



SUMMARY REPORT

OF ENVIRONMENTAL IMPACT ASSESSMENT REPORT



UPSTREAM PROJECT FOR HYGIENE AND VALUE ADDED PRODUCTS (UHV PROJECT)

Project Location : IRPC Industrial Zone

Tumbon Chen Nern, Aumphur Rayong, Rayong

Project Owner : IRPC Public Company Limited

Project Owner Address : 555/2 Energy Complex Building B, 6th

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Prepared by



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SUMMARY REPORT
THE ENVIRONMENTAL IMPACT ASSESSMENT OF
UPSTREAM PROJECT FOR HYGIENE AND VALUE ADDED PRODUCTS
(UHV)
IRPC PUBLIC COMPANY LIMITED

1. INTRODUCTION

1.1 PROJECT BACKGROUND

IRPC Public Company Limited (IRPC) has operated continuously the petroleum and petrochemical industries to create the complete production process in the company group within the manufacturing area. The main raw material is crude oil which can be processed through the fractionating tower to produce the desired products, i.e. liquefied petroleum gas (for cooking), gasoline, diesel and residue (heavy fuel oil) which have very low values as well as some contaminated sulfur contents. Nowadays, IRPC has some limitations of the low capacity of the value added unit for the residue that is lower than the normal values designed for the refinery plant. Together with the fluctuations of the crude oil price, IRPC is now facing the economic instability.

IRPC has planned to improve the product quality with environmental friendly and efficient resources utilizations to create the optimum benefit to the country and the people. In addition, IRPC has recognized of impacts on environment and health. IRPC has initiated the **Upstream Project for Hygiene and Value Added Products (UHV)** using the residue as the raw material in order to convert the residue to produce propylene gas that can be used further for making house wares or other goods.

UHV project of IRPC Public Company Limited is the plant producing the major and minor products in petrochemical group by value adding the residue (heavy fuel oil) at the bottom of the fractionating tower. The main products are such as propylene and heavy naphtha (HN), while the by products are such as ethylene, butanes, propane, light cycle oil (LCO), light naphtha (LN), hydrogen, sulfur, fuel gas and crude cycle oil (CLO) as indicated in **Table 1.1-1**

Table 1.1-1 Main Products and By Products Production Capacity

Products	Capacity (Approx.)	Usage
<u>Petroleum Products</u>		
- Heavy Naphtha (HN)	288,835 Ton/yr	Export.
- Propane	45,894 Ton/yr	Export.
- Butanes	195,068 Ton/yr	Export.
- Light Cycle Oil (LCO)	170,846 Ton/yr	Export.
- Light Naphtha (LN)	97,473 Ton/yr	Send to Ethylene Plant within IRPC.
- Fuel Gas	115,615 Ton/yr	1) Self use 54,627 Ton/yr. 2) Send to Fuel Gas Header within IRPC 60,988 Ton/yr.
- Clarified Oil (CLO)	53,436 Ton/yr	Export.
<u>Petrochemical Products</u>		
- Propylene	337,532 Ton/yr	Send to Polypropylene Plant within IRPC.
- Ethylene	75,818 Ton/yr	Send to Ethylene Header within IRPC for using in Polyethylene Plant or EBSM Plant.
<u>Other Products</u>		
- Hydrogen	38,702 Ton/yr	1) Self use 27,200 Ton/yr 2) Send to Hydrogen Header within IRPC 11,502 Ton/yr
- Liquid Sulphur	47,593 Ton/yr	Export

Source: IRPC Public Company Limited., 2013

UHV project is classified as the refinery industry project, which is not classified as the project or activity which may seriously affect community on environmental quality, natural resources and health in which the government sector, state enterprise and private sector must conduct the environmental impact assessment dated on August 31th, B.E. 2553. However, IRPC has the intention to study and evaluate the environmental impact and health impact following the environmental impact assessment report guideline for the project or activity which may seriously affect community on environmental quality, natural resources and health dated on December 29th, B.E. 2552. Therefore, IRPC has assigned the Consultant of Technology Company Limited to be responsible for the preparation of the environmental impact assessment report of UHV Project to be submitted to the Office of Natural Resources and Environmental Policy and Planning for further review and approval of the permit for factory operation.

1.2 PROJECT SCHEDULE

UHV project will take times around 8 months for detail engineering design, 24 months for equipment purchase and construction and equipment installation, and finally 5 months for testing the operation. Thus, total time required will be around 29 months. It is expected to start the commercial operation in B.E. 2558 (operating days are 365 day/year).

2. PROJECT DESCRIPTION

2.1 PROJECT SIZE AND LOCATION

UHV project of IRPC is located in the area of IRPC industrial zone, Cheongneon, Muang District, Rayong Province. The total area of project is around 330 rai (528,000 m²) as indicated in **Figure 2.1-1**.

Project plotplan and landuse of the UHV project of IRPC Public Company Limited and locations of process units and equipment is shown in **Figure 2.1-2**, consisting of:

(1) Residue Hydrodesulfurization process and Residue Fluidise Catalytic Cracking process consisting of 7 units

- 1) Residue Hydrodesulfurization Unit (RHDS)
- 2) Residue Fluidise Catalytic Cracking Unit (RFCCU)
- 3) LPG Sweetening Unit (LSU)

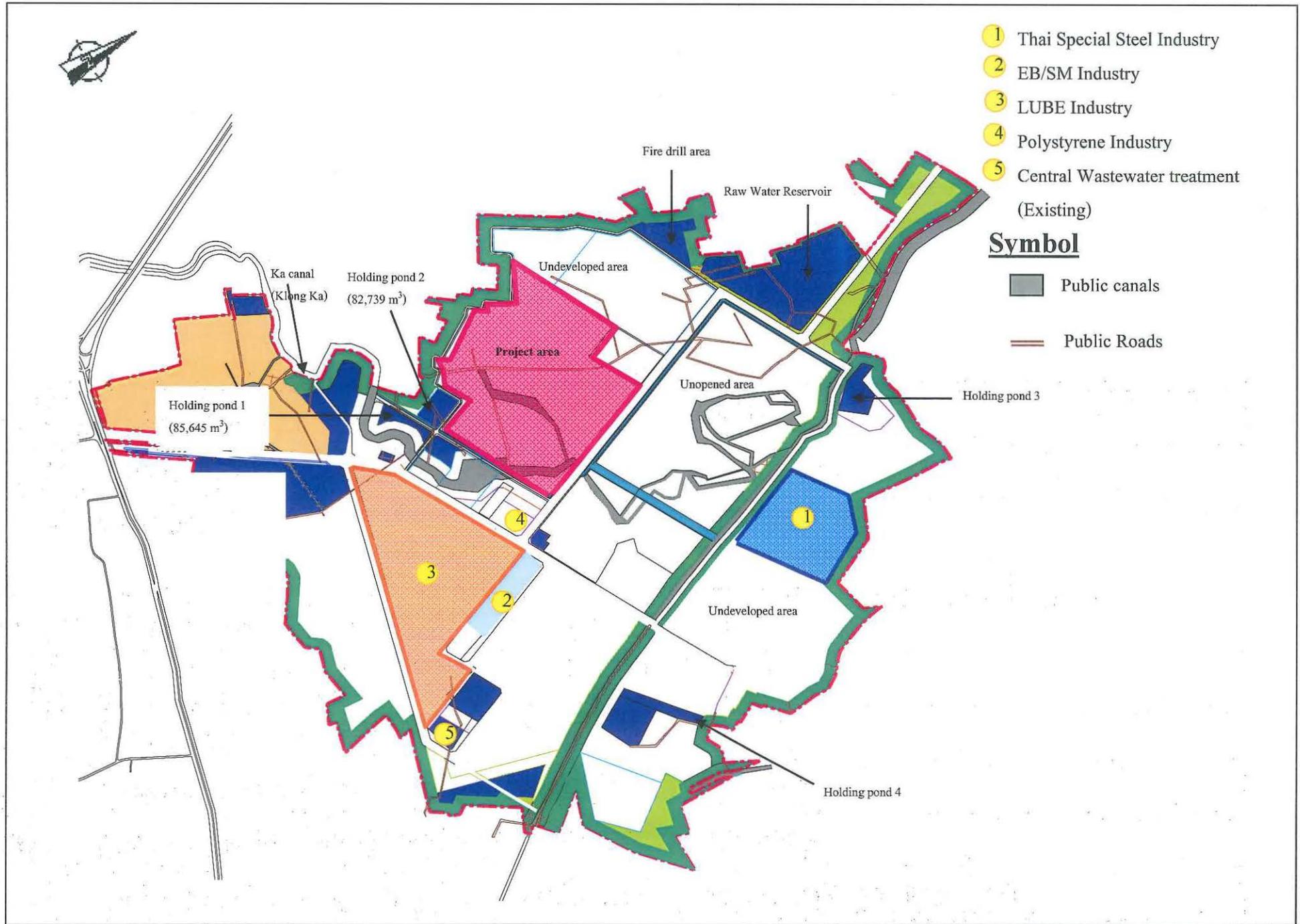


Figure 2.1-1 Project Area.