

ภาคผนวก ข

ใบรายงานผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY	RECEIVED DATE	: JANUARY 6, 2022
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED	ANALYTICAL DATE	: JANUARY 6-13, 2022
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230	REPORT NO.	: 2022-U003803
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com	WORK NO.	: 2019-002022
SAMPLING SOURCE	: -	ANALYSIS NO.	: T22AA098-0006
SAMPLE TYPE	: EFFLUENT		
SAMPLING DATE	: JANUARY 5, 2022		
SAMPLING TIME	: 09:30 HOUR		
SAMPLING METHOD °	: GRAB		
SAMPLING BY °	: MR THANADET WANSANOR		
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AA098-0006	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	31	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	< 2.0	2.0
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	35.8	0.1
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	50.7	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	6.5	5.0
NITRATE °	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	2.53	0.09
SULPHIDE °	mg/L	METHYLENE BLUE METHOD (SM: 4500-S ²⁻ D)	< 0.02	0.02
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	39,480	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	1.1	3
METALS				
LEAD °	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	< 0.015	0.015
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-05-01-002

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[REDACTED]
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LABORATORY SUPERVISOR

JANUARY 17, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: EFFLUENT	RECEIVED DATE	: JANUARY 13, 2022
SAMPLING DATE	: JANUARY 12, 2022	ANALYTICAL DATE	: JANUARY 13-17, 2022
SAMPLING TIME	: 10:25 HOUR	REPORT NO.	: 2022-U005098
SAMPLING METHOD	: GRAB	WORK NO.	: 2019-002022
SAMPLING BY	: MR THANADET WANSANOR ๓-145-๓-8104	ANALYSIS NO.	: T22AA590-0005
ANALYZED BY	: MISS KANNIKAR SUMLEETHA ๓-145-๓-8218		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AA590-0005	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	33	-
TOTAL DISSOLVED SOLIDS ^c	mg/L	DRIED AT 180 °C (SM: 2540 C)	35,575	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

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SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-12-01-005

LABORATORY SUPERVISOR
๓-145-๓-3314
JANUARY 21, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : FEBRUARY 2, 2022
SAMPLING TIME : 10:55 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 2, 2022
ANALYTICAL DATE : FEBRUARY 2-10, 2022
REPORT NO. : 2022-U010224
WORK NO. : 2019-002022
ANALYSIS NO. : T22AB844-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AB844-0006	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	33	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	< 2.0	2.0
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	34.2	0.1
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	80.2	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	6.6	5.0
NITRATE °	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	6.87	0.09
SULPHIDE °	mg/L	METHYLENE BLUE METHOD (SM: 4500-S ²⁻ D)	< 0.02	0.02
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	40,078	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3
METALS				
LEAD °	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	< 0.015	0.015
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-02-02-001



LABORATORY SUPERVISOR

FEBRUARY 11, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY	RECEIVED DATE	: FEBRUARY 10, 2022
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED	ANALYTICAL DATE	: FEBRUARY 10-12, 2022
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230	REPORT NO.	: 2022-U012359
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com	WORK NO.	: 2019-002022
SAMPLING SOURCE	: -	ANALYSIS NO.	: T22AC342-0005
SAMPLE TYPE	: EFFLUENT		
SAMPLING DATE	: FEBRUARY 9, 2022		
SAMPLING TIME	: 10:20 HOUR		
SAMPLING METHOD	: GRAB		
SAMPLING BY	: MR THANADET WANSANOR ๓-145-๑-0056		
ANALYZED BY	: MISS KANNIKAR SUMLEETHA ๓-145-๑-0074		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AC342-0005	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	33	-
TOTAL DISSOLVED SOLIDS ^c	mg/L	DRIED AT 180 °C (SM: 2540 C)	36,840	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR WHITE	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

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FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-09-02-003



LABORATORY SUPERVISOR

๓-145-๑-0004

FEBRUARY 22, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY	RECEIVED DATE	: MARCH 3, 2022
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED	ANALYTICAL DATE	: MARCH 3-13, 2022
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230	REPORT NO.	: 2022-U015962
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com	WORK NO.	: 2019-002022
SAMPLING SOURCE	: -	ANALYSIS NO.	: T22AD863-0006
SAMPLE TYPE	: EFFLUENT		
SAMPLING DATE	: MARCH 2, 2022		
SAMPLING TIME	: 12:13 HOUR		
SAMPLING METHOD ^c	: GRAB		
SAMPLING BY ^c	: MR THANADET WANSANOR		
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AD863-0006	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	36	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	< 2.0	2.0
SALINITY ^c	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	35.9	0.1
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	84.8	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	5.4	5.0
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	6.64	0.09
SULPHIDE ^c	mg/L	METHYLENE BLUE METHOD(SM: 4500-S ²⁻ D)	< 0.02	0.02
TOTAL DISSOLVED SOLIDS ^c	mg/L	DRIED AT 180 °C (SM: 2540 C)	39,040	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3
METALS				
LEAD ^c	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	< 0.015	0.015
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			YELLOW	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
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^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.
 RELEASE ORDER NO. : EV-02-03-001

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 (MRS PIPAT SUTTHAMNONGWONG)
 LABORATORY SUPERVISOR

MARCH 14, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 9, 2022
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR THANADET WANSANOR ๓-145-๓-0056
ANALYZED BY : MISS KANNIKAR SUMLEETHA ๓-145-๓-0074

RECEIVED DATE : MARCH 10, 2022
ANALYTICAL DATE : MARCH 10-11, 2022
REPORT NO. : 2022-U019813
WORK NO. : 2019-002022
ANALYSIS NO. : T22AE484-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AE484-0005	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	35	-
TOTAL DISSOLVED SOLIDS ^c	mg/L	DRIED AT 180 °C (SM: 2540 C)	37,738	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.9	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	

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^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-09-03-003

(Signature)

LABORATORY SUPERVISOR
๓-145-๓-0004
MARCH 17, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: EFFLUENT	RECEIVED DATE	: APRIL 7, 2022
SAMPLING DATE	: APRIL 7, 2022	ANALYTICAL DATE	: APRIL 7-18, 2022
SAMPLING TIME	: 11:20 HOUR	REPORT NO.	: 2022-U028803
SAMPLING METHOD °	: GRAB	WORK NO.	: 2019-002022
SAMPLING BY °	: MR THANADET WANSANOR	ANALYSIS NO.	: T22AG688-0006
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AG688-0006	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	35	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	< 2.0	2.0
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	31.5	0.1
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	93.6	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	< 5.0	5.0
NITRATE °	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	9.21	0.09
SULPHIDE °	mg/L	METHYLENE BLUE METHOD(SM: 4500-S ²⁻ D)	< 0.02	0.02
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	38,875	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3
METALS				
LEAD °	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	< 0.015	0.015
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			YELLOW	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

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^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-07-04-002

LABORATORY SUPERVISOR

APRIL 21, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 12, 2022
SAMPLING TIME : 08:50 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 12, 2022
ANALYTICAL DATE : APRIL 12-20, 2022
REPORT NO. : 2022-U030228
WORK NO. : 2019-002022
ANALYSIS NO. : T22AH069-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AH069-0005	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	35	-
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	39,450	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

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^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

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FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-12-04-004

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(MRS PITAPAT SUTTHAMANTWONG)
LABORATORY SUPERVISOR

APRIL 26, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY	RECEIVED DATE	: MAY 6, 2022
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED	ANALYTICAL DATE	: MAY 6-11, 2022
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230	REPORT NO.	: 2022-U034601
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com	WORK NO.	: 2019-002022
SAMPLING SOURCE	: -	ANALYSIS NO.	: T22AI411-0005
SAMPLE TYPE	: EFFLUENT		
SAMPLING DATE	: MAY 5, 2022		
SAMPLING TIME	: 10:40 HOUR		
SAMPLING METHOD °	: GRAB		
SAMPLING BY °	: MR THANADET WANSANOR		
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AI411-0005	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	34	-
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	36,825	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.8	3
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			YELLOW	

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^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-05-05-002

(MISS TITAPAT SUTTHAKONGWONG)
LABORATORY SUPERVISOR

MAY 18, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY	RECEIVED DATE	: MAY 11, 2022
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED	ANALYTICAL DATE	: MAY 11-19, 2022
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230	REPORT NO.	: 2022-U038270
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com	WORK NO.	: 2019-002022
SAMPLING SOURCE	: -	ANALYSIS NO.	: T22AI877-0009
SAMPLE TYPE	: EFFLUENT		
SAMPLING DATE	: MAY 11, 2022		
SAMPLING TIME	: 12:05 HOUR		
SAMPLING METHOD °	: GRAB		
SAMPLING BY °	: MR THANADET WANSANOR		
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AI877-0009	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.6 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	35	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	< 2.0	2.0
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	30.1	0.1
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	61.2	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	5.4	5.0
NITRATE °	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	9.21	0.09
SULPHIDE °	mg/L	METHYLENE BLUE METHOD(SM: 4500-S ²⁻ D)	< 0.02	0.02
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	32,375	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.7	3
METALS				
LEAD °	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	< 0.015	0.015
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-11-05-004

(MR. THANADET WANSANOR)
LABORATORY SUPERVISOR

MAY 25, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: EFFLUENT	RECEIVED DATE	: JUNE 1, 2022
SAMPLING DATE	: JUNE 1, 2022	ANALYTICAL DATE	: JUNE 1-13, 2022
SAMPLING TIME	: 10:10 HOUR	REPORT NO.	: 2022-U044951
SAMPLING METHOD °	: GRAB	WORK NO.	: 2019-002022
SAMPLING BY °	: MR NAPASIT SRIPIM	ANALYSIS NO.	: T22AK402-0006
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AK402-0006	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	34	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.7	2.0
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	30.1	0.1
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	78.4	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	8.1	5.0
NITRATE °	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	26.4	0.09
SULPHIDE °	mg/L	METHYLENE BLUE METHOD(SM: 4500-S ²⁻ D)	< 0.02	0.02
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	30,700	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3
METALS				
LEAD °	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	< 0.015	0.015
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-01-06-001

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 15, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 8, 2022
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR NAPASIT SRIPIM
ANALYZED BY : MISS AMONRAT PUTTALEE
RECEIVED DATE : JUNE 8, 2022
ANALYTICAL DATE : JUNE 8-23, 2022
REPORT NO. : 2022-U046499
WORK NO. : 2019-002022
ANALYSIS NO. : T22AL001-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW005 : REFINERY MIX T22AL001-0005	
pH ^a	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE °	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	33	-
TOTAL DISSOLVED SOLIDS °	mg/L	DRIED AT 180 °C (SM: 2540 C)	36,800	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.7	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-08-06-003

(MR. TITIPAT SUTTHANONGWONG)
LABORATORY SUPERVISOR

JUNE 23, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : JANUARY 5, 2022
SAMPLING TIME : 08:35 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 6, 2022
ANALYTICAL DATE : JANUARY 6-19, 2022
REPORT NO. : 2022-U005069
WORK NO. : 2019-002022
ANALYSIS NO. : T22AA099-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AA099-0001	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	< 0.005	0.005
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	27	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	32.2	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.4	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	0.7	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	77.6	25.0
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	9.1	1.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	34,520	25
CYANIDE	µg/L CN ⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN ⁻ C AND 4500-CN ⁻ E)	< 5	5
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	9.28	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.7	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AA099-0001	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.370	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-05-01-002

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[REDACTED SIGNATURE]

LABORATORY SUPERVISOR

JANUARY 21, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : JANUARY 12, 2022
SAMPLING TIME : 10:48 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 13, 2022
ANALYTICAL DATE : JANUARY 13-17, 2022
REPORT NO. : 2022-U005103
WORK NO. : 2019-002022
ANALYSIS NO. : T22AA590-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AA590-0006	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	31,525	25
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR WHITE	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-12-01-005

(MRS PITAPAT SUTTHAMANTWONG)
LABORATORY SUPERVISOR

JANUARY 21, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : FEBRUARY 2, 2022
SAMPLING TIME : 09:35 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 2, 2022
ANALYTICAL DATE : FEBRUARY 2-15, 2022
REPORT NO. : 2022-U010230
WORK NO. : 2019-002022
ANALYSIS NO. : T22AB843-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AB843-0001	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	0.008	0.005
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	30.9	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.4	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.0	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	47.1	25.0
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	15.8	1.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	36,682	25
CYANIDE	µg/L CN ⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN ⁻ C AND 4500-CN ⁻ E)	< 5	5
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	33.9	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AB843-0001	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.280	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-02-02-001

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[REDACTED]
.....
LABORATORY SUPERVISOR

FEBRUARY 15, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : FEBRUARY 9, 2022
SAMPLING TIME : 09:17 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE


RECEIVED DATE : FEBRUARY 10, 2022
ANALYTICAL DATE : FEBRUARY 10-12, 2022
REPORT NO. : 2022-U012360
WORK NO. : 2019-002022
ANALYSIS NO. : T22AC342-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AC342-0006	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H+ B)	7.9 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	35,420	25
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR WHITE	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-09-02-003

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 (MRS PIYAPAT SUTTAMANUTWONG)
 LABORATORY SUPERVISOR

FEBRUARY 22, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: SEAWATER	RECEIVED DATE	: MARCH 3, 2022
SAMPLING DATE	: MARCH 2, 2022	ANALYTICAL DATE	: MARCH 3-21, 2022
SAMPLING TIME	: 10:40 HOUR	REPORT NO.	: 2022-U015976
SAMPLING METHOD	: COMPOSITE	WORK NO.	: 2019-002022
SAMPLING BY	: MR THANADET WANSANOR	ANALYSIS NO.	: T22AD865-0001
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AD865-0001	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H* B)	7.9 (25°C)	-
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	0.007	0.005
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	31.1	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.4	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.2	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	48.0	25.0
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	17.3	1.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	34,520	25
CYANIDE	µg/L CN	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN C AND 4500-CN E)	< 5	5
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	11.7	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.8	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AD865-0001	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.310	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-02-03-001

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 23, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : MARCH 9, 2022
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : MARCH 10, 2022
ANALYTICAL DATE : MARCH 10-11, 2022
REPORT NO. : 2022-U019814
WORK NO. : 2019-002022
ANALYSIS NO. : T22AE484-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AE484-0006	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	30	-
TOTAL DISSOLVED SOLIDS	mg/L	DRIED AT 180 °C (SM: 2540 C)	36,854	25
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-09-03-003

(Signature)
LABORATORY SUPERVISOR

MARCH 17, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: SEAWATER	RECEIVED DATE	: APRIL 7, 2022
SAMPLING DATE	: APRIL 7, 2022	ANALYTICAL DATE	: APRIL 7-20, 2022
SAMPLING TIME	: 12:35 HOUR	REPORT NO.	: 2022-U027830
SAMPLING METHOD	: COMPOSITE	WORK NO.	: 2019-002022
SAMPLING BY	: MR THANADET WANSANOR	ANALYSIS NO.	: T22AG690-0001
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AG690-0001	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	0.007	0.005
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	27.3	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.3	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.2	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	65.1	25.0
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	15.2	1.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	36,550	25
CYANIDE	µg/L CN	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN C AND 4500-CN E)	< 5	5
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	4.60	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AG690-0001	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.290	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-07-04-002

....
(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 22, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 12, 2022
SAMPLING TIME : 09:05 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 12, 2022
ANALYTICAL DATE : APRIL 12-20, 2022
REPORT NO. : 2022-U030229
WORK NO. : 2019-002022
ANALYSIS NO. : T22AH069-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AH069-0006	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	31	-
TOTAL DISSOLVED SOLIDS	mg/L	DRIED AT 180 °C (SM: 2540 C)	35,295	25
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.
RELEASE ORDER NO. : EV-12-04-004

...
(MRS PIYAPAT SUTTAMANOTWONG)
LABORATORY SUPERVISOR

APRIL 26, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : MAY 5, 2022
SAMPLING TIME : 10:59 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : MAY 6, 2022
ANALYTICAL DATE : MAY 6-11, 2022
REPORT NO. : 2022-U034602
WORK NO. : 2019-002022
ANALYSIS NO. : T22AI411-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AI411-0006	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H+ B)	7.8 (25°C)	-
TEMPERATURE	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	30	-
TOTAL DISSOLVED SOLIDS	mg/L	DRIED AT 180 °C (SM: 2540 C)	35,550	25
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-05-05-002

(MRS PITAPAT SUTHAMNONGWONG)
LABORATORY SUPERVISOR

MAY 18, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: SEAWATER	RECEIVED DATE	: MAY 11, 2022
SAMPLING DATE	: MAY 11, 2022	ANALYTICAL DATE	: MAY 11-24, 2022
SAMPLING TIME	: 10:40 HOUR	REPORT NO.	: 2022-U039164
SAMPLING METHOD	: COMPOSITE	WORK NO.	: 2019-002022
SAMPLING BY	: MR THANADET WANSANOR	ANALYSIS NO.	: T22AI881-0001
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AI881-0001	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.8 (25°C)	-
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	0.008	0.005
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	31	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	30.8	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.5	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.5	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	69.0	25.0
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	8.0	1.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	34,275	25
CYANIDE	µg/L CN ⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN ⁻ C AND 4500-CN ⁻ E)	< 5	5
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	16.5	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AI881-0001	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	< 0.100	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-11-05-004



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 27, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : MAY 11, 2022
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MR KORNVIT CHIASIRISAKUL

RECEIVED DATE : MAY 11, 2022
ANALYTICAL DATE : MAY 11-19, 2022
REPORT NO. : 2022-U039165
WORK NO. : 2019-002022
ANALYSIS NO. : T22AI881-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006 : 500 M OFFSHORE (JETTY) T22AI881-0002	
METALS				
MERCURY	µg/L Hg	COLD-VAPOUR ATOMIC FLUORESCENCE SPECTROMETRIC METHOD (US EPA 2005: 245.7)	< 0.020	0.020
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			WHITE	

RELEASE ORDER NO. : EV-11-05-004

(MR BHUCHONK PANICHLERTUMPI)
LABORATORY SUPERVISOR

MAY 30, 2022



ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: SEAWATER	RECEIVED DATE	: JUNE 1, 2022
SAMPLING DATE	: JUNE 1, 2022	ANALYTICAL DATE	: JUNE 1-10, 2022
SAMPLING TIME	: 10:30 HOUR	REPORT NO.	: 2022-U045027
SAMPLING METHOD	: COMPOSITE	WORK NO.	: 2019-002022
SAMPLING BY	: MR NAPASIT SRIPIM	ANALYSIS NO.	: T22AK404-0001
ANALYZED BY	: MISS AMONRAT PUTTALÉE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AK404-0001	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	0.006	0.005
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	32	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	30.0	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.4	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.8	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	64.0	25.0
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	10.8	1.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	31,125	25
CYANIDE	µg/L CN	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN C AND 4500-CN E)	< 5	5
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	13.6	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.8	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AK404-0001	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.970	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-01-06-001

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 15, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : JUNE 8, 2022
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR NAPASIT SRIPIM
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JUNE 8, 2022
ANALYTICAL DATE : JUNE 8-23, 2022
REPORT NO. : 2022-U046500
WORK NO. : 2019-002022
ANALYSIS NO. : T22AL001-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW006. 500 M OFFSHORE (JETTY) T22AL001-0006	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE	°C	LABORATORY AND FIELD METHODS (SM: 2550 B)	31	-
TOTAL DISSOLVED SOLIDS	mg/L	DRIED AT 180 °C (SM: 2540 C)	34.025	25
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-08-06-003

LABORATORY SUPERVISOR

JUNE 23, 2022



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : JANUARY 5, 2022
SAMPLING TIME : 08:56 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 6, 2022
ANALYTICAL DATE : JANUARY 6-19, 2022
REPORT NO. : 2022-U005070
WORK NO. : 2019-002022
ANALYSIS NO. : T22AA099-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AA099-0002	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	27	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	32.3	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.6	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	0.6	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	80.8	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	35,360	25
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	2.60	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.6	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AA099-0002	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.440	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			WHITE	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-05-01-002

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[REDACTED]
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LABORATORY SUPERVISOR

JANUARY 21, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : FEBRUARY 2, 2022
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 2, 2022
ANALYTICAL DATE : FEBRUARY 2-15, 2022
REPORT NO. : 2022-U010231
WORK NO. : 2019-002022
ANALYSIS NO. : T22AB843-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AB843-0002	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	31.4	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	6.1	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	0.9	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	34.6	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	38,262	25
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	7.09	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.5	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AB843-0002	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	< 0.100	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			WHITE	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-02-02-001



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

FEBRUARY 15, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : MARCH 2, 2022
SAMPLING TIME : 11:25 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : MARCH 3, 2022
ANALYTICAL DATE : MARCH 3-21, 2022
REPORT NO. : 2022-U021095
WORK NO. : 2019-002022
ANALYSIS NO. : T22AD865-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AD865-0002	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.0 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	31.2	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.5	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.0	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	76.8	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	35,790	25
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	10.6	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	1.0	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AD865-0002	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	< 0.100	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			WHITE	

SM ; STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-02-03-001

(Signature)

LABORATORY SUPERVISOR

MARCH 23, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 7, 2022
SAMPLING TIME : 11:50 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 7, 2022
ANALYTICAL DATE : APRIL 7-20, 2022
REPORT NO. : 2022-U027831
WORK NO. : 2019-002022
ANALYSIS NO. : T22AG690-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AG690-0002	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.9 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	29.2	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.4	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.0	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	57.1	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	36,056	25
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	6.07	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.5	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AG690-0002	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	< 0.100	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-07-04-002

(MRS PITAPAT SUTTHAMANGTONG)
LABORATORY SUPERVISOR

APRIL 22, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER
SAMPLING DATE : MAY 11, 2022
SAMPLING TIME : 11:35 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : MAY 11, 2022
ANALYTICAL DATE : MAY 11-24, 2022
REPORT NO. : 2022-U039167
WORK NO. : 2019-002022
ANALYSIS NO. : T22AI881-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AI881-0003	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H* B)	7.9 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	31	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	30.7	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.4	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.6	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	58.0	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	34,475	25
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	5.51	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	0.4	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AI881-0003	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.190	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			-	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-11-05-004

(MRS PIYAPAT SUTTAMANGUWONG)
LABORATORY SUPERVISOR

MAY 27, 2022

ANALYSIS REPORT

PROJECT NAME	: ENVIRONMENTAL & SOCIOECONOMIC SURVEY		
CUSTOMER NAME	: ESSO (THAILAND) PUBLIC COMPANY LIMITED		
ADDRESS	: 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230		
CONTACT INFORMATION	: TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com		
SAMPLING SOURCE	: -		
SAMPLE TYPE	: SEAWATER	RECEIVED DATE	: JUNE 1, 2022
SAMPLING DATE	: JUNE 1, 2022	ANALYTICAL DATE	: JUNE 1-10, 2022
SAMPLING TIME	: 11:10 HOUR	REPORT NO.	: 2022-U045030
SAMPLING METHOD	: COMPOSITE	WORK NO.	: 2019-002022
SAMPLING BY	: MR NAPASIT SRIPIM	ANALYSIS NO.	: T22AK404-0002
ANALYZED BY	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AK404-0002	
pH	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	8.1 (25°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	33	-
SALINITY	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	32.4	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.7	0.5
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.0	0.5
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	60.8	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	33,325	25
NITRATE-NITROGEN	µg/L N	CADMIUM REDUCTION AND COLOURIMETRIC METHOD (BASED ON PRACTICAL HANDBOOK OF SEAWATER ANALYSIS (STRICKLAND AND PARSON, 1972, II.6))	3.99	0.50
SULPHIDE	µg/L	METHYLENE BLUE COLOURIMETRIC METHOD (METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 5)	< 10	10
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	1.1	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			LBW007. BERTH ISLAND T22AK404-0002	
METALS				
LEAD	µg/L Pb	PRE-CONCENTRATION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (BASED ON METHOD OF SEAWATER ANALYSIS, GRASSHOFF, 1999, CHAPTER 12)	0.430	0.100
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

FAT, OIL AND GREASE : THIS REPORTED VALUE IS BELOW LIMIT OF DETECTION. ITS USE IS SUBJECT TO CUSTOMER JUSTIFICATION.

RELEASE ORDER NO. : EV-01-06-001

[REDACTED SIGNATURE]

LABORATORY SUPERVISOR

JUNE 15, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEAWATER **RECEIVED DATE** : APRIL 27, 2022
SAMPLING DATE : APRIL 27, 2022 **ANALYTICAL DATE** : APRIL 27 - MAY 6, 2022
SAMPLING TIME : * **REPORT NO.** : 2022-U033553
SAMPLING METHOD : PLANKTON NET **WORK NO.** : 2019-002022
SAMPLING BY : MR THANADET WANSANOR **ANALYSIS NO.** : T22AH912-0001, T22AH912-0003
ANALYZED BY : MISS NAPAPORN PURATAKO

PHYTOPLANKTON (UNITS/m ³)	COUNTING UNIT	RESULT	
		SAMPLE NO. 1 09:50 HOUR * T22AH912-0001	SAMPLE NO. 2 10:30 HOUR * T22AH912-0003
Division Cyanophyta			
Class Cyanophyceae			
Family Oscillatoriaceae			
<i>Oscillatoria</i> spp.	FILAMENT	92,570	19,904
Family Nostocaceae			
<i>Richelia intracellularis</i>	FILAMENT	7,205	1,614
Division Chromophyta			
Class Bacillariophyceae			
Family Thalassiosiraceae			
<i>Planktoniella</i> spp.	CELL	8,224	0
<i>Skeletonema</i> spp.	FILAMENT	4,629	0
<i>Thalassiosira</i> spp.	CELL	121,374	33,345
Family Melosiraceae			
<i>Paralia sulcata</i>	CELL	76,108	10,223
Family Leptocylindraceae			
<i>Corethron criophilum</i>	CELL	14,395	12,909
Family Coscinodiscaceae			
<i>Coscinodiscus</i> spp.	CELL	101,317	70,458
<i>Palmeria hardmaniana</i>	CELL	72,004	45,722
Family Rhizosoleniaceae			
<i>Guinardia</i> spp.	CELL	2,729,243	1,053,674
<i>Rhizosolenia</i> spp.	CELL	2,841,869	1,142,421
Family Hemiaulaceae			
<i>Climacodium</i> spp.	CELL	10,291	21,518
<i>Eucampia</i> spp.	CELL	39,080	51,095
<i>Hemiaulus</i> spp.	CELL	66,342	70,458
Family Biddulphiaceae			
<i>Biddulphia bidduphiana</i>	CELL	3,086	16,677



PHYTOPLANKTON (UNITS/m ³)	COUNTING UNIT	RESULT	
		SAMPLE NO. 1 09:50 HOUR * T22AH912-0001	SAMPLE NO. 2 10:30 HOUR * T22AH912-0003
Family Chaetocerotaceae			
<i>Bacteriastrum</i> spp.	FILAMENT	453,589	150,605
<i>Chaetoceros</i> spp.	FILAMENT	29,138,670	15,057,464
Family Lithodermaceae			
<i>Ditylum</i> spp.	CELL	35,994	44,640
<i>Helicotheca tamesis</i>	CELL	19,548	25,277
Family Eupodiscaceae			
<i>Odontella</i> spp.	CELL	51,423	86,061
Family Thalassiomalacoceae			
<i>Thalassionema frauenfeldii</i>	CELL	128,563	126,933
<i>T. nitzschoides</i>	CELL	61,713	110,265
<i>Thalassiothrix</i> spp.	CELL	50,404	49,481
Family Naviculaceae			
<i>Amphora</i> spp.	CELL	34,452	32,813
<i>Diploneis</i> spp.	CELL	7,205	6,995
<i>Meuniera membranacea</i>	CELL	7,205	19,364
<i>Navicula</i> spp.	CELL	52,456	35,499
<i>Pinnularia</i> spp.	CELL	0	11,836
<i>Pleurosigma</i> spp.	CELL	388,790	463,641
<i>Trachyneis</i> spp.	CELL	0	18,823
Family Bacillariaceae			
<i>Bacillaria paxillifer</i>	CELL	37,028	29,586
<i>Nitzschia</i> spp.	CELL	25,195	6,995
<i>Pseudo-nitzschia</i> spp.	CELL	56,576	51,635
Family Surirellaceae			
<i>Surirella</i> spp.	CELL	553,363	57,549
Class Dictyochophyceae			
Family Dictyochophyceae			
<i>Dictyocha</i> spp.	CELL	17,481	0
Class Dinophyceae			
Family Prorocentraceae			
<i>Prorocentrum</i> spp.	CELL	79,193	32,272
Family Dinophysiaceae			
<i>Dinophysis</i> spp.	CELL	0	18,823
Family Ceratiaceae			
<i>Ceratium</i> spp.	CELL	10,291	26,358
<i>C. furca</i>	CELL	27,262	14,523
Family Goniadomaceae			
<i>Gonyaulax</i> spp.	CELL	37,028	0

PHYTOPLANKTON (UNITS/m ³)	COUNTING UNIT	RESULT	
		SAMPLE NO. 1 09:50 HOUR * T22AH912-0001	SAMPLE NO. 2 10:30 HOUR * T22AH912-0003
Family Pyrophacaceae <i>Pyrophacus</i> spp.	CELL	73,547	52,176
Family Peridiniaceae <i>Peridinium</i> spp.	CELL	53,999	25,818
Family Protoperidiniaceae <i>Protoperidinium</i> spp.	CELL	55,542	37,654
TOTAL ABUNDANCE (UNITS/m ³)		37,644,254	19,143,104
AMOUNT OF SPECIES :		40	39
SAMPLE CONDITION			
WATER'S COLOUR/TURBID		COLOURLESS/CLEAR	COLOURLESS/CLEAR
SEDIMENT		GREEN	GREEN

REMARK : PLANKTON COUNTING TECHNIQUES IS NATURAL UNIT COUNT. REFERENCE : AMERICAN PUBLIC HEALTH ASSOCIATION, AMERICAN WATER WORKS ASSOCIATION ENVIRONMENT AND WATER FEDERATION (APHA, AWWA AND WEF) 2017 . STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER. AMERICAN PUBLIC HEALTH ASSOCIATION WASHINGTON, DC., U.S.A.

ZOOPLANKTON (UNITS/m ³)	COUNTING UNIT	RESULT	
		SAMPLE NO. 1 09:50 HOUR * T22AH912-0001	SAMPLE NO. 2 10:30 HOUR * T22AH912-0003
Phylum Protozoa			
Class Sarcodina			
Foraminifera	CELL	436	162
Family Actinommidae			
<i>Actinomma leptoderma</i>	CELL	1,161	5,398
Class Ciliata			
Family Codonellidae			
<i>Tintinnopsis</i> sp.	CELL	1,814	242
Family Cyttarocylindae			
<i>Favella</i> sp.	CELL	943	1,531
Phylum Chaetognatha			
Class Sagittoidea			
Family Sagittidae			
<i>Sagitta</i> sp.	INDIVIDUAL	0	484
Phylum Annelida			
Class Polychaeta			
Polychaete Larva	INDIVIDUAL	2,178	2,497
Phylum Arthropoda			
Class Crustacea			
Cyclopoid Copepod	INDIVIDUAL	1,525	1,934
Calanoid Copepod	INDIVIDUAL	15,969	9,911
Harpacticoid Copepod	INDIVIDUAL	2,324	5,398
Nauplius of Copepod	INDIVIDUAL	50,956	49,551
Cerripecta Nauplius	INDIVIDUAL	508	0
Zoea	INDIVIDUAL	654	967
Phylum Mollusca			
Class Gastropoda			
Gastropod Larva	INDIVIDUAL	1,453	484
Class Bivalvia			
Bivalvia Larva	INDIVIDUAL	12,920	16,841
Phylum Echinodermata			
Class Echinoidea			
Echinopluteus Larva	INDIVIDUAL	0	322

ZOOPLANKTON (UNITS/m ³)	COUNTING UNIT	RESULT	
		SAMPLE NO. 1 09:50 HOUR * T22AH912-0001	SAMPLE NO. 2 10:30 HOUR * T22AH912-0003
Phylum Chordata Class Larvacea Family Oikopleuridae <i>Oikopleura</i> sp.	INDIVIDUAL	8,129	5,964
TOTAL ABUNDANCE (UNITS/m ³)		100,970	101,686
AMOUNT OF SPECIES		14	15
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT		COLOURLESS/CLEAR GREEN	COLOURLESS/CLEAR GREEN

SAMPLE NO. 1 500 m OFFSHORE (JETTY)

SAMPLE NO. 2 BERTH ISLAND

.....
(MISS CHAWEEWAN BOONLA)
LABORATORY SUPERVISOR

MAY 12, 2022

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL & SOCIOECONOMIC SURVEY
CUSTOMER NAME : ESSO (THAILAND) PUBLIC COMPANY LIMITED
ADDRESS : 118 MOO 2 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3314 2891 e-mail : wanlop.boongor@exxonmobil.com
SAMPLING SOURCE : -
SAMPLE TYPE : SEDIMENT
SAMPLING DATE : APRIL 27, 2022
SAMPLING TIME : *
SAMPLING METHOD : PETERSEN GRAB
SAMPLING BY : MR THANADET WANSANOR
ANALYZED BY : MISS PATCHAREE KONGCHUMNAN

RECEIVED DATE : APRIL 27, 2022
ANALYTICAL DATE : APRIL 27-MAY 6, 2022
REPORT NO. : 2022-U033554
WORK NO. : 2019-002022
ANALYSIS NO. : T22AH912-0002, T22AH912-0004

BENTHOS (INDIVIDUALS/m ²)	RESULT	
	SAMPLE NO. 1 10:00 HOUR * T22AH912-0002	SAMPLE NO. 2 10:50 HOUR * T22AH912-0004
Phylum Annelida		
Class Polychaeta		
Family Spionidae	0	7
Phylum Mollusca		
Class Bivalvia		
Family Veneridae	7	0
Phylum Arthropoda		
Class Malacostraca		
Family Squillidae	0	7
Family Pilumnidae	7	0
TOTAL DENSITY (INDIVIDUALS/m²)	14	14
AMOUNT OF SPECIES	2	2
SAMPLE CONDITION	CLAY WITH SHELLS	CLAY WITH SHELLS

SAMPLE NO. 1 500 m OFFSHORE (JETTY)
SAMPLE NO. 2 BERTH ISLAND


(Signature of Laboratory Supervisor)
LABORATORY SUPERVISOR

MAY 12, 2022





Your Project #: SRT-RF-2022-01

Attention: Tanaphorn Taweeyat

ESSO SRIRACHA REFINERY
118, Moo 2, Sukhapiban 7 Rd
Sriracha, Chonburi
Thailand 20230

Report Date: 05/03/2022

Report #: R7109218

Version: 2 - Revision

ANALYTICAL REPORT – REVISED REPORT

BV LABS JOB #: C280921

Received: 03/28/2022, 00:00

Sample Matrix: Passive Monitor
Samples Received: 2

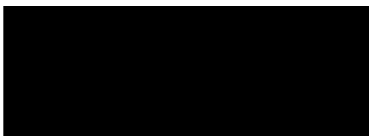
Analyses	Quantity	Date Analyzed	Laboratory Method	Analytical Method
Naphthas by NIOSH 1550 - Monitor	2	03/30/2022	NOV4SOP-00001	NIOSH 1550 / 1551
Volatiles (VOC) - List 1 -GC/FID-Monitor	2	03/30/2022	NOV SOP-00005	NOV SOP-00005

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Results relate only to the items tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Encryption Key



Please direct all questions regarding this Analytical Report to your Project Manager.

Wendy Lesniak, CS

Email: Wendy.Lesniak@bureauveritas.com

Phone# (248) 344-1770

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.



BUREAU
VERITAS

BV Labs Job #: C280921
Report Date: 05/03/2022

ESSO SRIRACHA REFINERY
Client Project #: SRT-RF-2022-01

ANALYTICAL RESULTS

Client ID:	SRT-RF-2022-01-001				Matrix:	Passive Monitor		
BV Labs ID:	SFA279				Sample Media:	AT 566/3M3500+Monitor Charcoal		
Date Sampled:	03/13/2022				Sampling Time (Minutes):	320		
	Samp Rate	Mass	Concentration		RL		Date	
ANALYTE	cc/min	ug	mg/m3	ppm	ug	Test Method	Analyzed	QC Batch
Benzene	9.7	<0.50	<0.16	<0.050	0.50	NOV SOP-00005	03/30/2022	7914045
THCs as n-Hexane	9.9	<30	<9.5	<2.7	30	NIOSH 1550 / 1551	03/30/2022	7917462
QC Batch = Quality Control Batch								
RL = Reporting Limit								

Client ID:	SRT-RF-2022-01-BLANK					Matrix:	Passive Monitor	
BV Labs ID:	SFA280					Sample Media:	AT 566/3M3500+Monitor Charcoal	
Date Sampled:								
	Samp Rate	Mass	Concentration		RL		Date	
ANALYTE	cc/min	ug	mg/m3	ppm	ug	Test Method	Analyzed	QC Batch
Benzene	9.7	<0.50	N/A	N/A	0.50	NOV SOP-00005	03/30/2022	7914045
THCs as n-Hexane	9.9	<30	N/A	N/A	30	NIOSH 1550 / 1551	03/30/2022	7917462
QC Batch = Quality Control Batch								
RL = Reporting Limit								



BUREAU
VERITAS

BV Labs Job #: C280921
Report Date: 05/03/2022

ESSO SRIRACHA REFINERY
Client Project #: SRT-RF-2022-01

GENERAL COMMENTS

Unless otherwise noted below the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and /or do not adversely affect the reported results and 3) the industrial hygiene results have not been blank corrected.

The client provided their pertinent field sampling data on the analysis request paperwork submitted with the samples. Results apply to the sample as received.

REVISED REPORT

As requested on May 3, 2022, the sample collection date has been updated. The change is reflected in the attached revised report.

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: C280921
Report Date: 05/03/2022

ESSO SRIRACHA REFINERY
Client Project #: SRT-RF-2022-01

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
7914045	LFX	LCS	Benzene	03/29/2022		92	%	79 - 113
7914045	LFX	LCS DUP	Benzene	03/30/2022		87	%	79 - 113
7914045	LFX	LCS/LCSD RPD	Benzene	03/30/2022	5.5		%	20
7914045	LFX	Method Blank	Benzene	03/29/2022	<1.0		ug	

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

LCS: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.



Your Project #: SRT-RF-2022-03

Attention: Tanaphorn Taweeyat

ESSO SRIRACHA REFINERY
118, Moo 2, Sukhapiban 7 Rd
Sriracha, Chonburi
Thailand 20230

Report Date: 07/15/2022

Report #: R7212382

Version: 1 - Final

ANALYTICAL REPORT

BV LABS JOB #: C2I8141

Received: 07/07/2022, 00:00

Sample Matrix: Passive Monitor
Samples Received: 2

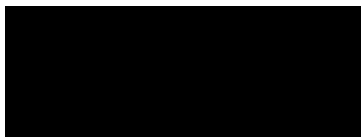
Analyses	Quantity	Date Analyzed	Laboratory Method	Analytical Method
Naphthas by NIOSH 1550 - Monitor	2	07/08/2022	NOV4SOP-00001	NIOSH 1550 / 1551
Volatiles (VOC) - List 1 -GC/FID-Monitor	2	07/15/2022	NOV SOP-00005	NOV SOP-00005

This report shall not be reproduced except in full, without the written approval of the laboratory.

Results relate only to the items tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Encryption Key



Please direct all questions regarding this Analytical Report to your Project Manager.

Wendy Lesniak, CS

Email: Wendy.Lesniak@bureauveritas.com

Phone# (248) 344-1770

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.



BUREAU
VERITAS

BV Labs Job #: C2I8141

Report Date: 07/15/2022

ESSO SRIRACHA REFINERY

Client Project #: SRT-RF-2022-03

ANALYTICAL RESULTS

Client ID:	SRT-RF-2022-03-001				Matrix:	Passive Monitor		
BV Labs ID:	TCG541				Sample Media:	AT 566/3M3500+Monitor Charcoal		
Date Sampled:	06/29/2022				Sampling Time (Minutes):	480		
ANALYTE	Samp Rate cc/min	Mass ug	Concentration mg/m3	ppm	RL ug	Test Method	Date Analyzed	QC Batch
Benzene	9.7	<0.50	<0.11	<0.034	0.50	NOV SOP-00005	07/15/2022	8112045
THCs as n-Hexane	9.9	<30	<6.3	<1.8	30	NIOSH 1550 / 1551	07/08/2022	8101205
QC Batch = Quality Control Batch								
RL = Reporting Limit								

Client ID:	SRT-RF-2022-03-BLANK					Matrix:	Passive Monitor	
BV Labs ID:	TCG542					Sample Media:	AT 566/3M3500+Monitor Charcoal	
Date Sampled:								
	Samp Rate	Mass	Concentration		RL		Date	
ANALYTE	cc/min	ug	mg/m3	ppm	ug	Test Method	Analyzed	QC Batch
Benzene	9.7	<0.50	N/A	N/A	0.50	NOV SOP-00005	07/15/2022	8112045
THCs as n-Hexane	9.9	<30	N/A	N/A	30	NIOSH 1550 / 1551	07/08/2022	8101205
QC Batch = Quality Control Batch								
RL = Reporting Limit								



BUREAU
VERITAS

BV Labs Job #: C2I8141

Report Date: 07/15/2022

ESSO SRIRACHA REFINERY

Client Project #: SRT-RF-2022-03

GENERAL COMMENTS

Unless otherwise noted below the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and /or do not adversely affect the reported results and 3) the industrial hygiene results have not been blank corrected.

The client provided their pertinent field sampling data on the analysis request paperwork submitted with the samples. Results apply to the sample as received.

Results relate only to the items tested.



QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
8112045	JA9	LCS	Benzene	07/15/2022		102	%	N/A
8112045	JA9	LCS DUP	Benzene	07/15/2022		102	%	N/A
8112045	JA9	LCS/LCSD RPD	Benzene	07/15/2022	0.098		%	20
8112045	JA9	Method Blank	Benzene	07/15/2022	<1.0		ug	

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LCS: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.