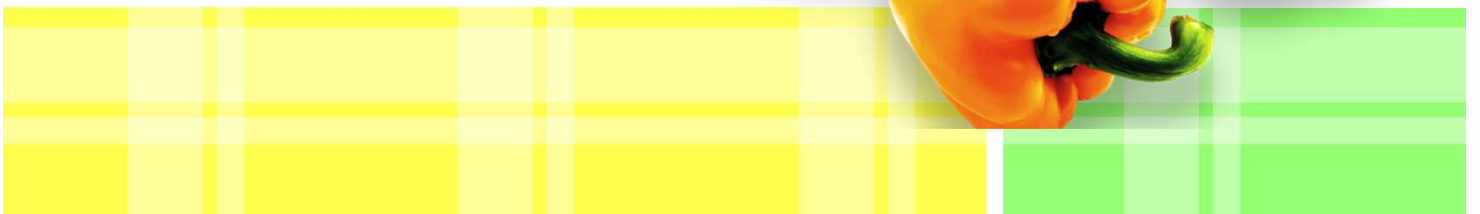
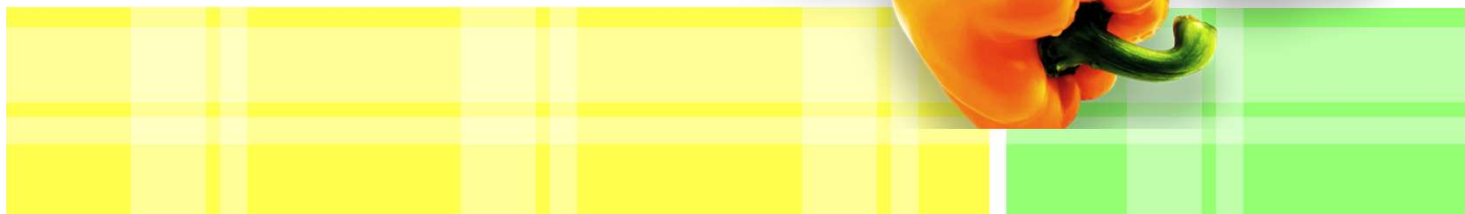


ภาคผนวก



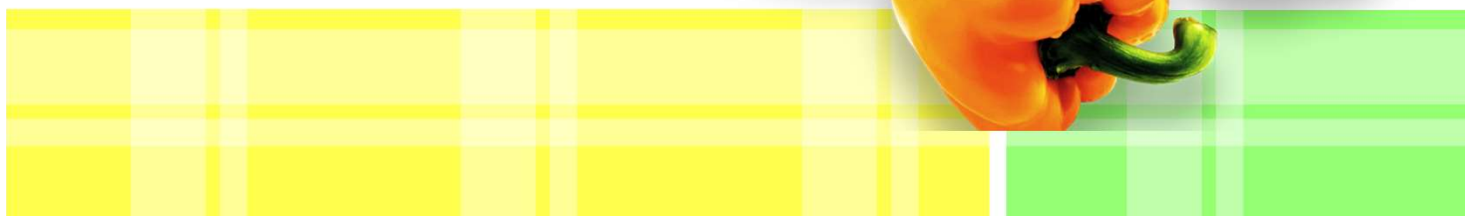
ภาคผนวก ก

ผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม



ภาคผนวก ก1

ผลการติดตามตรวจสอบคุณภาพอากาศ
ที่ระบายออกจากปล่อง แบบครั้งคราว



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, 11TH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4) (42/4 MOO 1 SUKHUMVIT ROAD KM. 124 THUNG SUKHLA SI RACHA CHON BURI 20230)
SAMPLE TYPE : STACK
SAMPLING DATE : MARCH 10, 2022
SAMPLING TIME : 10:00 HOUR
SAMPLING BY : MR ATTHAPORN THEPTONG จ-145-จ-0008
ANALYZED BY : MISS SUWAN KONGTHONG จ-145-ค-0025

RECEIVED DATE : MARCH 11, 2022
ANALYTICAL DATE : MARCH 11-17, 2022
REPORT NO. : 2022-U021362
WORK NO. : 2021-003222
ANALYSIS NO. : T22AE816-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	
			B-4017 T22AE816-0001	
			ACTUAL OXYGEN	7% OXYGEN
OXIDE OF NITROGEN AS NITROGEN DIOXIDE	ppm	ABSORPTION, PHENOLDISULFONIC ACID METHOD (US EPA METHOD 7)	6.54	15.6
SAMPLE CONDITION			COMPLETE	

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE AND DRY BASIS.

Budsakorn ✓

(MISS BUDSAKORN LERDPANUMAS)
LABORATORY SUPERVISOR

จ-145-ค-0011
MARCH 24, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4) (42/4 MOO 1 SUKHUMVIT ROAD KM. 124 THUNG SUKHLA SI RACHA CHON BURI 20230)
SAMPLE TYPE : STACK
SAMPLING DATE : MAY 6, 2022
SAMPLING TIME : 11:40 HOUR
SAMPLING BY : MR ATTHAPORN THEPTONG ๓-145-๓-0008
ANALYZED BY : MISS SUWAN KONGTHONG ๓-145-๓-0025

RECEIVED DATE : MAY 13, 2022
ANALYTICAL DATE : MAY 13-19, 2022
REPORT NO. : 2022-U039577
WORK NO. : 2021-003222
ANALYSIS NO. : T22AJ085-0019

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	
			B-4017 T22AJ085-0019	
			ACTUAL OXYGEN	7% OXYGEN
OXIDE OF NITROGEN AS NITROGEN DIOXIDE	ppm	ABSORPTION, PHENOLDISULFONIC ACID METHOD (US EPA METHOD 7)	5.12	12.8
SAMPLE CONDITION			COMPLETE	

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE AND DRY BASIS.

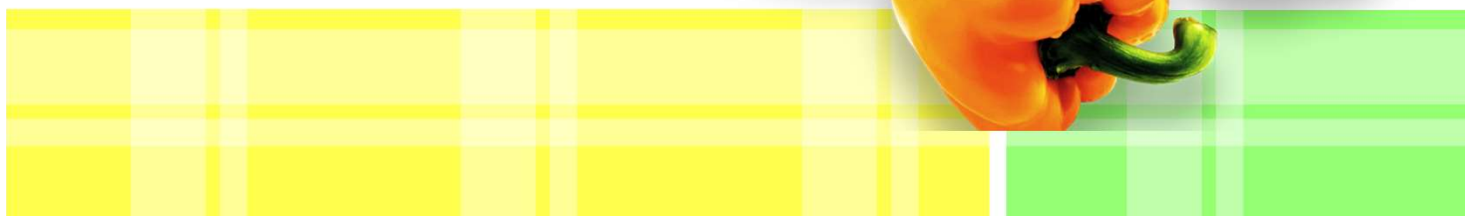
Budsakorn ✓

(MISS BUDSAKORN LERDPANUMAS)
LABORATORY SUPERVISOR
๓-145-๓-0011
MAY 28, 2022



ภาคผนวก ก2

ผลการติดตามตรวจสอบคุณภาพอากาศ
ที่ระบายออกจากปล่อง แบบต่อเนื่อง



วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
1	0:00:00	16.44	15.01	16.21	14.79	14.22	14.92	14.76	14.84	17.95	14.87	14.66	14.79
1	1:00:00	16.56	15.00	14.82	14.78	13.91	14.90	14.81	14.84	17.99	14.86	14.74	14.78
1	2:00:00	17.31	14.99	14.66	14.77	13.77	14.89	15.20	14.83	17.93	14.84	14.54	14.77
1	3:00:00	17.22	14.98	14.78	14.77	13.36	14.87	14.96	14.82	17.90	14.84	14.48	14.77
1	4:00:00	17.72	14.98	14.77	14.77	13.33	14.87	14.77	14.82	17.99	14.85	14.61	14.78
1	5:00:00	17.83	14.98	14.41	14.77	13.15	14.87	14.93	14.83	19.72	14.88	14.84	14.78
1	6:00:00	17.61	15.00	14.17	14.78	13.15	14.89	14.68	14.84	19.33	14.88	15.49	14.80
1	7:00:00	17.75	15.00	12.90	14.81	12.95	14.90	14.54	14.86	18.98	14.89	15.72	14.82
1	8:00:00	16.95	15.02	13.04	14.83	14.51	14.87	16.43	14.95	18.70	14.92	17.29	14.88
1	9:00:00	16.57	15.03	13.37	14.84	15.07	14.79	18.36	15.03	18.72	14.93	18.40	14.94
1	10:00:00	16.46	15.03	13.58	14.83	15.08	14.80	16.95	14.91	18.58	14.91	15.86	14.72
1	11:00:00	17.10	15.02	13.78	14.82	14.72	14.78	15.30	14.79	18.33	14.89	15.60	14.70
1	12:00:00	18.82	15.02	13.92	14.80	14.45	14.76	15.30	14.77	17.69	14.88	16.04	14.70
1	13:00:00	18.93	14.99	17.45	14.87	14.51	14.73	15.46	14.74	17.56	14.87	16.05	14.68
1	14:00:00	19.38	14.94	18.19	14.86	14.67	14.71	15.82	14.73	18.04	14.85	16.06	14.67
1	15:00:00	20.14	14.93	17.85	14.84	14.66	14.70	16.14	14.72	17.69	14.82	16.07	14.65
1	16:00:00	20.34	14.94	17.56	14.82	14.63	14.70	16.20	14.71	17.61	14.81	18.96	14.88
1	17:00:00	19.82	14.97	17.50	14.81	14.74	14.70	16.31	14.72	17.50	14.82	18.94	14.88
1	18:00:00	19.39	14.98	17.74	14.84	14.92	14.70	16.10	14.73	17.10	14.81	18.71	14.86
1	19:00:00	19.22	14.99	17.67	14.84	15.03	14.71	16.19	14.75	16.77	14.84	18.83	14.89
1	20:00:00	19.06	15.00	17.87	14.86	14.95	14.73	16.48	14.77	17.37	14.86	18.72	14.90
1	21:00:00	18.48	15.00	13.96	14.78	14.94	14.74	16.67	14.79	17.22	14.87	18.37	14.91
1	22:00:00	18.31	15.00	12.15	14.77	14.96	14.76	17.74	14.89	16.98	14.87	18.12	14.90
1	23:00:00	17.77	14.99	12.40	14.78	13.00	14.90	16.55	14.90	16.74	14.86	14.96	14.81
2	0:00:00	17.15	14.98	12.53	14.77	13.06	14.89	16.43	14.90	16.88	14.85	15.19	14.80
2	1:00:00	17.24	14.97	12.71	14.77	12.99	14.88	16.52	14.89	16.88	14.84	15.46	14.80
2	2:00:00	17.56	14.97	12.79	14.77	12.91	14.87	16.66	14.90	16.84	14.83	15.40	14.79
2	3:00:00	17.77	14.97	12.63	14.76	12.81	14.86	16.52	14.90	16.80	14.82	15.35	14.79
2	4:00:00	18.52	14.96	12.43	14.77	12.87	14.87	16.84	14.90	16.82	14.84	15.32	14.79
2	5:00:00	18.48	14.97	12.27	14.77	12.51	14.87	16.76	14.91	17.36	14.85	15.25	14.78
2	6:00:00	18.33	14.98	12.34	14.78	12.51	14.89	16.83	14.92	18.10	14.88	15.30	14.79
2	7:00:00	18.30	15.00	12.20	14.79	12.41	14.90	17.11	14.94	18.54	14.91	15.76	14.82
2	8:00:00	17.99	15.02	12.22	14.82	14.98	14.89	18.31	14.93	18.39	14.92	17.11	14.82
2	9:00:00	17.28	15.03	12.89	14.85	16.62	14.97	18.46	14.88	18.39	14.93	16.33	14.72
2	10:00:00	17.08	15.03	12.89	14.85	17.03	15.02	18.26	14.89	18.73	14.94	16.35	14.73
2	11:00:00	16.69	15.00	13.06	14.84	16.85	15.00	17.98	14.88	19.28	14.93	16.28	14.73
2	12:00:00	16.95	14.99	13.13	14.82	16.79	14.98	17.95	14.86	19.59	14.92	15.76	14.70
2	13:00:00	16.39	14.94	17.85	14.88	16.92	14.97	18.05	14.84	19.76	14.90	15.68	14.67
2	14:00:00	16.09	14.92	18.02	14.86	17.15	14.95	18.21	14.83	19.78	14.90	16.06	14.67
2	15:00:00	16.14	14.91	17.96	14.86	17.36	14.92	18.39	14.82	19.67	14.87	15.97	14.65
2	16:00:00	16.14	14.91	18.16	14.86	17.12	14.90	18.82	14.82	20.00	14.89	16.30	14.68
2	17:00:00	16.07	14.92	18.48	14.86	17.32	14.93	19.14	14.84	20.14	14.90	16.15	14.67
2	18:00:00	16.33	14.94	18.72	14.88	17.87	14.96	21.62	15.04	20.14	14.90	16.49	14.67
2	19:00:00	16.86	14.95	18.40	14.88	17.84	14.96	22.36	15.10	20.50	14.93	16.60	14.68
2	20:00:00	16.95	14.97	17.93	14.88	17.60	14.97	22.49	15.11	20.69	14.95	16.39	14.68
2	21:00:00	17.34	14.99	12.80	14.81	17.33	14.97	23.00	15.13	20.72	14.98	16.38	14.69
2	22:00:00	17.74	14.99	12.28	14.79	17.03	14.97	22.70	15.13	20.86	14.99	17.63	14.84
2	23:00:00	17.67	14.99	12.20	14.78	12.64	14.90	17.85	15.03	20.96	14.99	16.04	14.83
3	0:00:00	16.91	14.94	12.38	14.78	12.59	14.89	17.97	15.02	20.84	14.98	15.89	14.82
3	1:00:00	16.68	14.95	12.58	14.78	12.73	14.88	17.79	15.00	21.27	14.98	16.20	14.81
3	2:00:00	12.88	14.87	12.32	14.77	12.53	14.86	17.97	15.00	21.58	14.97	16.31	14.80
3	3:00:00	16.79	14.92	12.22	14.77	12.74	14.86	17.66	14.99	18.93	14.89	16.46	14.81
3	4:00:00	14.19	14.89	12.16	14.77	12.68	14.86	17.32	14.98	16.88	14.86	16.62	14.81
3	5:00:00	13.23	14.85	12.16	14.77	12.44	14.87	16.53	14.98	16.97	14.87	16.52	14.81
3	6:00:00	13.87	14.85	12.27	14.78	12.28	14.88	15.80	14.98	16.96	14.87	16.35	14.82
3	7:00:00	13.87	14.86	12.23	14.80	12.52	14.90	15.56	15.00	16.93	14.88	16.19	14.82
3	8:00:00	13.97	14.89	12.21	14.82	15.65	14.97	15.64	15.01	18.82	14.93	16.48	14.84
3	9:00:00	13.95	14.90	12.77	14.85	17.52	15.02	16.21	15.03	20.16	14.95	16.48	14.85
3	10:00:00	13.74	14.89	12.74	14.84	17.52	15.03	16.81	15.03	20.94	14.97	16.77	14.85
3	11:00:00	13.75	14.88	12.42	14.82	16.95	15.01	17.31	15.02	20.86	14.95	16.73	14.83
3	12:00:00	13.61	14.86	13.32	14.81	16.98	15.00	17.83	15.01	21.06	14.92	16.78	14.83
3	13:00:00	12.92	14.82	17.76	14.86	16.88	14.98	17.85	14.98	20.99	14.96	16.64	14.81
3	14:00:00	12.87	14.79	18.74	14.85	17.41	14.95	17.72	14.96	20.94	14.96	16.74	14.79
3	15:00:00	12.90	14.78	19.67	14.89	18.04	14.96	18.08	14.95	20.87	14.95	16.93	14.79
3	16:00:00	12.83	14.78	19.25	14.87	17.72	14.94	17.69	14.96	21.15	14.95	17.08	14.79
3	17:00:00	12.96	14.80	17.63	14.82	17.90	14.94	17.76	14.96	21.19	14.95	16.45	14.78
3	18:00:00	18.02	14.92	18.12	14.83	17.79	14.95	21.70	15.07	20.28	14.93	17.30	14.81
3	19:00:00	18.20	14.95	18.39	14.86	17.48	14.95	22.09	15.11	21.45	14.99	18.53	14.90
3	20:00:00	18.02	14.96	18.35	14.88	17.57	14.97	22.15	15.13	21.47	15.00	18.46	14.92
3	21:00:00	14.31	14.87	13.79	14.80	17.58	14.97	21.97	15.14	21.49	15.02	17.08	14.88
3	22:00:00	13.24	14.87	12.68	14.79	17.27	14.96	17.30	15.04	20.86	15.01	16.52	14.86
3	23:00:00	13.86	14.90	12.39	14.78	12.73	14.89	17.19	15.02	16.95	14.89	16.84	14.86

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
4	0:00:00	14.69	14.90	12.05	14.78	12.39	14.88	16.95	15.01	17.05	14.88	16.95	14.86
4	1:00:00	15.93	14.91	11.94	14.78	12.31	14.87	17.28	15.00	17.34	14.87	17.01	14.85
4	2:00:00	14.97	14.89	11.85	14.77	12.47	14.87	17.36	14.99	16.86	14.85	17.17	14.85
4	3:00:00	14.11	14.87	12.09	14.76	12.68	14.87	17.47	14.98	16.82	14.86	17.08	14.85
4	4:00:00	13.83	14.88	12.06	14.76	12.82	14.87	17.64	14.99	16.96	14.86	17.11	14.85
4	5:00:00	14.09	14.88	11.91	14.76	12.69	14.88	18.16	15.00	17.04	14.87	16.86	14.85
4	6:00:00	14.77	14.85	11.94	14.78	12.63	14.88	18.55	15.02	16.26	14.88	16.66	14.85
4	7:00:00	14.71	14.87	11.84	14.79	12.55	14.86	18.58	15.03	13.89	14.92	16.54	14.85
4	8:00:00	14.74	14.89	11.84	14.81	14.99	14.93	19.66	15.00	16.79	14.93	18.21	14.93
4	9:00:00	14.90	14.89	12.54	14.84	16.87	15.00	19.40	14.94	17.95	14.94	19.30	15.00
4	10:00:00	15.11	14.89	13.68	14.86	16.97	15.01	18.78	14.92	17.87	14.93	19.31	14.99
4	11:00:00	14.67	14.87	13.23	14.84	16.99	15.00	18.51	14.91	17.86	14.91	18.18	14.87
4	12:00:00	13.95	14.83	13.40	14.82	15.07	14.78	18.11	14.89	18.91	14.89	16.39	14.74
4	13:00:00	13.62	14.79	18.13	14.89	14.83	14.72	17.41	14.85	19.39	14.88	16.32	14.72
4	14:00:00	13.74	14.79	18.23	14.87	14.90	14.69	17.46	14.83	20.02	14.96	16.58	14.71
4	15:00:00	14.26	14.80	18.67	14.84	15.16	14.67	17.43	14.82	19.95	14.94	16.69	14.70
4	16:00:00	14.53	14.81	18.61	14.83	15.07	14.66	17.21	14.82	19.69	14.94	16.73	14.69
4	17:00:00	14.26	14.80	18.87	14.85	15.12	14.66	16.98	14.83	19.68	14.94	16.80	14.70
4	18:00:00	17.89	14.90	18.70	14.88	15.00	14.67	17.70	14.87	20.22	14.94	16.88	14.70
4	19:00:00	18.50	14.94	18.50	14.87	14.91	14.67	18.02	14.88	20.48	14.96	16.94	14.71
4	20:00:00	18.18	14.94	18.15	14.88	15.00	14.69	17.43	14.85	20.57	14.97	16.51	14.71
4	21:00:00	15.14	14.86	12.77	14.81	16.59	14.87	17.97	14.88	20.59	14.99	16.54	14.73
4	22:00:00	15.14	14.88	11.85	14.78	16.46	14.93	19.71	14.99	20.40	14.98	16.87	14.79
4	23:00:00	15.42	14.90	11.87	14.79	12.86	14.85	18.36	15.00	16.59	14.87	16.07	14.84
5	0:00:00	15.74	14.90	11.92	14.79	Shutdown	Shutdown	18.68	14.99	17.06	14.86	16.06	14.83
5	1:00:00	15.78	14.90	11.98	14.79	Shutdown	Shutdown	19.01	14.98	17.08	14.84	16.97	14.85
5	2:00:00	15.80	14.89	12.11	14.79	Shutdown	Shutdown	19.08	14.97	16.97	14.83	17.10	14.85
5	3:00:00	15.93	14.88	11.99	14.79	Shutdown	Shutdown	19.18	14.97	17.07	14.82	17.18	14.86
5	4:00:00	16.08	14.88	13.37	14.82	Shutdown	Shutdown	19.11	14.98	17.31	14.83	16.34	14.86
5	5:00:00	16.21	14.89	13.46	14.82	Shutdown	Shutdown	18.87	14.99	17.41	14.83	16.44	14.86
5	6:00:00	16.04	14.89	13.46	14.83	Shutdown	Shutdown	18.40	15.00	17.37	14.84	16.37	14.86
5	7:00:00	15.60	14.90	14.12	14.85	Shutdown	Shutdown	17.95	15.02	17.21	14.85	16.19	14.87
5	8:00:00	15.74	14.92	14.23	14.88	Shutdown	Shutdown	20.43	15.09	19.44	14.92	15.85	14.87
5	9:00:00	15.46	14.92	14.18	14.89	Shutdown	Shutdown	21.51	15.05	21.25	14.99	16.00	14.87
5	10:00:00	15.32	14.90	14.18	14.89	Shutdown	Shutdown	21.47	15.04	21.12	14.98	15.96	14.87
5	11:00:00	14.99	14.87	14.23	14.89	Shutdown	Shutdown	21.44	15.06	20.86	14.97	16.41	14.87
5	12:00:00	15.50	14.85	15.42	14.89	Shutdown	Shutdown	21.05	15.11	20.80	14.95	16.60	14.85
5	13:00:00	19.16	14.94	19.84	14.92	Shutdown	Shutdown	20.97	15.08	20.93	14.93	17.66	14.85
5	14:00:00	19.41	14.93	19.36	14.91	Shutdown	Shutdown	19.06	14.94	21.15	14.92	16.50	14.82
5	15:00:00	19.38	14.92	19.34	14.90	Shutdown	Shutdown	17.39	14.83	20.76	14.88	16.96	14.83
5	16:00:00	18.90	14.90	19.17	14.89	Shutdown	Shutdown	17.38	14.82	20.74	14.86	17.07	14.82
5	17:00:00	18.44	14.89	19.17	14.90	Shutdown	Shutdown	17.43	14.82	20.66	14.87	16.27	14.80
5	18:00:00	18.19	14.89	19.03	14.90	Shutdown	Shutdown	17.36	14.82	20.53	14.87	17.08	14.84
5	19:00:00	17.59	14.89	18.70	14.91	Shutdown	Shutdown	17.27	14.82	20.13	14.89	15.85	14.70
5	20:00:00	17.49	14.90	18.67	14.93	Shutdown	Shutdown	19.50	15.01	20.08	14.89	16.27	14.72
5	21:00:00	13.85	14.82	Shutdown	Shutdown	Shutdown	Shutdown	19.07	15.03	19.83	14.90	17.22	14.90
5	22:00:00	13.07	14.80	Shutdown	Shutdown	Shutdown	Shutdown	17.91	15.01	19.42	14.89	15.90	14.86
5	23:00:00	13.35	14.80	Shutdown	Shutdown	Shutdown	Shutdown	14.88	14.90	16.98	14.79	16.22	14.85
6	0:00:00	13.38	14.81	Shutdown	Shutdown	Shutdown	Shutdown	14.89	14.89	17.06	14.78	16.03	14.85
6	1:00:00	13.70	14.83	Shutdown	Shutdown	Shutdown	Shutdown	15.62	14.89	16.95	14.77	16.07	14.84
6	2:00:00	15.05	14.87	Shutdown	Shutdown	Shutdown	Shutdown	16.14	14.89	16.80	14.76	16.28	14.83
6	3:00:00	15.12	14.86	Shutdown	Shutdown	Shutdown	Shutdown	16.44	14.90	16.83	14.76	15.93	14.80
6	4:00:00	15.20	14.87	Shutdown	Shutdown	Shutdown	Shutdown	17.40	14.92	16.93	14.77	16.71	14.84
6	5:00:00	15.10	14.87	Shutdown	Shutdown	Shutdown	Shutdown	17.69	14.93	17.00	14.78	16.35	14.83
6	6:00:00	16.10	14.89	17.99	14.90	Shutdown	Shutdown	17.81	14.95	17.00	14.78	15.45	14.81
6	7:00:00	15.95	14.90	17.71	14.92	Shutdown	Shutdown	16.79	14.95	17.75	14.80	15.12	14.82
6	8:00:00	15.90	14.91	18.06	14.93	Shutdown	Shutdown	19.41	15.05	19.38	14.88	17.44	14.89
6	9:00:00	16.65	14.93	18.67	14.94	Shutdown	Shutdown	21.25	15.12	20.49	14.94	19.22	14.91
6	10:00:00	17.81	14.94	18.42	14.92	Shutdown	Shutdown	21.08	15.10	20.33	14.93	18.35	14.87
6	11:00:00	17.95	14.92	17.88	14.90	Shutdown	Shutdown	20.87	15.08	20.50	14.92	16.55	14.76
6	12:00:00	17.02	14.88	17.77	14.87	Shutdown	Shutdown	20.62	15.04	19.23	14.83	16.70	14.75
6	13:00:00	20.27	14.95	17.12	14.84	Shutdown	Shutdown	20.72	15.01	17.84	14.72	16.84	14.73
6	14:00:00	20.62	14.94	17.50	14.82	Shutdown	Shutdown	18.11	14.83	19.06	14.85	16.91	14.72
6	15:00:00	20.92	14.94	17.76	14.80	Shutdown	Shutdown	17.17	14.76	19.09	14.85	17.03	14.69
6	16:00:00	20.76	14.93	17.66	14.80	Shutdown	Shutdown	17.38	14.75	18.81	14.84	17.17	14.70
6	17:00:00	20.66	14.93	17.56	14.81	Shutdown	Shutdown	17.46	14.76	18.73	14.83	17.63	14.61
6	18:00:00	19.81	14.91	19.58	14.89	Shutdown	Shutdown	16.64	14.76	19.01	14.83	17.91	14.61
6	19:00:00	18.85	14.89	18.99	14.91	Shutdown	Shutdown	15.83	14.73	18.99	14.85	18.71	14.62
6	20:00:00	18.82	14.92	18.34	14.91	Shutdown	Shutdown	15.94	14.74	18.90	14.86	18.69	14.63
6	21:00:00	15.15	14.84	14.74	14.82	Shutdown	Shutdown	16.11	14.76	19.07	14.87	18.33	14.62
6	22:00:00	15.34	14.84	14.52	14.81	Shutdown	Shutdown	16.26	14.80	18.77	14.87	19.24	14.73
6	23:00:00	15.38	14.84	14.72	14.81	Shutdown	Shutdown	16.07	14.90	15.66	14.77	17.91	14.79

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
7	0:00:00	15.60	14.84	14.86	14.80	Shutdown	Shutdown	16.13	14.89	15.93	14.76	17.89	14.78
7	1:00:00	15.04	14.83	15.25	14.81	Shutdown	Shutdown	16.22	14.89	16.11	14.75	17.89	14.76
7	2:00:00	15.07	14.83	15.31	14.80	Shutdown	Shutdown	16.14	14.87	16.25	14.74	18.16	14.76
7	3:00:00	15.09	14.83	15.43	14.79	Shutdown	Shutdown	16.40	14.88	16.51	14.74	18.27	14.76
7	4:00:00	15.65	14.84	15.43	14.79	Shutdown	Shutdown	16.47	14.88	16.56	14.75	18.65	14.78
7	5:00:00	15.35	14.85	14.89	14.78	Shutdown	Shutdown	16.54	14.88	16.67	14.76	18.41	14.78
7	6:00:00	15.98	14.87	14.92	14.80	Shutdown	Shutdown	16.97	14.90	16.49	14.77	18.19	14.76
7	7:00:00	16.33	14.89	14.77	14.81	Shutdown	Shutdown	17.26	14.93	16.70	14.79	18.08	14.77
7	8:00:00	16.24	14.90	14.19	14.81	Shutdown	Shutdown	19.34	15.02	18.62	14.88	19.31	14.83
7	9:00:00	16.61	14.91	14.10	14.82	Shutdown	Shutdown	20.82	15.09	19.89	14.93	18.62	14.73
7	10:00:00	16.66	14.90	14.29	14.82	Shutdown	Shutdown	20.87	15.07	19.49	14.92	17.81	14.65
7	11:00:00	15.94	14.88	14.26	14.81	Shutdown	Shutdown	21.07	15.06	19.15	14.89	17.62	14.66
7	12:00:00	16.52	14.87	15.67	14.83	Shutdown	Shutdown	21.20	15.05	20.13	14.88	17.78	14.71
7	13:00:00	19.31	14.94	19.30	14.90	Shutdown	Shutdown	19.52	14.91	20.00	14.88	18.01	14.65
7	14:00:00	19.20	14.92	20.07	14.79	Shutdown	Shutdown	17.64	14.79	20.44	14.89	18.27	14.63
7	15:00:00	19.17	14.92	20.33	14.79	Shutdown	Shutdown	17.80	14.76	20.34	14.87	18.30	14.60
7	16:00:00	18.79	14.91	20.07	14.82	Shutdown	Shutdown	18.18	14.76	20.35	14.85	18.22	14.59
7	17:00:00	18.19	14.89	19.78	14.81	Shutdown	Shutdown	18.24	14.78	19.65	14.85	17.99	14.59
7	18:00:00	18.07	14.89	18.81	14.77	Shutdown	Shutdown	18.38	14.80	19.65	14.84	18.06	14.61
7	19:00:00	17.76	14.90	18.09	14.80	Shutdown	Shutdown	18.22	14.81	19.94	14.87	18.27	14.64
7	20:00:00	18.03	14.92	16.12	14.81	Shutdown	Shutdown	19.24	14.88	19.75	14.89	17.77	14.65
7	21:00:00	15.06	14.86	84.36	15.77	Shutdown	Shutdown	21.66	15.06	19.45	14.90	18.08	14.67
7	22:00:00	13.99	14.84	92.72	15.94	Shutdown	Shutdown	21.59	15.06	19.70	14.91	19.26	14.78
7	23:00:00	14.39	14.84	92.19	15.93	Shutdown	Shutdown	18.18	14.95	16.39	14.80	19.40	14.83
8	0:00:00	13.98	14.84	92.60	15.95	16.78	14.93	18.64	14.95	16.93	14.81	18.92	14.80
8	1:00:00	13.89	14.83	93.79	15.97	16.03	14.90	19.06	14.94	17.14	14.80	18.49	14.77
8	2:00:00	13.55	14.81	86.16	15.70	16.04	14.90	19.48	14.94	17.14	14.79	18.49	14.77
8	3:00:00	13.59	14.81	14.42	14.77	16.19	14.89	19.29	14.93	16.93	14.79	18.68	14.77
8	4:00:00	13.75	14.81	13.97	14.78	15.99	14.88	19.35	14.93	17.13	14.79	18.31	14.76
8	5:00:00	13.51	14.82	13.87	14.79	16.10	14.90	19.51	14.94	16.73	14.79	18.08	14.75
8	6:00:00	14.71	14.86	13.83	14.79	16.15	14.92	19.26	14.96	16.51	14.80	18.13	14.76
8	7:00:00	15.69	14.90	13.75	14.80	15.81	14.92	19.59	14.98	16.33	14.81	17.82	14.78
8	8:00:00	15.60	14.90	12.80	14.82	18.37	15.01	22.65	15.09	16.36	14.82	18.88	14.84
8	9:00:00	16.12	14.93	13.10	14.84	20.81	15.08	24.13	15.16	16.51	14.84	20.14	14.90
8	10:00:00	16.68	14.94	13.66	14.85	21.44	15.09	23.83	15.14	16.51	14.83	20.47	14.90
8	11:00:00	16.74	14.92	15.31	14.87	21.29	15.07	23.50	15.12	16.46	14.82	20.55	14.92
8	12:00:00	19.40	14.94	15.83	14.85	21.26	15.05	23.14	15.09	16.83	14.80	20.93	14.93
8	13:00:00	14.37	14.50	18.26	14.78	21.27	15.02	22.48	15.04	16.25	14.76	18.80	14.70
8	14:00:00	14.33	14.47	18.22	14.77	20.97	15.00	21.17	14.96	15.78	14.73	18.61	14.65
8	15:00:00	14.58	14.48	18.86	14.77	20.83	15.00	18.20	14.79	15.90	14.75	17.77	14.48
8	16:00:00	14.64	14.47	20.22	14.83	20.91	14.99	17.98	14.78	15.76	14.74	17.72	14.51
8	17:00:00	14.66	14.48	20.71	14.87	20.99	15.01	17.87	14.78	16.07	14.74	17.70	14.52
8	18:00:00	14.23	14.47	19.19	14.83	21.05	15.02	17.31	14.76	19.59	14.84	18.23	14.57
8	19:00:00	13.96	14.53	19.29	14.85	20.98	15.03	17.42	14.76	19.66	14.87	18.28	14.60
8	20:00:00	17.71	14.89	19.26	14.86	20.97	15.04	17.67	14.77	19.52	14.89	18.01	14.62
8	21:00:00	15.28	14.82	14.81	14.78	21.09	15.05	17.28	14.78	18.87	14.87	20.17	14.84
8	22:00:00	13.51	14.83	14.16	14.77	20.48	15.04	17.54	14.81	15.91	14.79	20.19	14.85
8	23:00:00	13.89	14.84	13.99	14.77	16.75	14.92	17.04	14.94	16.02	14.79	18.01	14.76
9	0:00:00	13.98	14.83	13.82	14.76	16.40	14.91	17.67	14.94	16.09	14.78	17.75	14.75
9	1:00:00	13.83	14.81	13.82	14.76	16.14	14.90	18.43	14.93	16.11	14.77	17.69	14.74
9	2:00:00	13.89	14.80	13.65	14.74	15.77	14.88	18.98	14.92	15.90	14.75	17.64	14.73
9	3:00:00	14.40	14.81	13.52	14.73	15.72	14.87	18.95	14.91	16.00	14.74	17.57	14.74
9	4:00:00	15.40	14.83	13.74	14.74	15.87	14.88	18.60	14.89	15.43	14.75	17.83	14.74
9	5:00:00	15.98	14.86	13.07	14.75	16.06	14.89	18.31	14.90	15.83	14.77	18.18	14.76
9	6:00:00	16.07	14.86	13.21	14.77	15.84	14.90	18.39	14.91	16.04	14.79	18.26	14.77
9	7:00:00	15.86	14.87	13.43	14.78	15.54	14.91	18.01	14.93	15.80	14.80	18.51	14.79
9	8:00:00	16.78	14.90	13.01	14.80	17.91	15.00	21.10	15.04	17.95	14.85	19.41	14.84
9	9:00:00	16.85	14.92	13.28	14.81	20.02	15.07	21.50	15.02	19.90	14.88	20.02	14.88
9	10:00:00	17.20	14.91	13.53	14.82	20.25	15.07	19.52	14.88	20.04	14.90	18.81	14.74
9	11:00:00	16.82	14.89	13.08	14.80	20.24	15.04	18.39	14.84	20.25	14.92	17.87	14.68
9	12:00:00	15.47	14.85	13.69	14.79	20.01	15.01	16.02	14.64	19.15	14.88	17.93	14.68
9	13:00:00	15.96	14.83	18.63	14.80	20.55	15.00	15.60	14.57	19.42	14.86	17.57	14.59
9	14:00:00	15.63	14.81	16.43	14.73	20.66	14.98	17.71	14.71	19.33	14.86	17.19	14.54
9	15:00:00	15.59	14.80	15.99	14.35	19.71	14.95	18.32	14.73	20.36	14.87	17.51	14.49
9	16:00:00	16.42	14.82	17.13	14.28	19.39	14.90	18.67	14.75	20.45	14.86	17.59	14.51
9	17:00:00	14.92	14.79	15.89	14.30	19.39	14.93	17.80	14.73	19.84	14.83	17.66	14.55
9	18:00:00	16.60	14.80	16.02	14.30	19.68	14.94	17.49	14.71	19.75	14.87	17.40	14.54
9	19:00:00	18.04	14.87	15.99	14.30	19.48	14.95	17.27	14.72	19.50	14.87	17.37	14.56
9	20:00:00	16.90	14.86	16.38	14.33	19.71	14.96	17.30	14.73	19.73	14.89	17.63	14.60
9	21:00:00	12.43	14.79	15.65	14.34	19.67	14.97	16.86	14.72	19.97	14.91	17.66	14.60
9	22:00:00	12.11	14.79	15.75	14.35	18.98	14.97	16.94	14.75	19.63	14.91	17.22	14.59
9	23:00:00	12.13	14.79	15.97	14.35	15.34	14.89	18.66	14.93	16.00	14.81	17.18	14.74

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
10	0:00:00	12.31	14.79	16.07	14.35	15.22	14.87	19.81	14.96	16.16	14.80	16.94	14.75
10	1:00:00	12.31	14.79	16.05	14.34	15.06	14.86	19.83	14.95	16.14	14.79	17.48	14.75
10	2:00:00	12.22	14.78	16.16	14.34	14.80	14.84	19.97	14.94	16.12	14.78	18.01	14.76
10	3:00:00	11.59	14.77	15.99	14.34	14.89	14.83	19.82	14.93	15.83	14.78	18.71	14.77
10	4:00:00	11.73	14.78	15.97	14.34	14.95	14.84	19.71	14.94	15.93	14.78	18.27	14.75
10	5:00:00	11.92	14.79	16.03	14.34	14.98	14.84	19.36	14.95	15.70	14.77	18.30	14.76
10	6:00:00	11.61	14.80	16.16	14.35	15.13	14.85	19.24	14.96	15.52	14.79	18.49	14.78
10	7:00:00	11.62	14.81	16.06	14.36	14.99	14.87	19.00	14.97	15.30	14.81	18.50	14.79
10	8:00:00	11.98	14.84	15.76	14.38	17.57	14.94	18.78	14.99	17.53	14.88	18.94	14.75
10	9:00:00	13.02	14.88	15.93	14.40	19.48	15.01	18.78	15.00	19.17	14.93	17.99	14.67
10	10:00:00	13.29	14.88	16.07	14.40	19.23	15.01	18.42	15.00	18.94	14.93	17.67	14.66
10	11:00:00	12.02	14.83	15.83	14.37	19.00	14.99	18.51	14.99	18.57	14.89	17.97	14.66
10	12:00:00	11.79	14.81	16.30	14.34	19.15	14.98	19.10	14.98	18.80	14.88	18.08	14.68
10	13:00:00	16.84	14.90	18.94	14.38	19.18	14.96	19.70	14.97	18.91	14.88	16.84	13.62
10	14:00:00	19.24	14.86	19.10	14.37	19.31	14.94	20.40	14.96	19.26	14.88	15.56	11.58
10	15:00:00	18.10	14.82	18.96	14.36	19.43	14.94	19.95	14.94	19.25	14.87	18.27	14.56
10	16:00:00	17.82	14.86	18.74	14.33	19.06	14.91	19.89	14.94	19.20	14.85	17.74	14.71
10	17:00:00	18.55	14.89	16.01	14.28	19.40	14.93	18.84	14.91	19.24	14.86	17.35	16.34
10	18:00:00	18.69	14.90	16.41	14.29	19.12	14.93	19.17	14.91	19.38	14.88	43.12	19.65
10	19:00:00	17.85	14.89	16.66	14.31	19.25	14.94	19.58	14.95	18.93	14.88	Maintenance	Maintenance
10	20:00:00	17.38	14.90	16.68	14.34	19.48	14.96	18.86	14.93	19.02	14.91	22.14	13.61
10	21:00:00	13.33	14.82	15.94	14.37	19.29	14.96	18.88	14.94	18.77	14.91	16.11	14.74
10	22:00:00	13.23	14.83	15.40	14.37	18.88	14.95	18.57	14.94	18.04	14.90	17.72	14.94
10	23:00:00	13.08	14.83	15.62	14.37	15.00	14.87	18.47	14.94	14.64	14.80	16.64	15.15
11	0:00:00	13.23	14.83	15.69	14.36	15.02	14.85	18.51	14.94	17.73	14.87	16.51	15.13
11	1:00:00	13.60	14.83	15.31	14.35	15.01	14.83	18.41	14.92	18.41	14.88	16.98	15.12
11	2:00:00	13.52	14.82	15.34	14.35	15.08	14.82	18.46	14.91	18.28	14.87	17.33	15.11
11	3:00:00	13.76	14.82	15.40	14.34	15.19	14.81	18.56	14.91	18.49	14.86	16.83	15.10
11	4:00:00	13.94	14.84	15.27	14.35	15.14	14.82	18.61	14.92	14.91	14.77	16.88	15.15
11	5:00:00	14.66	14.86	15.32	14.35	15.14	14.83	18.56	14.92	13.85	14.75	17.16	15.35
11	6:00:00	14.05	14.87	15.27	14.37	15.25	14.84	18.50	14.94	13.89	14.77	17.46	15.46
11	7:00:00	14.43	14.89	15.28	14.38	15.31	14.86	18.36	14.95	13.76	14.78	17.25	15.49
11	8:00:00	14.42	14.89	15.20	14.40	17.42	14.92	18.13	14.97	16.37	14.86	17.57	15.21
11	9:00:00	14.64	14.91	14.99	14.41	19.14	15.00	18.09	14.98	17.72	14.92	16.82	14.97
11	10:00:00	13.99	14.88	15.18	14.41	17.62	14.88	18.09	14.98	17.90	14.91	16.47	14.98
11	11:00:00	14.37	14.87	15.05	14.37	15.81	14.75	18.46	14.98	17.47	14.88	16.43	14.94
11	12:00:00	13.78	14.84	15.53	14.34	15.68	14.73	18.46	14.95	17.17	14.83	16.00	14.93
11	13:00:00	18.50	14.92	18.49	14.38	15.84	14.72	18.14	14.92	17.01	14.81	15.60	14.87
11	14:00:00	18.30	14.89	18.39	14.34	15.95	14.70	18.19	14.89	16.91	14.83	15.52	14.85
11	15:00:00	18.69	14.89	18.80	14.34	16.05	14.68	18.50	14.89	16.77	14.81	15.62	14.86
11	16:00:00	18.77	14.89	19.08	14.35	16.31	14.68	18.89	14.89	16.23	14.73	16.05	14.86
11	17:00:00	17.58	14.83	18.62	14.30	16.78	14.69	17.93	14.86	16.54	14.80	16.00	14.83
11	18:00:00	18.07	14.88	19.26	14.37	16.19	14.68	18.10	14.86	16.73	14.83	15.41	14.81
11	19:00:00	18.18	14.89	19.34	14.40	16.27	14.69	18.64	14.90	16.87	14.84	15.00	14.81
11	20:00:00	18.38	14.90	19.16	14.42	16.19	14.70	18.33	14.90	16.93	14.85	14.88	14.79
11	21:00:00	13.50	14.84	15.91	14.35	16.13	14.71	18.16	14.90	16.87	14.86	14.91	14.84
11	22:00:00	12.72	14.81	15.38	14.35	17.86	14.87	18.07	14.91	16.38	14.85	15.85	15.05
11	23:00:00	12.60	14.80	15.47	14.35	14.94	14.83	17.92	14.91	13.41	14.76	14.17	15.26
12	0:00:00	12.78	14.80	15.39	14.33	14.71	14.82	17.99	14.90	15.05	14.78	13.81	15.25
12	1:00:00	12.77	14.80	15.64	14.33	14.95	14.82	18.07	14.90	16.81	14.84	13.78	15.24
12	2:00:00	12.61	14.79	16.22	14.35	15.18	14.81	18.04	14.89	14.88	14.62	14.06	15.23
12	3:00:00	12.49	14.79	15.87	14.34	15.17	14.81	18.05	14.89	14.00	14.74	14.14	15.22
12	4:00:00	12.29	14.79	16.00	14.34	15.06	14.81	18.13	14.89	13.94	14.74	14.69	15.23
12	5:00:00	12.26	14.80	16.11	14.36	14.98	14.82	17.95	14.90	13.94	14.75	14.41	15.24
12	6:00:00	11.98	14.80	15.81	14.37	14.86	14.83	17.89	14.91	13.59	14.74	14.35	15.23
12	7:00:00	11.93	14.82	15.43	14.40	14.20	14.84	17.74	14.93	13.70	14.77	13.97	15.22
12	8:00:00	11.75	14.85	15.62	14.43	16.90	14.91	17.66	14.94	15.74	14.85	14.57	15.26
12	9:00:00	12.19	14.87	15.84	14.43	19.79	14.99	17.87	14.95	17.04	14.91	14.55	15.27
12	10:00:00	12.31	14.86	15.93	14.39	16.97	14.79	17.79	14.95	17.07	14.90	14.39	15.27
12	11:00:00	11.93	14.85	15.67	14.36	14.22	14.55	17.80	14.94	16.93	14.89	14.44	15.23
12	12:00:00	12.51	14.83	15.75	14.33	13.25	14.48	17.46	14.92	17.07	14.87	14.23	15.20
12	13:00:00	17.66	14.92	18.78	14.34	12.72	14.46	17.89	14.90	17.42	14.85	13.92	15.16
12	14:00:00	18.31	14.91	18.16	14.30	12.96	14.44	17.81	14.88	17.49	14.83	14.05	15.14
12	15:00:00	18.33	14.86	17.40	14.30	12.87	14.42	18.18	14.88	17.56	14.81	13.79	15.11
12	16:00:00	14.53	14.58	18.90	14.35	13.34	14.43	17.97	14.86	17.63	14.82	12.78	15.13
12	17:00:00	17.78	14.88	19.38	14.39	12.87	14.42	17.48	14.85	16.89	14.80	12.63	15.13
12	18:00:00	14.93	14.65	19.25	14.39	13.13	14.42	15.02	14.66	16.92	14.79	13.38	15.08
12	19:00:00	12.57	14.44	19.13	14.39	13.22	14.44	15.07	14.64	16.76	14.81	14.78	15.04
12	20:00:00	12.41	14.45	19.27	14.41	13.29	14.46	15.10	14.64	17.06	14.84	14.94	15.04
12	21:00:00	16.87	14.89	16.38	14.35	13.23	14.47	14.89	14.66	16.93	14.86	13.19	15.12
12	22:00:00	17.32	14.93	16.03	14.33	14.27	14.59	13.28	14.78	16.77	14.85	11.87	15.18
12	23:00:00	16.59	14.92	16.19	14.33	14.58	14.81	13.10	14.76	14.35	14.76	11.82	15.17

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
13	0:00:00	13.39	14.86	16.16	14.33	14.65	14.81	13.26	14.76	14.14	14.74	11.86	15.15
13	1:00:00	13.75	14.85	16.35	14.33	14.79	14.80	13.32	14.75	15.46	14.78	11.76	15.15
13	2:00:00	14.31	14.82	16.30	14.32	14.75	14.79	13.42	14.74	16.60	14.82	11.97	15.15
13	3:00:00	14.16	14.82	16.35	14.32	14.87	14.79	13.77	14.74	16.96	14.83	12.75	15.20
13	4:00:00	13.53	14.83	15.92	14.31	14.88	14.79	13.83	14.75	14.93	14.73	12.69	15.21
13	5:00:00	13.68	14.83	16.02	14.32	14.50	14.80	13.68	14.75	16.73	14.82	12.54	15.21
13	6:00:00	13.08	14.84	16.28	14.33	14.28	14.81	13.39	14.77	17.28	14.87	12.56	15.21
13	7:00:00	11.87	14.86	16.19	14.35	14.20	14.82	13.25	14.78	17.11	14.88	12.27	15.20
13	8:00:00	12.81	14.88	16.01	14.36	14.20	14.84	12.88	14.79	16.43	14.80	14.29	15.14
13	9:00:00	16.05	14.90	16.02	14.36	14.84	14.86	13.34	14.81	14.71	14.64	13.10	14.85
13	10:00:00	19.59	14.93	15.78	14.34	14.90	14.86	12.39	14.80	12.60	14.43	13.09	14.86
13	11:00:00	20.41	14.92	15.74	14.33	15.09	14.85	13.06	14.79	12.72	14.42	13.37	14.85
13	12:00:00	17.40	14.84	15.73	14.30	14.97	14.83	14.71	14.80	12.61	14.41	13.50	14.83
13	13:00:00	12.57	14.45	15.78	14.26	15.47	14.82	15.21	14.80	12.71	14.39	13.12	14.81
13	14:00:00	12.50	14.42	15.73	14.22	16.07	14.83	15.57	14.78	12.78	14.37	12.39	14.70
13	15:00:00	12.49	14.41	16.04	14.24	14.87	14.81	15.86	14.78	12.96	14.36	12.80	14.73
13	16:00:00	12.89	14.42	15.96	14.24	15.27	14.82	15.50	14.75	12.78	14.34	12.64	14.73
13	17:00:00	12.84	14.43	15.97	14.26	14.95	14.81	14.78	14.73	12.77	14.34	12.72	14.72
13	18:00:00	12.96	14.44	17.56	14.26	17.49	14.78	15.35	14.65	12.69	14.34	12.63	14.73
13	19:00:00	12.83	14.46	19.10	14.36	16.31	14.71	15.19	14.65	12.55	14.36	13.16	14.75
13	20:00:00	12.54	14.47	18.90	14.36	15.70	14.71	15.01	14.65	12.38	14.36	13.19	14.77
13	21:00:00	15.84	14.84	16.18	14.32	16.55	14.82	15.61	14.73	12.27	14.36	12.89	14.77
13	22:00:00	16.49	14.86	16.00	14.32	14.01	14.86	13.56	14.77	12.32	14.37	12.77	14.80
13	23:00:00	16.05	14.86	15.94	14.33	14.21	14.87	13.81	14.77	16.39	14.82	12.27	15.07
14	0:00:00	17.56	14.90	14.94	14.35	14.22	14.85	14.14	14.76	16.67	14.83	12.25	15.05
14	1:00:00	18.01	14.92	14.22	14.38	14.22	14.84	14.24	14.75	16.61	14.82	12.24	15.04
14	2:00:00	18.09	14.91	14.39	14.37	14.14	14.82	14.18	14.74	17.36	14.84	12.58	15.03
14	3:00:00	18.43	14.91	13.94	14.38	14.10	14.81	13.66	14.73	17.03	14.83	12.42	15.03
14	4:00:00	18.33	14.92	14.16	14.38	14.17	14.81	13.46	14.73	16.64	14.82	12.43	15.04
14	5:00:00	18.43	14.93	15.04	14.39	14.07	14.83	13.20	14.74	16.73	14.84	12.33	15.03
14	6:00:00	18.57	14.94	15.27	14.41	14.17	14.84	12.99	14.75	17.22	14.86	12.20	15.04
14	7:00:00	18.53	14.95	15.16	14.43	13.96	14.85	13.08	14.77	17.33	14.88	11.91	15.05
14	8:00:00	17.93	14.98	14.72	14.42	14.98	14.81	13.25	14.79	17.36	14.90	10.72	15.09
14	9:00:00	18.38	15.00	14.72	14.42	15.71	14.78	13.84	14.82	17.60	14.92	10.07	15.09
14	10:00:00	18.27	14.99	14.92	14.39	15.81	14.78	13.87	14.82	17.34	14.91	10.07	15.08
14	11:00:00	18.05	14.97	15.05	14.35	15.08	14.75	13.64	14.81	17.10	14.89	10.07	15.06
14	12:00:00	17.19	14.89	15.40	14.32	14.92	14.73	14.38	14.81	17.24	14.87	9.96	15.04
14	13:00:00	13.08	14.52	15.55	14.37	15.49	14.73	15.25	14.81	17.22	14.85	11.71	14.96
14	14:00:00	12.76	14.44	15.76	14.39	15.53	14.70	17.29	14.84	17.24	14.84	13.18	14.79
14	15:00:00	12.31	14.42	16.02	14.49	15.17	14.68	17.52	14.80	16.97	14.81	12.53	14.73
14	16:00:00	12.28	14.42	17.31	14.40	15.28	14.68	18.00	14.81	16.90	14.81	12.31	14.70
14	17:00:00	12.65	14.42	17.10	14.40	15.36	14.68	17.58	14.81	17.06	14.80	12.63	14.71
14	18:00:00	12.92	14.45	17.66	14.43	15.41	14.69	17.24	14.72	17.53	14.84	12.72	14.70
14	19:00:00	13.28	14.46	17.91	14.45	15.58	14.70	16.34	14.71	17.56	14.85	12.72	14.72
14	20:00:00	13.25	14.47	18.16	14.45	15.28	14.72	15.89	14.70	17.38	14.86	12.73	14.74
14	21:00:00	18.28	14.92	17.30	14.39	15.00	14.73	14.04	14.67	17.16	14.87	12.78	14.76
14	22:00:00	18.71	14.95	16.43	14.40	16.11	14.84	11.85	14.76	14.54	14.63	12.71	14.76
14	23:00:00	18.82	14.94	16.19	14.41	13.92	14.86	11.42	14.75	16.79	14.81	12.92	14.78
15	0:00:00	18.75	14.93	16.17	14.41	14.11	14.85	12.15	14.75	15.24	14.79	15.17	14.99
15	1:00:00	19.06	14.92	16.28	14.40	14.25	14.84	12.22	14.73	14.23	14.77	15.16	14.98
15	2:00:00	19.05	14.92	16.47	14.40	14.11	14.82	12.19	14.73	13.96	14.76	15.10	14.98
15	3:00:00	19.27	14.92	16.66	14.40	14.26	14.82	12.69	14.73	13.86	14.75	15.03	14.97
15	4:00:00	19.66	14.92	16.84	14.41	14.28	14.82	12.72	14.73	13.73	14.76	15.13	14.98
15	5:00:00	20.01	14.93	16.96	14.41	15.80	14.84	12.63	14.75	13.53	14.75	15.30	14.98
15	6:00:00	17.49	14.87	16.87	14.40	15.19	14.85	12.91	14.76	13.33	14.76	15.26	15.00
15	7:00:00	17.72	14.89	16.76	14.40	14.36	14.83	12.80	14.78	13.60	14.78	15.12	15.01
15	8:00:00	18.56	14.91	16.75	14.41	15.57	14.81	12.96	14.80	14.23	14.79	15.25	15.03
15	9:00:00	19.39	14.95	16.68	14.42	15.17	14.75	13.16	14.82	14.66	14.80	15.44	15.03
15	10:00:00	18.40	14.92	16.66	14.41	15.93	14.77	13.55	14.85	14.85	14.79	15.35	15.03
15	11:00:00	18.12	14.92	16.50	14.40	15.93	14.76	14.77	14.86	14.54	14.77	15.60	15.02
15	12:00:00	17.45	14.86	16.29	14.39	14.33	14.61	13.85	14.81	14.53	14.76	15.41	15.01
15	13:00:00	14.31	14.58	17.75	14.47	12.96	14.47	14.08	14.78	14.59	14.74	15.29	14.98
15	14:00:00	14.96	14.61	18.35	14.43	13.21	14.45	15.75	14.80	14.30	14.72	15.40	14.96
15	15:00:00	15.65	14.66	18.58	14.44	13.00	14.42	16.48	14.78	13.44	14.71	15.21	14.97
15	16:00:00	15.81	14.67	18.51	14.42	12.95	14.42	16.41	14.77	13.32	14.70	15.01	14.95
15	17:00:00	15.59	14.67	18.46	14.43	14.28	14.52	15.90	14.75	13.38	14.71	15.23	14.96
15	18:00:00	15.99	14.69	18.69	14.44	16.17	14.65	16.34	14.69	15.28	14.71	15.30	14.97
15	19:00:00	16.50	14.71	18.62	14.45	16.45	14.67	15.72	14.65	14.23	14.60	15.17	14.98
15	20:00:00	16.52	14.72	18.44	14.46	16.45	14.70	15.01	14.64	14.22	14.60	15.27	15.00
15	21:00:00	15.28	14.64	17.99	14.41	15.88	14.70	15.17	14.66	14.15	14.66	15.24	15.01
15	22:00:00	16.12	14.71	17.20	14.40	15.79	14.72	13.63	14.78	13.94	14.75	15.20	15.02
15	23:00:00	16.48	14.71	17.35	14.38	17.03	14.84	13.82	14.77	14.20	14.75	15.28	15.01

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
16	0:00:00	16.18	14.70	17.62	14.38	17.35	14.84	13.86	14.76	14.06	14.74	15.27	15.00
16	1:00:00	16.20	14.70	17.68	14.36	17.51	14.83	13.64	14.75	14.06	14.75	15.27	14.99
16	2:00:00	16.26	14.69	17.66	14.36	15.85	14.82	13.52	14.74	14.29	14.76	15.48	14.99
16	3:00:00	16.22	14.68	17.37	14.36	15.45	14.83	13.36	14.74	14.37	14.76	15.58	14.98
16	4:00:00	15.98	14.68	17.19	14.37	16.60	14.83	13.36	14.75	14.50	14.77	15.57	14.99
16	5:00:00	15.74	14.69	17.10	14.39	16.58	14.84	13.12	14.76	14.79	14.78	15.62	15.00
16	6:00:00	15.46	14.70	17.41	14.40	15.58	14.84	13.15	14.77	14.88	14.77	15.70	15.00
16	7:00:00	15.41	14.71	17.23	14.40	15.56	14.85	12.88	14.79	14.58	14.76	15.71	15.02
16	8:00:00	15.10	14.73	17.15	14.41	16.19	14.81	12.69	14.81	14.78	14.78	15.65	15.03
16	9:00:00	15.25	14.75	17.03	14.41	15.85	14.75	12.83	14.83	15.01	14.79	16.23	15.04
16	10:00:00	14.99	14.73	16.83	14.41	15.90	14.76	13.35	14.84	14.98	14.79	15.70	15.05
16	11:00:00	15.36	14.73	16.75	14.42	15.88	14.74	15.39	14.86	14.92	14.78	15.54	15.03
16	12:00:00	15.79	14.73	16.93	14.40	15.91	14.72	15.43	14.82	14.75	14.74	15.99	15.02
16	13:00:00	15.43	14.70	17.14	14.37	14.45	14.54	15.44	14.78	14.67	14.73	15.98	14.99
16	14:00:00	15.52	14.68	17.08	14.35	15.58	14.59	16.60	14.78	14.86	14.72	16.46	14.98
16	15:00:00	15.46	14.67	17.39	14.37	16.35	14.66	16.23	14.77	14.79	14.71	16.44	14.96
16	16:00:00	15.85	14.68	17.23	14.32	16.07	14.65	15.16	14.73	14.57	14.72	16.15	14.97
16	17:00:00	15.92	14.69	17.03	14.33	16.48	14.67	14.41	14.72	14.45	14.72	15.99	14.92
16	18:00:00	16.97	14.76	17.92	14.40	16.62	14.68	15.80	14.65	17.15	14.79	16.38	14.97
16	19:00:00	16.10	14.71	18.66	14.43	16.85	14.71	15.89	14.65	17.09	14.83	16.59	14.97
16	20:00:00	16.11	14.72	18.65	14.44	16.61	14.72	15.85	14.66	16.90	14.85	16.34	15.00
16	21:00:00	16.29	14.73	17.84	14.39	16.61	14.73	15.57	14.68	16.53	14.85	16.06	14.99
16	22:00:00	16.09	14.71	17.11	14.39	16.32	14.75	14.13	14.79	13.91	14.77	15.95	15.00
16	23:00:00	16.06	14.70	17.00	14.38	15.19	14.87	13.87	14.79	13.86	14.76	15.78	15.00
17	0:00:00	15.98	14.71	17.04	14.36	15.30	14.87	13.61	14.77	13.72	14.75	15.42	15.00
17	1:00:00	16.06	14.70	17.42	14.36	15.34	14.86	13.50	14.77	13.76	14.74	15.23	14.98
17	2:00:00	16.32	14.70	17.23	14.35	15.29	14.84	13.68	14.76	14.22	14.74	15.45	14.97
17	3:00:00	17.68	14.79	17.29	14.34	15.39	14.84	13.82	14.76	14.36	14.74	15.59	14.97
17	4:00:00	16.97	14.87	17.42	14.34	15.33	14.83	13.87	14.76	14.46	14.73	15.71	14.96
17	5:00:00	15.78	14.86	17.37	14.35	15.41	14.85	13.75	14.77	14.74	14.74	15.65	14.97
17	6:00:00	17.43	14.88	17.33	14.36	15.68	14.84	13.78	14.77	14.78	14.75	15.76	14.98
17	7:00:00	18.01	14.90	17.31	14.37	15.60	14.84	13.73	14.80	14.73	14.77	15.77	14.99
17	8:00:00	18.58	14.92	17.45	14.38	16.77	14.81	13.77	14.81	16.27	14.85	15.51	14.99
17	9:00:00	15.02	14.75	17.92	14.38	16.93	14.77	14.21	14.84	17.35	14.92	15.42	15.00
17	10:00:00	14.61	14.75	18.94	14.38	16.71	14.77	14.35	14.85	17.73	14.93	15.56	15.01
17	11:00:00	17.47	14.94	19.26	14.36	16.67	14.76	14.78	14.84	17.90	14.92	15.68	15.00
17	12:00:00	17.55	14.91	18.18	14.32	16.32	14.73	14.26	14.83	18.19	14.91	15.80	14.95
17	13:00:00	13.28	14.47	18.03	14.33	16.16	14.70	14.32	14.82	18.04	14.86	15.58	14.95
17	14:00:00	13.37	14.46	18.19	14.34	16.48	14.69	14.75	14.81	17.91	14.84	15.74	14.96
17	15:00:00	13.04	14.42	18.48	14.37	17.43	14.71	14.76	14.80	18.05	14.83	16.58	14.95
17	16:00:00	12.90	14.42	18.97	14.38	19.12	14.77	14.52	14.79	18.99	14.86	16.40	14.91
17	17:00:00	13.01	14.42	19.25	14.39	19.43	14.88	14.31	14.79	18.51	14.84	16.47	14.93
17	18:00:00	12.63	14.41	19.69	14.45	19.18	14.88	17.05	14.73	18.19	14.87	16.56	14.95
17	19:00:00	12.42	14.42	19.87	14.45	19.77	14.91	16.13	14.68	17.67	14.87	16.38	14.95
17	20:00:00	12.61	14.43	19.70	14.47	19.77	14.93	15.95	14.68	17.50	14.87	15.70	14.96
17	21:00:00	17.91	14.88	18.95	14.41	19.64	14.94	16.08	14.72	17.47	14.88	15.75	14.95
17	22:00:00	17.99	14.91	18.07	14.41	19.29	14.94	15.07	14.83	16.78	14.87	15.91	14.95
17	23:00:00	17.92	14.91	17.85	14.40	15.65	14.87	15.01	14.83	14.30	14.79	15.87	14.99
18	0:00:00	18.26	14.92	17.76	14.37	15.44	14.86	15.14	14.81	14.81	14.79	15.92	14.96
18	1:00:00	18.73	14.92	17.63	14.35	15.83	14.85	15.04	14.79	14.63	14.77	17.03	15.01
18	2:00:00	18.83	14.91	17.56	14.35	16.08	14.85	14.97	14.79	14.34	14.76	16.70	14.98
18	3:00:00	19.09	14.92	17.47	14.35	15.84	14.84	14.88	14.79	14.32	14.75	16.75	14.97
18	4:00:00	19.33	14.90	17.42	14.35	15.73	14.83	14.78	14.80	14.40	14.77	16.97	14.97
18	5:00:00	19.31	14.91	17.45	14.35	15.74	14.85	14.69	14.81	14.16	14.76	16.78	14.97
18	6:00:00	19.00	14.92	17.39	14.36	15.78	14.86	14.79	14.82	14.32	14.77	16.73	14.98
18	7:00:00	18.50	14.93	17.17	14.37	15.55	14.89	14.85	14.84	14.23	14.78	16.50	14.99
18	8:00:00	17.92	14.95	16.98	14.39	16.56	14.84	17.31	14.93	15.91	14.85	16.52	15.01
18	9:00:00	15.58	12.09	16.87	14.40	16.16	14.77	18.88	15.00	16.85	14.91	16.85	15.01
18	10:00:00	21.53	15.02	16.98	14.39	16.07	14.77	18.85	14.99	16.85	14.90	16.89	14.98
18	11:00:00	20.67	15.00	17.06	14.37	16.56	14.80	18.56	14.96	16.70	14.89	17.36	15.01
18	12:00:00	20.51	14.96	16.75	14.36	16.56	14.74	18.83	14.95	17.21	14.89	17.10	14.96
18	13:00:00	14.99	14.51	18.32	14.39	18.06	14.74	19.65	14.95	17.41	14.87	17.04	14.91
18	14:00:00	14.87	14.46	18.59	14.35	19.99	14.86	20.04	14.94	17.57	14.86	17.18	14.94
18	15:00:00	15.92	14.49	19.01	14.37	19.86	13.84	19.96	14.93	17.71	14.86	17.55	14.96
18	16:00:00	14.94	14.44	18.94	14.30	21.28	14.87	19.96	14.92	17.72	14.86	18.41	14.95
18	17:00:00	14.55	14.43	16.31	13.94	21.26	14.90	19.75	14.94	17.80	14.83	18.13	14.94
18	18:00:00	14.68	14.44	15.70	13.92	21.84	14.91	20.65	14.97	17.92	14.86	18.15	14.93
18	19:00:00	14.26	14.44	15.83	13.95	21.69	14.94	21.03	14.97	17.51	14.88	17.99	14.95
18	20:00:00	13.83	14.45	15.54	13.96	21.56	14.96	20.80	14.99	17.42	14.91	18.74	14.98
18	21:00:00	19.27	14.89	17.14	14.34	21.57	14.97	20.89	15.03	17.63	14.92	18.46	14.98
18	22:00:00	19.61	14.93	17.67	14.41	22.02	14.98	20.42	15.03	17.23	14.90	16.98	14.95
18	23:00:00	19.79	14.93	17.55	14.41	18.58	14.91	15.81	14.93	14.66	14.82	16.69	14.96

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
19	0:00:00	20.03	14.93	17.50	14.41	18.16	14.89	15.81	14.92	14.44	14.80	16.84	14.94
19	1:00:00	20.48	14.96	17.40	14.40	17.90	14.88	15.65	14.91	14.61	14.79	16.45	14.93
19	2:00:00	21.06	14.96	17.48	14.39	17.65	14.86	15.14	14.89	14.84	14.79	16.38	14.94
19	3:00:00	21.81	14.96	17.39	14.38	17.97	14.86	14.98	14.88	14.74	14.78	16.34	14.94
19	4:00:00	22.23	14.97	17.38	14.39	17.98	14.85	14.87	14.88	14.62	14.78	16.23	14.94
19	5:00:00	22.28	14.97	17.28	14.42	17.62	14.84	14.58	14.88	14.46	14.78	16.56	14.95
19	6:00:00	22.22	14.98	17.43	14.45	17.41	14.84	14.56	14.90	14.57	14.78	17.99	14.99
19	7:00:00	22.52	14.99	17.25	14.44	17.77	14.84	14.60	14.91	14.72	14.80	18.25	15.01
19	8:00:00	21.53	15.00	17.17	14.45	19.00	14.82	17.87	14.99	16.45	14.87	18.36	15.01
19	9:00:00	21.46	15.02	17.16	14.45	18.30	14.75	19.67	15.05	17.41	14.93	18.24	15.01
19	10:00:00	21.64	15.02	17.94	14.42	17.81	14.74	19.69	15.04	17.60	14.94	18.34	15.00
19	11:00:00	21.28	15.01	18.57	14.40	17.38	14.72	19.74	15.03	17.58	14.93	18.07	14.92
19	12:00:00	20.94	14.96	18.43	14.38	17.26	14.70	20.12	15.03	17.80	14.91	18.01	14.90
19	13:00:00	15.08	14.50	19.11	14.37	17.25	14.68	19.85	15.00	17.70	14.88	17.95	14.89
19	14:00:00	14.32	14.44	19.19	14.29	17.08	14.66	19.56	14.97	17.76	14.85	17.99	14.85
19	15:00:00	14.09	14.43	18.40	14.17	17.01	14.64	19.84	14.97	18.04	14.84	18.08	14.86
19	16:00:00	14.10	14.43	19.17	14.31	16.89	14.63	19.62	14.94	17.89	14.84	15.34	14.71
19	17:00:00	13.96	14.42	19.67	14.42	16.99	14.63	19.33	14.93	17.94	14.84	16.23	14.75
19	18:00:00	13.84	14.43	20.09	14.54	17.09	14.65	19.04	14.94	17.61	14.85	15.45	14.69
19	19:00:00	14.61	14.47	19.07	14.65	17.03	14.67	19.07	14.96	17.45	14.86	14.23	14.65
19	20:00:00	14.80	14.49	18.79	14.76	16.93	14.68	19.53	14.97	17.35	14.87	14.71	14.71
19	21:00:00	19.26	14.88	20.63	14.87	16.87	14.70	19.42	14.98	17.20	14.88	17.47	14.99
19	22:00:00	19.13	14.91	21.71	14.96	16.98	14.73	18.93	14.98	17.28	14.88	17.77	14.94
19	23:00:00	19.16	14.92	21.98	15.06	16.28	14.82	15.13	14.90	15.20	14.78	17.81	14.96
20	0:00:00	19.15	14.92	22.40	15.14	16.41	14.81	15.45	14.88	14.70	14.75	18.08	14.95
20	1:00:00	19.14	14.92	22.58	15.22	16.41	14.79	15.34	14.87	14.78	14.74	17.89	14.92
20	2:00:00	19.21	14.90	22.52	15.29	16.10	14.77	15.65	14.87	14.97	14.74	18.22	14.90
20	3:00:00	19.08	14.89	21.93	15.36	16.32	14.77	15.79	14.86	15.10	14.74	18.34	14.90
20	4:00:00	19.55	14.90	21.99	15.44	16.29	14.78	15.45	14.85	15.13	14.74	18.23	14.89
20	5:00:00	20.07	14.91	21.93	15.52	16.01	14.78	15.22	14.86	14.92	14.75	18.18	14.90
20	6:00:00	20.53	14.91	22.40	15.60	15.86	14.80	15.63	14.87	15.02	14.75	18.21	14.91
20	7:00:00	20.48	14.95	22.81	15.69	15.99	14.81	16.14	14.89	14.96	14.76	17.20	14.92
20	8:00:00	20.25	14.97	22.92	15.77	16.17	14.83	16.88	13.64	16.26	14.83	17.07	14.92
20	9:00:00	20.23	14.98	23.58	15.84	16.70	14.85	19.86	15.02	16.64	12.72	16.79	14.90
20	10:00:00	20.42	14.98	24.37	15.90	16.94	14.85	19.49	15.00	16.79	14.94	16.57	14.87
20	11:00:00	20.29	14.96	24.53	15.95	17.20	14.84	19.11	14.98	16.73	14.92	17.15	14.87
20	12:00:00	18.08	14.88	24.85	16.00	16.82	14.82	19.30	14.95	16.82	14.90	16.76	14.82
20	13:00:00	13.12	14.43	25.61	16.04	16.18	14.79	19.04	14.93	14.69	14.67	17.26	14.82
20	14:00:00	12.97	14.40	25.99	16.08	15.98	14.77	18.61	14.88	15.62	14.76	16.61	14.76
20	15:00:00	13.29	14.40	26.62	16.13	16.15	14.79	16.16	14.70	16.86	14.86	14.76	14.64
20	16:00:00	13.19	14.39	26.60	16.20	16.02	14.79	15.64	14.67	17.22	14.87	15.45	14.64
20	17:00:00	13.17	14.39	26.73	16.28	16.03	14.79	16.12	14.66	17.01	14.84	15.13	14.63
20	18:00:00	13.28	14.39	27.70	16.35	19.95	14.87	16.12	14.66	17.32	14.87	14.61	14.62
20	19:00:00	13.67	14.42	28.33	16.42	19.89	14.91	16.39	14.69	17.23	14.89	14.32	14.62
20	20:00:00	13.39	14.43	28.85	16.49	20.03	14.93	16.09	14.70	17.14	14.90	13.98	14.63
20	21:00:00	18.28	14.86	28.48	16.56	19.84	14.93	16.05	14.71	17.30	14.91	15.50	14.77
20	22:00:00	18.24	14.89	28.69	16.62	16.45	14.86	16.02	14.74	17.01	14.90	16.56	14.88
20	23:00:00	18.16	14.89	29.45	16.67	16.31	14.85	17.18	14.85	14.97	14.81	17.03	14.90
21	0:00:00	18.12	14.90	29.86	16.72	16.50	14.83	17.35	14.84	14.92	14.80	18.38	14.91
21	1:00:00	17.53	14.88	29.34	16.77	16.94	14.83	17.61	14.83	14.94	14.79	18.92	14.90
21	2:00:00	17.39	14.86	29.55	16.82	17.03	14.83	17.63	14.82	15.27	14.79	19.10	14.90
21	3:00:00	18.55	14.87	28.97	16.87	16.65	14.83	17.71	14.82	15.13	14.77	19.07	14.90
21	4:00:00	19.71	14.90	29.20	16.92	16.94	14.82	17.38	14.82	15.20	14.78	19.34	14.91
21	5:00:00	20.03	14.91	29.82	16.97	16.92	14.83	17.67	14.83	15.30	14.79	19.00	14.91
21	6:00:00	18.24	14.86	30.40	17.02	17.07	14.84	16.17	14.84	14.95	14.78	18.73	14.91
21	7:00:00	18.56	14.87	31.22	17.08	16.94	14.85	15.12	14.85	14.54	14.80	18.28	14.92
21	8:00:00	18.92	14.89	31.43	17.13	19.07	14.92	16.23	14.81	16.18	14.86	18.13	14.95
21	9:00:00	19.49	14.92	32.07	17.18	20.97	14.99	15.99	14.75	17.59	14.91	17.85	14.94
21	10:00:00	19.81	14.96	32.54	17.22	21.05	14.99	15.86	14.75	17.72	14.91	17.93	14.93
21	11:00:00	19.58	14.96	33.27	17.24	20.85	14.99	15.45	14.73	17.66	14.91	18.33	14.93
21	12:00:00	19.06	14.92	33.50	17.26	21.32	14.96	15.39	14.70	17.73	14.90	18.36	14.90
21	13:00:00	13.77	14.46	35.05	17.28	21.00	14.95	15.42	14.69	18.04	14.89	18.34	14.88
21	14:00:00	13.70	14.43	36.22	17.31	20.66	14.93	15.61	14.67	18.03	14.87	17.88	14.81
21	15:00:00	13.93	14.43	38.25	17.35	20.46	14.89	15.71	14.66	17.85	14.86	15.26	14.64
21	16:00:00	13.77	14.41	38.05	17.37	21.19	14.92	17.04	14.69	18.14	14.85	15.75	14.65
21	17:00:00	13.87	14.42	38.12	17.41	21.59	14.93	16.69	14.67	17.98	14.85	15.76	14.65
21	18:00:00	15.84	14.57	38.67	17.45	21.20	14.93	15.83	14.66	17.79	14.86	15.23	14.64
21	19:00:00	16.49	14.66	39.25	17.51	21.02	14.94	15.78	14.67	18.05	14.89	15.10	14.65
21	20:00:00	16.32	14.68	39.39	17.56	20.99	14.95	16.19	14.70	18.33	14.91	14.86	14.67
21	21:00:00	18.75	14.90	38.87	17.62	20.83	14.97	18.86	14.93	18.17	14.90	16.58	14.82
21	22:00:00	18.50	14.90	38.47	17.66	20.39	14.97	18.34	14.93	18.25	14.90	18.45	14.94
21	23:00:00	18.44	14.91	39.73	17.69	16.98	14.87	15.00	14.85	16.29	14.81	17.92	14.94

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
22	0:00:00	18.31	14.90	39.83	17.72	16.94	14.85	14.89	14.83	16.23	14.80	17.77	14.92
22	1:00:00	18.11	14.89	40.13	17.74	16.52	14.84	14.94	14.82	16.19	14.78	17.90	14.90
22	2:00:00	18.24	14.88	40.55	17.76	16.66	14.84	15.11	14.82	15.98	14.76	17.99	14.90
22	3:00:00	18.14	14.86	40.40	17.79	16.40	14.84	14.99	14.81	15.98	14.75	18.03	14.89
22	4:00:00	17.88	14.86	41.03	17.82	16.31	14.83	15.07	14.82	15.77	14.75	17.74	14.88
22	5:00:00	17.99	14.86	41.30	17.85	16.25	14.84	15.06	14.82	15.68	14.76	17.86	14.89
22	6:00:00	18.45	14.88	41.58	17.89	15.92	14.85	15.29	14.81	15.12	14.76	17.76	14.90
22	7:00:00	18.71	14.90	42.20	17.93	15.75	14.86	15.12	14.83	14.53	14.77	17.79	14.93
22	8:00:00	18.17	14.91	42.53	17.97	18.33	14.92	17.46	14.92	14.60	14.77	17.74	14.95
22	9:00:00	18.30	14.92	43.18	17.99	20.20	14.99	18.65	14.98	14.61	14.76	18.23	14.96
22	10:00:00	17.86	14.91	23.35	12.72	19.94	14.98	18.59	14.97	14.94	14.77	17.41	14.97
22	11:00:00	17.85	14.90	7.88	13.48	18.38	14.89	18.92	14.97	14.46	14.77	17.05	14.95
22	12:00:00	17.23	14.84	12.76	13.20	20.19	14.98	19.02	14.94	13.76	14.75	17.29	14.94
22	13:00:00	12.59	14.40	12.49	13.11	19.89	14.96	19.60	14.93	14.36	14.75	17.42	14.93
22	14:00:00	13.47	14.44	12.48	13.19	20.10	14.94	19.51	14.91	15.08	14.74	17.75	14.91
22	15:00:00	15.09	14.60	12.48	13.28	20.06	14.92	19.22	14.90	14.99	14.73	17.51	14.90
22	16:00:00	14.99	14.60	12.60	13.40	19.99	14.91	19.23	14.89	14.27	14.71	17.38	14.89
22	17:00:00	14.89	14.59	12.68	13.56	20.17	14.92	19.63	14.87	14.03	14.72	17.51	14.90
22	18:00:00	15.28	14.61	12.81	13.72	20.29	14.94	18.65	14.88	16.90	14.79	17.61	14.91
22	19:00:00	15.11	14.62	13.08	13.93	20.21	14.95	18.62	14.87	17.59	14.84	17.49	14.92
22	20:00:00	14.85	14.63	13.55	14.33	19.97	14.95	18.26	14.83	17.62	14.85	17.18	14.94
22	21:00:00	17.52	14.86	13.93	14.70	19.84	14.97	18.16	14.83	17.36	14.86	17.05	14.95
22	22:00:00	17.97	14.87	14.08	14.92	19.44	14.96	17.49	14.83	15.50	14.78	17.01	14.94
22	23:00:00	17.30	14.85	14.16	15.10	15.62	14.86	15.38	14.82	15.47	14.78	17.02	14.94
23	0:00:00	19.48	14.89	14.04	15.25	15.06	14.86	15.37	14.81	15.61	14.78	17.29	14.92
23	1:00:00	18.67	14.88	13.97	15.36	15.05	14.85	15.30	14.80	15.30	14.76	17.38	14.91
23	2:00:00	18.99	14.87	13.80	15.46	15.03	14.83	15.52	14.79	14.92	14.75	17.27	14.91
23	3:00:00	19.16	14.87	13.29	15.41	14.76	14.83	15.75	14.77	15.09	14.75	17.17	14.91
23	4:00:00	18.86	14.87	13.21	15.50	15.65	14.84	15.69	14.78	15.47	14.77	17.20	14.91
23	5:00:00	18.93	14.88	12.97	15.60	15.22	14.84	15.58	14.78	15.50	14.77	17.20	14.92
23	6:00:00	19.03	14.89	12.85	15.70	15.60	14.85	14.02	14.80	15.43	14.78	17.57	14.94
23	7:00:00	18.67	14.91	12.75	15.80	15.96	14.87	13.63	14.82	15.27	14.79	18.02	14.98
23	8:00:00	17.37	14.92	12.62	15.90	18.06	14.95	16.82	14.91	16.62	14.82	17.46	14.98
23	9:00:00	16.85	14.92	12.56	15.99	19.66	15.01	19.25	14.98	17.79	14.85	17.36	14.98
23	10:00:00	16.90	14.93	12.43	16.03	19.35	15.00	16.24	14.76	17.74	14.85	17.23	14.96
23	11:00:00	17.43	14.92	12.31	16.07	19.58	14.98	15.77	14.74	18.34	14.93	17.34	14.95
23	12:00:00	17.58	14.91	12.20	16.12	19.84	14.97	15.63	14.71	18.26	14.91	18.14	14.96
23	13:00:00	18.10	14.89	12.00	16.15	19.86	14.95	15.39	14.68	18.41	14.90	19.84	14.99
23	14:00:00	19.41	14.91	11.91	16.18	20.59	14.94	15.93	14.67	18.60	14.89	19.87	14.97
23	15:00:00	20.00	14.91	8.97	14.54	20.84	14.94	15.72	14.65	18.34	14.83	19.56	14.94
23	16:00:00	20.43	14.91	0.10	13.54	20.39	14.89	15.68	14.65	16.52	14.66	19.32	14.93
23	17:00:00	20.72	14.90	13.10	13.38	21.11	14.94	15.74	14.65	16.42	14.65	19.09	14.93
23	18:00:00	17.41	14.68	15.92	14.76	20.75	14.94	16.03	14.66	16.23	14.65	19.75	14.95
23	19:00:00	16.13	14.65	16.51	14.81	20.31	14.94	16.38	14.67	15.85	14.65	20.08	14.99
23	20:00:00	14.87	14.64	18.11	14.93	19.79	14.95	16.58	14.68	15.40	14.67	18.32	14.94
23	21:00:00	17.75	14.86	18.13	15.01	19.91	14.97	18.61	14.88	15.50	14.69	17.50	14.94
23	22:00:00	17.97	14.88	17.21	14.99	19.39	14.96	18.56	14.90	16.64	14.81	17.30	14.95
23	23:00:00	18.10	14.88	17.06	14.97	15.65	14.86	15.64	14.80	15.79	14.81	17.12	14.94
24	0:00:00	18.31	14.88	17.06	14.97	15.70	14.85	15.57	14.79	15.92	14.81	17.26	14.93
24	1:00:00	18.60	14.87	17.35	14.97	15.65	14.84	14.86	14.77	15.63	14.80	17.33	14.92
24	2:00:00	18.77	14.87	17.16	14.96	15.62	14.84	14.79	14.76	15.59	14.80	17.45	14.90
24	3:00:00	18.90	14.86	17.36	14.96	15.44	14.82	14.82	14.75	16.12	14.81	17.63	14.90
24	4:00:00	19.16	14.86	17.21	14.95	15.34	14.83	14.58	14.75	15.99	14.81	17.84	14.90
24	5:00:00	19.18	14.88	17.34	14.97	15.57	14.83	14.58	14.76	15.69	14.81	18.23	14.90
24	6:00:00	18.99	14.89	17.37	14.98	15.43	14.84	14.23	14.78	15.18	14.82	17.97	14.92
24	7:00:00	18.62	14.90	17.16	15.00	15.58	14.86	14.37	14.80	15.08	14.83	18.33	14.95
24	8:00:00	17.69	14.92	17.50	15.02	16.35	14.83	14.57	14.82	16.76	14.92	18.55	14.96
24	9:00:00	17.35	14.93	17.54	15.03	16.21	14.77	14.97	14.84	17.75	14.97	18.39	14.97
24	10:00:00	18.37	14.95	17.94	15.04	15.87	14.77	15.60	14.85	15.72	14.81	18.10	14.97
24	11:00:00	17.94	14.93	17.82	15.02	15.70	14.76	15.56	14.84	14.68	14.71	17.69	14.94
24	12:00:00	16.31	14.82	18.12	15.00	15.62	14.72	15.58	14.82	14.31	14.71	18.11	14.94
24	13:00:00	12.41	14.41	18.66	14.94	15.64	14.71	16.18	14.81	14.28	14.69	19.82	14.97
24	14:00:00	12.46	14.38	16.87	14.83	16.25	14.70	15.45	14.77	14.54	14.68	19.68	14.93
24	15:00:00	12.44	14.37	16.45	14.82	16.59	14.71	15.31	14.75	14.85	14.68	18.91	14.89
24	16:00:00	13.12	14.39	16.52	14.82	16.06	14.69	15.96	14.78	14.89	14.67	18.68	14.88
24	17:00:00	13.07	14.39	16.57	14.83	15.67	14.69	15.57	14.77	15.25	14.69	19.11	14.88
24	18:00:00	12.97	14.38	16.83	14.84	15.47	14.69	17.90	14.75	15.46	14.71	18.35	14.87
24	19:00:00	13.03	14.39	17.04	14.86	15.57	14.70	16.15	14.63	15.75	14.74	18.18	14.90
24	20:00:00	12.71	14.39	17.07	14.87	15.72	14.72	16.91	14.70	16.26	14.79	17.99	14.91
24	21:00:00	17.61	14.83	17.20	15.03	15.74	14.73	18.22	14.86	16.40	14.80	17.90	14.92
24	22:00:00	17.75	14.86	17.04	15.04	15.74	14.76	15.38	14.79	16.27	14.81	17.87	14.92
24	23:00:00	17.68	14.86	17.44	15.04	14.83	14.86	15.61	14.77	16.09	14.90	17.79	14.92

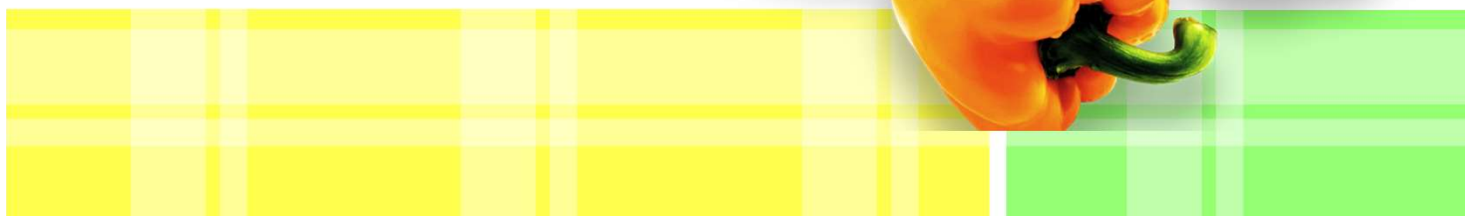
วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
25	0:00:00	17.64	14.85	17.61	15.02	14.78	14.84	15.42	14.76	16.30	14.90	18.82	14.93
25	1:00:00	17.97	14.85	17.79	15.00	15.13	14.82	15.41	14.75	16.23	14.90	18.71	14.92
25	2:00:00	18.07	14.85	17.71	14.98	15.15	14.81	15.31	14.74	16.19	14.91	19.09	14.92
25	3:00:00	18.19	14.85	17.58	14.97	15.18	14.80	15.54	14.74	16.17	14.90	19.18	14.91
25	4:00:00	18.39	14.86	17.55	14.97	15.10	14.80	15.29	14.74	16.47	14.92	19.39	14.92
25	5:00:00	18.34	14.87	17.29	14.98	14.96	14.82	15.44	14.75	16.17	14.92	19.31	14.92
25	6:00:00	18.44	14.88	17.57	15.00	14.84	14.84	15.19	14.76	15.88	14.89	18.88	14.92
25	7:00:00	17.78	14.90	17.32	15.02	14.80	14.86	14.60	14.78	15.40	14.89	18.29	14.92
25	8:00:00	17.29	14.91	17.43	15.04	16.04	14.86	16.08	14.78	16.76	14.95	18.20	14.95
25	9:00:00	17.06	14.92	17.85	15.06	15.31	14.78	15.61	14.69	17.37	14.96	18.01	14.95
25	10:00:00	17.01	14.91	18.33	15.06	15.03	14.77	15.61	14.70	15.22	14.76	17.85	14.94
25	11:00:00	15.76	14.77	18.48	15.04	14.67	14.76	15.51	14.69	15.08	14.74	17.76	14.93
25	12:00:00	16.43	14.83	18.61	15.02	14.84	14.75	15.51	14.66	15.31	14.73	17.91	14.92
25	13:00:00	12.37	14.40	19.06	14.96	14.99	14.73	15.77	14.65	15.41	14.73	17.82	14.89
25	14:00:00	12.64	14.38	17.75	14.87	14.71	14.71	15.42	14.61	15.61	14.73	17.78	14.87
25	15:00:00	12.63	14.37	17.77	14.86	14.73	14.69	15.35	14.59	15.40	14.70	18.04	14.86
25	16:00:00	12.69	14.37	18.20	14.87	14.68	14.69	12.93	14.57	15.05	14.69	17.82	14.86
25	17:00:00	12.96	14.38	18.16	14.86	14.66	14.69	16.52	14.70	15.02	14.69	18.19	14.88
25	18:00:00	13.01	14.38	18.64	14.86	15.59	14.71	18.63	14.82	15.18	14.70	18.09	14.88
25	19:00:00	12.63	14.38	18.53	14.87	15.80	14.74	18.96	14.85	15.27	14.71	18.19	14.89
25	20:00:00	12.51	14.39	18.41	14.88	18.00	14.93	18.71	14.85	14.75	14.71	18.01	14.91
25	21:00:00	17.60	14.84	18.20	14.99	18.10	14.98	18.54	14.87	14.22	14.72	17.79	14.92
25	22:00:00	17.33	14.82	17.82	15.00	17.98	14.98	17.96	14.86	14.54	14.75	17.75	14.93
25	23:00:00	17.15	14.81	17.80	15.01	14.58	14.88	15.28	14.77	14.90	14.85	17.80	14.93
26	0:00:00	17.21	14.81	17.65	14.99	14.46	14.87	15.43	14.76	14.82	14.83	17.88	14.92
26	1:00:00	17.33	14.80	17.59	14.98	14.41	14.85	15.45	14.75	15.10	14.82	18.38	14.92
26	2:00:00	17.38	14.80	17.65	14.96	14.40	14.84	15.43	14.74	15.47	14.82	18.47	14.91
26	3:00:00	17.21	14.79	17.59	14.96	14.44	14.84	15.42	14.73	15.59	14.83	17.75	14.90
26	4:00:00	17.33	14.80	17.66	14.97	14.06	14.85	15.49	14.74	15.66	14.84	17.94	14.90
26	5:00:00	17.67	14.81	17.87	14.98	14.28	14.86	15.47	14.75	15.25	14.83	17.94	14.91
26	6:00:00	17.80	14.81	18.14	15.00	14.19	14.87	15.31	14.76	14.96	14.84	17.99	14.92
26	7:00:00	17.80	14.83	18.10	15.03	14.28	14.89	15.20	14.77	15.13	14.85	18.42	14.95
26	8:00:00	17.83	14.85	18.09	15.04	16.46	14.97	16.33	14.77	15.87	14.83	18.28	14.96
26	9:00:00	18.00	14.86	18.04	15.05	18.29	15.04	16.10	14.70	15.19	14.74	18.17	14.97
26	10:00:00	18.14	14.88	17.99	15.05	16.81	14.96	16.08	14.70	14.87	14.73	18.08	14.97
26	11:00:00	18.16	14.89	17.99	15.03	14.48	14.80	15.99	14.70	14.78	14.72	18.14	14.96
26	12:00:00	17.20	14.82	18.23	15.01	14.27	14.76	15.88	14.67	15.41	14.72	18.06	14.93
26	13:00:00	13.01	14.41	17.98	14.93	14.17	14.74	15.67	14.63	15.15	14.69	17.66	14.93
26	14:00:00	13.04	14.38	16.73	14.85	14.16	14.71	15.91	14.62	15.16	14.66	18.03	14.93
26	15:00:00	12.97	14.37	16.71	14.83	11.77	14.67	15.68	14.60	15.00	14.65	17.96	14.90
26	16:00:00	12.97	14.37	16.50	14.83	13.38	14.69	16.23	14.62	15.09	14.65	18.03	14.90
26	17:00:00	13.00	14.37	16.70	14.85	12.97	14.68	16.23	14.63	15.06	14.64	18.12	14.92
26	18:00:00	13.00	14.37	16.98	14.85	14.54	14.71	15.67	14.63	15.03	14.64	17.89	14.93
26	19:00:00	12.89	14.38	17.46	14.86	15.26	14.74	15.73	14.65	14.91	14.65	16.02	14.78
26	20:00:00	12.63	14.39	17.44	14.87	15.10	14.74	16.08	14.66	14.58	14.67	14.82	14.71
26	21:00:00	17.81	14.84	17.11	14.99	14.85	14.74	18.26	14.87	14.72	14.68	14.70	14.72
26	22:00:00	17.82	14.87	17.10	15.00	14.97	14.76	18.05	14.88	14.85	14.71	14.68	14.72
26	23:00:00	17.88	14.87	16.70	14.99	13.68	14.87	15.36	14.77	14.79	14.81	15.01	14.72
27	0:00:00	18.12	14.87	17.01	14.98	13.59	14.86	15.37	14.76	15.08	14.82	15.50	14.71
27	1:00:00	17.98	14.86	17.82	14.98	13.49	14.86	15.38	14.74	15.43	14.81	15.56	14.69
27	2:00:00	18.30	14.85	17.69	14.97	13.58	14.85	15.34	14.73	15.16	14.79	15.30	14.69
27	3:00:00	18.39	14.84	17.87	14.96	13.81	14.85	15.38	14.73	14.99	14.79	15.18	14.69
27	4:00:00	18.28	14.84	17.26	14.95	13.89	14.86	15.27	14.73	15.10	14.79	15.18	14.69
27	5:00:00	18.49	14.84	17.15	14.95	13.81	14.86	15.34	14.74	15.22	14.80	15.16	14.70
27	6:00:00	18.35	14.86	17.32	14.96	13.81	14.88	15.26	14.75	15.19	14.81	15.11	14.71
27	7:00:00	18.28	14.87	17.46	14.98	13.74	14.89	15.24	14.77	15.09	14.81	14.62	14.73
27	8:00:00	17.88	14.89	17.52	15.01	13.58	14.90	16.19	14.75	16.61	14.88	14.77	14.75
27	9:00:00	17.68	14.91	16.93	15.01	13.93	14.90	15.47	14.68	17.35	14.93	14.57	14.75
27	10:00:00	17.37	14.90	16.52	15.00	14.30	14.91	15.88	14.70	14.88	14.71	14.61	14.69
27	11:00:00	17.42	14.90	16.27	14.97	14.76	14.90	16.01	14.69	14.83	14.70	15.45	14.73
27	12:00:00	16.60	14.82	15.83	14.96	14.50	14.86	15.16	14.63	15.20	14.70	14.80	14.73
27	13:00:00	12.36	14.40	15.37	14.92	14.62	14.84	16.16	14.63	15.25	14.67	15.18	14.72
27	14:00:00	12.35	14.38	15.15	14.90	14.73	14.82	14.49	14.45	15.39	14.66	15.47	14.72
27	15:00:00	12.51	14.38	14.96	14.89	14.47	14.80	13.31	14.35	15.36	14.63	15.58	14.71
27	16:00:00	12.79	14.38	14.02	14.86	13.67	14.76	13.45	14.36	16.72	14.63	15.49	14.71
27	17:00:00	12.82	14.38	13.80	14.86	13.61	14.77	13.32	14.37	17.53	14.78	15.81	14.71
27	18:00:00	12.61	14.38	17.72	14.96	14.28	14.70	15.47	14.55	18.03	14.85	15.94	14.71
27	19:00:00	12.53	14.38	17.51	15.00	13.23	14.67	15.82	14.61	18.02	14.88	15.61	14.71
27	20:00:00	12.34	14.39	16.92	14.99	13.60	14.69	15.69	14.61	17.91	14.89	15.43	14.71
27	21:00:00	17.29	14.84	12.81	14.93	13.43	14.72	15.57	14.62	17.90	14.90	15.36	14.71
27	22:00:00	17.62	14.87	12.79	14.93	12.41	14.82	17.08	14.78	17.59	14.90	16.75	14.86
27	23:00:00	17.66	14.87	12.55	14.92	12.27	14.82	15.48	14.74	15.06	14.81	14.37	14.84

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
28	0:00:00	17.60	14.87	12.21	14.92	12.55	14.82	15.10	14.72	15.29	14.80	18.01	14.93
28	1:00:00	17.43	14.86	12.34	14.92	12.61	14.80	14.73	14.71	15.34	14.78	17.92	14.92
28	2:00:00	17.28	14.84	12.14	14.90	12.61	14.80	14.73	14.70	15.24	14.78	17.99	14.92
28	3:00:00	17.49	14.84	12.10	14.90	12.60	14.80	14.62	14.70	15.12	14.77	17.59	14.91
28	4:00:00	17.77	14.84	12.20	14.90	12.84	14.80	14.68	14.71	15.20	14.76	17.48	14.93
28	5:00:00	17.59	14.85	11.80	14.90	13.23	14.82	14.55	14.72	15.18	14.76	16.37	14.82
28	6:00:00	17.91	14.86	11.45	14.90	13.27	14.83	14.54	14.72	15.15	14.78	15.02	14.72
28	7:00:00	17.56	14.87	11.17	14.92	13.16	14.84	14.37	14.74	14.97	14.79	15.05	14.73
28	8:00:00	17.37	14.90	11.47	14.93	14.05	14.81	15.38	14.73	16.42	14.86	14.86	14.72
28	9:00:00	17.45	14.92	13.42	14.97	13.80	14.77	14.64	14.66	17.07	14.91	12.74	14.57
28	10:00:00	17.55	14.91	14.19	14.95	13.79	14.78	14.41	14.65	15.21	14.73	12.94	14.57
28	11:00:00	17.74	14.92	12.36	14.91	13.25	14.74	14.32	14.64	14.56	14.66	13.51	14.57
28	12:00:00	17.52	14.89	13.30	14.90	13.26	14.73	14.33	14.61	14.77	14.66	13.75	14.55
28	13:00:00	12.77	14.42	15.07	14.77	13.35	14.70	14.43	14.59	14.83	14.65	16.70	14.78
28	14:00:00	12.52	14.38	14.94	14.74	13.55	14.68	14.69	14.56	14.87	14.63	18.55	14.91
28	15:00:00	13.01	14.39	15.63	14.78	14.74	14.69	14.97	14.56	14.73	14.61	18.18	14.83
28	16:00:00	12.65	14.37	15.66	14.74	14.60	14.68	14.74	14.55	14.72	14.59	16.29	14.68
28	17:00:00	12.35	14.36	15.89	14.74	14.57	14.67	14.81	14.58	14.83	14.59	16.13	14.68
28	18:00:00	12.47	14.37	15.85	14.74	14.39	14.68	14.84	14.60	14.73	14.60	15.75	14.68
28	19:00:00	12.47	14.38	15.97	14.75	14.14	14.70	15.33	14.64	16.63	14.71	15.41	14.68
28	20:00:00	12.68	14.41	16.11	14.76	14.03	14.71	16.04	14.67	17.84	14.87	15.25	14.69
28	21:00:00	17.49	14.86	14.96	14.92	14.05	14.72	19.54	14.89	18.64	14.91	15.15	14.68
28	22:00:00	17.70	14.87	14.97	14.94	15.17	14.82	19.58	14.93	17.82	14.90	15.18	14.67
28	23:00:00	17.73	14.87	14.73	14.93	13.66	14.86	18.56	14.90	14.95	14.82	15.06	14.68
29	0:00:00	17.69	14.86			13.49	14.86	20.60	14.98	14.65	14.81	14.91	14.67
29	1:00:00	17.69	14.85			13.25	14.85	20.83	14.98	14.94	14.80	15.03	14.66
29	2:00:00	17.73	14.84			13.58	14.85	20.35	14.93	15.04	14.80	15.27	14.67
29	3:00:00	18.10	14.85			13.80	14.85	19.58	14.91	14.87	14.79	15.27	14.65
29	4:00:00	18.31	14.85			13.61	14.86	19.07	14.90	15.19	14.79	15.22	14.65
29	5:00:00	18.16	14.85			13.67	14.86	18.78	14.91	14.90	14.79	15.04	14.66
29	6:00:00	18.16	14.87			13.29	14.87	19.40	14.92	14.88	14.79	14.90	14.67
29	7:00:00	17.99	14.88			13.75	14.89	19.48	14.93	14.83	14.79	15.16	14.68
29	8:00:00	17.89	14.88			14.56	14.85	17.90	14.80	15.24	14.81	15.05	14.70
29	9:00:00	17.60	14.89			14.33	14.77	16.86	14.72	15.48	14.83	15.18	14.70
29	10:00:00	17.95	14.89			13.83	14.76	13.61	14.52	15.68	14.83	15.18	14.70
29	11:00:00	18.04	14.89			13.84	14.76	13.07	14.49	15.09	14.80	15.18	14.68
29	12:00:00	17.58	14.85			15.20	14.75	13.07	14.47	15.35	14.79	15.69	14.69
29	13:00:00	12.81	14.39			15.99	14.74	12.97	14.45	15.75	14.79	16.14	14.66
29	14:00:00	13.10	14.37			16.00	14.71	12.76	14.42	15.94	14.78	16.44	14.65
29	15:00:00	12.70	14.34			16.38	14.72	12.49	14.40	15.90	14.76	16.53	14.67
29	16:00:00	13.33	14.35			18.40	14.90	12.54	14.39	15.55	14.75	18.86	14.81
29	17:00:00	14.12	14.37			18.82	14.94	12.26	14.39	15.38	14.76	19.24	14.83
29	18:00:00	13.52	14.37			18.88	14.94	12.35	14.40	17.66	14.85	19.39	14.86
29	19:00:00	12.73	14.35			18.57	14.96	12.60	14.43	17.63	14.88	19.07	14.87
29	20:00:00	12.69	14.37			18.10	14.97	12.24	14.44	17.74	14.90	18.83	14.87
29	21:00:00	17.72	14.82			18.03	14.97	11.86	14.45	16.76	14.87	18.31	14.86
29	22:00:00	17.74	14.85			17.87	14.98	12.03	14.46	14.04	14.78	17.94	14.87
29	23:00:00	17.63	14.84			14.17	14.90	14.34	14.59	14.83	14.79	17.79	14.87
30	0:00:00	17.48	14.84			13.97	14.88	15.50	14.67	15.67	14.81	17.69	14.85
30	1:00:00	17.61	14.83			13.96	14.87	15.47	14.66	15.85	14.80	17.40	14.84
30	2:00:00	17.61	14.83			13.85	14.86	15.15	14.64	15.96	14.79	17.70	14.84
30	3:00:00	17.56	14.82			13.67	14.85	15.29	14.64	15.97	14.79	17.67	14.84
30	4:00:00	17.53	14.82			13.27	14.85	15.18	14.63	15.93	14.79	15.89	14.76
30	5:00:00	17.34	14.82			13.21	14.86	15.09	14.64	16.03	14.78	15.69	14.77
30	6:00:00	17.21	14.83			13.31	14.87	15.12	14.64	16.11	14.80	14.03	14.80
30	7:00:00	16.69	14.85			13.24	14.89	14.95	14.66	15.91	14.81	12.98	14.82
30	8:00:00	16.49	14.86			14.48	14.86	15.06	14.69	17.36	14.89	15.68	14.83
30	9:00:00	16.45	14.90			14.34	14.78	12.94	14.55	17.72	14.94	18.31	14.87
30	10:00:00	17.01	14.91			14.52	14.79	11.83	14.47	17.77	14.93	18.71	14.89
30	11:00:00	16.86	14.89			14.43	14.78	11.88	14.47	15.25	14.71	19.03	14.90
30	12:00:00	18.12	14.91			14.24	14.75	11.58	14.45	15.01	14.68	18.52	14.82
30	13:00:00	18.63	14.89			14.86	14.73	11.61	14.42	15.08	14.68	18.96	14.83
30	14:00:00	19.30	14.87			15.34	14.71	11.86	14.39	15.46	14.66	16.49	14.66
30	15:00:00	20.06	14.87			15.39	14.69	12.42	14.37	15.44	14.62	15.87	14.61
30	16:00:00	19.21	14.84			15.64	14.69	12.12	14.35	15.49	14.61	15.75	14.60
30	17:00:00	17.54	14.80			15.49	14.70	11.87	14.35	15.99	14.63	18.63	14.81
30	18:00:00	13.48	14.40			15.29	14.70	12.02	14.38	16.16	14.65	17.46	14.72
30	19:00:00	13.55	14.38			14.97	14.71	12.01	14.38	16.03	14.66	15.27	14.61
30	20:00:00	14.59	14.49			14.77	14.72	12.05	14.39	16.82	14.77	14.88	14.63
30	21:00:00	18.36	14.85			15.15	14.74	14.68	14.62	18.01	14.91	15.24	14.65
30	22:00:00	17.88	14.86			16.26	14.83	17.53	14.87	17.47	14.90	16.73	14.77
30	23:00:00	17.84	14.86			14.38	14.87	17.85	14.88	14.93	14.78	15.73	14.80

วันที่	เวลา	B-4017 'S STACK											
		มกราคม		กุมภาพันธ์		มีนาคม		เมษายน		พฤษภาคม		มิถุนายน	
		NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)	NOx (ppm)	O ₂ (%)
31	0:00:00	18.25	14.86			14.30	14.86			14.95	14.76		
31	1:00:00	17.94	14.85			14.08	14.86			15.34	14.77		
31	2:00:00	18.10	14.84			13.80	14.85			15.41	14.77		
31	3:00:00	18.00	14.84			13.94	14.85			15.45	14.76		
31	4:00:00	17.69	14.83			13.90	14.85			15.28	14.76		
31	5:00:00	17.75	14.83			13.69	14.86			15.24	14.76		
31	6:00:00	17.85	14.84			13.75	14.88			15.00	14.77		
31	7:00:00	17.92	14.86			13.42	14.89			15.31	14.79		
31	8:00:00	17.86	14.88			14.32	14.84			16.58	14.87		
31	9:00:00	17.73	14.89			13.92	14.76			17.62	14.93		
31	10:00:00	17.60	14.91			13.75	14.76			15.43	14.73		
31	11:00:00	17.29	14.89			13.56	14.73			15.13	14.70		
31	12:00:00	17.22	14.87			13.86	14.71			15.29	14.69		
31	13:00:00	12.58	14.40			13.67	14.69			15.42	14.66		
31	14:00:00	14.23	14.53			13.95	14.67			15.24	14.63		
31	15:00:00	14.89	14.59			14.74	14.67			15.26	14.62		
31	16:00:00	15.20	14.59			15.52	14.69			15.32	14.61		
31	17:00:00	15.34	14.60			15.62	14.70			15.21	14.61		
31	18:00:00	15.45	14.60			15.79	14.72			15.18	14.62		
31	19:00:00	15.82	14.62			16.20	14.74			15.11	14.64		
31	20:00:00	15.73	14.62			16.25	14.76			15.63	14.70		
31	21:00:00	18.12	14.85			16.27	14.76			17.67	14.90		
31	22:00:00	17.93	14.86			17.22	14.87			17.08	14.89		
31	23:00:00	17.89	14.86			14.77	14.86			14.72	14.80		

ภาคผนวก ก3

ผลการติดตามตรวจสอบคุณภาพอากาศ
ในบรรยากาศ



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : บ้านทุ่งเทครัว
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SIRAPAT JONGPHADUNGKIET
ANALYZED BY : MISS JETJARIN TUMSA-AT
RECEIVED DATE : MAY 13, 2022
ANALYTICAL DATE : MAY 13-20, 2022
REPORT NO. : 2022-U038151
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI977-0004 - T22AI977-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			บ้านทุ่งเทครัว		
			* T22AI977-0004	** T22AI977-0005	*** T22AI977-0006
PARTICULATE MATTER ($\leq 10 \mu\text{m}$)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.061	0.039	0.029
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK

PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM10 : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX J.
* : SAMPLING FROM 08:00 HOUR ON MAY 6, 2022 TO 08:00 HOUR ON MAY 7, 2022.
** : SAMPLING FROM 08:00 HOUR ON MAY 7, 2022 TO 08:00 HOUR ON MAY 8, 2022.
*** : SAMPLING FROM 08:00 HOUR ON MAY 8, 2022 TO 08:00 HOUR ON MAY 9, 2022.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : น้ำในบ่อ
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SIRAPAT JONGPHADUNGKIET
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : MAY 13, 2022
ANALYTICAL DATE : MAY 13-20, 2022
REPORT NO. : 2022-U038152
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI977-0007 - T22AI977-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			น้ำในบ่อ		
			* T22AI977-0007	** T22AI977-0008	*** T22AI977-0009
PARTICULATE MATTER ($\leq 10 \mu\text{m}$)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.042	0.022	0.021
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK

PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM10 : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX J.
* : SAMPLING FROM 09:30 HOUR ON MAY 6, 2022 TO 09:30 HOUR ON MAY 7, 2022.
** : SAMPLING FROM 09:30 HOUR ON MAY 7, 2022 TO 09:30 HOUR ON MAY 8, 2022.
*** : SAMPLING FROM 09:30 HOUR ON MAY 8, 2022 TO 09:30 HOUR ON MAY 9, 2022.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : บ้านอ่าวอุดม
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SIRAPAT JONGPHADUNGKIET
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : MAY 13, 2022
ANALYTICAL DATE : MAY 13-20, 2022
REPORT NO. : 2022-U038153
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI977-0010 - T22AI977-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			บ้านอ่าวอุดม		
			* T22AI977-0010	** T22AI977-0011	*** T22AI977-0012
PARTICULATE MATTER ($\leq 10 \mu\text{m}$)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.030	0.015	0.025
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK

PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM10 : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX J.
* : SAMPLING FROM 08:30 HOUR ON MAY 6, 2022 TO 08:30 HOUR ON MAY 7, 2022.
** : SAMPLING FROM 08:30 HOUR ON MAY 7, 2022 TO 08:30 HOUR ON MAY 8, 2022.
*** : SAMPLING FROM 08:30 HOUR ON MAY 8, 2022 TO 08:30 HOUR ON MAY 9, 2022.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : มหาวิทยาลัยเกษตรศาสตร์ วิทยาเขตศรีราชา
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SIRAPAT JONGPHADUNGKIET
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : MAY 13, 2022
ANALYTICAL DATE : MAY 13-20, 2022
REPORT NO. : 2022-U038154
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI977-0013 - T22AI977-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			มหาวิทยาลัยเกษตรศาสตร์ วิทยาเขตศรีราชา		
			* T22AI977-0013	** T22AI977-0014	*** T22AI977-0015
PARTICULATE MATTER ($\leq 10 \mu\text{m}$)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.035	0.011	0.015
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK

PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM10 : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX J.
* : SAMPLING FROM 10:30 HOUR ON MAY 6, 2022 TO 10:30 HOUR ON MAY 7, 2022.
** : SAMPLING FROM 10:30 HOUR ON MAY 7, 2022 TO 10:30 HOUR ON MAY 8, 2022.
*** : SAMPLING FROM 10:30 HOUR ON MAY 8, 2022 TO 10:30 HOUR ON MAY 9, 2022.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (Branch Office No.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING PLACE : บ้านทุ่งเทครัว
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : MAY 6-9, 2022
MEASURING DATE : MAY 6-9, 2022 **ANALYTICAL DATE** : MAY 6-9, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U041192
MEASURING METHOD : CHEMILUMINESCENCE **WORK NO.** : 2021-003222
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AI977-0004 - T22AI977-0006

TIME *	RESULT (ppm)		
	NITROGEN DIOXIDE		
	บ้านทุ่งเทครัว		
	MAY 6-7, 2022 T22AI977-0004	MAY 7-8, 2022 T22AI977-0005	MAY 8-9, 2022 T22AI977-0006
08:00-09:00 HOUR	0.0291	0.0287	0.0288
09:00-10:00 HOUR	0.0289	0.0290	0.0292
10:00-11:00 HOUR	0.0294	0.0284	0.0269
11:00-12:00 HOUR	0.0273	0.0274	0.0273
12:00-13:00 HOUR	0.0268	0.0282	0.0292
13:00-14:00 HOUR	0.0279	0.0281	0.0289
14:00-15:00 HOUR	0.0278	0.0271	0.0288
15:00-16:00 HOUR	0.0279	0.0271	0.0283
16:00-17:00 HOUR	0.0281	0.0281	0.0276
17:00-18:00 HOUR	0.0288	0.0284	0.0272
18:00-19:00 HOUR	0.0292	0.0271	0.0279
19:00-20:00 HOUR	0.0282	0.0264	0.0257
20:00-21:00 HOUR	0.0265	0.0259	0.0250
21:00-22:00 HOUR	0.0262	0.0241	0.0232
22:00-23:00 HOUR	0.0241	0.0233	0.0243
23:00-00:00 HOUR	0.0223	0.0247	0.0249
00:00-01:00 HOUR	0.0225	0.0244	0.0224
01:00-02:00 HOUR	0.0206	0.0238	0.0232
02:00-03:00 HOUR	0.0222	0.0211	0.0213
03:00-04:00 HOUR	0.0249	0.0241	0.0241
04:00-05:00 HOUR	0.0244	0.0242	0.0243
05:00-06:00 HOUR	0.0259	0.0257	0.0270
06:00-07:00 HOUR	0.0266	0.0264	0.0296
07:00-08:00 HOUR	0.0296	0.0282	0.0303



(MR SILA BANJONGJAIRUK)
LABORATORY SUPERVISOR

JUNE 3, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (Branch Office No.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING PLACE : กรุงเทพมหานคร
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : MAY 6-9, 2022
MEASURING DATE : MAY 6-9, 2022 **ANALYTICAL DATE** : MAY 6-9, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U041193
MEASURING METHOD : CHEMILUMINESCENCE **WORK NO.** : 2021-003222
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AI977-0007 - T22AI977-0009

TIME *	RESULT (ppm)		
	NITROGEN DIOXIDE		
	ไนโตรเจนไดออกไซด์		
	MAY 6-7, 2022 T22AI977-0007	MAY 7-8, 2022 T22AI977-0008	MAY 8-9, 2022 T22AI977-0009
08:00-09:00 HOUR	0.0230	0.0279	0.0252
09:00-10:00 HOUR	0.0234	0.0288	0.0228
10:00-11:00 HOUR	0.0238	0.0282	0.0247
11:00-12:00 HOUR	0.0233	0.0291	0.0262
12:00-13:00 HOUR	0.0229	0.0275	0.0296
13:00-14:00 HOUR	0.0212	0.0270	0.0282
14:00-15:00 HOUR	0.0212	0.0250	0.0283
15:00-16:00 HOUR	0.0211	0.0259	0.0279
16:00-17:00 HOUR	0.0221	0.0273	0.0319
17:00-18:00 HOUR	0.0239	0.0279	0.0327
18:00-19:00 HOUR	0.0237	0.0299	0.0328
19:00-20:00 HOUR	0.0255	0.0289	0.0327
20:00-21:00 HOUR	0.0274	0.0307	0.0332
21:00-22:00 HOUR	0.0306	0.0297	0.0336
22:00-23:00 HOUR	0.0320	0.0300	0.0311
23:00-00:00 HOUR	0.0325	0.0281	0.0329
00:00-01:00 HOUR	0.0342	0.0297	0.0334
01:00-02:00 HOUR	0.0350	0.0293	0.0339
02:00-03:00 HOUR	0.0358	0.0289	0.0332
03:00-04:00 HOUR	0.0340	0.0276	0.0343
04:00-05:00 HOUR	0.0316	0.0269	0.0373
05:00-06:00 HOUR	0.0287	0.0287	0.0378
06:00-07:00 HOUR	0.0270	0.0283	0.0382
07:00-08:00 HOUR	0.0274	0.0274	0.0367

(Signature)

(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

JUNE 3, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (Branch Office No.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING PLACE : บ้านฉางอุตสาหกรรม
MEASURING TYPE : AMBIENT (AIR)
MEASURING DATE : MAY 6-9, 2022
MEASURING TIME : *
MEASURING METHOD : CHEMILUMINESCENCE
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET

RECEIVED DATE : MAY 6-9, 2022
ANALYTICAL DATE : MAY 6-9, 2022
REPORT NO. : 2022-U041194
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI977-0010 - T22AI977-0012

TIME *	RESULT (ppm)		
	NITROGEN DIOXIDE		
	บ้านฉางอุตสาหกรรม		
	MAY 6-7, 2022 T22AI977-0010	MAY 7-8, 2022 T22AI977-0011	MAY 8-9, 2022 T22AI977-0012
08:00-09:00 HOUR	0.0159	0.0211	0.0210
09:00-10:00 HOUR	0.0153	0.0184	0.0214
10:00-11:00 HOUR	0.0160	0.0163	0.0211
11:00-12:00 HOUR	0.0165	0.0150	0.0210
12:00-13:00 HOUR	0.0165	0.0175	0.0178
13:00-14:00 HOUR	0.0158	0.0188	0.0144
14:00-15:00 HOUR	0.0158	0.0185	0.0105
15:00-16:00 HOUR	0.0162	0.0185	0.0109
16:00-17:00 HOUR	0.0171	0.0172	0.0129
17:00-18:00 HOUR	0.0176	0.0173	0.0148
18:00-19:00 HOUR	0.0179	0.0168	0.0167
19:00-20:00 HOUR	0.0180	0.0161	0.0166
20:00-21:00 HOUR	0.0173	0.0169	0.0163
21:00-22:00 HOUR	0.0175	0.0159	0.0161
22:00-23:00 HOUR	0.0170	0.0167	0.0169
23:00-00:00 HOUR	0.0174	0.0158	0.0170
00:00-01:00 HOUR	0.0179	0.0150	0.0172
01:00-02:00 HOUR	0.0190	0.0155	0.0183
02:00-03:00 HOUR	0.0188	0.0159	0.0223
03:00-04:00 HOUR	0.0183	0.0181	0.0247
04:00-05:00 HOUR	0.0182	0.0190	0.0266
05:00-06:00 HOUR	0.0181	0.0208	0.0281
06:00-07:00 HOUR	0.0187	0.0207	0.0318
07:00-08:00 HOUR	0.0197	0.0211	0.0338



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

JUNE 3, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (Branch Office No.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING PLACE : สถานีวิจัยเกษตรครีราชา
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : MAY 6-9, 2022
MEASURING DATE : MAY 6-9, 2022 **ANALYTICAL DATE** : MAY 6-9, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U041195
MEASURING METHOD : CHEMILUMINESCENCE **WORK NO.** : 2021-003222
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AI977-0013 - T22AI977-0015

TIME *	RESULT (ppm)		
	NITROGEN DIOXIDE		
	สถานีวิจัยเกษตรครีราชา		
	MAY 6-7, 2022 T22AI977-0013	MAY 7-8, 2022 T22AI977-0014	MAY 8-9, 2022 T22AI977-0015
08:00-09:00 HOUR	0.0216	0.0277	0.0252
09:00-10:00 HOUR	0.0234	0.0250	0.0247
10:00-11:00 HOUR	0.0236	0.0224	0.0235
11:00-12:00 HOUR	0.0263	0.0198	0.0239
12:00-13:00 HOUR	0.0264	0.0196	0.0250
13:00-14:00 HOUR	0.0268	0.0209	0.0249
14:00-15:00 HOUR	0.0250	0.0212	0.0245
15:00-16:00 HOUR	0.0258	0.0212	0.0240
16:00-17:00 HOUR	0.0256	0.0241	0.0241
17:00-18:00 HOUR	0.0268	0.0253	0.0241
18:00-19:00 HOUR	0.0263	0.0274	0.0240
19:00-20:00 HOUR	0.0284	0.0264	0.0248
20:00-21:00 HOUR	0.0254	0.0262	0.0265
21:00-22:00 HOUR	0.0260	0.0246	0.0258
22:00-23:00 HOUR	0.0236	0.0236	0.0252
23:00-00:00 HOUR	0.0249	0.0221	0.0232
00:00-01:00 HOUR	0.0218	0.0220	0.0216
01:00-02:00 HOUR	0.0211	0.0199	0.0209
02:00-03:00 HOUR	0.0213	0.0198	0.0211
03:00-04:00 HOUR	0.0220	0.0194	0.0217
04:00-05:00 HOUR	0.0240	0.0206	0.0207
05:00-06:00 HOUR	0.0243	0.0217	0.0200
06:00-07:00 HOUR	0.0277	0.0230	0.0213
07:00-08:00 HOUR	0.0268	0.0249	0.0216



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

JUNE 3, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING PLACE : โรงกลั่นน้ำมันไทยออยล์
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : MAY 6-9, 2022
MEASURING DATE : MAY 6-9, 2022 **ANALYTICAL DATE** : MAY 6-9, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U041191
MEASURING METHOD : WIND SPEED & WIND DIRECTION EQUIPMENT **WORK NO.** : 2021-003222
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AI977-0001 - T22AI977-0003

TIME *	RESULT (m/s)					
	โรงกลั่นน้ำมันไทยออยล์					
	MAY 6-7, 2022 T22AI977-0001		MAY 7-8, 2022 T22AI977-0002		MAY 8-9, 2022 T22AI977-0003	
	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION
08:00-09:00 HOUR	1.8	SE	1.4	NE	3.4	ESE
09:00-10:00 HOUR	1.1	ESE	2.7	NNE	0.5	SSW
10:00-11:00 HOUR	3.0	SE	2.1	NNE	1.4	S
11:00-12:00 HOUR	0.4	ESE	3.4	NE	2.5	S
12:00-13:00 HOUR	1.8	SSE	2.1	N	2.9	S
13:00-14:00 HOUR	0.6	S	3.3	N	1.3	S
14:00-15:00 HOUR	1.3	E	2.9	E	2.4	ESE
15:00-16:00 HOUR	2.6	E	1.6	SE	2.2	ESE
16:00-17:00 HOUR	1.8	SE	2.8	SE	3.3	SSE
17:00-18:00 HOUR	2.4	SE	0.5	SSE	2.2	SE
18:00-19:00 HOUR	3.3	ESE	1.5	SSE	2.3	SSW
19:00-20:00 HOUR	1.4	SSE	2.3	SE	1.4	SSW
20:00-21:00 HOUR	0.7	SSW	3.4	ESE	3.4	SW
21:00-22:00 HOUR	3.1	SSE	1.5	ESE	2.1	SSW
22:00-23:00 HOUR	2.1	SSE	1.6	SSE	3.1	SW
23:00-00:00 HOUR	1.0	ESE	3.0	ESE	1.4	WSW
00:00-01:00 HOUR	3.2	SE	1.0	SSE	1.4	WSW
01:00-02:00 HOUR	1.7	SSW	2.6	SSW	0.6	WSW
02:00-03:00 HOUR	0.7	ESE	0.7	SSW	1.8	WSW
03:00-04:00 HOUR	0.7	ESE	2.7	S	1.9	WNW
04:00-05:00 HOUR	1.2	E	2.6	SSE	2.1	WSW
05:00-06:00 HOUR	1.3	ENE	2.9	SSE	0.5	WNW
06:00-07:00 HOUR	0.6	ENE	1.3	S	2.9	SSW
07:00-08:00 HOUR	3.2	ENE	2.8	ESE	2.8	WNW



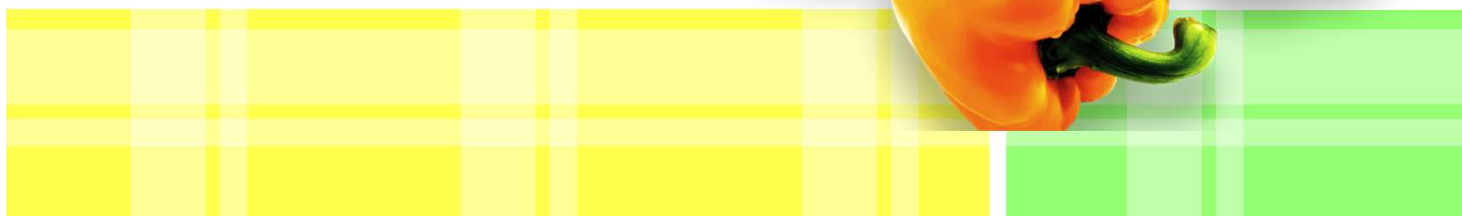
(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

JUNE 3, 2022



ภาคผนวก ก4

ผลการติดตามตรวจสอบระดับเสี่ยง



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING SOURCE : รั้วโครงการ TP
MEASURING TYPE : AMBIENT (NOISE) **RECEIVED DATE** : MAY 6-7, 2022
MEASURING DATE : MAY 6-7, 2022 **ANALYTICAL DATE** : MAY 6-7, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U041189
MEASURING METHOD : INTEGRATED SOUND LEVEL METER **WORK NO.** : 2021-003222
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AI967-0001

TIME*	RESULT dB(A)		
	รั้วโครงการ TP		
	MAY 6-7, 2022		
	T22AI967-0001		
	L _{Aeq} 1 hour	L _{Amax} 1 hour	L _{A90} 1 hour
07:00-08:00 HOUR	63.3	76.4	61.2
08:00-09:00 HOUR	67.3	82.1	61.8
09:00-10:00 HOUR	64.4	73.0	62.1
10:00-11:00 HOUR	63.5	70.8	61.3
11:00-12:00 HOUR	63.6	77.9	60.9
12:00-13:00 HOUR	64.6	75.7	61.1
13:00-14:00 HOUR	63.7	79.1	61.3
14:00-15:00 HOUR	64.1	73.3	61.5
15:00-16:00 HOUR	64.7	78.8	61.7
16:00-17:00 HOUR	64.8	79.0	61.8
17:00-18:00 HOUR	64.0	79.6	61.3
18:00-19:00 HOUR	62.9	72.7	61.4
19:00-20:00 HOUR	63.3	76.3	61.5
20:00-21:00 HOUR	64.3	80.6	61.3
21:00-22:00 HOUR	63.6	73.0	61.2
22:00-23:00 HOUR	68.7	86.2	62.3
23:00-00:00 HOUR	64.5	78.0	62.1
00:00-01:00 HOUR	63.9	73.8	61.4
01:00-02:00 HOUR	63.8	75.1	61.7
02:00-03:00 HOUR	63.6	81.7	61.3
03:00-04:00 HOUR	63.9	75.1	61.3
04:00-05:00 HOUR	62.5	68.5	60.8
05:00-06:00 HOUR	64.0	78.9	61.0
06:00-07:00 HOUR	63.1	81.3	60.9
L _{Aeq} 24 hours	64.4		
L _{Adn}	71.0		



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

JUNE 3, 2022

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- REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
ADDRESS : 42/4 MOO 1 THUNG SUKHLA SI RACHA CHON BURI 20230
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING SOURCE : บ้านทุ่งเทครัว
MEASURING TYPE : AMBIENT (NOISE)
MEASURING DATE : MAY 6-7, 2022
MEASURING TIME : *
MEASURING METHOD : INTEGRATED SOUND LEVEL METER
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET

RECEIVED DATE : MAY 6-7, 2022
ANALYTICAL DATE : MAY 6-7, 2022
REPORT NO. : 2022-U041190
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI967-0002

TIME*	RESULT dB(A)		
	บ้านทุ่งเทครัว		
	MAY 6-7, 2022		
	T22AI967-0002		
	L _{Aeq} 1 hour	L _{Amax} 1 hour	L _{A90} 1 hour
07:00-08:00 HOUR	60.2	74.5	53.7
08:00-09:00 HOUR	60.1	76.4	55.2
09:00-10:00 HOUR	56.4	78.0	52.4
10:00-11:00 HOUR	53.3	70.6	51.3
11:00-12:00 HOUR	54.2	68.8	51.6
12:00-13:00 HOUR	61.6	79.7	54.4
13:00-14:00 HOUR	58.2	72.7	53.4
14:00-15:00 HOUR	57.3	76.8	53.0
15:00-16:00 HOUR	57.8	71.2	53.3
16:00-17:00 HOUR	58.0	79.6	53.6
17:00-18:00 HOUR	60.0	77.4	55.1
18:00-19:00 HOUR	55.5	69.0	53.0
19:00-20:00 HOUR	58.7	79.5	54.1
20:00-21:00 HOUR	59.1	75.3	53.7
21:00-22:00 HOUR	59.6	74.5	52.6
22:00-23:00 HOUR	58.3	70.8	52.2
23:00-00:00 HOUR	56.0	75.4	51.4
00:00-01:00 HOUR	52.0	62.5	50.6
01:00-02:00 HOUR	52.2	67.0	50.7
02:00-03:00 HOUR	51.8	73.7	50.4
03:00-04:00 HOUR	53.2	76.4	50.4
04:00-05:00 HOUR	51.9	72.0	50.7
05:00-06:00 HOUR	52.7	74.6	50.7
06:00-07:00 HOUR	51.5	66.0	50.6
L _{Aeq} 24 hours		57.3	
L _{Adn}		61.4	

Sila Banjongjairuk

(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

JUNE 3, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED

ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, 11TH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK
BANGKOK 10900

CONTACT INFORMATION : TEL : 08 1556 0557 e-mail : kitiya@thaioilgroup.com

MEASURING PLACE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4) (42/4 MOO 1 SUKHUMVIT ROAD KM. 124 THUNG
SUKHLA SI RACHA CHON BURI 20230)

MEASURING TYPE : WORKPLACE (NOISE) **RECEIVED DATE** : MARCH 8, 2022

MEASURING DATE : MARCH 8, 2022 **ANALYTICAL DATE** : MARCH 8, 2022

MEASURING TIME : 08:15-16:15 HOUR **REPORT NO.** : 2022-U020718

MEASURING EQUIPMENT : INTEGRATED SOUND LEVEL METER **WORK NO.** : 2021-003222

MEASURED BY : MR WORAWUT JITMAIKASEM **ANALYSIS NO.** : T22AE823-0001

TIME *	RESULT	
	TP AREA	
	T22AE823-0001	
	L _{Aeq} 1 hour	L _{Amax}
08:15-09:15 HOUR	83.6	86.4
09:15-10:15 HOUR	83.5	84.7
10:15-11:15 HOUR	83.4	84.7
11:15-12:15 HOUR	83.2	84.8
12:15-13:15 HOUR	83.2	84.2
13:15-14:15 HOUR	83.2	84.4
14:15-15:15 HOUR	83.2	84.2
15:15-16:15 HOUR	83.3	84.2
L _{Aeq} 8 hours	83.3	
UNIT	dB(A)	

Nattawat

(MR NATTAWAT DANGSAWAT)

LABORATORY SUPERVISOR

MARCH 24, 2022

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- REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.

ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED

ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, 11TH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK
BANGKOK 10900

CONTACT INFORMATION : TEL : 08 1556 0557 e-mail : kitiya@thaioilgroup.com

MEASURING PLACE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4) (42/4 MOO 1 SUKHUMVIT ROAD KM. 124 THUNG
SUKHLA SI RACHA CHON BURI 20230)

MEASURING TYPE : WORKPLACE (NOISE) **RECEIVED DATE** : MAY 10, 2022

MEASURING DATE : MAY 10, 2022 **ANALYTICAL DATE** : MAY 10, 2022

MEASURING TIME : 08:03-16:03 HOUR **REPORT NO.** : 2022-U038975

MEASURING EQUIPMENT : INTEGRATED SOUND LEVEL METER **WORK NO.** : 2021-003222

MEASURED BY : MISS SUMITTRA NAMPRADIDKUL **ANALYSIS NO.** : T22AJ123-0001

TIME *	RESULT	
	G-5019	
	T22AJ123-0001	
	L _{Aeq} 1 hour	L _{Amax}
08:03-09:03 HOUR	84.1	87.1
09:03-10:03 HOUR	84.0	85.4
10:03-11:03 HOUR	83.9	85.3
11:03-12:03 HOUR	84.1	85.3
12:03-13:03 HOUR	84.1	85.3
13:03-14:03 HOUR	83.8	85.2
14:03-15:03 HOUR	84.1	85.5
15:03-16:03 HOUR	84.2	85.6
L _{Aeq} 8 hours	84.0	
UNIT	dB(A)	

Nattawat

(MR NATTAWAT DANGSAWAT)

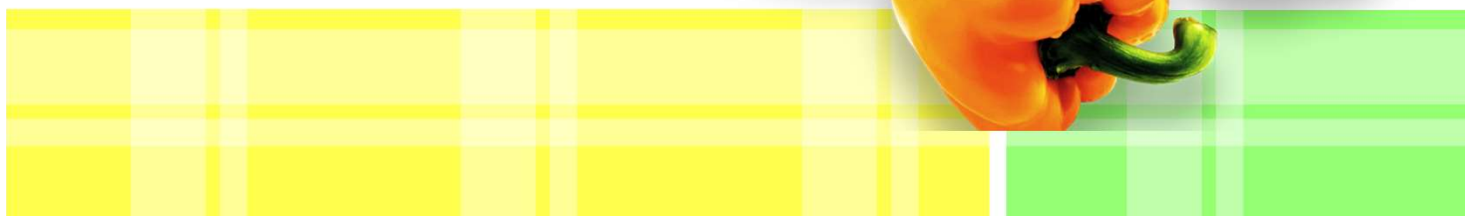
LABORATORY SUPERVISOR

MAY 25, 2022

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ภาคผนวก ก5

ผลการติดตามตรวจสอบความร้อน
ในสถานประกอบการ



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, 11TH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
MEASURING PLACE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4) (42/4 MOO 1 SUKHUMVIT ROAD KM. 124 THUNG SUKHLA SI RACHA CHON BURI 20230)
MEASURING TYPE : WORKPLACE (HEAT STRESS)
MEASURING DATE : MARCH 8, 2022
MEASURING TIME : *
MEASURING EQUIPMENT : WET BULB GLOBE TEMPERATURE
MEASURED BY : MR WORAWUT JITMAIKASEM

RECEIVED DATE : MARCH 8, 2022
ANALYTICAL DATE : MARCH 8, 2022
REPORT NO. : 2022-U020717
WORK NO. : 2021-003222
ANALYSIS NO. : T22AE822-0001 - T22AE822-0003

ANALYSIS NO.	MEASURING SITE	DURATION TIME*	RESULT (DEGREE CELSIUS)				
			NWB	DB	GT	WBGT	WBGT AVG
T22AE822-0001	TP AREA (GENERATOR HOUSE G-5015) [REDACTED]	13:10-14:40 HOUR	27.8	37.7	39.7	31.3	30.2
		14:40-15:10 HOUR	26.4	26.7	27.5	26.7	
T22AE822-0002	TP AREA (GENERATOR HOUSE G-5016) [REDACTED]	13:15-14:45 HOUR	27.8	38.4	39.7	31.3	30.2
		14:45-15:15 HOUR	26.4	26.7	27.7	26.8	
T22AE822-0003	TP AREA (GENERATOR HOUSE G-5017) [REDACTED]	13:20-14:50 HOUR	27.8	38.6	39.8	31.4	30.2
		14:50-15:20 HOUR	26.4	26.8	27.7	26.8	

Nattawat

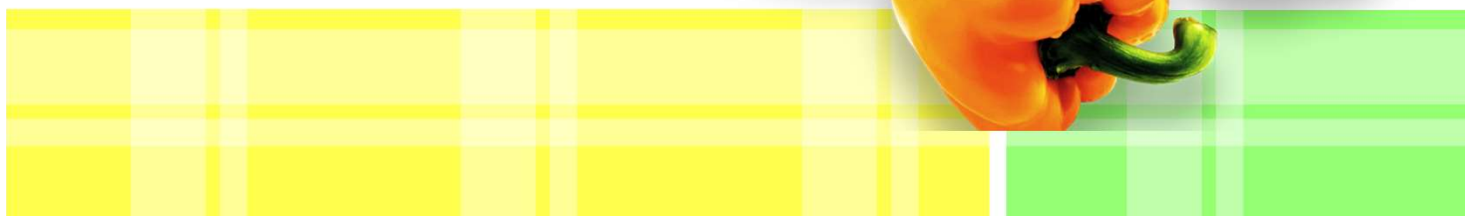
(MR NATTAWAT DANGSAWAT)
LABORATORY SUPERVISOR

MARCH 24, 2022



ภาคผนวก ก6

ผลการติดตามตรวจสอบคุณภาพน้ำทะเล



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 12, 2022
SAMPLING TIME : 12:45 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KANNIKAR SUMLEETHA

RECEIVED DATE : APRIL 12, 2022
ANALYTICAL DATE : APRIL 12-27, 2022
REPORT NO. : 2022-U030789
WORK NO. : 2021-003222
ANALYSIS NO. : T22AH092-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			JETTY # 3 T22AH092-0001	
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.2 (30°C)	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.2	0.5
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.6	0.5
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	912	25.0
TOTAL AMMONIA ^b	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H	162	10.0
AMMONIA NITROGEN (UNIONIZED) ^c	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H AND CALCULATION	18.6	0.30
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	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.

ND : NON-DETECTABLE.

Paewena Ch.

(MISS PAWEENA CHARASCHOTEPINIT)
LABORATORY SUPERVISOR

APRIL 29, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 12, 2022
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KANNIKAR SUMLEETHA

RECEIVED DATE : APRIL 12, 2022
ANALYTICAL DATE : APRIL 12-27, 2022
REPORT NO. : 2022-U030790
WORK NO. : 2021-003222
ANALYSIS NO. : T22AH092-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			CONVENTIONAL BUOY MOORING T22AH092-0002	
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H* B)	8.2 (30°C)	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.2	0.5
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.4	0.5
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	92.8	25.0
TOTAL AMMONIA ^b	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H	134	10.0
AMMONIA NITROGEN (UNIONIZED) ^c	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H AND CALCULATION	15.2	0.30
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	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.

ND : NON-DETECTABLE.



(MISS PAWEENA CHARASCHOTEPINIT)
LABORATORY SUPERVISOR

APRIL 29, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSKULA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 12, 2022
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KANNIKAR SUMLEETHA

RECEIVED DATE : APRIL 12, 2022
ANALYTICAL DATE : APRIL 12-27, 2022
REPORT NO. : 2022-U030791
WORK NO. : 2021-003222
ANALYSIS NO. : T22AH092-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			SINGLE BUOY MOORING 1 T22AH092-0003	
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.1 (30°C)	-
TEMPERATURE °C	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN °C	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.9	0.5
BIOCHEMICAL OXYGEN DEMAND °C	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	0.6	0.5
CHEMICAL OXYGEN DEMAND °C	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	89.6	25.0
TOTAL AMMONIA ^b	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H	106	10.0
AMMONIA NITROGEN (UNIONIZED) ^c	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H AND CALCULATION	9.67	0.30
FAT, OIL AND GREASE °C	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	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.

ND : NON-DETECTABLE.

Paewena Ch.

(MISS PAWEENA CHARASCHOTEPINIT)
LABORATORY SUPERVISOR

APRIL 29, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 12, 2022
SAMPLING TIME : 13:20 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KANNIKAR SUMLEETHA

RECEIVED DATE : APRIL 12, 2022
ANALYTICAL DATE : APRIL 12-27, 2022
REPORT NO. : 2022-U030792
WORK NO. : 2021-003222
ANALYSIS NO. : T22AH092-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			REFINERY OUTFALL T22AH092-0004	
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.1 (32°C)	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	32	-
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.0	0.5
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	1.1	0.5
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	75.2	25.0
TOTAL AMMONIA ^b	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H	125	10.0
AMMONIA NITROGEN (UNIONIZED) ^c	µg/L N	IN-HOUSE METHOD: UAE.TP.WAT.001 BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA&WEF, 23rd ED., 2017, PART 4500-NH ₃ H AND CALCULATION	12.9	0.30
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	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.

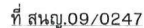
ND : NON-DETECTABLE.



(MISS PAWEENA CHARASCHOTEPINIT)
LABORATORY SUPERVISOR

APRIL 29, 2022





เรียน อธิบดีกรมเจ้าท่า

อ้างอิง 1. หนังสือรับรองตรวจสภาพท่าเทียบเรือ ขนาดเกินกว่า 500 ตันกรอสส์ ท่าหมายเลข 1 – 8 ท่าผูกจอดเรือ CBM, SBM-1 และ SBM-2 เลขที่ 102 ถึง 112/2564 ของบริษัท ไทยออยล์ จำกัด (มหาชน)

2. ใบอนุญาตให้ท่าเทียบเรือระบายน้ำลงสู่ทะเล เลขที่ คค 0310/สปว 411/2564

สิ่งที่ส่งมาด้วย รายงานผลการตรวจวัดคุณภาพน้ำทั้งที่ผ่านระบบบำบัดและหน่วยกลั่นน้ำทะเล ประจำเดือนมกราคม ถึงเดือนมีนาคม 2565 รวมถึงผลการติดตามตรวจสอบคุณภาพน้ำทะเลเดือนพฤศจิกายน 2564

ตามหนังสือรับรองตรวจสอบสภาพท่าเทียบเรือท่าเทียบเรือที่อ้างถึง 1. กรมเจ้าท่าได้อนุญาตให้บริษัท ไทยออยล์ จำกัด (มหาชน) ใช้ท่าเทียบเรือขนาดเกินกว่า 500 ตันกรอสส์ ท่าหมายเลข 1 - 8 และตู้ขนผูกจอดเรือ CBM, SBM-1 และ SBM-2 โดยมีเงื่อนไขให้บริษัทฯ ต้องติดตามตรวจสอบคุณภาพน้ำทั้งจากทุกจุดที่ปล่อยออกจากโครงการลงสู่แหล่งน้ำ โดยดัชนีคุณภาพที่ตรวจวัด ได้แก่ ความเป็นกรดต่าง ปริมาณความสกปรกหรือบีโอดี (BOD5) ปริมาณสารแขวนลอย และปริมาณน้ำมันและไขมัน โดยทำการตรวจวัด 4 เดือนต่อครั้งและต้องรายงานผลการวิเคราะห์ให้กรมเจ้าท่าทราบ และตามใบอนุญาตที่อ้างถึง 2. กรมเจ้าท่าได้อนุญาตให้บริษัทฯ เททิ้งหรือระบายน้ำทั้ง ตามค่ามาตรฐานควบคุมการระบายน้ำที่กำหนดไว้ในประกาศกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อมหรือ ประกาศกรมเจ้าท่าลงสู่ทะเล รวมถึงให้บริษัทฯ ต้องตรวจสอบคุณภาพน้ำที่ย่อยลงน้อย สัปดาห์ละ 1 ครั้ง และรายงานให้ กรมเจ้าท่าทราบทุก 3 เดือน ตามความละเอียดแจ้งแล้วนั้น

ในการนี้ บริษัทฯ ขอเรียนว่าได้ปฏิบัติตามเงื่อนไขดังกล่าวอย่างครบถ้วน พร้อมทั้งได้จัดทำรายงานผลการตรวจวัดคุณภาพน้ำทั้งที่ผ่านระบบบำบัดและหน่วยกลั่นน้ำทะเล ประจำเดือนมกราคมถึงเดือนมีนาคม 2565 รวมถึงผลการติดตามสอบคุณภาพน้ำทะเลเดือนพฤศจิกายน 2564 เสร็จเรียบร้อยแล้ว ทั้งนี้ บริษัทฯ จึงขอเสนอรายงาน ดังกล่าว เพื่อรายงานผลการปฏิบัติตามเงื่อนไข โดยมีรายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย

จึงเรียนมาเพื่อโปรดทราบ

ได้รับหนังสือต้นฉบับนี้
ไว้เรียบร้อยแล้ว

ชื่อ.....

ลงวันที่ 28 เมษายน 69

แผนกรัฐกิจสัมพันธ์
โทร 0 2797 2999 ต่อ 43031

วันที่ 28 เมษายน 2565

ผู้บันทึกด้วยตัวเอง : คงชีพ

(นางสาวสุภาพร ไชยวรรณ์)

เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์เภสัช ๑๒๐๒-๑-๘๗๕๓

ผู้จัดทำ: นสพ. นกนพ: น

(นางรักสมภพ วีรหัตถประเสริฐ)

เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์พิษเภสัชกรรม คณะเภสัชศาสตร์ มหาวิทยาลัยขอนแก่น ๖๒๐๒-๖-๔๖๓๖

ผู้ตรวจสอบภาษาอังกฤษ : คงศักดิ์

(สืบหาเหตุ ๒๕๕๖-๒๕๕๗)

ผู้ควบคุมผลิตภัณฑ์ปฏิกิริยารวณะหมักเอทานอล เลขทะเบียน ๖๒๐๒-๓-๔๖๓

[illegible][illegible]

ศาสตราจารย์ ดร. ปิยะมณีนุช มิตรกุล (นายแพทย์) เกษตรบัณฑิต ๒๕๐๒ ปริญญาวิทยาศาสตรบัณฑิต เกษตร (เกษตร)
ปริญญาวิทยาศาสตรมหาบัณฑิต เกษตร (เกษตร) เกษตรบัณฑิต (เกษตร) เกษตรบัณฑิต (เกษตร)

บริษัท ไทยออยล์ จำกัด (มหาชน) ทะเบียนเลขที่ 0107547000711
555/1 ศูนย์เอเนอร์จี คอมเพล็กซ์ อาคารสูง ชั้น 11 ถนนวิภาวดีรังสิต แขวงจตุจักร
เขตจตุจักร กรุงเทพฯ 10900
Thai Oil Public Company Limited Registration No. 0107547000711
555/1 Energy Complex Building A, 11th Floor, Vibhavadi Rangsit Road,
Chatuchak, Chatuchak, Bangkok 10900, Thailand
Telephone: +66(0) 2797 2999, +66(0) 2299 0000 Fax: +66(0) 2797 2970

โรงงาน: 42/1 หมู่ที่ 1 ถนนสุขุมวิท กม.ที่ 124 ตำบลทุ่งสุกษา อำเภอสรรคบุรี
จังหวัดชัยภูมิ 20230
Refinery: 42/1 Moo 1 Sukhumvit Road Km.124, Tungsukha, Sriracha,
Chonburi 20230, Thailand
Telephone: +66(0) 3840-8500, +66(0) 3835 9000, +66(0) 3835 1555
Fax: +66(0) 3835 1554, +66(0) 3835 1444, +66(0) 3835 9019

ประเภทที่ ๒

[illegible][illegible]

ผู้กำกับตัวอย่าง : ศรชัย

(นางสาวสุภาพร ไชยธรรม์)

เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์เอกสาร ณ เลขทะเบียน ๗-๒๐๒-๙-๘๗๕๓

Handwritten signature: *22/05/2020*

(นางรัชฎาภมา วีรศักดิ์ประภา)

(นางภัทมน วิรัตน์ประสงค)
เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ดิน แยกทะเบียน ว-202-จ-4636

ผู้ตรวจสอบความคืบหน้า : ศ.ชัชวาลย์

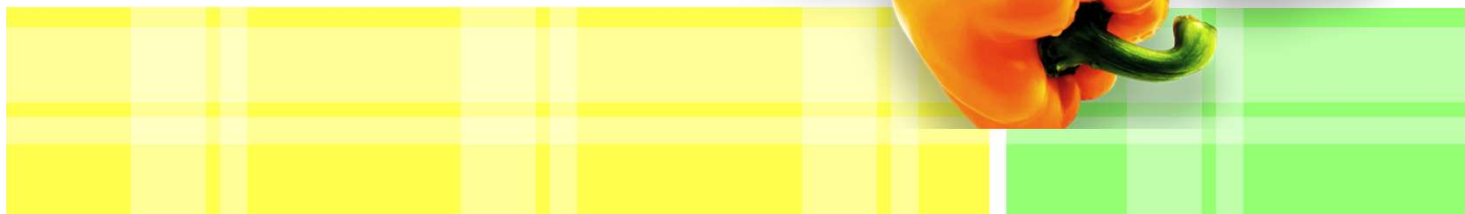
(หมายเหตุ : ทั่วทั้งเล่ม)

(นางสาวนิกร ท้าตาญ)

1944

ภาคผนวก ก7

ผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JANUARY 12, 2022
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 13, 2022
ANALYTICAL DATE : JANUARY 13-20, 2022
REPORT NO. : 2022-U005377
WORK NO. : 2021-003222
ANALYSIS NO. : T22AA599-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			นำทิ้งที่ระบายนอก จากโครงการ (DISCHARGE POINT) T22AA599-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.5 (33°C)	5.5-9.0	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	33	≤ 40	-
ELECTRICAL CONDUCTIVITY ^c	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	11.2 (33°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	34	≤ 3,000	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500 -NO ₃ ⁻ E)	ND	-	0.09
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
PHOSPHATE ^c	mg/L PO ₄ ³⁻	ASCORBIC ACID METHOD (SM: 4500-P E)	1.32	-	0.03
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR		

^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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 25, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSKULA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : FEBRUARY 9, 2022
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 10, 2022
ANALYTICAL DATE : FEBRUARY 10-19, 2022
REPORT NO. : 2022-U012270
WORK NO. : 2021-003222
ANALYSIS NO. : T22AC344-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			น้ำทิ้งที่ระบายออก จากโครงการ (DISCHARGE POINT) T22AC344-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.8 (32°C)	5.5-9.0	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	32	≤ 40	-
ELECTRICAL CONDUCTIVITY ^c	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	11.2 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	2.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	ND	≤ 3,000	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500 -NO ₃ ⁻ E)	ND	-	0.09
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
PHOSPHATE ^c	mg/L PO ₄ ³⁻	ASCORBIC ACID METHOD (SM: 4500-P E)	ND	-	0.03
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR		

^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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,

PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

FEBRUARY 22, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 9, 2022
SAMPLING TIME : 08:50 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : MARCH 10, 2022
ANALYTICAL DATE : MARCH 10-17, 2022
REPORT NO. : 2022-U020265
WORK NO. : 2021-003222
ANALYSIS NO. : T22AE491-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			นำทั้งที่ระบายนอก จากพื้นที่โครงการ T22AE491-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.6 (32°C)	5.5-9.0	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	32	≤ 40	-
ELECTRICAL CONDUCTIVITY ^c	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	9.9 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	2.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	ND	≤ 3,000	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ ⁻ E)	2.48	-	0.09
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
PHOSPHATE ^c	mg/L PO ₄ ³⁻	ASCORBIC ACID METHOD (SM: 4500-P E)	0.06	-	0.03
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR		

^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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 23, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 4, 2022
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 4, 2022
ANALYTICAL DATE : APRIL 4-12, 2022
REPORT NO. : 2022-U027536
WORK NO. : 2021-003222
ANALYSIS NO. : T22AG430-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			นำทั้งที่ระบายนอก จากพื้นที่โครงการ T22AG430-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.4 (30°C)	5.5-9.0	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	30	≤ 40	-
ELECTRICAL CONDUCTIVITY ^c	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	41.8 (30°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	ND	≤ 3,000	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500 -NO ₃ ⁻ E)	0.71	-	0.09
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
PHOSPHATE ^c	mg/L PO ₄ ³⁻	ASCORBIC ACID METHOD (SM: 4500-P E)	2.82	-	0.03
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 18, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MAY 9, 2022
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR NAPASIT SRIPIIM
ANALYZED BY : MISS AMONRAT PUTTAALEE

RECEIVED DATE : MAY 10, 2022
ANALYTICAL DATE : MAY 10-19, 2022
REPORT NO. : 2022-U037159
WORK NO. : 2021-003222
ANALYSIS NO. : T22AI730-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			น้ำทิ้งที่ระบายนอกจากพื้นที่โครงการ T22AI730-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.4 (38°C)	5.5-9.0	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	38	≤ 40	-
ELECTRICAL CONDUCTIVITY ^c	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	10.8 (38°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	ND	≤ 3,000	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500 -NO ₃ ⁻ E)	0.27	-	0.09
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
PHOSPHATE ^c	mg/L PO ₄ ³⁻	ASCORBIC ACID METHOD (SM: 4500-P E)	ND	-	0.03
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR		

^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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,

PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 23, 2022



ANALYSIS REPORT

CUSTOMER NAME : THAI OIL PUBLIC COMPANY LIMITED
ADDRESS : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com
SAMPLING SOURCE : THAI OIL PUBLIC COMPANY LIMITED (BRANCH OFFICE NO.4)
 (42/4 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 6, 2022
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR NAPASIT SRIPIM
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JUNE 6, 2022
ANALYTICAL DATE : JUNE 6-13, 2022
REPORT NO. : 2022-U044814
WORK NO. : 2021-003222
ANALYSIS NO. : T22AK780-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			น้ำทิ้งที่ระบายออก จากพื้นที่โครงการ T22AK780-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.2 (32°C)	5.5-9.0	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	32	≤ 40	-
ELECTRICAL CONDUCTIVITY ^c	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	20.1 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.1	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	ND	≤ 3,000	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: 4500 -NO ₃ ⁻ E)	ND	-	0.09
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
PHOSPHATE ^c	mg/L PO ₄ ³⁻	ASCORBIC ACID METHOD (SM: 4500-P E)	ND	-	0.03
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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 17, 2022

