ภาคผนวก ข-31

เอกสารการตรวจสอบอุปกรณ์เครื่องจักร

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Automatic Winding machine

No: AW-01

วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบตู้ควบคุม,สวิทช์ ว่าอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
2	ไฟสัญญาณตรวจสอบสถานะเครื่อง on																															
3	ตรวจสอบมอเตอร์และอุปกรณ์ส่งกำลังเป็นปกติหรือไม่																															
4	ตรวจสอบว่าแต่ละกระบอกสูบเคลื่อนที่ตามปกติหรือไม่																															
5	ตรวจสอบว่าแรงดันลมที่เข้าเครื่องจักร เป็นปกติดีหรือไม่(0.6-0.8mpa)																															
6	ตรวจสอบสกรูและสายเชื่อมของแต่ละส่วน ว่าหลวมหรือเสียหายหรือไม่																															
7	ตรวจสอบว่าแขนขึ้นลงมีการหลวมหรือไม่																															
8	ตรวจสอบหน้าจอสัมผัสใช้งานปกติหรือไม่																															
9	ตรวจสอบอุปกรณ์เซ็นเซอร์ส่วนต่างๆทำงานถูกต้อง หรือไม่																															
10	ตรวจสอบเกจวัดแรงดันและปุ่มปรับแรงดัน ว่าอยู่ในตำแหน่งกดลงไม่มีความเสียหาย																															
11	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ5s เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																

✓ = ใช้งานได้ ✗=ไม่ผ่านต้องแก้ไขทันที

Remark :

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Vevtical Winding

No: VW-01

วันที่ เดือน ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบสวิทช์เปิด-ปิด ปุ่มกดต่างๆ ปุ่มหยุดฉุกเฉินว่าอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
2	ตรวจสอบว่าแรงดันลมที่เข้าเครื่องจักรเป็นปกติดีหรือไม่ (0.6-0.8mpa)																															
3	ตรวจสอบมอเตอร์และอุปกรณ์ส่งกำลังเป็นปกติหรือไม่																															
4	ตรวจสอบสกรูและสายเชื่อมของแต่ละส่วน ว่าหลวมหรือเสียหายหรือไม่																															
5	ตรวจสอบ Footswitch ว่ามีการชำรุดหรือเสียหายหรือไม่																															
6	ตรวจสอบอุปกรณ์เซ็นเซอร์ส่วนต่างๆทำงานถูกต้อง ว่าทำงานถูกต้องหรือไม่																															
7	ตรวจสอบหน้าจอสัมผัสใช้งานปกติหรือไม่																															
8	ตรวจสอบว่าแต่ละกระบอกสูบเคลื่อนที่ตามปกติหรือไม่																															
9	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ 5 S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																
✓ = ใช้งานได้ ✗=ไม่ผ่านต้องแก้ไขทันที		Remark :																														

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ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Horizontal Windind

No: HW-01

วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบสวิทช์เปิด-ปิด ปุ่มกดต่างๆ ปุ่มหยุดฉุกเฉินว่าอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
2	ตรวจสอบว่าแรงดันลมที่เข้าเครื่องจักรเป็นปกติดีหรือไม่ (0.6-0.8mpa)																															
3	ตรวจสอบมอเตอร์และอุปกรณ์ส่งกำลังเป็นปกติหรือไม่																															
4	ตรวจสอบสกรูและสายเชื่อมของแต่ละส่วนม่ว่าหลวมหรือเสียหายหรือไม่																															
5	ตรวจสอบ Footswitch ว่ามีการชำรุดหรือเสียหายหรือไม่																															
6	ตรวจสอบอุปกรณ์เซ็นเซอร์ส่วนต่างๆ ว่าทำงานถูกต้องหรือไม่																															
7	ตรวจสอบอุปกรณ์เซ็นเซอร์ส่วนต่างๆ ว่าทำงานถูกต้องหรือไม่																															
8	ตรวจสอบหน้าจอสัมผัสใช้งานแกดอดีหรือไม่																															
9	ตรวจสอบคันโยกว่าเป็นปกติดีหรือไม่																															
10	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ 5 S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																

✓= ใช้งานได้ ✕=ไม่ผ่านต้องแก้ไขทันที

Remark :

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Semi-Automatic Assembly machine

No: SRA-01

วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบสวิทช์เปิด-ปิด ปุ่มกดต่างๆ ปุ่มหยุดฉุกเฉินว่าอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
2	ตรวจสอบว่าแรงดันลมที่เข้าเครื่องจักรเป็นปกติดีหรือไม่ (0.6-0.8mpa)																															
3	ตรวจสอบว่าแต่ละกระบอกสูบลมขึ้น-ลง เคลื่อนที่ตามปกติหรือไม่																															
4	ตรวจสอบอุปกรณ์เซ็นเซอร์ส่วนต่างๆ ว่าทำงานถูกต้องหรือไม่																															
5	ตรวจสอบแม่พิมพ์ว่าอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
6	ตรวจสอบอุปกรณ์ป้องกัน (เซ็นเซอร์ , PPE) เมื่อมือเข้าไปเครื่องจะต้องหยุดการทำงานทันที																															
7	ตรวจสอบหน้าจอสัมผัสใช้งานได้ปกติหรือไม่																															
8	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ 5 S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																

✓ = ใช้งานได้ ✗ = ไม่ผ่านต้องแก้ไขทันที

Remark :

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Punching Machine

No: Punch-01

วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบตู้ควบคุม , สวิทช์ว่าอยู่ตำแหน่งที่ถูกต้องหรือไม่																															
2	ตรวจสอบแม่พิมพ์ว่าอยู่ในสภาพพร้อมใช้งานหรือไม่																															
3	ตรวจสอบสายพานว่าอยู่ในสภาพพร้อมใช้งานหรือไม่																															
4	ตรวจสอบกลไกของเครื่องจักรว่าเป็นปกติหรือไม่																															
5	ตรวจสอบการตั้งเครื่องให้เหมาะสมกับหน้างาน																															
6	พนักงานต้องมีความพร้อม ไม่มีอาการป่วย หรืองว่งนอน																															
7	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ 5 S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																
✓= ใช้งานได้ ✗=ไม่ผ่านต้องแก้ไขทันที	Remark :																															

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : **Laser Marking** No: **Mark-01** วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบตู้ควบคุม , สวิทช์ว่าอยู่ตำแหน่งที่ถูกต้องหรือไม่																															
2	ตรวจสอบชุดอุปกรณ์คอมพิวเตอร์ว่าทำงานปกติหรือไม่																															
3	ตรวจสอบชุดอุปกรณ์หัวเลเซอร์บนว่าทำงานปกติหรือไม่																															
4	ตรวจสอบ Footswitch ว่ามีการชำรุดหรือเสียหายหรือไม่																															
5	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ 5 S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																

✓= ใช้งานได้ ✗=ไม่ผ่านต้องแก้ไขทันที

Remark :

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Color coding machine

No: Color-01

วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบตู้ควบคุม , สวิทช์ว่าอยู่ตำแหน่งที่ถูกต้องหรือไม่																															
2	ตรวจสอบระบบดูดอากาศว่าทำงานปกติหรือไม่																															
3	ตรวจเช็คกรองอากาศ ต้องไม่อุดตัน																															
4	ตรวจสอบน้ำให้เหมาะสมกับขีดที่กำหนดไว้ , เช็คปั๊มน้ำ , ระบบน้ำวนว่าทำงานปกติหรือไม่																															
5	ตรวจสอบสายลมว่าปกติหรือไม่ ต้องไม่รั่ว																															
6	ตรวจสอบกาพ่นสี , สีที่ใช้ , และอุปกรณ์ต่างๆ																															
7	ตรวจสอบอุปกรณ์และสภาพแวดล้อม โดยรอบ 5 S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																

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Remark :

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : CNC lathe **No: CNC-l01** **วันที่** **เดือน** ☐ **ปี**

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตู้ควบคุม / สวิทช์เปิด-ปิด / สวิทช์ควบคุม / ปุ่มหยุดฉุกเฉิน อยู่ในสภาพปกติและอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
2	จอสัมผัส / หน้าจอแสดงผล สามารถทำงานได้ตามปกติหรือไม่																															
3	ประตูนิรภัย / การ์ดป้องกัน / โครงเครื่องจักร อยู่ในสภาพสมบูรณ์ไม่แตก ไม่บุบ และไม่เสียหาย																															
4	ระบบโปรแกรมของเครื่องจักร ตั้งค่าการทำงานให้ถูกต้อง																															
5	ตรวจสอบปุ่มหยุดฉุกเฉิน โดยการให้เครื่องจักรทำงาน เมื่อกดปุ่มฉุกเฉิน เครื่องต้องหยุดการทำงานทั้งหมด																															
6	ระดับน้ำมันมันไฮดรอลิคอยู่ในระดับที่ปกติ ไม่มีรอยรั่ว ที่เครื่องจักร หรือรอบๆเครื่องจักร																															
7	เซ็นเซอร์ของเครื่องจักรทำงานได้ตามปกติ																															
8	เครื่องจักร , อุปกรณ์สภาพแวดล้อมโดยรอบของ เครื่องจักรต้องสะอาดไม่มีเศษชิ้นงานตกค้าง ไม่มีเศษจากการกลึง																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																

✓ = ใช้งานได้ ✗ = ไม่ผ่านต้องแก้ไขทันที

Remark :

SILMAX

ตารางการตรวจสอบเครื่องจักรเบื้องต้นก่อนปฏิบัติงานประจำวัน

FM7.1-01-11-A

ชื่อเครื่องจักร : Laser cutting

No: Laser-01

วันที่ เดือน ☐ ปี

Item	Detail	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	ตรวจสอบเกตวัดแรงดันลมต้องไม่น้อยกว่า 0.4 Mpa																															
2	ตรวจสอบน้ำมันต้องไม่ต่ำกว่าขีดที่กำหนดและเกตวัดแรงดันลมต้องไม่ต่ำกว่า 1.0 Mpa																															
3	ตรวจสอบน้ำกลั่นบริสุทธิ์ ต้องไม่ต่ำกว่าขีดที่กำหนด																															
4	ตรวจสอบเครื่องซับความชื้นในห้องทำความเย็นและอุณหภูมิในห้องต้องต่ำกว่า 26 องศา																															
5	ตรวจสอบหัวเลเซอร์ทุกครั้งก่อนใช้งาน																															
6	ตรวจสอบเครน ปุ่มเลื่อนคูด / คาย , ลูกยางดูดแผ่นเหล็กทุกครั้งก่อนใช้งาน																															
7	ตู้ควบคุม / สวิทช์เปิด-ปิด / สวิทช์ควบคุม / ปุ่มหยุดฉุกเฉินอยู่ในสภาพปกติและอยู่ในตำแหน่งที่ถูกต้องหรือไม่																															
8	ตรวจสอบคอมพิวเตอร์และอุปกรณ์โปรแกรมเครื่องจักรต้องสะอาดไม่มีเศษชิ้นงานตกค้างก่อนทำงานทุกครั้ง																															
9	ประตูนิรภัย / การ์ดป้องกัน / โครงเครื่องจักรอยู่ในสภาพสมบูรณ์ ไม่แตก ไม่บุบ ไม่เสียหาย																															
10	ตรวจสอบอุปกรณ์และสภาพแวดล้อมโดยรอบ 5S เป็นปกติหรือไม่																															
พนักงานตรวจสอบ																																
Leader ตรวจสอบ																																
Maintenance ตรวจสอบ																																
✓ = ใช้งานได้ ✕ = ไม่ผ่านต้องแก้ไขทันที		Remark :																														

GULF — PM CHECK SHEET PM FIRE PUMP 3M

EQUIPMENT NAME : FIRE WATER PUMP	PLANT: GPD	FORM NO. AM-IPP-FW-MTN-MM-10-03
	CHECK DATE: 20 - 04 - 2023	WORK ORDER NO: 20273060
☑MACHINE OPERATE ☑MACHINE STAND BY	TIME: 15 47	WORK PERMIT NO: 240 2-00030

VISUAL INSPECTION AND ACTIVITY

INTERVAL		DESCRIPTION	CRITERIA ACCEPTANCE	RESULT: JOCKEY FIRE PUMP	ELECTRICAL FIRE PUMP	DIESEL FIRE PUMP	REMARK
EVERY 3 MONTH	1	CHECK COUPLING	NOT DAMAGE	-	✓	✓	
	2	NOISE AND LEAKS	NO LEAKAGE , NORMAL NOISE	-	✓	✓	
	3	CHECK FLEXIBLE JOINT	DRAIN WATER	-	✓	✓	
	4	CHECK OR REGREASE	NOT LACK OF LUBRICANT	-	✓	✓	
	5	CHECK OR CLEAN STRAINER	NOT DUTY	-	✓	✓	
	6	CHECK SEAL SHAFT OR REPLACE	NO LEAKAGE	-	✓	✓	
	7	CHECK BOLT,NUT	NOT LOOSEN	-	✓	✓	
	8	RUNNING PERIOD	____MINUTES				
	9	STOPPING PERIOD	____MINUTES				

MEASURING AND RECORD DATA (FOR MACHINE OPERATE)

VELOCITY VALUE RMS (mm/s)

EQUIPMENT NAME	STD	DRIVER NDE H	DRIVER NDE V	DRIVER NDE A	DRIVER DE H	DRIVER DE V	DRIVER DE A	STD	DRIVEN NDE H	DRIVEN NDE V	DRIVEN NDE A	DRIVEN DE H	DRIVEN DE V	DRIVEN DE A
JOCKEY FIRE PUMP	<4.5	-	-	-	-	-	-	<4.5	-	-	-	-	-	-
ELECTRICAL FIRE PUMP	<4.5	0.239	0.307	0.650	0.631	0.375	0.664	<4.5	2.12	1.25	2.11	1.69	1.00	1.58
DIESEL FIRE PUMP	<10.9							<10.9	2.61 3.42	1.07	2.47	3.42	1.73	3.51

TEMPERATURE (°C)

EQUIPMENT NAME	STD	DRIVER NDE	DRIVER DE	STD	DRIVEN NDE	DRIVEN DE
JOCKEY FIRE PUMP	<80	-	-	<80	-	-
ELECTRICAL FIRE PUMP	<80	39.8	40.1	<80	40.8	44.8
DIESEL FIRE PUMP	<80			<80	38.0	37.8

REMARK

EFP: suct = 0.7 bar, disch = 10.2 bar @ 5,000 GPM

PFP: suct = 0.4 bar, disch = 9.8 bar @ 5,000 GPM

FULL NAME : Prachyanut Kajwang khwang

DATE : 20 - 04 - 2023

FULL NAME : Rangsan Ekawpayphu

DATE : 20/04/23

GULF — ROTATING MACHINE CONDITION : COMMON 6M

PLANT: GPD

POWERMAMT CONDITION: ☑BLOCK OPERATION ☐ RESERVE SHUTDOWN

CHECK DATE: 19 - May - 2023

REPORTED BY ENGINEER FULL NAME: Prachyanut Kajwang khwang DATE: 19 - May - 2023

FROM NO. AM-IPP-FW-MTN-MM-04-01

WORK ORDER NO. 20273060 & 20274716

ACCEPTED AND COMPLETED BY LEADER FULL NAME: Rangsan Ekawpayphu DATE: 20 May 2023

WORK PERMIT NO.

OVERALL VIBRATION

VELOCITY VALUE RMS (mm/s)

BEARING TEMPERATURE (°C)

NO	ECS	EQUIPMENT NAME	Power (kW)	Support Type	VELOCITY VALUE RMS (mm/s) DRIVER NDE H	NDE V	NDE A	DE H	DE V	DE A	STD. W/A	DRIVEN NDE H	NDE V	NDE A	DE H	DE V	DE A	STD. W/A	BEARING TEMPERATURE (°C) DRIVER NDE	DE	DE	DRIVEN NDE	DE	DE	NOTE
1	90GHM01AP101	AUXILIARY BOILER FUEL OIL PUMP A	0.75	Rigid	<1.8						<4.0							<80							Not Operate
2	90GHM01AP102	AUXILIARY BOILER FUEL OIL PUMP B	0.75	Rigid	<1.8	0.39	0.62	0.85	0.42	0.49	0.83	<4.0	0.51	0.99	0.49	0.51	0.51	1.12	<80						
3	90GHM01AN101	AUXILIARY BOILER FD FAN A	18.5	Rigid	<1.8							<2.8							<80						Not Operate
4	90GHM01AN102	AUXILIARY BOILER FD FAN B	18.5	Rigid	<2.8							<2.8							<80						Not Operate
5	90GLA11AP101	AUXILIARY BOILER FEED WATER PUMP A	7.5	Rigid	<1.8							<5.1							<80						Not Operate
6	90GLA11AP102	AUXILIARY BOILER FEED WATER PUMP B	7.5	Rigid	<1.8	0.54	0.65	1.54	0.50	0.51	0.50	<5.1	0.46	0.47	0.45				<80						
7	90GCR01AP101	DEMINERALIZED WATER PUMP A			<2.8							<5.1							<80						Not Operate
8	90GCR01AP102	DEMINERALIZED WATER PUMP B	18.5	Rigid	<2.8	1.22	0.77	0.16	1.21	1.02	0.16	<5.1	0.37	0.24	0.76	0.32	0.73	1.42	<80	31.2	40.3	48.2	49.7		
9	90GCR01AP103	DEMINERALIZED WATER PUMP C			<2.8							<5.1							<80						Not Operate
10	90GHA01AP101	SERVICE WATER PUMP A	11	Rigid	<1.8							<5.1							<80						Not Operate
11	90GHA01AP102	SERVICE WATER PUMP B	11	Rigid	<1.8	0.81	0.42	0.68	0.78	0.84	0.99	<5.1	0.29	0.17	0.24	0.23	0.57	0.41	<80	31.3	40.5	45.6	47.0		
12	90GLR01AP101	POTABLE WATER PUMP A	5.5	Rigid	<1.8	0.57	0.73	0.13	0.67	0.52	0.11	<5.1	0.31	0.76	0.47	0.28	0.52	0.60	<80	33.6	39.2	34.5	42.1		
13	90GLR01AP102	POTABLE WATER PUMP B	5.5	Rigid	<1.8	1.15	0.16	0.10	0.70	0.31	0.08	<5.1	0.20	0.33	0.27	0.21	0.14	0.47	<80						
14	90MBU01AP101	NOX WATER TRANSFER PUMP A			<2.8							<5.1							<80						Not Operate
15	90MBU01AP102	NOX WATER TRANSFER PUMP B	45	Rigid	<2.3							<5.1							<80						Not Operate
16	90MBU01AP103	NOX WATER TRANSFER PUMP C			<2.3							<5.1							<80						Not Operate
17	90MBU01AP104	NOX WATER TRANSFER PUMP D			<2.3							<5.1							<80						Not Operate
18	90GAT01AP111	COOLING WATER MAKE UP PUMP A			<4.5							-							<80						Not Operate
19	90GAT01AP112	COOLING WATER MAKE UP PUMP B	132	Flexible	<4.5	0.59	0.52	0.35	0.42	0.32	0.26	-							<80						
20	90GAT01AP113	COOLING WATER MAKE UP PUMP C			<4.5	0.47	0.54	0.54	0.29	0.33	0.37	-							<80	43.1	48.2				Not Operate
21	90GVT01AP101	COOLING WATER DISCHARGE PUMP A	30	Flexible	<2.8	0.25	0.21	0.48	0.15	0.17	0.44	-							<80						
22	90GVT01AP102	COOLING WATER DISCHARGE PUMP B	30	Flexible	<2.8	0.25	0.21	0.48	0.15	0.17	0.44	-							<80	32.8	38.5				Not Operate
23	90EGA11AP101	FO UNLOADING PUMP A1			<1.8	1.56	1.36	1.13	1.31	<4.0	2.38	2.40	3.04	1.28	2.67	2.13	<80	33.8	42.9	58.7	53.8		
24	90EGA11AP102	FO UNLOADING PUMP A2			<1.8	1.69	0.64	0.92	1.56	1.10	0.96	<4.0	1.83	3.21	2.40	1.41	2.81	2.21	<80	31.8	42.4	47.8	47.4		
25	90EGA11AP103	FO UNLOADING PUMP A3			<1.8	1.41	1.05	1.27	1.59	1.29	1.29	<4.0	2.26	2.14	2.15	1.81	2.25	1.67	<80	34.6	45.9	45.7	56.0		
26	90EGA11AP104	FO UNLOADING PUMP B1	11	Rigid	<1.8	1.46	1.49	0.66	1.61	0.95	0.63	<4.0	2.95	3.29	3.46	1.06	3.03	1.39	<80	35.2	47.6	54.2	49.0		
27	90EGA11AP105	FO UNLOADING PUMP B2			<1.8	1.26	1.28	1.24	1.26	0.89	0.98	<4.0	1.64	1.74	2.46	1.19	1.90	1.70	<80	35.6	44.6	58.0	53.6		
28	90EGA11AP106	FO UNLOADING PUMP B3			<1.8	1.42	1.14	1.16	1.32	1.25	1.23	<4.0	2.52	2.01	2.38	2.10	1.97	1.43	<80	34.5	44.0	54.0	53.5		
29	90EGC11AP101	FUEL OIL TRANSFER PUMP A			<4.5							<4.0							<80						Not Operate
30	90EGC11AP102	FUEL OIL TRANSFER PUMP B	90	Rigid	<4.5							<4.0							<80						Not Operate
31	90EGC11AP103	FUEL OIL TRANSFER PUMP C			<4.5							<4.0							<80						Not Operate
32	90EGC11AP104	FUEL OIL TRANSFER PUMP D			<4.5							<4.0							<80						Not Operate
33	90EKK01AN101	FUEL GAS COMPRESSOR A : MOTOR	1890	Rigid	<2.1							-							<80						Not Operate
		FUEL GAS COMPRESSOR A : LOW SHAFT			-						<3.0								<80						

GULF — ROTATING MACHINE CONDITION : COMMON 6M

PLANT: GPD	CHECK DATE: 19-May-23	FROM NO. AM-IPP-FW-MTN-MM-04-01	WORK ORDER NO.	WORK PERMIT NO.

POWERPLANT CONDITION: ☐ BLOCK OPERATION ☐ RESERVE SHUTDOWN

REPORTED BY ENGINEER — FULL NAME: Prachyawat Rajmwangkhwang — DATE: 19-May-2023

ACCEPTED AND COMPLETED BY LEADER — FULL NAME: Rongsan Skawpraypho — DATE: 24 May 2023

OVERALL VIBRATION

ITEM	KKS	EQUIPMENT NAME	Power (kW)	Support Type	VELOCITY VALUE RMS (mm/s) DRIVER STD. W/A	DRIVER NDE H	DRIVER NDE V	DRIVER NDE A	DRIVER DE H	DRIVER DE V	DRIVER DE A	DRIVEN STD. W/A	DRIVEN DE H	DRIVEN DE V	DRIVEN DE A	DRIVEN NDE H	DRIVEN NDE V	DRIVEN NDE A	BEARING TEMPERATURE (°C) STD.	DRIVER NDE	DRIVER DE	DRIVEN DE	DRIVEN NDE	NOTE
		FUEL GAS COMPRESSOR A : HIGH SHAFT			-							<5.0							<90					Not Operate
14	10EKH01AN101	FUEL GAS COMPRESSOR B : MOTOR	1830	Rigid	<7.1							-							<80					Not Operate
		FUEL GAS COMPRESSOR B : LOW SHAFT			-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR B : HIGH SHAFT			-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR C : MOTOR			<7.1							-							<80					Not Operate
15	20EKH01AN101	FUEL GAS COMPRESSOR C : LOW SHAFT	1860	Rigid	-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR C : HIGH SHAFT			-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR D : MOTOR			<7.1							-							<80					Not Operate
16	30EKH01AN101	FUEL GAS COMPRESSOR D : LOW SHAFT	1880	Rigid	-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR D : HIGH SHAFT			-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR E : MOTOR			<7.1							-							<80					Not Operate
17	40EKH01AN101	FUEL GAS COMPRESSOR E : LOW SHAFT	1890	Rigid	-							<5.0							<80					Not Operate
		FUEL GAS COMPRESSOR E : HIGH SHAFT			-							<5.0							<80					Not Operate

AM-IPP-FW-MTN-MM-04-01

GULF — ROTATING MACHINE CONDITION (4M)

PLANT: GPD BLOCK 1	CHECK DATE: 19-May-2023	FROM NO. AM-IPP-FW-MTN-MM-04-01	WORK ORDER NO. A-2027037 B-2027411	WORK PERMIT NO.

POWERPLANT CONDITION: ☑ BLOCK OPERATION ☐ RESERVE SHUTDOWN

REPORTED BY ENGINEER — FULL NAME: Prachyawat Rajmwangkhwang — DATE: 19-May-2023

ACCEPTED AND COMPLETED BY LEADER — FULL NAME: Rongsan Skawpraypho — DATE: 24 May 2023

OVERALL VIBRATION

ITEM	KKS	EQUIPMENT NAME	Power (kW)	Support Type	VELOCITY VALUE RMS (mm/s) DRIVER STD. W/A	DRIVER NDE H	DRIVER NDE V	DRIVER NDE A	DRIVER DE H	DRIVER DE V	DRIVER DE A	DRIVEN STD. W/A	DRIVEN DE H	DRIVEN DE V	DRIVEN DE A	DRIVEN NDE H	DRIVEN NDE V	DRIVEN NDE A	BEARING TEMPERATURE (°C) STD.	DRIVER NDE	DRIVER DE	DRIVEN DE	DRIVEN NDE	NOTE
1	10MBV01AP101	LUBE OIL PUMP A	132	Flexible	<7.1	0.43	0.85	0.39	0.36	0.52	0.31	-							<80	41.0	47.5			
2	10MBV01AP102	LUBE OIL PUMP B	132	Flexible	<7.1	0.70	0.32	0.39	0.35	0.30	0.40	-							<80	55.7	47.4			
3	10MBV21AP101	LUBE OIL PURIFIER PUMP	2.2	Rigid	<1.8	0.59	0.61	0.69	0.58	0.63	0.38	<1.8	0.50	0.48	0.78	0.30	0.48	0.62	<80	34.4	45.9	63.6	64.0	
4	10MBX01AP101	CONTROL OIL PUMP A	37	Rigid	<2.8	0.84	0.91	0.96	0.87	1.04	1.19	<2.8	1.73	1.64	1.33	1.08	1.90	0.88	<50	32.1	39.1	52.4	47.5	
5	10MBX01AP102	CONTROL OIL PUMP B	37	Rigid	<2.8	0.24	0.52	0.65	0.63	0.74	0.60	<2.8	0.65	0.75	1.75	0.86	1.52	1.27	<80	45.0	47.0	54.9	52.6	
6	10MBX11AP101	CONTROL OIL POLISHING PUMP	4	Flexible	<1.8	0.64	1.68	[illegible]	0.61	0.94	1.09	<1.8	[illegible]	[illegible]	[illegible]	1.57	[illegible]		<80	31.0	33.5	[illegible]	45.5	
7	10MKW01AP101	SEAL OIL PUMP A	11	Rigid	<1.8	0.47	0.29	0.16	0.47	0.29	0.15	<1.8	0.62	0.52	0.48	0.65	0.59	0.44	<80	38.2	48.9	49.3	48.1	
8	10MKW01AP102	SEAL OIL PUMP B	11	Rigid	<1.8	0.28	0.35	0.14	0.25	0.34	0.12	<1.8	0.71	0.37	0.42	0.85	0.46	0.38	<80	46.5	55.0	49.2	48.2	
9	10MKW01AP301	VACUUM PUMP FOR SEAL OIL SUPPLY UNIT	2.2	Rigid	<1.8	0.68	0.84	[illegible]	0.59	0.86	1.01	<1.8	0.59	0.46	0.29	0.56	0.41	0.31	<80	36.8	38.3	60.7	61.5	
10	10MKW01AN101	VAPOR EXTRACTOR	0.4	Flexible	<1.8	4.75	[illegible]	0.26	[illegible]	0.65	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	31.0	33.5	[illegible]	[illegible]	
11	10MBH01AN101	GT 45 COOLER FAN A	5.5	Flexible	<1.8	0.67	0.37	[illegible]	0.63	0.73	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	38.9	38.7	[illegible]	[illegible]	
12	10MBH01AN102	GT 45 COOLER FAN B	5.5	Flexible	<1.8	0.81	0.53	[illegible]	0.50	0.83	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	38.6	38.5	[illegible]	[illegible]	
13	10MBH01AN103	GT 45 COOLER FAN C	5.5	Flexible	<1.8	0.87	0.77	[illegible]	0.54	0.81	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	44.8	47.9	[illegible]	[illegible]	
14	10MBA11AN101	GT PACKAGE VENTILATION FAN A	75	Rigid	<2.8	0.95	0.45	0.31	0.78	0.43	0.34	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	40.5	53.1	[illegible]	[illegible]	
15	10MBA11AN102	GT PACKAGE VENTILATION FAN B	75	Rigid	<2.8	1.10	0.60	0.30	0.71	0.54	0.37	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	39.0	52.1	[illegible]	[illegible]	
16	10MBA11AN103	GT PACKAGE VENTILATION FAN C	75	Rigid	<2.8	0.91	0.64	0.29	0.88	0.54	0.29	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	58.6	70.2	[illegible]	[illegible]	
17	10MBH06AN001	GT ECA COMPRESSOR A : MOTOR	600	Rigid	<4.5	0.52	0.92	0.35	0.90	0.49	0.29	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	48.5	56.2	[illegible]	[illegible]	
		GT ECA COMPRESSOR A : LOW SHAFT			-							<6.1	0.46	0.59	0.94	0.48	0.52	0.40	<80	[illegible]	[illegible]	34.8	52.1	
		GT ECA COMPRESSOR A : HIGH SHAFT			-							<6.1	0.61	0.51	0.45	0.59	0.78	0.76	<80	[illegible]	[illegible]	61.8	91.0	
		ECA MAIN OIL PUMP			-							<6.1	0.48	0.15	0.28	0.50	0.14	[illegible]	<80	[illegible]	[illegible]	56.5	52.5	
18	10MBH06AN002	GT ECA COMPRESSOR B : MOTOR	600	Rigid	<4.5	0.88	0.35	0.18	0.58	0.36	0.35	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80	59.5	56.5	[illegible]	[illegible]	
		GT ECA COMPRESSOR B : LOW SHAFT			-							<6.1	0.40	0.42	0.40	0.96	0.52	0.34	<80	[illegible]	[illegible]	58.8	55.6	
		GT ECA COMPRESSOR B : HIGH SHAFT			-							<6.1	0.54	0.40	1.15	0.22	0.35	0.75	<80	[illegible]	[illegible]	63.8	84.2	
		ECA MAIN OIL PUMP			-							<6.1	0.39	0.15	0.51	0.89	0.13	[illegible]	<80	[illegible]	[illegible]	62.1	69.3	
19	10LCA14AP101	GT2C/ECA COOLER CW RECIR PUMP A	11	Rigid	<1.8	0.17	0.14	0.14	0.19	0.17	0.12	<5.1	0.19	0.16	0.21	0.12	0.11	0.17	<80	38.8	58.1	58.9	46.9	
20	10LCA14AP102	GT2C/ECA COOLER CW RECIR PUMP B	11	Rigid	<1.8	0.88	0.35	0.18	0.58	0.36	0.35	<5.1	0.40	0.42	0.40	0.96	0.52	0.34	<80	44.7	63.4	62.1	69.3	
21	10MBL02AP201	GT EVAP COOLER PUMP	45	Rigid	<2.8	1.52	0.80	0.59	1.65	1.07	1.23	<5.1	1.86	0.82	1.34	1.35	0.61	1.56	<80	40.8	60.3	52.3	53.8	
22	10MBN12AP101	GT MAIN FUEL OIL PUMP	570	Rigid	<7.1							-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80			[illegible]	[illegible]	Not Operate
23	10MBU04AP101	GT WATER INJECTION PUMP	280	Rigid	<4.5							-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<80			[illegible]	[illegible]	Not Operate
24	10GEF13AN101	GT CASING COOLING AIR FAN	45	Rigid	<2.8							<2.8							<80					Not Operate
25	10LAC31AP101	HP/IP FEED WATER PUMP A	4240	Rigid	<4.5	0.76	1.11	1.32	0.84	0.94	1.26	<6.1	1.45	0.95	0.93	1.81	0.88	0.87	<80	51.8	56.8	54.6	43.5	
26	10LAC31AP102	HP/IP FEED WATER PUMP B	4240	Rigid	<4.5	0.92	0.25	0.48	0.66	0.28	0.87	<6.1	1.13	1.04	1.14	1.82	1.12	1.06	<80	52.7	56.9	52.2	44.4	
27	10HAC01AP101	PREHEATER RECIRCULATION PUMP A	150	Rigid	<4.5	2.12	0.16	0.15	2.85	0.55	0.14	<5.1	1.01	0.83	1.05	0.82	0.65	1.17	<80	39.5	48.1	61.8	56.4	
28	10HAC01AP102	PREHEATER RECIRCULATION PUMP B	150	Rigid	<4.5	4.16	0.67	0.11	3.88	0.50	0.10	<5.1	0.89	0.68	1.01	0.66	0.51	0.80	<80	43.0	54.0	61.0	65.5	

AM-IPP-FW-MTN-MM-04-01

GULF ROTATING MACHINE CONDITION (4M)

PLANT: GPD BLOCK 1	CHECK DATE: 19 - May	FROM NO. AM-IPP-FW-MTN-MM-04-01	WORK ORDER NO.	WORK PERMIT NO.
POWERPLANT CONDITION ☑ BLOCK OPERATION ☐ RESERVE SHUTDOWN	REPORTED BY ENGINEER FULL NAME: ___ DATE: 19 - May - 2023	ACCEPTED AND COMPLETED BY LEADER DATE: 24 May 2023		

OVERALL VIBRATION & BEARING TEMPERATURE

ITEM	KKS	EQUIPMENT NAME	Power (kW)	Support Type	VELOCITY VALUE RMS (mm/s)														BEARING TEMPERATURE (°C)					NOTE
					DRIVER							DRIVEN							STD.	DRIVER		DRIVEN		
					STD. W/A	NDE			DE			STD. W/A	DE			NDE				NDE	DE	DE	NDE	
						H	V	A	H	V	A		H	V	A	H	V	A						
29	10GAF02AP101	RAW WATER BOOSTER PUMP A	30	Rigid	<2.8	1.25	0.95	0.11	1.25	1.05	0.11	<5.1	1.17	0.58	0.78	0.92	0.79	0.93	<80	40.3	44.6	40.7	48.7	
30	10GAF02AP102	RAW WATER BOOSTER PUMP B	30	Rigid	<2.8							<5.1							<80					Not Operate
31	10LCB01AP101	CONDENSATE PUMP A	670	Flexible	<7.1	0.33	0.42	0.45	0.24	0.29	0.46	-							<80	54.5	38.7			
32	10LCB01AP102	CONDENSATE PUMP B	670	Flexible	<7.1							-							<80					Not Operate
33	10MAW01AN101	GLAND STEAM CONDENSER EXHAUSTER FAN A	30	Rigid	<2.8	0.65	1.32	2.10	0.78	0.84	2.56	-							<80	38.2	42.8			
34	10MAW01AN102	GLAND STEAM CONDENSER EXHAUSTER FAN B	30	Rigid	<2.8	1.26	0.98	1.20	1.14	1.00	1.17	-							<80	48.7	40.6			
35	10MAX01AP101	CONDENSER VACUUM PUMP A	90	Rigid	<4.5	0.55	0.38	0.41	0.57	0.37	0.60	<6.1	0.88	0.80	1.61	1.00	1.23	2.76	<80	41.1	55.8	47.8	48.0	
36	10MAX01AP201	CONDENSER VACUUM PUMP A SEAL WATER PUMP	3.7	Rigid	<1.8	0.47	0.44	[illegible]	0.33	0.51	0.60	<5.1	0.43	0.70	0.65	0.40	0.72	1.20	<80	37.1	42.7	40.4	40.3	
37	10MAX01AP102	CONDENSER VACUUM PUMP B	90	Rigid	<4.5	0.40	0.29	0.38	0.35	0.25	0.48	<6.1	1.64	0.78	1.15	1.90	1.11	1.44	<80	48.5	60.9	52.2	47.0	
38	10MAX01AP202	CONDENSER VACUUM PUMP B SEAL WATER PUMP	3.7	Rigid	<1.8	0.49	0.46	[illegible]	0.58	0.48	0.50	<5.1	0.50	0.73	0.58	0.49	0.48	1.02	<80	38.2	41.5	39.7	43.9	
39	10PGA01AP101	CLOSED COOLING WATER PUMP A	160	Rigid	<2.8	1.45	0.97	0.33	0.52	0.37	0.31	<5.1	1.26	0.89	0.64	1.26	0.54	0.82	<80	43.8	70.5	43.8	44.5	
40	10PGA01AP102	CLOSED COOLING WATER PUMP B	160	Rigid	<2.8	0.95	0.25	0.49	1.89	0.49	0.51	<5.1	1.01	0.50	1.21	1.98	0.48	1.34	<80	45.6	74.7	44.7	43.9	
41	10PAH20AP101	CONDENSER TUBE CLEANING BALL RECIR PMP A	11	Rigid	<1.8	0.20	0.24	0.11	0.19	0.22	0.11	<5.1	0.80	0.36	0.26	1.25	0.50	0.50	<80	39.8	50.7	42.1	47.9	
42	10PAH20AP102	CONDENSER TUBE CLEANING BALL RECIR PMP B	11	Rigid	<1.8							<5.1							<80					Not Operate
43	10PAC01AP101	CIRCURATING WATER PUMP A	1720	Flexible	<7.1	0.56	0.49	1.29	0.31	0.57	0.62	-							<80	60.0	36.8			
44	10PAC01AP102	CIRCURATING WATER PUMP B	1720	Flexible	<7.1	0.86	0.71	1.13	0.29	0.45	0.87	-							<80	56.9	37.6			
45	10PAC02AP101	AUXILIARY CIRCURATING WATER PUMP	30	Flexible	<2.8							-							<80					Not Operate
46	10PAD01AN101	COOLING TOWER FAN A	220	Rigid	<4.5	0.27	0.36	0.39	0.28	0.44	0.40	-							<80	46.6	51.1			
47	10PAD01AN102	COOLING TOWER FAN B			<4.5	0.27	0.33	0.26	0.27	0.37	0.33	-							<80	47.7	51.8			Grease leaked at DE side
48	10PAD01AN103	COOLING TOWER FAN C			<4.5	0.20	0.27	0.46	0.25	0.43	0.57	-							<80	46.4	52.8			
49	10PAD01AN104	COOLING TOWER FAN D			<4.5	0.31	0.38	0.31	0.29	0.46	0.35	-							<80	46.3	51.1			Grease leaked at DE side
50	10PAD01AN105	COOLING TOWER FAN E			<4.5	0.25	0.32	0.28	0.26	0.37	0.28	-							<80	45.6	51.8			
51	10PAD01AN106	COOLING TOWER FAN F			<4.5	0.24	0.38	0.39	0.25	0.46	0.72	-							<80	47.6	53.9			Grease leaked at DE side
52	10PAD01AN107	COOLING TOWER FAN G			<4.5	0.19	0.36	0.32	0.18	0.27	0.37	-							<80	45.8	53.1			
53	10PAD01AN108	COOLING TOWER FAN H			<4.5	0.23	0.26	0.63	0.21	0.35	0.40	-							<80	47.5	52.7			Grease leaked at DE side

AM-IPP-FW-MTN-MM-04-01

GULF AUXILIARY BOILER INSPECTION SHEET

EQUIPMENT NAME: AUXILIARY BOILER	PLANT: GPD	FORM NO. AM-IPP-FW-MTN-MM-10-01
KKS CODE: 30 QHA 00	CHECK DATE: 16/5/2023	WORK ORDER NO: 20274723
☐ MACHINE OPERATE ☑ MACHINE STAND BY	TIME: 15:00	WORK PERMIT NO: 1402000065

VISUAL INSPECTION AND ACTIVITY

Equipment	DESCRIPTION	CRITERIA/ACCEPTANCE	Result	Remark
ROTARY BURNER	CHECK BELT TENSION (> LV4%)	PUSH BELT DEPTH 20-25 mm	☑ NORMAL ☐ ABNORMAL	
	CHECK BELT CENTERING	BELT CENTERING DOSE NOT OFFSET FROM PULLEY	☑ NORMAL ☐ ABNORMAL	
	CHECK FLAT BELT CONDITION	DOSE NOT SHEAR,TEAR,WEAR	☑ NORMAL ☐ ABNORMAL	
BURNER	CHECK REFACTORY BRICK	BRICK DOSE NOT DROP, BROKEN	☑ NORMAL ☐ ABNORMAL	
	CLEAN ROTARY BURNER FAN	CLEAN	☑ NORMAL ☐ ABNORMAL	
	CHECK BURNER GASKET	DOSE NOT DETERIORATED	☐ NORMAL ☐ ABNORMAL	
FUEL OIL PUMP	CHECK FLUID LEAK	NO LEAKAGE OIL	☐ NORMAL ☐ ABNORMAL	
	CHECK FOR UNUSAL	SOUND SMOOTH, TIGHTNESS BOLT&NUT, NO LEAKS	☑ NORMAL ☐ ABNORMAL	

NOTE: Belt ตึงดี

REPORTED BY ENGINEER

FULL NAME: Rachawat Rachwangkhwang

DATE: 16 / 5 / 2023

ACCEPTED AND COMPLETED BY LEADER

FULL NAME: Rungsan Khamsingha

DATE: 23 May 2023

AM-IPP-FW-MTN-MM-10-01

GULF PM CHECK SHEET AIR COMPRESSOR

EQUIPMENT NAME : AIR COMPRESSOR B	PLANT : GPD	FORM NO.	
KKS CODE: 90QFA03 AN101	CHECK DATE: 09/05/23	AM-IPP-FW-MTN-MM-01-01	
☑ MACHINE OPERATE ☐ MACHINE STAND BY	INTERVAL:	WORK ORDER NO : 20279714	
	TIME: 14:22	WORK PERMIT NO : 2401000066	

VISUAL INSPECTION AND ACTIVITY

INTERVAL		DESCRIPTION	CRITERIA ACCEPTANCE	RESULT		REMARK
3 Month	1	CHECK COOLER	CHECK LEAK , WATER INLET/OUT TEMPERATURE CLEAN	☑ NORMAL	☐ ABNORMAL	
	2	CHECK BOLT/COUPLING CONNECTION	BOLT/COUPLING SHOULD BE TIGH	☐ NORMAL	☐ ABNORMAL	
	3	CHECK AIR FILTER	NO DAMAGE, CLEANLINESS OF ELEMENT	☑ NORMAL	☐ ABNORMAL	
	4	CHECK COMPREESOR OIL LEVEL	CHECK OIL CONDITION CHANGE IF IT'S DIRTY	☑ NORMAL	☐ ABNORMAL	

MEASURING AND RECORD DATA (FOR MACHINE OPERATE)

EQUIPMENT NAME	VELOCITY VALUE RMS (mm/s)												
	STD	DRIVER						STD	DRIVEN				
		NDE			DE				NDE			DE	
		H	V	A	H	V	A		H	V	A	H	V	A
AIR COMPRESSOR													

EQUIPMENT NAME	TEMPERATURE (°C)				
	STD	DRIVER		STD	DRIVEN	
		NDE	DE		NDE	DE
AIR COMPRESSOR						

REMARK

B- Found oil leak at IO TCV and inlet Flexille hose oil distribution manifold.
C - Found oil leak at oil filter.
- Inform to Mechanical weekly meeting No. 136, Contractor plan to rectify.

DATE : 9/5/2023

GULF PM CHECK SHEET GT HP PURGE AIR COMPRESSOR

EQUIPMENT NAME : GT HP PURGE AIR COMPRESSOR	PLANT : GPD	FORM NO.	
KKS CODE: 90QEF02AN101	CHECK DATE: 9/5/2023	AM-IPP-FW-MTN-MM-01-01	
☐ MACHINE OPERATE ☑ MACHINE STAND BY	INTERVAL:	WORK ORDER NO : 20274715	
	TIME: 14:10	WORK PERMIT NO : 24080000 67	

VISUAL INSPECTION AND ACTIVITY

INTERVAL		DESCRIPTION	CRITERIA ACCEPTANCE	RESULT		REMARK
3 Month	1	CHECK COOLER	CHECK LEAK , WATER INLET/OUT TEMPERATURE CLEAN	☑ NORMAL	☐ ABNORMAL	
	2	CHECK BOLT/COUPLING CONNECTION	BOLT/COUPLING SHOULD BE TIGH	☑ NORMAL	☐ ABNORMAL	
	3	CHECK AIR FILTER	NO DAMAGE, CLEANLINESS OF ELEMENT	☑ NORMAL	☐ ABNORMAL	
	4	CHECK COMPREESOR OIL LEVEL	CHECK OIL CONDITION CHANGE IF IT'S DIRTY	☑ NORMAL	☐ ABNORMAL	

MEASURING AND RECORD DATA (FOR MACHINE OPERATE)

EQUIPMENT NAME	VELOCITY VALUE RMS (mm/s)												
	STD	DRIVER						STD	DRIVEN				
		NDE			DE				NDE			DE	
		H	V	A	H	V	A		H	V	A	H	V	A
AIR COMPRESSOR													

EQUIPMENT NAME	TEMPERATURE (°C)				
	STD	DRIVER		STD	DRIVEN	
		NDE	DE		NDE	DE
AIR COMPRESSOR						

REMARK

Not operate

DATE : 24 May 2023

AM-IPP-FW-MTN-MM-01-01

ภาคผนวก ข-32

เอกสารการสุ่มตรวจประเมิน (Audit)

หน่วยงานที่เข้ามารับของเสียไปกำจัด

บริษัท สวนอุตสาหกรรมโรจนะ ระยอง 2 จำกัด

ROJANA INDUSTRIAL PARK RAYONG 2 COMPANY LIMITED

54/5 หมู่ 1 ตำบลมาบยางพร อำเภอปลวกแดง จังหวัดระยอง 21140

54/5 MOO1 T. MAP YANGPHON A. PLUAK DAENG RAYONG 21140 THAILAND

ที่

วันที่

เรื่อง ขอความร่วมมือในการเข้าตรวจประเมินการจัดการของเสียของโรงงานอุตสาหกรรม
ในโครงการสวนอุตสาหกรรมปลวกแดง ส่วนขยาย ครั้งที่ 1

เรียน ผู้จัดการโรงงานฯ

สิ่งที่ส่งมาด้วย 1.แบบบันทึกปริมาณขยะ
2. แบบบันทึกการตรวจสอบปริมาณขยะหรือวัสดุที่ไม่ใช้แล้ว
3. แบบบันทึกการตรวจสอบสถานที่จัดเก็บและคัดแยกขยะ

ตามที่ โครงการสวนอุตสาหกรรมปลวกแดง ส่วนขยาย ครั้งที่ 1 (โครงการฯ) ต้องจัดทำรายงานผลการปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อมของโครงการสวนอุตสาหกรรมปลวกแดง ส่วนขยาย ครั้งที่ 1 (ระยะดำเนินการ) (EIA Monitoring) เสนอต่อสำนักงานนโยบายและแผนทรัพยากรธรรมชาติและสิ่งแวดล้อม (สผ.) และหน่วยงานราชการที่เกี่ยวข้อง เป็นประจำทุก 6 เดือน นั้น

ในขณะนี้ โครงการฯ อยู่ระหว่างจัดทำรายงานผลการปฏิบัติตามมาตรการฯ ระหว่างเดือนกรกฎาคม-ธันวาคม พ.ศ. 2565 ซึ่งจำเป็นต้องนำข้อมูลผลการตรวจประเมินการจัดการของเสียของโรงงานอุตสาหกรรมในโครงการฯ มาวิเคราะห์และประมวลผล ประกอบการจัดทำรายงานฯ ด้วย

ทางโครงการฯ จึงใคร่ขอความร่วมมือจากท่าน ในการขอเข้าตรวจประเมินการจัดการของเสียของโรงงานระหว่างเดือนกรกฎาคม-ธันวาคม 2565 ซึ่งมีรายละเอียดดังสิ่งที่ส่งมาด้วย หากท่านสะดวกให้ทางโครงการฯ เข้าตรวจประเมินวันใด กรุณาแจ้งกลับมาที่ E-Mail : [redacted] (ภายในวันที่ 31 ธ.ค. 2565) และสามารถสอบถามรายละเอียดเพิ่มเติมได้โดยตรงที่ [redacted] หมายเลขโทรศัพท์ [redacted]

จึงเรียนมาเพื่อโปรดพิจารณา ให้ความร่วมมือดังกล่าว จะขอบคุณยิ่ง

ขอแสดงความนับถือ

([redacted])
เจ้าหน้าที่สิ่งแวดล้อม

แบบบันทึกปริมาณขยะ

บริษัท.....ประจำเดือน..... พ.ศ. .....

ลำดับ	รหัสของเสีย	รายการ / ชนิดของวัสดุที่ไม่ใช้แล้ว	ยอดยกมา	วันที่ 1	วันที่ 2	วันที่ 3	วันที่ 4	วันที่ 5	วันที่ 6	วันที่ 7	วันที่ 8	วันที่ 9	วันที่ 10	วันที่ 11
1.	07 06 08	จารบีที่ใช้งานแล้ว												
2.	13 02 08	น้ำมันหล่อลื่นใช้งานแล้ว												
3.	15 02 02	วัสดุปนเปื้อนสารเคมี / สี / น้ำมัน												
4.	15 01 10	ภาชนะปนเปื้อน												
5.	16 06 01	แบตเตอรี่												
6.	16 06 02	ถ่านไฟฉาย												
7.	16 02 15	หลอดไฟฟ้า												
8.	16 02 13	อุปกรณ์ไฟฟ้า, อิเล็กทรอนิกส์												
9.	02 04 81	กระดาษกรองปนเปื้อนสารตะกั่ว												
10.	15 01 11	กระป๋องสีสเปรย์												
11.	17 06 03	ฉนวนใยแก้วกันความร้อน												
12.	15 02 03	เรซิ่นกรองน้ำเชื่อม												
13.	15 02 02	ถังน้ำมันเก่า (ถังเปล่า)												
14.	15 01 02	พลาสติกเก่า,เศษพลาสติก												
15.	12 01 03	เศษเหล็กเก่า												
16.	16 01 03	ยางรถยนต์เก่า												
17.	19 12 04	สายพานเก่า												
18.	16 02 16	สายไฟ/สายไฮดรอลิค												
19.	15 01 02	กระสอบน้ำตาล/ลูกตันเก่า												
20.	15 01 01	เศษกระดาษ,กระดาษลัง												

ผู้บันทึก.....
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ผู้ตรวจสอบ.....
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ผู้อนุมัติ.....
...../...../.....

แบบบันทึกปริมาณขยะ

บริษัท.....ประจำเดือน..... พ.ศ. .....

ลำดับ	รหัสของเสีย	รายการ / ชนิดของวัสดุที่ไม่ใช้แล้ว	ยอดยกมา	วันที่ 12	วันที่ 13	วันที่ 14	วันที่ 15	วันที่ 16	วันที่ 17	วันที่ 18	วันที่ 19	วันที่ 20	วันที่ 21	วันที่ 22
1.	07 06 08	จารบีที่ใช้งานแล้ว												
2.	13 02 08	น้ำมันหล่อลื่นใช้งานแล้ว												
3.	15 02 02	วัสดุปนเปื้อนสารเคมี / สี / น้ำมัน												
4.	15 01 10	ภาชนะปนเปื้อน												
5.	16 06 01	แบตเตอรี่												
6.	16 06 02	ถ่านไฟฉาย												
7.	16 02 15	หลอดไฟฟ้า												
8.	16 02 13	อุปกรณ์ไฟฟ้า, อิเล็กทรอนิกส์												
9.	02 04 81	กระดาษกรองปนเปื้อนสารตะกั่ว												
10.	15 01 11	กระป๋องสีสเปรย์												
11.	17 06 03	ฉนวนใยแก้วกันความร้อน												
12.	15 02 03	เรซิ่นกรองน้ำเชื่อม												
13.	15 02 02	ถังน้ำมันเก่า (ถังเปล่า)												
14.	15 01 02	พลาสติกเก่า,เศษพลาสติก												
15.	12 01 03	เศษเหล็กเก่า												
16.	16 01 03	ยางรถยนต์เก่า												
17.	19 12 04	สายพานเก่า												
18.	16 02 16	สายไฟ/สายไฮดรอลิค												
19.	15 01 02	กระสอบน้ำตาล/ลูกตันเก่า												
20.	15 01 01	เศษกระดาษ,กระดาษลัง												

ผู้บันทึก.....

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ผู้ตรวจสอบ.....

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ผู้อนุมัติ.....

...../...../.....

แบบบันทึกปริมาณขยะ

บริษัท.....ประจำเดือน..... พ.ศ. .....

ลำดับ	รหัสของเสีย	รายการ / ชนิดของวัสดุที่ไม่ใช้แล้ว	ยอดยกมา	วันที่ 23	วันที่ 24	วันที่ 25	วันที่ 26	วันที่ 27	วันที่ 28	วันที่ 29	วันที่ 30	วันที่ 31	ยอดรวม
1.	07 06 08	จารบีที่ใช้งานแล้ว											
2.	13 02 08	น้ำมันหล่อลื่นใช้งานแล้ว											
3.	15 02 02	วัสดุปนเปื้อนสารเคมี / สี / น้ำมัน											
4.	15 01 10	ภาชนะปนเปื้อน											
5.	16 06 01	แบตเตอรี่											
6.	16 06 02	ถ่านไฟฉาย											
7.	16 02 15	หลอดไฟฟ้า											
8.	16 02 13	อุปกรณ์ไฟฟ้า, อิเล็กทรอนิกส์											
9.	02 04 81	กระดาษกรองปนเปื้อนสารตะกั่ว											
10.	15 01 11	กระป๋องสีสเปรย์											
11.	17 06 03	ฉนวนใยแก้วกันความร้อน											
12.	15 02 03	เรซิ่นกรองน้ำเชื่อม											
13.	15 02 02	ถังน้ำมันเก่า (ถังเปล่า)											
14.	15 01 02	พลาสติกเก่า,เศษพลาสติก											
15.	12 01 03	เศษเหล็กเก่า											
16.	16 01 03	ยางรถยนต์เก่า											
17.	19 12 04	สายพานเก่า											
18.	16 02 16	สายไฟ/สายไฮดรอลิค											
19.	15 01 02	กระสอบน้ำตาล/ลูกตันเก่า											
20.	15 01 01	เศษกระดาษ,กระดาษลัง											

ผู้บันทึก..... ผู้ตรวจสอบ..... ผู้อนุมัติ.....

...../...../..... ...../...../..... ...../...../.....

บันทึกการตรวจสอบสถานที่จัดเก็บและคัดแยกขยะ

บริษัท..... ประจำเดือน.....พ.ศ.....

ลำดับ	รายการ	วันที่ตรวจ.....		วันที่ตรวจ.....		วันที่ตรวจ.....		วันที่ตรวจ.....	
		ผลการตรวจ		ผลการตรวจ		ผลการตรวจ		ผลการตรวจ	
		ผ่าน	ไม่ผ่าน	ผ่าน	ไม่ผ่าน	ผ่าน	ไม่ผ่าน	ผ่าน	ไม่ผ่าน
1.	สภาพ Bund ไม่แตกรั่ว								
2.	ผนังอาคาร และหลังคาไม่รั่ว								
3.	พื้นที่จัดเก็บเพียงพอ ต่อการจัดเก็บ								
4.	แสงสว่างภายในอาคารพร้อมใช้งาน								
5.	ป้ายบ่งชี้ประเภทของขยะแต่ละชนิด								
6.	อุปกรณ์ดับเพลิงพร้อมตอบโต้เหตุฉุกเฉิน								
7.	ร่องระบายรอบอาคาร พร้อมใช้งาน								
8.	ภาชนะบรรจุของเสีย ไม่หกรั่วไหล								
9.	การคัดแยกและจัดเก็บถูกประเภท								

<u>หลักเกณฑ์การตรวจสอบ</u>

1.สภาพของ Bund ไม่มีการแตกและรั่ว พร้อมใช้งานกรณีเกิดการหกรั่วไหล

2. ผนังและหลังคาของอาคารคัดแยกขยะ ไม่รั่วซึม พร้อมใช้งาน

3. พื้นที่การจัดเก็บขยะแต่ล่ะประเภทเพียงพอต่อการจัดเก็บไม่ออกมานอกพื้นที่จัดเก็บ

4.แสงสว่างภายในอาคารจัดเก็บพร้อมใช้งาน

5.มีป้ายชี้บ่งขยะแต่ล่ะประเภทพื้นที่จัดเก็บชัดเจน

6.อุปกรณ์ดับเพลิงพร้อมตอบโต้เหตุฉุกเฉิน และตรวจเช็คสภาพถังในเอกสารตรวจเช็ค

7.ร่องระบายน้ำรอบอาคาร ไม่มีสิ่งอุดตันและพร้อมใช้งาน

8.ภาชนะบรรจุของเสีย และภาชนะรองรับพร้อมใช้งานไม่แตกและหกรั่วไหล

9.การคัดแยกขยะถูกประเภทและการจัดเก็บถูกตามป้ายบ่งชี้

ผู้บันทึก..... ผู้ทบทวน..... ผู้อนุมัติ.....(EMR)

แบบบันทึกการตรวจสอบปริมาณขยะหรือวัสดุที่ไม่ใช้แล้ว

บริษัท.....ประจำเดือน..... พ.ศ. .....

ลำดับ	รหัสของเสีย	รายการ / ชนิดของวัสดุที่ไม่ใช้แล้ว	ยอดยกมา	ปริมาณรับเข้า	ปริมาณสะสม	ปริมาณที่ส่งออก	ปริมาณคงเหลือ	เวลาสะสม
1.	07 06 08	จารบีที่ใช้งานแล้ว						
2.	13 02 08	น้ำมันหล่อลื่นใช้งานแล้ว						
3.	15 02 02	วัสดุปนเปื้อนสารเคมี / สี / น้ำมัน						
4.	15 01 10	ภาชนะปนเปื้อน						
5.	16 06 01	แบตเตอรี่						
6.	16 06 02	ถ่านไฟฉาย						
7.	16 02 15	หลอดไฟฟ้า						
8.	16 02 13	อุปกรณ์ไฟฟ้า, อิเล็กทรอนิกส์						
9.	02 04 81	กระดาษกรองปนเปื้อนสารตะกั่ว						
10.	15 01 11	กระป๋องสีสเปรย์						
11.	17 06 03	ฉนวนใยแก้วกันความร้อน						
12.	15 02 03	เรซิ่นกรองน้ำเชื่อม						
13.	15 02 02	ถังน้ำมันเก่า (ถังเปล่า)						
14.	15 01 02	พลาสติกเก่า,เศษพลาสติก						
15.	12 01 03	เศษเหล็กเก่า						
16.	16 01 03	ยางรถยนต์เก่า						
17.	19 12 04	สายพานเก่า						
18.	16 02 16	สายไฟ/สายไฮดรอลิค						
19.	15 01 02	กระสอบน้ำตาล/ลูกตันเก่า						
20.	15 01 01	เศษกระดาษ,กระดาษลัง						

ผู้บันทึก.....

...../...../.....

ผู้ตรวจสอบ.....

...../...../.....

ผู้อนุมัติ.....

...../...../.....

ภาพถ่าย

1. สภาพ Bund ไม่แตกรั่ว		1. สภาพของ Bund ไม่มีการแตกและรั่ว พร้อมใช้งานกรณีเกิดการหกรั่วไหล
2. ผนังอาคารและหลังคาไม่รั่วไหล		2. ผนังและหลังคาของอาคารคัดแยกขยะ ไม่รั่วซึม พร้อมใช้งาน
3. พื้นที่จัดเก็บเพียงพอ ต่อการจัดเก็บ		3. พื้นที่การจัดเก็บขยะแต่ล่ะประเภทเพียงพอต่อการจัดเก็บไม่ออกมานอกพื้นที่จัดเก็บ
4. แสงสว่างในอาคารพร้อมใช้งาน		4. แสงสว่างภายในอาคารจัดเก็บพร้อมใช้งาน
5. ป้ายบ่งชี้ประเภทของขยะแต่ละชนิด		5. มีป้ายชี้บ่งขยะแต่ล่ะประเภทพื้นที่จัดเก็บชัดเจน
6. อุปกรณ์ดับเพลิงพร้อมโต้เหตุฉุกเฉิน		6. อุปกรณ์ดับเพลิงพร้อมตอบโต้เหตุฉุกเฉิน และตรวจเช็คสภาพถังในเอกสารตรวจเช็ค
7. ร่องระบายรอบอาคารพร้อมใช้งาน		7. ร่องระบายน้ำรอบอาคาร ไม่มีสิงอุดตันและพร้อมใช้งาน
8. ภาชนะบรรจุของเสีย ไม่หกรั่วไหล		8. ภาชนะบรรจุของเสีย และภาชนะรองรับพร้อมใช้งานไม่แตกและหกรั่วไหล
9. การคัดแยกและจัดเก็บถูกประเภท		9. การคัดแยกขยะถูกประเภทและการจัดเก็บถูกตามป้ายบ่งชี้

ลงวันที่ .....

ภาคผนวก ข-33

พนักงานท้องถิ่นที่อาศัยในจังหวัดระยอง

เอกสารรายชื่อพนักงานท้องถิ่นของโรงงาน

ทะเบียนประวัติพนักงาน บริษัทฯ ซิลแม็กซ์ ซีลลิ่ง โซลูชั่น จำกัด ปัจจุบัน บริษัทฯ มีพนักงานทั้งหมด 46 คน แบ่งเป็น เพศชาย 20 คน และเพศหญิง 26 คน โดยบริษัทมีพนักงานที่มีที่อยู่อาศัยตามทะเบียนบ้านในจังหวัดระยองทั้งหมด 7 คน จากพนักงานทั้งหมด แบ่งตามอำเภอ ดังนี้

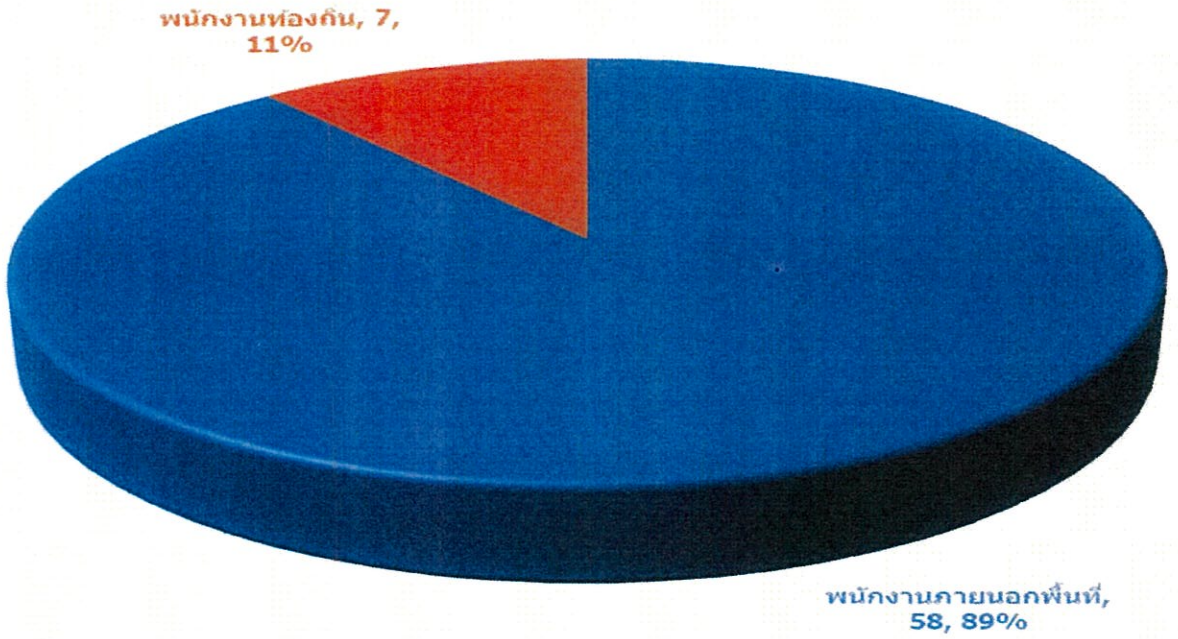
รายการ	จำนวนพนักงาน
อำเภอเมืองระยอง	1
อำเภอบ้านฉาง	-
อำเภอแกลง	-
อำเภอวังจันทร์	-
อำเภอบ้านค่าย	2
อำเภอปลวกแดง	3
อำเภอเขาชะเมา	-
อำเภอนิคมพัฒนา	1

ตารางแสดงผลจำนวนพนักงานท้องถิ่นของโรงงาน

ตารางข้างต้น แสดงจำนวนพนักงานของบริษัทฯ ที่มีที่อยู่อาศัยในจังหวัดระยอง โดยแบ่งจากอำเภอของบริเวณที่อยู่อาศัย ทั้งแล้วมีจำนวน 6 คน โดยไม่แยกเพศชายหรือหญิง และจากพนักงานที่มีท้องถิ่นอยู่ในจังหวัดระยองโดยมากมีที่อยู่อาศัยในอำเภอปลวกแดง ซึ่งเป็นอำเภอที่ตั้งของบริษัทฯ เช่นกัน

GULF

ข้อมูลแสดงจำนวนพนักงานท้องถิ่น



ภาคผนวก ข-34

เอกสารบัญชีแหล่งกำเนิดมลพิษอากาศ

Id	Factory	Plot size (rai)	Stack No.	Source	sampling date	Stack		Exhaust Gas				Pollutant Concentraion						Emission Loading (cal: Q x mg/Nm3/1000)			Emission Loading (cal: kg/d)		
												Lab report			Calculation								
						Dia.	H	T	$T^{1/}$	$V^{1/}$	$Q^{2/}$	TSP	NO_x	SO_2	TSP	NO_x	SO_2	TSP	NO_x	SO_2	TSP	NO_x	SO_2
						(m)	(m)	(Celsius)	(K)	(m/s)	(Nm^3/s)	(mg/m^3)	(ppm)	(ppm)	(mg/Nm^3)	(mg/Nm^3)	(mg/Nm^3)	(g/s)	(g/s)	(g/s)	(kg/day)	(kg/day)	(kg/day)
1	บริษัท กัลฟ์ พีดี จำกัด	483.3	1	ปล่อง HRSG 10	16-Jun-23	8.0	60.0	85.30	358.3	8.80	367.9411	1.74	20.28	0.15	1.74	38.15	0.39	0.64022	14.03865	0.14447	55.31479	1212.9390	12.48201
		483.30																			**55.315**	**1212.939**	**12.482**

พื้นที่ไร่ทั้งหมดของ 1 โรงงาน	483.30
เนื้อที่นิคม	1,144.83

	TSP	NO_x	SO_2
อัตราการระบายมลพิษ (kg/d)	**55.315**	**1212.939**	**12.482**
%	**3.402**	**33.43**	**0.3892**
โควตา	**1,625.97**	**3,628.49**	**3,207.44**

ตารางที่ 1 ผลการตรวจวัดและวิเคราะห์คุณภาพอากาศจากปล่องระบายอากาศ HRSG 10 โครงการโรงไฟฟ้าปลวกแดง (ระยะดำเนินการ) บริษัท กัลฟ์ พีดี จำกัด

วันที่ทำการตรวจวัด : 16 มิถุนายน พ.ศ. 2566
เวลาขณะเก็บตัวอย่าง : 10.50-12.25 น.
ประเภทของแหล่งกำเนิด : การเผาไหม้ของเชื้อเพลิง
ชนิดของเชื้อเพลิง : ก๊าซธรรมชาติ
ลักษณะของปล่อง

ความสูงของปล่อง	60.0	เมตร
เส้นผ่าศูนย์กลางของปล่อง	8.0	เมตร (ณ ตำแหน่งตรวจวัด)
อุณหภูมิภายในปล่อง	85.3	องศาเซลเซียส
ความเร็วของก๊าซภายในปล่อง	26.5	เมตรต่อวินาที
อัตราการไหลของก๊าซภายในปล่อง	58,429	ลูกบาศก์เมตรต่อนาที[1/]
ร้อยละของออกซิเจน	12.2	
ร้อยละของความชื้น	11.4	

พารามิเตอร์ที่ตรวจวัด	ค่าความเข้มข้น[1/]								อัตราการระบาย (กรัมต่อวินาที)	
	ส่วนในล้านส่วน				มิลลิกรัมต่อลูกบาศก์เมตร				ค่าจากการตรวจวัด	ค่าที่กำหนด[2/]
	ผลการตรวจวัด		ค่าที่กำหนด[2/]	ค่ามาตรฐาน[3/]	ผลการตรวจวัด		ค่าที่กำหนด[2/]	ค่ามาตรฐาน[3/]		
	12.2%O_2	7%O_2	7%O_2	7%O_2	12.2%O_2	7%O_2	7%O_2	7%O_2		
ฝุ่นละอองรวม	-	-	-	-	1.74	2.77	20	60	1.69	9.7
ก๊าซซัลเฟอร์ไดออกไซด์	0.15	0.23	10	20	0.38	0.61	26	52	0.37	13.9
ก๊าซออกไซด์ของไนโตรเจน	20.28	32.39	59	120	38.13	60.89	111	226	37.15	58.6
ก๊าซคาร์บอนมอนอกไซด์	0.46	0.74	-	690[4/]	0.53	0.85	-	790[4/]	0.52	-

หมายเหตุ :
1. [1/] ที่สภาวะอากาศแห้ง ความดันมาตรฐาน 760 มิลลิเมตรปรอท อุณหภูมิ 25 องศาเซลเซียส
2. [2/] ค่าที่กำหนดในรายงานการเปลี่ยนแปลงรายละเอียดโครงการโรงไฟฟ้าปลวกแดง (ครั้งที่ 4) พ.ศ. 2564
3. [3/] ค่ามาตรฐานตามประกาศกระทรวงอุตสาหกรรม พ.ศ.2547 เรื่อง กำหนดค่าปริมาณสารเจือปนในอากาศที่ระบายออกจากโรงงานผลิตส่ง หรือจำหน่ายไฟฟ้า และค่ามาตรฐานตามประกาศกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อม พ .ศ.2553 เรื่อง กำหนดมาตรฐานควบคุมการปล่อยทิ้งอากาศเสียจากโรงไฟฟ้าใหม่
4. [4/] ค่ามาตรฐานตามประกาศกระทรวงอุตสาหกรรม พ.ศ.2549 เรื่อง กำหนดค่าปริมาณของสารเจือปนในอากาศที่ระบายออกจากโรงงาน และค่ามาตรฐานตามประกาศกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อม พ .ศ.2549 เรื่อง กำหนดมาตรฐานควบคุมการปล่อยทิ้งอากาศเสียจากโรงงานอุตสาหกรรม

ภาพถ่ายการตรวจวัดคุณภาพอากาศจากปล่องระบายอากาศ

โครงการโรงไฟฟ้าปลวกแดง (ระยะดำเนินการ) บริษัท กัลฟ์ พีดี จำกัด

วันที่ 16 มิถุนายน พ.ศ. 2566

ตำแหน่งตรวจวัด	ภาพถ่ายประกอบ
1. ปล่องระบายมลสารของหน่วยการผลิตที่ 1 (Block 1) : HRSG 10 (733646E, 1433134N)	 

ภาคผนวก ค

ใบรับรองผลการตรวจวิเคราะห์

ภาคผนวก ค-01

คุณภาพอากาศในบรรยากาศโดยทั่วไป

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338618
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2614702-1

Sample Description Air Quality
Location วัดมาบยางพร (A1) (GPS 47P 0732270, 1436522)
Date Analysis Commenced May 19, 2023
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2338618-1	May 06 - May 07, 2023	0.040	0.026	757	31
2338618-2	May 07 - May 08, 2023	0.043	0.035	757	31
2338618-3	May 08 - May 09, 2023	0.059	0.031	757	33
2338618-4	May 09 - May 10, 2023	0.046	0.042	757	33
2338618-5	May 10 - May 11, 2023	0.055	0.031	757	30
2338618-6	May 11 - May 12, 2023	0.026	0.021	757	30
2338618-7	May 12 - May 13, 2023	0.033	0.030	757	31
Guideline		0.33	0.12	-	-

Reference Method
Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Metter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Satcha Phetsawaeng

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

Approved by ThanitaK.
Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338618
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2614702-2

Sample Description Air Quality
Location บ้านวังตาฝิ่น (A2) (GPS 47P 0735931, 1436159)
Date Analysis Commenced May 19, 2023
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2338618-8	May 06 - May 07, 2023	0.068	0.040	757	31
2338618-9	May 07 - May 08, 2023	0.104	0.052	757	31
2338618-10	May 08 - May 09, 2023	0.079	0.054	757	33
2338618-11	May 09 - May 10, 2023	0.040	0.018	757	33
2338618-12	May 10 - May 11, 2023	0.052	0.031	757	30
2338618-13	May 11 - May 12, 2023	0.039	0.020	757	30
2338618-14	May 12 - May 13, 2023	0.070	0.044	757	31
Guideline		0.33	0.12	-	-

Reference Method
Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Metter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Satcha Phetsawaeng

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

Approved by ThanitaK.
Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338618
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2614702-3

Sample Description Air Quality
Location วัดประสิทธิ์ธาราม (A3) (GPS 47P 0731870, 1430333)
Date Analysis Commenced May 19, 2023
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2338618-15	May 06 - May 07, 2023	0.026	0.022	757	31
2338618-16	May 07 - May 08, 2023	0.036	0.032	757	31
2338618-17	May 08 - May 09, 2023	0.033	0.029	757	33
2338618-18	May 09 - May 10, 2023	0.028	0.021	757	33
2338618-19	May 10 - May 11, 2023	0.047	0.039	757	30
2338618-20	May 11 - May 12, 2023	0.022	0.016	757	30
2338618-21	May 12 - May 13, 2023	0.027	0.021	757	31
Guideline		0.33	0.12	-	-

Reference Method
Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Metter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Satcha Phetsawaeng

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

Approved by ThanitaK.
Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338618
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2614702-4

Sample Description Air Quality
Location วัดวังประตู (A4) (GPS 47P 0736656, 1430554)
Date Analysis Commenced May 19, 2023
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2338618-22	May 06 - May 07, 2023	0.052	0.035	757	31
2338618-23	May 07 - May 08, 2023	0.058	0.039	757	31
2338618-24	May 08 - May 09, 2023	0.055	0.036	757	33
2338618-25	May 09 - May 10, 2023	0.057	0.023	757	33
2338618-26	May 10 - May 11, 2023	0.049	0.032	757	30
2338618-27	May 11 - May 12, 2023	0.053	0.024	757	30
2338618-28	May 12 - May 13, 2023	0.046	0.028	757	31
Guideline		0.33	0.12	-	-

Reference Method
Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Metter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Satcha Phetsawaeng

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

Approved by ThanitaK.
Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338613
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2614670-1

Sample Description Air Quality
Location วัดมาบยางพร (A1)
(GPS 47P 0732270, 1436522)
Parameter Nitrogen dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338613-1 May 06, 2023	2338613-2 May 07, 2023	2338613-3 May 08, 2023	2338613-4 May 09, 2023	2338613-5 May 10, 2023	2338613-6 May 11, 2023	2338613-7 May 12, 2023
11:00 AM - 12:00 PM	0.011	0.011	0.010	0.007	0.007	0.008	0.009
12:00 PM - 01:00 PM	0.012	0.011	0.009	0.008	0.007	0.011	0.008
01:00 PM - 02:00 PM	0.011	0.010	0.010	0.007	0.007	0.012	0.008
02:00 PM - 03:00 PM	0.012	0.008	0.009	0.007	0.007	0.011	0.008
03:00 PM - 04:00 PM	0.011	0.007	0.008	0.010	0.006	0.009	0.008
04:00 PM - 05:00 PM	0.010	0.008	0.008	0.012	0.006	0.011	0.011
05:00 PM - 06:00 PM	0.010	0.010	0.008	0.011	0.006	0.010	0.010
06:00 PM - 07:00 PM	0.011	0.008	0.007	0.009	0.006	0.007	0.012
07:00 PM - 08:00 PM	0.011	0.010	0.007	0.012	0.006	0.009	0.007
08:00 PM - 09:00 PM	0.009	0.011	0.006	0.012	0.006	0.008	0.007
09:00 PM - 10:00 PM	0.009	0.009	0.007	0.014	0.006	0.009	0.008
10:00 PM - 11:00 PM	0.009	0.007	0.007	0.017	0.006	0.007	0.008
11:00 PM - 12:00 AM	0.010	0.007	0.007	0.016	0.006	0.007	0.007
12:00 AM - 01:00 AM	0.010	0.007	0.007	0.016	0.006	0.008	0.007
01:00 AM - 02:00 AM	0.009	0.015	0.008	0.016	0.007	0.010	0.007
02:00 AM - 03:00 AM	0.010	0.019	0.007	0.014	0.007	0.014	0.008
03:00 AM - 04:00 AM	0.010	0.014	0.008	0.012	0.008	0.013	0.009
04:00 AM - 05:00 AM	0.014	0.013	0.012	0.011	0.008	0.019	0.009
05:00 AM - 06:00 AM	0.017	0.011	0.015	0.011	0.009	0.023	0.008
06:00 AM - 07:00 AM	0.014	0.012	0.015	0.010	0.010	0.016	0.007
07:00 AM - 08:00 AM	0.010	0.012	0.012	0.009	0.008	0.013	0.008
08:00 AM - 09:00 AM	0.011	0.011	0.010	0.009	0.008	0.011	0.006
09:00 AM - 10:00 AM	0.013	0.010	0.009	0.008	0.008	0.011	0.007
10:00 AM - 11:00 AM	0.009	0.010	0.007	0.007	0.008	0.011	0.007
Average	0.011	0.011	0.009	0.011	0.007	0.011	0.008
1hr - Maximum	0.017	0.019	0.015	0.017	0.010	0.023	0.012
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 EPAMethod Part 50 App. F (Chemiluminescence)

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338613
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2658631-1

Sample Description Air Quality
Location บ้านวังตาผิน (A2)
(GPS 47P 0735931, 1436159)
Parameter Nitrogen dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338613-8 May 06, 2023	2338613-9 May 07, 2023	2338613-10 May 08, 2023	2338613-11 May 09, 2023	2338613-12 May 10, 2023	2338613-13 May 11, 2023	2338613-14 May 12, 2023
12:00 PM - 01:00 PM	0.006	0.005	0.007	0.006	0.006	0.006	0.002
01:00 PM - 02:00 PM	0.006	0.005	0.006	0.008	0.006	0.005	0.001
02:00 PM - 03:00 PM	0.006	0.005	0.006	0.005	0.005	0.005	0.002
03:00 PM - 04:00 PM	0.006	0.006	0.005	0.005	0.005	0.005	0.002
04:00 PM - 05:00 PM	0.005	0.006	0.005	0.005	0.005	0.005	0.003
05:00 PM - 06:00 PM	0.005	0.007	0.006	0.005	0.005	0.005	0.002
06:00 PM - 07:00 PM	0.005	0.005	0.005	0.005	0.006	0.005	0.002
07:00 PM - 08:00 PM	0.005	0.005	0.005	0.005	0.005	0.005	0.002
08:00 PM - 09:00 PM	0.006	0.005	0.005	0.005	0.005	0.005	0.004
09:00 PM - 10:00 PM	0.006	0.006	0.006	0.005	0.005	0.005	<0.001
10:00 PM - 11:00 PM	0.005	0.006	0.006	0.006	0.005	0.005	0.002
11:00 PM - 12:00 AM	0.006	0.006	0.006	0.006	0.005	0.005	0.002
12:00 AM - 01:00 AM	0.006	0.006	0.006	0.006	0.005	0.006	0.002
01:00 AM - 02:00 AM	0.006	0.006	0.006	0.006	0.005	0.006	0.001
02:00 AM - 03:00 AM	0.006	0.006	0.006	0.006	0.005	0.005	0.002
03:00 AM - 04:00 AM	0.006	0.006	0.006	0.006	0.005	0.006	0.004
04:00 AM - 05:00 AM	0.006	0.006	0.007	0.006	0.006	0.006	0.001
05:00 AM - 06:00 AM	0.006	0.006	0.008	0.006	0.007	0.006	0.003
06:00 AM - 07:00 AM	0.006	0.006	0.006	0.006	0.006	0.006	<0.001
07:00 AM - 08:00 AM	0.006	0.006	0.006	0.006	0.006	0.006	0.002
08:00 AM - 09:00 AM	0.006	0.006	0.006	0.006	0.006	0.006	0.002
09:00 AM - 10:00 AM	0.006	0.006	0.007	0.007	0.006	0.007	0.002
10:00 AM - 11:00 AM	0.006	0.007	0.007	0.008	0.007	0.006	0.004
11:00 AM - 12:00 PM	0.006	0.006	0.006	0.006	0.006	0.005	0.002
Average	0.006	0.006	0.006	0.006	0.005	0.006	0.002
1hr - Maximum	0.006	0.007	0.008	0.008	0.007	0.007	0.004
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 EPAMethod Part 50 App. F (Chemiluminescence)

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338613
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2658637-1

Sample Description Air Quality
Location วัดประสิทธิ์ธาราม (A3)
(GPS 47P 0731870, 1430333)
Parameter Nitrogen dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338613-15 May 06, 2023	2338613-16 May 07, 2023	2338613-17 May 08, 2023	2338613-18 May 09, 2023	2338613-19 May 10, 2023	2338613-20 May 11, 2023	2338613-21 May 12, 2023
11:00 AM - 12:00 PM	0.006	0.003	0.006	0.003	0.004	0.003	0.004
12:00 PM - 01:00 PM	0.021	0.005	0.013	0.009	0.004	0.006	0.011
01:00 PM - 02:00 PM	0.001	0.004	0.008	0.006	0.004	0.003	0.006
02:00 PM - 03:00 PM	0.006	0.004	0.007	0.005	0.004	0.007	0.013
03:00 PM - 04:00 PM	0.010	0.005	0.015	0.016	0.012	0.031	0.038
04:00 PM - 05:00 PM	0.006	0.002	0.006	0.008	0.009	0.009	0.015
05:00 PM - 06:00 PM	0.008	0.011	0.011	0.014	0.010	0.012	0.021
06:00 PM - 07:00 PM	0.032	0.013	0.020	0.019	0.018	0.030	0.016
07:00 PM - 08:00 PM	0.010	0.008	0.010	0.009	0.007	0.012	0.021
08:00 PM - 09:00 PM	0.011	0.010	0.012	0.009	0.008	0.010	0.020
09:00 PM - 10:00 PM	0.026	0.022	0.022	0.020	0.018	0.025	0.013
10:00 PM - 11:00 PM	0.011	0.009	0.009	0.007	0.006	0.009	0.013
11:00 PM - 12:00 AM	0.007	0.007	0.008	0.006	0.006	0.010	0.009
12:00 AM - 01:00 AM	0.009	0.010	0.010	0.010	0.013	0.013	0.018
01:00 AM - 02:00 AM	0.007	0.007	0.006	0.006	0.008	0.005	0.010
02:00 AM - 03:00 AM	0.008	0.007	0.006	0.006	0.006	0.006	0.010
03:00 AM - 04:00 AM	0.018	0.016	0.018	0.014	0.015	0.024	0.031
04:00 AM - 05:00 AM	0.009	0.008	0.007	0.007	0.006	0.010	0.011
05:00 AM - 06:00 AM	0.007	0.008	0.007	0.007	0.008	0.011	0.010
06:00 AM - 07:00 AM	0.011	0.011	0.010	0.011	0.010	0.014	0.020
07:00 AM - 08:00 AM	0.005	0.006	0.006	0.007	0.003	0.005	0.008
08:00 AM - 09:00 AM	0.004	0.007	0.003	0.004	0.004	0.006	0.005
09:00 AM - 10:00 AM	0.007	0.011	0.015	0.008	0.009	0.012	0.013
10:00 AM - 11:00 AM	0.004	0.003	0.006	0.003	0.003	0.006	0.003
Average	0.010	0.008	0.010	0.009	0.008	0.012	0.014
1hr - Maximum	0.032	0.022	0.022	0.020	0.018	0.031	0.038
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 EPAMethod Part 50 App. F (Chemiluminescence)

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338613
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2658638-1

Sample Description Air Quality
Location วัดวังประดู่ (A4)
(GPS 47P 0736656, 1430554)
Parameter Nitrogen dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338613-22 May 06, 2023	2338613-23 May 07, 2023	2338613-24 May 08, 2023	2338613-25 May 09, 2023	2338613-26 May 10, 2023	2338613-27 May 11, 2023	2338613-28 May 12, 2023
10:00 AM - 11:00 AM	0.006	0.004	0.003	0.011	0.004	0.005	0.005
11:00 AM - 12:00 PM	0.008	0.010	0.004	0.009	0.005	0.005	0.007
12:00 PM - 01:00 PM	0.007	0.008	0.007	0.007	0.008	0.005	0.014
01:00 PM - 02:00 PM	0.008	0.009	0.020	0.010	0.006	0.008	0.017
02:00 PM - 03:00 PM	0.010	0.012	0.007	0.008	0.003	0.014	0.016
03:00 PM - 04:00 PM	0.011	0.010	0.004	0.008	0.008	0.014	0.016
04:00 PM - 05:00 PM	0.012	0.010	0.003	0.010	0.004	0.014	0.014
05:00 PM - 06:00 PM	0.010	0.006	0.005	0.011	0.010	0.012	0.010
06:00 PM - 07:00 PM	0.010	0.007	0.004	0.008	0.005	0.009	0.008
07:00 PM - 08:00 PM	0.008	0.011	0.010	0.005	0.004	0.009	0.006
08:00 PM - 09:00 PM	0.005	0.015	0.008	0.010	0.004	0.008	0.006
09:00 PM - 10:00 PM	0.006	0.014	0.013	0.006	0.004	0.007	0.005
10:00 PM - 11:00 PM	0.008	0.018	0.011	0.008	0.007	0.007	0.005
11:00 PM - 12:00 AM	0.009	0.024	0.011	0.008	0.009	0.005	0.004
12:00 AM - 01:00 AM	0.010	0.028	0.016	0.013	0.013	0.004	0.005
01:00 AM - 02:00 AM	0.010	0.036	0.017	0.018	0.013	0.005	0.004
02:00 AM - 03:00 AM	0.010	0.010	0.014	0.019	0.020	0.006	0.006
03:00 AM - 04:00 AM	0.006	0.005	0.018	0.022	0.017	0.016	0.018
04:00 AM - 05:00 AM	0.008	0.005	0.019	0.030	0.020	0.010	0.011
05:00 AM - 06:00 AM	0.006	0.005	0.007	0.009	0.008	0.007	0.008
06:00 AM - 07:00 AM	0.006	0.006	0.006	0.008	0.007	0.006	0.002
07:00 AM - 08:00 AM	0.007	0.006	0.004	0.006	0.006	0.006	0.006
08:00 AM - 09:00 AM	0.005	0.007	0.006	0.005	0.006	0.004	0.012
09:00 AM - 10:00 AM	0.006	0.006	0.005	0.004	0.005	0.005	0.011
Average	0.008	0.011	0.009	0.011	0.008	0.008	0.009
1hr - Maximum	0.012	0.036	0.020	0.030	0.020	0.016	0.018
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 EPAMethod Part 50 App. F (Chemiluminescence)

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338615
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2614676-1

Sample Description Air Quality
Location วัดมาบยางพร (A1)
(GPS 47P 0732270, 1436522)
Parameter Sulfur Dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338615-1 May 06, 2023	2338615-2 May 07, 2023	2338615-3 May 08, 2023	2338615-4 May 09, 2023	2338615-5 May 10, 2023	2338615-6 May 11, 2023	2338615-7 May 12, 2023
11:00 AM - 12:00 PM	0.002	0.002	0.004	0.002	0.002	0.003	0.002
12:00 PM - 01:00 PM	0.002	0.002	0.003	0.002	0.002	0.003	0.002
01:00 PM - 02:00 PM	0.003	0.002	0.002	0.002	0.002	0.003	0.002
02:00 PM - 03:00 PM	0.002	0.002	0.002	0.002	0.002	0.003	0.002
03:00 PM - 04:00 PM	0.002	0.002	0.002	0.002	0.002	0.003	0.002
04:00 PM - 05:00 PM	0.002	0.002	0.002	0.002	0.002	0.003	0.002
05:00 PM - 06:00 PM	0.002	0.003	0.002	0.002	0.002	0.003	0.002
06:00 PM - 07:00 PM	0.002	0.003	0.002	0.002	0.002	0.003	0.002
07:00 PM - 08:00 PM	0.002	0.003	0.002	0.002	0.003	0.003	0.002
08:00 PM - 09:00 PM	0.002	0.003	0.002	0.002	0.002	0.003	0.002
09:00 PM - 10:00 PM	0.002	0.004	0.002	0.002	0.002	0.003	0.002
10:00 PM - 11:00 PM	0.002	0.004	0.002	0.002	0.002	0.003	0.002
11:00 PM - 12:00 AM	0.002	0.004	0.002	0.002	0.002	0.003	0.002
12:00 AM - 01:00 AM	0.002	0.004	0.002	0.002	0.002	0.003	0.002
01:00 AM - 02:00 AM	0.002	0.004	0.002	0.002	0.002	0.003	0.002
02:00 AM - 03:00 AM	0.002	0.004	0.002	0.002	0.003	0.003	0.002
03:00 AM - 04:00 AM	0.002	0.003	0.002	0.003	0.003	0.003	0.002
04:00 AM - 05:00 AM	0.002	0.002	0.002	0.003	0.003	0.003	0.002
05:00 AM - 06:00 AM	0.002	0.002	0.003	0.003	0.003	0.003	0.002
06:00 AM - 07:00 AM	0.002	0.002	0.003	0.003	0.004	0.003	0.003
07:00 AM - 08:00 AM	0.002	0.002	0.002	0.002	0.004	0.003	0.003
08:00 AM - 09:00 AM	0.002	0.003	0.002	0.002	0.004	0.002	0.003
09:00 AM - 10:00 AM	0.002	0.003	0.002	0.002	0.004	0.002	0.002
10:00 AM - 11:00 AM	0.002	0.003	0.002	0.002	0.002	0.002	0.002
Average	0.002	0.003	0.002	0.002	0.003	0.003	0.002
1hr - Maximum	0.003	0.004	0.004	0.003	0.004	0.003	0.003
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338615
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2658639-1

Sample Description Air Quality
Location บ้านวังตาฝิ่น (A2)
(GPS 47P 0735931, 1436159)
Parameter Sulfur Dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338615-8 May 06, 2023	2338615-9 May 07, 2023	2338615-10 May 08, 2023	2338615-11 May 09, 2023	2338615-12 May 10, 2023	2338615-13 May 11, 2023	2338615-14 May 12, 2023
12:00 PM - 01:00 PM	0.004	0.004	0.005	0.004	0.004	0.005	0.004
01:00 PM - 02:00 PM	0.002	0.004	0.005	0.004	0.004	0.005	0.005
02:00 PM - 03:00 PM	0.005	0.002	0.005	0.005	0.005	0.004	0.004
03:00 PM - 04:00 PM	0.006	0.005	0.005	0.004	0.004	0.004	0.005
04:00 PM - 05:00 PM	0.005	0.005	0.005	0.005	0.004	0.004	0.004
05:00 PM - 06:00 PM	0.004	0.005	0.005	0.007	0.004	0.004	0.004
06:00 PM - 07:00 PM	0.004	0.004	0.005	0.004	0.004	0.004	0.004
07:00 PM - 08:00 PM	0.004	0.005	0.005	0.005	0.004	0.004	0.004
08:00 PM - 09:00 PM	0.004	0.005	0.004	0.005	0.004	0.004	0.004
09:00 PM - 10:00 PM	0.004	0.005	0.004	0.004	0.004	0.004	0.004
10:00 PM - 11:00 PM	0.005	0.005	0.005	0.005	0.004	0.004	0.004
11:00 PM - 12:00 AM	0.005	0.005	0.004	0.004	0.004	0.004	0.004
12:00 AM - 01:00 AM	0.004	0.005	0.004	0.005	0.004	0.004	0.004
01:00 AM - 02:00 AM	0.004	0.005	0.005	0.005	0.004	0.004	0.004
02:00 AM - 03:00 AM	0.004	0.005	0.005	0.005	0.004	0.004	0.004
03:00 AM - 04:00 AM	0.004	0.004	0.004	0.005	0.005	0.004	0.004
04:00 AM - 05:00 AM	0.004	0.004	0.005	0.005	0.004	0.004	0.004
05:00 AM - 06:00 AM	0.004	0.004	0.005	0.005	0.005	0.004	0.004
06:00 AM - 07:00 AM	0.004	0.004	0.004	0.005	0.005	0.004	0.004
07:00 AM - 08:00 AM	0.004	0.004	0.005	0.005	0.004	0.004	0.004
08:00 AM - 09:00 AM	0.004	0.004	0.004	0.004	0.004	0.005	0.004
09:00 AM - 10:00 AM	0.004	0.004	0.004	0.004	0.005	0.004	0.004
10:00 AM - 11:00 AM	0.004	0.004	0.005	0.004	0.004	0.005	0.004
11:00 AM - 12:00 PM	0.004	0.005	0.005	0.004	0.004	0.004	0.004
Average	0.004	0.005	0.005	0.005	0.004	0.004	0.004
1hr - Maximum	0.006	0.005	0.005	0.007	0.005	0.005	0.005
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338615
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2658640-1

Sample Description Air Quality
Location วัดประสิทธิ์ธาราม (A3)
(GPS 47P 0731870, 1430333)
Parameter Sulfur Dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338615-15 May 06, 2023	2338615-16 May 07, 2023	2338615-17 May 08, 2023	2338615-18 May 09, 2023	2338615-19 May 10, 2023	2338615-20 May 11, 2023	2338615-21 May 12, 2023
11:00 AM - 12:00 PM	0.004	0.005	0.006	0.003	0.003	0.003	0.004
12:00 PM - 01:00 PM	0.004	0.004	0.006	0.003	0.003	0.003	0.004
01:00 PM - 02:00 PM	0.003	0.004	0.006	0.003	0.003	0.003	0.004
02:00 PM - 03:00 PM	0.003	0.004	0.006	0.003	0.003	0.003	0.004
03:00 PM - 04:00 PM	0.003	0.003	0.005	0.003	0.003	0.003	0.004
04:00 PM - 05:00 PM	0.003	0.003	0.005	0.003	0.003	0.003	0.005
05:00 PM - 06:00 PM	0.003	0.003	0.005	0.003	0.003	0.003	0.004
06:00 PM - 07:00 PM	0.003	0.003	0.005	0.003	0.003	0.003	0.004
07:00 PM - 08:00 PM	0.003	0.004	0.005	0.003	0.003	0.003	0.004
08:00 PM - 09:00 PM	0.003	0.007	0.004	0.003	0.003	0.003	0.004
09:00 PM - 10:00 PM	0.003	0.004	0.004	0.003	0.003	0.003	0.004
10:00 PM - 11:00 PM	0.003	0.006	0.004	0.003	0.003	0.003	0.004
11:00 PM - 12:00 AM	0.003	0.006	0.004	0.003	0.003	0.003	0.004
12:00 AM - 01:00 AM	0.003	0.007	0.004	0.003	0.003	0.003	0.004
01:00 AM - 02:00 AM	0.003	0.007	0.004	0.003	0.003	0.003	0.004
02:00 AM - 03:00 AM	0.003	0.004	0.004	0.003	0.003	0.003	0.004
03:00 AM - 04:00 AM	0.003	0.006	0.003	0.003	0.003	0.003	0.005
04:00 AM - 05:00 AM	0.003	0.009	0.003	0.003	0.003	0.003	0.004
05:00 AM - 06:00 AM	0.004	0.009	0.003	0.003	0.003	0.003	0.003
06:00 AM - 07:00 AM	0.005	0.009	0.003	0.003	0.003	0.003	0.003
07:00 AM - 08:00 AM	0.004	0.012	0.003	0.003	0.003	0.003	0.003
08:00 AM - 09:00 AM	0.003	0.008	0.003	0.003	0.003	0.003	0.003
09:00 AM - 10:00 AM	0.003	0.008	0.003	0.003	0.003	0.003	0.003
10:00 AM - 11:00 AM	0.005	0.007	0.003	0.003	0.003	0.003	0.003
Average	0.003	0.006	0.004	0.003	0.003	0.003	0.004
1hr - Maximum	0.005	0.012	0.006	0.003	0.003	0.003	0.005
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID: 2338615
Date Received : May 16, 2023
Date Reported : May 22, 2023
Report Number: 2658641-1

Sample Description Air Quality
Location วัดวังประดู่ (A4)
(GPS 47P 0736656, 1430554)
Parameter Sulfur Dioxide (ppm)
Measurement Date May 06, 2023 - May 13, 2023
Measurement by Satcha Phetsawaeng

Time	2338615-22 May 06, 2023	2338615-23 May 07, 2023	2338615-24 May 08, 2023	2338615-25 May 09, 2023	2338615-26 May 10, 2023	2338615-27 May 11, 2023	2338615-28 May 12, 2023
10:00 AM - 11:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.004
11:00 AM - 12:00 PM	0.003	0.003	0.003	0.003	0.003	0.005	0.003
12:00 PM - 01:00 PM	0.007	0.003	0.003	0.003	0.004	0.006	0.001
01:00 PM - 02:00 PM	0.003	0.003	0.003	0.003	0.004	0.007	0.001
02:00 PM - 03:00 PM	0.003	0.003	0.003	0.003	0.004	0.007	0.002
03:00 PM - 04:00 PM	0.003	0.003	0.003	0.003	0.004	0.005	0.002
04:00 PM - 05:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.002
05:00 PM - 06:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
06:00 PM - 07:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
07:00 PM - 08:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
08:00 PM - 09:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
09:00 PM - 10:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
10:00 PM - 11:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
11:00 PM - 12:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
12:00 AM - 01:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
01:00 AM - 02:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
02:00 AM - 03:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
03:00 AM - 04:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
04:00 AM - 05:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
05:00 AM - 06:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
06:00 AM - 07:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
07:00 AM - 08:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
08:00 AM - 09:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
09:00 AM - 10:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
Average	0.003	0.003	0.003	0.003	0.003	0.004	0.003
1hr - Maximum	0.007	0.003	0.003	0.003	0.004	0.007	0.004
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

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Approved by Orawan R.
Orawan Rakyong
Scientist (3)

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID : 2338617
Date Received : May 16, 2023
Date Reported : May 24, 2023
Report Number : 2614697-1

Sample Number 2338617-1 to 7
Parameter Wind Speed / Wind Direction
Location วัตถังประธู (GPS 47P 0736656, 1430554)
Sampling Date May 06 - May 13, 2023
Sampling by Satcha Phetsawaeng

Time	May 06 - May 07, 2023		May 07 - May 08, 2023		May 08 - May 09, 2023		May 09 - May 10, 2023		May 10 - May 11, 2023		May 11 - May 12, 2023		May 12 - May 13, 2023	
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)
10:00 AM - 11:00 AM	1.1	219.0 SW	0.4	151.0 SSE	0.5	167.0 SSE	0.6	248.0 WSW	0.9	230.0 SW	4.8	127.0 SE	0.4	134.0 SE
11:00 AM - 12:00 PM	1.0	289.0 WNW	0.6	213.0 SSW	3.6	65.0 ENE	2.3	133.0 SE	1.9	227.0 SW	3.4	127.0 SE	1.1	93.0 E
12:00 PM - 01:00 PM	0.6	229.0 SW	4.0	118.0 ESE	4.8	96.0 E	0.7	146.0 SE	1.2	312.0 NW	3.4	104.0 ESE	2.8	106.0 ESE
01:00 PM - 02:00 PM	1.1	248.0 WSW	3.3	97.0 E	3.2	78.0 ENE	1.7	201.0 SSW	0.9	9.0 N	3.2	150.0 SSE	1.2	191.0 S
02:00 PM - 03:00 PM	1.3	241.0 WSW	0.9	256.0 WSW	1.9	124.0 SE	3.3	143.0 SE	1.1	350.0 N	1.6	114.0 ESE	2.4	137.0 SE
03:00 PM - 04:00 PM	1.1	130.0 SE	3.1	109.0 ESE	1.5	136.0 SE	1.4	138.0 SE	1.0	211.0 SSW	2.6	146.0 SE	3.0	155.0 SSE
04:00 PM - 05:00 PM	1.7	102.0 ESE	3.2	133.0 SE	1.2	100.0 E	0.0	- -	0.0	- -	3.2	125.0 SE	2.0	80.0 E
05:00 PM - 06:00 PM	1.2	94.0 E	4.0	100.0 E	1.1	41.0 NE	1.6	214.0 SW	0.0	- -	3.2	141.0 SE	1.1	112.0 ESE
06:00 PM - 07:00 PM	3.3	118.0 ESE	3.8	85.0 E	0.9	36.0 NE	0.8	225.0 SW	0.0	- -	3.0	101.0 E	1.2	43.0 NE
07:00 PM - 08:00 PM	2.0	94.0 E	1.1	102.0 ESE	1.5	51.0 NE	0.2	- -	0.0	- -	3.2	56.0 NE	1.2	22.0 NNE
08:00 PM - 09:00 PM	2.3	106.0 ESE	3.8	88.0 E	1.3	92.0 E	0.0	- -	0.0	- -	2.2	38.0 NE	1.5	73.0 ENE
09:00 PM - 10:00 PM	0.7	124.0 SE	1.8	121.0 ESE	2.9	88.0 E	0.0	- -	0.0	- -	1.7	37.0 NE	0.4	55.0 NE
10:00 PM - 11:00 PM	1.4	137.0 SE	2.5	105.0 ESE	1.5	92.0 E	0.3	291.0 WNW	0.3	193.0 SSW	1.7	151.0 SSE	1.4	76.0 ENE
11:00 PM - 12:00 AM	0.7	131.0 SE	3.3	135.0 SE	1.4	81.0 E	2.1	16.0 NNE	0.5	195.0 SSW	0.3	151.0 SSE	1.5	118.0 ESE
12:00 AM - 01:00 AM	1.1	125.0 SE	1.5	118.0 ESE	1.2	74.0 ENE	1.2	137.0 SE	0.7	196.0 SSW	0.0	- -	1.2	100.0 E
01:00 AM - 02:00 AM	0.9	134.0 SE	0.6	133.0 SE	0.8	49.0 NE	0.7	98.0 E	0.7	195.0 SSW	0.2	- -	2.0	359.0 N
02:00 AM - 03:00 AM	1.6	132.0 SE	0.0	- -	0.0	- -	0.4	359.0 N	1.1	0.0 N	0.2	- -	2.3	69.0 ENE
03:00 AM - 04:00 AM	0.8	79.0 E	0.3	56.0 NE	0.7	8.0 N	1.1	119.0 ESE	1.4	351.0 N	0.0	- -	2.1	114.0 ESE
04:00 AM - 05:00 AM	0.0	- -	0.5	355.0 N	0.4	292.0 WNW	0.0	- -	1.4	317.0 NW	0.3	359.0 N	0.5	121.0 ESE
05:00 AM - 06:00 AM	0.0	- -	0.7	51.0 NE	0.0	- -	0.8	106.0 ESE	1.7	289.0 WNW	0.9	10.0 N	1.3	123.0 ESE
06:00 AM - 07:00 AM	1.3	128.0 SE	0.6	118.0 ESE	0.8	5.0 N	1.1	101.0 E	0.8	289.0 WNW	1.2	99.0 E	1.2	125.0 SE
07:00 AM - 08:00 AM	1.9	209.0 SSW	2.3	130.0 SE	0.7	27.0 NNE	0.8	119.0 ESE	1.9	109.0 ESE	1.6	74.0 ENE	1.3	146.0 SE
08:00 AM - 09:00 AM	0.1	- -	2.2	116.0 ESE	1.4	103.0 ESE	2.0	229.0 SW	2.8	92.0 E	0.9	13.0 NNE	2.3	103.0 ESE
09:00 AM - 10:00 AM	0.3	122.0 ESE	2.7	100.0 E	0.9	30.0 NNE	0.5	235.0 SW	3.8	84.0 E	0.6	262.0 W	2.1	273.0 W

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by
Sarayuth Jittranont
Assistant General Manager

Analysis / Test Report

Client : Rojana Industrial Park Rayong 2 Co., Ltd.
54/5 Moo 1, Map Yang Phon, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Pluak Daeng
Project Location :

Lot ID : 2338617
Date Received : May 16, 2023
Date Reported : May 24, 2023
Report Number : 2614697-1

Wind Rose



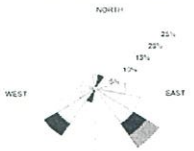
Date : May 06-07, 2023



Date : May 07-08, 2023



Date : May 08-09, 2023



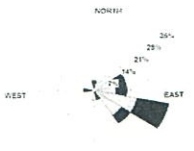
Date : May 09-10, 2023



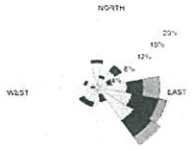
Date : May 10-11, 2023



Date : May 11-12, 2023



Date : May 12-13, 2023



Date : May 06-13, 2023

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	8.33
1.7-3.3	23.81
0.3-1.7	55.36
Calms	12.50

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Approved by
Sarayuth Jittranont
Assistant General Manager

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ภาคผนวก ค-02

คุณภาพน้ำเสียก่อนเข้าระบบส่วนกลางทางชีวภาพ
ของสวนอุตสาหกรรมปลวกแดง
และคุณภาพน้ำทิ้งภายหลังผ่านการบำบัดแล้ว

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547360-1 Rev. No.1

Sample Number	234003-1
Sampled Date	Jan 12, 2023 11:30 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jan 12, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	51	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	62	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	62	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	1.4	≤1.0	Wastewater Analysis	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 C	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547360-1 Rev. No.1

Sample Number	234003-1
Sampled Date	Jan 12, 2023 11:30 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jan 12, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	244	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	49.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Note : This Analysis test report is reissued to supersede report No.2547360-1, Date Reported : Jan 20, 2023 due to revise client information.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547360-2 Rev. No.1

Sample Number	234003-1
Sampled Date	Jan 12, 2023 11:30 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.13	≤1.00	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	Not Detected	≤0.03	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	0.004	≤2.00	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	0.003	0.01	Not Detected	≤0.25	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	0.0008	≤0.20	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	0.09	≤5.00	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547360-2 Rev. No.1

Sample Number	234003-1
Sampled Date	Jan 12, 2023 11:30 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.03	≤1.00	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	Not Detected	≤0.02	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	0.05	≤0.75	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	0.06	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Note : This Analysis test report is reissued to supersede report No.2547360-2, Date Reported : Jan 19, 2023 due to revise client information.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงบำบัดปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547360-3 Rev. No.1

Sample Number	234003-1
Sampled Date	Jan 12, 2023 11:30 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.06	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	1.71	≤10.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	<0.0005	≤1.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	24000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	49000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	39.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	71	≤2000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	7.6	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

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Approved by
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงบำบัดปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547360-3 Rev. No.1

Sample Number	234003-1
Sampled Date	Jan 12, 2023 11:30 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	0.50	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2547360-3, Date Reported : Jan 20, 2023 due to revise client information.

Sampling By : Pitthaya Thongtaeng , Panupong Manit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of the 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.

Approved by
Narumon Banchongkit
Supervisor

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14016-22/ EMAIL S:\Reports_All_GL.rpt (5:21PM)

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงบำบัดปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547361-1 Rev. No.1

Sample Number	234003-2
Sampled Date	Jan 12, 2023 11:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jan 12, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	40	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	20	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	19	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	2.5	≤1.0	Wastewater Analysis	Rayong
pH at 25 degree C *		-	-	10.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 C	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงบำบัดปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547361-1 Rev. No.1

Sample Number	234003-2
Sampled Date	Jan 12, 2023 11:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jan 12, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	29.5	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	270	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	5.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : This Analysis test report is reissued to supersede report No.2547361-1, Date Reported : Jan 20, 2023 due to revise client information.

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547361-2 Rev. No.1

Sample Number	234003-2
Sampled Date	Jan 12, 2023 11:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	≤1.0	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	Not Detected	≤0.03	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	0.001	≤2.0	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	0.003	0.01	Not Detected	≤0.25	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	Not Detected	≤0.2	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	0.006	≤5.0	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management Sawitree Noisangiam, Manager, ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547361-2 Rev. No.1

Sample Number	234003-2
Sampled Date	Jan 12, 2023 11:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.03	≤1.0	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	Not Detected	≤0.02	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	≤0.75	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	0.02	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Note : This Analysis test report is reissued to supersede report No.2547361-2, Date Reported : Jan 19, 2023 due to revise client information.

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Sawitree Noisangiam, Manager, ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547361-3 Rev. No.1

Sample Number	234003-2
Sampled Date	Jan 12, 2023 11:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.04	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.04	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.20	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	42	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Approved by Narumon Banchongkit, Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 234003
Date Received : Jan 12, 2023
Date Reported : Feb 16, 2023
Report Number : 2547361-3 Rev. No.1

Sample Number	234003-2
Sampled Date	Jan 12, 2023 11:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Fluoride	mg/L	0.05	0.2	1.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Note : This Analysis test report is reissued to supersede report No.2547361-3, Date Reported : Jan 20, 2023 due to revise client information.

Sampling By : Pitthaya Thongtaeng , Panupong Manit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by Narumon Banchongkit, Supervisor

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Analysis / Test Report

TESTING
No.0042

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565938-1 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงระบายปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-1
Sampled Date	Feb 03, 2023 11:11 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	53.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	253	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	39	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	39	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	0.1	≤1.0	Wastewater Analysis	Rayong
pH at 25 degree C *		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 C	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0042

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565938-1 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงระบายปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-1
Sampled Date	Feb 03, 2023 11:11 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	28.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1228	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	48.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	24	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Note : This Analysis test report is reissued to supersede report No.2565938-1, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565938-2 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงระบายปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-1
Sampled Date	Feb 03, 2023 11:11 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	≤1.00	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	Not Detected	≤0.03	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	0.004	≤2.00	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	0.003	0.01	Not Detected	≤0.25	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	0.004	≤0.20	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	0.08	≤5.00	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565938-2 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงระบายปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-1
Sampled Date	Feb 03, 2023 11:11 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.01	≤1.00	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	Not Detected	≤0.02	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	≤0.75	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	0.51	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Note : This Analysis test report is reissued to supersede report No.2565938-2, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 238487
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565938-3 Rev. No.1

Sample Number	238487-1
Sampled Date	Feb 03, 2023 11:11 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Feb 04, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.40	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	2.65	≤10.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	≤1.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	1300000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	2400000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	46.5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	34	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	<0.2	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

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Approved by
Narumon Banchongkit
Supervisor

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 238487
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565938-3 Rev. No.1

Sample Number	238487-1
Sampled Date	Feb 03, 2023 11:11 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Feb 04, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	0.75	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Note : This Analysis test report is reissued to supersede report No.2565938-3, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai , Nantawat Sarin

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Approved by
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 238487
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565939-1 Rev. No.1

Sample Number	238487-2
Sampled Date	Feb 03, 2023 11:20 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	36	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	9	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	8	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	2.7	≤1.0	Wastewater Analysis	Rayong
pH at 25 degree C *		-	-	10.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 C	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 238487
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565939-1 Rev. No.1

Sample Number	238487-2
Sampled Date	Feb 03, 2023 11:20 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	27.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	336	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	4.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Note : This Analysis test report is reissued to supersede report No.2565939-1, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565939-2 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-2
Sampled Date	Feb 03, 2023 11:20 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	≤1.0	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	Not Detected	≤0.03	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	0.0006	≤2.0	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	0.003	0.01	Not Detected	≤0.25	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	Not Detected	≤0.2	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	0.004	≤5.0	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management Sawitree N.
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0009

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565939-2 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-2
Sampled Date	Feb 03, 2023 11:20 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.03	≤1.0	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	Not Detected	≤0.02	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	≤0.75	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	0.01	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Note : This Analysis test report is reissued to supersede report No.2565939-2, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Sawitree N.
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565939-3 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-2
Sampled Date	Feb 03, 2023 11:20 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Feb 04, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.04		Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.02	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	3.46	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	59	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	8.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Approved by N.Banchongkit
Narumon Banchongkit
Supervisor

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Lot ID: 238487

Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2565939-3 Rev. No.1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	238487-2
Sampled Date	Feb 03, 2023 11:20 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Feb 04, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Fluoride	mg/L	0.05	0.2	1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Note : This Analysis test report is reissued to supersede report No.2565939-3, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai , Nantawat Sarin

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by N.Banchongkit
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2318976

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589419-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-1
Sampled Date	Mar 02, 2023 10:40 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	11.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	38	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	64	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	61	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	0.8	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Lot ID: 2318976

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589419-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-1
Sampled Date	Mar 02, 2023 10:40 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	44.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	180	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	33.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2318976

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589419-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-1
Sampled Date	Mar 02, 2023 10:40 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.11	≤1.00	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	Not Detected	≤0.03	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	0.003	≤2.00	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	0.003	0.01	Not Detected	≤0.25	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	0.003	≤0.20	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	0.05	≤5.00	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2318976

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589419-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-1
Sampled Date	Mar 02, 2023 10:40 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.02	≤1.00	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	Not Detected	≤0.02	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	≤0.75	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	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589419-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-1
Sampled Date	Mar 02, 2023 10:40 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.10	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.38	≤10.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	≤1.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	79000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	330000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	25.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	87	≤2000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	<0.2	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

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Approved by
Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No.0042

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589419-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-1
Sampled Date	Mar 02, 2023 10:40 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	4.60	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai , Panupong Manit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589420-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-2
Sampled Date	Mar 02, 2023 3:00 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	5.5	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	54	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	11	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	11	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	0.006	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	1.7	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	10.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589420-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2318976-2
Sampled Date	Mar 02, 2023 3:00 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	33.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	4.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589420-2

Sample Number	2318976-2
Sampled Date	Mar 02, 2023 3:00 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	≤1.0	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	Not Detected	≤0.03	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	0.002	≤2.0	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	0.003	0.01	Not Detected	≤0.25	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	0.002	≤0.2	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	0.01	≤5.0	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management Sawitree N.
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589420-2

Sample Number	2318976-2
Sampled Date	Mar 02, 2023 3:00 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.04	≤1.0	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	Not Detected	≤0.02	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	≤0.75	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	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Sawitree N.
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589420-3

Sample Number	2318976-2
Sampled Date	Mar 02, 2023 3:00 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.02	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.06	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	4.34	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	60	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	8.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Approved by Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2318976
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2589420-3

Sample Number	2318976-2
Sampled Date	Mar 02, 2023 3:00 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Mar 03, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Fluoride	mg/L	0.05	0.2	0.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Tanasit Wongsachai , Panupong Manit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- {A} Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2335318

Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621441-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-1
Sampled Date	Apr 04, 2023 9:25 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	6.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	36	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	12	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	12	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	2.4	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Lot ID: 2335318

Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621441-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-1
Sampled Date	Apr 04, 2023 9:25 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature * ,	Degree C	-	-	33.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	236	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	18.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2335318

Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621441-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-1
Sampled Date	Apr 04, 2023 9:25 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.0008	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.12	≤1.00	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	Not Detected	≤0.03	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	0.002	≤2.00	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	0.003	0.01	Not Detected	≤0.25	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	0.002	≤0.20	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	0.04	≤5.00	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Nanthawadee Somboon
Specialist 1
ทะเบียนเลขที่ ว-204-จ-4716

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-จ-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0009

Lot ID: 2335318

Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621441-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-1
Sampled Date	Apr 04, 2023 9:25 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.13	≤1.00	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	Not Detected	≤0.02	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	≤0.75	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	0.14	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Nanthawadee Somboon
Specialist 1
ทะเบียนเลขที่ ว-204-จ-4716

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-จ-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621441-3

Sample Number	2335318-1
Sampled Date	Apr 04, 2023 9:25 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.10	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.48	≤10.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	≤1.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	4900.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	7900.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	9.11	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	57	≤2000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	1.1	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

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Approved by
Narumon Banchongkit
Supervisor

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621441-3

Sample Number	2335318-1
Sampled Date	Apr 04, 2023 9:25 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	0.14	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai , Nantawat Sarin

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Approved by
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621442-1

Sample Number	2335318-2
Sampled Date	Apr 04, 2023 9:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	3.3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	54	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	12	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	11	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	3.0	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	10.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621442-1

Sample Number	2335318-2
Sampled Date	Apr 04, 2023 9:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	35.1	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	336	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	4.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621442-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-2
Sampled Date	Apr 04, 2023 9:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	≤1.0	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	Not Detected	≤0.03	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	0.0009	≤2.0	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	0.003	0.01	Not Detected	≤0.25	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	<0.0005	≤0.2	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	0.004	≤5.0	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Nanthawadee Somboon
Specialist 1
ทะเบียนเลขที่ ว-204-จ-4716

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621442-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-2
Sampled Date	Apr 04, 2023 9:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	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	Not Detected	≤0.02	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	≤0.75	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	0.02	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Tanasit Wongsachal ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Nanthawadee Somboon
Specialist 1
ทะเบียนเลขที่ ว-204-จ-4716

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621442-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-2
Sampled Date	Apr 04, 2023 9:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.02		Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.03	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.08	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	78	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	11.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Approved by
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2335318
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2621442-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรงานปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2335318-2
Sampled Date	Apr 04, 2023 9:50 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Apr 05, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Fluoride	mg/L	0.05	0.2	1.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Tanasit Wongsachal , Nantawat Sarin

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649698-1

Sample Number	2348846-1
Sampled Date	May 05, 2023 10:32 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	9.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	50	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	16	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	16	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	7.1	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-ง-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649698-1

Sample Number	2348846-1
Sampled Date	May 05, 2023 10:32 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	32.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	312	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	20.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ง-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-ง-0001

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-ง-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649698-2

Sample Number	2348846-1
Sampled Date	May 05, 2023 10:32 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.10	≤1.00	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	<0.0005	≤0.03	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	0.005	≤2.00	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	0.003	0.01	Not Detected	≤0.25	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	0.003	≤0.20	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	0.04	≤5.00	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-ง-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649698-2

Sample Number	2348846-1
Sampled Date	May 05, 2023 10:32 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.11	≤1.00	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	Not Detected	≤0.02	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	≤0.75	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	0.20	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ง-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-ง-0001

Remark :
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- "<" : 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.

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-ง-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649698-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2348846-1
Sampled Date	May 05, 2023 10:32 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.09	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.83	≤10.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	≤1.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	220000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	790000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	10.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	50	≤2000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	1.3	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

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Approved by
Narumon Banchongkit
Supervisor

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649698-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2348846-1
Sampled Date	May 05, 2023 10:32 AM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	0.12	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong , Kardbundit Kitisupavanit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Approved by
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649699-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2348846-2
Sampled Date	May 05, 2023 10:18 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	11.9	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	65	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	18	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	17	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	2.1	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	9.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-ส-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649699-1

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2348846-2
Sampled Date	May 05, 2023 10:18 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	34.5	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	372	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ส-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-ส-0001

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-ส-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649699-2

Sample Number	2348846-2
Sampled Date	May 05, 2023 10:18 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.04	≤1.0	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	Not Detected	≤0.03	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	0.003	≤2.0	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	0.003	0.01	Not Detected	≤0.25	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	0.002	≤0.2	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	0.01	≤5.0	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management Sawitree N.
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649699-2

Sample Number	2348846-2
Sampled Date	May 05, 2023 10:18 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	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	Not Detected	≤0.02	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	0.75	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	0.04	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management Sawitree N.
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649699-3

Sample Number	2348846-2
Sampled Date	May 05, 2023 10:18 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.03	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.08	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	<0.05	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	81	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	9.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Approved by Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2348846
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2649699-3

Sample Number	2348846-2
Sampled Date	May 05, 2023 10:18 AM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	May 06, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Fluoride	mg/L	0.05	0.2	0.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Surawit Narapong , Kardbundit Kitisupavanit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682116-1

Sample Number	2358715-1
Sampled Date	Jun 06, 2023 12:21 PM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	8.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	41	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	23	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	24	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682116-1

Sample Number	2358715-1
Sampled Date	Jun 06, 2023 12:21 PM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	216	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	24.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682116-2

Sample Number	2358715-1
Sampled Date	Jun 06, 2023 12:21 PM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jun 07, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.10	≤1.00	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	Not Detected	≤0.03	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	0.002	≤2.00	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	0.003	0.01	Not Detected	≤0.25	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	<0.0005	≤0.20	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	0.05	≤5.00	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682116-2

Sample Number	2358715-1
Sampled Date	Jun 06, 2023 12:21 PM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jun 07, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.008	≤1.00	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	Not Detected	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Silver	mg/L	0.0003	0.0005	Not Detected	≤1.00	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	≤0.75	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	0.06	≤5.00	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management
Sawitree Noisangiam
Manager
ทะเบียนเลขที่ ว-204-จ-4709

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

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2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682116-3

Sample Number	2358715-1
Sampled Date	Jun 06, 2023 12:21 PM
Sample Description	Wastewater
Location	Collecting Tank
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.14	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.89	≤10.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	70000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	110000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	17.4	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	106	≤2000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	<0.2	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	0.57	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

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Approved by
Narumon Banchongkit
Supervisor

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682116-3

Sampling By : Surawit Narapong , Kardbundit Kitisupavanit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Approved by
Narumon Banchongkit
Supervisor

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682117-1

Sample Number	2358715-2
Sampled Date	Jun 06, 2023 12:37 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	15.4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	73	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	10	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	9	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	2.1	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
pH at 25 degree C *		-	-	10.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682117-1

Sample Number	2358715-2
Sampled Date	Jun 06, 2023 12:37 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	32.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	296	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	4.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682117-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2358715-2
Sampled Date	Jun 06, 2023 12:37 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jun 07, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.05	≤1.0	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	Not Detected	≤0.03	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	0.003	≤2.0	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	0.003	0.01	Not Detected	≤0.25	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	0.0007	≤0.2	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	0.007	≤5.0	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	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management Siriluk P.
Siriluk Puengpang
Section Head
ทะเบียนเลขที่ ว-204-จ-4720

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682117-2

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2358715-2
Sampled Date	Jun 06, 2023 12:37 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jun 07, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	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	Not Detected	≤0.02	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	0.75	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	0.02	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management Siriluk P.
Siriluk Puengpang
Section Head
ทะเบียนเลขที่ ว-204-จ-4720

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682117-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2358715-2
Sampled Date	Jun 06, 2023 12:37 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jun 07, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Aluminium	mg/L	0.003	0.005	0.02	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Iron	mg/L	0.003	0.005	0.07	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Silver	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
[A] Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.07	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.5	1	127	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	9.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Approved by N.Bangkit
Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2358715
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2682117-3

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: WWTP

Sample Number	2358715-2
Sampled Date	Jun 06, 2023 12:37 PM
Sample Description	Wastewater
Location	Holding Pond
Date Analysis Commenced	Jun 07, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, one amber glass bottle and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Fluoride	mg/L	0.05	0.2	0.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Surawit Narapong , Kardbundit Kitisupavanit

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by N.Bangkit
Narumon Banchongkit
Supervisor

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ภาคผนวก ค-03

คุณภาพน้ำทิ้งจากโรงงานอุตสาหกรรม

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233955
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541910-1

Sample Number	233955-1
Sampled Date	Jan 12, 2023 11:20 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	<5	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	100	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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ALS LABORATORY GROUP (THAILAND) CO. LTD. An ALS Limited Company
www.alsglobal.com

Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233955
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541910-2

Sample Number	233955-1
Sampled Date	Jan 12, 2023 11:20 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO. LTD. An ALS Limited Company
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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233962
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541904-1

Sample Number	233962-1
Sampled Date	Jan 12, 2023 11:10 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	72.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	206	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	228	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	80.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	66	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : 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.

Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233962
Date Received : Jan 12, 2023
Date Reported : Jan 18, 2023
Report Number : 2541904-2

Sample Number	233962-1
Sampled Date	Jan 12, 2023 11:10 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	11	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Siriluk Puengpang, Supervisor, ทะเบียนเลขที่ ว-204-จ-4720

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233963
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541889-1

Sample Number	233963-1
Sampled Date	Jan 12, 2023 10:20 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	21.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	53	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	158	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	31.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233963
Date Received : Jan 12, 2023
Date Reported : Jan 18, 2023
Report Number : 2541889-2

Sample Number	233963-1
Sampled Date	Jan 12, 2023 10:20 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Siriluk Puengpang
Supervisor
ทะเบียนเลขที่ ว-204-จ-4720

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233964
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541888-1

Sample Number	233964-1
Sampled Date	Jan 12, 2023 9:45 AM
Sample Description	Wastewater
Location	บริษัท คีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	18.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	60	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	210	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	29.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233964
Date Received : Jan 12, 2023
Date Reported : Jan 18, 2023
Report Number : 2541888-2

Sample Number	233964-1
Sampled Date	Jan 12, 2023 9:45 AM
Sample Description	Wastewater
Location	บริษัท คีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Siriluk Puengpang
Supervisor
ทะเบียนเลขที่ ว-204-จ-4720

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233965
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541885-1

Sample Number	233965-1
Sampled Date	Jan 12, 2023 10:00 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	58	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	296	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	79.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management N.Banchongkit
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by D.Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233965
Date Received : Jan 12, 2023
Date Reported : Jan 18, 2023
Report Number : 2541885-2

Sample Number	233965-1
Sampled Date	Jan 12, 2023 10:00 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Siriluk P.
Siriluk Puengpang
Supervisor
ทะเบียนเลขที่ ว-204-จ-4720

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO.,LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233966
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541903-1

Sample Number	233966-1
Sampled Date	Jan 12, 2023 10:35 AM
Sample Description	Wastewater
Location	บริษัท ซิลแมกซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	62.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	171	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	99.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	42	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : 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.

Technical Management N.Banchongkit
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by D.Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO.,LTD. An ALS Limited Company

Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233966
Date Received : Jan 12, 2023
Date Reported : Jan 18, 2023
Report Number : 2541903-2

Sample Number	233966-1
Sampled Date	Jan 12, 2023 10:35 AM
Sample Description	Wastewater
Location	บริษัท ซิลแมกซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Siriluk P.
Siriluk Puengpang
Supervisor
ทะเบียนเลขที่ ว-204-จ-4720

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO.,LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233967
Date Received : Jan 12, 2023
Date Reported : Jan 19, 2023
Report Number : 2541896-1

Sample Number	233967-1
Sampled Date	Jan 12, 2023 10:55 AM
Sample Description	Wastewater
Location	บริษัท เทียนกุง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	33.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	136	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	268	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	25.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 233967
Date Received : Jan 12, 2023
Date Reported : Jan 18, 2023
Report Number : 2541896-2

Sample Number	233967-1
Sampled Date	Jan 12, 2023 10:55 AM
Sample Description	Wastewater
Location	บริษัท เทียนกุง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Jan 16, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong) No.2/2559 and No.1/2560, Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Siriluk Puengpang
Supervisor
ทะเบียนเลขที่ ว-204-จ-4720

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238514
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550336-1

Sample Number	238514-1
Sampled Date	Feb 03, 2023 10:55 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	33.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	425	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	6.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	978	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	9.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238514
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550336-2

Sample Number	238514-1
Sampled Date	Feb 03, 2023 10:55 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management
Narin Saisang
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238517
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550340-1

Sample Number	238517-1
Sampled Date	Feb 03, 2023 10:45 AM
Sample Description	Wastewater
Location	บริษัท วีดีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	90.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	210	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	322	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	84.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	44	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management N.Banchongkit
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by D.Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238517
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550340-2

Sample Number	238517-1
Sampled Date	Feb 03, 2023 10:45 AM
Sample Description	Wastewater
Location	บริษัท วีดีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	9	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Narin Saiseng
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238520
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550343-1

Sample Number	238520-1
Sampled Date	Feb 03, 2023 10:13 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	27.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	61	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	178	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	27.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management N.Banchongkit
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by D.Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238520
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550343-2

Sample Number	238520-1
Sampled Date	Feb 03, 2023 10:13 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Narin Saiseng
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238522
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550345-1 Rev. No.1

Sample Number	238522-1
Sampled Date	Feb 03, 2023 9:55 AM
Sample Description	Wastewater
Location	บริษัท คีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	22.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	125	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	284	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	31.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550345-1, Date Reported : Feb 10, 2023 due to revise guideline/specification

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238522
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550345-2 Rev. No.1

Sample Number	238522-1
Sampled Date	Feb 03, 2023 9:55 AM
Sample Description	Wastewater
Location	บริษัท คีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	18	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550345-2, Date Reported : Feb 09, 2023 due to revise guideline/specification

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

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

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238523
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550347-1 Rev. No.1

Sample Number	238523-1
Sampled Date	Feb 03, 2023 10:03 AM
Sample Description	Wastewater
Location	บริษัท คีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	17.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	91	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	312	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	73.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550347-1, Date Reported : Feb 10, 2023 due to revise guideline/specification

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238523
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550347-2 Rev. No.1

Sample Number	238523-1
Sampled Date	Feb 03, 2023 10:03 AM
Sample Description	Wastewater
Location	บริษัท คีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550347-2, Date Reported : Feb 09, 2023 due to revise guideline/specification

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

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

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238524
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550350-1 Rev. No.1

Sample Number	238524-1
Sampled Date	Feb 03, 2023 10:20 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	119	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	243	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	416	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	99.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	52	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550350-1, Date Reported : Feb 10, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238524
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550350-2 Rev. No.1

Sample Number	238524-1
Sampled Date	Feb 03, 2023 10:20 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550350-2, Date Reported : Feb 09, 2023 due to revise sample information.

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Narin Salseng
Supervisor
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Approved by
Kanokkorn Anek
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ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238526
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550361-1 Rev. No.1

Sample Number	238526-1
Sampled Date	Feb 03, 2023 10:35 AM
Sample Description	Wastewater
Location	บริษัท เทียนกง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Feb 03, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	20.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	56	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	262	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	17.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550361-1, Date Reported : Feb 10, 2023 due to revise guideline/specification

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 238526
Date Received : Feb 03, 2023
Date Reported : Feb 15, 2023
Report Number : 2550361-2 Rev. No.1

Sample Number	238526-1
Sampled Date	Feb 03, 2023 10:35 AM
Sample Description	Wastewater
Location	บริษัท เทียนกง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Note : This Analysis test report is reissued to supersede report No.2550361-2, Date Reported : Feb 09, 2023 due to revise guideline/specification

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management
Narin Salseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

TESTING
No.0042

Analysis / Test Report

Lot ID: 2318983

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572974-1

Sample Number	2318983-1
Sampled Date	Mar 02, 2023 10:30 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	2.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	33	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	204	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	61.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : 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.

Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Lot ID: 2318983

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572974-2

Sample Number	2318983-1
Sampled Date	Mar 02, 2023 10:30 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ค-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

TESTING
No.0042

Analysis / Test Report

Lot ID: 2318984

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572975-1

Sample Number	2318984-1
Sampled Date	Mar 02, 2023 10:20 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	101	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	269	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	356	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	43.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	57	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Lot ID: 2318984

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572975-2

Sample Number	2318984-1
Sampled Date	Mar 02, 2023 10:20 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	11	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ค-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318985
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572976-1

Sample Number	2318985-1
Sampled Date	Mar 02, 2023 9:45 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	27.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	68	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	170	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	12.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318985
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572976-2

Sample Number	2318985-1
Sampled Date	Mar 02, 2023 9:45 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318986
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572977-1

Sample Number	2318986-1
Sampled Date	Mar 02, 2023 9:30 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	27.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	114	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	280	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	58.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD An ALS Limited Company

Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318986
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572977-2

Sample Number	2318986-1
Sampled Date	Mar 02, 2023 9:30 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
Narin Saiseng
Supervisor
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Approved by
Kanokkorn Anek
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ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318987
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572978-1

Sample Number	2318987-1
Sampled Date	Mar 02, 2023 9:32 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (เฟส 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	58	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	232	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	53.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company
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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318987
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572978-2

Sample Number	2318987-1
Sampled Date	Mar 02, 2023 9:32 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (เฟส 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318989
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572979-1

Sample Number	2318989-1
Sampled Date	Mar 02, 2023 9:53 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	108	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	326	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	82.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	39	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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

Technical Management
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Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318989
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572979-2

Sample Number	2318989-1
Sampled Date	Mar 02, 2023 9:53 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	9	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318990
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572980-1

Sample Number	2318990-1
Sampled Date	Mar 02, 2023 10:05 AM
Sample Description	Wastewater
Location	บริษัท เทียนกุง พรีซิชัน ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Mar 02, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	28.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	116	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	244	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	12.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

Remark :
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Technical Management N.Banchongkit
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by D.Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2318990
Date Received : Mar 02, 2023
Date Reported : Mar 10, 2023
Report Number : 2572980-2

Sample Number	2318990-1
Sampled Date	Mar 02, 2023 10:05 AM
Sample Description	Wastewater
Location	บริษัท เทียนกุง พรีซิชัน ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Mar 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	11	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Panupong Manit ทะเบียนเลขที่ ว-204-จ-8600

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Technical Management Narin Saiseng
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335305
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607458-1

Sample Number	2335305-1
Sampled Date	Apr 04, 2023 11:47 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	166	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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Technical Management N.Banchongkit
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by D.Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335305
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607458-2

Sample Number	2335305-1
Sampled Date	Apr 04, 2023 11:47 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Narin Saiseng
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335308
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607459-1

Sample Number	2335308-1
Sampled Date	Apr 04, 2023 11:30 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	61.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	175	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	236	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	76.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	72	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006

Remark :
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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335308
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607459-2

Sample Number	2335308-1
Sampled Date	Apr 04, 2023 11:30 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006

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

Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ค-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335309
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607460-1

Sample Number	2335309-1
Sampled Date	Apr 04, 2023 10:45 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	12.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	57	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	182	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	16.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335309
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607460-2

Sample Number	2335309-1
Sampled Date	Apr 04, 2023 10:45 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715

Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ค-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335310
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607462-1

Sample Number	2335310-1
Sampled Date	Apr 04, 2023 10:25 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	24.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	115	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	24.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335310
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607462-2

Sample Number	2335310-1
Sampled Date	Apr 04, 2023 10:25 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335312
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607465-1

Sample Number	2335312-1
Sampled Date	Apr 04, 2023 10:25 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	57	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	180	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	92.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ก-9442

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Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335312
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607465-2

Sample Number	2335312-1
Sampled Date	Apr 04, 2023 10:25 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335313
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607468-1

Sample Number	2335313-1
Sampled Date	Apr 04, 2023 10:05 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชัน จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	73.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	218	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	340	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	113	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	43	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

Remark :
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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335313
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607468-2

Sample Number	2335313-1
Sampled Date	Apr 04, 2023 10:05 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชัน จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	12	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335316
Date Received : Apr 04, 2023
Date Reported : Apr 11, 2023
Report Number : 2607484-1

Sample Number	2335316-1
Sampled Date	Apr 04, 2023 11:15 AM
Sample Description	Wastewater
Location	บริษัท เทียนกง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Apr 04, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	44.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	106	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	216	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	11.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	9	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2335316
Date Received : Apr 04, 2023
Date Reported : Apr 07, 2023
Report Number : 2607484-2

Sample Number	2335316-1
Sampled Date	Apr 04, 2023 11:15 AM
Sample Description	Wastewater
Location	บริษัท เทียนกง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Apr 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Nantawat Sarin ทะเบียนเลขที่ ว-204-จ-8596

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

Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347026
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634033-1

Sample Number	2347026-1
Sampled Date	May 05, 2023 10:56 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	152	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management — Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347026
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634033-2

Sample Number	2347026-1
Sampled Date	May 05, 2023 10:56 AM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management — Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by — Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347027
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634035-1

Sample Number	2347027-1
Sampled Date	May 05, 2023 10:26 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	30.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	91	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	284	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	43.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management — Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347027
Date Received : May 05, 2023
Date Reported : May 11, 2023
Report Number : 2634035-2

Sample Number	2347027-1
Sampled Date	May 05, 2023 10:26 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management — Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by — Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347029
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634041-1

Sample Number	2347029-1
Sampled Date	May 05, 2023 9:46 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	14.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	69	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	200	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	18.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ค-9442

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Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347029
Date Received : May 05, 2023
Date Reported : May 11, 2023
Report Number : 2634041-2

Sample Number	2347029-1
Sampled Date	May 05, 2023 9:46 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ค-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347030
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634044-1

Sample Number	2347030-1
Sampled Date	May 05, 2023 9:28 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	10.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	52	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	244	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	8.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347030
Date Received : May 05, 2023
Date Reported : May 11, 2023
Report Number : 2634044-2

Sample Number	2347030-1
Sampled Date	May 05, 2023 9:28 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ค-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347032
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634045-1

Sample Number	2347032-1
Sampled Date	May 05, 2023 9:36 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (รุงที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	49	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	220	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	19.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347032
Date Received : May 05, 2023
Date Reported : May 11, 2023
Report Number : 2634045-2

Sample Number	2347032-1
Sampled Date	May 05, 2023 9:36 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (รุงที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347034
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634047-1

Sample Number	2347034-1
Sampled Date	May 05, 2023 9:56 AM
Sample Description	Wastewater
Location	บริษัท ซิลมิกซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	69.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	157	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	300	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	95.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management Narumon Banchongkit, Supervisor, ทะเบียนเลขที่ ว-323-จ-9445
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347034
Date Received : May 05, 2023
Date Reported : May 11, 2023
Report Number : 2634047-2

Sample Number	2347034-1
Sampled Date	May 05, 2023 9:56 AM
Sample Description	Wastewater
Location	บริษัท ซิลมิกซ์ ซีลลิ่ง โซลูชั่น จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management Narin Saiseng, Supervisor, ทะเบียนเลขที่ ว-204-จ-4715
Approved by Kanokkorn Anek, Senior Manager, ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347035
Date Received : May 05, 2023
Date Reported : May 12, 2023
Report Number : 2634048-1

Sample Number	2347035-1
Sampled Date	May 05, 2023 10:13 AM
Sample Description	Wastewater
Location	บริษัท เทียนกุง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	190	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	301	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	928	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	18.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2347035
Date Received : May 05, 2023
Date Reported : May 11, 2023
Report Number : 2634048-2

Sample Number	2347035-1
Sampled Date	May 05, 2023 10:13 AM
Sample Description	Wastewater
Location	บริษัท เทียนกุง พรีซิชั่น ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	May 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ด-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358872
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658744-1

Sample Number	2358872-1
Sampled Date	Jun 06, 2023 12:06 PM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	103	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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- "<" : 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.

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358872
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658744-2

Sample Number	2358872-1
Sampled Date	Jun 06, 2023 12:06 PM
Sample Description	Wastewater
Location	บริษัท กัลฟ์ พีดี จำกัด : GULF PD COMPANY LIMITED.
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
Narin Saiseng
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ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ด-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310

P/O :

Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)

Project Location: Factory

Lot ID: 2358880
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658752-1

Sample Number	2358880-1
Sampled Date	Jun 06, 2023 11:45 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	15.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	40	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	168	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	10.9	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management
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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310

P/O :

Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)

Project Location: Factory

Lot ID: 2358880
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658752-2

Sample Number	2358880-1
Sampled Date	Jun 06, 2023 11:45 AM
Sample Description	Wastewater
Location	บริษัท วีอีเอ็ม (ไทยแลนด์) จำกัด : VEM (THAILAND) CO., LTD.
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management
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Approved by
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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310

P/O :

Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)

Project Location: Factory

Lot ID: 2358882
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658762-1

Sample Number	2358882-1
Sampled Date	Jun 06, 2023 11:11 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	15.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	53	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	276	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	10.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310

P/O :

Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)

Project Location: Factory

Lot ID: 2358882
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658762-2

Sample Number	2358882-1
Sampled Date	Jun 06, 2023 11:11 AM
Sample Description	Wastewater
Location	บริษัท เซล อินดัสทรี (ไทยแลนด์) จำกัด : SAIL INDUSTRY (THAILAND) CO.,LTD.
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management
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ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok
Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358884
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658766-1

Sample Number	2358884-1
Sampled Date	Jun 06, 2023 10:38 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	8.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	30	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	172	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management
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Approved by
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ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok
Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358884
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658766-2

Sample Number	2358884-1
Sampled Date	Jun 06, 2023 10:38 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 1) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
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Approved by
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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok
Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358886
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658770-1

Sample Number	2358886-1
Sampled Date	Jun 06, 2023 10:47 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	19.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	45	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	228	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	51.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :
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Technical Management
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Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok
Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358886
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658770-2

Sample Number	2358886-1
Sampled Date	Jun 06, 2023 10:47 AM
Sample Description	Wastewater
Location	บริษัท กีลอง (ประเทศไทย) จำกัด (จุดที่ 2) : GEELONG (THAILAND) CO.,LTD.
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358888
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658772-1

Sample Number	2358888-1
Sampled Date	Jun 06, 2023 11:37 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชัน จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	82.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	195	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	312	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	69.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	31	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Del Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358888
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658772-2

Sample Number	2358888-1
Sampled Date	Jun 06, 2023 11:37 AM
Sample Description	Wastewater
Location	บริษัท ซิลแม็กซ์ ซีลลิ่ง โซลูชัน จำกัด : SILMAX SEALING SOLUTION CO.,LTD.
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
Narin Saiseng
Supervisor
ทะเบียนเลขที่ ว-204-จ-4715

Approved by
Kanokkorn Anek
Senior Manager
ทะเบียนเลขที่ ว-204-ก-6111

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Analysis / Test Report

TESTING
No.0042

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358889
Date Received : Jun 06, 2023
Date Reported : Jun 13, 2023
Report Number : 2658777-1

Sample Number	2358889-1
Sampled Date	Jun 06, 2023 11:29 AM
Sample Description	Wastewater
Location	บริษัท เทียนกง พรีซิชัน ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Jun 06, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	79.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	188	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
pH at 25 degree C *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	532	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	21.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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

Technical Management
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Supervisor
ทะเบียนเลขที่ ว-323-จ-9445

Approved by
Del Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

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Analysis / Test Report

Client : Rojana Industrial Management Co., Ltd.
2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok Thailand 10310
P/O :
Project Name : โครงการสวนอุตสาหกรรมปลวกแดง (โรจนะปลวกแดง/ระยอง2)
Project Location: Factory

Lot ID: 2358889
Date Received : Jun 06, 2023
Date Reported : Jun 12, 2023
Report Number : 2658777-2

Sample Number	2358889-1
Sampled Date	Jun 06, 2023 11:29 AM
Sample Description	Wastewater
Location	บริษัท เทียนกง พรีซิชัน ทูลส์ (ประเทศไทย) จำกัด : TIANGONG PRECISION TOOLS (THAILAND)
Date Analysis Commenced	Jun 08, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 D	Bangkok

Guideline : Standard of Rojana Industrial park (Rayong 2), Criteria of wastewater drainage from the factory to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management
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