

洛加纳工业园



洛加纳工业园进场施工管理条例

泰国洛加纳工业园（大众）有限公司

洛加纳工业园进场施工管理条例

一、基本条款

1、业主须提前 14 天向洛加纳提出进场申请，根据洛加纳一至五号文件要求，准备入场申请材料。材料须包括同时提供承建商名单、工程设计图纸（一式两份）、各项临时和常规施工过程的细节说明（如：临时围墙、临时入口、临时排水系统和临时污水处理系统等）。

2、客户或其承建商对施工期间园区设施负责，为预防园区客户建设区域内的公共建筑发生任何损坏或丢失造成影响，客户或其承建商须交纳保证金如下：

- 所购土地面积为 0-30 莱：保证金不少于 200,000 泰铢（贰拾萬泰铢整）
- 所购土地面积为 31-49 莱：保证金不少于 400,000 泰铢（肆拾萬泰铢整）
- 所购土地面积为 50 莱及以上：保证金不少于 600,000 泰铢（陆拾萬泰铢整）
- 除上述外，客户或其承包商如须在公共场所施工，须另外收取保证金 500-1,000 泰铢/平方米

施工结束后，客户或其承建商须提交施工保证金本金退还申请，在园方检查并确认第一条所述各项临时工程已复原处理完毕，且现场公共设施无损毁或丢失等情况产生的其他费用后，将于一个月之内退还相应本金。

3、在施工期间客户或其承包商必须支付公共事业和各个便利，如下：

- 客户购买新的土地建工厂，客户或其承包商要对这些服务是 1,000 泰铢/莱/月支付（按照客户土地计算服务收费）
- 如果增加建设，客户或其承包商对这些费用是 1,000 泰铢/莱/月支付（除了客户服务的月费以外，是从建设面积或建设相关土地来计算）

这两种情况是从按照 1 号文件通知建设之日起到项目部按照施工检

查表已建设检查完成来计算服务费与建设保证金退款之前。

1.2 在施工过程中，客户或其承包商得要保持建筑面积的清洁度、

项目的排水沟、建设地区前街保持干净，一旦有随意弃置现象，将禁止该项目继续使用所有公用事业服务，直到问题解决。

1.3 客户或其承包商进入园区使用的车辆禁止超重：

- 10 轮卡车 车货总重不超过 21 吨
- 18 轮卡车 车货总重不超过 37.4 吨

如果被查出超重，须缴纳罚款 500 泰铢/辆/次，并立即禁止使用公共区域，至问题解决。

1.4 禁止客户或其承包商自开井渠并违规用水。

1.5 禁止客户或其承包商违规建设住宅楼、别墅或小商店等其他非生产用途的建筑。

1.6 禁止在公共区域做任何侵犯他人区域的建筑或举措

1.7 禁止客户或其承包商把泥土仍在洛加纳工业园外面，洛加纳工业园将会准备支撑区域，以及让承包商把车来仍泥土地区平地。

1.8 请客户或其承包商把水泥桩、混凝土片、混凝土碎片或建设废料仍在洛加纳工业园外面，向洛加纳工业园交送外运申请表以及堆放地点（按照洛加纳工业园的表格）

1.9 在施工过程中须注意控制粉尘

1.10 禁止在建设地区内燃烧建设废料

1.11 在施工过程中，17:00 之后不允许施工造成噪音

1.14 在施工过程中，必须提供工作人员为了各种卡车进入建设单位的便利和出入口护理

1.15 客户或其承包商，在施工过程中要盖上临时篱笆，篱笆不低于 1.80 米。

1.16 在施工过程中，客户或其承包商要准备清洗出入建设单位各种卡车车轮的地方

1.17 禁止客户或其承包商堆放泥土或其他废料高于 2.5 米。

1.18 在施工区固体废物管理条例，可以在文件 1 措施预防和修复环境的影响详细看（施工过程中）

1.19 在施工区安全性管理条例，可以在文件 1 措施预防和修复环境的影响详细看（施工过程中）

1.20 在工厂周围地区内调整平地，做任何行动前，该通知洛加纳工业园先考虑
注意：除了这些规定，要跟随文件 1 措施预防和修复环境的影响

2. 建设工程法规为了在项目的公用事业不受影响

2.1 在建设中排污水的规定。客户或其承包商要分开排污水系统

和排雨水系统，是一个封闭系统。要有化粪池为了容易收集项目废水样品。要连接污水管到洛加纳工业园的废水系统，必须告知项目部前 14 天。如已检查，项目部会通知进行连接，以允许污水排放。客户或其承包商将要支付污水处理按照 80%的使用水量。

2.2 客户或其承包商的排污水的规定

2.2.1 客户或其承包商必须建设一个污水池，为了收集废水和为了容易收集废水样品去分析，并要有阀门关开污水池和项目的污水池根据标准 2 和标准 3。

2.2.2 废水管跟项目的输送废水连接。客户或其承包商必须提交排污水计划图和连接的详细信息前 14 天，该项目部先考虑，已被允许才能进行连接。

2.2.3 废水的属性按照废水排放的公告（根据文件 3）

2.2.4 已使用过的废水、厕所包括厕所污水必须提供充分 septic-tank 为了污水处理或厕所污水前排放污水到工厂的污水收集系统。（根据附件 7）

2.2.5 从食堂排出废水有脂肪混合，必须提供一个隔油池为了能足够污水处理前排放污水到工厂的污水收集系统。（根据附件 8）

2.2.6 禁止排放生产过程的废水、厕所污水和已使用过的水到雨水排水系统。如果排入污水到雨水渠，将被项目部收取至少 10,000 泰铢/次的罚款，已包括其他相关费用。

2.3 雨水排水到项目的雨水排水系统的规定

2.3.1 必须申请许可在工厂内的排雨水管道跟项目的雨水排水系统连接，以及申请工厂建设许可，当项目部考虑已允许才可以进行。如果连接管道完成之后，必须通知项目部进行检查。

2.3.2 如果建设临时排水沟，需要提供沉淀池和筛陷阱垃圾，筛孔尺寸的差距不大于 2 厘米，而切割角度不高达 45 度的水流动方向。（根据标准 8）

2.3.3 如果建设永久的排水沟，需要提供沉淀池和筛陷阱垃圾，筛孔尺寸的差距不大于 2 厘米，有门开-关和切割角度不高达 45 度的水流动方向。（根据标准 9）

2.4 申请用水的规定

2.4.1 客户或其承包商需要申请用水，通知每天耗水量，以及连接到工厂详细位置和相关文件。收到申请用水书之后，洛加纳将检测和在 15 天内会通知所费用。客户或承包商付水表安装费用之后，大约 30 天洛加纳将会安装水表。

2.4.2 申请用水 分为 2 种：

1. 临时用水。客户或其承包商必须交纳使用水的保证金 15,000 泰铢，这笔钱不包括连接管道的费用、安装水表和其他设备，一旦取消使用水并退还用水的保证金。

2. 采用永久水。客户或其承包商必须交纳 25% 水表每个月可以排放的水量的保证金（根据附件 6）这笔钱不包括连接管道的费用、安装水表和其他设备，一旦取消使用水并退还用水的保证金。

2.4.3 禁止客户或承包商直接从供水管抽水。

注意：安装水表和其他设备的费用，由客户来支付

2.5 建设工厂进出口的连接路的规定

2.5.1 工厂只能有一个入口，宽度不少于 6 米，但不超过 14 米。

2.5.2 进出入口 分为 2 种：

- 临时入口要按照标准 5
- 永久入口要按照标准 6、7、10

2.5.3 地块位于十字路口、连接桥梁路或出口路，从拐角接头路口或交叉口到入口中间距离不少于 20 米。

2.5.4 客户或其承包商要建设工厂进出口的连接路之前，必须提交施工图给项目部检测、考虑至少 14 天时间。当认为合适，并得到允许才能进行建设。如果客户或其承包商未经允许，继续施工，项目部有拆除建筑的权利。

2.5.5 禁止客户或其承包商做任何事情如果影响到公用事业如：供水管、排废水管、排水沟，如果收到损坏，项目部将被收取 5 万泰铢/次/地方的罚款。这价格还没有包括影响损坏其他作用。

2.5.6 如果大楼入口跟消防用水管道匹配位置，客户或承包商得要付水管搬迁的费用。

2.5.7 如果大楼入口跟废水处理池道匹配位置，客户或承包商得要付废水处理池搬迁的费用。或设计入口有钢盖覆盖污水池，这钢盖能防止水流入污水池，并能接受工厂出入的汽车重量（根据标准 10）

3. 应当知建筑物的设计和施工的一般准则

3.1 设计图必须出示在工厂内的排污水系统和排雨水系统，以及水流到洛加纳的排污水系统和排雨水系统方向，排污水系统和排雨水系统必须分开清楚

3.2 离土地边线的空地

-面积小于 4000 平方米的建筑，用于建设用地，土地边线的空地四面至少 6 米

-面积大于 4000 平方米的建筑，用于建设用地，土地边线的空地四面至少 10 米

注意：根据 3.2 空地部分不能有屋顶、雨篷或其他东西来盖空地部分上

3.3 施工栅栏

1. 靠洛加纳的路和公用事业 是围墙栅栏或按照标准 4.1, 4.2

2. 围墙栅栏的高度不高于 2 米从洛加纳客户的地平高度

3. 工厂和工厂之间和工厂的后面是固体栅栏 不高于 2 米

4. 建设工厂的栅栏靠近缓冲，需要做排水被困系统，由放排雨水管道沿着篱笆，宣泄雨水排入排雨水管道厂内（根据标准 4.4）

5. 客户或其承包商建设已完成后，必须提交工厂的排雨水系统、排污水系统与出入口的 As Built Drawing（前申请退款建设保资金）

3.4 如安装 LPG 储气罐、易燃品或其他燃料，得要跟项目部通知，以及要根据能源部的规定。必须先申请，并做任何事情之前得要得到省能源办公室的许可。

Analytical Method and Acceptable Wastewater Characteristic Standard

Parameter	RIP Method	Standard
Temperature	Thermometer	≤ 40
pH	Electrometric	5.5-9.0
COD	Close Reflux	≤ 1,250 Ayutthaya
COD	Close Reflux	≤ 750 Rayong, Prachinburi
BOD	5 Days BOD Test	≤ 500
Suspended Solid (SS)	Dried at 103 - 105° C	≤ 200
Total Dissolved Solids (TDS)	Dried at 180° C	≤ 3000
Sulfide (H ₂ S)	Iodometric	≤ 1.0
Zinc (Zn)	Direct Aspiration,AAS	≤ 5.0
Chromium (Cr) (hexavalent)	Colorimetric	≤ 0.25
Chromium (Cr) (trivalent)	Colorimetric	≤ 0.75
Arsenic (As)	Hydride Generation,AAS	≤ 0.25
Copper (Cu)	Direct Aspiration,AAS	≤ 2.0
Mercury (Hg)	Cold Vapor Technique,AAS	≤ 0.005
Cadmium (Cd)	Direct Aspiration,AAS	≤ 0.03
Barium (Ba)	Direct Aspiration,AAS	≤ 1.0
Selenium (Se)	Hydride Generation,AAS	≤ 0.02
Lead (pb)	Direct Aspiration,AAS	≤ 0.2
Nickel (Ni)	Direct Aspiration,AAS	≤ 1.0
Silver (Ag)	Direct Aspiration,AAS	≤ 1.0
Tin (Sn)	Direct Aspiration,AAS	≤ 1.0
Aluminum (Al)	Direct Aspiration,AAS	≤ 5.0
Iron	Phenanthroline	≤ 5.0
Manganese	Direct Aspiration, AAS	≤ 5.0
Formaldehyde	Colorimetric	≤ 1.0
Phenol & Cresols	Direct Photometric	≤ 1.0
Free Chlorine	DPD Colorimetric	≤ 1.0
Insecticide	GC,GCMS	None
Radioactive Compound	None	None
Fluoride (F)	SPADNS	≤ 5.0
Oil and Grease	Soxhlet Extraction	≤ 10.0
Detergent	Colorimetric	≤ 100

Parameter	RIP Method	Standard
Colour	Colorimetric	≤ 120 Pt-Co Unit
Cyanide (as HCN)	Colorimetric	≤ 0.2
Free Ammonia	Titrimetric	≤ 50
Ammonia	Titrimetric	≤ 50
Tar		None
Total Kjeldahl Nitrogen (TKN)	Macro - Kjeldahl	100.00

APPLICATION FORM

Form 1

Date:

Subject: Construction Schedule

To: General Manager, Rojana Industrial Park Public Co., Ltd.

According to the contract made between us,Co., Ltd. and Rojana Industrial Park entered into the agreement to purchase and sell the land, Plot No. Phase

We have hiredCo., Ltd. to be a contractor to construct our factory as per the construction plan attached herewith. The construction is scheduled to commence on(date) and be completed on(date) having Mr. to be responsible for the execution.

We hereto would like to notify the construction schedule above and request for the approval for execution.

Yours sincerely,

(.....)

Managing Director

Remark: The client needs to submit to Rojana Industrial Park to identify construction company prior to construction.

Form 2

Date

Subject: ☐ Temporary ☐ Permanent Water Supply Request

To: General Manager, Rojana Industrial Park Public Co., Ltd.

Attached: 1. Water Supply Connection Plan

According to the contract made between us,Co., Ltd. and Rojana Industrial Park entered into the agreement to purchase and sell the land, Plot No. Phase We now require water supply from Rojana as follows: -

For factory machinery and equipment/construction for approximatelycu.m. daily foremployees with(size in “) water supply pipe to connect to factory as per the plan attached herewith. We shall pay water fee and guarantee deposit as per the rate the Project specifies.

We hereto submit this request for approval.

Yours sincerely,

(.....)

Managing Director

Form 3

No. /

Date

Subject: Construction Rules and Regulations Acknowledgement

To: General Manager, Rojana Industrial Park Public Co., Ltd.

According to the contract made between us,Co., Ltd. and Rojana Industrial Park entered into the agreement to purchase and sell the land, Plot No. Phase The construction now has been commenced.

We hereto would like to notify we acknowledge Rojana Industrial Park's construction rules and regulations.

Yours sincerely,

(.....)

Managing Director

Remark: The form shall be completed and submitted by client.

Form 4

No. /

Date

Subject: Construction Rules and Regulations Acknowledgement

To: General Manager of Rojana Industrial Park Plc.

According to the contract betweenCo., Ltd. and Rojana Industrial Park entered into the agreement to purchase and sell the land, Plot No. Phase
We, as the contractor of....., would like to notify we acknowledge Rojana Industrial Park's construction rules and regulations.

Yours sincerely,

(.....)

Project Manager/
Contractor

Remark: The form shall be completed and submitted by contractor.

Form 5

No. /

Date

Subject: Rojana Industrial Park Wastewater Treatment System Use Request.

To: General Manager, Rojana Industrial Park Public Co., Ltd.

- Attached:
1. Details of the wastewater treatment system control measure 2 copies
 2. Wastewater treatment system calculation in detail 2 copies
 3. Flow diagram of wastewater treatment system A3 sized 2 copies
 4. Site plan of factory 2 copies
 5. Diagram of the connecting position to the central wastewater system 2 copies
 6. Diagram of the separated wastewater and rainwater drainage system A3 sized 2 copies

We,, have constructed our factory in Rojana Industrial Park on the land No. / Land Plot No. having total area ofrai ngan square wah. We've started to operate the factory, and it is necessary to get an approval from Rojana to use Rojana's waste water treatment system. All the necessary supporting documents are attached herewith for the consideration.

We hereby notify Rojana to know and consider to proceed further.

Yours sincerely,

.....
(.....)

Title :

Wastewater Pretreatment System

1.) Factory information

1.1) Name of factory/company:

1.2) Factory construction area:raingan..... sq. wah.

1.3) Expected number of employeepersons

1.4) Operation – manufacturing

.....

2.) Water use information

2.1) Expected consumption at factory's full capacity processing

2.2.1) Manufacturing process consumptioncu.m./day

2.2.2) Daily life consumptioncu.m./day

2.2) Expected generated wastewater quantity at factory's full capacity processing.

2.2.1) Manufacturing process consumption cu.m./day

2.2.2) Daily life consumptioncu.m./day

2.2.3) Total generated wastewater quantity cu.m./day

2.3) Factory's manufacturing process To be as follows:-

(Write simple flow diagram to be easy for understanding together with details to the manufacturing stages – in the next page).

Contact Person:

Title:

Mobile Number:

Email:

Types and consumptions of the chemicals used in the manufacturing process

No.	Chemicals	Consumption (Kg./month)

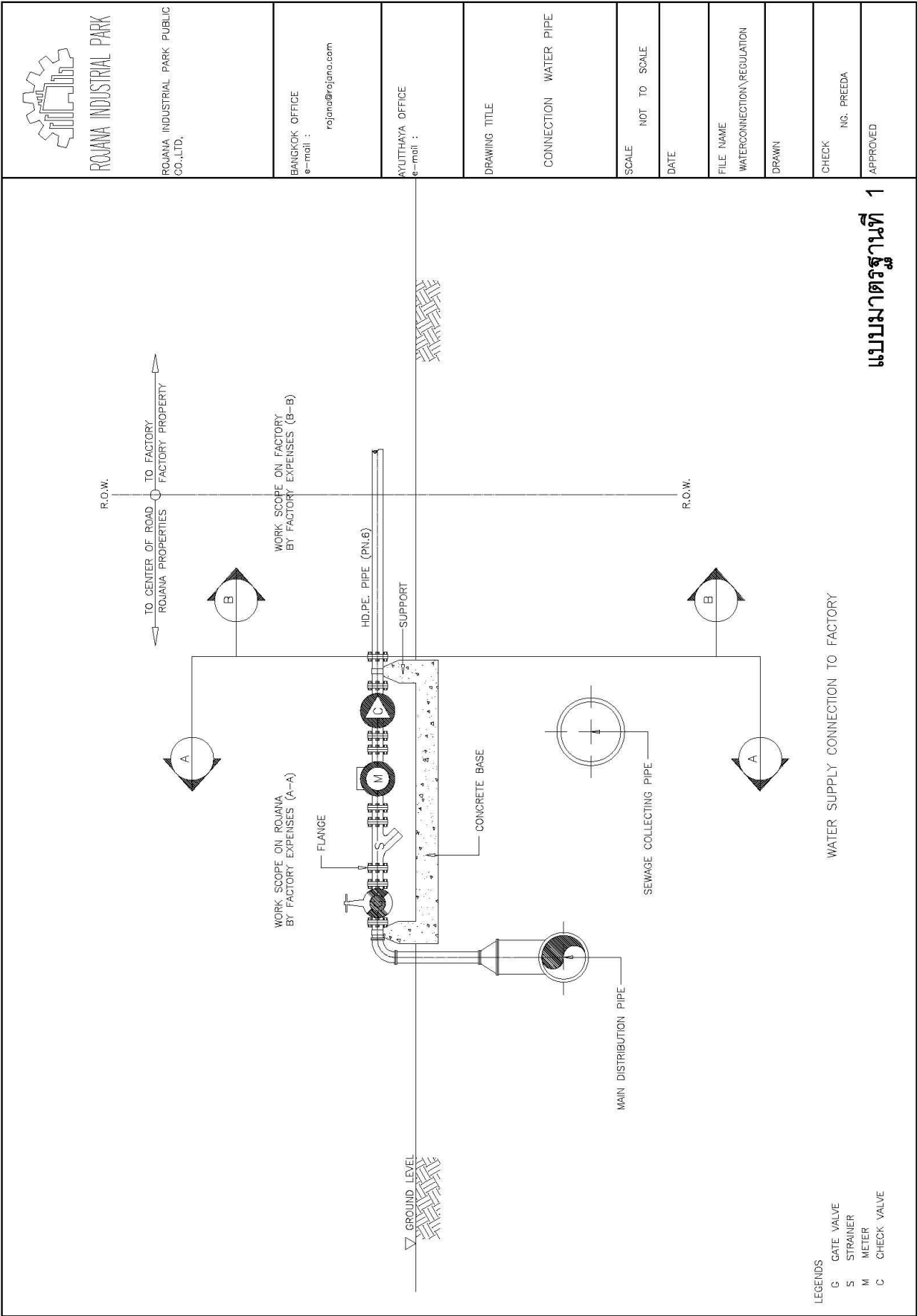
Wastewater pretreatment system information

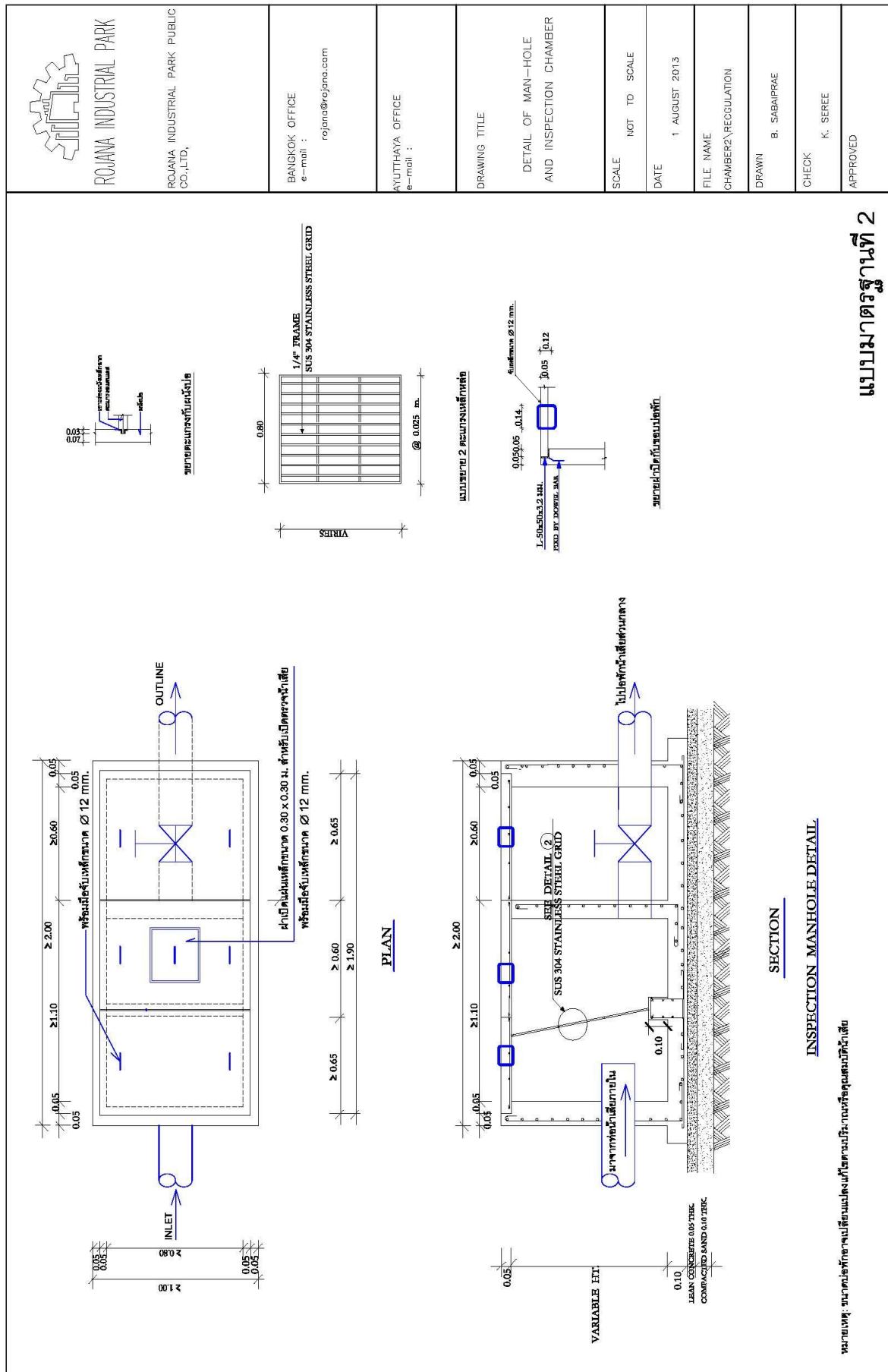
- 1.) The client ☐ has ☐ does not have a wastewater pretreatment system.
- 2.) Type of the pretreatment system
- 3.) Description of the wastewater pretreatment system mentioned (use next page in case writing space is not sufficient).

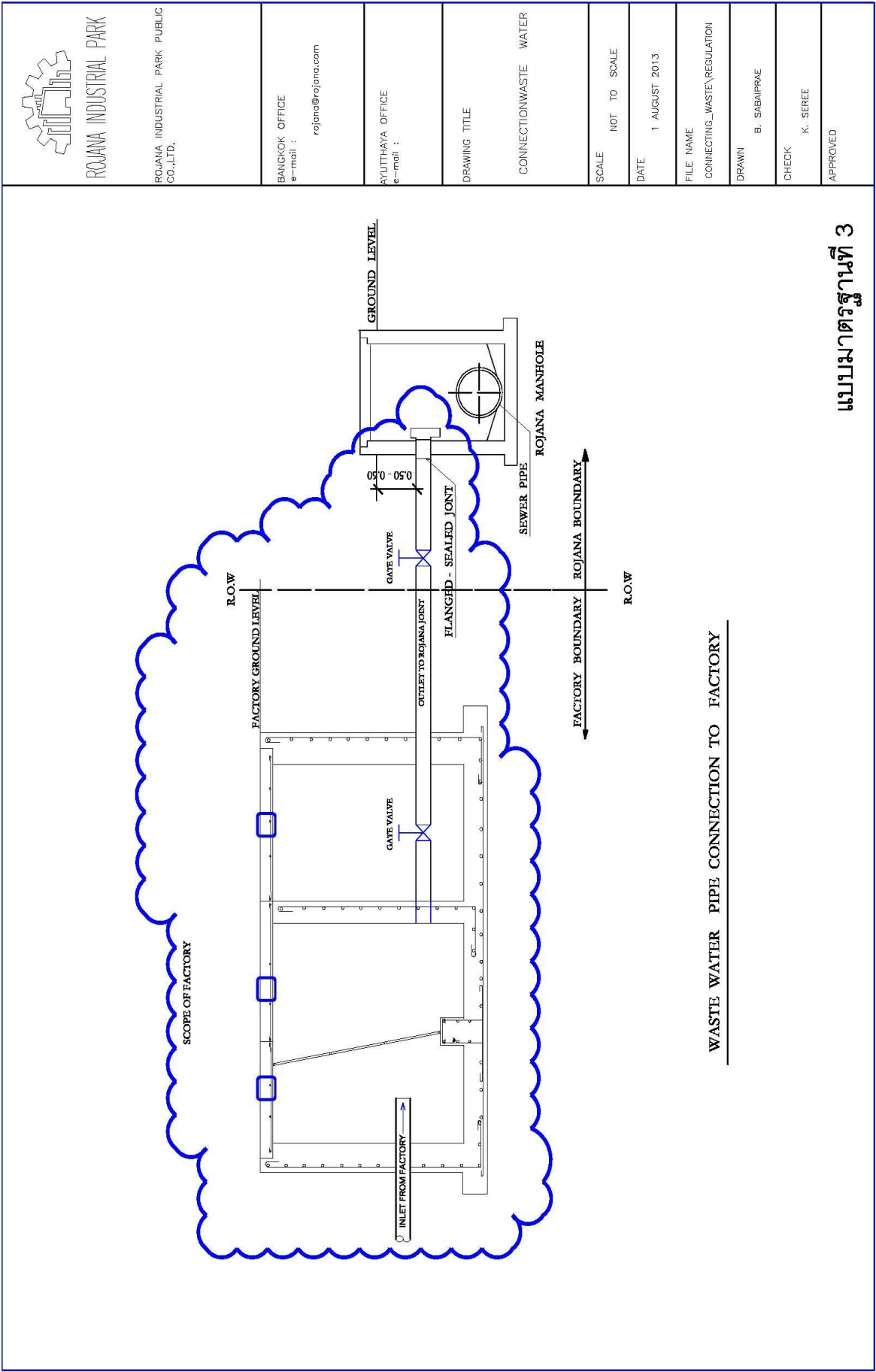
Detail / Measure**Rojana Industrial Park Wastewater Treatment System Use Request Procedure**


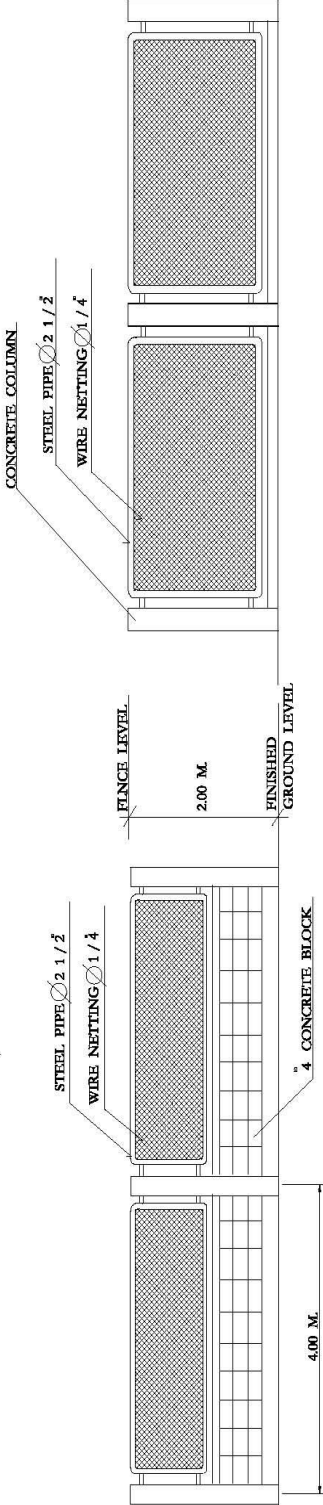
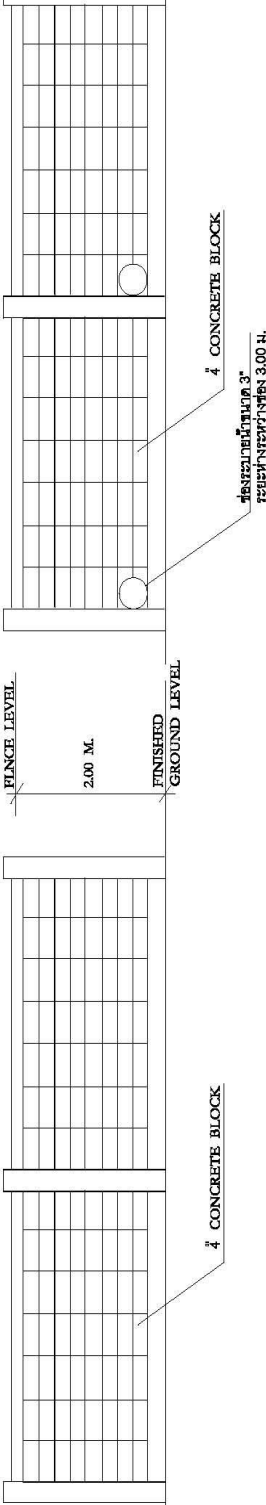
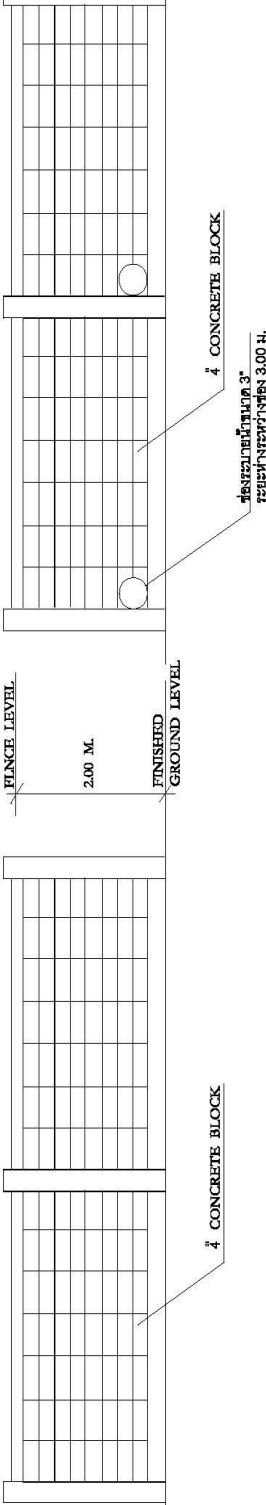
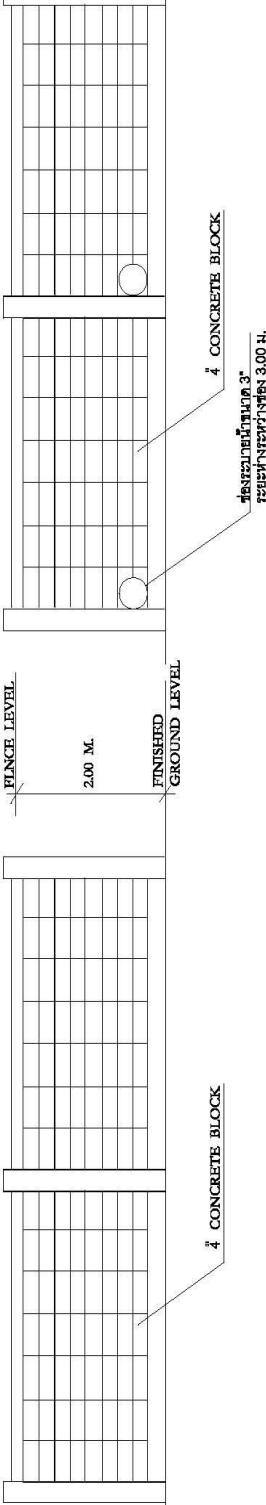
1. Take the wastewater treatment system use request form from the Rojana Industrial Park's administration section.
2. Complete the form and submit together with the documentation as follows:-
 - 2.1) Detail of the client's preventive/control measure to wastewater from manufacturing process (as per Rojan's form).
 - 2.2) The client's wastewater treatment system design basic calculation in detail for 1 copy.
 - 2.3) Blueprint flow diagram of wastewater treatment system for 1 copy.
 - 2.4) Site plan of factory for 1 copy.
3. Rojana Industrial Park shall consider and issue approval certificate under the specified condition immediately for the client to apply for the factory operation license.

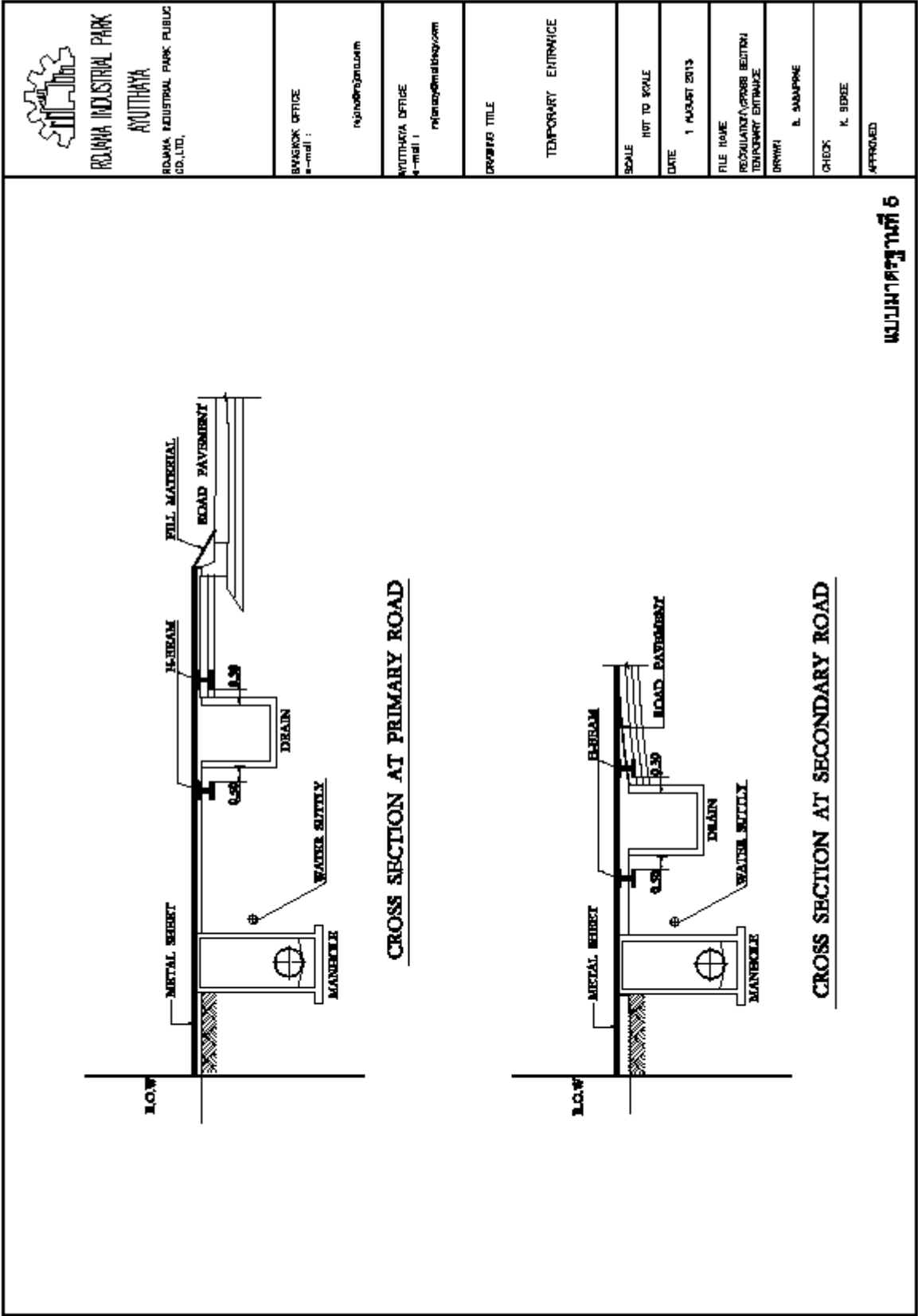
TYPICAL DRAWING








<div><div>ROJANA INDUSTRIAL PARK</div></div> <div>ROJANA INDUSTRIAL PARK PUBLIC CO.,LTD.</div>		BANGKOK OFFICE e-mail : rojana@rojana.com		AYUTHAYA OFFICE e-mail : rojanay@molodzy.com		DRAWING TITLE	STANDARD FENCE		SCALE	NOT TO SCALE	DATE	1 AUGUST 2013	FILE NAME	STANDARD FENCE\REGULATION	DRAWN	B. SABAIPRAE	CHECK	K. SEREE	APPROVED
		แบบมาตรฐานที่ 4.1				แบบมาตรฐานที่ 4.2				แบบมาตรฐานที่ 4.3				แบบมาตรฐานที่ 4.4		STANDARD FENCE DETAIL		แบบมาตรฐานที่ 4	



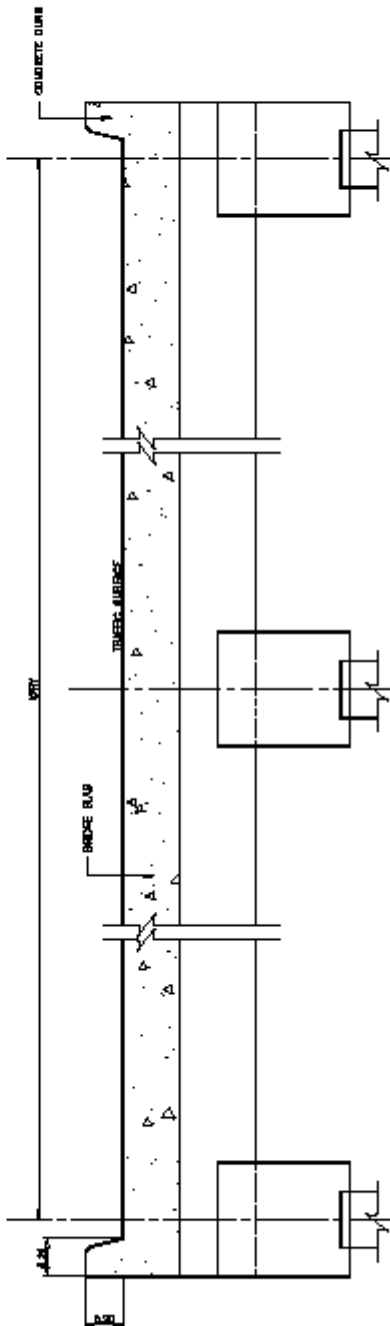
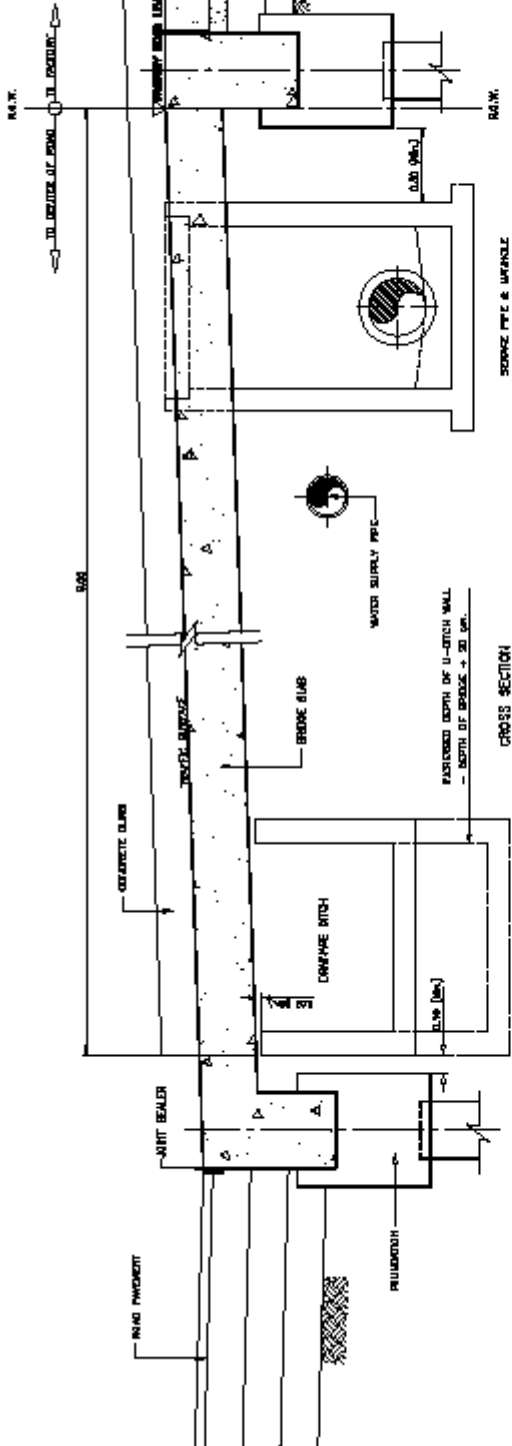


ROJANA INDUSTRIAL PARK
CO., LTD.

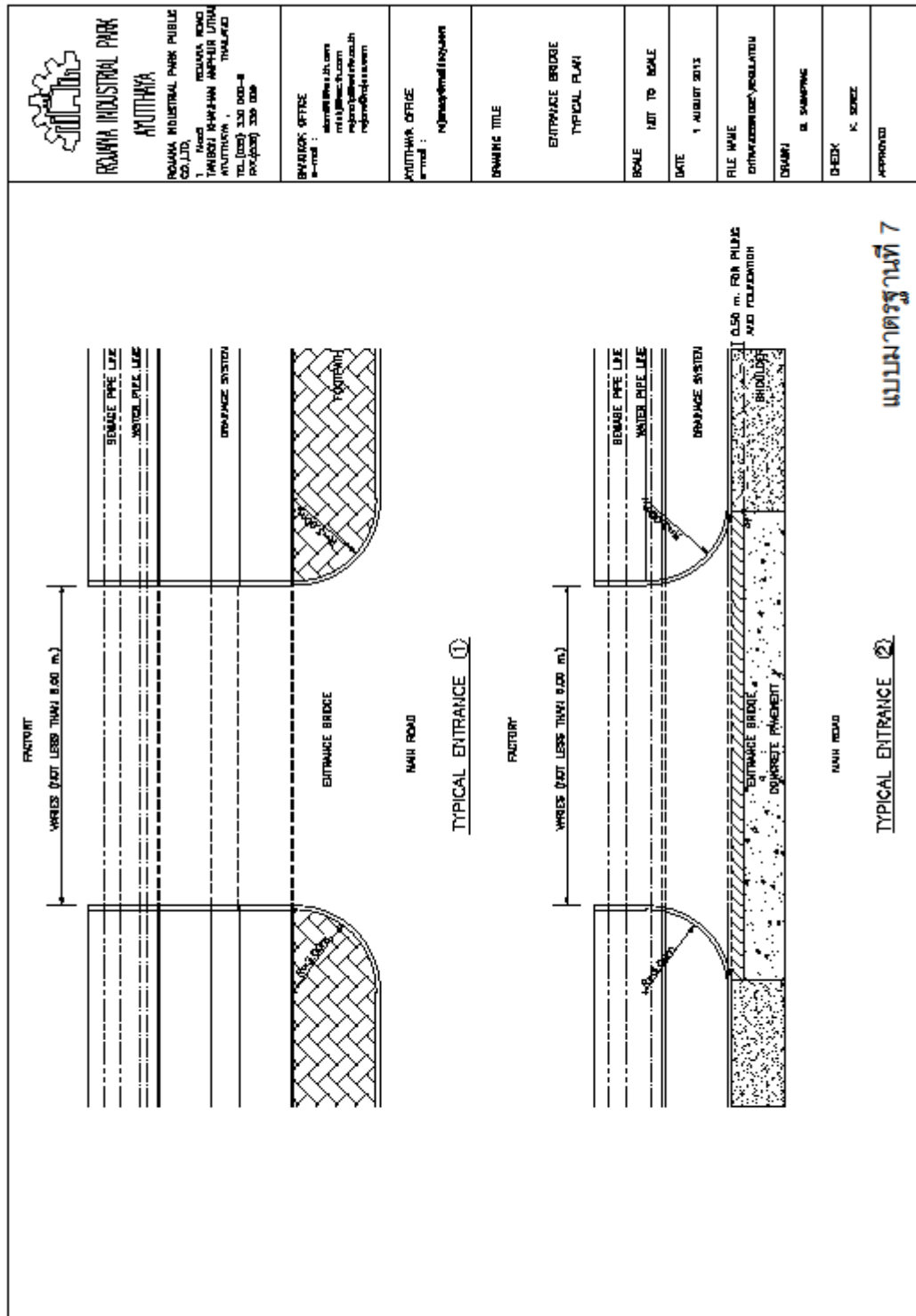
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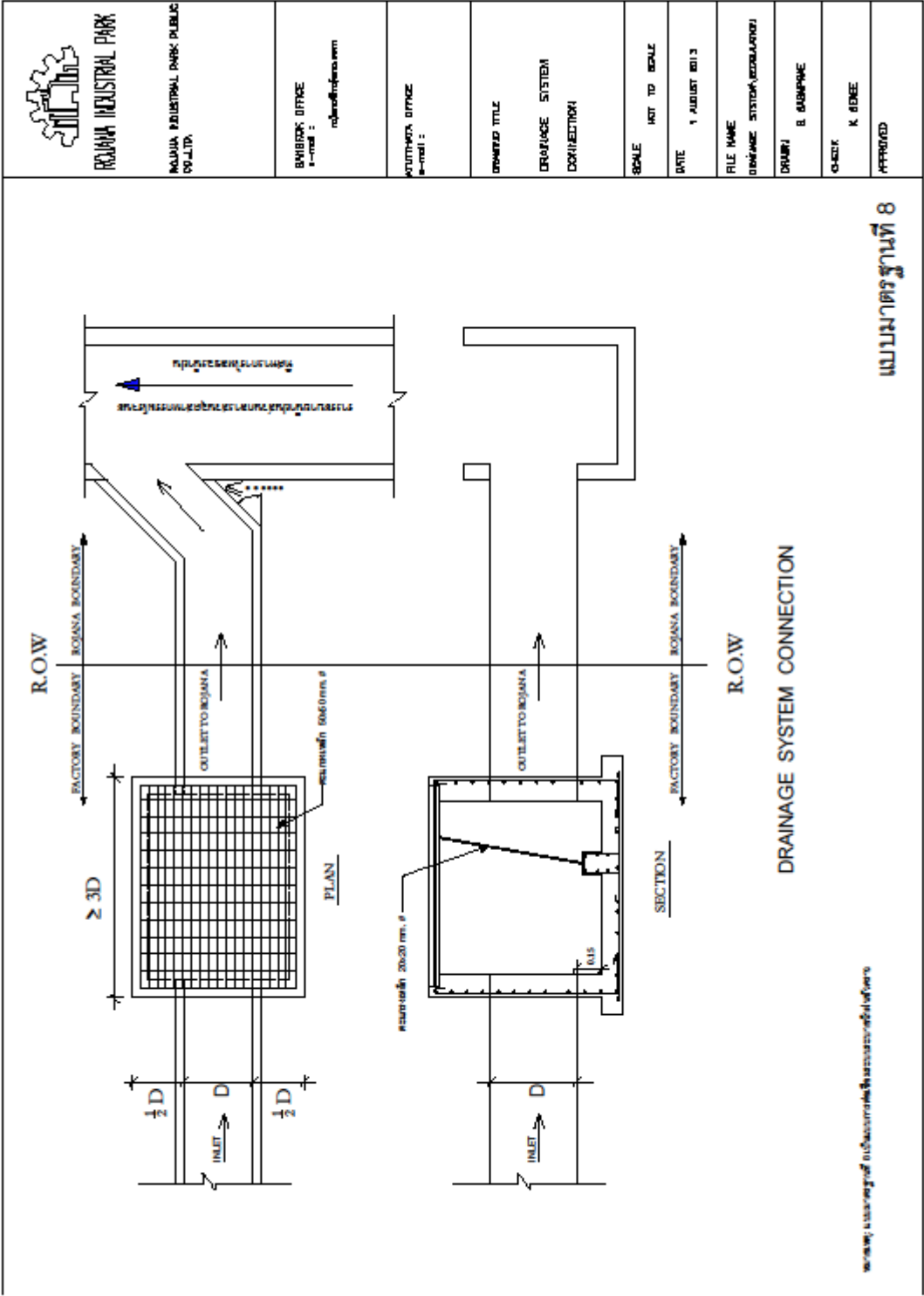
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DRAWN B. SANGPHAE	CHECK K. SEREE
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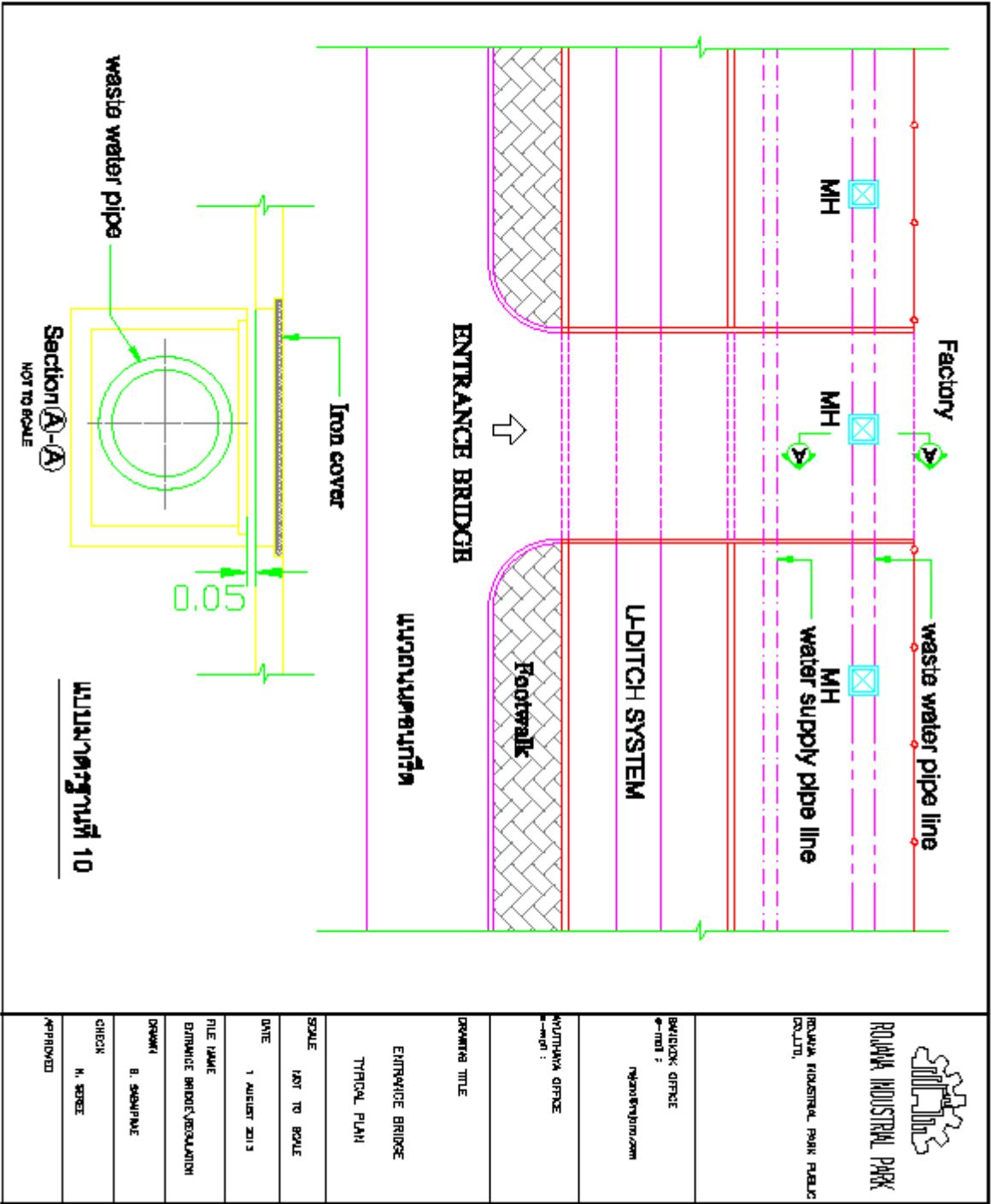


Table 1 Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
1. Air quality	- Spray water to reeking dust in summer at least 2 times daily in morning and afternoon times.	- Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Check engines and machinery to be in good condition to reduce black smoke emission.	- Construction machinery and vehicles	- Entire construction period	- Contractor/Rojana Industrial Park
	- Control transport loads to be within limits as per specified by law and maintain vehicle load platforms to be in good condition always.	- Construction site area and transport routes both internal and external	- Entire construction period	- Contractor/Rojana Industrial Park
2. Noise	- Provide ear muffs/ear plugs for workers to wear at loud noise construction site such as at piles driving, foundation installation etc.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Check equipment and machines regularly to ensure performances.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Have execution planning to avoid simultaneous operations of heavy machines being the sources of loud noise.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Limit the construction executions which cause loud noise to be in the 08.00-17.00 Hrs. period only.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
3. Soil resource	- Erect soil bunker around the construction site to prevent soil erosion.	- Around Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Grow groundcover plants on strong water flowing areas to prevent soil erosion and bank collapse of the ditch/canal nearby.	- Around Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
3. Soil resource (cont'd)	- Avoid construction materials and equipment heaping and heavy-machines placing near ditch/canal bank to prevent soil subsidy and collapse.	- Side of the waterway nearby the construction site	- Entire construction period	- Contractor/Rojana Industrial Park
	- Not execute construction during heavy rain to avoid probable soil collapse.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
4. Surface water quality	- Arrange the construction schedule to be suitable such as embankment should be conducted in summer to avoid/minimize soil erosion to waterway etc.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Prepare the temporary building, office and machinery, equipment and vehicle storage plant to avoid lubricating oils flowing to waterway from their uses and replacements.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- The contractor shall provide toilets and septic tanks sufficient for workers by the proportion 1 toilet-to-15 workers and being minimum 50 m. distant from waterway.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Wastes and construction materials waste shall not be disposed to waterway but hygienically collected to deliver to the Project for disposal further.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Mud detention ponds shall be provided in the construction site to prevent soil mud to flow to waterway.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
4. Surface water quality (cont'd)	- Cleanings in the Project area such as vehicle cleaning, dust-prevention water spraying and other cleanings shall not have their waters drained to waterway directly.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Wastewater retention pond shall be provided to storage wastewater from cleanings and washings in the construction site area for natural seepage to ground/subsequent reuse.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Waste water should be reused if possible such as road water-sprays, plant watering etc.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
5. Transportation	- Speeds of the construction material transport trucks shall be limited to maximum 40 Km./hr. on main roads.	- Roads to transport construction materials/equipment	- Entire construction period	- Contractor/Rojana Industrial Park
	- The contractor shall have the measure the transport truck drivers shall be careful at driving especially at community areas and Rojana's entry/exit gates.	- Rojana and community areas	- Entire construction period	- Contractor/Rojana Industrial Park
	- Drivers shall not park trucks on the public road in front of Rojana site for no hindrances to traffic. The construction materials during transport should be under cover and shall not project out of the vehicle platform.	- At Rojana front side/construction materials transport trucks	- Entire construction period	- Contractor/Rojana Industrial Park
	- Traffic officers/signals should be provided in Rojana area for convenience especially at entry/exit gates.	- At Rojana front side	- Entire construction period	- Contractor/Rojana Industrial Park
	- Avoid construction materials and equipment transports in rush hours (07.00-08.00 Hr. and 17.00-18.00 Hr. periods) especially on Monday-Friday.	- Roads to transport construction materials to Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Avoid placing machinery/equipment on road surface/shoulder to prevent accidents to take place/hindrance to traffic.	- Elevated road over the Highway No. 3056 construction area	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
5. Transportation (cont'd)	- Lifting RFC slabs/other materials shall be with signals clearly visible in reasonable distances from construction locations such as emergency light signal or machinery working sign placard etc. including the officer to provide traffic convenience shall be made available across the construction period.	- Elevated road over the Highway No. 3056 construction area	- Entire construction period	- Contractor/Rojana Industrial Park
6. Waste disposal	- Waste bins together with cover lids shall be distributedly provided in the construction area sufficiently.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Wastes and construction material waste shall not be disposed to drainage sewage and the Project's public drainage troughs.	- Drainage sewage/public drainage troughs	- Entire construction period	- Contractor/Rojana Industrial Park
	- Workers to collect wastes to specified area and contain wastes to bins for orderliness shall be provided.	- Around Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- For wastes from construction workers the contractor shall contact a licensed disposal service company for disposal.	- Around Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Workers to collect wastes to specified area at least once daily shall be provided	- Around Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
7. Fire accident prevention	- Security guards in the construction area and workers quarter shall be provided 24 hrs.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Training to construction workers for care and prevention against fire accident shall be provided.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Mobile fire-fighting equipment shall be provided to the construction area.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Co ordinations with the police and municipality officers nearby shall be conducted to request for co operations in emergency cases.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- The Industrial Parks' safety and fire accident prevention rules and regulations shall be complied with.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
8. Heath	- The contractor shall manage the construction site to be hygienic such as provides sufficient clean water for drinking and other uses, hygienic and sufficient toilets, bins to collect wastes for hygienic disposal etc.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Provide training to workers to use and maintain PPE for construction.	- Construction site area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Impose penalty rules for the workers who conduct quarrels/cause problems to community and the drivers who do not follow rules.	- In Rojana area and nearby community areas	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
9. Hygiene and safety	<p>- The contractor shall be selected based on the management for workers safety as a criteria. Thereto the hire contract shall contain the provision on workers safety and hygiene protection as follows:</p> <ul style="list-style-type: none"> ● The rules and practices for working safety shall be specified. ● Suitable PPE shall be provided. ● All tools and equipment conditions shall be checked for work safety. 	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- The contractor shall provide suitable PPE such as helmets, goggles, safety shoes, gloves, welding masks, mouth napkins, ear plugs, ear muffs etc. sufficient for workers.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- The contractor shall check and control workers wear PPE correctly and suitably with their works.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park

Table 1 (cont'd) Rojana Industrial Park (Ayutthaya) environmental effects preventive and corrective measures (construction period)

Environmental Effects	Environmental Effects Preventive & Connective Measures	Operation venue	Operation Period	Responsible by
9. Hygiene and safety (cont'd)	- Specify the construction area border clearly and install fences and entry/exit gates.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Set the traffic system and directions in the construction area to be clear and safe.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Provide the officers to check the machinery and equipment operations to be safe.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park
	- Provide first aid materials including the coordination procedure for delivering serious accident victims to the hospital nearby.	- In Rojana area	- Entire construction period	- Contractor/Rojana Industrial Park

Announcement

No. 1/2557

**Subject: Wastewater Discharge of the Factories in Rojana Industrial Parks
(Ayutthaya)**

In order to have the drainage as well as standard of wastewater within Rojana Industrial Parks suitably run, Rojana Industrial Park Public Company Limited agrees to declare regulations and criteria of wastewater discharge into the central wastewater treatment system that have been revised and amended announcement No.1/2549 in accordance with the Announcement No. 2/2539 dated June 14, 1996 and dated February 18, 1997 of the Ministry of Industry, and adhere to the following regulations:

1. Wastewater means all types of water that have been used, from manufacturing processes, washing from laboratories, washrooms, toilets, which include wastewater from the use of water by workers and from other activities in industrial factories. However, the wastewater must be in accordance with the standard of wastewater discharge as stipulated herein.
2. For wastewater discharge, entrepreneurs shall construct the wastewater discharge system for draining wastewater from every part of the factories into Rojana's public sewer, which shall be conducted on the following criteria:
 - 2.1 The wastewater discharge must be run with sufficient speed that could flow all sewage into Rojana's public sewer without leaving any particles behind.
 - 2.2 The wastewater discharge system must be properly covered, clean and not emit foul odours.
 - 2.3 The wastewater discharge system must be entirely separated from the rainwater drainage system. This is to prevent rainwater from entering into the public wastewater treatment system and wastewater from running into the rainwater reservoir.
 - 2.4 Before discharging the wastewater into the public sewer, the entrepreneur must provide at least one manhole at the point for convenience of collecting wastewater samples.
 - 2.5 Prior to discharge the wastewater into the public sewer, the entrepreneur must provide the gate valves at the point of entry.
 - 2.6 The connections of the individual sewers with the public sewer shall be made at a suitable point for the inspection manhole as provided by the industrial park.
 - 2.7 All connections connecting with the public sewer must be tightly sealed for prevention of outward and inward seepage of water.
 - 2.8 In case the quality of wastewater, at a certain time, drastically changes, a water preservation tank must be prepared, large enough for improving the wastewater to have the consistent quality.

3. The acceptable characteristic of wastewater discharged into the central wastewater treatment system are as follows:

3.1	pH	between	5.5 - 9.0	ppm
3.2	The temperature of discharged wastewater shall not exceed 40 ⁰ C.			
3.3	COD - Chemical Oxygen Demand	not exceed	1,250.0	ppm (Ayutthaya Project)
3.4	BOD - Biochemical Oxygen Demand (at 20°c within a period of 5 days)	not exceed	500.0	ppm
3.5	TDS – Total Dissolved Solids	not exceed	3,000.0	ppm
3.6	Suspended Solids	not exceed	200.0	ppm
3.7	Oil & Grease	not exceed	10.0	ppm
3.8	TKN – Total Kjeldahl Nitrogen	not exceed	100.0	ppm
3.9	Colour	not exceed	120	Pt-Co unit
3.10	Odor	none disgusting		
3.11	Detergent	not exceed	100.0	ppm
3.12	Free Ammonia	not exceed	50.0	ppm
3.13	Ammonia	not exceed	50.0	ppm
3.14	Fluoride	not exceed	5.0	ppm
3.15	Sulphide (equivalent as H2 S)	not exceed	1.0	ppm
3.16	Formaldehyde	not exceed	1.0	ppm
3.17	Phenols & Cresols	not exceed	1.0	ppm
3.18	Free Chlorine	not exceed	1.0	ppm
3.19	Cyanide (equivalent as HCN)	not exceed	0.2	ppm
3.20	Insecticide	none		
3.21	Radioactive Compound	none		
3.22	Tar	none		
3.23	Heavy metals shall not exceed the following limits:			
3.23.1	Zinc (as Zn)	not exceed	5.0	ppm
3.23.2	Chromium (as Cr)			
	3.23.2.1 Hexavalent Chromium	not exceed	0.25	ppm
	3.23.2.2 Trivalent Chromium	not exceed	0.75	ppm
3.23.3	Arsenic (as As)	not exceed	0.25	ppm
3.23.4	Copper (as Cu)	not exceed	2.0	ppm
3.23.5	Mercury (as Hg)	not exceed	0.005	ppm
3.23.6	Cadmium (as Cd)	not exceed	0.03	ppm
3.23.7	Barium (as Ba)	not exceed	1.0	ppm
3.23.8	Selenium (as Se)	not exceed	0.02	ppm

- | | | | | |
|---------|-------------------|------------|-----|-----|
| 3.23.9 | Lead (as Pb) | not exceed | 0.2 | ppm |
| 3.23.10 | Nickel (as Ni) | not exceed | 1.0 | ppm |
| 3.23.11 | Iron | not exceed | 5.0 | ppm |
| 3.23.12 | Manganese | not exceed | 5.0 | ppm |
| 3.23.13 | Silver (as Ag) | not exceed | 1.0 | ppm |
| 3.23.14 | Tin (as Sn) | not exceed | 1.0 | ppm |
| 3.23.15 | Aluminium (as Al) | not exceed | 5.0 | ppm |
- 3.24 The discharged wastewater shall not be included with any of the following substance:
- 3.24.1 High-viscosity solutions
 - 3.24.2 Fuels and flammable solvents
 - 3.24.3 Solid, solutions or flammable gas which is explosive and dangerous substance
 - 3.24.4 Non-biodegradable pigments
 - 3.24.5 Decomposable solids, non-biodegradable materials or materials that coagulate in the sewer and cause a clogging condition
 - 3.24.6 Sludge of calcium carbonate
4. In case the wastewater composition of any entrepreneur does not meet the acceptable characteristic specified in Clause 3, the entrepreneur shall establish in place a primary wastewater treatment system before having the water discharged into the central treatment system. In the event that it cannot proceed within a short period of time, Rojana will put into practice measures of adjusting and increasing fees for wastewater treatment; or stop supplying water, as the case may be; and/or propose to Department of Industrial Work. (via Provincial Industry Office) to give an order to stop the proceeding temporarily in the part that causes the unsuitable wastewater.
5. In case any entrepreneur releases the wastewater from the factory into the rainwater drainage pipe, he/she shall pay for damages, proceeding fees and fines as specified by Rojana.
6. The regulations and wastewater standards are subject to changes under the conditions set out by the Department of Industrial Works, or other related agencies, or Rojana Industrial Park Public Co., Ltd. In the event that there is any regulation, restriction, announcement or any order earlier set out by Rojana having a conflict with this Announcement, the entrepreneur is required to adhere to this Announcement in all cases.

Announced on March 17, 2014

Mr. Direk Vinichbutr
President

Announcement

No.02/2014 Subject: The standard of air pollution control in ROJANA industrial park

In order to comply with ROJANA's standard of air pollution control. All customers in park must follow the standard for air pollution control by specific types of contaminative substances releasing into the air named as: Dust (TPS), Sulfur Dioxide Gas(SO₂) , Nitrogen Dioxide (NO₂), by these given standards:

The chimney height lower than 10 meters

SO ₂	no more than	1.24 kg./rai/day
NO ₂	no more than	0.21 kg./rai/day
Dust	no more than	0.47 kg./rai/day

The chimney height lower than 20 meters

SO ₂	no more than	2.40 kg./rai/day
NO ₂	no more than	0.30 kg./rai/day
Dust	no more than	0.80 kg./rai/day

The chimney height lower than 30 meters

SO ₂	no more than	3.18 kg./rai/day
NO ₂	no more than	0.36 kg./rai/day
Dust	no more than	1.09 kg./rai/day

The chimney height lower than 40 meters

SO ₂	no more than	4.29 kg./rai/day
NO ₂	no more than	0.42 kg./rai/day
Dust	no more than	1.33 kg./rai/day

The chimney height lower than 50 meters

SO ₂	no more than	6.36 kg./rai/day
NO ₂	no more than	0.50 kg./rai/day
Dust	no more than	1.69 kg./rai/day

The chimney height lower than 50 meters

SO ₂	no more than	8.38 kg./rai/day
NO ₂	no more than	0.58 kg./rai/day
Dust	no more than	2.10 kg./rai/day

Announced on March 17, 2014

Mr. Direk Vinichbutr
President

Announcement**No. 3/2557 Subject: Prescription of Fuel Oil Characteristics and Quality**

In order to keep least environmental impact caused by emissions from fuel oil combustion, Rojana Industrial Park Public Co.,Ltd. hereby announces a Prescription of Fuel Oil Characteristics and Quality, which is rectified in accordance with the announcement of the Department of Energy Business, referring to Prescription of Fuel Oil Characteristics and Quality (No. 2) B.E. 2547

No.	Item	Limit	Fuel Oil					Test Method
			Type 1	Type 2	Type 3	Type 4	Type 5	
1	Sulphur Content, % wt.	Less than	2.0	2.0	2.0	2.0	0.5	ASTM D 4294
2	Specific Gravity at 15.6/15.6 °C	Less than	0.985	0.990	0.995	0.995	0.995	ASTM D 1298
3	Viscosity, cSt							ASTM D 445
	at 50 °C centistokes	More than	7	81	181	231	-	
		Less than	80	180	230	280	-	
	at 100 °C centistokes	More than	-	-	-	-	3	
		Less than	-	-	-	-	30	
4	Flash Point, °C	More than	60	60	60	60	60	ASTM D 93
5	Pour Point, °C	Less than	24	24	30	30	57	ASTM D 97
6	Gross Heat of Combustion, cal/g	More than	10,000	9,900	9,900	9,900	9,900	ASTM D 240
7	Ash Content, % wt.	Less than	0.1	0.1	0.1	0.1	0.1	ASTM D 482
8	Water and Sediment, % vol.	Less than	1.0	1.0	1.0	1.0	1.0	ASTM D 1796
9	Colour	Less than	8.0	-	-	-	-	ASTM D 1500

Announced on March 17, 2014

Mr. Direk Vinichbutr
President

Announcement**No. 4/2557 Subject: Prescription of the Content Value of Contaminants in Air Emitted from Factories**

In order to maintain content value of contaminants in air emitted from factories consistent with a standard prescribed by Rojana Industrial Park Public Co.,Ltd., the Company hereby declares a Prescription of the Content Value of Contaminants in Air Emitted from Factories, which is amended with respect to the announcement of the Ministry of Industry, regarding to Prescription of the Content Value of Contaminants in Air Emitted from Factories B.E. 2549 as follows;

No. 1 The air that can be emitted from the factories must have a content value of each type of contaminant not exceeding the prescribed value below;

Types of Contaminants (Measurement Unit)		Sources of Contaminants	Quantity of Air Contaminants	
			Non-combustion	Combustion
1.	Total Suspended Particulate (mg./sq.m.)	a. Heat source that uses; - Oil or fuel oil - Coal - Biomass fuel - Others b. Smelting, melting, casting, rolling, drawing and/or producing Aluminium c. General production	- - - - 300 400	240 320 320 320 240 320
2.	Antimony (mg./sq.m.)	General Production	20	16
3.	Arsenic (mg./sq.m.)	General Production	20	16
4.	Copper (mg./sq.m.)	General Production	30	24
5.	Lead (mg./sq.m.)	General Production	30	24
6.	Mercury (mg./sq.m.)	General Production	3	24
7.	Chlorine (mg./sq.m.)	General Production	30	24
8.	Hydrogen Chloride (mg./sq.m.)	General Production	200	160

Type of Contaminants (Measurement Unit)		Source of Contaminants	Quantity of Air Contaminant	
			Non- combustion	Combustion
9.	Sulfuric Acid (ppm)	General Production	25	-
10.	Hydrogen Sulfide (ppm)	General Production	100	80
11.	Carbon Monoxide (ppm)	General Production	870	690
12.	Sulfur Dioxide (ppm)	a. Heat source that uses; - Oil or fuel oil - Coal - Biomass fuel - Others b. General production	- - - - 500	950 700 60 60 -
13.	Oxides of Nitrogen (ppm)	Heat source that uses; - Oil or fuel oil - Coal - Biomass fuel - Others	- - - -	200 400 200 200
14.	Xylene (ppm)	General Production	200	-
15.	Cresol (ppm)	General Production	5	-

No. 2 Measurement of content value of emitted air from factories: air released from factories through smokestacks, vents or ventilators, with or without being treated, will be measured during manufacturing, which staffs and officers agree that maximum quantity of air contaminants will be discharged during the time.

No. 3 Quantity of air contaminants is calculated at 1 atmosphere pressure and temperature 25 °C

Announced on March 17, 2014

Mr. Direk Vinichbutr
President

Announcement**No. 5/2557 Subject: Calculation of Wastewater Treatment Charge**

For a precise calculation of wastewater treatment charge, Rojana Industrial Park Public Co.,Ltd. hereby specifies a rate of wastewater treatment service, dividing into 2 cases as below;

1. Calculating from Biochemical Oxygen Demand (BOD) of wastewater:-
 - 1.1 BOD less than 200 mg./l Service Charge: 6 Baht per sq.m.
 - 1.2 BOD between 200-300 mg./l Service Charge: 7 Baht per sq.m.
 - 1.3 BOD between 301-500 mg./l Service Charge: 8 Baht per sq.m.
 - 1.4 BOD between 501-1000 mg./l Service Charge: 9 Baht per sq.m.
 - 1.5 BOD more than 1000 mg./l Service Charge: 20 Baht per sq.m.
2. If the result of wastewater characteristic analysis indicates any value exceeds the Rojana's standard prescribed in the Announcement of Wastewater Discharged by the Factories No. 1/2557, such as, BOD is greater than 1000 mg./l, Grease and Oil, TDS, Metal, and others, Rojana Industrial Park will charge at 20 Baht per sq.m. for total quantity of wastewater to be treated. If the value of wastewater characteristic continually goes beyond Rojana's standard, a service charge for total quantity of wastewater will increase to 40 Baht per sq.m. and 80 Baht per sq.m. respectively. If a wastewater treatment system of the factory is not yet improved, Rojana will suspend the wastewater treatment service for the particular factory.

Announced on March 17, 2014

Mr. Direk Vinichbutr
President

Announcement**No. 6/2557 Subject: Discharging Wastewater into Rainwater Gutter**

To prevent wastewater to be discharged into rainwater gutter, Rojana Industrial Park will impose a charge to the factory that does not comply with regulations. A total expense include:-

- | | |
|--|----------------------------|
| 1. Damages | 10,000 Baht per occurrence |
| 2. Rainwater Gutter | 2,500 Baht per point |
| 3. Wastewater Sucking Expense | 500 Baht per sq.m. |
| 4. Wastewater Elimination or Treatment Expense is as per actual cost | |
| 5. Other Expenses (if any) | |

Announced on March 17, 2014

Mr. Direk Vinichbutr
President

Service Fee

No.	Description	Service Fee	Remark
1	<u>Service Fee</u>		
	3.1 Water supply truck service fee	500 Baht/travel	In case of emergency for factory
	3.2 Water supply service fee	20 Baht/cu.m.	In case of emergency to central water supply
	3.3 Wastewater pumping cost	500 Baht/ cu.m.	In case of discharging wastewater into rainwater drainage system by factory/contractor
	3.4 Sewer barrier wall installation fee	2,500 Baht/location	
	3.5 General waste collection service fee	45 Baht/bin	

Penalty Amount

No.	Description	Penalty	Remark
1	Factory/contractor discharges wastewater to rainwater gutter.	10,000 Baht/time/location and other costs for correction	Factory/contractor shall be responsible to provide the facility for wastewater discharge.
2	Factory/contractor conducts an act which causes effect to water supply/wastewater system.	50,000 Baht/ time/location and other costs for correction	Water supply/wastewater pipe is broken/damaged by factory's/contractor's act.
1	<u>Wastewater treatment service fee</u> Rojana Industrial Park (Plc.)	6 Baht/cu.m 7 Baht/cu.m 8 Baht/cu.m 9 Baht/cu.m 20 Baht/cu.m	Wastewater quantity assumed to be 80% of the water supply quantity - BOD 0-200 mg./l - BOD 201-300 mg./l - BOD 301-500 mg./l - BOD 501-1,000 mg./l - BOD1,001-1,200 mg./l and over Or other cases as considered by Rojana Industrial Park

Security Deposit for Water Supply Use

No.	Description	Security Deposit (25% of the Cost of Water)	Remark
1	Meter Size 1 inch	8,550.00	
2	Meter Size 2 inch	34,300.00	
3	Meter Size 2 1/2 inch	53,660.00	
4	Meter Size 3 inch	77,280.00	
5	Meter Size 4 inch	137,470.00	
6	Meter Size 6 inch	309,260.00	
7	Meter Size 8 inch	549,900.00	
8	Meter Size 10 inch	859,160.00	

Capacity of Septic Tank / people

No.	Number of People	Total Amount of Wastewater (litter)	Treatment Ratio	Remark
1	13	1,200	0.80	
2	16	1,600	1.00	
3	20	1,800	1.20	
4	23	2,250	1.40	
5	33	3,100	2.00	
6	50	5,200	3.00	
7	65	6,400	4.00	
8	80	7,500	5.00	

Capacity of Grease Trap / people

No.	Number of People	Number of Table	Width (mm)	Length (mm)	Height (mm)
1	1-5	1	350	450	335
2	6-10	5	480	480	420
3	11-50	3-10	430	565	525
4	51-120	11-24	480	680	500
5	121-260	25-50	640	1050	525