

คุณภาพน้ำใต้ดิน



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด  
S.P.S. CONSULTING SERVICE CO., LTD.  
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Ref. No. WR448/03/23

Report No. 2303/404\_2

25/2/66

### Groundwater Quality Analysis Report

Project : PTT Asahi Chemical Co., Ltd. Sampling Date : 21 March 2023  
Project Location : WHA Eastern Industrial Estate (Map Ta Phut)  
8 Phangmuang Chapoh 3-1 Road, Huai Pong,  
Mueang Rayong, Rayong Date Received : 22 March 2023  
Date of Analysis : 22-28 March 2023  
Date Reported : 30 March 2023  
Client Name : NPC Safety and Environmental Service Co., Ltd.  
Sampling Method : Grab  
Sampling by : Thitinan Ruangram (๖-011-๖-8722)  
S.P.S. Consulting Service Co., Ltd.

Parameter	Analytical Method	MW9*	Standard	LOQ
pH	Electrometric Method (4500-H <sup>+</sup> B.)	4.75	6.5-9.2 <sup>(1)</sup>	-
Antimony (mg/L)	Digestion, Inductively Coupled Plasma Method (3030 F. & 3120 B.)	0.04	1.0	<0.01
Vanadium (mg/L)	Digestion, Inductively Coupled Plasma Method (3030 F. & 3120 B.)	<0.005	17	<0.005
Total Petroleum Hydrocarbon (C <sub>2</sub> -C <sub>35</sub> ) - TPH (C <sub>3</sub> -C <sub>4</sub> ) (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Flame Ionization Detector Method (Method 5030C & 8015D**)	<0.00004	1.4	<0.00004

#### Remark:

Sample Characteristics: Yellow turbid with moderately precipitate

\* Up-gradient

<sup>(1)</sup> In the case of acid or alkaline contamination, compare the result of pH value at down-gradient with up-gradient. The pH value change must not exceed one level and in the range of maximum allowable concentration of the groundwater quality standards for drinking purposes is 6.5 to 9.2

- TPH (C<sub>3</sub>-C<sub>4</sub>): Sum of n-Pentane, n-Hexane, n-Heptane, n-Octane

Standard = Criteria and Inspection of Soil and Groundwater Contamination in Factory Area, Notification of Ministry of Industry B.E. 2559 (2016)

Method = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017.

Method\*\* = United States Environmental Protection Agency (U.S. EPA) Method

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Waraphon Phoowut)

๖-011-๖-8420

Laboratory Operator

๓๐ / ๐๓ / ๒๕๖๖

(Benjawan Sapphawong)

๖-011-๖-7143

Laboratory Supervisor

๓๐ / ๐๓ / ๒๕๖๖

----- End of Report -----



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Sampling Method : Grab  
Sampling by : Thitinan Ruangram  
S.P.S. Consulting Service Co., Ltd.

Parameter	Analytical Method	MW9*	Standard	LOQ
Acrylonitrile (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Mass Spectrometric Method (Method 8260C)	<0.002	0.1	<0.002
Methyl Methacrylate (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Mass Spectrometric Method (Method 8260C)	<0.007	-	<0.007

#### Remark:

Sample Characteristics: Yellow turbid with moderately precipitate

\* Up-gradient

Standard = The Standard Value of PTT AC

Method = United States Environmental Protection Agency (U.S. EPA) Method.

Reported results refer to submitted samples only.

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(Waraphon Phoowut)

Laboratory Operator

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(Benjawan Sapphawong)

Laboratory Supervisor

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Client Name : NPC Safety and Environmental Service Co., Ltd.  
Sampling Method : Grab  
Sampling by : Thitinan Ruangram (T-011-Q-8722)  
S.P.S. Consulting Service Co., Ltd.

Parameter	Analytical Method	MW4	Standard	LOQ
pH	Electrometric Method (4500-H <sup>+</sup> B.)	5.04	6.5-9.2 <sup>(1)</sup>	-
Antimony (mg/L)	Digestion, Inductively Coupled Plasma Method (3030 F. & 3120 B.)	<0.01	1.0	<0.01
Vanadium (mg/L)	Digestion, Inductively Coupled Plasma Method (3030 F. & 3120 B.)	<0.005	17	<0.005
Total Petroleum Hydrocarbon (C <sub>9</sub> -C <sub>25</sub> ) - TPH (C <sub>4</sub> -C <sub>8</sub> ) (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Flame Ionization Detector Method (Method 5030C & 8015D**)	<0.00004	1.4	<0.00004

#### Remark:

Sample Characteristics: Yellow turbid with moderately precipitate

<sup>(1)</sup> In the case of acid or alkaline contamination, compare the result of pH value at down-gradient with up-gradient. The pH value change must not exceed one level and in the range of maximum allowable concentration of the groundwater quality standards for drinking purposes is 6.5 to 9.2

- TPH (C<sub>4</sub>-C<sub>8</sub>): Sum of n-Pentane, n-Hexane, n-Heptane, n-Octane

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T-011-Q-8420

Laboratory Operator

30 / 03 / 23

(Benjawan Sapphawong)

T-011-Q-7143

Laboratory Supervisor

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F1201-13/01-12-22/JOB2301



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Sampling by : Thitinan Ruangram  
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Parameter	Analytical Method	MW4	Standard	LOQ
Acrylonitrile (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Mass Spectrometric Method (Method 8260C)	<0.002	0.1	<0.002
Methyl Methacrylate (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Mass Spectrometric Method (Method 8260C)	<0.007	-	<0.007

#### Remark:

Sample Characteristics: Yellow turbid with moderately precipitate

Standard = The Standard Value of PTT AC

Method = United States Environmental Protection Agency (U.S. EPA) Method.

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30 / 03 / 23

(Benjawan Sapphawong)

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Parameter	Analytical Method	MW5	Standard	LOQ
pH	Electrometric Method (4500-H <sup>+</sup> B.)	6.22	6.5-9.2 <sup>(1)</sup>	-
Antimony (mg/L)	Digestion, Inductively Coupled Plasma Method (3030 F. & 3120 B.)	<0.01	1.0	<0.01
Vanadium (mg/L)	Digestion, Inductively Coupled Plasma Method (3030 F. & 3120 B.)	0.005	17	<0.005
Total Petroleum Hydrocarbon (C <sub>9</sub> -C <sub>32</sub> ) - TPH (C <sub>9</sub> -C <sub>8</sub> ) (mg/L)	Purge and Trap Capillary-Column Gas Chromatographic/Flame Ionization Detector Method (Method 5030C & 8015D**)	<0.00004	1.4	<0.00004

#### Remark:

Sample Characteristics: Yellow turbid with moderately precipitate

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