Chapter 5
Environmental Impact Assessment

5.1 Introduction

Study and prepare an environmental impact assessment report on the Runway and Taxiway 2 Construction Project, U-Tapao International Airport, Ban Chang District, Rayong, referencing and complying with relevant guidelines and regulations as follows:

1. Notification of the Ministry of Natural Resources and Environment Re: Specifications for Projects, Businesses or Operations that May Severely Impact Natural Resources, Environmental Quality, and the Health, Sanitation, and Quality of Life of People in the Community, in which an environmental impact assessment report must be composed, along with the criteria, procedures, and conditions for the Environmental Impact Assessment Report 2018 and (No. 2) 2019.

2. Guidelines for the Assessment of Environmental Impacts for Transportation Projects (Environmental Impact Assessments for Airports or Airport Projects) of the Office of Environmental Impact Assessment, Office of Natural Resources and Environmental Policy and Planning (2006).

3. Notification of the Office of Natural Resources and Environmental Policy and Planning, Re: Guidelines for Public Engagement in the Procedure for Composing Environmental Impact Assessment Reports (2019).

4. Laws, conditions and regulations of relevant government agencies.

The environmental impact assessment analyzes potential impacts on environmental impacts and various values in the study area, both positive and negative, and primary and secondary impacts in both the short term and long term, in order to determine the nature and severity of the impacts. The assessment also compares impacts in the case that the project is conducted and if it isn't conducted, both in the construction phase and operation phase. The assessment of environmental impacts for Runway and Taxiway 2 Construction Project, U-Tapao International Airport, Ban Chang District, Rayon, analyzes impacts on environmental resources in 4 areas, namely physical environmental resources, biological environmental resources, human use value and quality of life value (the preliminary impact assessment to determine the study scope is as shown in Annex 5-1). Accepted academic tools and rationale have been used to forecast and assess impacts. Some matters require a mathematical model to provide predictive results in order to establish environmental impact prevention and resolution measures and environmental impact monitoring measures.

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The impact assessment starts by considering the nature of project operations and current environmental resource conditions around the project area by determining the nature and severity of environmental impacts that may arise from the project. The nature of environmental impacts are classified into two types:

1. Positive impacts, referring to activities that will be carried out or results from project constructions that are good or benefit the environment and human use in the project area and nearby vicinity.

2. Negative impacts, referring to activities that will be carried out or results from project constructions that damage natural resources and human use in the project area and nearby vicinity.

Criteria for determining the severity of the environmental impacts are considered from the magnitude of the impact for each environmental factor. The criteria to determine the magnitude of the impacts consist of the standard values of environmental resources, the scope of the affected area/distance, the duration of the impact, and the impacts on public health. The 4 impact levels are classified as follows:

1. High level of impact : Project development activities or outcomes have a higher-than-standard level impact on changes in natural resources and the environment or cause severe/permanent changes to environmental resources. The scope of the affected area is spread to outside of the project area and impacts occur throughout the project area. The adverse events are long-lasting and permanent. Activities affect people's health to a life-threatening level. Prevention and resolution measures can't be formulated for mitigation or to restore such environmental resources to their original condition.

2. Moderate level of impact : Project development activities or outcomes have an adequate level of impact on changes in natural resources and the environment when compared to standard range. The scope of the affected area is quite widespread but contained within the project area. Adverse effects are long-lasting but not permanent. Activities impact resources, which affect people's health but not to a life-threatening level. Environmental impact prevention and resolution measures can be formulated for the arising impacts to be mitigated.

3. Low level of impact : Activities or results from project developments have some level of impact on changes in natural resources and the environment. Environmental resources are still in standard range. The scope of the affected area is not widespread and the arising impacts are contained within the project area. The impact period is relatively short. Activities impact resources, which affect people's mental health, such as by causing disturbances and annoyances. Environmental impact prevention and resolution measures can be formulated for the arising impacts to be mitigated or nonexistent.

4. No impact or no insignificant : Activities or outcomes of project developments do not cause changes or impact natural resources and the environment, whether directly or indirectly.

The magnitude and significance of the impact is considered from study data details and results of studies on the current environment are the main basis for assessing the environmental impact of each issue, including comments from environmental experts for each issue as main points. In the environmental impact assessment, during the construction phase, this will be considered from the Runway 2 development activities, including the runway underpass and parallel taxiway, Passenger Terminal 3, the secondary concourse, aircraft apron, U-Tapao Train Station, commercial business centers, supporting areas, and warehouses in the airport expansion area. Details are as shown in item 2.4 Project Components within the Project Area. These components have the capacity to support 70 million passengers per year in 2048, with details as follows:

5.2 Physical environmental resources

5.2.1 Noise

5.2.1.1 Construction Phase

(1) Study Methods

Assessment of noise impacts from project activities during the construction phase, in which sources of noise depend on the construction activity, type of machinery and equipment, distance from the source of noise, etc. In the impact assessment, the machines and equipment that are used and cause loud noise are considered. The loudest machine has a maximum noise level within the range of 80-90 dBA at a distance of 15 meters. Supposing that multiple machines are used at the same time, causing the noise level to rise, will be the worse case scenario in consideration to project construction activities. In the event that construction work is carried out within the same period of time, which has a very low probability of actually occurring, namely: 1) construction work on Runway 2; 2) construction work on the parallel taxiway; 3) construction work on the runway underpass; 4) construction work on aircraft aprons and aircraft stand taxilanes; 5) construction work on Passenger

Terminal 3; 6) construction work on the warehouse; 7) construction work on the control tower; 8) construction work on the ground transportation center; 9) construction work on the car park building; 10) construction work on the firefighting building; 11) road construction work; 12) construction work on office buildings/shops; 13) construction work on the aviation support area; and 14) construction work on the high-speed train station (underground), this will be assessed in the overall noise that may impact sensitive areas and communities surrounding the project area, which is far from sources of noise caused by the project in varying distances, including workers operating in the construction site. In addition, assessments will also be conducted on noise impacts from the transportation of project construction materials that may affect sensitive areas and communities near transportation routes.

1) Scope of Study

Study and assessment of noise impacts from project construction activities, with details as follows:

1.1) Assessment of the overall impact of noise on sensitive areas and communities that may be caused by project construction activities over a 24-hour period and noise levels in current conditions (based on the the first set of noise data, from the rainy season, taken on 18-25 July 2019 and the second set taken on 3-10 November 2019). The maximum 24-hour noise levels have been considered to be used to represent levels from sensitive areas and the community in the current condition, which is in the range of 59.6-65.0 dBA. Impact levels will be considered in comparison with with noise level indices from construction activities assessed for community impact, namely the 24 hour-average noise level ($L_{Aeq\ 24\ Hours}$) and disturbance noise levels as based on Notification No. 15 of the National Environment Board (1997) Re: Determination of Standard Noise Levels, which specifies that the 24-hour average noise level must not exceed 70 dBA.

1.2) Assessment of the impact on workers working operating within the construction site, for the daytime (7.00 am - 4.00 pm) only. The impact level will be considered in comparison with noise level indices assessed for impacts on workers and staff, such as the total noise level from 8 hours of work, as set in the Ministerial Notification Re: Determination of Standards for Administration, Management, and Operation on Occupational Safety, Health and Environment regarding Heat, Light and Noise, 2016, and the Notification of the Department of Labor Protection and Welfare Re: Standards for Average Noise Levels Allowed for Employees per Work Day, 2018, which specifies that the 8-hour average noise level must not exceed 85 dBA.

1.3) Assessment of the impact of noise from project construction material transportation activities that may affect sensitive areas and communities adjacent to the transportation routes. Project material transportation activities consist of: loading and transporting of soil, stone, sand and asphalt cement by 10-wheel trucks, in which the law stipulates a maximum load of 25 tons (including vehicle weight) with a capacity of approximately 16 tons per vehicle; loading cement and steel by 3-axle, 18-wheel trailer trucks, in which the law stipulates a maximum load of 47 tons, with a capacity of approximately 30 tons per vehicle. Transportation is required to take 10 hours per day, from 9.00 a.m. - 4.00 p.m. (7 hours) during the day and 6.00 - 9.00 p.m. during the night (3 hours). The impact level will be considered in comparison with the noise level indices from project transportation activities assessed for community impact, namely the 24-hour average noise level (LAeq 24 Hours) and disturbance noise levels as based on Notification No. 15 of the National Environment Board (1997) Re: Determination of Standard Noise Levels, which specifies that the 24-hour average noise level must not exceed 70 dBA.

Assessment of impact or expected noise levels for the community, workers and employees that have changed due to sources of noise caused by the project, conducted using relevant mathematical formulas as a calculation tool, as detailed under the next item.

2) Relevant Mathematical Formulas

Assessment of impact or predicted noise levels from construction activities that impact sensitive areas and nearby communities and workers within the construction site can be calculated based on noise levels from machinery and equipment operation using the following mathematical formula:

1. Calculate the noise level from the machine based on the Acoustical Usage Factor using the formula:

$$Leq\ (equip) = E.L + 10 \log (U.F.) - 20 \log(D/15.24) - 10G \log(D/15.24) \quad \text{.....(1)}$$

When Leq (equip) = Leq from receiver of noise produced by the use of one instrument for a period of time

E.L = Instrument noise level measured at a distance of 15.24 meters from the noise source.

G = Constants for ground parameters and topography, G = 0 for hard soil

D = Distance between the receiver and the instrument that is the source of noise

U.F. = Machine usage variable (A Usage Factor), consisting of the duration of machinery use. For construction, calculate this from machinery use during the daytime.

2. Calculate the noise level from the source at various distances or at consideration points using the Noise Decay Formula, a formula to calculate energy distribution based on physical principles:

Lp_2 = $Lp_1 - 20 \log (R_2/R_1)$ .....(2)

When Lp_2 = Noise level at $_R$2 meters distance from the noise source (dBA)

Lp_1 = Noise level at 15 meters distance from the noise source (dBA)

R_2 = Distance between noise source and noise receiving point (meters)

R_1 = Distance between noise source and the noise measurement point at 15 meters.

3. Calculate the total noise level at the consideration point caused by the use of multiple noise sources operating simultaneously by using the formula:

$$Lp_{total} = 10 \log \sum_{i=1}^{n} 10^{Lpi/10} \quad \text{.....(3)}$$

When Lp_{total} = Total noise level received from n machines while in operation (dBA)

Lpi = Noise level from machine type i (dBA)

4. Calculate the noise level from construction activities based on the number of working hours as a 24-hour average noise level ($L_{Aeq\ 24\ hours}$) using the formula:

$$L_{AeqT} = Lp + 10 \log (t/T) \quad \text{.....(4)}$$

When L_{AeqT} = Noise level that can occur in a particular period of time (dBA)

Lp = Noise level caused by noise source (dBA)

t = The duration of noise caused by the source (hours) in this case is 8 hours.

T = Duration of time for calculation of average value (hours) in this case is 24 hours.

To assess the impact of noise from operating machinery and equipment, consider the noise level data from the operation of various construction machinery and equipment at a distance of 15 meters and the Acoustic Usage Factor data for similarity to actual use as referenced from the FHWA Highway Construction Noise Handbook, 2006, as shown in Table 5.2-1.

Table 5.2-1 Noise Levels of Construction Machinery and Equipment

Machinery/Equipment	Acoustical Usage Factor [1/] (%)	Noise level at 15 meters (Spec.721.560) [2/] (dBA)
1. All other equipment > 5 HP	50	85
2. Auger Drill Rig	20	85
3. Backhoe	40	80
4. Boring Jack Power Unit	50	80
5. Chain Saw	20	85
6. Compactor	20	80
7. Concrete Mixer Truck	40	85
8. Concrete Pump Truck	20	82
9. Crane	16	85
10. Mobile Crane	16	85
11. Dozer	40	85
12. Drill Rig Truck	20	84
13. Drum Mixer	50	80
14. Dump Truck	40	84
15. Excavator	40	85
16. Grader	40	85
17. Hydra Break Ram	10	90
18. Impact Pile Driver	20	95
19. Jackhammer	20	85
20. Man Lift	20	85
21. Pave	50	85
22. Pickup Truck	40	75
23. Pneumatic Tool	50	85
24. Vibratory Pile Driver	20	95
25. Roller	20	85

Source: [1/] Modified from Transit Noise and Violation Impact Assessment Manual (p. 176), FTA, 2018.
[2/] Modified from FHWA Highway Construction Noise Handbook (p. 91-92), FHWA, 2006.
(http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm)

In this regard, the noise levels from machinery in operation for construction activities will differ in number and type according to the construction step. The construction activities are divided into 8 activities, namely: 1) land adjustments/soil quality improvement/groundwork, 2) filling of embankments and safety areas around taxiway/pavement structure construction, 3) structural work on roads/road surface work, 4) excavations, driving of piling/extraction of piling heads

and runway underpass roof, 5) foundation work, 6) structural work, 7) architectural and system work, and 8) Construction work within the station/system work and architectural work within the electric train station. Calculation of the noise level from the machinery used for each construction activity, considered from the machine's Usage Factor (%U.F.) for similarity to actual use, with the operation time set at 8 hours per day, found that the 24-hour average noise levels at 15 meters was equal to 83.5, 82.0, 85.1, 85.2, 80.4, 83.4, 80.0 and 84.8 dBA, respectively, as shown in Table 5.2-2.

Table 5.2-2 Noise levels from construction phase activities

Machinery/Equipment	Quantity	AcousticalUsage Factor[1/] (%)	Maximum noise level at 15 meters[2/] (dBA)	Total noise level from the machine[3/] (dBA)	Noise Level 24-hour average[4/] (dBA)
1. Demolition work to remove obstacles/road improvements/land adjustments/drainage system construction/construction of the aircraft apron/taxiway construction					
1) Backhoe	1	40	80	88.3	83.5
2) Grader	1	40	85		
3) Bulldozer	1	40	85		
4) Truck (Dump Truck)	3	40	84		
5) Ric Machine (Equipment > 5HP)	1	20	85		
6) Compactor	1	20	80		
2. Filling work for embankments and safety areas around the taxiways/pavement structure construction work					
1) Backhoe	1	40	80	86.8	82.0
2) Grader	1	40	85		
3) Bulldozer	1	40	85		
4) Roller	3	20	85		
3. Pavement Structure/Surface Work					
1) Backhoe	1	40	80	89.9	85.1
2) Grader	1	40	85		
3) Bulldozer	1	40	85		
4) Truck (Dump Truck)	3	40	84		
5) Concrete Truck	3	40	85		
4. Excavations and driving of piling/extraction of piling heads and runway underpass roof					
1) Backhoe	2	40	80	90.0	85.2
2) Grader	1	40	85		
3) Bulldozer	1	40	85		
4) Truck (Dump Truck)	2	40	84		
5) Crane	2	16	85		
6) Concrete Truck	2	40	85		
7) Concrete Pump	2	20	84		
5. Foundation work					
1) Backhoe	1	40	80	85.2	80.4
2) Truck (Dump Truck)	1	40	84		
3) Concrete Truck	1	40	85		
4) Pile Drilling Machine (Auger Drill Rig)	1	20	85		
6. Structural work					
1) Truck (Dump Truck)	2	40	84	88.2	83.4
2) Crane	2	16	85		
3) Concrete truck	2	40	85		
4) Concrete Pump	2	20	84		

Table 5.2-2 Noise levels from construction phase activities

Machinery/Equipment	Quantity	AcousticalUsage Factor[1/] (%)	Maximum noise level at 15 meters[2/] (dBA)	Total noise level from the machine[3/] (dBA)	Noise Level 24-hour average[4/] (dBA)
7. Architecture and System Work					
1) Truck (Dump Truck)	2	40	84	84.8	80.0
2) Crane	2	16	85		
8. Construction work within station/system work and architectural work inside electric train station					
1) Backhoe	1	40	80	89.6	84.8
2) Bulldozer	1	40	85		
3) Truck (Dump Truck)	3	40	84		
4) Concrete truck	3	40	85		
5) Scissorlift (Man Lift)	1	20	85		

Source: [1] / Modified from Transit Noise and Violation Impact Assessment Manual (p. 176), FTA, 2018.

[2/] Modified from FHWA Highway Construction Noise Handbook (p.91-92), FHWA, 2006. (http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm)

[3/] calculated using the formula: Leq (equip) = E.L + 10 log (U.F.) – 20 log (D/15.24) – 10G log (D/15.24) and $L_{\text{รวม}}=10 \log [\sum_{i=1}^{n} 10^{Lpi/10}]$

[4/] Calculated using the formula: LAeqT = Lp + 10 log (t/T)

When considering project construction activities, cases in which construction work will be conducted at the time comprise: 1) construction work on Runway 2; 2) construction work on the parallel taxiway; 3) construction work on the runway underpass; 4) construction work on aircraft aprons and aircraft stand taxilanes; 5) construction work on Passenger Terminal 3; 6) construction work on the warehouse; 7) construction work on the control tower; 8) construction work on the ground transportation center; 9) construction work on the car park building; 10) construction work on the firefighting building; 11) road construction work; 12) construction work on office buildings/shops; 13) construction work on the aviation support area; and 14) construction work on the high-speed train station (underground), in which the 24-hour average noise level at 15 meters was equal to 92.0, 85.0, 91.1, 94.1, 87.4, 91.2, 83.0, and 87.8 dBA, respectively, as shown in Table 5.2-3.

Table 5.2-3 Total noise level from activities in each area during the construction phase

Activity	24-hour average noise level at 15 meters (dBA) [1/]							
	Land adjustments/soil quality improvement/ground work	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structure work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
1) Runway 2								
1.1) Filling work for embankments and safety areas around the taxiways	-	82.0	-	-	-	-	-	-
1.2) Pavement structure construction work	-	-	85.1	-	-	-	-	-
2)Parallel taxiways								
2.1) Filling work for embankments and safety areas around the taxiways	-	82.0		-	-	-	-	-
2.2) Pavement structure construction work	-	-	85.1	-	-	-	-	-
3) Runway underpass (the excavated soil is reused as filling material with the project area) 50 meters * 8 meters deep (3.5 hundred thousand cubic meters)								
Excavations and driving/extraction of piling systems (approximately 8-10 meters) using excavation machinery	-	-	-	85.2	-	-	-	-
3.2) Piling head extraction work	-	-	-	85.2	-	-	-	-
3.3) Construction of underpass roof	-	-	-	85.2	-	-	-	-
4) Aircraft apron and aircraft stand taxilane (with 850,000 sq. m. usage space), construction period of 24 months								
4.1) Excavate and adjust the area.	83.5	-	-	85.2	-	-	-	-
4.2) Soil quality improvement work	83.5	-	-	-	-	-	-	-
4.3) Groundwork	83.5	-	-	-	-	-	-	-
5) Passenger Terminal 3 has 4 floors with 182,900 square meters usage space.								
5.1) Structural work	-	-	-	-	-	83.4	-	-
5.2) Architecture and system work	-	-	-	-	-	-	80.0	-
6) Warehouse with 17,900 square meters usage space.								
6.1) Excavate and adjust the area.	83.5	-	-	85.2	-	-	-	-

Table 5.2-3 Total noise level from activities in each area during the construction phase

Activity	24-hour average noise level at 15 meters (dBA) 1/							
	Land adjustments/soil quality improvement/ground work	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structure work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
6.2) Foundation work	-	-	-	-	80.4	-	-	-
7) Flight control tower with 6,000 meters usage space.								
Architecture and system work	-	-	-	-	-	-	80.0	-
8) Ground transportation center with 30,000 square meters usage space.								
8.1) Excavate and adjust the area.	83.5	-	-	85.2	-	-	-	-
8.2) Foundation work	-	-	-	-	80.4	-	-	-
8.3) Structural work	-	-	-	-	-	83.4	-	-
9) Parking building with 35,000 square meters usage space.								
9.1) Excavate and adjust the area.	83.5	-	-	85.2	-	-	-	-
9.2) Foundation work	-	-	-	-	80.4	-	-	-
9.3) Structural work	-	-	-	-	-	83.4	-	-
10) Firefighting building with 2,200 square meters usage space.								
10.1) Excavate and adjust the area.	83.5	-	-	83.5	-	-	-	-
10.2) Foundation work	-	-	-	-	80.4	-	-	-
10.3) Structural work	-	-	-	-	-	83.4	-	-
11) Road with 150,000 square meters usage space.								
11.1) Pavement structure work	-	-	85.1	-	-	-	-	-
11.2) Pavement work	-	-	85.1	-	-	-	-	-
12) Office/shop building with 25,000 square meters usage space.								
Structural work	-	-	-	-	-	83.4	-	-
13) Aviation support area with 15,000 square meters usage space.								

Table 5.2-3 Total noise level from activities in each area during the construction phase

Activity	24-hour average noise level at 15 meters (dBA) [1/]							
	Land adjustments/soil quality improvement/ground work	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structure work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
13.1) Foundation work	-	-	-	-	80.4	-	-	-
13.2) Structural work	-	-	-	-	-	83.4	-	-
14) High-speed (underground) railway station with 16,640 square meters usage space.								
14.1) Construction work within the station	-	-	-	-	-	-	-	84.8
14.2) System and architectural work within the station	-	-	-	-	-	-	80.0	84.8
Total noise level[2/] (dBA)	92.0	85.0	91.1	94.1	87.4	91.2	83.0	87.8

Note : [1/] Calculated using the formula: $L_{AeqT} = Lp + 10 \log (t/T)$

[2/] $L_{\text{รวม}} = 10 \log [\sum_{i=1}^{n} 10^{Lpi/10}]$

(2) Study Results

Assessment of loud noises from construction operations were divided into 3 cases, namely noise levels in sensitive areas and communities, noise levels in construction areas, and noise levels from project construction material transportation. Details are as follows:

1) Noise levels in sensitive areas and communities

Noise levels in sensitive areas and communities: Noise levels are evaluated from construction operations involving land adjustments/land quality adjustments/land filling, filling of roads and safety areas around taxiways/pavement structure construction, structural work on roads/road surface work, excavations, driving of piling/extraction of piling heads and runway underpass roofs, foundation work, structural work, architecture work, system work and construction within the station/systematic work and architecture work within the sky train station for sensitive areas and communities surrounding the project area comprising a total of 201 sites (144 sensitive areas and 57 communities) in the range of 40 - 13,740 meters from the border of the construction area. It was found that the 24-hour average noise level was in the range of 59.6 - 85.6 dBA, with details as shown in Table 5.2- 4, most of which was in standard level for general noise according to Notification No. 15 of the National Environment Board (1997), which requires that the 24-hour average noise level does not exceed 70 dBA except for historical sites and religious sites, comprising 3 locations, namely the Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion), the Shrine of Admiral Prince Abhakara Kiartivongse (Air Defense Artillery Battalion), and the Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion), which are located within 40, 90, and 180 meters, respectively, from the project area. The highest level of noise was from excavations, driving of piling/extraction of piling heads and runway underpass roofs, equal to 85.6, 78.7 and 73.2 dBA respectively, which exceeds standard specifications. However, this will not cause any impacts as the area is not inhabited by people. As the historical sites and religious sites already have a relatively high noise level at present (65 dBA) and are relatively close to the construction site, the noise impact is expected to be at a low level.

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	Educational Institution	1420	52.5	45.5	51.6	54.6	47.9	51.7	43.5	48.3	65.0	65.2	65.0	65.2	65.4	65.1	65.2	65.0	65.1
2	Wat Phala School	Educational Institution	2620	47.2	40.2	46.3	49.3	42.6	46.4	38.2	43.0	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
3	Phala Subdistrict Municipality Child Development Center	Educational Institution	2880	46.3	39.3	45.4	48.4	41.7	45.5	37.3	42.1	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
4	Ban Khlong Sai School	Educational Institution	3030	45.9	38.9	45.0	48.0	41.3	45.1	36.9	41.7	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
5	Rayong English Program School	Educational Institution	2800	46.6	39.6	45.7	48.7	42.0	45.8	37.6	42.4	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
6	Rayong Garden International School	Educational Institution	2900	46.3	39.3	45.4	48.4	41.7	45.5	37.3	42.1	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	Educational Institution	2510	47.5	40.5	46.6	49.6	42.9	46.7	38.5	43.3	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
8	Wat Khiri Pawanaram School	Educational Institution	2570	47.3	40.3	46.4	49.4	42.7	46.5	38.3	43.1	63.0[5/]	63.1	63.0	63.1	63.2	63.0	63.1	63.0	63.0
9	Ban Khlong Bang Phai School	Educational Institution	1550	51.7	44.7	50.8	53.8	47.1	50.9	42.7	47.5	61.5[5/]	61.9	61.6	61.9	62.2	61.7	61.9	61.6	61.7
10	Pattanavechsuksa School	Educational Institution	1740	50.7	43.7	49.8	52.8	46.1	49.9	41.7	46.5	60.2[5/]	60.7	60.3	60.6	60.9	60.4	60.6	60.3	60.4
11	Pattanavech College	Educational Institution	1860	50.1	43.1	49.2	52.2	45.5	49.3	41.1	45.9	65.0	65.1	65.0	65.1	65.2	65.0	65.1	65.0	65.1
12	Saeng Song La Child Development Center 3	Educational Institution	2610	47.2	40.2	46.3	49.3	42.6	46.4	38.2	43.0	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
13	Wat Sa Kaeo School	Educational Institution	2720	46.8	39.8	45.9	48.9	42.2	46.0	37.8	42.6	59.6[5/]	59.8	59.6	59.8	60.0	59.7	59.8	59.6	59.7
14	Wat Sombun Naram School (Tem Rat Memorial)	Educational Institution	6240	39.6	32.6	38.7	41.7	35.0	38.8	30.6	35.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	Educational Institution	6240	39.6	32.6	38.7	41.7	35.0	38.8	30.6	35.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
16	Sajjaseuksa School	Educational Institution	5620	40.5	33.5	39.6	42.6	35.9	39.7	31.5	36.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
17	Ban Chang District Center for Non-Formal and Informal Education	Educational Institution	6820	38.8	31.8	37.9	40.9	34.2	38.0	29.8	34.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
18	Wat Suwan Rangsan Community School	Educational Institution	6750	38.9	31.9	38.0	41.0	34.3	38.1	29.9	34.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
19	Ban Yai Ra Child Development Center	Educational Institution	6790	38.9	31.9	38.0	41.0	34.3	38.1	29.9	34.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
20	Wat Samnak Kathon School	Educational Institution	8520	36.9	29.9	36.0	39.0	32.3	36.1	27.9	32.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
21	Ban Sam Nak Thon Child Development Center	Educational Institution	8570	36.9	29.9	36.0	39.0	32.3	36.1	27.9	32.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
22	Burapatit Child Development Center, Sam Nak Thon SAO	Educational Institution	11160	34.6	27.6	33.7	36.7	30.0	33.8	25.6	30.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
23	Wat Chak Mak School	Educational Institution	11130	34.6	27.6	33.7	36.7	30.0	33.8	25.6	30.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
24	St. Andrews International School, Green Valley, Rayong,	Educational Institution	12360	33.7	26.7	32.8	35.8	29.1	32.9	24.7	29.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	Educational Institution	5140	41.3	34.3	40.4	43.4	36.7	40.5	32.3	37.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
26	Ban Phayun School	Educational Institution	5140	41.3	34.3	40.4	43.4	36.7	40.5	32.3	37.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
27	Rakpasa Kindergarten	Educational Institution	4590	42.3	35.3	41.4	44.4	37.7	41.5	33.3	38.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
28	Wat Ban Chang School (Boonrawdprachanukul)	Educational Institution	4830	41.8	34.8	40.9	43.9	37.2	41.0	32.8	37.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	Educational Institution	6940	38.7	31.7	37.8	40.8	34.1	37.9	29.7	34.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	Educational Institution	6940	38.7	31.7	37.8	40.8	34.1	37.9	29.7	34.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
31	Wat Prachummit Bamrung School	Educational Institution	7550	38.0	31.0	37.1	40.1	33.4	37.2	29.0	33.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
32	Udom Wittayanukun School	Educational Institution	8660	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	Educational Institution	8590	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
34	Wat Noen Kraprok School	Educational Institution	8590	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
35	Chonnabot Phatthana Kindergarten	Educational Institution	8170	37.3	30.3	36.4	39.4	32.7	36.5	28.3	33.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
36	Aksorn Business Administration Technological College	Educational Institution	5790	40.3	33.3	39.4	42.4	35.7	39.5	31.3	36.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Draft Version

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
37	Banchang Karnchanakul Wittaya School	Educational Institution	5570	40.6	33.6	39.7	42.7	36.0	39.8	31.6	36.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
38	Ban Khao Huai Mahat School	Educational Institution	10040	35.5	28.5	34.6	37.6	30.9	34.7	26.5	31.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
39	Ban Phudon - Huai Mahat Child Development Center	Educational Institution	10040	35.5	28.5	34.6	37.6	30.9	34.7	26.5	31.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
40	Ban Map Fakthong School	Educational Institution	13740	32.8	25.8	31.9	34.9	28.2	32.0	23.8	28.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
41	Phuru Yor. Sor. Sor. 80 School	Educational Institution	12460	33.6	26.6	32.7	35.7	29.0	32.8	24.6	29.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
42	Khao Chi Chan School	Educational Institution	9460	36.0	29.0	35.1	38.1	31.4	35.2	27.0	31.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
43	Ban Khalot Child Development Center	Educational Institution	3120	45.6	38.6	44.7	47.7	41.0	44.8	36.6	41.4	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
44	Ban Khalot School	Educational Institution	3150	45.6	38.6	44.7	47.7	41.0	44.8	36.6	41.4	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
45	Phlu Ta Luang Wittaya School	Educational Institution	4460	42.5	35.5	41.6	44.6	37.9	41.7	33.5	38.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
46	Athittan Kindergarten School	Educational Institution	4490	42.5	35.5	41.6	44.6	37.9	41.7	33.5	38.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	Educational Institution	5410	40.9	33.9	40.0	43.0	36.3	40.1	31.9	36.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
48	Ban Khao Bai Si School	Educational Institution	5460	40.8	33.8	39.9	42.9	36.2	40.0	31.8	36.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Subject to changes and approval by the Government of Thailand

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	Educational Institution	6330	39.5	32.5	38.6	41.6	34.9	38.7	30.5	35.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
50	Ban KM. 5 School	Educational Institution	6620	39.1	32.1	38.2	41.2	34.5	38.3	30.1	34.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
51	Royal Thai Fleet Sattahip District School	Educational Institution	8260	37.2	30.2	36.3	39.3	32.6	36.4	28.2	33.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
52	RTN. 8 Nursery	Educational Institution	7740	37.7	30.7	36.8	39.8	33.1	36.9	28.7	33.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
53	Juk Samet School	Educational Institution	7820	37.7	30.7	36.8	39.8	33.1	36.9	28.7	33.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
54	Juk Samet Child Development Center	Educational Institution	7990	37.5	30.5	36.6	39.6	32.9	36.7	28.5	33.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
55	Ban Chong Samaesarn Child Development Center	Educational Institution	8520	36.9	29.9	36.0	39.0	32.3	36.1	27.9	32.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
56	Samaesarn Subdistrict NFE Center	Educational Institution	8610	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
57	Ban Chong Samaesarn School	Educational Institution	8230	37.2	30.2	36.3	39.3	32.6	36.4	28.2	33.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
58	Wat Phala Vipassana Office	Religious Site	2470	47.7	40.7	46.8	49.8	43.1	46.9	38.7	43.5	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
59	Wat Phala	Religious Site	2510	47.5	40.5	46.6	49.6	42.9	46.7	38.5	43.3	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
60	Chao Li Hu Ong Yea Shrine	Religious Site	840	57.0	50.0	56.1	59.1	52.4	56.2	48.0	52.8	65.0	65.6	65.1	65.5	66.0	65.2	65.5	65.1	65.3
61	Wat Khlong Sai	Religious Site	1640	51.2	44.2	50.3	53.3	46.6	50.4	42.2	47.0	65.0	65.2	65.0	65.1	65.3	65.1	65.1	65.0	65.1
62	Wat Khiri Pawanaram	Religious Site	1630	51.3	44.3	50.4	53.4	46.7	50.5	42.3	47.1	65.0	65.2	65.0	65.1	65.3	65.1	65.2	65.0	65.1

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
63	Ban Chang Christ Church	Religious Site	2200	48.7	41.7	47.8	50.8	44.1	47.9	39.7	44.5	65.0	65.1	65.0	65.1	65.2	65.0	65.1	65.0	65.0
64	Ban Chang Church	Religious Site	2540	47.4	40.4	46.5	49.5	42.8	46.6	38.4	43.2	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
65	Wat Ban Khlong Bang Phai	Religious Site	1460	52.2	45.2	51.3	54.3	47.6	51.4	43.2	48.0	65.0	65.2	65.0	65.2	65.4	65.1	65.2	65.0	65.1
66	Admiral Prince Abhakara Kiartivongse Monument	Religious Site	1330	53.0	46.0	52.1	55.1	48.4	52.2	44.0	48.8	65.0	65.3	65.1	65.2	65.4	65.1	65.2	65.0	65.1
67	Royal Thai Naval Air Division Naval Aviation Museum	Religious Site	1240	53.7	46.7	52.8	55.8	49.1	52.9	44.7	49.5	65.0	65.3	65.1	65.3	65.5	65.1	65.3	65.0	65.1
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	Religious Site	1010	55.4	48.4	54.5	57.5	50.8	54.6	46.4	51.2	65.0	65.5	65.1	65.4	65.7	65.2	65.4	65.1	65.2
69	Somdej Phra Pathom (Air Defense Regiment 1)	Religious Site	660	59.1	52.1	58.2	61.2	54.5	58.3	50.1	54.9	65.0	66.0	65.2	65.8	66.5	65.4	65.8	65.1	65.4
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	Religious Site	550	60.7	53.7	59.8	62.8	56.1	59.9	51.7	56.5	65.0	66.4	65.3	66.1	67.1	65.5	66.2	65.2	65.6
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	Religious Site	90	76.4	69.4	75.5	78.5	71.8	75.6	67.4	72.2	65.0	76.7	70.8	75.9	78.7	72.7	76.0	69.4	73.0
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	Religious Site	40	83.5	76.5	82.6	85.6	78.9	82.7	74.5	79.3	65.0	83.5	76.8	82.7	85.6	79.1	82.8	74.9	79.4
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	Religious Site	180	70.4	63.4	69.5	72.5	65.8	69.6	61.4	66.2	65.0	71.5	67.3	70.8	73.2	68.4	70.9	66.6	68.7
74	Wat Sa Kaeo	Religious Site	1720	50.8	43.8	49.9	52.9	46.2	50.0	41.8	46.6	65.0	65.2	65.0	65.1	65.3	65.1	65.1	65.0	65.1
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	Religious Site	1200	53.9	46.9	53.0	56.0	49.3	53.1	44.9	49.7	65.0	65.3	65.1	65.3	65.5	65.1	65.3	65.0	65.1
76	Wat Sombun Naram	Religious Site	5070	41.4	34.4	40.5	43.5	36.8	40.6	32.4	37.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
77	Ban Chang Abundant Grace Church	Religious Site	6380	39.4	32.4	38.5	41.5	34.8	38.6	30.4	35.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
78	Wat Samnak Kathon	Religious Site	7140	38.4	31.4	37.5	40.5	33.8	37.6	29.4	34.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
79	Wat Suwan Rangsan	Religious Site	5560	40.6	33.6	39.7	42.7	36.0	39.8	31.6	36.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
80	Wat Nong Bot	Religious Site	7810	37.7	30.7	36.8	39.8	33.1	36.9	28.7	33.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
81	The Shrine of Luang Tia Chak Mak	Religious Site	9630	35.8	28.8	34.9	37.9	31.2	35.0	26.8	31.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
82	Wat Chak Mak	Religious Site	9700	35.8	28.8	34.9	37.9	31.2	35.0	26.8	31.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
83	The Shrine of Luang Tia Ban Phayun	Religious Site	4870	41.8	34.8	40.9	43.9	37.2	41.0	32.8	37.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
84	The Shrine of King Taksin the Great (Ban Chang)	Religious Site	4790	41.9	34.9	41.0	44.0	37.3	41.1	32.9	37.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
85	Wat Chonthararam (Phayun)	Religious Site	4280	42.9	35.9	42.0	45.0	38.3	42.1	33.9	38.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
86	Masjid Dawatul Islam	Religious Site	3450	44.8	37.8	43.9	46.9	40.2	44.0	35.8	40.6	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
87	Chinese shrine at the Buddha Dhamma Foundation	Religious Site	4340	42.8	35.8	41.9	44.9	38.2	42.0	33.8	38.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
88	The Shrine of Luang Tia Ban Chang	Religious Site	3820	43.9	36.9	43.0	46.0	39.3	43.1	34.9	39.7	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
89	The Shrine of Laoia Guan Yu Ban Chang	Religious Site	3920	43.7	36.7	42.8	45.8	39.1	42.9	34.7	39.5	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
90	Wat Ban Chang	Religious Site	3900	43.7	36.7	42.8	45.8	39.1	42.9	34.7	39.5	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
91	Wat Prachummit Bamrung	Religious Site	6710	39.0	32.0	38.1	41.1	34.4	38.2	30.0	34.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
92	The Shrine of Luang Tia Noen Kraprok 1	Religious Site	7340	38.2	31.2	37.3	40.3	33.6	37.4	29.2	34.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
93	The Shrine of Luang Tia Noen Kraprok 2	Religious Site	7540	38.0	31.0	37.1	40.1	33.4	37.2	29.0	33.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
94	Wat Noen Kraprok	Religious Site	7630	37.9	30.9	37.0	40.0	33.3	37.1	28.9	33.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
95	Wat Phudon Nim Sanoh	Religious Site	8670	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
96	Church of Christ Ban Chang	Religious Site	8560	36.9	29.9	36.0	39.0	32.3	36.1	27.9	32.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
97	Anek Kusala Sala (Viharn Sien)	Religious Site	11040	34.7	27.7	33.8	36.8	30.1	33.9	25.7	30.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
98	Wat Yan Nasangwararam	Religious Site	11080	34.6	27.6	33.7	36.7	30.0	33.8	25.6	30.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
99	Sirisirirak Monastery	Religious Site	11440	34.4	27.4	33.5	36.5	29.8	33.6	25.4	30.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
100	Anan Buraparam Meditation Center	Religious Site	11950	34.0	27.0	33.1	36.1	29.4	33.2	25.0	29.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
101	Wat Map Fakthong	Religious Site	13170	33.1	26.1	32.2	35.2	28.5	32.3	24.1	28.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
102	Khao Chi Chan Image of Lord Buddha	Religious Site	9080	36.4	29.4	35.5	38.5	31.8	35.6	27.4	32.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
103	Wat Khao Chi Chan	Religious Site	7420	38.1	31.1	37.2	40.2	33.5	37.3	29.1	33.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
104	Rat Samakkhi Temple	Religious Site	2990	46.0	39.0	45.1	48.1	41.4	45.2	37.0	41.8	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
105	The Shrine of Chao Mae Kuan Im	Religious Site	3220	45.4	38.4	44.5	47.5	40.8	44.6	36.4	41.2	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	Religious Site	2690	46.9	39.9	46.0	49.0	42.3	46.1	37.9	42.7	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
107	Prakai Dhamma Meditation Center	Religious Site	5810	40.2	33.2	39.3	42.3	35.6	39.4	31.2	36.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
108	KM.8 Meditation Center	Religious Site	4650	42.2	35.2	41.3	44.3	37.6	41.4	33.2	38.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
109	Wat Rangsee Sunthorn (KM.5)	Religious Site	6670	39.0	32.0	38.1	41.1	34.4	38.2	30.0	34.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	Religious Site	7340	38.2	31.2	37.3	40.3	33.6	37.4	29.2	34.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
111	Sattahip Meditation Center (Khao Bandai Kaew)	Religious Site	7400	38.1	31.1	37.2	40.2	33.5	37.3	29.1	33.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
112	Wat Tung Prong	Religious Site	8200	37.2	30.2	36.3	39.3	32.6	36.4	28.2	33.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
113	Khao Phlu Ta Luang Meditation Center	Religious Site	4220	43.0	36.0	42.1	45.1	38.4	42.2	34.0	38.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	Religious Site	4030	43.4	36.4	42.5	45.5	38.8	42.6	34.4	39.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

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Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
115	Wat Khao Bai Si Santitham	Religious Site	4690	42.1	35.1	41.2	44.2	37.5	41.3	33.1	37.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
116	Welu Amphawan Vipassana Office	Religious Site	4960	41.6	34.6	40.7	43.7	37.0	40.8	32.6	37.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	Religious Site	5590	40.6	33.6	39.7	42.7	36.0	39.8	31.6	36.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	Religious Site	5680	40.4	33.4	39.5	42.5	35.8	39.6	31.4	36.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
119	Samaesarn Pattanakarn Church	Religious Site	6340	39.5	32.5	38.6	41.6	34.9	38.7	30.5	35.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	Religious Site	7130	38.5	31.5	37.6	40.6	33.9	37.7	29.5	34.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
121	Wat Chong Samaesarn	Religious Site	8660	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
122	Viharn Luang Por Dam	Religious Site	8950	36.5	29.5	35.6	38.6	31.9	35.7	27.5	32.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
123	The Shrine of King Taksin the Great (Samaesarn)	Religious Site	9230	36.2	29.2	35.3	38.3	31.6	35.4	27.2	32.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
124	Thai Island and Sea Natural History Museum	Religious Site	9160	36.3	29.3	35.4	38.4	31.7	35.5	27.3	32.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	Religious Site	9260	36.2	29.2	35.3	38.3	31.6	35.4	27.2	32.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	Religious Site	9280	36.2	29.2	35.3	38.3	31.6	35.4	27.2	32.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
127	Eastern-Nong Muang Community Health Service Center	Medical Institution	1460	52.2	45.2	51.3	54.3	47.6	51.4	43.2	48.0	65.0	65.2	65.0	65.2	65.4	65.1	65.2	65.0	65.1
128	Phala Subdistrict Health Promotion Hospital	Medical Institution	2860	46.4	39.4	45.5	48.5	41.8	45.6	37.4	42.2	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
129	Ban Chang Hospital	Medical Institution	4200	43.1	36.1	42.2	45.2	38.5	42.3	34.1	38.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Subject to changes and approval by the Government of Thailand

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	Medical Institution	1480	52.1	45.1	51.2	54.2	47.5	51.3	43.1	47.9	65.0	65.2	65.0	65.2	65.3	65.1	65.2	65.0	65.1
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	Medical Institution	2620	47.2	40.2	46.3	49.3	42.6	46.4	38.2	43.0	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	Medical Institution	5200	41.2	34.2	40.3	43.3	36.6	40.4	32.2	37.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
133	Ban Yai Ra Subdistrict Health Promotion Hospital	Medical Institution	6760	38.9	31.9	38.0	41.0	34.3	38.1	29.9	34.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
134	Sam Nak Thon Subdistrict Health Promotion Hospital	Medical Institution	8190	37.3	30.3	36.4	39.4	32.7	36.5	28.3	33.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
135	Ban Chak Mak Subdistrict Health Promotion Hospital	Medical Institution	11200	34.5	27.5	33.6	36.6	29.9	33.7	25.5	30.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
136	Ban Phayun Subdistrict Health Promotion Hospital	Medical Institution	5250	41.1	34.1	40.2	43.2	36.5	40.3	32.1	36.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	Medical Institution	9310	36.1	29.1	35.2	38.2	31.5	35.3	27.1	31.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
138	Phudon Huai Mahat Community Health Service Unit	Medical Institution	9740	35.8	28.8	34.9	37.9	31.2	35.0	26.8	31.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
139	Wat Yan Nasangwararam Hospital	Medical Institution	11880	34.0	27.0	33.1	36.1	29.4	33.2	25.0	29.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	Medical Institution	12080	33.9	26.9	33.0	36.0	29.3	33.1	24.9	29.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	Medical Institution	9390	36.1	29.1	35.2	38.2	31.5	35.3	27.1	31.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	Medical Institution	1910	49.9	42.9	49.0	52.0	45.3	49.1	40.9	45.7	65.0	65.1	65.0	65.1	65.2	65.0	65.1	65.0	65.1
143	Sattahip Hospital KM.10	Medical Institution	3460	44.7	37.7	43.8	46.8	40.1	43.9	35.7	40.5	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	Medical Institution	8590	36.8	29.8	35.9	38.9	32.2	36.0	27.8	32.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Phala Subdistrict Municipality (Phala Subdistrict, Ban Chang District, Rayong)																			
145	Village No. 1 Ban Sakulthong	Community	4710	42.1	35.1	41.2	44.2	37.5	41.3	33.1	37.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
146	Village No. 2, Ban Kilo 16	Community	1500	52.0	45.0	51.1	54.1	47.4	51.2	43.0	47.8	65.0	65.2	65.0	65.2	65.3	65.1	65.2	65.0	65.1

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
147	Village No. 4, Ban Tung Prong	Community	1290	53.3	46.3	52.4	55.4	48.7	52.5	44.3	49.1	65.0	65.3	65.1	65.2	65.5	65.1	65.2	65.0	65.1
148	Village No. 5, Phala Subdistrict	Community	1570	51.6	44.6	50.7	53.7	47.0	50.8	42.6	47.4	65.0	65.2	65.0	65.2	65.3	65.1	65.2	65.0	65.1
149	Village No. 6, Ban Takat	Community	3110	45.7	38.7	44.8	47.8	41.1	44.9	36.7	41.5	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
150	Village No. 7, Ban Khlong Sai	Community	1940	49.8	42.8	48.9	51.9	45.2	49.0	40.8	45.6	65.0	65.1	65.0	65.1	65.2	65.0	65.1	65.0	65.0
	Sam Nak Thon Subdistrict Municipality (Sam Nak Thon Subdistrict, Ban Chang District, Rayong Province)																			
151	Village No. 1 Ban Sam Nak Thon	Community	6450	39.3	32.3	38.4	41.4	34.7	38.5	30.3	35.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
152	Village No. 2, Ban Chak Mak	Community	9810	35.7	28.7	34.8	37.8	31.1	34.9	26.7	31.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
153	Village No. 3, Ban Sa Kaeo	Community	1870	50.1	43.1	49.2	52.2	45.5	49.3	41.1	45.9	65.0	65.1	65.0	65.1	65.2	65.0	65.1	65.0	65.1
154	Sa Kaeo Community 1	Community	3590	44.4	37.4	43.5	46.5	39.8	43.6	35.4	40.2	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
155	Sa Kaeo Community 2	Community	2610	47.2	40.2	46.3	49.3	42.6	46.4	38.2	43.0	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
156	Village No. 4, Ban Khlong Bang Phai	Community	1320	53.1	46.1	52.2	55.2	48.5	52.3	44.1	48.9	65.0	65.3	65.1	65.2	65.4	65.1	65.2	65.0	65.1
157	Village No. 5, Ban Yai Ra	Community	5130	41.3	34.3	40.4	43.4	36.7	40.5	32.3	37.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
158	Village No. 6, Ban Khao Khrok	Community	4400	42.7	35.7	41.8	44.8	38.1	41.9	33.7	38.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
159	Village no. 7, Ban Nong Takhian	Community	9280	36.2	29.2	35.3	38.3	31.6	35.4	27.2	32.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
160	Village No. 8, Ban Cherng Khao	Community	1880	50.0	43.0	49.1	52.1	45.4	49.2	41.0	45.8	65.0	65.1	65.0	65.1	65.2	65.0	65.1	65.0	65.1
	Ban Chang Municipality (Ban Chang Subdistrict, Ban Chang District, Rayong)																			
161	Eastern-Nong Muang Community	Community	1120	54.5	47.5	53.6	56.6	49.9	53.7	45.5	50.3	65.0	65.4	65.1	65.3	65.6	65.1	65.3	65.0	65.1
162	Wat Khiri Pawanaram Community	Community	2380	48.0	41.0	47.1	50.1	43.4	47.2	39.0	43.8	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
163	Ban Chang-Phala Community	Community	2410	47.9	40.9	47.0	50.0	43.3	47.1	38.9	43.7	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
164	Ruam Sompong Community	Community	3320	45.1	38.1	44.2	47.2	40.5	44.3	36.1	40.9	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
165	Ming Mongkol Community	Community	4080	43.3	36.3	42.4	45.4	38.7	42.5	34.3	39.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
166	Jor Koo Community	Community	4160	43.1	36.1	42.2	45.2	38.5	42.3	34.1	38.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
167	Wirat Phatthana Department Store Community	Community	4340	42.8	35.8	41.9	44.9	38.2	42.0	33.8	38.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
168	Thep Chinda Community	Community	4570	42.3	35.3	41.4	44.4	37.7	41.5	33.3	38.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
169	Health Park Community	Community	4680	42.1	35.1	41.2	44.2	37.5	41.3	33.1	37.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
170	Wat Ban Chang Community	Community	4970	41.6	34.6	40.7	43.7	37.0	40.8	32.6	37.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
171	Dong Dang Community	Community	5060	41.4	34.4	40.5	43.5	36.8	40.6	32.4	37.2	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
172	Night Market Community	Community	5190	41.2	34.2	40.3	43.3	36.6	40.4	32.2	37.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
173	Ruam Mitr Community	Community	5370	40.9	33.9	40.0	43.0	36.3	40.1	31.9	36.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
174	Ban Chang - Noen Kraprok Community	Community	5800	40.3	33.3	39.4	42.4	35.7	39.5	31.3	36.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
175	Dao Pitak Community	Community	5950	40.0	33.0	39.1	42.1	35.4	39.2	31.0	35.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
176	Taiwa Community	Community	7700	37.8	30.8	36.9	39.9	33.2	37.0	28.8	33.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
177	East Ban Noen Kraprok Community, Prachummit	Community	7810	37.7	30.7	36.8	39.8	33.1	36.9	28.7	33.5	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
178	Ban Noen Kraprok Community	Community	8490	36.9	29.9	36.0	39.0	32.3	36.1	27.9	32.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
179	Nong Yai Community	Community	8830	36.6	29.6	35.7	38.7	32.0	35.8	27.6	32.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Ban Chang Subdistrict Municipality (Ban Chang Subdistrict, Ban Chang District, Rayong)																			
180	Village No. 1, Pan Din Tai	Community	7970	37.5	30.5	36.6	39.6	32.9	36.7	28.5	33.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
181	Village No. 2, Ban Prachummit	Community	5140	41.3	34.3	40.4	43.4	36.7	40.5	32.3	37.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
182	Village No. 3, Ban Noen Samre	Community	4990	41.6	34.6	40.7	43.7	37.0	40.8	32.6	37.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
183	Village No. 4, Ban Phayun	Community	3320	45.1	38.1	44.2	47.2	40.5	44.3	36.1	40.9	65.0	65.0	65.0	65.0	65.1	65.0	65.0	65.0	65.0
184	Village No. 6, Ban Noen Kraprok	Community	8960	36.5	29.5	35.6	38.6	31.9	35.7	27.5	32.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
185	Village No. 7, Ban Khao Phudon Huai Mahat	Community	9650	35.8	28.8	34.9	37.9	31.2	35.0	26.8	31.6	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Huai Yai Subdistrict Municipality (Huai Yai Subdistrict, Bang Lamung District, Chonburi)																			
186	Village No. 11, Ban Map Fakthong	Community	8000	37.5	30.5	36.6	39.6	32.9	36.7	28.5	33.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
187	Village No. 13, Ban Nong Phakkut	Community	10640	35.0	28.0	34.1	37.1	30.4	34.2	26.0	30.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Khao Chi Chan Subdistrict Municipality (Na Jomtien Subdistrict, Sattahip District, Chonburi)																			
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	Community	10680	35.0	28.0	34.1	37.1	30.4	34.2	26.0	30.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	Community	8800	36.6	29.6	35.7	38.7	32.0	35.8	27.6	32.4	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Kled Kaew Subdistrict Municipality (Bang Sare Subdistrict, Sattahip District, Chonburi)																			
190	Village No. 6 (Ban Khao Krating Community)	Community	8540	36.9	29.9	36.0	39.0	32.3	36.1	27.9	32.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
191	Village No. 7 (Ban Nong Hin Community)	Community	7230	38.3	31.3	37.4	40.4	33.7	37.5	29.3	34.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
192	Village No. 11 (Ban Khong Wanphen Community)	Community	6020	39.9	32.9	39.0	42.0	35.3	39.1	30.9	35.7	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Phlu Ta Luang Subdistrict, Sattahip District, Chonburi																			
193	Village No. 1, Ban Phlu Ta Luang	Community	2940	46.2	39.2	45.3	48.3	41.6	45.4	37.2	42.0	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
194	Village No. 2, Ban Khalot	Community	2290	48.3	41.3	47.4	50.4	43.7	47.5	39.3	44.1	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
195	Village No. 3, Ban Khlong Phai	Community	2340	48.1	41.1	47.2	50.2	43.5	47.3	39.1	43.9	65.0	65.1	65.0	65.1	65.1	65.0	65.1	65.0	65.0
196	Village No. 4, Ban Khlong Phlu Ta Luang	Community	4110	43.2	36.2	42.3	45.3	38.6	42.4	34.2	39.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0

Table 5.2- 4 Forecasted 24-hour average noise levels in sensitive areas and communities (construction phase)

Sequence No.	Sensitive areas and communities	Type of sensitive area/community	Distance from border of construction area (meters) site border/fence	24 hours noise level from construction activities[2/] (dBA)								Noise levels in current conditions [4/]	Total noise level (including noise in current conditions)[3/] (dBA)							
				Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction within stations/systemsand architectural work within the skytrain station		Land adjustments/soil quality improvement/groundwork	Filling work for embankments and safety areas around the taxiways/pavement structure construction work	Ground structure/surface work	Excavations and driving of piling/extraction of piling heads and runway underpass roof	Foundation work	Structural work	Architecture and system work	Construction work within station/system work and architectural work inside electric train station
			(meters)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
197	Village No. 5, Ban Khao Bai Si	Community	3010	46.0	39.0	45.1	48.1	41.4	45.2	37.0	41.8	65.0	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.0
198	Village No. 6, Ban Khao Tabaek	Community	4730	42.0	35.0	41.1	44.1	37.4	41.2	33.0	37.8	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
199	Village No. 7, Ban Nong Ya Noi	Community	5930	40.1	33.1	39.2	42.2	35.5	39.3	31.1	35.9	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
200	Village No. 8, Ban Nong Ya	Community	7120	38.5	31.5	37.6	40.6	33.9	37.7	29.5	34.3	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Samaesarn Subdistrict, Sattahip District, Chonburi																			
201	Ban Nong Krachong Community	Community	5840	40.2	33.2	39.3	42.3	35.6	39.4	31.2	36.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Standard 24-hour average noise level[1/]				70																

Notes : [1/]Standard general noise level in accordance with National Environment Board Notification No. 15 (1997)

[2/] Noise level from construction activities at different stages calculated using the formula: Lp2= Lp1-20log (R2/R1)

[3/] Total noise level calculated using total noise formula. $L_{\text{รวม}}=10 \log [\sum_{i=1}^{n} 10^{Lpi/10}]$

[4/] Data from set 1, rainy season, taken on 18 - 25 July 2019 and set 2, dry season, taken on 3 - 10 November 2019). Use the maximum 24-hour average noise level (65 dBA) to represent noise levels in sensitive areas and communities under current conditions.

[5/] Noise level measurement points in sensitive areas and communities under current conditions (same period of time as [4/]).

2) Noise levels within the construction area

In addition to the assessment of impacts from noise on the sensitive areas and nearby communities, the impact of noise is also evaluated from workers during the construction phase with operations conducted for 8 hours per day. In cases where the machinery for each operation is working simultaneously, with noise levels calculated from noise affecting workers throughout the 8-hour period, as shown in Table 5.2-2, it was found that the noise level was 84.8 - 90.0 dBA. Noise levels from excavations and the driving of piling/extraction of piling heads and runway underpass roofs equaled 90.0 dBA, which exceeds the standard average level of noise allowed for employees throughout the day according to the notification of the Labor Protection and Welfare Department 2018, which specifies that noise levels must not exceed 85 dBA. Therefore, it is expected that impact on workers is high. However, normal construction operations will not require machinery to be used at the same time.

In addition, in project operations, there are management systems for safety, occupational health, and the working environment to reduce the loudness of noise arising from the activities. Workers working within 15 meters of machinery throughout the 8-hour workday must have ear plugs or ear muffs as set in the Ministerial Notification Re: Determination of Standards for Administration and Management of Occupational Safety, Health and Environment regarding Heat, Light and Noise, 2016 (Chapter 4 Personal Protective Equipment), which requires ear muffs that reduce noise by not less than 25 dBA and ear plugs that reduce noise by not less than 15 dBA, and the Notification of the Department of Labor Protection and Welfare Re: Standards for Average Noise Levels Allowed for Employees per Work Day, 2018. The project must oversee contractors to strictly implement the measures for workers in order to reduce the impacts on workers' health to be contained to a low level in accordance with the standard specifications.

Wearing ear plugs and ear muffs can help reduce noise levels (Noise Reduction Rate (NRR)) by not less than 15 and 25 dBA, respectively. Noise levels while wearing noise reducing equipment (Effective A –Weighted Noise Level; ENL) are calculated using the formula:

ENL = dB(A) – (Derated NRR - 7) .....(5)

When ENL = Effective A–Weighted Noise Level (dBA)

dB(A) = Noise level in operation areas (dBA) in this case is the total noise level from construction activities.

Derated NRR = Ear muffs reduce noise by 25% from the Label NRR.
Formable Ear Plugs reduce noise by 50% of the Label NRR,
all other ear plugs reduce noise by 70% from the Label NRR.

(Source : U.S.DHHS, Criteria for A Recommended Standard, Occupational Noise Exposure, Revised Criteria1998)

From project measures requiring that all workers must wear personal protective equipment to reduce noise levels, it was found that total noise levels for workers wearing ear plugs to reduce total noise caused by activities was reduced by 84.3 - 89.5 dBA, or in the case of wearing ear muffs, the total noise level from such activities was reduced to 73.1 - 78.3 dBA. For the total noise level from each piece of equipment received during the 8-hour workday, details are as shown in Table 5.2-5. Therefore, the project requires that ear muffs must be worn by workers working within 15 meters of machinery used for demolition/road improvements/renovations/general construction activities. As for other activities, ear muffs are to be worn to reduce the noise level received from activities to be contained within standard levels.

Table 5.2-5 Predicted noise levels per worker operating in the construction phase

Construction activities	Average noise level throughout 8 hours of operation (dBA)		
	Total noise level from machinery at 15 meters[2/]	Total noise level when wearing ear plugs (NRR=15 dBA)[3/]	Total noise level when wearing ear muffs (NRR=25 dBA)[3/]
Land adjustments/soil quality improvement/groundwork	88.3	87.8	76.6
Filling work for embankments and safety areas around the taxiways/pavement structure construction work	86.8	86.3	75.1
Ground structure/surface work	89.9	89.4	78.2
Excavations and driving of piling/extraction of piling heads and runway underpass roof	90.0	89.5	78.3

Foundation work	85.2	84.7	73.5
Structural work	88.2	87.7	76.5
Architecture and system work	84.8	84.3	73.1
Construction work within station/system work and architectural work inside electric train station	89.6	89.1	77.9
Standard average noise level throughout 8 hours of operation[1/]	85		

Notes : [1/] Standard workday-average general noise level allowed to employees to receive in accordance with the notification of the Department of Labor Protection and Welfare (2018)
[2/] Refer to the total noise levels from Table 5.2-3
[3/] Calculated using ENL = dB(A) – (Derated NRR - 7)

3) Noise levels from transportation of project construction materials

Assessment of impacts from noise caused by transportation of construction materials on sensitive areas and communities near transportation routes can be calculated from the level of noise caused by the activities using the following mathematical formulas (referenced from U.S. Department of Transportation, FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December 1978):

3.1) Calculate the noise level of heavy trucks with diesel engines using formula (1):

$(L_0)_{EHT} = 24.6 \log_{10}(S)+38.5$ .....(1)

When $(L_0)_{EHT}$ = Noise level of heavy duty trucks at a distance of 15 meters (dBA)
S = Average speed of each vehicle type (kilometers per hour). In this case, the speed is 60 kilometers per hour.

3.2) Calculate 1-hour average noise level from transportation of construction materials at receiving point using formula (2):

$Leq(hi) = (L_0)_{Ei}+10\log10(NiD_0/SiT)+10\log_{10}(D_0/D)^{1/□}- 25+\Delta S$ .....(2)

When Leq(hi) = 1-hour average noise level from transportation of construction materials at noise receiving point
$(L_0)_{Ei}$ = Noise levels of "i" type vehicles, in the case that the selected vehicle type is large trucks $(L_0)_{EHT}$
T = Period for which the noise level is calculated (h) corresponding to Ni, in which T is generally equal to 1 hour (T = 1 h or <1h>)
Ni = Number of "i" type vehicles passing the road during period "T"
D = Perpendicular distance between road center line and receiving point (meters)
D_0 = Reference distance for noise level from vehicle exhaust point, set at 15 meters.
Si = Average speed (kilometers per hour) of vehicle type "i" while traveling on the road.
α = Component (no unit) relating to sound-absorbing characteristics of the area between the road and the noise receiving point. In this case, the nature of the area between the road and the noise receiving point is comprised of scattered buildings and structures, or trees between the noise source and receiving point, or no buildings but consisting of soft ground covered with vegetation, in which □ = 0.5.
ΔS = Shielding factor due to the obstacles between noise source and receiving point, such as trees and walls. In this case, the shielding factor is set at 4.5 dBA (soft ground covered in vegetation with no structures).

From formula (1), project material transportation activities consist of: loading and transporting of soil, stone, sand and asphalt cement by 10-wheel trucks, in which the law stipulates a maximum load of 25 tons with a capacity of approximately 16 tons per vehicle; loading cement and steel by 3-axle, 18-wheel trailer trucks, in which the law stipulates a maximum load of 47 tons, with a capacity of approximately 30 tons per vehicle. Transportation is required to take 10 hours per day, from 9.00 a.m. - 4.00 p.m. (7 hours) during the day and 6.00 p.m. - 9.00 p.m. during the night (3 hours).

Assuming that construction material transportation vehicles are heavy trucks passing through communities with a speed limit of 60 kilometers per hour, the noise levels of large trucks can be calculated as follows:

$(L_0)_{EHT}$ = $24.6 \log_{10}(60)+38.5$

= 82.2 dBA

Details of truck types, material types, and distances along routes of transport, comprising 4 routes, namely highway numbers 3, 332, 3126, and 3376, each of which has an average of 3 - 5 trucks passing per hour, are as detailed in Table 5.2- 6

When considering noise levels from the transportation of project construction materials, which consist of multiple types and large quantities, base the assessment assumptions on the worst case scenario. Assume that each route has an average of 10 trucks per hour, with transportation scheduled for 10 hours per day, with noise level caused by each material transportation trucks being equal (82.2 dBA), the impact of noise levels from transporting project materials on 88 sensitive areas and communities (52 sensitive areas and 36 communities) along the 500-meter-long transportation route found that the 24-hour average noise level at destination sites along the transportation route (highway numbers 3, 332, 3126, and 3376) as shown in Figure 5.2-1Project construction material transportation within a range of 12 - 416 meters was within 40.2 - 63.1 dBA, with a baseline noise level (current noise level) at 60.2 - 65.0 dBA. When evaluated in conjunction with the construction material transportation noise levels, the noise levels are at 61.3 - 67.2 DBA, which is within all normal noise level standards in accordance with Notification No. 15 of the National Environment Board (1997), which specifies that the 24-hour average noise level must not exceed 70 dBA, as shown in Table 5.2-7. Therefore, the impact of noise caused by the transportation of project construction materials is low.

Table 5.2- 6 List of construction material transportation trucks used in the project

Heavy duty truck (material type)	Transportation route	Transportation route distance (kilometers)	Number of Trucks (Vehicles per hour)
10-wheeled truck (13,860,288 tons of filling sand)	Highway 332	9.1	3
3-axle 18-wheeled trailer truck (93,527 tons of steel bars) 10-wheeled truck (2,465,960 tons of stones) 10-wheeled truck (3,225,858 tons of sand) 3-axle 18-wheeled trailer truck (928,648 tons of cement) 3-axle 18-wheeled trailer truck (93,527 tons of steel bars)	Highway 3	36.5	5
3-axle 18-wheeled trailer truck (93,527 tons of steel bars) 10-wheeled truck (547,296 tons of asphalt cement)	Highway 3376	79.4	3
Reserve materials from other places (Petchaburi and Ratchaburi) by boat, brought from Chuk Samet Pier and transported later to the project area using 10-wheel trailer trucks.	Highway 3126	12.7	1

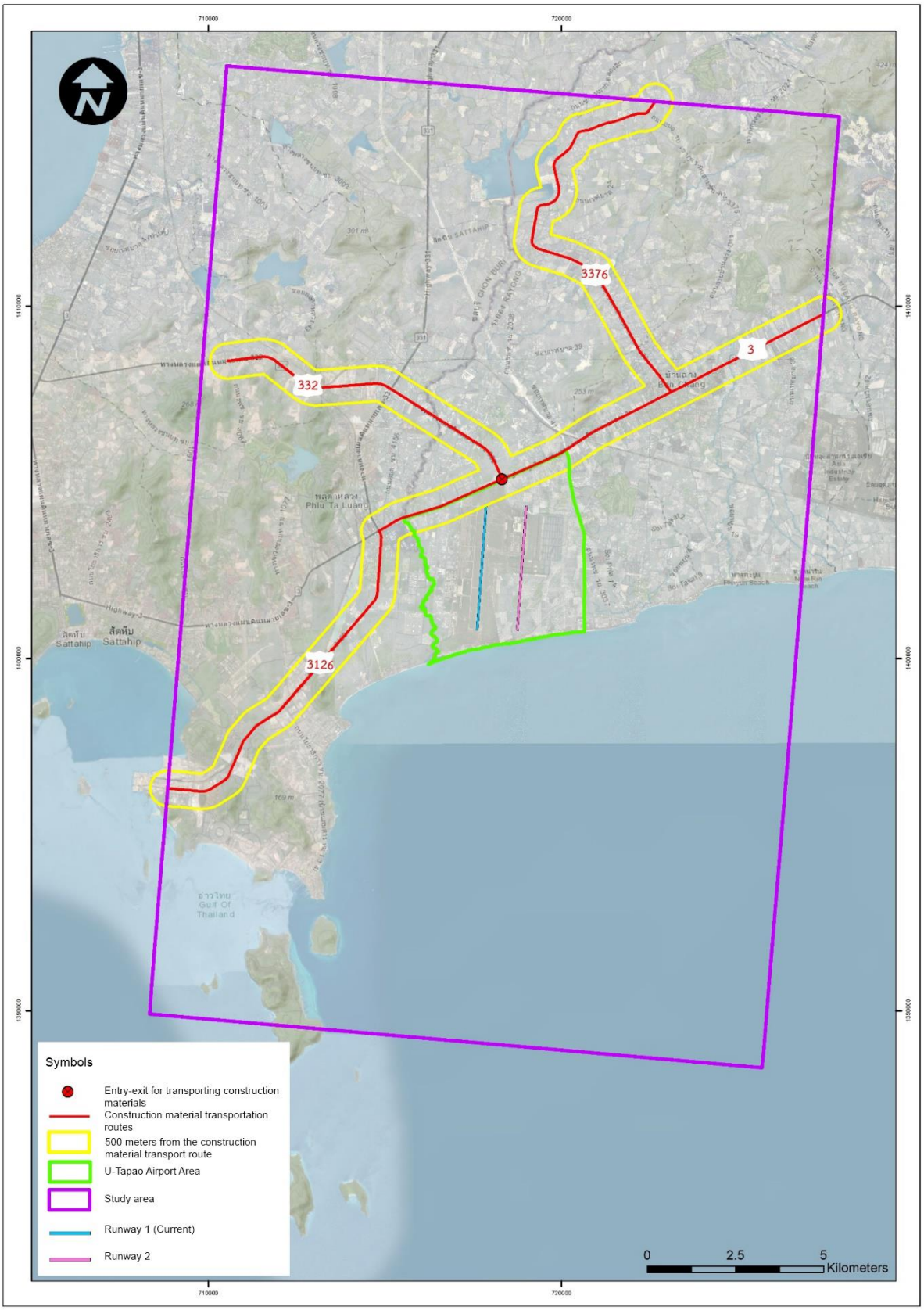


Figure 5.2-1 Project construction material transportationroutes

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
1	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	Educational Institution	27	65.0	58.0	-	-	-	65.8	-	-	-
2	Wat Khiri Pawanaram School	Educational Institution	76	63.0[3/]	51.3	-	-	-	63.3	-	-	-
3	Ban Khlong Bang Phai School	Educational Institution	155	61.5[3/]	46.7	-	-	-	61.6	-	-	-
4	Pattanavechsuksa School	Educational Institution	44	60.2[3/]	-	-	54.9	-	-	-	61.3	-
5	Pattanavech College	Educational Institution	57	65.0	-	-	53.2	-	-	-	65.3	-
6	Sajjaseuksa School	Educational Institution	104	65.0	-	-	-	49.3	-	-	-	65.1
7	Ban Chang District Center for Non-Formal and Informal Education	Educational Institution	20	65.0	-	-	-	59.9	-	-	-	66.2
8	Wat Suwan Rangsan Community School	Educational Institution	247	65.0	-	-	-	43.6	-	-	-	65.0
9	Ban Yai Ra Child Development Center	Educational Institution	307	65.0	-	-	-	42.2	-	-	-	65.0
10	Wat Samnak Kathon School	Educational Institution	16	65.0	-	-	-	61.6	-	-	-	66.6
11	Ban Sam Nak Thon Child Development Center	Educational Institution	158	65.0	-	-	-	46.5	-	-	-	65.1
12	Wat Ban Chang School (Boonrawdprachanukul)	Educational Institution	416	65.0	40.2	-	-	-	65.0	-	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
13	Udom Wittayanukun School	Educational Institution	29	65.0	57.6	-	-	-	65.7	-	-	-
14	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	Educational Institution	197	65.0	45.1	-	-	-	65.0	-	-	-
15	Wat Noen Kraprok School	Educational Institution	197	65.0	45.1	-	-	-	65.0	-	-	-
16	Aksorn Business Administration Technological College	Educational Institution	29	65.0	57.6	-	-	-	65.7	-	-	-
17	Banchang Karnchanakul Wittaya School	Educational Institution	335	65.0	-	-	-	41.6	-	-	-	65.0
18	Ban Khalot Child Development Center	Educational Institution	188	65.0	-	45.4	-	-	-	65.0	-	-
19	Ban Khalot School	Educational Institution	186	65.0	-	45.5	-	-	-	65.0	-	-
20	Athittan Kindergarten School	Educational Institution	203	65.0	-	-	44.9	-	-	-	65.0	-
21	RTN. 8 Nursery	Educational Institution	321	65.0	-	41.9	-	-	-	65.0	-	-
22	Juk Samet School	Educational Institution	319	65.0	-	42.0	-	-	-	65.0	-	-
23	Juk Samet Child Development Center	Educational Institution	405	65.0	-	40.4	-	-	-	65.0	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
24	Wat Khiri Pawanaram	Community Temple	52	65.0	53.8	-	-	-	65.3	-	-	-
25	Ban Chang Christ Church	Church	66	65.0	52.3	-	-	-	65.2	-	-	-
26	Ban Chang Church	Church	85	65.0	50.6	-	-	-	65.2	-	-	-
27	Wat Ban Khlong Bang Phai	Community Temple	57	65.0	53.2	-	-	-	65.3	-	-	-
28	Admiral Prince Abhakara Kiartivongse Monument	Monument	399	65.0	40.5	-	-	-	65.0	-	-	-
29	Royal Thai Naval Air Division Naval Aviation Museum	Historical Museum	194	65.0	45.2	-	-	-	65.0	-	-	-
30	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	Monument	71	65.0	51.8	-	-	-	65.2	-	-	-
31	Somdej Phra Pathom (Air Defense Regiment 1)	Religious Site and Buddhist Place of Worship	142	65.0	47.2	-	-	-	65.1	-	-	-
32	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	Monument	42	65.0	55.1	-	-	-	65.4	-	-	-
33	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	Monument	80	65.0	51.0	-	-	-	65.2	-	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
34	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	Religious Site and Buddhist Place of Worship	36	65.0	56.2	-	-	-	65.5	-	-	-
35	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	Shrine	106	65.0	49.1	-	-	-	65.1	-	-	-
36	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	Site to pay respect to King Taksin the Great	351	65.0	41.3	-	-	-	65.0	-	-	-
37	Ban Chang Abundant Grace Church	Church	114	65.0	-	-	-	48.7	-	-	-	65.1
38	Wat Samnak Kathon	Community Temple	83	65.0	-	-	-	50.7	-	-	-	65.2
39	Wat Suwan Rangsan	Community Temple	307	65.0	-	-	-	42.2	-	-	-	65.0
40	The Shrine of Luang Tia Chak Mak	Chinese Shrine	172	65.0	-	-	-	46.0	-	-	-	65.1
41	Wat Chak Mak	Community Temple	263	65.0	-	-	-	43.2	-	-	-	65.0
42	Chinese shrine at the Buddha Dhamma Foundation	Chinese Shrine	61	65.0	52.8	-	-	-	65.3	-	-	-
43	Wat Ban Chang	Community Temple	411	65.0	40.3	-	-	-	65.0	-	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
44	The Shrine of Luang Tia Noen Kraprok 2	Chinese Shrine	32	65.0	56.9	-	-	-	65.6	-	-	-
45	Wat Noen Kraprok	Community Temple	92	65.0	50.1	-	-	-	65.1	-	-	-
46	Rat Samakkhi Temple	Community Temple	61	65.0	-	52.8	-	-	-	65.3	-	-
47	The Shrine of Chao Mae Kuan Im	Chinese Shrine	218	65.0	44.5	-	-	-	65.0	-	-	-
48	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	Monument/ Memorial Hall	165	65.0	46.2	-	-	-	65.1	-	-	-
49	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	Memorial site for paying homage and respect to His Majesty	102	65.0	-	49.4	-	-	-	65.1	-	-
50	Ban Yai Ra Subdistrict Health Promotion Hospital	Medical Institution	302	65.0	-	-	-	42.3	-	-	-	65.0
51	Sam Nak Thon Subdistrict Health Promotion Hospital	Medical Institution	66	65.0	-	-	-	52.2	-	-	-	65.2
52	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	Medical Institution	150	65.0	-	46.9	-	-	-	65.1	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
53	Village No. 1 Ban Sakulthong	Community	176	65.0	-	-	-	45.8	-	-	-	65.1
54	Village No. 1 Ban Sam Nak Thon	Community	12	65.0	-	-	-	63.1	-	-	-	67.2
55	Village No. 2, Ban Chak Mak	Community	19	65.0	-	-	-	60.3	-	-	-	66.3
56	Village No. 3, Ban Sa Kaeo	Community	41	65.0	-	-	55.3	-	-	-	65.4	-
57	Village No. 4, Ban Khlong Bang Phai	Community	21	65.0	59.5	-	-	-	66.1	-	-	-
58	Village No. 5, Ban Yai Ra	Community	14	65.0	-	-	-	62.4	-	-	-	66.9
59	Village no. 7, Ban Nong Takhian	Community	15	65.0	-	-	-	62.0	-	-	-	66.8
60	Village No. 8, Ban Cherng Khao	Community	27	65.0	58.1	-	-	-	65.8	-	-	-
61	Eastern-Nong Muang Community	Community	54	65.0	53.5	-	-	-	65.3	-	-	-
62	Wat Khiri Pawanaram Community	Community	39	65.0	55.6	-	-	-	65.5	-	-	-
63	Ban Chang-Phala Community	Community	17	65.0	61.0	-	-	-	66.5	-	-	-
64	Ming Mongkol Community	Community	237	65.0	43.9	-	-	-	65.0	-	-	-
65	Jor Koo Community	Community	22	65.0	59.3	-	-	-	66.0	-	-	-
66	Wirat Phatthana Department Store Community	Community	20	65.0	59.9	-	-	-	66.2	-	-	-
67	Thep Chinda Community	Community	22	65.0	59.3	-	-	-	66.0	-	-	-
68	Wat Ban Chang Community	Community	23	65.0	59.0	-	-	-	66.0	-	-	-
69	Dong Dang Community	Community	17	65.0	61.1	-	-	-	66.5	-	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
70	Night Market Community	Community	19	65.0	60.2	-	-	-	66.2	-	-	-
71	Ruam Mitr Community	Community	19	65.0	60.3	-	-	-	66.3	-	-	-
72	Ban Chang - Noen Kraprok Community	Community	24	65.0	58.9	-	-	-	66.0	-	-	-
73	Dao Pitak Community	Community	21	65.0	59.8	-	-	-	66.1	-	-	-
74	Taiwa Community	Community	32	65.0	57.0	-	-	-	65.6	-	-	-
75	East Ban Noen Kraprok Community, Prachummit	Community	23	65.0	59.1	-	-	-	66.0	-	-	-
76	Ban Noen Kraprok Community	Community	21	65.0	59.7	-	-	-	66.1	-	-	-
77	Nong Yai Community	Community	28	65.0	57.9	-	-	-	65.8	-	-	-
78	Village No. 1, Pan Din Tai	Community	24	65.0	58.7	-	-	-	65.9	-	-	-
79	Village No. 3, Ban Noen Samre	Community	18	65.0	-	-	-	60.7	-	-	-	66.4
80	Village No. 6, Ban Noen Kraprok	Community	20	65.0	59.9	-	-	-	66.2	-	-	-
81	Village No. 6 (Ban Khao Krating Community)	Community	115	65.0	-	-	48.6	-	-	-	65.1	-
82	Village No. 7 (Ban Nong Hin Community)	Community	404	65.0	-	-	40.4	-	-	-	65.0	-
83	Village No. 11 (Ban Khong Wanphen Community)	Community	44	65.0	-	-	54.8	-	-	-	65.4	-
84	Village No. 1, Ban Phlu Ta Luang	Community	17	65.0	-	61.2	-	-	-	66.5	-	-
85	Village No. 2, Ban Khalot	Community	15	65.0	62.0	-	-	-	66.8	-	-	-

Table 5.2-7 Predicted noise levels from transportation of construction materials in sensitive areas and communities within a radius of 500 meters (construction phase)

Sequence No.	Location name	Type of sensitive area/community	Distance from the center of the transportation route to a nearby building (meters)	Noise levels in current conditions[2/] (dBA)	24-hour average noise level from transportation of construction materials at noise receiving point[4/] (dBA) within transport route number (road number)				Total noise level caused by construction material transportation and noise levels under current conditions[5/] (dBA) within transportation route (road number)			
					Highway3	Highway 3126	Highway332	Highway 3376	Highway3	Highway 3126	Highway332	Highway 3376
86	Village No. 3, Ban Khlong Phai	Community	35	65.0	-	-	56.4	-	-	-	65.6	-
87	Village No. 4, Ban Khlong Phlu Ta Luang	Community	47	65.0	-	-	54.4	-	-	-	65.4	-
88	Village No. 5, Ban Khao Bai Si	Community	32	65.0	-	-	56.9	-	-	-	65.6	-
Standard 24-hour average noise level[1/]				70								

Notes : [1/]Standard general noise level in accordance with National Environment Board Notification No. 15 (1997)

[2/] Noise level data set 1, rainy season, taken on 18 - 25 July 2019 and set 2, dry season, taken on 3 - 10 November 2019). Use the maximum 24-hour average noise level (65 dBA) to represent noise levels in sensitive areas and communities under current conditions.

[3/] Noise level measurement points in sensitive areas and communities under current conditions (same period of time as [2/]).

[4/] Noise level from construction activities at different phases calculated using formula: Leq(hi) = (L0)Ei + 10log10(NiD0/SiT) + 10log10(D0/D)1/.**α** - 25 + ΔS and formula: L_{AeqT} = Lp + 10 log (t/T)

[5/] Calculated using formula: LpTotal = 10 log □ $10^{Lpi/10}$

Subject to changes and approval by the Government of Thailand

5.2.1.2 Operation phase

(1) Study Methods

In the assessment of noise impacts caused by developments in the Runway and Taxiway 2 Construction Project, U-Tapao International Airport, data and operating procedure models (runway operations models and distributions and runway flight capacity) were considered in order to apply the obtained data when formulating study scenarios to assess the impact of aircraft noise. The impact assessment process is as follows:

- Relevant data
- Forecasted number of flights and aircraft models
- Determination of Study Scenarios
- Preparation of information for runway operation models
- Prepared data for importing into mathematical models

1) Relevant data

Relevant data is used as input for preparing mathematical models, namely the Aviation Environmental Design Tool (AEDT) Version 2d-SP2 (September 5, 2019) for assessing impact from aircraft noise, in which the projected noise level assessment results are shown in the form of a Noise Exposure Forecast (NEF) contour map comprised of relevant data items as follows:

1.1) Flight situation data for U-Tapao International Airport

Flight situation data for U-Tapao International Airport, in which the data is taken from real flight statistics from January to December 2019, comprising flight takeoff-landing dates and times classified into daytime (7.00 a.m. - 10.00 p.m.) and night time (10.00 p.m. - 7.00 a.m.), the types of aircrafts taking off-landing in each runway, and information on departure and destination airports (source: 2019 flight situation data from U-Tapao International Airport) with details as shown in Addendum 5.2-1(2019 flight situation data from U-Tapao International Airport).

1.2) Takeoff-Landing Routes

U-Tapao International Airport flight paths are referenced from the flight paths for U-Tapao International Airport announced by AIP Thailand, comprising the landing route flight path (Instrument Approach Chart) and takeoff route flight path (Standards Departure Chart Instrument (SID)) (Source: Civil Aviation Authority of Thailand), with details as shown in Addendum 5.2-2 (takeoff-landing flight paths).

1.3) Information on the number of flights and aircraft types expected to increase in the initial year of operation (Forecast Fleet Mix).

- Data on the maximum number of flights expected to increase in the initial year of operation is comprised of 3 types of flight forecasts: 1) Forecast of flights in the case that the increase of flights is lower than baseline (conservative forecast); 2) in the case that the increase of flights is in accordance with baseline (baseline forecast); and 3) in the case that the increase of flights is greater than baseline (aggressive forecast), comprising a 10-year incremental forecast for 2028, 2038, and 2048. The advisory companies have chosen Scenario 2) for assumed runway closures and Scenario 3) for normal situations and worst case scenarios at maximum flight capacity (source: Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)). Details are as shown in Addendum 5.2-3 (Forecasted airport demand data for Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong) and reference hourly flight statistics forms from the 2018 flight situation data for Suvarnabhumi Airport from Airports of Thailand (Public) Company Limited.

- Data on the maximum number of flights expected to increase in the initial year of operation (forecast fleet mix) is comprised of data projections for aircrafts that will be in service in 2028, 2038, and 2048 (Source: modified from Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)).

1.4) Runway capacity information

Advisors have calculated the U-Tapao International Airport runway capacity using basic data, namely the fleet mix, landing speed of each aircraft type, separation matrix, and runway occupancy time, which has been

used to calculate the runway hourly capacity using mathematical models for takeoff cases and landing cases. From the maximum flight capacity in the case of 2 active runways, the traffic capacity of each runway is 35 flights per hour (source: Robert Horonjeff et al., 2010, Planning and Design of Airports, McGraw-Hill, Chapter 12: Capacity and Delay and FAA Techniques for Determining Airport Airside Capacity and Delay, Report No. FAARD-74-124). Details are as shown in Addendum 5.2-4 (Calculation of Runway Capacity for U-Tapao International Airport).

For information on the maximum runway flight capacity in the event of 2 active runways, the traffic capacity of each runway is 35 flights per hour. This was used by the advisory group to calculate the number of flights for the worst case scenario at the maximum number of flights, which is expected to occur during hours in which the runway is in full flight capacity, at 35 flights per runway, comprising 2 runways, totaling a maximum flight capacity of 70 flights per hour. Forecasted details for the number of flights are per Scenario 5, assessment of impacts from flight situations in the event of ultimate development in 2048 in the event of any peak hours at maximum flight capacity of 70 flights per hour (peak hour). Flights are forecasted using data models from the 2018 aviation situation at Suvarnabhumi Airport to represent operation patterns for 2 active runways, with the forecasted average maximum number of flights per day totaling 1,364 flights per day. Details of calculations are as shown in item 3) Determination of Study Scenarios.

1.5) Information on future runway management during project development

For information on future runway management during project development, the advisors have prepared runway operation models for initiating operations for 2 runways with reference to data from current U-Tapao International Airport flight paths in accordance with the notification of AIP Thailand, as detailed in Addendum 5.2-1(takeoff-landing flight paths). (Source: Civil Aviation Authority of Thailand), and modified from U-Tapao International Airport usage data (source: Runway Usage Guidelines for U-Tapao International Airport from Aeronautical Radio of Thailand Co., Ltd., no. BWT 536/2563 dated 3 April 2020). The runway operation models are divided into Phase 1 (less than 300 flights expected per day) and Phase 2 (more than 300 flights expected per day) and classifies flight seasons into 2 seasons, namely hot season (February to September) and cold season (October to January). Details are as shown in Addendum 5.2-5 (Runway Operation Data for U-Tapao International Airport dated 3 April 2020).

1.6) U-Tapao International Airport physical data

Physical data for U-Tapao International Airport consists of the geographic coordinates of U-Tapao International Airport and the width and length of the runway (source: Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)).

1.7) Climate of U-Tapao International Airport that may impact noise distribution

Climate factors of U-Tapao International Airport that may impact noise distribution consist of temperature, air pressure, and average wind velocity based on 3-year retrospective data (2016-2018) (source: air monitoring stations, U-Tapao International Airport).

2) Forecasted number of flights and aircraft models

Based on data on the forecasted number of flights per the Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018), the number of passengers and flights at U-Tapao International Airport have been forecasted at ultimate development in 2028, 2038, and 2048. The passenger and flight growth rates have been forecasted in accordance with the airport growth rate in 3 forms, comprising 1) conservative forecast, 2) baseline forecast, and 3) aggressive forecast. Details are as shown in Table 5.2-8.

Table 5.2-8 Information on forecasted number of passengers and flights at U-Tapao International Airport in 2048

Forecasted Data	Conservative (Conservative Forecast)	Baseline (Baseline Forecast)	Aggressive (Aggressive Forecast)
1. Number of passengers (million people per year)	36	54	70
2. Number of domestic and international flights (flights per year)	167,000	241,100	305,000
3. Number of freight flights (flights per year)	12,400	15,000	19,200

4. Maximum total number of flights (flights per year)	**179,400**	**256,100**	**324,200**

Source: **Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)**

2.1) Determining the maximum number of flights used for assessment

The noise impact assessment for 2048 is based on passenger numbers and flight numbers from the 2018 Suvarnabhumi Airport Master Plan. There are 3 forecast levels, consisting of baseline, aggressive, and conservative. For the environmental impact assessment, the aggressive level was chosen to cover the maximum possible number of passengers and flights. By 2048, there will be approximately 70 million passengers and a total of 324,200 flights, consisting of 305,000 passenger fights and 19,200 freight flights. When considering the ratio between the number of passengers to the number of annual flights, the average number of passengers per aircraft is approximately 230 passengers per aircraft. Compared to the air transport statistics of Suvarnabhumi Airport in 2018, there were 63.4 million passengers, with a total of 369,436 passenger flights. The average number of passengers per aircraft was approximately 172 passengers per aircraft. It can be seen that the average number of passengers in the U-Tapao Airport plan is higher than the current statistics of Suvarnabhumi Airport. which is due to fleet mix and load factors. Suvarnabhumi Airport fleet mix is comprised of Code C aircrafts at approximately 57% and Code E aircrafts at approximately 38%, as shown in Table 5.2-9, in which Suvarnabhumi Airport had an average load factor of 77% in 2018.

Table 5.2-9 Fleet Mix for Suvarnabhumi Airport, 2019

Year 2019	International	Domestic	Total
Ratio	76%	24%	100%
Code	[1]	[2]	[3]
A	0%	0%	0%
B	0%	3%	1%
C	48%	85%	57%
D	2%	0%	1%
E	47%	13%	38%
F	3%	0%	3%

Source: Air Transport Statistics for Suvarnabhumi Airport 2018 (AOT, AIR TRAFFIC REPORT 2018), Airports of Thailand Public Company Limited

For U-Tapao airport, the advisors have adjusted fleet mix distribution from the U-Tapao airport master plan by adjusting Code D distribution from 21% to 1% and Code E from 16% to 36% as manufacturing, technology, and demand for Code D aircrafts in the long-term are likely to decline. However, airlines still need to be able to carry passengers while having limited slots, so it is likely that they will switch to using Code E aircrafts, which are wide-body aircrafts that can accommodate 250-400 people, as they did before.

The results of the fleet mix adjustments in 2048 project that U-Tapao Airport will consist of 62% Code C aircrafts and 36% Code E aircrafts, similar to Suvarnabhumi Airport at present, but will have a greater load factor. When considering the seat capacity for current flight aircrafts, the average seat capacity is based on the aircraft with the highest frequency for each code according to the air transport statistics of Suvarnabhumi Airport. In 2018, the load factor was approximately 96% with an average of 230 passengers per flight, as shown in Table 5.2-10

Table 5.2- 10 Forecasted fleet mix distribution and average number of passengers at U-Tapao Airport when considering the seat capacity of current flight aircrafts

Current Aircraft					
Code	Fleet Mix	Design Aircraft	Seat Capacity	Load Factor	PAX Per Movement
	[1]		[2]	[3]	[4] = [1]*[2]*[3]
C	62.00%	A320	171	96%	102.10
D	1.00%	B767	233	96%	2.24
E	36.00%	B777	346	96%	119.95
F	1.00%	A380	555	96%	5.34
				Total PAX	230

Source: United Analyst and Engineering Consultants Co., Ltd., 2020.

However, when considering future plans from airlines for aircraft orders (Next Gen Aircraft), which tend to have a greater seat capacity per aircraft, namely:

Code C: The A320-Neo has a seat capacity of 180 seats.
[https://www.airbus.com/aircraft/passenger-aircraft/a320-family/a320neo.html]

Code D: The Boeing767-400ER has a seat capacity of 245 seats.
[https://www.boeing.com/commercial/aeromagazine/aero_03/textonly/ps01txt.html]

Code E: The Boeing 777-X has a seat capacity of 384-426 seats (average 400 seats).
[http://www.boeing.com/commercial/777x/?cm_re=March_2015-_-Roadblock-_-777X#/technical-specs]

When considering seat capacity, the average capacity of service is 230 passengers per flight, with a load factor of approximately 87% as shown in Table 5.2- 11.

Table 5.2- 11 Forecasted fleet mix distribution and average number of passengers at U-Tapao Airport when considering the seat capacity of current flight aircrafts

Next Gen Aircraft					
Code	Fleet Mix	Design Aircraft	Seat Capacity	Load Factor	PAX Per Movement
	[1]		[2]	[3]	[4] = [1]*[2]*[3]
C	62.00%	A320	180	87%	97.20
D	1.00%	B767	245	87%	2.13
E	36.00%	B777	400	87%	125.42
F	1.00%	A380	555	87%	4.83
				Total PAX	230

Source: United Analyst and Engineering Consultants Co., Ltd., 2020.

2.2) Consideration of runway closure, 2048

As U-Tapao Airport is strategically positioned as a regional HUB airport, which serves mainly international flights. and has a higher proportion of transit/transfer passengers than Suvarnabhumi Airport, with both small and large aircraft flights to various short distance destinations, the size of the engine may not be determined as a condition for cutting the flight due to having to maintain origin and destination distributions in be consistent with travel needs. Another important reason why airlines cannot consider changing from smaller aircrafts to larger aircrafts is because most regional airlines have only one type of aircraft for cost management purposes. Intercontinental airlines focus on using larger aircrafts on main routes, which already have congested slot allocations. Therefore, slot allocation in the event of runway closure will need to consider reducing distributed flights to reduce flights for aircrafts of all sizes. This will allow various airlines, especially those with 1-2 regular flights per day, to provide services for their flight routes under a reduced number of flights for certain days, per the examples from Dubai International Airport [Dubai International Airport: Southern Runway Rehabilitation (SRR) | Airport Coordination Limited (Acl-uk.org)] As a result of this distributed flight reduction, the overall Fleet Mix remained unchanged. However, the impacts from scheduling flights to non-peak range, which is the night time range, is still reflected in this scenario.

For forecasting the number of flights during project development, the advisory group has selected the aggressive forecast to conduct aircraft noise impact assessments for project developments in 2048

2.3) Flight forecasts

Aggressive forecasts for growth rates from project developments in 2028, 2038 and 2048, which have a flight capacity of 80,600 flights per year, 200,000 flights per year, and 324,200 flights per year, respectively, are detailed in Table 5.2-12.

Table 5.2-12 Baseline forecasts for growth rates and aggressive forecasts for growth rates

Expected Number of flights (flights per year)	Year 2028		Year 2038		Year 2048	
	Baseline (Baseline)	Aggressive (Aggressive)	Baseline (Baseline)	Aggressive (Aggressive)	Baseline (Baseline)	Aggressive (Aggressive)
1. Domestic and international flights	69,900	78,000	156,300	189,000	241,100	305,000
2. Freight flights	2,400	2,600	9,000	11,000	15,000	19,200
3. Total forecasted flights	72,300	80,600	165,300	200,000	256,100	324,200

Source: Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)

2.4) Aircraft type forecasts

To forecast aircraft types that will be in serve at U-Tapao International Airport in the future (2028, 2038, and 2048), the advisory group has used information modified from the Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018) as detailed in Table 5.2- 13. Due to future aircraft technology, the majority of commercial aircrafts will be Code C and E types, and Code D and F type aircrafts will be reduced. From the aircraft type forecast data in the master plan, it was found that there was a relatively high distribution of Code D aircrafts. For example, the 2048 aircraft type forecast showed that Code D aircrafts were predicted to comprise 21%. Therefore, the consulting group adjusted the distribution of Code D aircrafts to only 1% and allocated the remaining amount to Code E aircrafts, increasing from 16% to 36%, as detailed in Table 5.2-14.

Table 5.2- 13 Forecasted aircraft types in service at U-Tapao International Airport

Aircraft Movement	Year 2028			Year 2038			Year 2048		
	Domestic flights	International flights	Freight flights	Domestic flights	International flights	Freight flights	Domestic flights	International flights	Freight flights
Code C	100	80	50	90	60	30	80	50	20
Code D	-	5	50	10	15	50	20	20	40
Code E	-	15	-	-	25	15	-	30	30
Code F	-	-	-	-	-	5	-	-	10
Total Code	100	100	100	100	100	100	100	100	100

Table 5.2-14 Aircraft type forecasts for U-Tapao International Airport in 2048

Aircraft Movement	Domestic flights	International flights	Flights Freight	Aircraft type forecast	Aircraft type forecast (Updated)
Code C	122,000	76,250	3,840	62%	62%
Code D	30,500	30,500	7,680	21%	1%
Code E	-	45,750	5,760	16%	36%
Code F	-	-	1,920	1%	1%
Total Code	152,500	152,500	19,200	100%	100%

The aircraft models that will be in operation in the future are Code C, D, E, and F, divided by size of aircraft wingspan and outer main gear wheel span, with details as shown in Table 5.2-15. The fleet mix summary for the baseline year (2018) and fleet mix forecast for aircrafts expected to be in service at U-Tapao International Airport in the future (2028, 2039, and 2048) are as detailed in Table 5.2- 16

Table 5.2-15 Aircraft Code Requirements by Aircraft Wingspan Size and Outer Main Gear Wheel Span

Aircraft Type Aircraft Code	Wingspan	Outer Main Gear Wheel Span	Typical Aeroplane
C	24 m but < 36 m	6 m but < 9 m	BOEING 737-700 / AIRBUS A-320 / EMBRAER ERJ 190-100
D	36 m but < 52 m	9 m but < 14 m	B767 / AIRBUS A-310
E	52 m but < 65 m	9 m but < 14 m	B777 / B787 Series / A330
F	65 m but < 80 m	14 m but < 16 m	BOEING 747-8 / AIRBUS A-380-800

Source: ICAO Annex 14 Aerodrome Reference Code

Table 5.2- 16 Forecast of aircrafts expected to be in service at U-Tapao International Airport in the future

Aircraft Type Aircraft Code	Percentage of proportion of aircraft models				
	Baseline year (2018)		Forecasted year		
	Hot season	Cold season	Year 2028	Year 2038	Year 2048
Code A	0.008216	0.004728	-	-	-
Code B	0.662940	0.576758	-	-	-
Code C	56.904392	57.035702	57	58	62
Code D	1.237157	1.306366	1	1	1
Code E	38.446822	38.248619	39	38	36
Code F	2.740480	2.827834	3	3	1
Total amount	100	100	100	100	100

Source: Modified from Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)

3) Determination of Study Scenarios

The advisors have formulated study scenarios for assessing the impact of aircraft noise during product developments, which consists of scenarios in which all runways are active and in the case of closed runways, with details as follows:

3.1) All runways active scenarios

Scenarios in which all runways are active are based on flight situation data from pre-project developments (1 active runway) and studied from supporting data for increased air traffic from 2 active runways using forecasted data for aircraft types in service at U-Tapao International Airport in the future and U-Tapao International Airport flight forecast data, as shown in Table 5.2- 16, as reference data for formulating the active runway scenarios for 5 cases, divided into 4 normal cases and 1 peak hour case, as follows:

- Normal cases

In case 1, aviation situation impacts were assessed by using actual flight information from the 2019 aviation situation at U-Tapao International Airport (1 active runway), in which there was a total of 17,052 flights for the year, divided into 11,515 flights in the hot season and 5,537 flights in the cold season, with an average of 48 flights per day in the hot season and 45 flights per day in the cold season.

In case 2, assessments on impacts from the aviation situation forecasted in the event of project developments in 2028 used data models from the 2018 aviation situation at Suvarnabhumi Airport to represent operation patterns for 2 runways. Forecasted flights for 2028 comprised 80,600 flights per year, divided into 221 flights per day in the hot season and 221 flights per day in the cold season.

In case 3, assessments on impacts from the aviation situation forecasted in the event of project developments in 2038 used data models from the 2018 aviation situation at Suvarnabhumi Airport to represent operation patterns for 2 runways. Forecasted flights for 2038 comprised 200,000 flights per year, divided into 548 flights per day in the hot season and 548 flights per day in the cold season.

In case 4, assessments on impacts from the aviation situation forecasted in the event of project developments in 2048 used data models from the 2018 aviation situation at Suvarnabhumi Airport to represent operation patterns for 2 runways. Forecasted flights for 2048 comprised 324,200 flights per year, divided into 889 flights per day in the hot season and 889 flights per day in the cold season.

In this regard, the flight statistics model for Scenarios 2-4 is based on hourly flight statistics models from the 2018 aviation situation data for Suvarnabhumi Airport from Airports of Thailand Public Company Limited. The number of night flights (10.00 p.m. - 07.00 a.m.) have been increased to obtain a 70:30 daytime to nighttime flight ratio in accordance with the aforementioned assumptions. This resulted in an average of 1,047 flights per day in the hot season and an average of 1,074 flights in the cold season, as detailed in figure 5.2-2

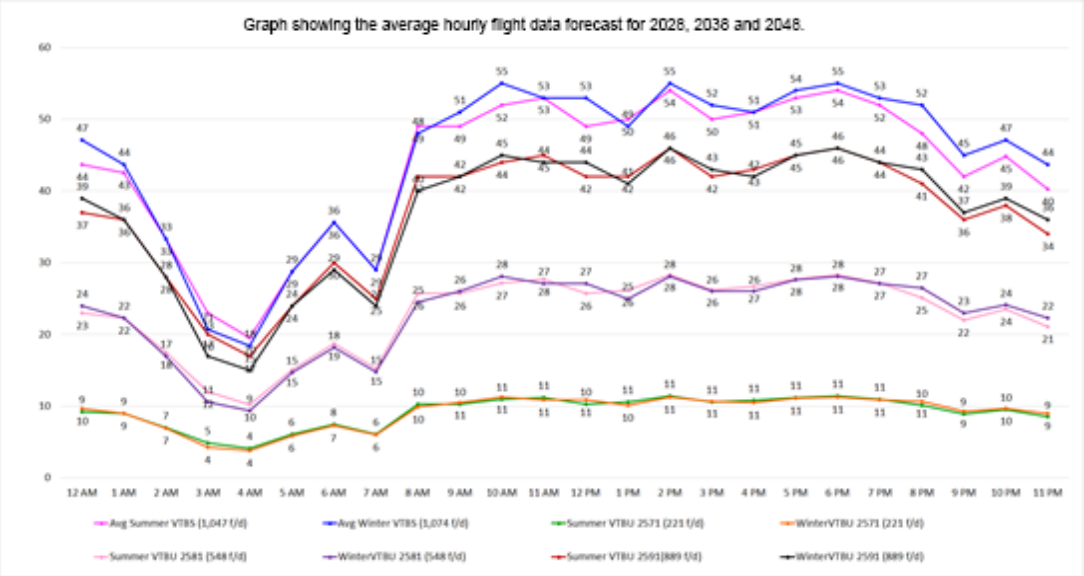


figure 5.2-2 Graph showing flight forecast data for 2028, 2038 and 2048 for U-Tapao International Airport

- Peak Hour

In case 5, assessments on impacts from the aviation situation forecasted in the event of project developments in 2048 during peak hour with a maximum flight capacity of 70 flights per hour used data models from the 2018 aviation situation at Suvarnabhumi Airport to represent operation patterns for 2 runways. The forecasted average number flights for 2048 comprised 1,364 flights per day, divided into 1,364 flights per day in the hot season and 1,364 flights per day in the cold season. Forecast details are as follows:

In the worst-case scenario, such as an emergency or an accident that requires temporary closure of a runway for a short time, in which a maximum of 70 flights per hour must be managed at any hour for at least 1 hour, which will increase the total number of flights per day for a total of 24 hours, the number of flights was calculated using the hourly flight statistics from the 2018 aviation situation of Suvarnabhumi Airport to create a graph to find the hourly average of flights in each season, with details as shown in Figure 5.2-3 and Figure 5.2-4. The hot season graph shows an hourly average of 54 flights. The flights forecasts were formulated by adjusting the direct variable proportion curve to an hourly average of 70 flights, in which the resulting number of flights in the hot season increased from a total of 1,047 flights to 1,364

flights per day. For the cold season, there was an hourly average of 55 flights. The flight forecasts were formulated by adjusting the direct variable proportion curve to an hourly average of 70 flights, in which the resulting number of flights in the cold season increased from a total of 1,074 flights to 1,364 flights per day.

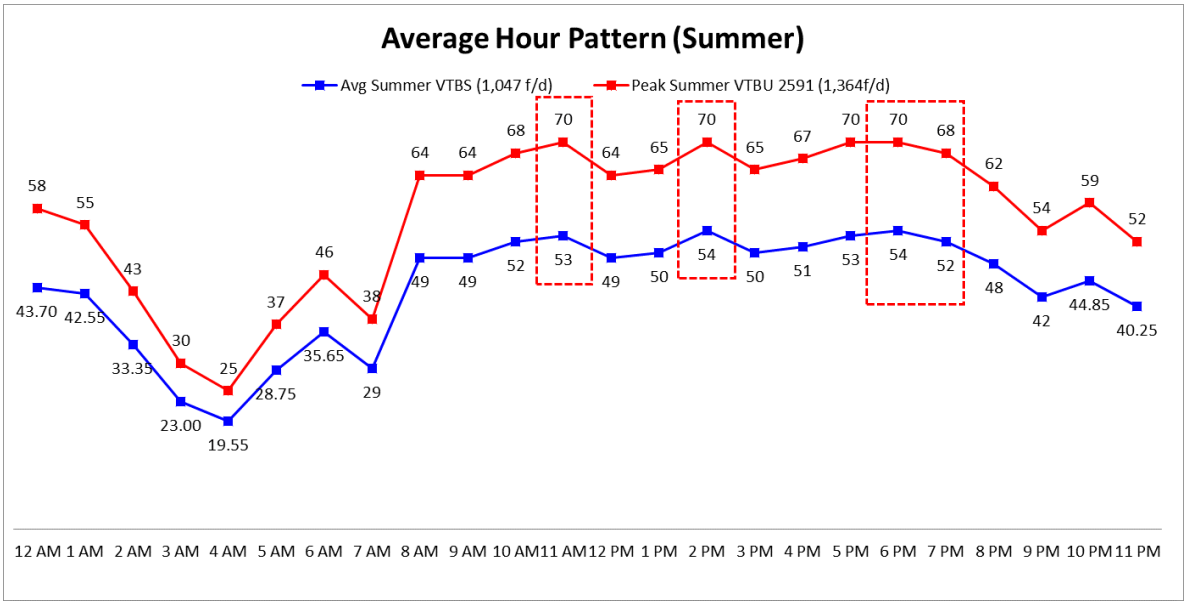


Figure 5.2-3 Graph showing the average hourly flight data forecasted for 2048 at peak hour in the hot season (maximum 1,364 flights per day)

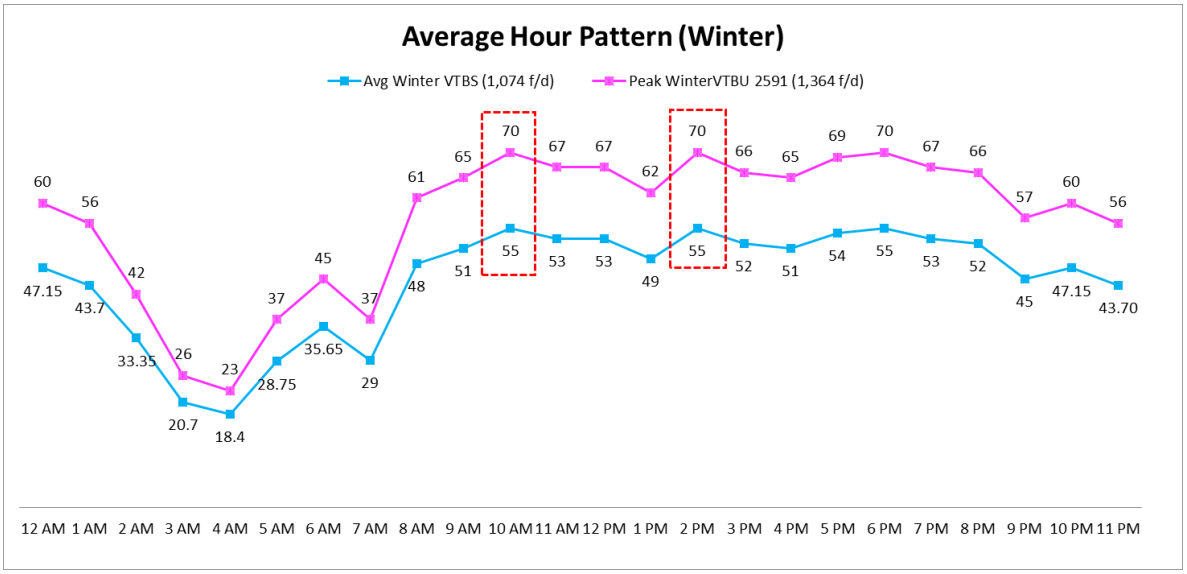


Figure 5.2-4 Graph showing the average hourly flight data forecasted for 2048 at peak hour in the cold season (maximum 1,364 flights per day)

3.2) Runway Closure Scenarios

Runway closure scenarios (planned, with at least 6 months advance notice before allocation of flight schedule for next flight season) consist of the following :

Runways can be closed at a certain time of the year, with different runway operation patterns that have different seasonal potential depending on the frequency of use. Therefore, the project has chosen runway operation models that have the highest frequency of use as a substitute, to represent the runway operation models that are most likely to be used when the runway is closed.

Forecasted flights in the event of runway closures use the hourly average flight graph from case 4, with an average of 889 flights per day, to keep flights under the hourly runway flight capacity, comprising not more than 35 flights per hour under the conditions:

1) Flights may be delayed or flight schedules may be accelerated by not more than 1 hour.

2) To reduce the accumulation of delayed flights, there must be no more than 10 delayed flights from the previous hour.

As a result of the closure of runway 1 or runway 2 under the above conditions, the number of flights will be reduced to 791 flights per day as follows:

In case 6, in which runway 1 is closed (2048) and runway 2 is in operation, with a flight capacity of 35 flights per hour per runway and a flight capacity of 791 flights per day in both the hot season and cold season.

In case 7, in which runway 2 is closed (2048) and runway 1 is in operation, with a flight capacity of 35 flights per hour per runway and a flight capacity of 791 flights per day in both the hot season and cold season.

Forecasted flights in the event of runway closures use the hourly average flight graph from case 4, with an average of 889 flights per day, distributed so that hourly flights do not exceed 35 flights per day (maximum flight capacity). In the event that runway 1 or runway 2 is closed, the number of flights will be reduced to 791 flights per day, with details as shown in Figure 5.2-5 and Figure 5.2-6.

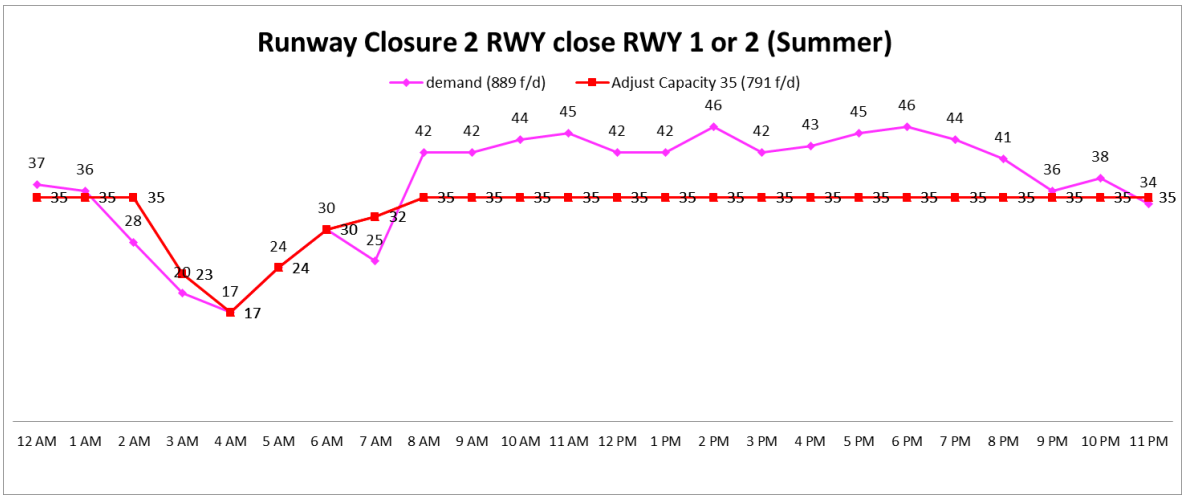


Figure 5.2-5 Flight forecast in the event of case 6, closure of runway 1, or case 7, closure of runway 2, in 2048 in the hot season (average 791 flights per day).

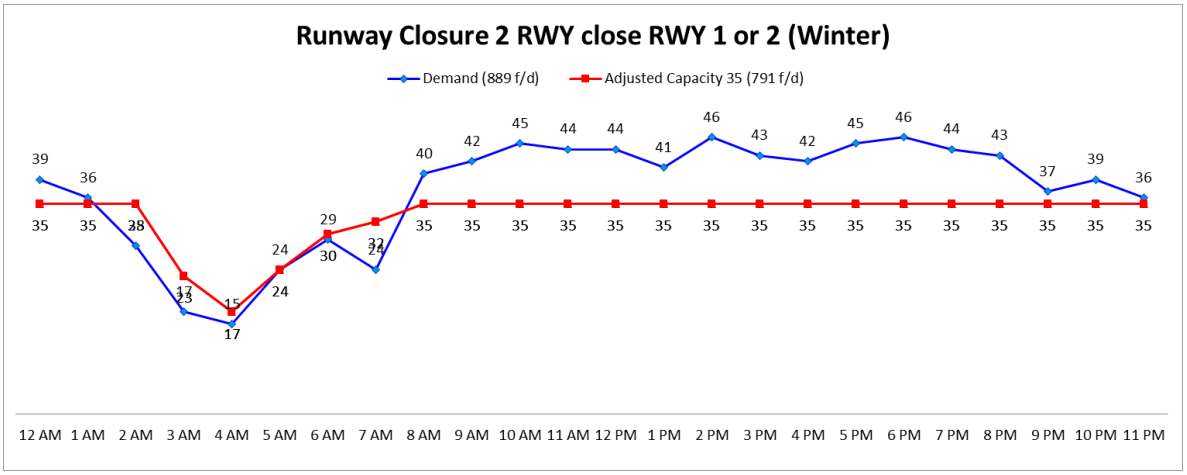


Figure 5.2-6 Flight forecast in the event of case 6, closure of runway 1, or case 7, closure of runway 2, in 2048 in the cold season (average 791 flights per day).

- Additional cases (for considering phased compensation) for considering closures of any runways in 2028 and 2038

In case 8, in which runway 1 is closed (2028) and runway 2 is in operation, with a flight capacity of 35 flights per hour per runway and a flight capacity of 221 flights per day in both the hot season and cold season, with the specifications per case 2 as detailed in Figure 5.2-7 and Figure 5.2-8.

In case 9, in which runway 2 is closed (2028) and runway 1 is in operation, with a flight capacity of 35 flights per hour per runway and a flight capacity of 221 flights per day in both the hot season and cold season, with the specifications per case 2 as detailed in Figure 5.2-7 and Figure 5.2-8.

In case 10, in which runway 1 is closed (2038) and runway 2 is in operation, with a flight capacity of 35 flights per hour per runway and a flight capacity of 548 flights per day in both the hot season and cold season, with the specifications per case 3 as detailed in Figure 5.2-9 and Figure 5.2-10.

In case 11, in which runway 2 is closed (2038) and runway 1 is in operation, with a flight capacity of 35 flights per hour per runway and a flight capacity of 548 flights per day in both the hot season and cold season, with the specifications per case 3 as detailed in Figure 5.2-9 and Figure 5.2-10.

A detailed summary of the scenarios in the case of all runways active, in normal cases, in peak hours, and in the case of runway closures as as shown in Table 5.2- Study17.

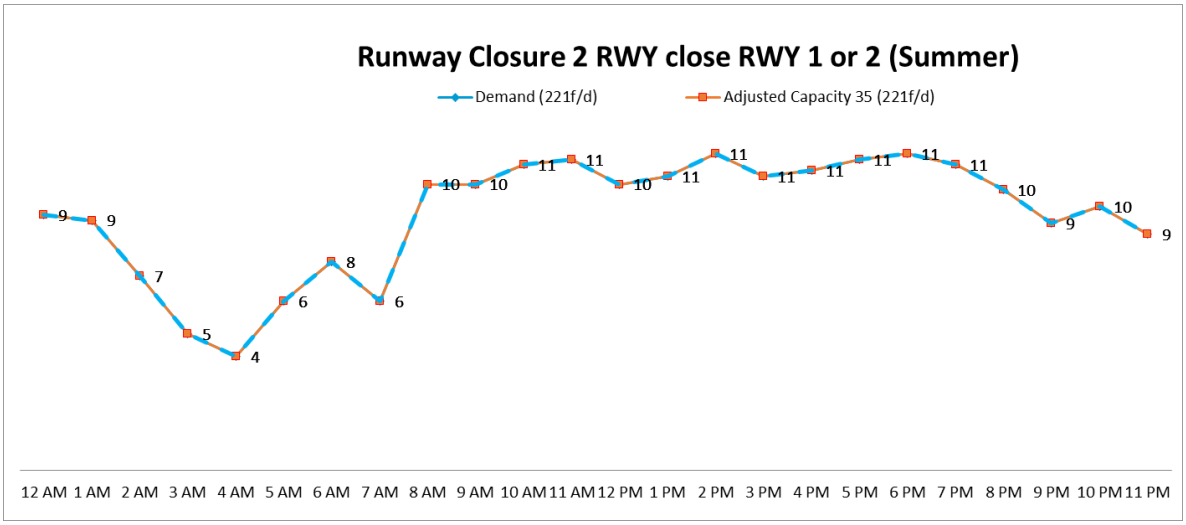


Figure 5.2-7 Flight forecast in the event of case 8, closure of runway 1, or case 9, closure of runway 2, in 2028 in the hot season (average 221 flights per day).

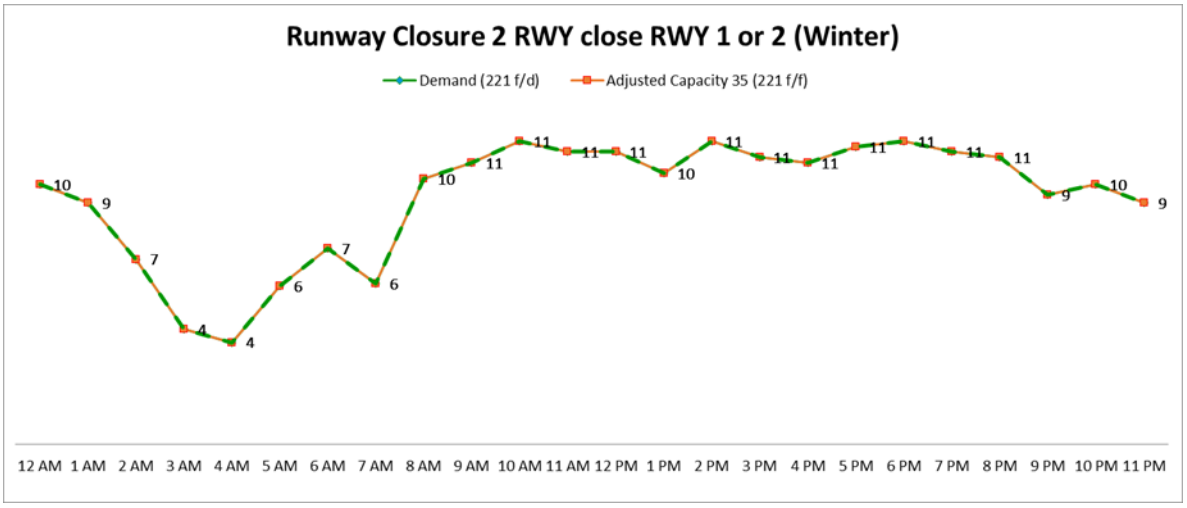


Figure 5.2-8 Flight forecast in the event of case 8, closure of runway 1, or case 9, closure of runway 2, in 2028 in the cold season (average 221 flights per day).

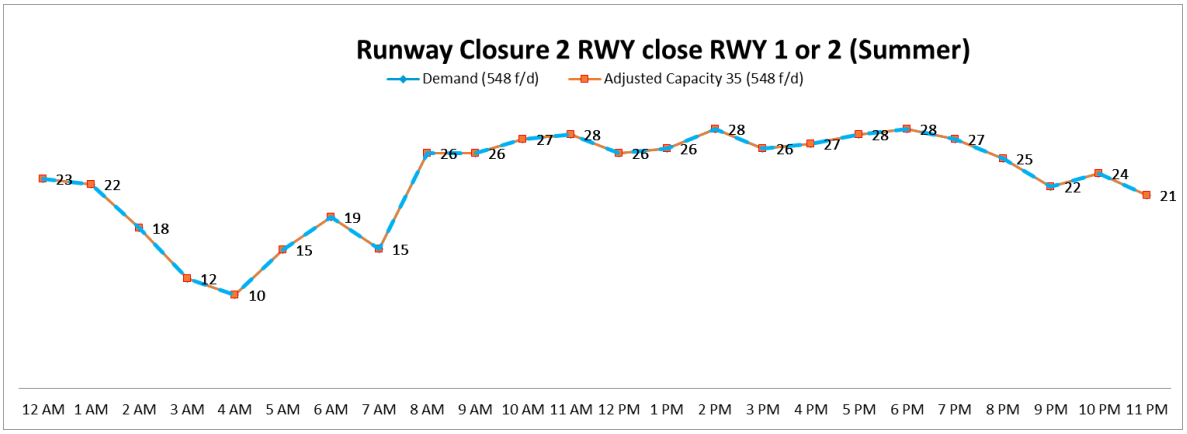


Figure 5.2-9 Flight forecast in the event of case 10, closure of runway 1, or case 11, closure of runway 2, in 2038 in the hot season (average 548 flights per day).

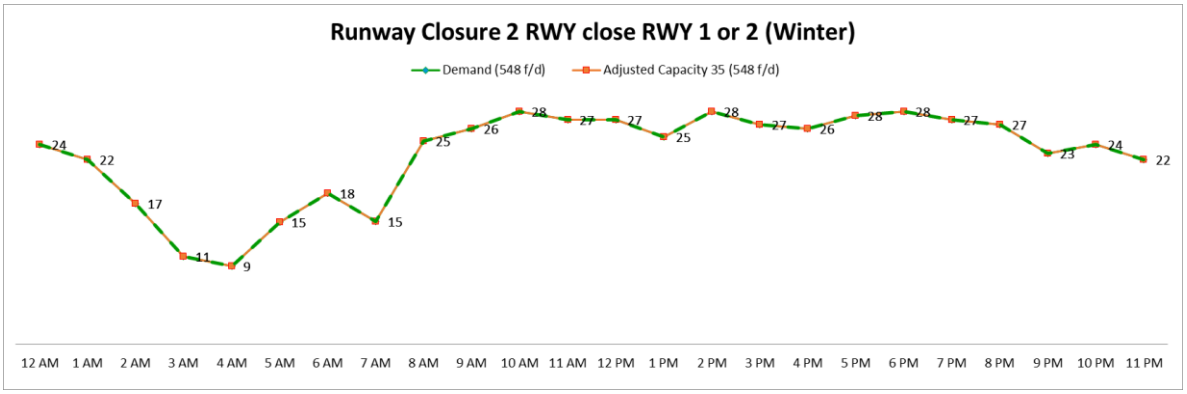


Figure 5.2-10 Flight forecast in the event of case 10, closure of runway 1, or case 11, closure of runway 2, in 2038 in the cold season (average 548 flights per day).

Table 5.2- Study17 scenarios for assessing noise impacts caused by aircrafts

Study scenario[1,2/]	Number of flights per year	Maximum flights per hour	Fleet mix (percentage)		Number of flights per day	
		(flights per hour)	Daytime	Nighttime	Hot season	Cold season
Normal cases						
Scenario 1: Aviation situation in 2019 (1 runway)	17,052	34	90[4/]	10[5/]	48	45
Scenario 2: Flight forecast for 2028 (2 runways)	80,600	70	70	30	221	221
Scenario 3: Flight forecast for 2038 (2 runways)	200,000	70	70	30	548	548
Scenario 4: Flight forecast for 2048 (2 runways)	324,200	70	70	30	889	889
Peak Hour						
Scenario 5: Peak flight forecast	-	70	70	30	1,364	1,364
In the case of runway closure						
Scenario 6: Closure of Runway 1 (2048)	-	35	66	34	791	791
Scenario 7: Closure of Runway 2 (2048)	-	35	66	34	791	791
Additional case[3/]						
Scenario 8: Closure of Runway 1 (2028)	-	35	70	30	221	221
Scenario 9: Closure of Runway 2 (2028)	-	35	70	30	221	221
Scenario 10: Closure of Runway 1 (2038)	-	35	70	30	548	548
Scenario 11: Closure of Runway 2 (2038)	-	35	70	30	548	548

Note : [1/] Forecasted flight data is based on the Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018)

[2/] Case 2-11 references statistical models for monthly flights comprising data from the 2018 flight situation of Suvarnabhumi Airport from Airports of Thailand Public Company Limited

[3/] In addition, the study has added phase-by-phase study results, in cases of runway closure for 2028 and 2038, for consideration of compensation measures.

[4/] hot season 90% cold season 91%

[5/] hot season 10% cold season 9%

4) Preparation of data on runway operation models and distribution

The data on runway operation models and distributions is used as input for mathematical models. The advisor has prepared runway operation models for 2 active runways, divided into operation models for Phase 1 (less than 300 forecasted flights per day) and Phase 2 (more than 300 forecasted flights per day), in which the flight seasons have been divided into 2 seasons, comprising the hot season (February to September) and cold season (October to January), based on data from the 2018 aviation situation of Suvarnabhumi Airport and runway operation data from U-Tapao International Airport.

Scenarios 2-4 consist of basic data showing the number and distribution of flights according to flight direction and substituted as distribution values according to the Phase 1 and Phase 2 runway operation models, together with additional scenarios as determined by the advisor.

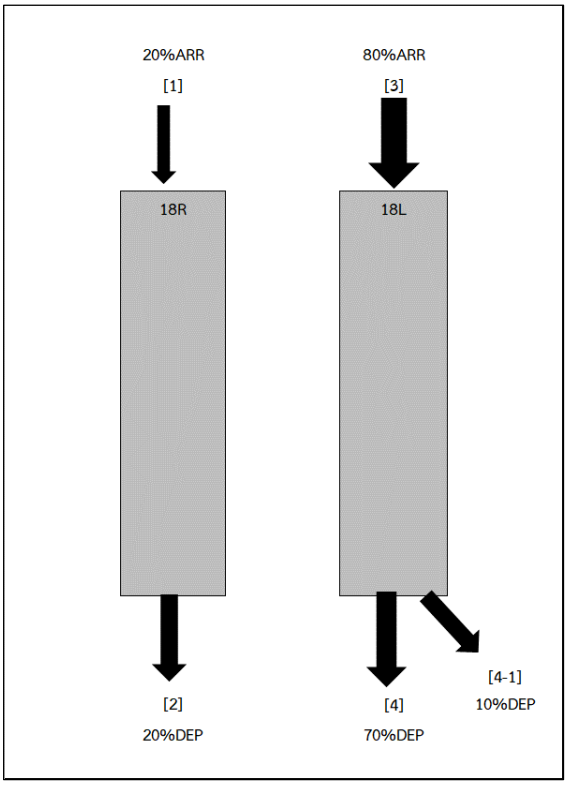
The data on runway operation models and distributions is used as input for mathematical models for each form, and divided by seasonal operations, in which the operation models in the case of 2 active runways is divided into 2 runway operation models, comprising Phase 1 (less than 300 forecasted flights per day) and Phase 2 (more than 300 forecasted flights per day). The flight seasons have been divided into 2 seasons, comprising the hot season (February to September) and cold season (October to January), with details as follows:

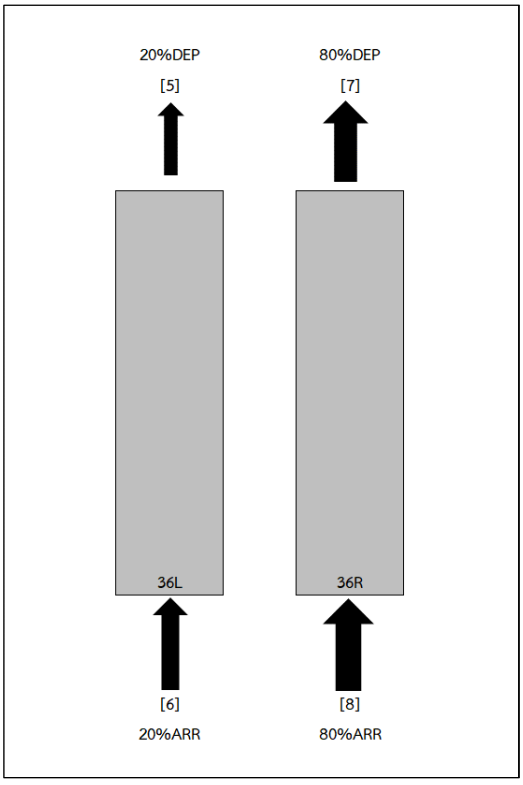
4.1) Runway Operations Models Phase 1

(less than 300 flights per day). Use for Scenario 2, flights forecasted for 2028 (2 runways), with an average 221 flights per day, containing data from the runway operation model for the hot season (Model 18P1) and the runway operation model for the cold season (Model 36P1) with runway operation details as follows:

- Model 18P1: Runway Operations Phase 1 for hot season distributes operations for Runway 1 (18R) as 20% landings and 20% takeoffs, and for Runway 2 ((18L) as 80% landings, 70% straight takeoffs, and 10% oblique takeoffs. Details are as shown in Figure 5.2-11 (1)

- Model 36P1: Runway Operations Phase 2 for cold season distributes operations for Runway 1 (36L) as 20% landings and 20% takeoffs, and for Runway 2 (36R) as 80% landings and 80% takeoffs. Details are as shown in Figure 5.2-11 (2)





(1) Phase 1 Runway Operation Models, hot season (Feb. - Sept.)
Model 18P1 Runway Operations Phase 1

(2) Phase 1 Runway Operation Models, cold season (Oct. - Jan.)
Model 36P1 Runway Operations Phase 1

Figure 5.2-11 Runway Operations Models Phase 1

4.2 Runway Operations Models Phase 2

(more than 300 flights per day). Use for Scenario 3, 4 and 5, flights forecasted for 2038 and 2048 (2 runways), with an average of 548, 889, and 1,364 flights per day, respectively, containing data from the runway operation model for the hot season (Model 18P2) and the runway operation model for the cold season (Model 36P2) with runway operation details as follows:

- Model 18P2: Runway Operations Phase for the hot season is divided into 6 sub-models as follows:

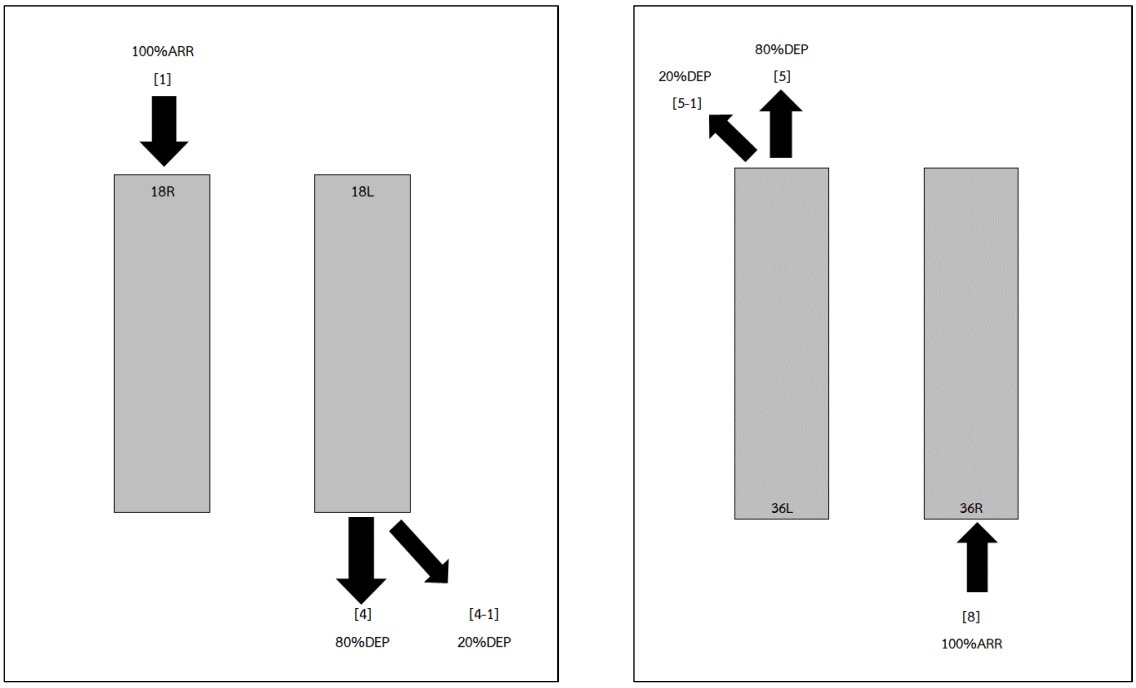
  - Model 18P2-1 : Segregated Parallel Operations (15%)
  - Model 18P2-2 : Segregated Parallel Operations (3%)
  - Model 18P2-3 : Semi-Mixed Operations (Arrival > Departure), (12%)
  - Model 18P2-4 : Semi-Mixed Operations (Departure > Arrival), (5%)
  - Model 18P2-5 : Mixed Parallel Operations (Arrival 80:20), (60%)
  - Model 18P2-6 : Mixed Parallel Operations (Arrival 50:50), (5%)

- Model 36P2 : Runway Operations Phase for the cold season is divided into 6 sub-models as follows:

  - Model 36P2-1 : Segregated Operations (15%)
  - Model 36P2-2 : Segregated Operations (2%)
  - Model 36P2-3 : Semi-Mixed Operations (Arrival > Departure), (15%)
  - Model 36P2-4 : Semi-Mixed Operations (Departure > Arrival), (4%)
  - Model 36P2-5 : Mixed Parallel Operations (Arrival 20:80), (60%)
  - Model 36P2-6 : Mixed Parallel Operations (Arrival 40:60), (4%)

Details of runway operations for each of the sub-models for the hot season and cold season are as follows:

- Model 18P2-1 : Segregated Parallel Operations have a frequency of 15% for hot season operations, distributing Runway 1 (18R) operations at 100% landings, and Runway 2 (18L) operations at 80% straight takeoffs and 20% oblique take offs. Details are as shown in Figure 5.2-12 (1).
- Model 36P2-1 : Segregated Parallel Operations have a frequency of 15% for cold season operations, distributing Runway 1 (136L) operations at 80% for straight takeoffs and 20% oblique takeoffs, and Runway 2 operations (36R) at 100% landings. Details are as shown in Figure 5.2-12 (2).

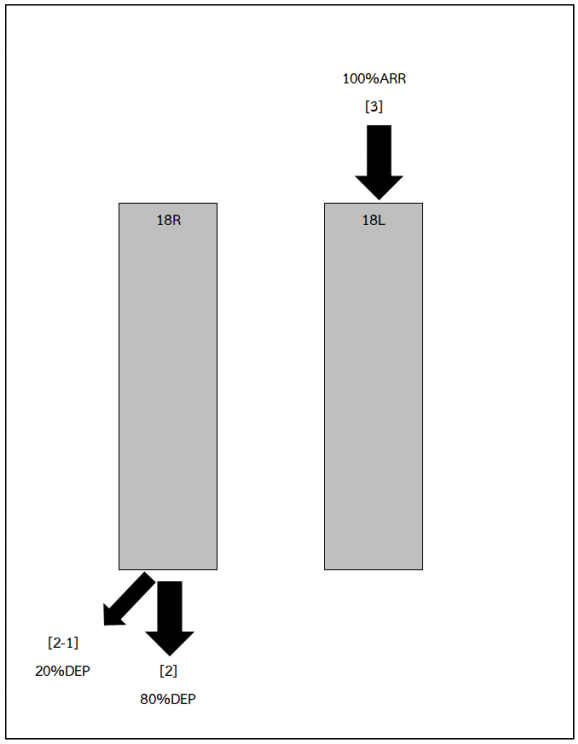


(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)
Model 18P2-1 : Segregated Parallel Operations (15%)

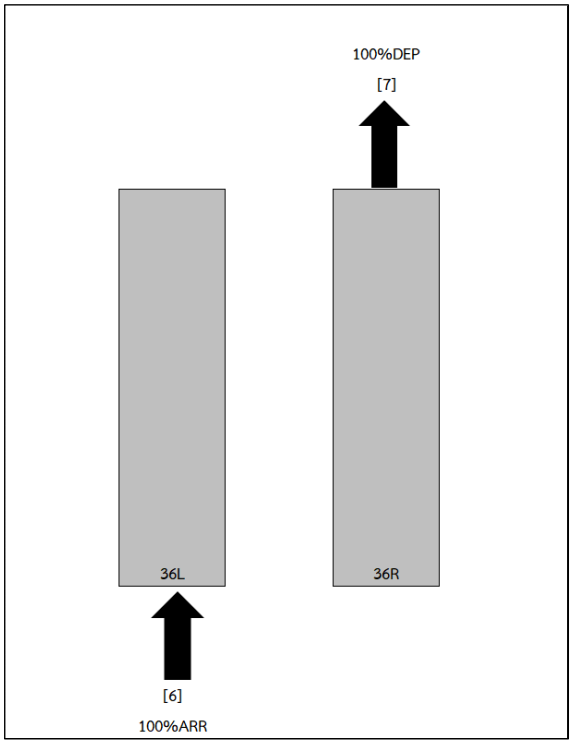
(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)
Model 36P2-1 : Segregated Operations (15%)

Figure 5.2-12 Runway Operations Models Phase 2
Model 18P2-1 and Model 36P2-1

- Model 18P2-2 : Segregated Parallel Operations have a 3% frequency for hot season operations, distributing Runway 1 (18R) operations at 80% straight takeoffs and 20% oblique takeoffs, and Runway 2 (18L) operations at 100% landings. Details are as shown in Figure 5.2-13(1).
- Model 36P2-2 : Segregated Operations have a 2% frequency for cold season operations, distributing Runway 1 (36L) operations at 100% landings, and Runway 2 (36R) operations at 100% takeoffs. Details are as shown in Figure 5.2-13(2).



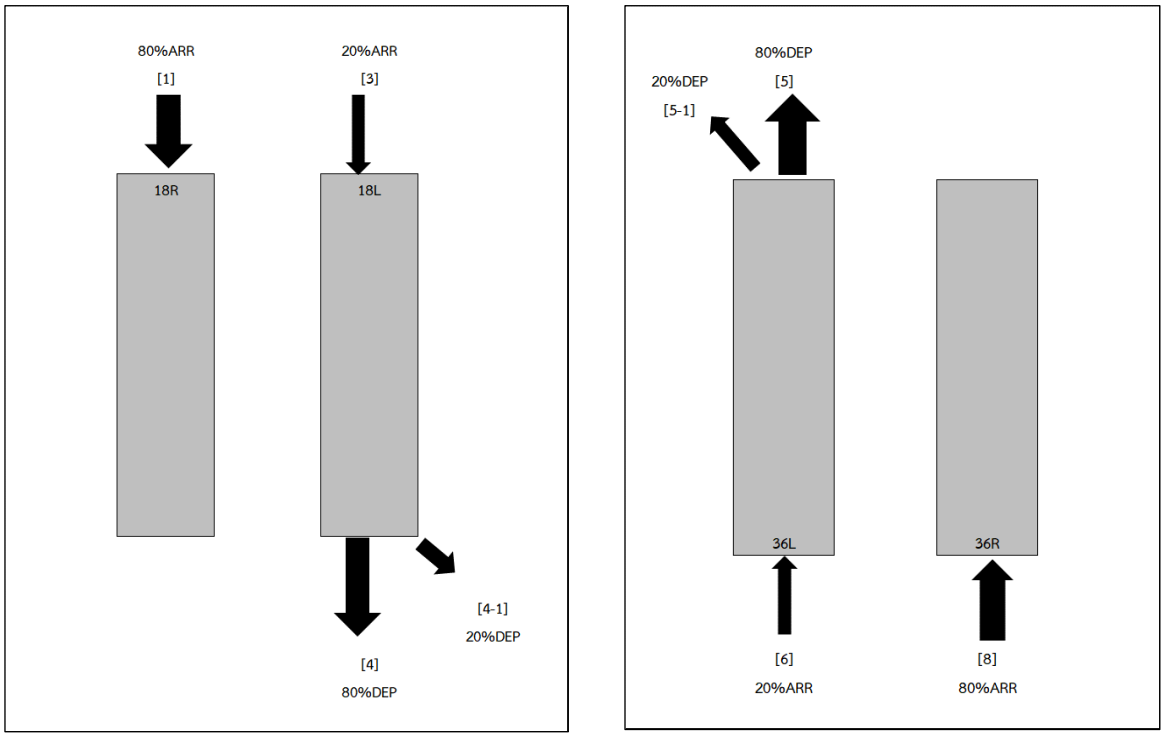
(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)
Model 18P2-2 : Segregated Parallel Operations (3%)



(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)
Model 36P2-2 : Segregated Operations (2%)

Figure 5.2-13 Runway Operations Models Phase 2
Model 18P2-2 and Model 36P2-2

- Model 18P2-3 : Semi-Mixed Operations (Arrival > Departure) have a 12% frequency for hot season operations, distributing Runway 1 (18R) operations at 80% landings, and Runway 2 (18L) operations at 20% landings, 80% straight takeoffs and 20% oblique takeoffs. Details are as shown in Figure 5.2-14(1).
- Model 36P2-3 : Semi-Mixed Operations (Arrival > Departure) have a 15% frequency for cold season operations, distributing Runway 1 (36L) operations at 20% landings, 80% straight takeoffs and 20% oblique takeoffs, and Runway 2 (36R) operations at 80% landings. Details are as shown in Figure 5.2-14(2).

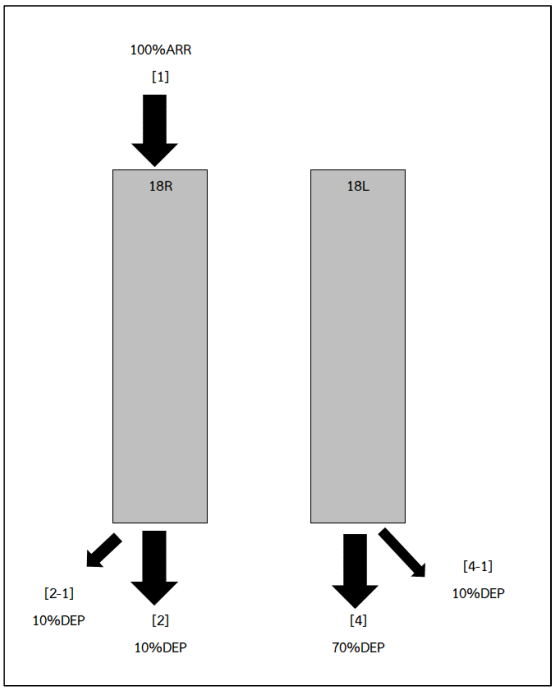


(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)
Model 18P2-3 : Semi-Mixed Operations (12%)
(Arrival > Departure)

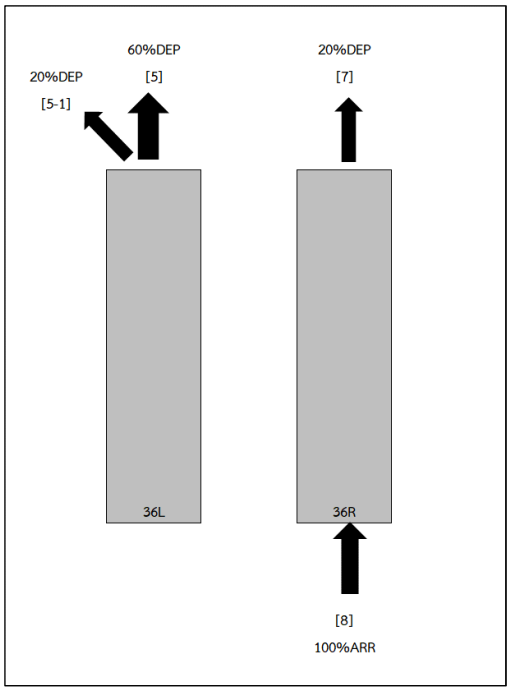
(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)
Model 36P2-3 : Semi-Mixed Operations (15%)
(Arrival > Departure)

Figure 5.2-14 Runway Operations Models Phase 2
Model 18P2-3 and Model 36P2-3

- Model 18P2-4 : Semi-Mixed Operations (Departure > Arrival) have a 5% frequency for hot season operations, distributing Runway 1 (18R) operations at 100% landings, 10% straight takeoffs, and 10% oblique takeoffs, and Runway 2 (18L) operations at 70% straight takeoffs and 10% oblique takeoffs. Details are as shown in Figure 5.2-15(1).
- Model 36P2-4 : Semi-Mixed Operations (Departure > Arrival) have a 4% frequency for cold season operations, distributing Runway 1 (36L) operations at 60% straight takeoffs and 20% straight takeoffs, and Runway 2 (36R) operations at 100% landings and 20% takeoffs. Details are as shown in Figure 5.2-15(2).



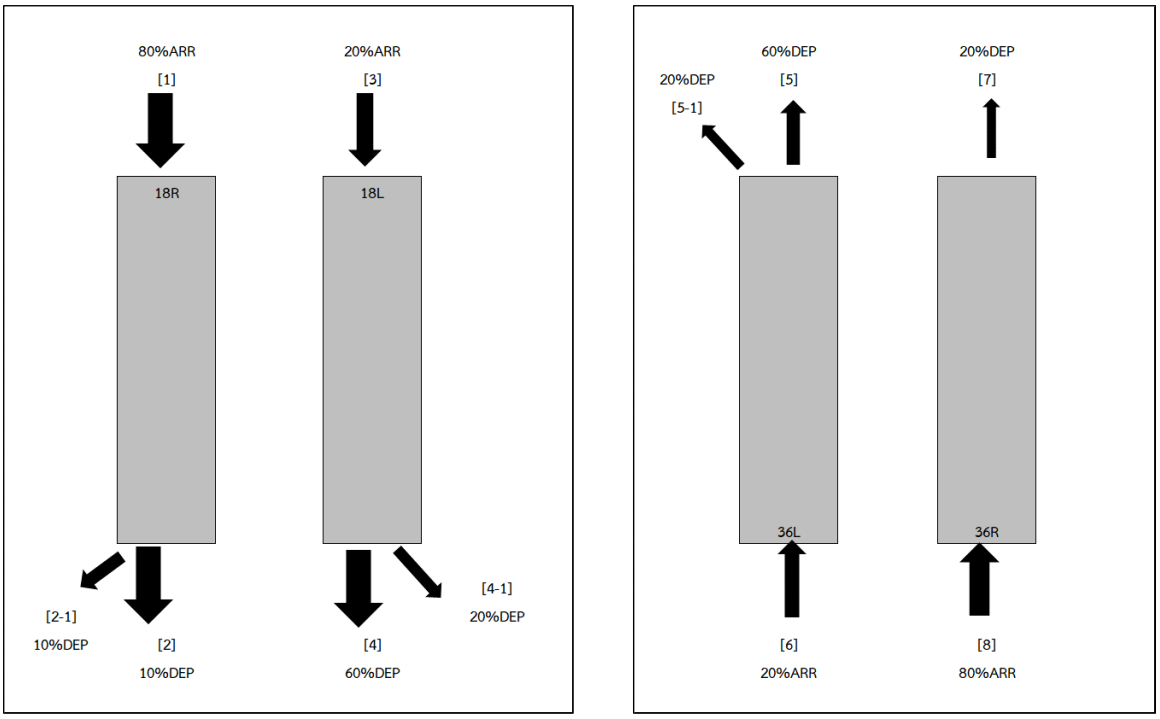
(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)
Model 18P2-4 : Semi-Mixed Operations (5%)
(Departure > Arrival)



(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)
Model 36P2-4 : Semi-Mixed Operations (4%)
(Departure > Arrival)

Figure 5.2-15 Runway Operations Models Phase 2
Model 18P2-4 and Model 36P2-4

- Model 18P2-5 : Mixed Parallel Operations (Arrival 80:20) have a 60% frequency for hot season operations, distributing Runway 1 (18R) operations at 80% landings, 10% straight takeoffs, and 10% oblique takeoffs, and Runway 2 (18L) operations at 20% landings, 60% straight takeoffs and 20% oblique takeoffs. Details are as shown in Figure 5.2-16(1).
- Model 36P2-5 : Mixed Parallel Operations (Arrival 20:80) have a 60% frequency for cold season operations, distributing Runway 1 (36L) operations at 20% landings, 60% straight takeoffs, and 20% oblique takeoffs, and Runway 2 (36R) operations at 80% landings and 20% takeoffs. Details are as shown in Figure 5.2-16(2).

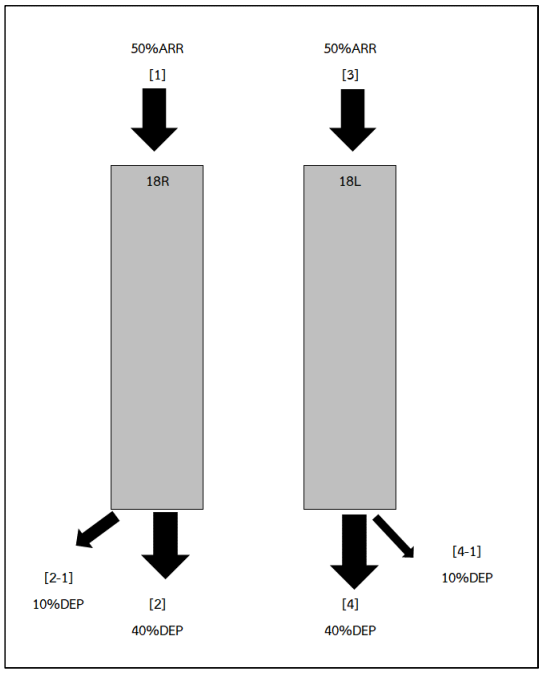


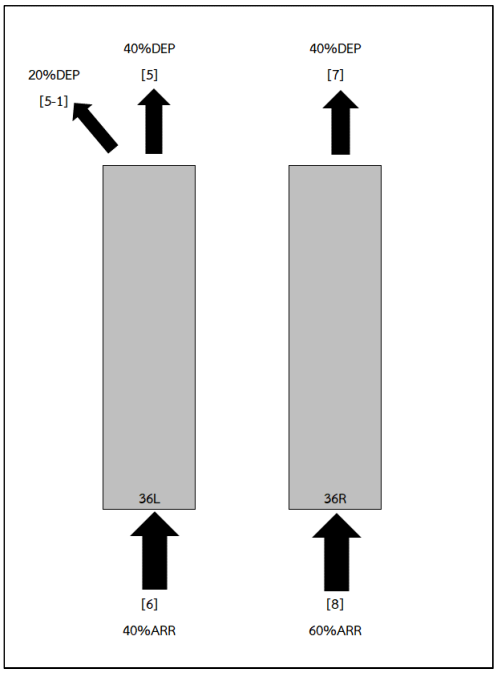
(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)
Model 18P2-5 : Mixed Parallel Operations (60%)
(ARR 80:20)

(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)
Model 36P2-5 : Mixed Parallel Operations (60%)
(ARR 20:80)

Figure 5.2-16 Runway Operations Models Phase 2
Model 18P2-5 and Model 36P2-5

- Model 18P2-6 : Mixed Parallel Operations (Arrival 50:50 have a 5% frequency for hot season operations, distributing Runway 1 (18R) operations at 50% landings, 40% straight takeoffs, and 10% oblique takeoffs, and Runway 2 (18L) operations at 50% landings, 40% straight takeoffs and 10% oblique takeoffs. Details are as shown in Figure 5.2-17(1).
- Model 36P2-6 : Mixed Parallel Operations (Arrival 40:60) have a 4% frequency for hot season operations, distributing Runway 1 (36L) operations at 40% landings, 40% straight takeoffs, and 20% oblique takeoffs, and Runway 2 (36R) operations at 60% landings and 40% takeoffs. Details are as shown in Figure 5.2-17 (2).





(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)
Model 18P2-6 : Mixed Parallel Operations (5%)
(Arrival 50:50)

(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)
Model 36P2-6 : Mixed Parallel Operations (4%)
(Arrival 40:60)

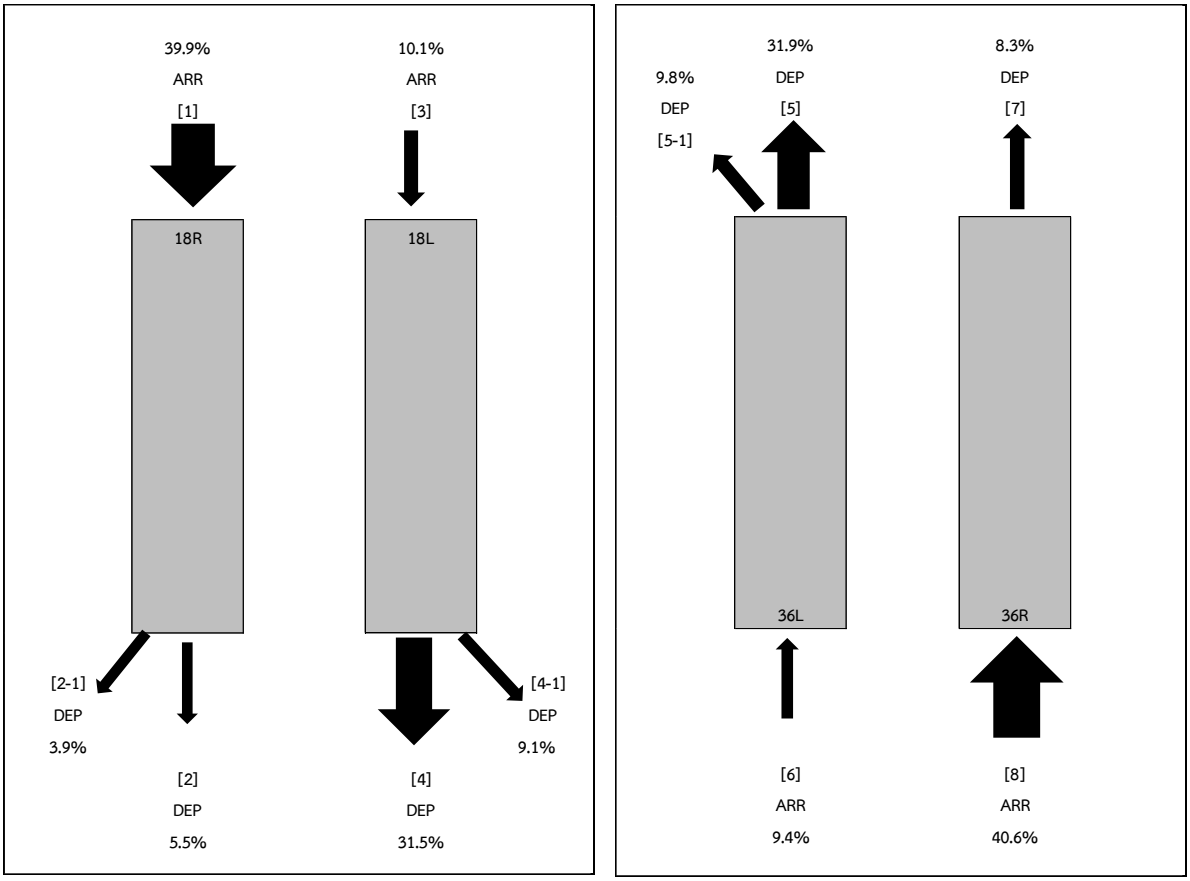
Figure 5.2-17 Runway Operations Models Phase 2
Model 18P2-6 and Model 36P2-6

An overview of the 6 sub-models for Model 18P2 Runway Operations Phase 2 in the hot season (Feb. - Sept.) and Model 36P2 Runway Operations Phase 2 for the cold season (Oct. - Jan.) are shown according to the following formula:

18P2 = 15%(18P2-1)+3%(18P2-2)+12%(18P2-3)+5%(18P2-4)+60%(18P2-5)+5%(18P2-6)

36P2 = 15%(36P2-1)+2%(36P2-2)+15%(36P2-3)+4%(36P2-4)+60%(36P2-5)+4%(36P2-6)

The overview is as shown in Figure 5.2-18 (1) and Figure 5.2-18 (2)



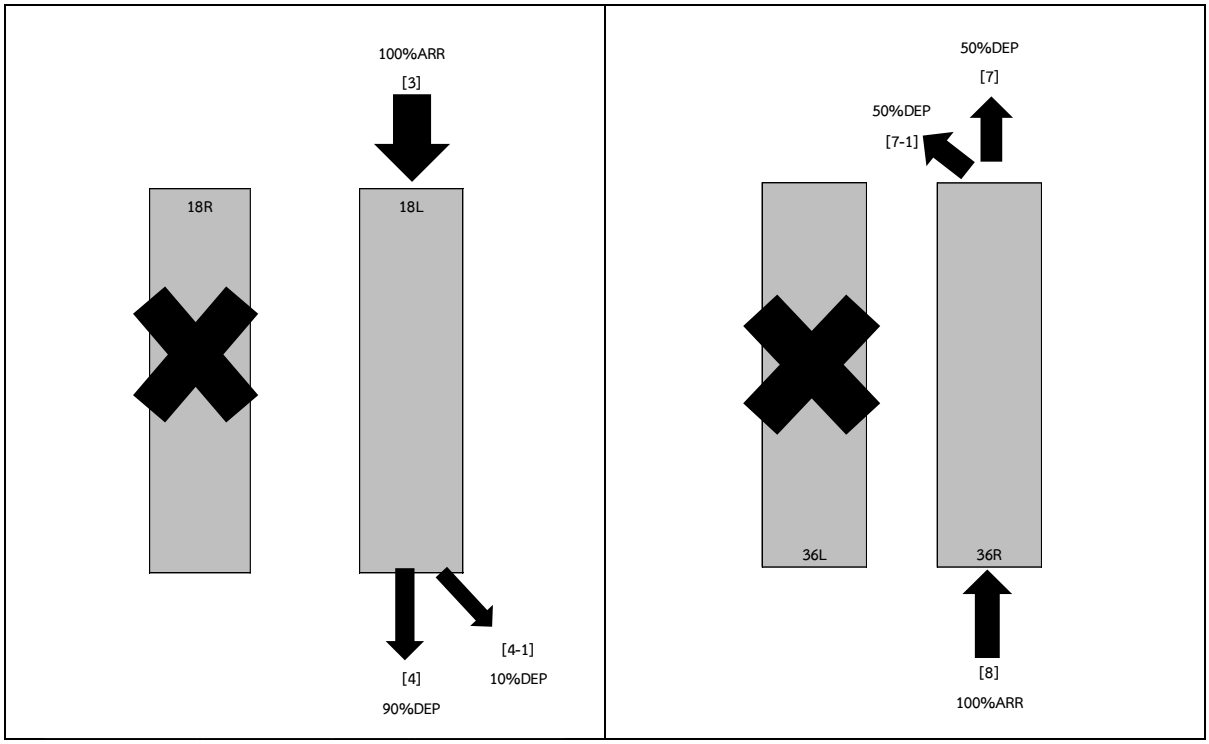
(1) Runway Operations Models Phase 2, hot season (Feb. - Sept.)

(2) Runway Operations Models Phase 2, cold season (Oct. - Jan.)

Figure 5.2-18 Runway Operations Models Phase 2

4.3 Runway Operations Models in case of Runway 1 or Runway 2 closure (less than 300 forecasted flights per day)

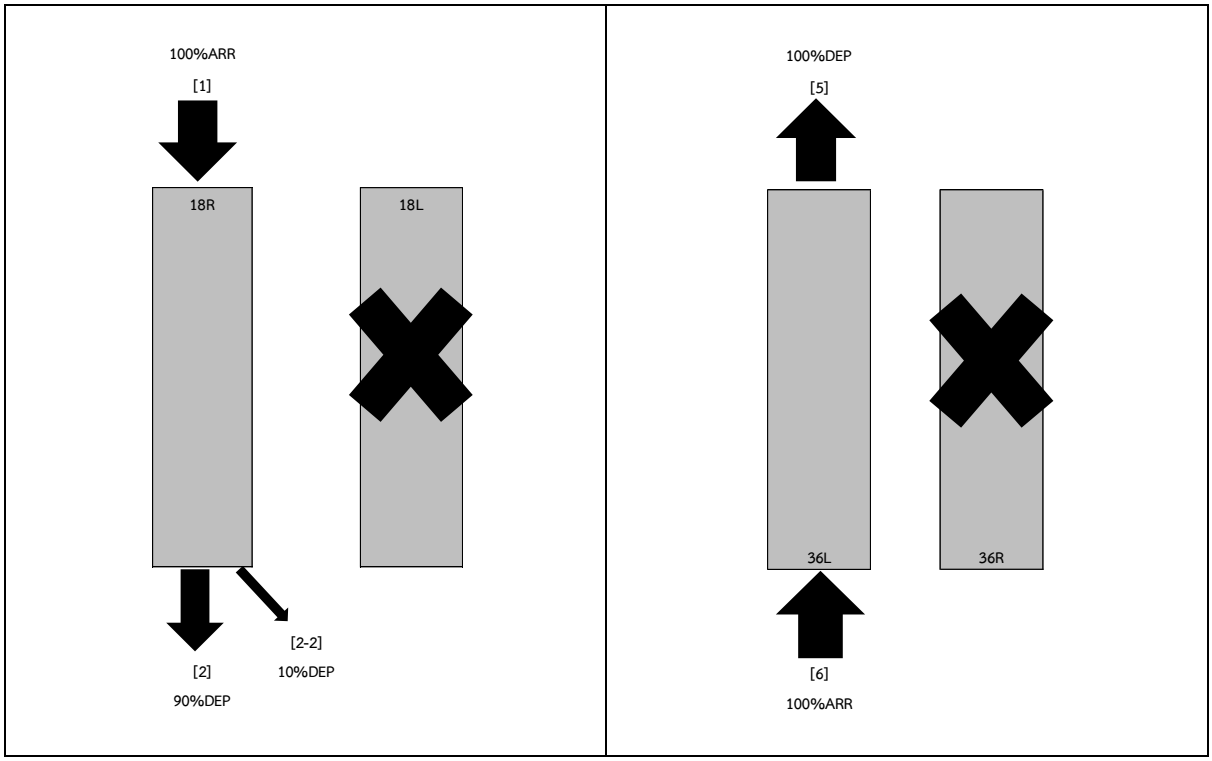
Use for Scenario 8, closure of Runway 1, and Scenario 9, closure of Runway 2 (2028), with an average 221 flights per day, modified from data from Runway Operations Models Phase 1, containing data from the runway operation model in the case of Runway 1 closure, and the runway operation model in the case of Runway 2 closure (less than 300 forecasted flights per day), with details as shown in Figure 5.2-19 and Figure 5.2-20.



Runway Operations Models in case of Runway 1 closure Case 8: Closure of Runway 1 (2028) in the hot season (Feb. - Sept.)

Runway Operations Models in case of Runway 1 closure Case 8: Closure of Runway 1 (2028) in the cold season (Oct. - Jan.)

Figure 5.2-19 Runway Operations Models in case of Runway 1 closure (less than 300 forecasted flights per day)



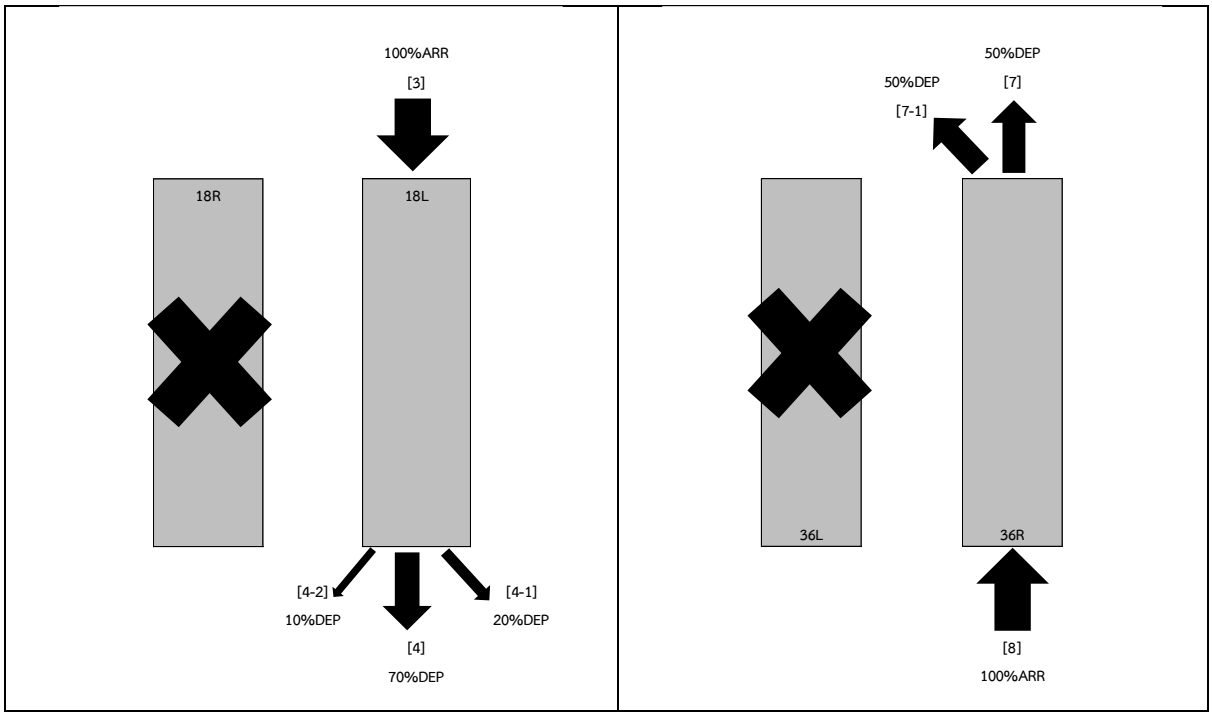
Runway Operations Models in case of Runway 2 closure Case 9: Closure of Runway 2 (2028) in the hot season (Feb. - Sept.)

Runway Operations Models in case of Runway 2 closure Case 9: Closure of Runway 1 (2028) in the cold season (Oct. - Jan.)

Figure 5.2-20Runway Operations Models in case of Runway 2 closure (less than 300 forecasted flights per day)

4.4) Runway Operations Models in case of Runway 1 or Runway 2 closure

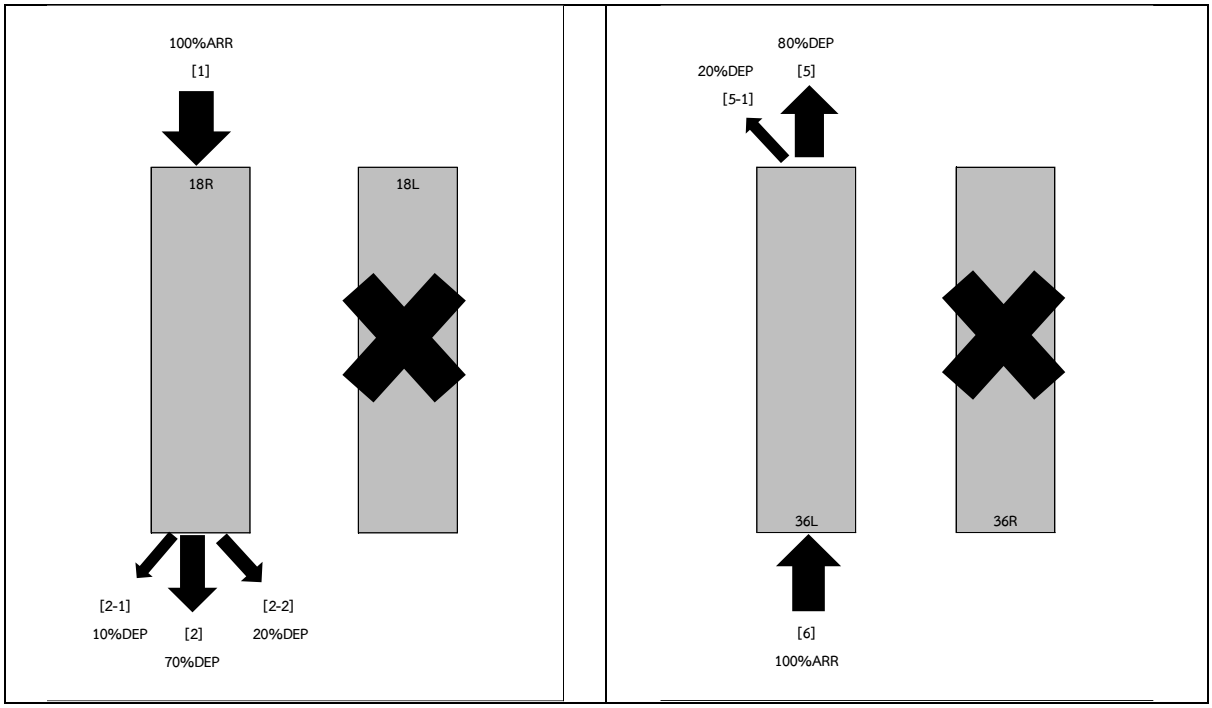
(More than 300 forecasted flights per day), used for Scenario 6, in the case of Runway 1 closure (2048) and Scenario 7, in the case of Runway 2 closure (2048), with an average 791 flights per day, and Scenario 10, in the case of Runway 1 closure (2038) and Scenario 11, in the case of Runway 2 closure (2038), with an average 548 flights per day, respectively. Modified from Runway Operations Models Phase 2 Model 18P2-5 : Mixed Parallel Operations (Arrival 80:20), with an usage frequency of 60% in the hot season, Model 36P2-5 : Mixed Parallel Operations (Arrival 20:80) with an usage frequency of 60% in the cold season, which has the highest usage frequency as representing runway operation models in the case of runway closures, comprised of runway operation models in the case of Runway 1 closure and runway operation models in the case of Runway 2 closure (more than 300 forecasted flights per day). Details are as shown in Figure 5.2-21 and Figure 5.2-22



Runway Operations Models in case of Runway 1 closure Case 6: Closure of Runway 1 (2048) and Case 10: Closure of Runway 1 (2038) in the hot season (Feb. - Sept.)

Runway Operations Models in case of Runway 1 closure Case 6: Closure of Runway 1 (2048) and Case 10: Closure of Runway 1 (2038) in the cold season (Oct. - Jan.)

Figure 5.2-21 Runway Operations Models in case of Runway 1 closure (more than 300 forecasted flights per day)



Runway Operations Models in case of Runway 2 closure Case 7: Closure of Runway 2 (2048) and Case 11: Closure of Runway 2 (2038) in the hot season (Feb. - Sept.)

Runway Operations Models in case of Runway 2 closure Case 7: Closure of Runway 2 (2048) and Case 11: Closure of Runway 2 (2038) in the cold season (Oct. - Jan.)

Figure 5.2-22 Runway Operations Models in case of Runway 2 closure (more than 300 forecasted flights per day)

5) Preparation of input data and runway operation distributions

To prepare input data for AEDT2d-SP2 mathematical models for NEF forecast contours, flight data was compiled by aircraft type and model, divided by arrivals and departures during the day (7.00 a.m. - 10 p.m.) and during the night (10.00 p.m. - 7.00 a.m.) and divided into hot season flights (February to September) and cold season flights (October to January). Flight data was compiled according to runway distribution and outlined flight routes by determining the forecasted number of flights according to study scenarios with detailed data imported into a mathematical model. Scenario 1, 2019 aviation situation, and flight forecasts for Scenarios 2-11 are as shown in Table 5.2-18 to Table 5.2-39.

Case 1: Aviation Situation, 2019 (hot season) as shown in Table 5.2-18
Case 1: Aviation Situation, 2019 (cold season) as shown in Table 5.2-19
Case 2: Flight forecast for 2028 comprising an average of 221 flights per day (hot season) as shown in Table 5.2-20
Case 2: Flight forecast for 2028 comprising an average of 221 flights per day (cold season) as shown in Table 5.2-21
Case 3: Flight forecast for 2038 comprising an average of 548 flights per day (hot season) as shown in Table 5.2-22
Case 3: Flight forecast for 2038 comprising an average of 548 flights per day (cold season) as shown in Table 5.2-23
Case 4: Flight forecast for 2048 comprising an average of 889 flights per day (hot season) as shown in Table 5.2-24
Case 4: Flight forecast for 2048 comprising an average of 889 flights per day (cold season) as shown in Table 5.2-25
Case 5: Peak flight forecast for 2048 comprising an average of 1,364 flights per day (hot season) as shown in Table 5.2-26
Case 5: Peak flight forecast for 2048 comprising an average of 1,364 flights per day (cold season) as shown in Table 5.2-27
Case 6: Flight forecast for 2048 in the case that Runway 1 is closed comprising an average of 791 flights per day (hot season) as shown in Table 5.2-28
Case 6: Flight forecast for 2048 in the case that Runway 1 is closed comprising an average of 791 flights per day (hot season) as shown in Table 5.2-29
Case 7: Flight forecast for 2048 in the case that Runway 2 is closed comprising an average of 791 flights per day (hot season) as shown in Table 5.2-30
Case 7: Flight forecast for 2048 in the case that Runway 2 is closed comprising an average of 791 flights per day (cold season) as shown in Table 5.2-31
Case 8: Flight forecast for 2028 in the case that Runway 1 is closed comprising an average of 221 flights per day (hot season) as shown in Table 5.2-32
Case 8: Flight forecast for 2028 in the case that Runway 1 is closed comprising an average of 221 flights per day (cold season) as shown in Table 5.2-33
Case 9: Flight forecast for 2028 in the case that Runway 2 is closed comprising an average of 221 flights per day (hot season) as shown in Table 5.2-34
Case 9: Flight forecast for 2028 in the case that Runway 2 is closed comprising an average of 221 flights per day (cold season) as shown in Table 5.2-35
Case 10: Flight forecast for 2038 in the case that Runway 1 is closed comprising an average of 548 flights per day (hot season) as shown in Table 5.2-36
Case 10: Flight forecast for 2038 in the case that Runway 1 is closed comprising an average of 548 flights per day (cold season) as shown in Table 5.2-37
Case 11: Flight forecast for 2038 in the case that Runway 2 is closed comprising an average of 548 flights per day (hot season) as shown in Table 5.2-38
Case 11: Flight forecast for 2038 in the case that Runway 2 is closed comprising an average of 548 flights per day (cold season) as shown in Table 5.2-39

Table 5.2-18 Case 1: Aviation Situation, 2019 (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			18R		18R	
			Daytime	Night time	Daytime	Night time
1	A	C10T	0.000000	0.000000	0.000000	0.000000
2	A	C150	0.012397	0.000000	0.016529	0.000000
3	A	C152	0.061983	0.000000	0.061983	0.000000
4	A	C172	4.904959	0.008264	4.929752	0.004132
5	A	C182	0.016529	0.000000	0.016529	0.000000
6	A	C210	0.020661	0.008264	0.028926	0.000000
7	A	C510	0.012397	0.000000	0.012397	0.000000
8	A	C77R	0.012397	0.000000	0.012397	0.000000
9	A	DA40	1.652893	0.000000	1.644628	0.004132
10	A	DA42	0.574380	0.000000	0.578512	0.000000
11	A	EA50	0.004132	0.000000	0.004132	0.000000
12	A	HDJT	0.000000	0.000000	0.000000	0.000000
13	A	HUSK	0.000000	0.000000	0.000000	0.000000
14	A	KODI	0.000000	0.000000	0.000000	0.000000
15	A	LJ35	0.004132	0.000000	0.004132	0.000000
16	A	LJ60	0.024793	0.000000	0.024793	0.000000
17	A	MU2	0.004132	0.000000	0.004132	0.000000
18	A	P180	0.004132	0.000000	0.000000	0.004132
19	A	PIVI	0.000000	0.000000	0.004132	0.000000
20	A	P28A	0.004132	0.000000	0.004132	0.000000
21	A	P750	0.004132	0.000000	0.016529	0.000000
22	A	PA46	0.000000	0.000000	0.004132	0.000000
23	A	P46T	0.000000	0.000000	0.000000	0.000000
24	A	P68	0.000000	0.000000	0.000000	0.000000
25	A	PIVI	0.012397	0.000000	0.012397	0.000000
26	A	RBEL	0.020661	0.000000	0.020661	0.000000
27	A	RV9	0.000000	0.000000	0.000000	0.000000
28	A	SR22	0.020661	0.000000	0.020661	0.000000
29	A	WW24	0.000000	0.000000	0.000000	0.000000
30	A	TBM7	0.037190	0.000000	0.033058	0.004132

Table 5.2-18 Case 1: Aviation Situation, 2019 (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			18R		18R	
			Daytime	Night time	Daytime	Night time
31	B	BE30	0.004132	0.000000	0.000000	0.000000
32	B	B350	0.012397	0.000000	0.020661	0.000000
33	B	BE20	0.008264	0.000000	0.012397	0.000000
34	B	C208	0.000000	0.000000	0.000000	0.000000
35	B	C25B	0.004132	0.000000	0.004132	0.000000
36	B	C550	0.012397	0.000000	0.012397	0.000000
37	B	C560	0.004132	0.000000	0.004132	0.000000
38	B	C750	0.008264	0.000000	0.004132	0.000000
39	B	CL30	0.004132	0.000000	0.012397	0.000000
40	B	CL60	0.028926	0.000000	0.012397	0.008264
41	B	CRJ2	0.020661	0.000000	0.020661	0.000000
42	B	E135	0.000000	0.000000	0.000000	0.000000
43	B	D328	0.004132	0.000000	0.004132	0.000000
44	B	F2TH	0.020661	0.000000	0.020661	0.000000
45	B	F900	0.004132	0.008264	0.004132	0.008264
46	B	FA50	0.000000	0.000000	0.000000	0.000000
47	B	G150	0.000000	0.000000	0.000000	0.004132
48	B	GALX	0.004132	0.000000	0.004132	0.000000
49	B	GLF4	0.012397	0.004132	0.020661	0.000000
50	B	H25B	0.016529	0.000000	0.016529	0.000000
51	A	M18	0.000000	0.000000	0.004132	0.000000
52	C	A20N	0.586777	0.070248	0.599174	0.020661
53	C	A21N	0.004132	0.000000	0.004132	0.000000
54	C	A318	0.004132	0.000000	0.004132	0.000000
55	C	A319	0.066116	0.000000	0.049587	0.020661
56	C	A320	7.285124	1.264463	6.971074	1.611570
57	C	A321	0.004132	0.000000	0.004132	0.000000
58	C	AN72	0.000000	0.004132	0.000000	0.000000
59	C	AT43	0.004132	0.000000	0.004132	0.000000
60	C	AT72	0.045455	0.004132	0.049587	0.000000

Table 5.2-18 Case 1: Aviation Situation, 2019 (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			18R		18R	
			Daytime	Night time	Daytime	Night time
61	C	AT76	1.987603	0.004132	1.966942	0.012397
62	C	B38M	0.004132	0.000000	0.004132	0.000000
63	C	B712	0.000000	0.000000	0.000000	0.000000
64	C	B734	0.000000	0.008264	0.008264	0.000000
65	C	B736	0.004132	0.000000	0.000000	0.000000
66	C	B737	0.033058	0.004132	0.049587	0.008264
67	C	B738	0.979339	0.020661	0.884298	0.111570
68	C	B739	0.933884	0.359504	1.169421	0.070248
69	C	DH8B	0.004132	0.000000	0.004132	0.000000
70	C	E190	0.000000	0.000000	0.000000	0.000000
71	C	E35L	0.024793	0.004132	0.028926	0.000000
72	C	FA7X	0.037190	0.000000	0.037190	0.004132
73	C	FA8X	0.000000	0.004132	0.004132	0.000000
74	C	GL5T	0.045455	0.004132	0.037190	0.012397
75	C	GLEX	0.049587	0.008264	0.045455	0.004132
76	C	GLF5	0.045455	0.004132	0.049587	0.000000
77	C	GLF6	0.020661	0.000000	0.028926	0.000000
78	D	A306	0.004132	0.000000	0.008264	0.000000
79	D	AN12	0.008264	0.008264	0.016529	0.004132
80	D	B752	0.913223	0.376033	1.223140	0.061983
81	D	B762	0.000000	0.000000	0.004132	0.000000
82	D	B763	0.330579	0.219008	0.483471	0.061983
83	D	IL76	0.016529	0.000000	0.016529	0.000000
84	D	T204	0.008264	0.000000	0.008264	0.000000
85	E	A332	0.000000	0.000000	0.000000	0.000000
86	E	A333	0.020661	0.008264	0.028926	0.000000
87	E	A359	0.004132	0.000000	0.000000	0.000000
88	E	B744	0.194215	0.012397	0.111570	0.115702
89	E	B745	0.004132	0.000000	0.000000	0.000000
90	E	B772	0.028926	0.012397	0.041322	0.004132

Table 5.2-18 Case 1: Aviation Situation, 2019 (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			18R		18R	
			Daytime	Night time	Daytime	Night time
91	E	B77W	0.004132	0.000000	0.004132	0.000000
92	E	B788	0.045455	0.000000	0.045455	0.000000
93	E	B789	0.004132	0.000000	0.004132	0.000000
94	F	A124	0.000000	0.000000	0.000000	0.000000
95	F	A388	0.016529	0.000000	0.008264	0.000000
Total number of flights			21.351236	2.429747	21.640491	2.161152
Arrivals		24	Daytime flights		43	90%
Departures		24	Night flights		5	10%
Total average daily flights		48	Total average daily flights		48	100%

Table 5.2-19Scenario 1, 2019 Flight Situation 2019 (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			36L		36L	
			Daytime	Night time	Daytime	Night time
1	A	C10T	0.000000	0.000000	0.008130	0.000000
2	A	C150	0.000000	0.000000	0.000000	0.000000
3	A	C152	0.016260	0.000000	0.000000	0.000000
4	A	C172	3.528455	0.000000	3.569106	0.000000
5	A	C182	0.016260	0.000000	0.016260	0.000000
6	A	C210	0.000000	0.000000	0.000000	0.000000
7	A	C510	0.024390	0.000000	0.032520	0.000000
8	A	C77R	0.016260	0.000000	0.016260	0.000000
9	A	DA40	1.829268	0.000000	1.813008	0.000000
10	A	DA42	0.349593	0.000000	0.341463	0.000000
11	A	EA50	0.000000	0.000000	0.000000	0.000000
12	A	HDJT	0.008130	0.000000	0.000000	0.000000
13	A	HUSK	0.008130	0.000000	0.000000	0.000000
14	A	KODI	0.008130	0.000000	0.000000	0.000000
15	A	LJ35	0.008130	0.000000	0.008130	0.000000

Table 5.2-19Scenario 1, 2019 Flight Situation 2019 (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			36L		36L	
			Daytime	Night time	Daytime	Night time
16	A	LJ60	0.008130	0.000000	0.008130	0.000000
17	A	MU2	0.000000	0.000000	0.000000	0.000000
18	A	P180	0.000000	0.000000	0.000000	0.000000
19	A	PIVI	0.000000	0.000000	0.000000	0.000000
20	A	P28A	0.000000	0.000000	0.000000	0.000000
21	A	P750	0.000000	0.000000	0.000000	0.000000
22	A	PA46	0.000000	0.000000	0.000000	0.000000
23	A	P46T	0.000000	0.000000	0.008130	0.000000
24	A	P68	0.008130	0.000000	0.008130	0.000000
25	A	PIVI	0.016260	0.000000	0.008130	0.000000
26	A	RBEL	0.000000	0.000000	0.008130	0.000000
27	A	RV9	0.008130	0.000000	0.000000	0.000000
28	A	SR22	0.008130	0.000000	0.008130	0.000000
29	A	WW24	0.000000	0.008130	0.000000	0.008130
30	A	TBM7	0.000000	0.000000	0.000000	0.000000
31	B	BE30	0.000000	0.000000	0.000000	0.000000
32	B	B350	0.008130	0.000000	0.000000	0.000000
33	B	BE20	0.008130	0.000000	0.000000	0.000000
34	B	C208	0.040650	0.000000	0.040650	0.000000
35	B	C25B	0.008130	0.000000	0.008130	0.000000
36	B	C550	0.000000	0.000000	0.000000	0.000000
37	B	C560	0.000000	0.000000	0.000000	0.000000
38	B	C750	0.000000	0.000000	0.000000	0.000000
39	B	CL30	0.000000	0.000000	0.008130	0.000000
40	B	CL60	0.016260	0.000000	0.032520	0.000000
41	B	CRJ2	0.016260	0.000000	0.016260	0.000000
42	B	E135	0.000000	0.008130	0.000000	0.000000
43	B	D328	0.000000	0.000000	0.000000	0.000000
44	B	F2TH	0.008130	0.008130	0.008130	0.000000

Table 5.2-19Scenario 1, 2019 Flight Situation 2019 (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			36L		36L	
			Daytime	Night time	Daytime	Night time
45	B	F900	0.032520	0.000000	0.016260	0.000000
46	B	FA50	0.008130	0.000000	0.000000	0.000000
47	B	G150	0.000000	0.000000	0.000000	0.000000
48	B	GALX	0.016260	0.000000	0.008130	0.000000
49	B	GLF4	0.008130	0.024390	0.056911	0.000000
50	B	H25B	0.008130	0.008130	0.008130	0.008130
51	A	M18	0.000000	0.000000	0.000000	0.000000
52	C	A20N	1.317073	0.040650	1.349593	0.008130
53	C	A21N	0.000000	0.000000	0.000000	0.000000
54	C	A318	0.000000	0.000000	0.000000	0.000000
55	C	A319	0.000000	0.000000	0.000000	0.008130
56	C	A320	5.951220	1.203252	6.056911	0.934959
57	C	A321	0.000000	0.000000	0.000000	0.000000
58	C	AN72	0.000000	0.000000	0.000000	0.000000
59	C	AT43	0.000000	0.000000	0.008130	0.000000
60	C	AT72	0.048780	0.000000	0.048780	0.000000
61	C	AT76	2.024390	0.000000	1.967480	0.000000
62	C	B38M	0.048780	0.000000	0.040650	0.000000
63	C	B712	0.016260	0.000000	0.008130	0.000000
64	C	B734	0.000000	0.000000	0.000000	0.000000
65	C	B736	0.000000	0.000000	0.040650	0.000000
66	C	B737	0.008130	0.024390	0.024390	0.000000
67	C	B738	1.081301	0.130081	0.934959	0.178862
68	C	B739	0.902439	0.170732	0.894309	0.105691
69	C	DH8B	0.000000	0.000000	0.000000	0.000000
70	C	E190	0.000000	0.000000	0.008130	0.008130
71	C	E35L	0.016260	0.000000	0.000000	0.000000
72	C	FA7X	0.040650	0.000000	0.016260	0.008130
73	C	FA8X	0.008130	0.000000	0.000000	0.000000

Table 5.2-19Scenario 1, 2019 Flight Situation 2019 (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals		Departures	
			36L		36L	
			Daytime	Night time	Daytime	Night time
74	C	GL5T	0.016260	0.008130	0.024390	0.008130
75	C	GLEX	0.065041	0.000000	0.073171	0.000000
76	C	GLF5	0.024390	0.000000	0.024390	0.000000
77	C	GLF6	0.016260	0.008130	0.032520	0.000000
78	D	A306	0.008130	0.000000	0.008130	0.000000
79	D	AN12	0.008130	0.008130	0.016260	0.016260
80	D	B752	1.569106	0.398374	1.788618	0.146341
81	D	B762	0.000000	0.000000	0.016260	0.000000
82	D	B763	0.764228	0.162602	0.747967	0.113821
83	D	IL76	0.000000	0.000000	0.000000	0.000000
84	D	T204	0.000000	0.000000	0.000000	0.000000
85	E	A332	0.056911	0.008130	0.081301	0.000000
86	E	A333	0.008130	0.000000	0.008130	0.000000
87	E	A359	0.000000	0.000000	0.000000	0.000000
88	E	B744	0.048780	0.056911	0.032520	0.048780
89	E	B745	0.000000	0.000000	0.000000	0.000000
90	E	B772	0.235772	0.016260	0.235772	0.000000
91	E	B77W	0.000000	0.000000	0.000000	0.000000
92	E	B788	0.089431	0.000000	0.089431	0.008130
93	E	B789	0.000000	0.000000	0.000000	0.000000
94	F	A124	0.008130	0.000000	0.000000	0.000000
95	F	A388	0.008130	0.000000	0.008130	0.000000
Total number of flights			20.430888	2.292682	20.642270	1.609754
Arrivals		23	Daytime flights		41	91%
Departures		22	Night flights		4	9%
Total average daily flights		45	Total average daily flights		45	100%

Table 5.2-20Scenario 2: Flight forecast for 2028 comprising an average of 221 flights per day (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			18R-T1		18L-T3		18R-T2		18L-T4		18R-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.021683	0.024284	0.086733	0.097136	0.026395	0.018457	0.092382	0.064599	0.013197	0.009228
2	C	A21N	0.011541	0.003412	0.046164	0.013648	0.006817	0.008827	0.023860	0.030896	0.003409	0.004414
3	C	A319	1.444553	0.124029	5.778211	0.496115	1.362042	0.217874	4.767148	0.762558	0.681021	0.108937
4	C	A320	4.559408	1.310331	18.237634	5.241325	4.606506	1.253877	16.122771	4.388571	2.303253	0.626939
5	C	A321	0.638254	0.174604	2.553016	0.698415	0.587853	0.232118	2.057484	0.812412	0.293926	0.116059
6	C	AT72	0.084634	0.000201	0.338537	0.000803	0.084778	0.000000	0.296724	0.000000	0.042389	0.000000
7	C	AT75	0.282755	0.013246	1.131021	0.052983	0.282652	0.013442	0.989281	0.047046	0.141326	0.006721
8	C	AT76	0.579150	0.037931	2.316600	0.151725	0.563206	0.055973	1.971220	0.195905	0.281603	0.027986
9	C	B38M	0.065749	0.026491	0.262996	0.105966	0.065550	0.026683	0.229426	0.093389	0.032775	0.013341
10	C	B733	0.000349	0.000000	0.001398	0.000000	0.000349	0.000000	0.001223	0.000000	0.000175	0.000000
11	C	B734	0.097749	0.068637	0.390997	0.274549	0.073591	0.096499	0.257568	0.337745	0.036795	0.048249
12	C	B737	0.059454	0.008831	0.237816	0.035322	0.066249	0.001003	0.231872	0.003511	0.033125	0.000502
13	C	B738	1.475154	1.209783	5.900616	4.839133	1.436682	1.252674	5.028386	4.384359	0.718341	0.626337
14	C	B739	0.082711	0.107773	0.330844	0.431090	0.098587	0.089477	0.345055	0.313169	0.049294	0.044738
15	C	E190	0.000524	0.000000	0.002098	0.000000	0.000524	0.000000	0.001835	0.000000	0.000262	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.000847	0.014899	0.003386	0.059597	0.005783	0.009228	0.020241	0.032296	0.002892	0.004614
18	D	A310	0.004374	0.000648	0.017497	0.002591	0.000141	0.005504	0.000494	0.019265	0.000071	0.002752
19	D	B752	0.039228	0.014251	0.156911	0.057006	0.038085	0.015541	0.133297	0.054395	0.019042	0.007771
20	D	B763	0.087345	0.062836	0.349379	0.251345	0.079837	0.071394	0.279430	0.249878	0.039919	0.035697
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	0.175843	0.050403	0.703372	0.201614	0.172061	0.054652	0.602215	0.191281	0.086031	0.027326
23	E	A333	1.560629	0.661343	6.242517	2.645373	1.583600	0.632861	5.542602	2.215013	0.791800	0.316430
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.066760	0.001423	0.267040	0.005691	0.020180	0.054855	0.070630	0.191992	0.010090	0.027427
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.059677	0.002642	0.238709	0.010569	0.003186	0.067654	0.011152	0.236790	0.001593	0.033827
28	E	A359	0.494946	0.319697	1.979784	1.278786	0.499544	0.314094	1.748404	1.099328	0.249772	0.157047
29	E	A35K	0.013458	0.001829	0.053834	0.007317	0.014516	0.000609	0.050804	0.002133	0.007258	0.000305

Table 5.2-20Scenario 2: Flight forecast for 2028 comprising an average of 221 flights per day (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			18R-T1		18L-T3		18R-T2		18L-T4		18R-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
30	E	B744	0.382676	0.231694	1.530703	0.926776	0.414044	0.195852	1.449156	0.685482	0.207022	0.097926
31	E	B747	0.002833	0.002642	0.011333	0.010569	0.000708	0.005079	0.002478	0.017777	0.000354	0.002540
32	E	B772	0.783059	0.473549	3.132237	1.894198	0.769850	0.488004	2.694475	1.708014	0.384925	0.244002
33	E	B773	1.308818	0.664595	5.235271	2.658381	1.353477	0.612951	4.737170	2.145327	0.676739	0.306475
34	E	B77L	0.005136	0.001829	0.020542	0.007317	0.005134	0.001829	0.017968	0.006400	0.002567	0.000914
35	E	B77W	0.041260	0.030892	0.165041	0.123570	0.060363	0.008939	0.211272	0.031288	0.030182	0.004470
36	E	B788	0.491582	0.519685	1.966326	2.078740	0.586813	0.409785	2.053847	1.434247	0.293407	0.204892
37	E	B789	0.171062	0.118692	0.684247	0.474769	0.182859	0.105037	0.640007	0.367628	0.091430	0.052518
38	E	B78X	0.045865	0.000000	0.183458	0.000000	0.045848	0.000000	0.160467	0.000000	0.022924	0.000000
39	F	A388	0.350482	0.298729	1.401927	1.194916	0.323036	0.329972	1.130625	1.154902	0.161518	0.164986
40	F	B74F	0.000382	0.000219	0.001528	0.000878	0.000382	0.000219	0.001337	0.000768	0.000191	0.000110
41	F	B748	0.013760	0.014256	0.055038	0.057026	0.015092	0.012716	0.052821	0.044508	0.007546	0.006358
Total number of flights			15.503690	6.596306	62.014761	26.385239	15.436320	6.663679	54.027127	23.322872	7.718164	3.331838
Arrivals			110.5		50%		Daytime flights		155		70%	
Departures			110.5		50%		Night flights		66		30%	
Total average daily flights			221		100%		Total average daily flights		221		100%	

Table 5.2-21Scenario 2: Flight forecast for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures			
			36L-T6		36R-T8		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.100302	0.067850	0.401209	0.271400	0.106388	0.061310	0.425553	0.245240
2	C	A21N	0.011996	0.002714	0.047985	0.010855	0.011673	0.003104	0.046691	0.012416
3	C	A319	1.485204	0.154699	5.940817	0.618795	1.426406	0.224286	5.705624	0.897144
4	C	A320	4.403296	1.303502	17.613183	5.214007	4.538686	1.153249	18.154742	4.612996
5	C	A321	0.780423	0.165942	3.121694	0.663769	0.736048	0.217689	2.944193	0.870757
6	C	AT72	0.091971	0.000000	0.367886	0.000000	0.092048	0.000000	0.368191	0.000000
7	C	AT75	0.213933	0.019386	0.855733	0.077544	0.227451	0.003880	0.909805	0.015521

Table 5.2-21Scenario 2: Flight forecast for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures			
			36L-T6		36R-T8		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
8	C	AT76	0.574488	0.037996	2.297951	0.151985	0.583636	0.027163	2.334544	0.108651
9	C	B38M	0.129293	0.024814	0.517173	0.099256	0.141073	0.010865	0.564293	0.043461
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
11	C	B734	0.035989	0.066687	0.143955	0.266749	0.009005	0.097398	0.036019	0.389590
12	C	B737	0.035656	0.012407	0.142622	0.049627	0.033351	0.015134	0.133403	0.060535
13	C	B738	1.437219	1.170515	5.748877	4.682061	1.393055	1.225812	5.572221	4.903248
14	C	B739	0.088306	0.071728	0.353224	0.286911	0.094049	0.065190	0.376194	0.260762
15	C	E190	0.008997	0.000000	0.035989	0.000000	0.008338	0.000776	0.033351	0.003104
16	C	GLF5	0.000667	0.000000	0.002666	0.000000	0.000667	0.000000	0.002668	0.000000
17	D	A306	0.000000	0.021085	0.000000	0.084341	0.010984	0.008322	0.043937	0.033289
18	D	A310	0.007657	0.000594	0.030628	0.002376	0.000000	0.009511	0.000000	0.038044
19	D	B752	0.021951	0.006236	0.087803	0.024946	0.020692	0.008025	0.082766	0.032101
20	D	B763	0.095205	0.072462	0.380820	0.289849	0.110611	0.054986	0.442444	0.219945
21	D	IL62	0.000000	0.000297	0.000000	0.001188	0.000256	0.000000	0.001022	0.000000
22	E	A332	0.167614	0.057755	0.670458	0.231019	0.181024	0.041966	0.724097	0.167865
23	E	A333	1.458211	0.752789	5.832844	3.011157	1.513525	0.692444	6.054098	2.769777
24	E	A340	0.000680	0.000000	0.002720	0.000000	0.000340	0.000396	0.001361	0.001584
25	E	A343	0.025499	0.001583	0.101997	0.006330	0.006465	0.023754	0.025860	0.095018
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.050998	0.001583	0.203992	0.006330	0.000340	0.060178	0.001361	0.240712
28	E	A359	0.476324	0.312904	1.905296	1.251616	0.462088	0.330188	1.848352	1.320750
29	E	A35K	0.028559	0.003956	0.114236	0.015823	0.030964	0.001188	0.123858	0.004752
30	E	B744	0.406626	0.224690	1.626505	0.898759	0.430102	0.197954	1.720410	0.791816
31	E	B747	0.001700	0.000791	0.006800	0.003165	0.000000	0.002771	0.000000	0.011085
32	E	B772	0.790814	0.454917	3.163254	1.819670	0.765269	0.485384	3.061076	1.941537
33	E	B773	1.394293	0.701364	5.577174	2.805456	1.436963	0.652457	5.747853	2.609829
34	E	B77L	0.003060	0.000791	0.012239	0.003165	0.003062	0.000792	0.012249	0.003168
35	E	B77W	0.066298	0.054590	0.265192	0.218359	0.088470	0.028901	0.353881	0.115606
36	E	B788	0.448445	0.462829	1.793780	1.851315	0.514489	0.387594	2.057958	1.550378

Table 5.2-21Scenario 2: Flight forecast for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures			
			36L-T6		36R-T8		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
37	E	B789	0.200253	0.131728	0.801013	0.526913	0.222197	0.106104	0.888786	0.424414
38	E	B78X	0.014959	0.000000	0.059838	0.000000	0.014972	0.000000	0.059887	0.000000
39	F	A388	0.327916	0.320208	1.311665	1.280833	0.298450	0.354664	1.193798	1.418654
40	F	B74F	0.001061	0.000823	0.004245	0.003293	0.001416	0.000412	0.005665	0.001648
41	F	B748	0.018748	0.013170	0.074994	0.052681	0.020888	0.010710	0.083551	0.042840
Total number of flights			15.404611	6.695385	61.618457	26.781543	15.535441	6.564557	62.141762	26.258237
Arrivals			110.5		50%		Daytime flights		155	70%
Departures			110.5		50%		Night flights		66	30%
Total average daily flights			221		100%		Total average daily flights		221	100%

Table 5.2-22Scenario 3: Flight forecast for 2038 comprising an average of 548 flights per day (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures							
			18R-T1		18L-T3		18R-T2-1		18R-T2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.218082	0.245328	0.055143	0.062032	0.025745	0.018083	0.036720	0.025792	0.209388	0.147069	0.060725	0.042652
2	C	A21N	0.116076	0.034469	0.029350	0.008716	0.006650	0.008649	0.009484	0.012335	0.054080	0.070339	0.015684	0.020399
3	C	A319	14.528850	1.252992	3.673704	0.316826	1.328540	0.213460	1.894886	0.304457	10.804987	1.736068	3.133577	0.503481
4	C	A320	45.857074	13.237540	11.595226	3.347188	4.493199	1.228478	6.408613	1.752169	36.543093	9.991188	10.597941	2.897566
5	C	A321	6.419355	1.763925	1.623171	0.446019	0.573393	0.227416	0.817826	0.324361	4.663394	1.849568	1.352441	0.536397
6	C	AT72	0.851225	0.002029	0.215237	0.000513	0.082693	0.000000	0.117944	0.000000	0.672539	0.000000	0.195045	0.000000
7	C	AT75	2.843863	0.133814	0.719087	0.033836	0.275699	0.013169	0.393227	0.018783	2.242256	0.107107	0.650282	0.031062
8	C	AT76	5.824906	0.383200	1.472861	0.096894	0.549352	0.054839	0.783537	0.078217	4.467872	0.446005	1.295737	0.129347
9	C	B38M	0.661283	0.267629	0.167209	0.067672	0.063938	0.026142	0.091194	0.037286	0.520004	0.212613	0.150808	0.061660
10	C	B733	0.003515	0.000000	0.000889	0.000000	0.000341	0.000000	0.000486	0.000000	0.002771	0.000000	0.000804	0.000000
11	C	B734	0.983131	0.693403	0.248590	0.175331	0.071781	0.094544	0.102380	0.134847	0.583791	0.768923	0.169307	0.222997
12	C	B737	0.597968	0.089212	0.151200	0.022558	0.064620	0.000983	0.092167	0.001402	0.525551	0.007994	0.152416	0.002318
13	C	B738	14.836627	12.221760	3.751527	3.090343	1.401343	1.227299	1.998725	1.750487	11.397096	9.981598	3.305296	2.894785
14	C	B739	0.831880	1.088766	0.210346	0.275301	0.096162	0.087664	0.137155	0.125035	0.782085	0.712973	0.226814	0.206771
15	C	E190	0.005275	0.000000	0.001334	0.000000	0.000511	0.000000	0.000729	0.000000	0.004159	0.000000	0.001206	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.008367	0.147923	0.002116	0.037403	0.005544	0.008885	0.007907	0.012672	0.045085	0.072260	0.013075	0.020956
18	D	A310	0.043237	0.006431	0.010933	0.001626	0.000135	0.005300	0.000193	0.007559	0.001100	0.043102	0.000319	0.012500
19	D	B752	0.387738	0.141492	0.098042	0.035777	0.036508	0.014964	0.052070	0.021343	0.296915	0.121702	0.086109	0.035295
20	D	B763	0.863340	0.623856	0.218300	0.157745	0.076531	0.068742	0.109155	0.098046	0.622422	0.559074	0.180510	0.162138
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	1.693514	0.487586	0.428215	0.123289	0.160706	0.051272	0.229214	0.073129	1.307022	0.416994	0.379052	0.120933
23	E	A333	15.030153	6.397629	3.800461	1.617677	1.479093	0.593727	2.109618	0.846828	12.029432	4.828767	3.488682	1.400401
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.642954	0.013762	0.162575	0.003480	0.018848	0.051463	0.026883	0.073401	0.153294	0.418545	0.044457	0.121383
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.574739	0.025561	0.145326	0.006463	0.002976	0.063471	0.004244	0.090528	0.024203	0.516207	0.007019	0.149706
28	E	A359	4.766740	3.092644	1.205298	0.781993	0.466577	0.294671	0.665475	0.420287	3.794663	2.396555	1.100498	0.695030
29	E	A35K	0.129616	0.017696	0.032774	0.004475	0.013558	0.000572	0.019337	0.000815	0.110263	0.004650	0.031978	0.001349

Table 5.2-22Scenario 3: Flight forecast for 2038 comprising an average of 548 flights per day (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures							
			18R-T1		18L-T3		18R-T2-1		18R-T2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
30	E	B744	3.685485	2.241335	0.931896	0.566734	0.386720	0.183741	0.551576	0.262068	3.145187	1.494361	0.912142	0.433383
31	E	B747	0.027287	0.025561	0.006900	0.006463	0.000661	0.004765	0.000943	0.006797	0.005379	0.038756	0.001560	0.011240
32	E	B772	7.541509	4.580969	1.906914	1.158325	0.719045	0.457827	1.025568	0.652995	5.847976	3.723499	1.695984	1.079860
33	E	B773	12.605001	6.429087	3.187247	1.625632	1.264156	0.575048	1.803056	0.820186	10.281357	4.676850	2.981718	1.356343
34	E	B77L	0.049460	0.017696	0.012506	0.004475	0.004795	0.001716	0.006839	0.002447	0.038997	0.013953	0.011310	0.004046
35	E	B77W	0.397370	0.298845	0.100477	0.075565	0.056380	0.008387	0.080414	0.011962	0.458535	0.068209	0.132981	0.019781
36	E	B788	4.734337	5.027271	1.197105	1.271174	0.548088	0.384445	0.781733	0.548331	4.457585	3.126682	1.292754	0.906776
37	E	B789	1.647467	1.148191	0.416571	0.290327	0.170792	0.098541	0.243599	0.140549	1.389046	0.801434	0.402840	0.232426
38	E	B78X	0.441714	0.000000	0.111690	0.000000	0.042822	0.000000	0.061077	0.000000	0.348272	0.000000	0.101003	0.000000
39	F	A388	3.464257	2.965858	0.875957	0.749934	0.309657	0.317714	0.441662	0.453153	2.518437	2.583962	0.730377	0.749381
40	F	B74F	0.003775	0.002179	0.000955	0.000551	0.000366	0.000211	0.000522	0.000301	0.002977	0.001718	0.000863	0.000498
41	F	B748	0.136003	0.141541	0.034389	0.035789	0.014467	0.012244	0.020634	0.017464	0.117657	0.099581	0.034122	0.028880
Total number of flights			153.453173	65.247180	38.801521	16.498126	14.812392	6.398432	21.126792	9.126032	120.468870	52.038306	34.937436	15.091740
Arrivals			274		50%		Daytime flights		384			70%		
Departures			274		50%		Night flights		164			30%		
Total average daily flights			548		100%		Total average daily flights		548			100%		

Table 5.2-23Scenario 3: Flight forecast for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.238230	0.161978	1.025414	0.697203	0.262703	0.152168	0.854421	0.494914	0.223199	0.129286
2	C	A21N	0.028493	0.006479	0.122640	0.027886	0.028823	0.007704	0.093745	0.025057	0.024489	0.006546
3	C	A319	3.527543	0.369312	15.183603	1.589629	3.522208	0.556665	11.455687	1.810507	2.992552	0.472956
4	C	A320	10.458371	3.111843	45.015958	13.394303	11.207323	2.862297	36.450886	9.309384	9.522011	2.431877
5	C	A321	1.853602	0.396154	7.978458	1.705163	1.817515	0.540292	5.911317	1.757255	1.544205	0.459045
6	C	AT72	0.218443	0.000000	0.940246	0.000000	0.227292	0.000000	0.739250	0.000000	0.193113	0.000000
7	C	AT75	0.508118	0.046280	2.187091	0.199202	0.561642	0.009631	1.826695	0.031323	0.477185	0.008182
8	C	AT76	1.364479	0.090708	5.873127	0.390435	1.441165	0.067416	4.687270	0.219265	1.224449	0.057278

Table 5.2-23Scenario 3: Flight forecast for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
9	C	B38M	0.307087	0.059238	1.321796	0.254980	0.348351	0.026967	1.132981	0.087708	0.295967	0.022912
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
11	C	B734	0.085478	0.159202	0.367922	0.685255	0.022235	0.241735	0.072319	0.786223	0.018892	0.205384
12	C	B737	0.084686	0.029619	0.364516	0.127487	0.082353	0.037561	0.267845	0.122163	0.069969	0.031913
13	C	B738	3.413573	2.794365	14.693040	12.027782	3.439855	3.042394	11.187841	9.895135	2.922583	2.584892
14	C	B739	0.209737	0.171235	0.902772	0.737048	0.232233	0.161799	0.755319	0.526237	0.197311	0.137468
15	C	E190	0.021370	0.000000	0.091982	0.000000	0.020588	0.001926	0.066961	0.006265	0.017492	0.001637
16	C	GLF5	0.001583	0.000000	0.006814	0.000000	0.001647	0.000000	0.005358	0.000000	0.001400	0.000000
17	D	A306	0.000000	0.049469	0.000000	0.212929	0.026656	0.020300	0.086696	0.066023	0.022647	0.017247
18	D	A310	0.017873	0.001394	0.076931	0.005998	0.000000	0.023199	0.000000	0.075452	0.000000	0.019710
19	D	B752	0.051237	0.014631	0.220539	0.062978	0.050213	0.019575	0.163312	0.063664	0.042662	0.016631
20	D	B763	0.222225	0.170006	0.956522	0.731757	0.268422	0.134120	0.873019	0.436214	0.228058	0.113951
21	D	IL62	0.000000	0.000697	0.000000	0.003000	0.000620	0.000000	0.002017	0.000000	0.000527	0.000000
22	E	A332	0.381209	0.132026	1.640838	0.568280	0.428030	0.099737	1.392133	0.324387	0.363665	0.084739
23	E	A333	3.316442	1.720859	14.274959	7.407094	3.578715	1.645669	11.639473	5.352400	3.040562	1.398200
24	E	A340	0.001547	0.000000	0.006657	0.000000	0.000805	0.000941	0.002617	0.003061	0.000684	0.000799
25	E	A343	0.057994	0.003617	0.249621	0.015571	0.015286	0.056455	0.049718	0.183616	0.012988	0.047966
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.115986	0.003617	0.499239	0.015571	0.000805	0.143019	0.002617	0.465159	0.000684	0.121513
28	E	A359	1.083314	0.715292	4.662909	3.078829	1.092603	0.784727	3.553599	2.552258	0.928301	0.666723
29	E	A35K	0.064953	0.009043	0.279575	0.038922	0.073215	0.002823	0.238126	0.009182	0.062205	0.002398
30	E	B744	0.924799	0.513636	3.980613	2.210843	1.016973	0.470460	3.307621	1.530131	0.864045	0.399714
31	E	B747	0.003867	0.001809	0.016643	0.007785	0.000000	0.006586	0.000000	0.021420	0.000000	0.005596
32	E	B772	1.798565	1.039931	7.741562	4.476174	1.809471	1.153568	5.885155	3.751884	1.537370	0.980099
33	E	B773	3.171073	1.603302	13.649245	6.901092	3.397687	1.550635	11.050694	5.043312	2.886756	1.317457
34	E	B77L	0.006959	0.001809	0.029954	0.007785	0.007241	0.001882	0.023550	0.006121	0.006152	0.001599
35	E	B77W	0.150783	0.124791	0.649014	0.537138	0.209187	0.068687	0.680364	0.223400	0.177730	0.058358
36	E	B788	1.019909	1.058016	4.389992	4.554019	1.216506	0.921160	3.956584	2.995996	1.033573	0.782640
37	E	B789	0.455441	0.301128	1.960353	1.296143	0.525382	0.252167	1.708761	0.820152	0.446377	0.214247

Table 5.2-23Scenario 3: Flight forecast for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
38	E	B78X	0.034022	0.000000	0.146442	0.000000	0.035401	0.000000	0.115137	0.000000	0.030077	0.000000
39	F	A388	0.765413	0.751252	3.294567	3.233614	0.724252	0.865078	2.355569	2.813593	0.615342	0.734991
40	F	B74F	0.002477	0.001931	0.010663	0.008313	0.003437	0.001005	0.011178	0.003268	0.002920	0.000854
41	F	B748	0.043762	0.030899	0.188364	0.133000	0.050689	0.026123	0.164861	0.084964	0.043066	0.022195
Total number of flights			36.010643	15.645568	155.000581	67.343208	37.747529	15.956471	122.770696	51.897093	32.071208	13.557003
Arrivals			274		50%		Daytime flights		384		70%	
Departures			274		50%		Night flights		164		30%	
Total average daily flights			548		100%		Total average daily flights		548		100%	

Table 5.2-24 Scenario 4: Flight forecast for 2048 comprising an average of 889 flights per day (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures							
			18R-T1		18L-T3		18R-T2-1		18R-T2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.375044	0.435310	0.094832	0.110071	0.044272	0.032084	0.063144	0.045761	0.360060	0.260936	0.104422	0.075675
2	C	A21N	0.199620	0.061162	0.050475	0.015465	0.011434	0.015345	0.016309	0.021886	0.092996	0.124799	0.026970	0.036193
3	C	A319	24.985860	2.223315	6.317819	0.562178	2.284542	0.378731	3.258423	0.540181	18.580130	3.080213	5.388463	0.893299
4	C	A320	78.862294	23.488755	19.940786	5.939267	7.726453	2.179624	11.020177	3.108780	62.839079	17.726838	18.224096	5.140998
5	C	A321	11.039629	3.129917	2.791434	0.791418	0.986000	0.403492	1.406324	0.575497	8.019117	3.281592	2.325642	0.951702
6	C	AT72	1.463887	0.003600	0.370152	0.000910	0.142198	0.000000	0.202816	0.000000	1.156492	0.000000	0.335397	0.000000
7	C	AT75	4.890708	0.237441	1.236644	0.060038	0.474089	0.023366	0.676190	0.033326	3.855758	0.190033	1.118217	0.055112
8	C	AT76	10.017330	0.679952	2.532940	0.171930	0.944660	0.097298	1.347361	0.138776	7.682900	0.791323	2.228134	0.229493
9	C	B38M	1.137236	0.474883	0.287557	0.120077	0.109947	0.046383	0.156816	0.066155	0.894194	0.377228	0.259327	0.109401
10	C	B733	0.006045	0.000000	0.001529	0.000000	0.000586	0.000000	0.000836	0.000000	0.004766	0.000000	0.001382	0.000000
11	C	B734	1.690731	1.230378	0.427511	0.311108	0.123433	0.167744	0.176052	0.239252	1.003880	1.364260	0.291137	0.395652
12	C	B737	1.028351	0.158297	0.260025	0.040026	0.111119	0.001744	0.158489	0.002487	0.903732	0.014184	0.262093	0.004113
13	C	B738	25.515157	21.686351	6.451655	5.483519	2.409734	2.177532	3.436984	3.105796	19.598315	17.709823	5.683749	5.136064
14	C	B739	1.430618	1.931911	0.361740	0.488495	0.165359	0.155538	0.235851	0.221843	1.344864	1.264991	0.390027	0.366863
15	C	E190	0.009072	0.000000	0.002294	0.000000	0.000879	0.000000	0.001254	0.000000	0.007152	0.000000	0.002074	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.013461	0.245542	0.003404	0.062087	0.008918	0.014747	0.012719	0.021033	0.072527	0.119936	0.021034	0.034783
18	D	A310	0.069559	0.010676	0.017588	0.002699	0.000218	0.008796	0.000310	0.012546	0.001770	0.071540	0.000513	0.020748
19	D	B752	0.623788	0.234866	0.157728	0.059387	0.058728	0.024837	0.083763	0.035425	0.477633	0.201998	0.138519	0.058582
20	D	B763	1.388933	1.035555	0.351200	0.261846	0.123111	0.114096	0.175592	0.162734	1.001258	0.927940	0.290377	0.269114
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	2.581112	0.766760	0.652649	0.193880	0.244914	0.080621	0.349318	0.114990	1.991877	0.655692	0.577669	0.190159
23	E	A333	22.907711	10.060672	5.792347	2.543899	2.254111	0.933590	3.215019	1.331571	18.332634	7.592864	5.316686	2.202023
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.979938	0.021641	0.247783	0.005472	0.028725	0.080921	0.040970	0.115417	0.233616	0.658131	0.067752	0.190866
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.875970	0.040196	0.221494	0.010164	0.004535	0.099803	0.006469	0.142348	0.036885	0.811695	0.010697	0.235402
28	E	A359	7.265069	4.863377	1.837015	1.229733	0.711055	0.463348	1.014172	0.660869	5.782997	3.768397	1.677139	1.092881
29	E	A35K	0.197551	0.027828	0.049952	0.007037	0.020661	0.000899	0.029469	0.001282	0.168039	0.007311	0.048733	0.002120
30	E	B744	5.617109	3.524640	1.420318	0.891226	0.589354	0.288918	0.840591	0.412082	4.793207	2.349768	1.390088	0.681461

Table 5.2-24 Scenario 4: Flight forecast for 2048 comprising an average of 889 flights per day (hot season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures							
			18R-T1		18L-T3		18R-T2-1		18R-T2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
31	E	B747	0.041590	0.040196	0.010516	0.010164	0.001008	0.007493	0.001438	0.010687	0.008197	0.060940	0.002377	0.017673
32	E	B772	11.494142	7.203861	2.906360	1.821538	1.095811	0.719898	1.562946	1.026785	8.912207	5.854915	2.584648	1.697996
33	E	B773	19.211494	10.110141	4.857737	2.556407	1.926551	0.904218	2.747824	1.289679	15.668600	7.353986	4.544084	2.132745
34	E	B77L	0.075383	0.027828	0.019061	0.007037	0.007307	0.002698	0.010423	0.003848	0.059431	0.021939	0.017236	0.006363
35	E	B77W	0.605638	0.469952	0.153139	0.118830	0.085922	0.013187	0.122549	0.018809	0.698798	0.107252	0.202660	0.031104
36	E	B788	7.215683	7.905698	1.824527	1.999001	0.835275	0.604510	1.191346	0.862208	6.793277	4.916467	1.970133	1.425835
37	E	B789	2.510931	1.805602	0.634903	0.456557	0.260284	0.154949	0.371240	0.221002	2.116880	1.260194	0.613921	0.365472
38	E	B78X	0.673224	0.000000	0.170228	0.000000	0.065260	0.000000	0.093080	0.000000	0.530759	0.000000	0.153927	0.000000
39	F	A388	1.857755	1.641036	0.469744	0.414946	0.166043	0.175779	0.236826	0.250711	1.350426	1.429603	0.391640	0.414602
40	F	B74F	0.002025	0.001206	0.000512	0.000305	0.000196	0.000117	0.000280	0.000167	0.001596	0.000950	0.000463	0.000276
41	F	B748	0.072933	0.078315	0.018442	0.019802	0.007757	0.006774	0.011064	0.009662	0.063090	0.055094	0.018297	0.015978
Total number of flights			248.932581	105.856860	62.944040	26.766519	24.030449	10.379080	34.274434	14.803595	195.439139	84.412832	56.679723	24.480748
Arrivals			444.5		50%		Daytime flights		622				70.0%	
Departures			444.5		50%		Night flights		267				30.0%	
Total average daily flights			889		100%		Total average daily flights		889				100%	

Table 5.2-25 Scenario 4: Flight forecast for 2048 comprising an average of 889 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.409114	0.288447	1.760948	1.241564	0.451279	0.271060	1.467748	0.881600	0.383418	0.230299
2	C	A21N	0.048931	0.011537	0.210612	0.049659	0.049513	0.013724	0.161038	0.044636	0.042068	0.011660
3	C	A319	6.057873	0.657663	26.074896	2.830777	6.050542	0.991598	19.678886	3.225090	5.140686	0.842485
4	C	A320	17.960226	5.541503	77.306187	23.852289	19.252241	5.098663	62.616310	16.582978	16.357167	4.331947
5	C	A321	3.183202	0.705462	13.701456	3.036518	3.122177	0.962432	10.154619	3.130231	2.652676	0.817706
6	C	AT72	0.375134	0.000000	1.614690	0.000000	0.390449	0.000000	1.269903	0.000000	0.331735	0.000000
7	C	AT75	0.872594	0.082414	3.755905	0.354735	0.964805	0.017155	3.137947	0.055796	0.819721	0.014575
8	C	AT76	2.343229	0.161531	10.085958	0.695280	2.475672	0.120089	8.051918	0.390580	2.103391	0.102031

Table 5.2-25 Scenario 4: Flight forecast for 2048 comprising an average of 889 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
9	C	B38M	0.527363	0.105490	2.269929	0.454062	0.598406	0.048037	1.946266	0.156235	0.508420	0.040813
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
11	C	B734	0.146792	0.283504	0.631835	1.220287	0.038197	0.430607	0.124231	1.400514	0.032453	0.365854
12	C	B737	0.145432	0.052744	0.625984	0.227027	0.141467	0.066908	0.460111	0.217612	0.120194	0.056846
13	C	B738	5.862150	4.976145	25.232449	21.418818	5.909075	5.419473	19.218774	17.626386	5.020492	4.604515
14	C	B739	0.360183	0.304932	1.550337	1.312518	0.398936	0.288215	1.297507	0.937396	0.338946	0.244875
15	C	E190	0.036698	0.000000	0.157961	0.000000	0.035367	0.003432	0.115028	0.011161	0.030049	0.002916
16	C	GLF5	0.002719	0.000000	0.011702	0.000000	0.002830	0.000000	0.009203	0.000000	0.002404	0.000000
17	D	A306	0.000000	0.082410	0.000000	0.354716	0.042836	0.033827	0.139321	0.110019	0.036394	0.028740
18	D	A310	0.028713	0.002322	0.123589	0.009993	0.000000	0.038658	0.000000	0.125733	0.000000	0.032845
19	D	B752	0.082313	0.024374	0.354299	0.104914	0.080692	0.032619	0.262443	0.106089	0.068558	0.027714
20	D	B763	0.357007	0.283211	1.536665	1.219027	0.431354	0.223497	1.402941	0.726904	0.366488	0.189888
21	D	IL62	0.000000	0.001161	0.000000	0.004997	0.000996	0.000000	0.003240	0.000000	0.000846	0.000000
22	E	A332	0.580185	0.208365	2.497290	0.896867	0.651642	0.157454	2.119411	0.512107	0.553651	0.133777
23	E	A333	5.047489	2.715880	21.725903	11.689959	5.448309	2.598000	17.720171	8.449779	4.629014	2.207323
24	E	A340	0.002354	0.000000	0.010132	0.000000	0.001225	0.001486	0.003985	0.004832	0.001041	0.001262
25	E	A343	0.088264	0.005709	0.379913	0.024575	0.023272	0.089125	0.075691	0.289872	0.019773	0.075723
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.176526	0.005709	0.759821	0.024575	0.001225	0.225783	0.003985	0.734341	0.001041	0.191831
28	E	A359	1.648760	1.128881	7.096756	4.859043	1.663400	1.238840	5.410071	4.029223	1.413265	1.052548
29	E	A35K	0.098855	0.014271	0.425501	0.061428	0.111464	0.004457	0.362528	0.014495	0.094703	0.003787
30	E	B744	1.407507	0.810626	6.058330	3.489177	1.548261	0.742710	5.035590	2.415601	1.315440	0.631024
31	E	B747	0.005885	0.002855	0.025330	0.012287	0.000000	0.010397	0.000000	0.033816	0.000000	0.008834
32	E	B772	2.737342	1.641231	11.782340	7.064348	2.754776	1.821126	8.959680	5.923060	2.340524	1.547272
33	E	B773	4.826242	2.530350	20.773592	10.891382	5.172708	2.447972	16.823801	7.961825	4.394857	2.079856

Table 5.2-25 Scenario 4: Flight forecast for 2048 comprising an average of 889 flights per day (cold season)

Sequence No.	Design Aircraft	Type Aircraft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
34	E	B77L	0.010591	0.002855	0.045588	0.012287	0.011024	0.002971	0.035853	0.009663	0.009366	0.002524
35	E	B77W	0.229485	0.196947	0.987773	0.847718	0.318471	0.108436	1.035800	0.352679	0.270580	0.092130
36	E	B788	1.552259	1.669773	6.681387	7.187204	1.852033	1.454226	6.023584	4.729749	1.573532	1.235545
37	E	B789	0.693162	0.475243	2.983577	2.045588	0.799852	0.398093	2.601452	1.294766	0.679573	0.338230
38	E	B78X	0.051781	0.000000	0.222879	0.000000	0.053895	0.000000	0.175288	0.000000	0.045790	0.000000
39	F	A388	0.409882	0.417168	1.764254	1.795615	0.387957	0.480520	1.261799	1.562853	0.329618	0.408262
40	F	B74F	0.001327	0.001072	0.005710	0.004616	0.001841	0.000558	0.005988	0.001815	0.001564	0.000474
41	F	B748	0.023435	0.017158	0.100870	0.073855	0.027152	0.014511	0.088311	0.047195	0.023069	0.012329
Total number of flights			58.391004	25.408943	251.332348	109.367705	61.265341	25.856659	199.260422	84.096631	52.052507	21.968440
Arrivals			444.5		50%		Daytime flights		622		70%	
Departures			444.5		50%		Night flights		267		30%	
Total average daily flights			889		100%		Total average daily flights		889		100%	

Table 5.2-26Scenario 5: Peak flight forecast comprising 1,364 daily flights, 2048 (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals				Departures							
			18R-T1		18L-T3		18R-T2-1		18R-T2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.575433	0.667900	0.145502	0.168882	0.067926	0.049226	0.096883	0.070211	0.552443	0.400357	0.160215	0.116108
2	C	A21N	0.306279	0.093842	0.077444	0.023729	0.017544	0.023544	0.025023	0.033580	0.142685	0.191480	0.041380	0.055531
3	C	A319	38.336012	3.411250	9.693482	0.862554	3.505191	0.581091	4.999426	0.828805	28.507646	4.725996	8.267563	1.370596
4	C	A320	120.999066	36.038990	30.595313	9.112667	11.854761	3.344215	16.908348	4.769827	96.414515	27.198433	27.961380	7.887876
5	C	A321	16.938193	4.802257	4.282920	1.214279	1.512828	0.619081	2.157734	0.882990	12.303798	5.034973	3.568251	1.460203
6	C	AT72	2.246054	0.005523	0.567928	0.001397	0.218175	0.000000	0.311182	0.000000	1.774415	0.000000	0.514602	0.000000
7	C	AT75	7.503853	0.364308	1.897393	0.092117	0.727399	0.035850	1.037483	0.051133	5.915921	0.291569	1.715689	0.084559
8	C	AT76	15.369672	1.043255	3.886310	0.263793	1.449400	0.149285	2.067267	0.212924	11.787937	1.214134	3.418645	0.352114
9	C	B38M	1.744872	0.728616	0.441201	0.184235	0.168692	0.071165	0.240604	0.101502	1.371969	0.578784	0.397888	0.167854
10	C	B733	0.009276	0.000000	0.002345	0.000000	0.000899	0.000000	0.001282	0.000000	0.007313	0.000000	0.002121	0.000000
11	C	B734	2.594102	1.887779	0.655934	0.477336	0.189385	0.257371	0.270118	0.367087	1.540262	2.093196	0.446695	0.607052
12	C	B737	1.577807	0.242876	0.398958	0.061413	0.170491	0.002676	0.243171	0.003816	1.386603	0.021762	0.402132	0.006311
13	C	B738	39.148116	33.273546	9.898827	8.413408	3.697275	3.341006	5.273392	4.765249	30.069855	27.172327	8.720623	7.880305
14	C	B739	2.195009	2.964147	0.555021	0.749502	0.253712	0.238644	0.361868	0.340376	2.063436	1.940885	0.598421	0.562880
15	C	E190	0.013919	0.000000	0.003520	0.000000	0.001349	0.000000	0.001924	0.000000	0.010973	0.000000	0.003182	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.020653	0.376737	0.005222	0.095260	0.013683	0.022626	0.019515	0.032272	0.111279	0.184019	0.032272	0.053368
18	D	A310	0.106724	0.016380	0.026986	0.004142	0.000334	0.013496	0.000476	0.019250	0.002716	0.109765	0.000788	0.031833
19	D	B752	0.957083	0.360357	0.242004	0.091118	0.090107	0.038108	0.128518	0.054352	0.732835	0.309928	0.212531	0.089883
20	D	B763	2.131052	1.588860	0.538849	0.401752	0.188890	0.175058	0.269412	0.249684	1.536238	1.423745	0.445528	0.412903
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	3.960222	1.176446	1.001365	0.297471	0.375773	0.123698	0.535962	0.176429	3.056154	1.006033	0.886322	0.291762
23	E	A333	35.147489	15.436171	8.887246	3.903125	3.458500	1.432414	4.932831	2.043040	28.127910	11.649793	8.157436	3.378582
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	1.503527	0.033204	0.380175	0.008396	0.044072	0.124158	0.062860	0.177086	0.358439	1.009775	0.103952	0.292847
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	1.344008	0.061672	0.339840	0.015594	0.006958	0.153129	0.009925	0.218406	0.056592	1.245391	0.016412	0.361178
28	E	A359	11.146855	7.461919	2.818547	1.886789	1.090978	0.710918	1.556053	1.013977	8.872900	5.781884	2.573249	1.676816
29	E	A35K	0.303104	0.042697	0.076641	0.010796	0.031701	0.001379	0.045215	0.001967	0.257823	0.011218	0.074772	0.003253

Table 5.2-26Scenario 5: Peak flight forecast comprising 1,364 daily flights, 2048 (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals				Departures							
			18R-T1		18L-T3		18R-T2-1		18R-T2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
30	E	B744	8.618377	5.407884	2.179206	1.367415	0.904251	0.443290	1.289726	0.632261	7.354257	3.605268	2.132824	1.045571
31	E	B747	0.063811	0.061672	0.016135	0.015594	0.001547	0.011497	0.002206	0.016397	0.012577	0.093501	0.003648	0.027116
32	E	B772	17.635556	11.052942	4.459252	2.794800	1.681312	1.104545	2.398041	1.575404	13.674073	8.983244	3.965647	2.605250
33	E	B773	29.476354	15.512072	7.453266	3.922317	2.955923	1.387349	4.216009	1.978765	24.040461	11.283281	6.972026	3.272289
34	E	B77L	0.115660	0.042697	0.029245	0.010796	0.011212	0.004139	0.015991	0.005903	0.091185	0.033662	0.026445	0.009762
35	E	B77W	0.929235	0.721051	0.234962	0.182322	0.131830	0.020234	0.188028	0.028859	1.072172	0.164559	0.310943	0.047724
36	E	B788	11.071082	12.129777	2.799387	3.067084	1.281570	0.927505	1.827893	1.322892	10.422980	7.543375	3.022791	2.187671
37	E	B789	3.852543	2.770350	0.974138	0.700499	0.399355	0.237739	0.569597	0.339085	3.247946	1.933525	0.941944	0.560746
38	E	B78X	1.032933	0.000000	0.261183	0.000000	0.100129	0.000000	0.142813	0.000000	0.814348	0.000000	0.236171	0.000000
39	F	A388	2.850368	2.517856	0.720732	0.636654	0.254762	0.269698	0.363364	0.384669	2.071970	2.193451	0.600896	0.636128
40	F	B74F	0.003107	0.001850	0.000786	0.000468	0.000301	0.000179	0.000430	0.000256	0.002449	0.001458	0.000710	0.000423
41	F	B748	0.111903	0.120161	0.028295	0.030383	0.011902	0.010394	0.016976	0.014824	0.096799	0.084531	0.028073	0.024515
Total number of flights			381.939309	162.417044	96.575560	41.068087	36.870117	15.924707	52.587546	22.713278	299.863874	129.515302	86.964167	37.561009
Arrivals			682		50%		Daytime flights		955		70%			
Departures			682		50%		Night flights		409		30%			
Total average daily flights			1364		100%		Total average daily flights		1364		100%			

Table 5.2-27Scenario 5: Peak flight forecast comprising 1,364 daily flights, 2048 (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.627707	0.442567	2.701838	1.904942	0.692401	0.415889	2.251977	1.352646	0.588281	0.353350
2	C	A21N	0.075075	0.017701	0.323143	0.076192	0.075969	0.021056	0.247082	0.068484	0.064545	0.017890
3	C	A319	9.294643	1.009057	40.006927	4.343285	9.283397	1.521417	30.193476	4.948281	7.887398	1.292632
4	C	A320	27.556522	8.502374	118.611517	36.596762	29.538871	7.822921	96.072719	25.443400	25.096935	6.646542
5	C	A321	4.884014	1.082396	21.022257	4.658954	4.790381	1.476668	15.580316	4.802739	4.070023	1.254613
6	C	AT72	0.575571	0.000000	2.477432	0.000000	0.599069	0.000000	1.948422	0.000000	0.508983	0.000000
7	C	AT75	1.338828	0.126449	5.762716	0.544273	1.480308	0.026321	4.814577	0.085608	1.257705	0.022363
8	C	AT76	3.595235	0.247839	15.474969	1.066773	3.798444	0.184254	12.354124	0.599271	3.227250	0.156547

Table 5.2-27Scenario 5: Peak flight forecast comprising 1,364 daily flights, 2048 (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
9	C	B38M	0.809138	0.161855	3.482770	0.696671	0.918139	0.073703	2.986171	0.239713	0.780073	0.062620
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
11	C	B734	0.225224	0.434983	0.969430	1.872296	0.058605	0.660684	0.190609	2.148819	0.049793	0.561333
12	C	B737	0.223138	0.080926	0.960453	0.348328	0.217055	0.102657	0.705953	0.333883	0.184415	0.087220
13	C	B738	8.994345	7.634941	38.714354	32.863069	9.066342	8.315143	29.487523	27.044309	7.702982	7.064745
14	C	B739	0.552632	0.467860	2.378694	2.013808	0.612091	0.442211	1.990774	1.438254	0.520047	0.375713
15	C	E190	0.056307	0.000000	0.242361	0.000000	0.054264	0.005265	0.176488	0.017124	0.046104	0.004473
16	C	GLF5	0.004171	0.000000	0.017954	0.000000	0.004342	0.000000	0.014120	0.000000	0.003689	0.000000
17	D	A306	0.000000	0.126442	0.000000	0.544243	0.065724	0.051901	0.213761	0.168803	0.055840	0.044096
18	D	A310	0.044055	0.003562	0.189625	0.015332	0.000000	0.059314	0.000000	0.192913	0.000000	0.050394
19	D	B752	0.126293	0.037398	0.543603	0.160971	0.123806	0.050047	0.402668	0.162774	0.105188	0.042521
20	D	B763	0.547759	0.434534	2.357718	1.870363	0.661829	0.342913	2.152545	1.115295	0.562306	0.291347
21	D	IL62	0.000000	0.001781	0.000000	0.007667	0.001529	0.000000	0.004972	0.000000	0.001299	0.000000
22	E	A332	0.890182	0.319697	3.831612	1.376070	0.999819	0.241583	3.251829	0.785730	0.849471	0.205255
23	E	A333	7.744404	4.166997	33.334231	17.936001	8.359385	3.986133	27.188205	12.964565	7.102335	3.386714
24	E	A340	0.003612	0.000000	0.015545	0.000000	0.001880	0.002279	0.006113	0.007414	0.001597	0.001937
25	E	A343	0.135424	0.008760	0.582905	0.037705	0.035707	0.136746	0.116133	0.444754	0.030337	0.116182
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.270845	0.008760	1.165799	0.037705	0.001880	0.346421	0.006113	1.126706	0.001597	0.294328
28	E	A359	2.529706	1.732052	10.888611	7.455269	2.552169	1.900762	8.300718	6.182071	2.168384	1.614933
29	E	A35K	0.151674	0.021897	0.652851	0.094249	0.171021	0.006838	0.556230	0.022240	0.145303	0.005810
30	E	B744	2.159549	1.243750	9.295345	5.353473	2.375510	1.139546	7.726148	3.706277	2.018290	0.968185
31	E	B747	0.009029	0.004380	0.038865	0.018852	0.000000	0.015952	0.000000	0.051884	0.000000	0.013554
32	E	B772	4.199926	2.518154	18.077740	10.838887	4.226676	2.794168	13.746910	9.087800	3.591085	2.373993
33	E	B773	7.404944	3.882336	31.873093	16.710737	7.936528	3.755943	25.812896	12.215893	6.743065	3.191140
34	E	B77L	0.016250	0.004380	0.069946	0.018852	0.016914	0.004559	0.055010	0.014826	0.014370	0.003873
35	E	B77W	0.352101	0.302177	1.515549	1.300660	0.488632	0.166374	1.589236	0.541118	0.415154	0.141355
36	E	B788	2.381644	2.561947	10.251307	11.027385	2.841590	2.231231	9.242034	7.256893	2.414283	1.895707
37	E	B789	1.063524	0.729169	4.577727	3.138562	1.227220	0.610798	3.991430	1.986569	1.042675	0.518949
38	E	B78X	0.079448	0.000000	0.341966	0.000000	0.082691	0.000000	0.268945	0.000000	0.070256	0.000000

Table 5.2-27Scenario 5: Peak flight forecast comprising 1,364 daily flights, 2048 (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals				Departures					
			36L-T6		36R-T8		36L-T5-1		36L-T5		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
39	F	A388	0.628885	0.640064	2.706910	2.755026	0.595246	0.737266	1.935989	2.397898	0.505736	0.626399
40	F	B74F	0.002035	0.001646	0.008761	0.007083	0.002825	0.000856	0.009187	0.002785	0.002400	0.000728
41	F	B748	0.035956	0.026326	0.154766	0.113316	0.041660	0.022264	0.135496	0.072411	0.035395	0.018916
Total number of flights			89.589795	38.985157	385.621290	167.803761	93.999919	39.672083	305.726899	129.030150	79.864589	33.706357
Arrivals			682		50%		Daytime flights		955		70%	
Departures			682		50%		Night flights		409		30%	
Total average daily flights			1364		100%		Total average daily flights		1364		100%	

Table 5.2-28Scenario 6: Flight forecast for 2048 in case of Runway 1 closure comprising an average of 791 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18L-T3		18L-T4-2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.394310	0.550133	0.047963	0.041781	0.335739	0.292464	0.095925	0.083561
2	C	A21N	0.209875	0.077296	0.012388	0.019983	0.086715	0.139878	0.024776	0.039965
3	C	A319	26.269467	2.809763	2.475014	0.493198	17.325096	3.452387	4.950027	0.986396
4	C	A320	82.913711	29.684430	8.370640	2.838389	58.594483	19.868723	16.741281	5.676778
5	C	A321	11.606770	3.955502	1.068207	0.525442	7.477450	3.678097	2.136414	1.050885
6	C	AT72	1.539091	0.004550	0.154053	0.000000	1.078374	0.000000	0.308107	0.000000
7	C	AT75	5.141959	0.300071	0.513616	0.030428	3.595312	0.212994	1.027232	0.060855
8	C	AT76	10.531954	0.859304	1.023420	0.126705	7.163943	0.886936	2.046841	0.253410
9	C	B38M	1.195661	0.600144	0.119113	0.060401	0.833794	0.422807	0.238227	0.120802
10	C	B733	0.006357	0.000000	0.000635	0.000000	0.004445	0.000000	0.001270	0.000000
11	C	B734	1.777589	1.554917	0.133724	0.218443	0.936071	1.529100	0.267449	0.436886
12	C	B737	1.081181	0.200052	0.120384	0.002271	0.842688	0.015897	0.240768	0.004542
13	C	B738	26.825955	27.406601	2.610644	2.835665	18.274506	19.849652	5.221287	5.671329
14	C	B739	1.504114	2.441495	0.179146	0.202548	1.254022	1.417835	0.358292	0.405096
15	C	E190	0.009538	0.000000	0.000953	0.000000	0.006669	0.000000	0.001906	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.014152	0.310309	0.009661	0.019204	0.067628	0.134427	0.019322	0.038408

Table 5.2-28Scenario 6: Flight forecast for 2048 in case of Runway 1 closure comprising an average of 791 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18L-T3		18L-T4-2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
18	D	A310	0.073132	0.013492	0.000236	0.011455	0.001650	0.080185	0.000472	0.022910
19	D	B752	0.655834	0.296817	0.063624	0.032344	0.445370	0.226406	0.127249	0.064687
20	D	B763	1.460287	1.308705	0.133375	0.148580	0.933626	1.040060	0.266750	0.297160
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	2.713713	0.969010	0.265333	0.104988	1.857332	0.734917	0.530666	0.209976
23	E	A333	24.084555	12.714394	2.442045	1.215755	17.094317	8.510288	4.884091	2.431511
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	1.030280	0.027349	0.031119	0.105379	0.217836	0.737651	0.062239	0.210757
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.920972	0.050799	0.004913	0.129967	0.034393	0.909770	0.009827	0.259934
28	E	A359	7.638299	6.146199	0.770339	0.603389	5.392372	4.223723	1.540678	1.206778
29	E	A35K	0.207699	0.035169	0.022384	0.001171	0.156688	0.008194	0.044768	0.002341
30	E	B744	5.905679	4.454341	0.638491	0.376241	4.469440	2.633684	1.276983	0.752481
31	E	B747	0.043727	0.050799	0.001092	0.009758	0.007643	0.068304	0.002184	0.019515
32	E	B772	12.084633	9.104036	1.187173	0.937478	8.310214	6.562349	2.374347	1.874957
33	E	B773	20.198453	12.776913	2.087176	1.177507	14.610231	8.242548	4.174352	2.355014
34	E	B77L	0.079256	0.035169	0.007917	0.003513	0.055416	0.024590	0.015833	0.007026
35	E	B77W	0.636751	0.593911	0.093085	0.017173	0.651596	0.120212	0.186170	0.034346
36	E	B788	7.586377	9.990999	0.904916	0.787216	6.334411	5.510510	1.809832	1.574432
37	E	B789	2.639926	2.281869	0.281984	0.201780	1.973891	1.412460	0.563969	0.403560
38	E	B78X	0.707809	0.000000	0.070701	0.000000	0.494908	0.000000	0.141402	0.000000
39	F	A388	1.953193	2.073896	0.179887	0.228905	1.259208	1.602337	0.359774	0.457811
40	F	B74F	0.002129	0.001524	0.000213	0.000152	0.001489	0.001065	0.000425	0.000304
41	F	B748	0.076680	0.098973	0.008404	0.008822	0.058828	0.061751	0.016808	0.017643
Total number of flights			261.721068	133.778931	26.033968	13.516031	182.237794	94.612201	52.067943	27.032056

Arrivals	395	50%	Daytime flights	522	66%
Departures	395	50%	Night flights	269	34%
Total average daily flights	791	100%	Total average daily flights	791	100%

Table 5.2-29Scenario 6: Flight forecast in the case that Runway 1 is closed for 2048 comprising an average of 791 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	1.819396	1.541920	0.966375	0.697714	0.966375	0.697714
2	C	A21N	0.217602	0.061672	0.106029	0.035325	0.106029	0.035325
3	C	A319	26.940356	3.515590	12.956710	2.552394	12.956710	2.552394
4	C	A320	79.872082	29.622559	41.226998	13.124070	41.226998	13.124070
5	C	A321	14.156226	3.771103	6.685869	2.477322	6.685869	2.477322
6	C	AT72	1.668284	0.000000	0.836112	0.000000	0.836112	0.000000
7	C	AT75	3.880569	0.440551	2.066045	0.044158	2.066045	0.044158
8	C	AT76	10.420725	0.863479	5.301437	0.309113	5.301437	0.309113
9	C	B38M	2.345271	0.563908	1.281434	0.123647	1.281434	0.123647
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
11	C	B734	0.652807	1.515495	0.081795	1.108392	0.081795	1.108392
12	C	B737	0.646762	0.281948	0.302940	0.172222	0.302940	0.172222
13	C	B738	26.069947	26.600392	12.653770	13.949842	12.653770	13.949842
14	C	B739	1.601794	1.630039	0.854287	0.741872	0.854287	0.741872
15	C	E190	0.163203	0.000000	0.075735	0.008833	0.075735	0.008833
16	C	GLF5	0.012091	0.000000	0.006060	0.000000	0.006060	0.000000
17	D	A306	0.000000	0.440527	0.091730	0.087071	0.091730	0.087071
18	D	A310	0.127691	0.012410	0.000000	0.099507	0.000000	0.099507
19	D	B752	0.366058	0.130295	0.172794	0.083961	0.172794	0.083961
20	D	B763	1.587669	1.513930	0.923706	0.575285	0.923706	0.575285
21	D	IL62	0.000000	0.006206	0.002134	0.000000	0.002134	0.000000
22	E	A332	2.580178	1.113834	1.395434	0.405291	1.395434	0.405291
23	E	A333	22.447015	14.517957	11.667080	6.687309	11.667080	6.687309
24	E	A340	0.010469	0.000000	0.002623	0.003824	0.002623	0.003824
25	E	A343	0.392524	0.030519	0.049835	0.229410	0.049835	0.229410
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.785041	0.030519	0.002623	0.581171	0.002623	0.581171
28	E	A359	7.332307	6.034527	3.562028	3.188801	3.562028	3.188801
29	E	A35K	0.439624	0.076288	0.238691	0.011472	0.238691	0.011472

Table 5.2-29Scenario 6: Flight forecast in the case that Runway 1 is closed for 2048 comprising an average of 791 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
30	E	B744	6.259414	4.333267	3.315467	1.911751	3.315467	1.911751
31	E	B747	0.026171	0.015260	0.000000	0.026763	0.000000	0.026763
32	E	B772	12.173411	8.773333	5.899113	4.687618	5.899113	4.687618
33	E	B773	21.463096	13.526190	11.076903	6.301133	11.076903	6.301133
34	E	B77L	0.047101	0.015260	0.023606	0.007648	0.023606	0.007648
35	E	B77W	1.020559	1.052795	0.681978	0.279116	0.681978	0.279116
36	E	B788	6.903151	8.925910	3.965968	3.743209	3.965968	3.743209
37	E	B789	3.082606	2.540450	1.712814	1.024701	1.712814	1.024701
38	E	B78X	0.230277	0.000000	0.115411	0.000000	0.115411	0.000000
39	F	A388	1.822812	2.230004	0.830777	1.236870	0.830777	1.236870
40	F	B74F	0.005900	0.005733	0.003943	0.001437	0.003943	0.001437
41	F	B748	0.104218	0.091722	0.058145	0.037351	0.058145	0.037351
Total number of flights			259.674407	135.825592	131.194399	66.555603	131.194399	66.555603
Arrivals			395.5	50%	Daytime flights		522	66%
Departures			395.5	50%	Night flights		269	34%
Total average daily flights			791	100%	Total average daily flights		791	100%

Table 5.2-30Scenario 7: Flight forecast in the case that Runway 2 is closed for 2048 comprising an average of 791 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18R-T1		18R-T2-1		18R-T2		18R-T2-2	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.394310	0.550133	0.047963	0.041781	0.335739	0.292464	0.095925	0.083561
2	C	A21N	0.209875	0.077296	0.012388	0.019983	0.086715	0.139878	0.024776	0.039965
3	C	A319	26.269467	2.809763	2.475014	0.493198	17.325096	3.452387	4.950027	0.986396
4	C	A320	82.913711	29.684430	8.370640	2.838389	58.594483	19.868723	16.741281	5.676778
5	C	A321	11.606770	3.955502	1.068207	0.525442	7.477450	3.678097	2.136414	1.050885
6	C	AT72	1.539091	0.004550	0.154053	0.000000	1.078374	0.000000	0.308107	0.000000
7	C	AT75	5.141959	0.300071	0.513616	0.030428	3.595312	0.212994	1.027232	0.060855
8	C	AT76	10.531954	0.859304	1.023420	0.126705	7.163943	0.886936	2.046841	0.253410
9	C	B38M	1.195661	0.600144	0.119113	0.060401	0.833794	0.422807	0.238227	0.120802
10	C	B733	0.006357	0.000000	0.000635	0.000000	0.004445	0.000000	0.001270	0.000000
11	C	B734	1.777589	1.554917	0.133724	0.218443	0.936071	1.529100	0.267449	0.436886
12	C	B737	1.081181	0.200052	0.120384	0.002271	0.842688	0.015897	0.240768	0.004542
13	C	B738	26.825955	27.406601	2.610644	2.835665	18.274506	19.849652	5.221287	5.671329
14	C	B739	1.504114	2.441495	0.179146	0.202548	1.254022	1.417835	0.358292	0.405096
15	C	E190	0.009538	0.000000	0.000953	0.000000	0.006669	0.000000	0.001906	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.014152	0.310309	0.009661	0.019204	0.067628	0.134427	0.019322	0.038408
18	D	A310	0.073132	0.013492	0.000236	0.011455	0.001650	0.080185	0.000472	0.022910
19	D	B752	0.655834	0.296817	0.063624	0.032344	0.445370	0.226406	0.127249	0.064687
20	D	B763	1.460287	1.308705	0.133375	0.148580	0.933626	1.040060	0.266750	0.297160
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	2.713713	0.969010	0.265333	0.104988	1.857332	0.734917	0.530666	0.209976
23	E	A333	24.084555	12.714394	2.442045	1.215755	17.094317	8.510288	4.884091	2.431511
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	1.030280	0.027349	0.031119	0.105379	0.217836	0.737651	0.062239	0.210757
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.920972	0.050799	0.004913	0.129967	0.034393	0.909770	0.009827	0.259934
28	E	A359	7.638299	6.146199	0.770339	0.603389	5.392372	4.223723	1.540678	1.206778
29	E	A35K	0.207699	0.035169	0.022384	0.001171	0.156688	0.008194	0.044768	0.002341
30	E	B744	5.905679	4.454341	0.638491	0.376241	4.469440	2.633684	1.276983	0.752481

Table 5.2-30Scenario 7: Flight forecast in the case that Runway 2 is closed for 2048 comprising an average of 791 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18R-T1		18R-T2-1		18R-T2		18R-T2-2	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
31	E	B747	0.043727	0.050799	0.001092	0.009758	0.007643	0.068304	0.002184	0.019515
32	E	B772	12.084633	9.104036	1.187173	0.937478	8.310214	6.562349	2.374347	1.874957
33	E	B773	20.198453	12.776913	2.087176	1.177507	14.610231	8.242548	4.174352	2.355014
34	E	B77L	0.079256	0.035169	0.007917	0.003513	0.055416	0.024590	0.015833	0.007026
35	E	B77W	0.636751	0.593911	0.093085	0.017173	0.651596	0.120212	0.186170	0.034346
36	E	B788	7.586377	9.990999	0.904916	0.787216	6.334411	5.510510	1.809832	1.574432
37	E	B789	2.639926	2.281869	0.281984	0.201780	1.973891	1.412460	0.563969	0.403560
38	E	B78X	0.707809	0.000000	0.070701	0.000000	0.494908	0.000000	0.141402	0.000000
39	F	A388	1.953193	2.073896	0.179887	0.228905	1.259208	1.602337	0.359774	0.457811
40	F	B74F	0.002129	0.001524	0.000213	0.000152	0.001489	0.001065	0.000425	0.000304
41	F	B748	0.076680	0.098973	0.008404	0.008822	0.058828	0.061751	0.016808	0.017643
Total number of flights			261.721068	133.778931	26.033968	13.516031	182.237794	94.612201	52.067943	27.032056
Arrivals			395.5	50%	Daytime flights		522		66%	
Departures			395.5	50%	Night flights		269		34%	
Total average daily flights			791	100%	Total average daily flights		791		100%	

Table 5.2-31Scenario 7: Flight forecast in the case that Runway 2 is closed for 2048 comprising an average of 791 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36L-T6		36L-T5-1		36L-T5	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	1.819396	1.541920	0.386550	0.279086	1.546199	1.116343
2	C	A21N	0.217602	0.061672	0.042411	0.014130	0.169646	0.056520
3	C	A319	26.940356	3.515590	5.182684	1.020958	20.730736	4.083831
4	C	A320	79.872082	29.622559	16.490799	5.249628	65.963197	20.998512
5	C	A321	14.156226	3.771103	2.674348	0.990929	10.697391	3.963715
6	C	AT72	1.668284	0.000000	0.334445	0.000000	1.337780	0.000000
7	C	AT75	3.880569	0.440551	0.826418	0.017663	3.305672	0.070653
8	C	AT76	10.420725	0.863479	2.120575	0.123645	8.482299	0.494580
9	C	B38M	2.345271	0.563908	0.512574	0.049459	2.050294	0.197836
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 5.2-31Scenario 7: Flight forecast in the case that Runway 2 is closed for 2048 comprising an average of 791 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36L-T6		36L-T5-1		36L-T5	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
11	C	B734	0.652807	1.515495	0.032718	0.443357	0.130871	1.773427
12	C	B737	0.646762	0.281948	0.121176	0.068889	0.484705	0.275555
13	C	B738	26.069947	26.600392	5.061508	5.579937	20.246032	22.319748
14	C	B739	1.601794	1.630039	0.341715	0.296749	1.366859	1.186996
15	C	E190	0.163203	0.000000	0.030294	0.003533	0.121177	0.014133
16	C	GLF5	0.012091	0.000000	0.002424	0.000000	0.009695	0.000000
17	D	A306	0.000000	0.440527	0.036692	0.034828	0.146768	0.139314
18	D	A310	0.127691	0.012410	0.000000	0.039803	0.000000	0.159211
19	D	B752	0.366058	0.130295	0.069118	0.033584	0.276471	0.134338
20	D	B763	1.587669	1.513930	0.369483	0.230114	1.477930	0.920456
21	D	IL62	0.000000	0.006206	0.000853	0.000000	0.003414	0.000000
22	E	A332	2.580178	1.113834	0.558174	0.162116	2.232695	0.648465
23	E	A333	22.447015	14.517957	4.666832	2.674924	18.667327	10.699694
24	E	A340	0.010469	0.000000	0.001049	0.001530	0.004197	0.006118
25	E	A343	0.392524	0.030519	0.019934	0.091764	0.079736	0.367056
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.785041	0.030519	0.001049	0.232468	0.004197	0.929874
28	E	A359	7.332307	6.034527	1.424811	1.275520	5.699244	5.102081
29	E	A35K	0.439624	0.076288	0.095476	0.004589	0.381906	0.018354
30	E	B744	6.259414	4.333267	1.326187	0.764700	5.304747	3.058802
31	E	B747	0.026171	0.015260	0.000000	0.010705	0.000000	0.042820
32	E	B772	12.173411	8.773333	2.359645	1.875047	9.438582	7.500188
33	E	B773	21.463096	13.526190	4.430761	2.520453	17.723045	10.081812
34	E	B77L	0.047101	0.015260	0.009443	0.003059	0.037770	0.012237
35	E	B77W	1.020559	1.052795	0.272791	0.111647	1.091164	0.446586
36	E	B788	6.903151	8.925910	1.586387	1.497284	6.345549	5.989135
37	E	B789	3.082606	2.540450	0.685126	0.409880	2.740502	1.639522
38	E	B78X	0.230277	0.000000	0.046164	0.000000	0.184657	0.000000
39	F	A388	1.822812	2.230004	0.332311	0.494748	1.329243	1.978992
40	F	B74F	0.005900	0.005733	0.001577	0.000575	0.006308	0.002299

Table 5.2-31Scenario 7: Flight forecast in the case that Runway 2 is closed for 2048 comprising an average of 791 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36L-T6		36L-T5-1		36L-T5	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
41	F	B748	0.104218	0.091722	0.023258	0.014940	0.093031	0.059761
Total number of flights			259.674407	135.825592	52.477760	26.622241	209.911036	106.488964
Arrivals			395.5	50%	Daytime flights		522	66%
Departures			395.5	50%	Night flights		269	34%
Total average daily flights			791	100%	Total average daily flights		791	100%

Draft Version

Table 5.2-32Scenario 8: Flight forecast in the case that Runway 1 is closed for 2028 comprising an average of 221 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			18L-T3	18L-T3	18L-T4	18L-T4	18L-T4-1	18L-T4-1
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.108416	0.121420	0.118776	0.083056	0.013197	0.009228
2	C	A21N	0.057705	0.017060	0.030677	0.039723	0.003409	0.004414
3	C	A319	7.222764	0.620144	6.129190	0.980431	0.681021	0.108937
4	C	A320	22.797042	6.551656	20.729277	5.642448	2.303253	0.626939
5	C	A321	3.191270	0.873019	2.645337	1.044530	0.293926	0.116059
6	C	AT72	0.423172	0.001004	0.381502	0.000000	0.042389	0.000000
7	C	AT75	1.413776	0.066229	1.271932	0.060488	0.141326	0.006721
8	C	AT76	2.895750	0.189657	2.534426	0.251878	0.281603	0.027986
9	C	B38M	0.328745	0.132457	0.294976	0.120071	0.032775	0.013341
10	C	B733	0.001747	0.000000	0.001572	0.000000	0.000175	0.000000
11	C	B734	0.488747	0.343186	0.331159	0.434244	0.036795	0.048249
12	C	B737	0.297269	0.044153	0.298122	0.004514	0.033125	0.000502
13	C	B738	7.375770	6.048916	6.465068	5.637033	0.718341	0.626337
14	C	B739	0.413555	0.538863	0.443642	0.402646	0.049294	0.044738
15	C	E190	0.002622	0.000000	0.002359	0.000000	0.000262	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.004233	0.074496	0.026024	0.041524	0.002892	0.004614
18	D	A310	0.021871	0.003239	0.000635	0.024769	0.000071	0.002752
19	D	B752	0.196139	0.071257	0.171382	0.069936	0.019042	0.007771
20	D	B763	0.436724	0.314182	0.359267	0.321272	0.039919	0.035697
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	0.879215	0.252017	0.774277	0.245932	0.086031	0.027326
23	E	A333	7.803146	3.306716	7.126202	2.847874	0.791800	0.316430
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.333800	0.007113	0.090810	0.246847	0.010090	0.027427
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.298386	0.013211	0.014338	0.304445	0.001593	0.033827
28	E	A359	2.474730	1.598483	2.247948	1.413422	0.249772	0.157047
29	E	A35K	0.067292	0.009147	0.065320	0.002742	0.007258	0.000305
30	E	B744	1.913379	1.158470	1.863200	0.881334	0.207022	0.097926

Subject to changes and approval by the Government of Thailand

Table 5.2-32Scenario 8: Flight forecast in the case that Runway 1 is closed for 2028 comprising an average of 221 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			18L-T3	18L-T3	18L-T4	18L-T4	18L-T4-1	18L-T4-1
			Daytime	Night time	Daytime	Night time	Daytime	Night time
31	E	B747	0.014167	0.013211	0.003186	0.022857	0.000354	0.002540
32	E	B772	3.915296	2.367747	3.464324	2.196018	0.384925	0.244002
33	E	B773	6.544089	3.322976	6.090648	2.758278	0.676739	0.306475
34	E	B77L	0.025678	0.009147	0.023101	0.008229	0.002567	0.000914
35	E	B77W	0.206301	0.154462	0.271635	0.040227	0.030182	0.004470
36	E	B788	2.457908	2.598425	2.640660	1.844032	0.293407	0.204892
37	E	B789	0.855309	0.593461	0.822867	0.472664	0.091430	0.052518
38	E	B78X	0.229323	0.000000	0.206315	0.000000	0.022924	0.000000
39	F	A388	1.752409	1.493645	1.453661	1.484874	0.161518	0.164986
40	F	B74F	0.001910	0.001097	0.001719	0.000987	0.000191	0.000110
41	F	B748	0.068798	0.071282	0.067912	0.057224	0.007546	0.006358
Total number of flights			77.518453	32.981548	69.463446	29.986549	7.718164	3.331838
Arrivals			110.5	50%	Daytime flights		155	70%
Departures			110.5	50%	Night flights		66	30%
Total average daily flights			221	100%	Total average daily flights		221	100%

Table 5.2-33Scenario 8: Flight forecast in the case that Runway 1 is closed for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.501511	0.339250	0.265971	0.153275	0.265971	0.153275
2	C	A21N	0.059981	0.013569	0.029182	0.007760	0.029182	0.007760
3	C	A319	7.426021	0.773494	3.566015	0.560715	3.566015	0.560715
4	C	A320	22.016478	6.517508	11.346714	2.883123	11.346714	2.883123
5	C	A321	3.902117	0.829712	1.840120	0.544223	1.840120	0.544223
6	C	AT72	0.459857	0.000000	0.230119	0.000000	0.230119	0.000000
7	C	AT75	1.069666	0.096930	0.568628	0.009701	0.568628	0.009701
8	C	AT76	2.872438	0.189981	1.459090	0.067907	1.459090	0.067907
9	C	B38M	0.646466	0.124070	0.352683	0.027163	0.352683	0.027163
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 5.2-33Scenario 8: Flight forecast in the case that Runway 1 is closed for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
11	C	B734	0.179944	0.333437	0.022512	0.243494	0.022512	0.243494
12	C	B737	0.178278	0.062034	0.083377	0.037834	0.083377	0.037834
13	C	B738	7.186096	5.852576	3.482638	3.064530	3.482638	3.064530
14	C	B739	0.441530	0.358638	0.235122	0.162976	0.235122	0.162976
15	C	E190	0.044986	0.000000	0.020844	0.001940	0.020844	0.001940
16	C	GLF5	0.003333	0.000000	0.001668	0.000000	0.001668	0.000000
17	D	A306	0.000000	0.105426	0.027461	0.020806	0.027461	0.020806
18	D	A310	0.038285	0.002970	0.000000	0.023777	0.000000	0.023777
19	D	B752	0.109753	0.031182	0.051729	0.020063	0.051729	0.020063
20	D	B763	0.476025	0.362311	0.276528	0.137466	0.276528	0.137466
21	D	IL62	0.000000	0.001485	0.000639	0.000000	0.000639	0.000000
22	E	A332	0.838072	0.288774	0.452561	0.104916	0.452561	0.104916
23	E	A333	7.291055	3.763947	3.783811	1.731111	3.783811	1.731111
24	E	A340	0.003401	0.000000	0.000851	0.000990	0.000851	0.000990
25	E	A343	0.127496	0.007913	0.016162	0.059386	0.016162	0.059386
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.254990	0.007913	0.000851	0.150445	0.000851	0.150445
28	E	A359	2.381620	1.564520	1.155220	0.825469	1.155220	0.825469
29	E	A35K	0.142795	0.019779	0.077411	0.002970	0.077411	0.002970
30	E	B744	2.033132	1.123449	1.075256	0.494885	1.075256	0.494885
31	E	B747	0.008500	0.003956	0.000000	0.006928	0.000000	0.006928
32	E	B772	3.954068	2.274587	1.913172	1.213460	1.913172	1.213460
33	E	B773	6.971467	3.506820	3.592408	1.631143	3.592408	1.631143
34	E	B77L	0.015299	0.003956	0.007656	0.001980	0.007656	0.001980
35	E	B77W	0.331489	0.272949	0.221176	0.072253	0.221176	0.072253
36	E	B788	2.242225	2.314144	1.286224	0.968986	1.286224	0.968986
37	E	B789	1.001267	0.658641	0.555491	0.265259	0.555491	0.265259
38	E	B78X	0.074797	0.000000	0.037430	0.000000	0.037430	0.000000
39	F	A388	1.639581	1.601042	0.746124	0.886659	0.746124	0.886659
40	F	B74F	0.005307	0.004116	0.003540	0.001030	0.003540	0.001030

Table 5.2-33Scenario 8: Flight forecast in the case that Runway 1 is closed for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
41	F	B748	0.093742	0.065852	0.052220	0.026775	0.052220	0.026775
Total number of flights			77.023068	33.476931	38.838604	16.411398	38.838604	16.411398
Arrivals			110.5	50%	Daytime flights		155	70%
Departures			110.5	50%	Night flights		66	30%
Total average daily flights			221	100%	Total average daily flights		221	100%

Table 5.2-34Scenario 9: Flight forecast in the case that Runway 2 is closed for 2028 comprising an average of 221 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			18R-T1		18R-T2		18R-T2-2	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.108416	0.121420	0.118776	0.083056	0.013197	0.009228
2	C	A21N	0.057705	0.017060	0.030677	0.039723	0.003409	0.004414
3	C	A319	7.222764	0.620144	6.129190	0.980431	0.681021	0.108937
4	C	A320	22.797042	6.551656	20.729277	5.642448	2.303253	0.626939
5	C	A321	3.191270	0.873019	2.645337	1.044530	0.293926	0.116059
6	C	AT72	0.423172	0.001004	0.381502	0.000000	0.042389	0.000000
7	C	AT75	1.413776	0.066229	1.271932	0.060488	0.141326	0.006721
8	C	AT76	2.895750	0.189657	2.534426	0.251878	0.281603	0.027986
9	C	B38M	0.328745	0.132457	0.294976	0.120071	0.032775	0.013341
10	C	B733	0.001747	0.000000	0.001572	0.000000	0.000175	0.000000
11	C	B734	0.488747	0.343186	0.331159	0.434244	0.036795	0.048249
12	C	B737	0.297269	0.044153	0.298122	0.004514	0.033125	0.000502
13	C	B738	7.375770	6.048916	6.465068	5.637033	0.718341	0.626337
14	C	B739	0.413555	0.538863	0.443642	0.402646	0.049294	0.044738
15	C	E190	0.002622	0.000000	0.002359	0.000000	0.000262	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.004233	0.074496	0.026024	0.041524	0.002892	0.004614
18	D	A310	0.021871	0.003239	0.000635	0.024769	0.000071	0.002752
19	D	B752	0.196139	0.071257	0.171382	0.069936	0.019042	0.007771
20	D	B763	0.436724	0.314182	0.359267	0.321272	0.039919	0.035697
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	0.879215	0.252017	0.774277	0.245932	0.086031	0.027326
23	E	A333	7.803146	3.306716	7.126202	2.847874	0.791800	0.316430
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.333800	0.007113	0.090810	0.246847	0.010090	0.027427
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.298386	0.013211	0.014338	0.304445	0.001593	0.033827
28	E	A359	2.474730	1.598483	2.247948	1.413422	0.249772	0.157047
29	E	A35K	0.067292	0.009147	0.065320	0.002742	0.007258	0.000305
30	E	B744	1.913379	1.158470	1.863200	0.881334	0.207022	0.097926

Table 5.2-34Scenario 9: Flight forecast in the case that Runway 2 is closed for 2028 comprising an average of 221 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			18R-T1		18R-T2		18R-T2-2	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
31	E	B747	0.014167	0.013211	0.003186	0.022857	0.000354	0.002540
32	E	B772	3.915296	2.367747	3.464324	2.196018	0.384925	0.244002
33	E	B773	6.544089	3.322976	6.090648	2.758278	0.676739	0.306475
34	E	B77L	0.025678	0.009147	0.023101	0.008229	0.002567	0.000914
35	E	B77W	0.206301	0.154462	0.271635	0.040227	0.030182	0.004470
36	E	B788	2.457908	2.598425	2.640660	1.844032	0.293407	0.204892
37	E	B789	0.855309	0.593461	0.822867	0.472664	0.091430	0.052518
38	E	B78X	0.229323	0.000000	0.206315	0.000000	0.022924	0.000000
39	F	A388	1.752409	1.493645	1.453661	1.484874	0.161518	0.164986
40	F	B74F	0.001910	0.001097	0.001719	0.000987	0.000191	0.000110
41	F	B748	0.068798	0.071282	0.067912	0.057224	0.007546	0.006358
Total number of flights			77.518453	32.981548	69.463446	29.986549	7.718164	3.331838
Arrivals			110.5	50%	Daytime flights		155	70%
Departures			110.5	50%	Night flights		66	30%
Total average daily flights			221	100%	Total average daily flights		221	100%

Table 5.2-35Scenario 9: Flight forecast in the case that Runway 2 is closed for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures	
			36L-T6		36L-T5	
			Daytime	Night time	Daytime	Night time
1	C	A20N	0.501511	0.339250	0.531942	0.306550
2	C	A21N	0.059981	0.013569	0.058363	0.015520
3	C	A319	7.426021	0.773494	7.132030	1.121430
4	C	A320	22.016478	6.517508	22.693428	5.766245
5	C	A321	3.902117	0.829712	3.680241	1.088447
6	C	AT72	0.459857	0.000000	0.460239	0.000000
7	C	AT75	1.069666	0.096930	1.137256	0.019401
8	C	AT76	2.872438	0.189981	2.918180	0.135813
9	C	B38M	0.646466	0.124070	0.705367	0.054327

Table 5.2-35Scenario 9: Flight forecast in the case that Runway 2 is closed for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures	
			36L-T6		36L-T5	
			Daytime	Night time	Daytime	Night time
10	C	B733	0.000000	0.000000	0.000000	0.000000
11	C	B734	0.179944	0.333437	0.045024	0.486988
12	C	B737	0.178278	0.062034	0.166754	0.075668
13	C	B738	7.186096	5.852576	6.965276	6.129060
14	C	B739	0.441530	0.358638	0.470243	0.325952
15	C	E190	0.044986	0.000000	0.041688	0.003881
16	C	GLF5	0.003333	0.000000	0.003335	0.000000
17	D	A306	0.000000	0.105426	0.054922	0.041611
18	D	A310	0.038285	0.002970	0.000000	0.047555
19	D	B752	0.109753	0.031182	0.103458	0.040126
20	D	B763	0.476025	0.362311	0.553055	0.274931
21	D	IL62	0.000000	0.001485	0.001278	0.000000
22	E	A332	0.838072	0.288774	0.905122	0.209831
23	E	A333	7.291055	3.763947	7.567623	3.462221
24	E	A340	0.003401	0.000000	0.001702	0.001980
25	E	A343	0.127496	0.007913	0.032324	0.118772
26	E	A345	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.254990	0.007913	0.001702	0.300890
28	E	A359	2.381620	1.564520	2.310440	1.650938
29	E	A35K	0.142795	0.019779	0.154822	0.005939
30	E	B744	2.033132	1.123449	2.150512	0.989771
31	E	B747	0.008500	0.003956	0.000000	0.013856
32	E	B772	3.954068	2.274587	3.826344	2.426921
33	E	B773	6.971467	3.506820	7.184817	3.262286
34	E	B77L	0.015299	0.003956	0.015311	0.003960
35	E	B77W	0.331489	0.272949	0.442352	0.144507
36	E	B788	2.242225	2.314144	2.572447	1.937972
37	E	B789	1.001267	0.658641	1.110983	0.530518
38	E	B78X	0.074797	0.000000	0.074859	0.000000
39	F	A388	1.639581	1.601042	1.492248	1.773318

Table 5.2-35Scenario 9: Flight forecast in the case that Runway 2 is closed for 2028 comprising an average of 221 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures	
			36L-T6		36L-T5	
			Daytime	Night time	Daytime	Night time
40	F	B74F	0.005307	0.004116	0.007081	0.002060
41	F	B748	0.093742	0.065852	0.104439	0.053550
Total number of flights			77.023068	33.476931	77.677207	32.822795
Arrivals		110.5	50%	Daytime flights	155	70%
Departures		110.5	50%	Night flights	66	30%
Total average daily flights		221	100%	Total average daily flights	221	100%

Table 5.2-36Scenario 10: Flight forecast in the case that Runway 1 is closed for 2038 comprising an average of 548 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18L-T3		18L-T4-2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.273225	0.307360	0.033258	0.023360	0.232805	0.163517	0.066516	0.046719
2	C	A21N	0.145426	0.043185	0.008590	0.011172	0.060129	0.078206	0.017180	0.022345
3	C	A319	18.202553	1.569818	1.716199	0.275747	12.013393	1.930226	3.432398	0.551493
4	C	A320	57.452300	16.584728	5.804285	1.586940	40.629992	11.108580	11.608569	3.173880
5	C	A321	8.042526	2.209944	0.740705	0.293774	5.184938	2.056420	1.481411	0.587548
6	C	AT72	1.066462	0.002542	0.106822	0.000000	0.747755	0.000000	0.213644	0.000000
7	C	AT75	3.562950	0.167650	0.356146	0.017012	2.493025	0.119085	0.712293	0.034024
8	C	AT76	7.297768	0.480094	0.709650	0.070841	4.967549	0.495885	1.419300	0.141681
9	C	B38M	0.828493	0.335301	0.082594	0.033770	0.578161	0.236391	0.165189	0.067540
10	C	B733	0.004404	0.000000	0.000440	0.000000	0.003081	0.000000	0.000880	0.000000
11	C	B734	1.231721	0.868734	0.092726	0.122131	0.649081	0.854918	0.185452	0.244262
12	C	B737	0.749168	0.111769	0.083475	0.001270	0.584328	0.008888	0.166951	0.002539
13	C	B738	18.588154	15.312103	1.810246	1.585417	12.671722	11.097918	3.620492	3.170834
14	C	B739	1.042225	1.364066	0.124222	0.113244	0.869551	0.792710	0.248443	0.226489
15	C	E190	0.006609	0.000000	0.000661	0.000000	0.004625	0.000000	0.001321	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.010482	0.185327	0.007161	0.011477	0.050128	0.080341	0.014322	0.022955
18	D	A310	0.054169	0.008058	0.000175	0.006846	0.001223	0.047923	0.000350	0.013692
19	D	B752	0.485779	0.177269	0.047160	0.019330	0.330122	0.135313	0.094321	0.038661
20	D	B763	1.081641	0.781601	0.098862	0.088800	0.692033	0.621599	0.197724	0.177600
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	2.121728	0.610875	0.207600	0.066233	1.453197	0.463630	0.415199	0.132466
23	E	A333	18.830614	8.015306	1.910683	0.766972	13.374778	5.368805	3.821365	1.533944
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.805529	0.017242	0.024348	0.066479	0.170438	0.465355	0.048696	0.132958
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.720065	0.032024	0.003844	0.081991	0.026909	0.573938	0.007688	0.163982
28	E	A359	5.972038	3.874637	0.602721	0.380654	4.219050	2.664580	1.205443	0.761309
29	E	A35K	0.162391	0.022171	0.017514	0.000739	0.122595	0.005170	0.035027	0.001477
30	E	B744	4.617381	2.808070	0.499563	0.237355	3.496938	1.661487	0.999125	0.474711

Table 5.2-36Scenario 10: Flight forecast in the case that Runway 1 is closed for 2038 comprising an average of 548 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18L-T3		18L-T4-2		18L-T4		18L-T4-1	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
31	E	B747	0.034187	0.032024	0.000854	0.006156	0.005980	0.043090	0.001709	0.012311
32	E	B772	9.448423	5.739294	0.928857	0.591418	6.502001	4.139927	1.857714	1.182836
33	E	B773	15.792248	8.054719	1.633029	0.742843	11.431202	5.199898	3.266058	1.485685
34	E	B77L	0.061966	0.022171	0.006194	0.002216	0.043358	0.015513	0.012388	0.004432
35	E	B77W	0.497847	0.374409	0.072831	0.010834	0.509816	0.075837	0.145662	0.021668
36	E	B788	5.931442	6.298445	0.708016	0.496623	4.956111	3.476363	1.416032	0.993247
37	E	B789	2.064038	1.438518	0.220628	0.127295	1.544394	0.891065	0.441255	0.254590
38	E	B78X	0.553404	0.000000	0.055317	0.000000	0.387222	0.000000	0.110635	0.000000
39	F	A388	4.340215	3.715793	0.400013	0.410421	2.800094	2.872947	0.800027	0.820842
40	F	B74F	0.004730	0.002730	0.000473	0.000273	0.003310	0.001910	0.000946	0.000546
41	F	B748	0.170393	0.177330	0.018688	0.015817	0.130816	0.110718	0.037376	0.031634
Total number of flights			192.254694	81.745307	19.134550	8.265450	133.941850	57.858153	38.269101	16.530900
Arrivals			274	50%	Daytime flights		384		70%	
Departures			274	50%	Night flights		164		30%	
Total average daily flights			548	100%	Total average daily flights		548		100%	

Table 5.2-37Scenario 10: Flight forecast in the case that Runway 1 is closed for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	1.263644	0.859181	0.670162	0.388184	0.670162	0.388184
2	C	A21N	0.151133	0.034365	0.073529	0.019654	0.073529	0.019654
3	C	A319	18.711146	1.958941	8.985223	1.420064	8.985223	1.420064
4	C	A320	55.474329	16.506146	28.590110	7.301779	28.590110	7.301779
5	C	A321	9.832060	2.101317	4.636519	1.378296	4.636519	1.378296
6	C	AT72	1.158689	0.000000	0.579828	0.000000	0.579828	0.000000
7	C	AT75	2.695209	0.245482	1.432761	0.024568	1.432761	0.024568
8	C	AT76	7.237607	0.481144	3.676442	0.171980	3.676442	0.171980
9	C	B38M	1.628883	0.314218	0.888649	0.068793	0.888649	0.068793
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 5.2-37Scenario 10: Flight forecast in the case that Runway 1 is closed for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
11	C	B734	0.453400	0.844457	0.056723	0.616671	0.056723	0.616671
12	C	B737	0.449202	0.157106	0.210084	0.095818	0.210084	0.095818
13	C	B738	18.106613	14.822147	8.775140	7.761210	8.775140	7.761210
14	C	B739	1.112510	0.908283	0.592431	0.412752	0.592431	0.412752
15	C	E190	0.113352	0.000000	0.052521	0.004914	0.052521	0.004914
16	C	GLF5	0.008398	0.000000	0.004202	0.000000	0.004202	0.000000
17	D	A306	0.000000	0.262398	0.068000	0.051785	0.068000	0.051785
18	D	A310	0.094804	0.007392	0.000000	0.059181	0.000000	0.059181
19	D	B752	0.271776	0.077610	0.128093	0.049935	0.128093	0.049935
20	D	B763	1.178747	0.901763	0.684749	0.342143	0.684749	0.342143
21	D	IL62	0.000000	0.003696	0.001582	0.000000	0.001582	0.000000
22	E	A332	2.022048	0.700306	1.091914	0.254432	1.091914	0.254432
23	E	A333	17.591401	9.127953	9.129375	4.198134	9.129375	4.198134
24	E	A340	0.008204	0.000000	0.002053	0.002401	0.002053	0.002401
25	E	A343	0.307615	0.019188	0.038996	0.144018	0.038996	0.144018
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.615225	0.019188	0.002053	0.364845	0.002053	0.364845
28	E	A359	5.746223	3.794120	2.787252	2.001853	2.787252	2.001853
29	E	A35K	0.344527	0.047965	0.186773	0.007202	0.186773	0.007202
30	E	B744	4.905412	2.724479	2.594320	1.200152	2.594320	1.200152
31	E	B747	0.020509	0.009594	0.000000	0.016801	0.000000	0.016801
32	E	B772	9.540127	5.516105	4.615999	2.942775	4.615999	2.942775
33	E	B773	16.820318	8.504394	8.667568	3.955702	8.667568	3.955702
34	E	B77L	0.036913	0.009594	0.018472	0.004801	0.018472	0.004801
35	E	B77W	0.799797	0.661929	0.533641	0.175222	0.533641	0.175222
36	E	B788	5.409900	5.612035	3.103331	2.349898	3.103331	2.349898
37	E	B789	2.415794	1.597271	1.340260	0.643283	1.340260	0.643283
38	E	B78X	0.180465	0.000000	0.090308	0.000000	0.090308	0.000000
39	F	A388	4.059980	3.984866	1.847581	2.206831	1.847581	2.206831
40	F	B74F	0.013141	0.010245	0.008768	0.002564	0.008768	0.002564

Table 5.2-37Scenario 10: Flight forecast in the case that Runway 1 is closed for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36R-T8		36R-T7-1		36R-T7	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
41	F	B748	0.232126	0.163900	0.129308	0.066641	0.129308	0.066641
Total number of flights			191.011227	82.988778	96.294720	40.705282	96.294720	40.705282
Arrivals			274	50%	Daytime flights		384	70%
Departures			274	50%	Night flights		164	30%
Total average daily flights			548	100%	Total average daily flights		548	100%

Table 5.2-38Scenario 11: Flight forecast in the case that Runway 2 is closed for 2038 comprising an average of 548 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18R-T1		18R-T2-1		18R-T2		18R-T2-2	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	0.273225	0.307360	0.033258	0.023360	0.232805	0.163517	0.066516	0.046719
2	C	A21N	0.145426	0.043185	0.008590	0.011172	0.060129	0.078206	0.017180	0.022345
3	C	A319	18.202553	1.569818	1.716199	0.275747	12.013393	1.930226	3.432398	0.551493
4	C	A320	57.452300	16.584728	5.804285	1.586940	40.629992	11.108580	11.608569	3.173880
5	C	A321	8.042526	2.209944	0.740705	0.293774	5.184938	2.056420	1.481411	0.587548
6	C	AT72	1.066462	0.002542	0.106822	0.000000	0.747755	0.000000	0.213644	0.000000
7	C	AT75	3.562950	0.167650	0.356146	0.017012	2.493025	0.119085	0.712293	0.034024
8	C	AT76	7.297768	0.480094	0.709650	0.070841	4.967549	0.495885	1.419300	0.141681
9	C	B38M	0.828493	0.335301	0.082594	0.033770	0.578161	0.236391	0.165189	0.067540
10	C	B733	0.004404	0.000000	0.000440	0.000000	0.003081	0.000000	0.000880	0.000000
11	C	B734	1.231721	0.868734	0.092726	0.122131	0.649081	0.854918	0.185452	0.244262
12	C	B737	0.749168	0.111769	0.083475	0.001270	0.584328	0.008888	0.166951	0.002539
13	C	B738	18.588154	15.312103	1.810246	1.585417	12.671722	11.097918	3.620492	3.170834
14	C	B739	1.042225	1.364066	0.124222	0.113244	0.869551	0.792710	0.248443	0.226489
15	C	E190	0.006609	0.000000	0.000661	0.000000	0.004625	0.000000	0.001321	0.000000
16	C	GLF5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17	D	A306	0.010482	0.185327	0.007161	0.011477	0.050128	0.080341	0.014322	0.022955
18	D	A310	0.054169	0.008058	0.000175	0.006846	0.001223	0.047923	0.000350	0.013692
19	D	B752	0.485779	0.177269	0.047160	0.019330	0.330122	0.135313	0.094321	0.038661
20	D	B763	1.081641	0.781601	0.098862	0.088800	0.692033	0.621599	0.197724	0.177600
21	D	IL62	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22	E	A332	2.121728	0.610875	0.207600	0.066233	1.453197	0.463630	0.415199	0.132466
23	E	A333	18.830614	8.015306	1.910683	0.766972	13.374778	5.368805	3.821365	1.533944
24	E	A340	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25	E	A343	0.805529	0.017242	0.024348	0.066479	0.170438	0.465355	0.048696	0.132958
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.720065	0.032024	0.003844	0.081991	0.026909	0.573938	0.007688	0.163982
28	E	A359	5.972038	3.874637	0.602721	0.380654	4.219050	2.664580	1.205443	0.761309
29	E	A35K	0.162391	0.022171	0.017514	0.000739	0.122595	0.005170	0.035027	0.001477
30	E	B744	4.617381	2.808070	0.499563	0.237355	3.496938	1.661487	0.999125	0.474711

Table 5.2-38Scenario 11: Flight forecast in the case that Runway 2 is closed for 2038 comprising an average of 548 flights per day (hot season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures					
			18R-T1		18R-T2-1		18R-T2		18R-T2-2	
			Daytime	Night time	Daytime	Night time	Daytime	Night time	Daytime	Night time
31	E	B747	0.034187	0.032024	0.000854	0.006156	0.005980	0.043090	0.001709	0.012311
32	E	B772	9.448423	5.739294	0.928857	0.591418	6.502001	4.139927	1.857714	1.182836
33	E	B773	15.792248	8.054719	1.633029	0.742843	11.431202	5.199898	3.266058	1.485685
34	E	B77L	0.061966	0.022171	0.006194	0.002216	0.043358	0.015513	0.012388	0.004432
35	E	B77W	0.497847	0.374409	0.072831	0.010834	0.509816	0.075837	0.145662	0.021668
36	E	B788	5.931442	6.298445	0.708016	0.496623	4.956111	3.476363	1.416032	0.993247
37	E	B789	2.064038	1.438518	0.220628	0.127295	1.544394	0.891065	0.441255	0.254590
38	E	B78X	0.553404	0.000000	0.055317	0.000000	0.387222	0.000000	0.110635	0.000000
39	F	A388	4.340215	3.715793	0.400013	0.410421	2.800094	2.872947	0.800027	0.820842
40	F	B74F	0.004730	0.002730	0.000473	0.000273	0.003310	0.001910	0.000946	0.000546
41	F	B748	0.170393	0.177330	0.018688	0.015817	0.130816	0.110718	0.037376	0.031634
Total number of flights			192.254694	81.745307	19.134550	8.265450	133.941850	57.858153	38.269101	16.530900
Arrivals			274	50%	Daytime flights		384		70%	
Departures			274	50%	Night flights		164		30%	
Total average daily flights			548	100%	Total average daily flights		548		100%	

Table 5.2-39 Scenario 11: Flight forecast in the case that Runway 2 is closed for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36L-T6		36L-T5-1		36L-T5	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
1	C	A20N	1.263644	0.859181	0.268065	0.155274	1.072259	0.621095
2	C	A21N	0.151133	0.034365	0.029411	0.007861	0.117646	0.031446
3	C	A319	18.711146	1.958941	3.594089	0.568026	14.376357	2.272103
4	C	A320	55.474329	16.506146	11.436044	2.920712	45.744176	11.682846
5	C	A321	9.832060	2.101317	1.854607	0.551318	7.418430	2.205274
6	C	AT72	1.158689	0.000000	0.231931	0.000000	0.927724	0.000000
7	C	AT75	2.695209	0.245482	0.573105	0.009827	2.292418	0.039309
8	C	AT76	7.237607	0.481144	1.470577	0.068792	5.882307	0.275167
9	C	B38M	1.628883	0.314218	0.355460	0.027517	1.421839	0.110069
10	C	B733	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 5.2-39 Scenario 11: Flight forecast in the case that Runway 2 is closed for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36L-T6		36L-T5-1		36L-T5	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
11	C	B734	0.453400	0.844457	0.022689	0.246668	0.090757	0.986673
12	C	B737	0.449202	0.157106	0.084033	0.038327	0.336134	0.153309
13	C	B738	18.106613	14.822147	3.510056	3.104484	14.040224	12.417936
14	C	B739	1.112510	0.908283	0.236973	0.165101	0.947890	0.660403
15	C	E190	0.113352	0.000000	0.021008	0.001966	0.084033	0.007862
16	C	GLF5	0.008398	0.000000	0.001681	0.000000	0.006724	0.000000
17	D	A306	0.000000	0.262398	0.027200	0.020714	0.108800	0.082855
18	D	A310	0.094804	0.007392	0.000000	0.023672	0.000000	0.094689
19	D	B752	0.271776	0.077610	0.051237	0.019974	0.204949	0.079896
20	D	B763	1.178747	0.901763	0.273900	0.136857	1.095599	0.547428
21	D	IL62	0.000000	0.003696	0.000633	0.000000	0.002531	0.000000
22	E	A332	2.022048	0.700306	0.436766	0.101773	1.747062	0.407091
23	E	A333	17.591401	9.127953	3.651750	1.679254	14.607000	6.717014
24	E	A340	0.008204	0.000000	0.000821	0.000960	0.003285	0.003841
25	E	A343	0.307615	0.019188	0.015598	0.057607	0.062393	0.230430
26	E	A345	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27	E	A346	0.615225	0.019188	0.000821	0.145938	0.003285	0.583753
28	E	A359	5.746223	3.794120	1.114901	0.800741	4.459603	3.202966
29	E	A35K	0.344527	0.047965	0.074709	0.002881	0.298837	0.011522
30	E	B744	4.905412	2.724479	1.037728	0.480061	4.150912	1.920243
31	E	B747	0.020509	0.009594	0.000000	0.006720	0.000000	0.026882
32	E	B772	9.540127	5.516105	1.846399	1.177110	7.385598	4.708441
33	E	B773	16.820318	8.504394	3.467027	1.582281	13.868109	6.329123
34	E	B77L	0.036913	0.009594	0.007389	0.001920	0.029555	0.007682
35	E	B77W	0.799797	0.661929	0.213456	0.070089	0.853825	0.280356
36	E	B788	5.409900	5.612035	1.241333	0.939959	4.965330	3.759837
37	E	B789	2.415794	1.597271	0.536104	0.257313	2.144416	1.029253
38	E	B78X	0.180465	0.000000	0.036123	0.000000	0.144492	0.000000
39	F	A388	4.059980	3.984866	0.739032	0.882732	2.956130	3.530929
40	F	B74F	0.013141	0.010245	0.003507	0.001025	0.014028	0.004102

Table 5.2-39 Scenario 11: Flight forecast in the case that Runway 2 is closed for 2038 comprising an average of 548 flights per day (cold season)

Sequence No.	Design Air craft	Type Air craft	Arrivals		Departures			
			36L-T6		36L-T5-1		36L-T5	
			Daytime	Night time	Daytime	Night time	Daytime	Night time
41	F	B748	0.232126	0.163900	0.051723	0.026657	0.206893	0.106626
Total number of flights			191.011227	82.988778	38.517886	16.282111	154.071550	65.128451
Arrivals			274	50%	Daytime flights		384	70%
Departures			274	50%	Night flights		164	30%
Total average daily flights			548	100%	Total average daily flights		548	100%

(2) Study Results

1) Results of assessments from mathematical models

Assessment results from mathematical models for NEF contours are used to create the NEF contour map by superimposing the NEF contour results from each flight season (hot season and cold season) and combining them to find the annual NEF noise level as shown in Figure 5.2-23 to Figure 5.2-*57* and the NEF contour map for 11 scenarios as shown Figure 5.2-*58*.

2) Noise Exposure Forecast (NEF) Results

Compared the NEF contour maps for various cases spatially with the NEF contours from the U-Tapao International Airport development project to consider compensation models for impacted areas in 2 forms, as follows:

In the case of project developments in the ultimate phase of the project, to consider the overall impact of the project at its peak in 2048, conduct a spatial comparison between NEF contour maps for scenarios 2 to 11, flight forecasts for 2028 to 2048 inclusive of all cases of runway closures, and Scenario 1, the aviation situation in 2019. A summary of the spatial comparison results are as shown in Table 5.2-40 with details as follows.

For the overall impact of the project at peak development in 2048, from a spatial comparison of the NEF contour map for scenarios 2 to 11, flight forecasts 2028 to 2048 inclusive of all cases of runway closures, in comparison with case 1, the aviation situation in 2019, the comparison of areas and buildings with increased NEF contours found that the NEF 30 - 40 area was increased by 46.78 square kilometers with 2,466 additional buildings affected. The NEF ≥ 40 area was increased by 13.81 square kilometers with 93 additional buildings affected. This equaled a total affected area of 60.59 square kilometers with a total of 2,559 buildings, with details as shown in Table 5.2-41 and Figure 5.2-*55*.

In cases divided into 3 stages of development, using spatial comparisons of NEF contours for U-Tapao International Airport at peak project development for 2028, 2038 and 2048, to be used for consideration of 3-phased compensation as follows:

Phase 1 NEF contour areas in 2019 compared with NEF contour areas in 2028, inclusive of all runway closures (up to 221 flights): From the comparison of increased NEF contour areas and buildings, it was found that the NEF 30 - 40 area was increased by 18.17 square kilometers with 527 additional buildings and that the NEF ≥ 40 area was increased by 4.33 square kilometers with no affected buildings in this area. Details are as shown in Table 5.2-42 and Figure 5.2-*56*.

Phase 2 NEF contour areas in 2019 and 2028, inclusive of all runway closure cases, compared with NEF contour areas in 2038, inclusive of all runway closure cases (peak 548 flights per day): From the comparison of increased NEF contour areas and buildings, it was found that the NEF 30 - 40 area was increased by 18.35 square kilometers with 1,119 additional buildings and that the NEF ≥ 40 area was increased by 3.88 square kilometers with 13 additional buildings. Details are as shown in Table 5.2-42 and Figure 5.2-58.

Phase 3 NEF contour areas in 2019, 2028, and 2038, inclusive of all runway closure cases, compared with NEF contour areas in 2048, inclusive of all runway closure cases (peak 1,364 flights per day): From the comparison of increased NEF contour areas and buildings, it was found that the NEF 30 - 40 area was increased by 19.75 square kilometers with 913 additional buildings and that the NEF ≥ 40 area was increased by 5.60 square kilometers with 80 additional buildings. Details are as shown in Table 5.2-42 and Figure 5.2-*58*.

When combining the total affected areas and buildings for all 3 phases, it was found that the total NEF 30 - 40 area was 46.78 square kilometers with a total of 2,466 affected buildings. The total NEF ≥ 40 area was 13.81 square kilometers with a total of 93 affected buildings. Therefore, the total affected area was 60.59 square kilometers with a total of 2,559 affected buildings. Details are as shown in Table 5.2-42.

Therefore, the predicted noise impact from aircrafts in the operation phase is at high level. The project has established relevant health and environmental impact prevention and resolution measures as shown in Chapter 7 Health and Environmental Action Plans, Health and Environmental Impact Prevention and Resolution Measures and Health and Environmental Impact Monitoring Measures and the Table of SPR.1 Project Measures.

Table 5.2-40Summary of study scenarios - distribution of takeoffs-landings in impacted areas of U-Tapao International Airport

Study Scenarios	Number of flights per day		Distribution of takeoffs-landings*			Summary of affected areas (square kilometers)		
				West side	East side			
	Hot season	Cold season	Direction	Runway 1	Runway 2	NEF 30-40	NEF ≥40	Total area
Normal cases								
Scenario 1: Aviation situation in 2019 (1 runway)	48	45	North side	100%	-	1.46	0.49	1.95
			South side	100%	-			
Scenario 2: Peak flight forecast for 2028 (2 runways)	221	221	North side	20%	80%	12.85	3.02	15.86
			South side	20%	80%			
Scenario 3: Peak flight forecast for 2038 (2 runways)	548	548	North side	82%	18%	23.07	5.98	29.05
			South side	19%	81%			
Scenario 4: Peak flight forecast for 2048 (2 runways)	889	889	North side	82%	18%	30.87	8.50	39.37
			South side	19%	81%			
Peak Hour								
Scenario 5: Peak flight forecast	1,364	1,364	North side	82%	18%	11.81	39.98	51.79
			South side	19%	81%			
In the case of runway closure								
Scenario 6: Closure of Runway 1 (2048)	791	791	North side	X	100%	27.27	6.30	33.58
			South side	X	100%			
Scenario 7: Closure of Runway 2 (2048)	791	791	North side	100%	X	27.28	6.29	33.57
			South side	100%	X			

Table 5.2-40 Summary of study scenarios - distribution of takeoffs-landings in impacted areas of U-Tapao International Airport

Study Scenarios	Number of flights per day		Distribution of takeoffs-landings*			Summary of affected areas (square kilometers)		
				West side	East side			
	Hot season	Cold season	Direction	Runway 1	Runway 2	NEF 30-40	NEF ≥40	Total area
Additional scenarios (for considering phased compensation)								
Scenario 8: Closure of Runway 1 (2028)	221	221	North side	X	100%	10.36	2.42	12.77
			South side	X	100%			
Scenario 9: Closure of Runway 2 (2028)	221	221	North side	100%	X	10.38	2.40	12.77
			South side	100%	X			

Scenario 10: Closure of Runway 1 (2038)	548	548	North side	X	100%	19.87	4.36	24.22
			South side	X	100%			
Scenario 11: Closure of Runway 2 (2038)	548	548	North side	100%	X	19.89	4.34	24.23
			South side	100%	X			

Note : * Takeoff-landing distribution is calculated from the whole year average based on runway usage during the hot season and cold season.

Table 5.2-41 Spatial comparison of NEF contours from U-Tapao International Airport project developments

Study Scenarios	Increased area (square kilometers)	Number of buildings*
Total area from spatial comparison of scenarios 2-11, flight forecasts for 2028 to 2048 inclusive of all closed runway scenarios in comparison with scenario 1, aviation situation for 2019.		
NEF ≥ 40	13.81	93
NEF 30 – 40	46.78	2,466
Total	60.59	2,559

Notes : * Location of buildings and structures from aerial photographs of the Royal Thai Survey Department, 2019.

Table 5.2- 42 Spatial comparison of NEF contours from U-Tapao International Airport project developments at ultimate development in 2028, 2038, and 2048 (for considering phased compensation)

Study Scenarios	Increased area (square kilometers)	Number of buildings*
Set 1: NEF contour areas in 2019 compared with NEF contour areas in 2028 Inclusive of all closed runway scenarios (maximum 221 flights per day)		
NEF ≥ 40	4.33	No buildings
NEF 30 – 40	18.17	527
Set 2: NEF contour areas in 2019 and 2028 inclusive of all cases of closed runways compared with NEF contour areas for 2038 inclusive of all cases of closed runways (maximum 548 fights per day)		
NEF ≥ 40	3.88	13
NEF 30 – 40	18.35	1,119
Set 3: NEF contour areas in 2019, 2028 and 2038 inclusive of all cases of closed runways, compared with NEF contour areas for 2048 inclusive of all cases of closed runways (maximum 1,364 fights per day)		
NEF ≥ 40	5.60	80
NEF 30 – 40	19.75	913
Total area and buildings affected, from all 3 phases		
NEF ≥ 40	13.81	93
NEF 30 – 40	46.78	2,466
Total	60.59	2,559

Notes : * Location of buildings and structures from aerial photographs of the Royal Thai Survey Department, 2019.

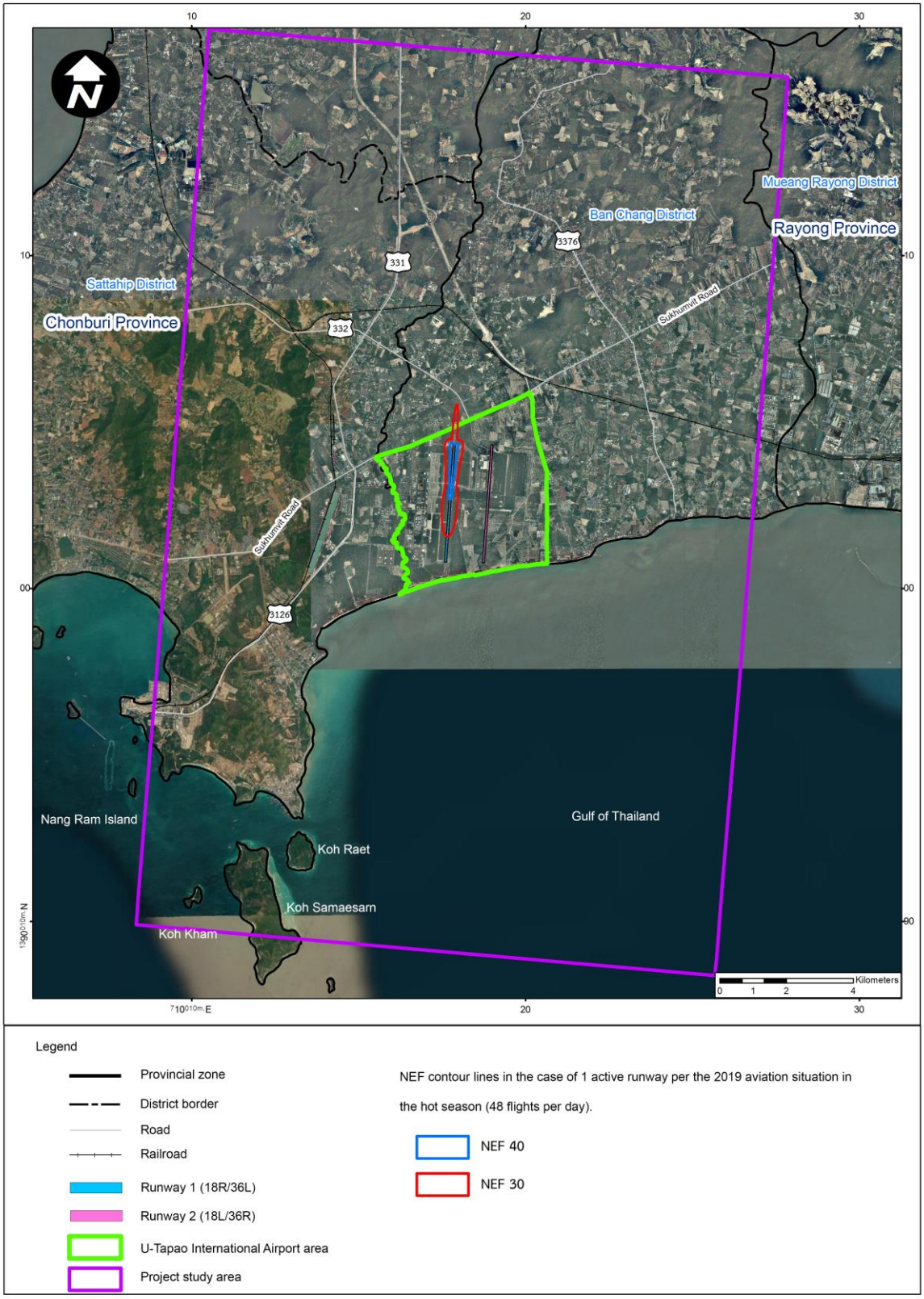


Figure 5.2-23 **NEF contours in Scenario 1: 2019 aviation situation in the hot season (average 48 flights per day)**

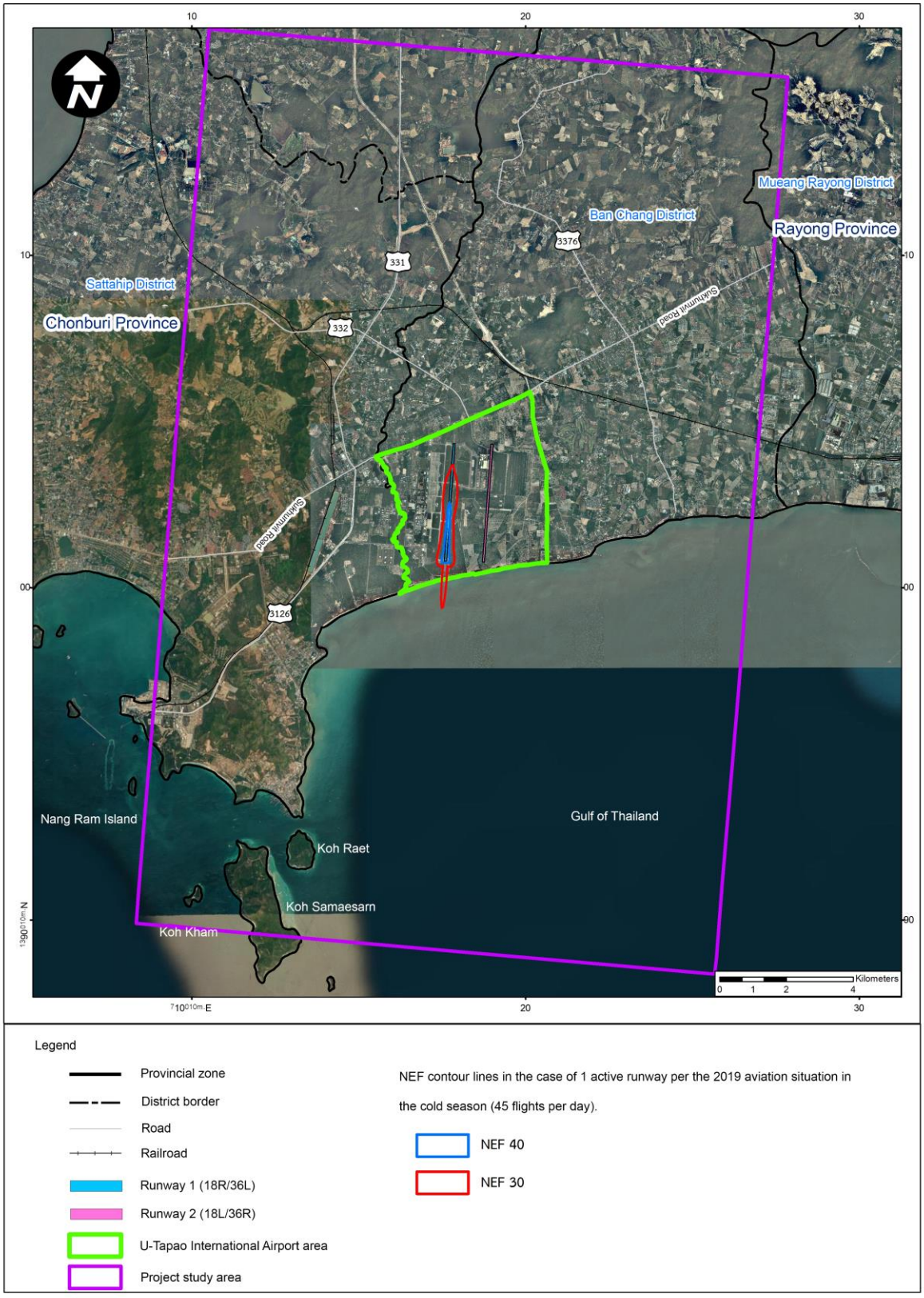


Figure 5.2-24 **NEF contours in Scenario 1: 2019 aviation situation in the cold season (average 45 flights per day)**

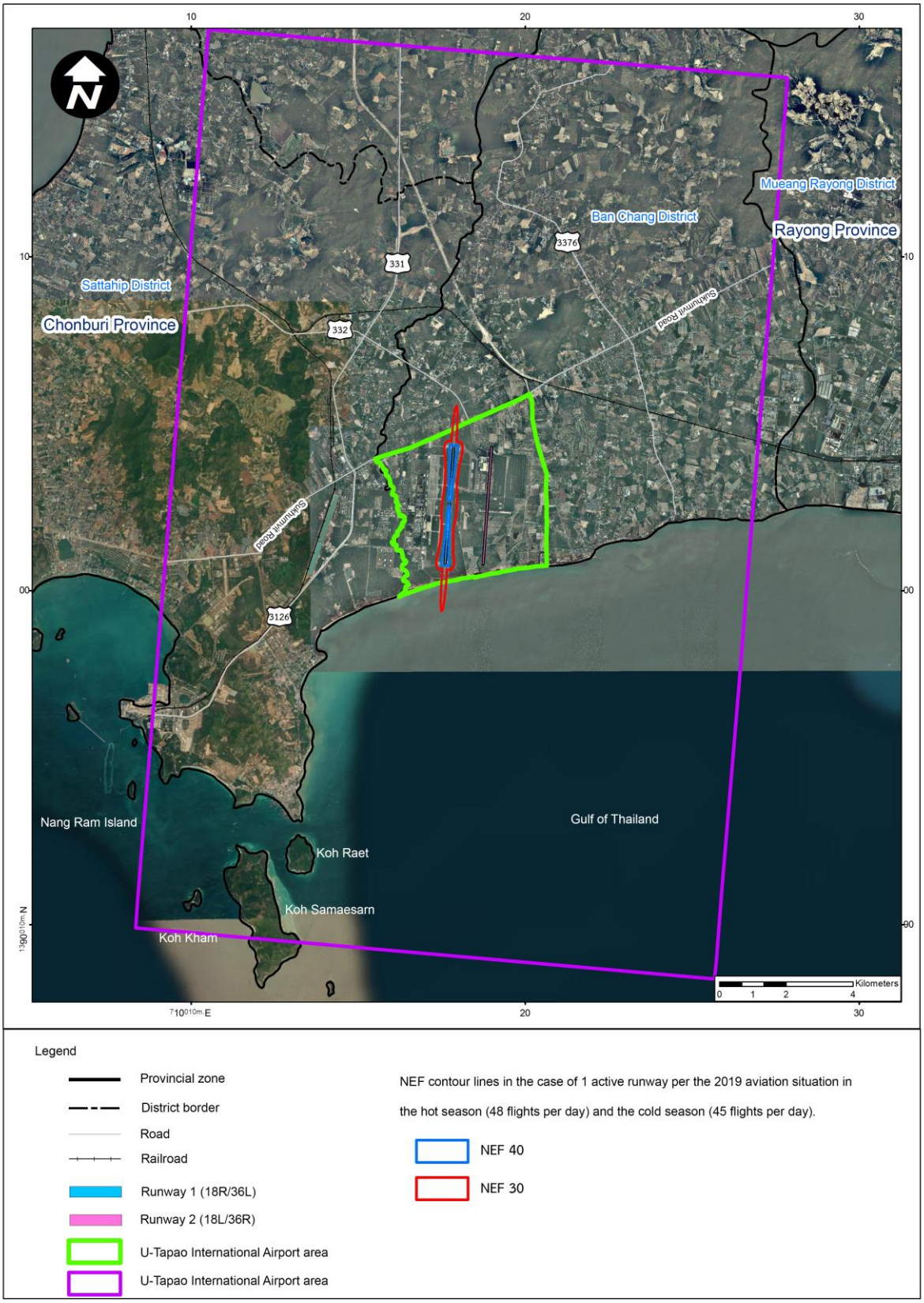


Figure 5.2-25 NEF contours in Scenario 1: 2019 aviation situation in the hot season (average 48 flights per day) and cold season (average 45 flights per day).

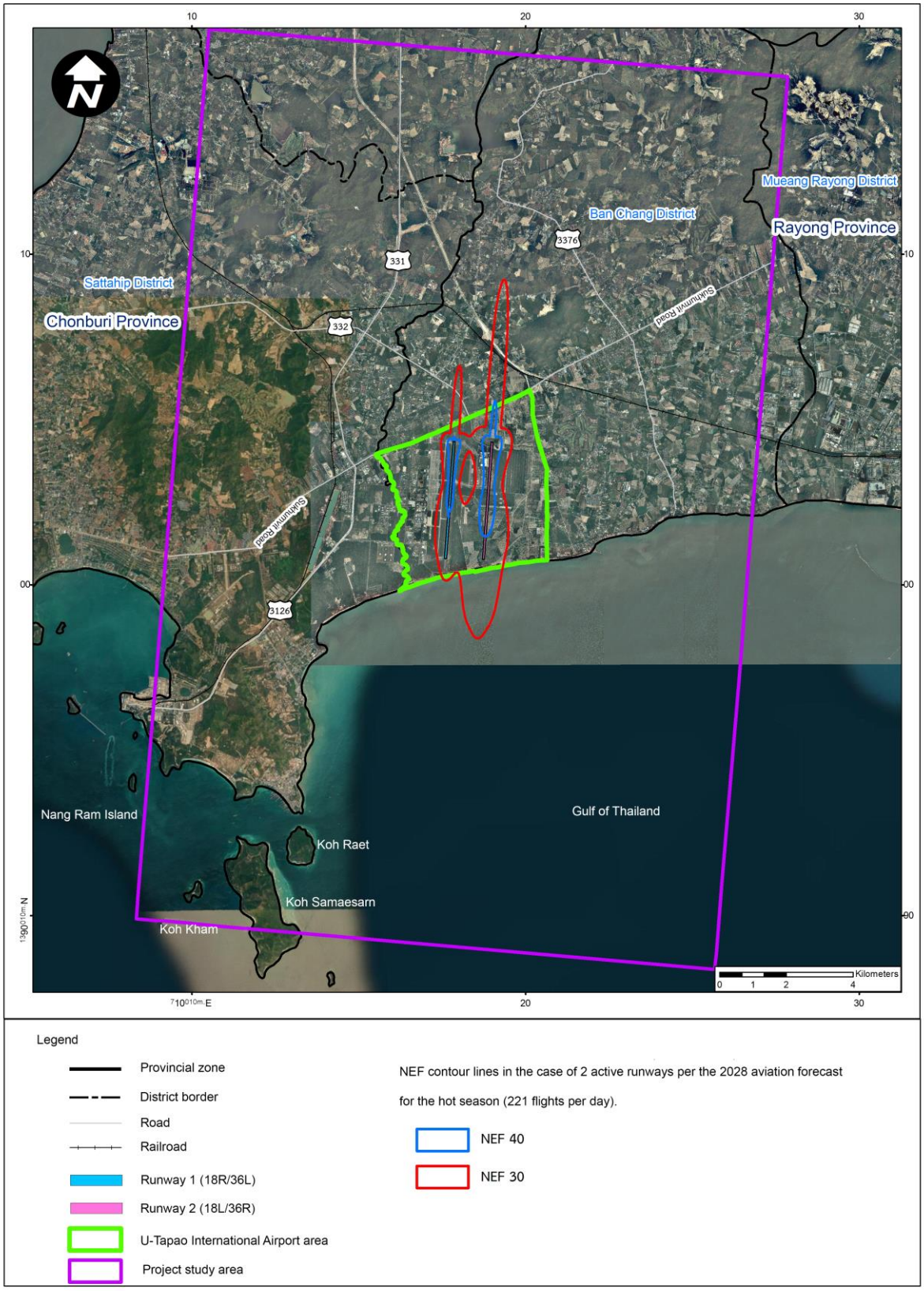


Figure 5.2-26 **NEF contours in Scenario 2: 2028 flight forecast for the hot season (average 221 flights per day)**

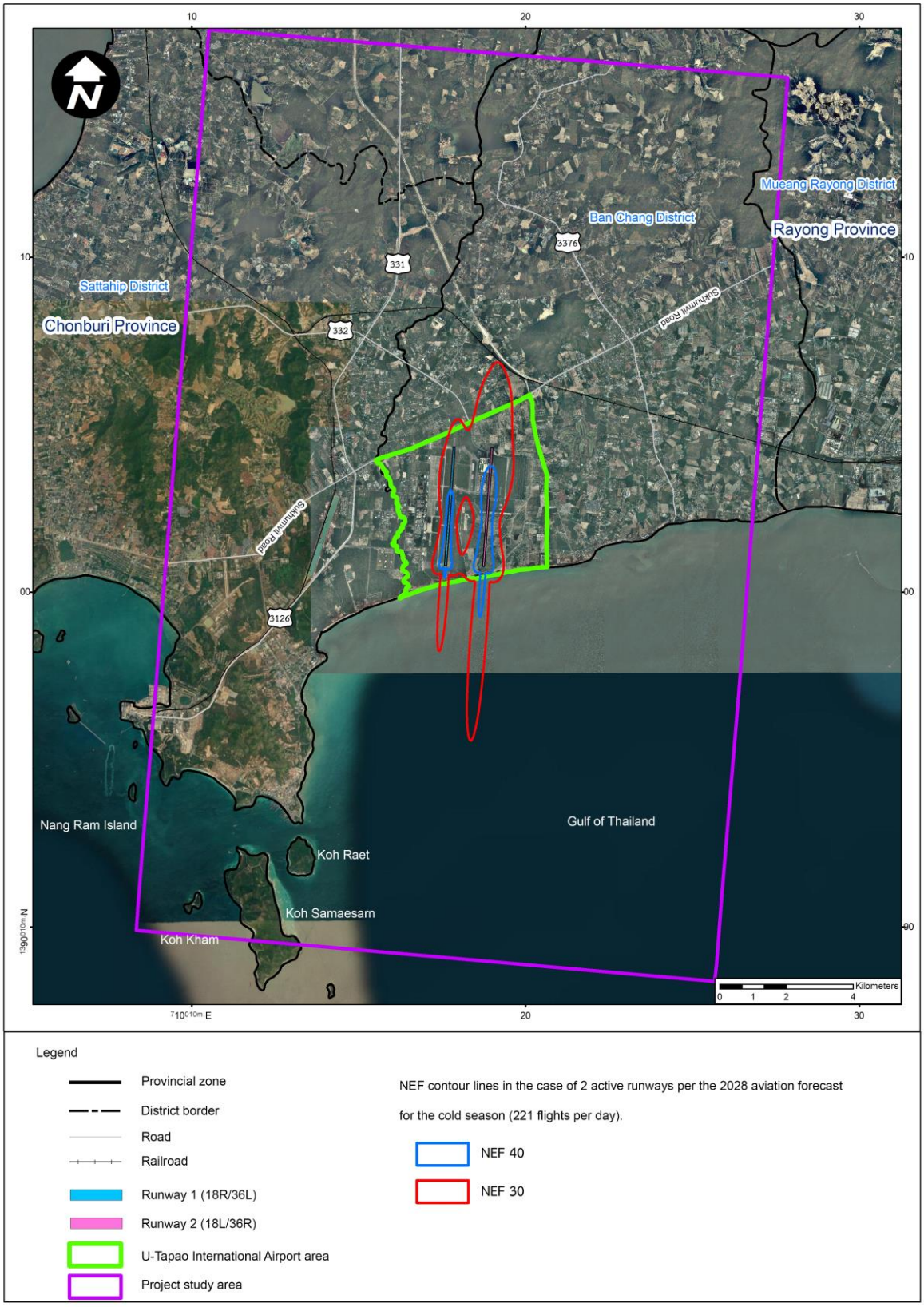


Figure 5.2-27 **NEF contours in Scenario 2: 2028 flight forecast for the cold season (average 221 flights per day)**

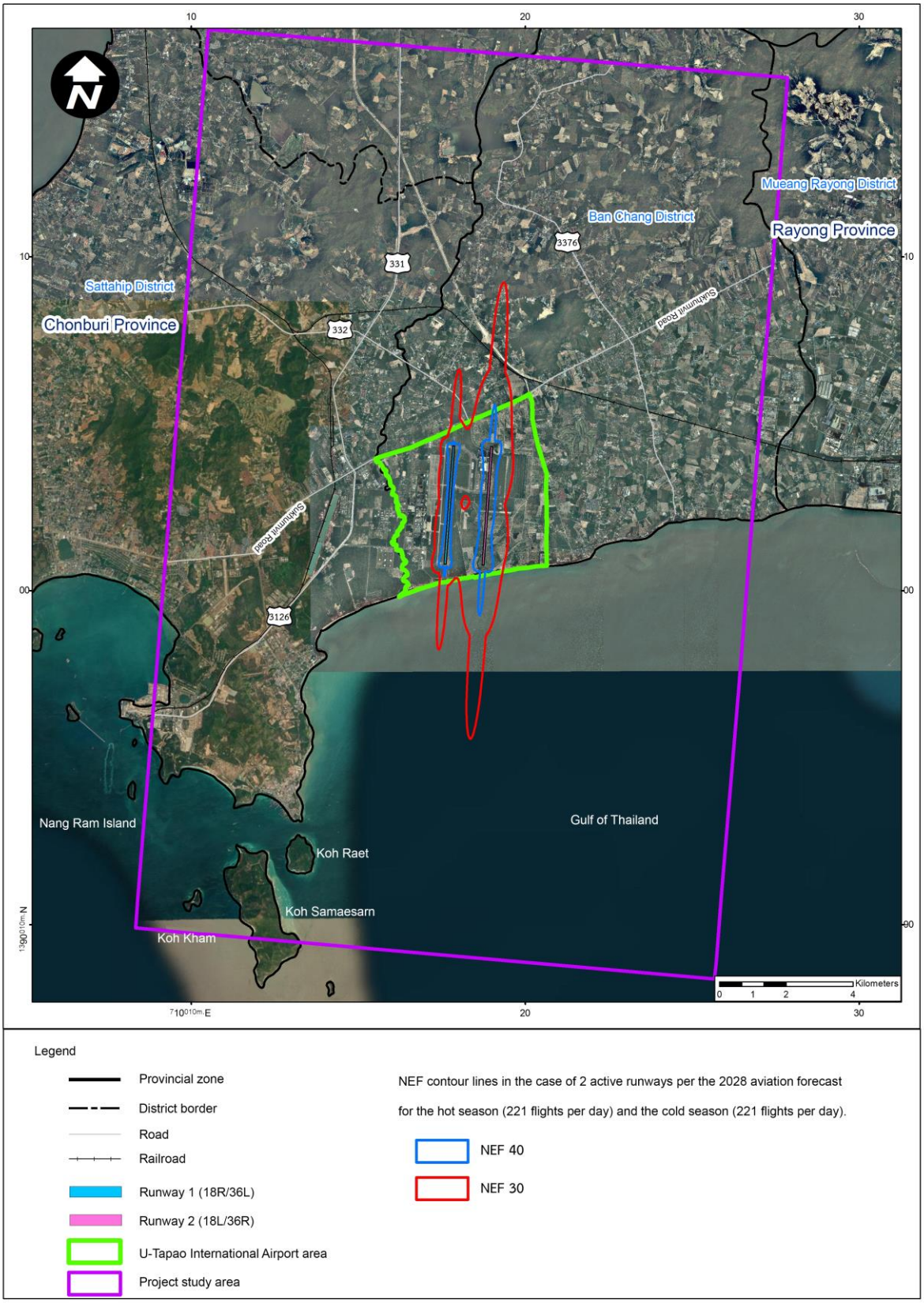


Figure 5.2-28 NEF contours in Scenario 2: 2028 flight forecast for the hot season (average 221 flights per day) and cold season (average 221 flights per day)

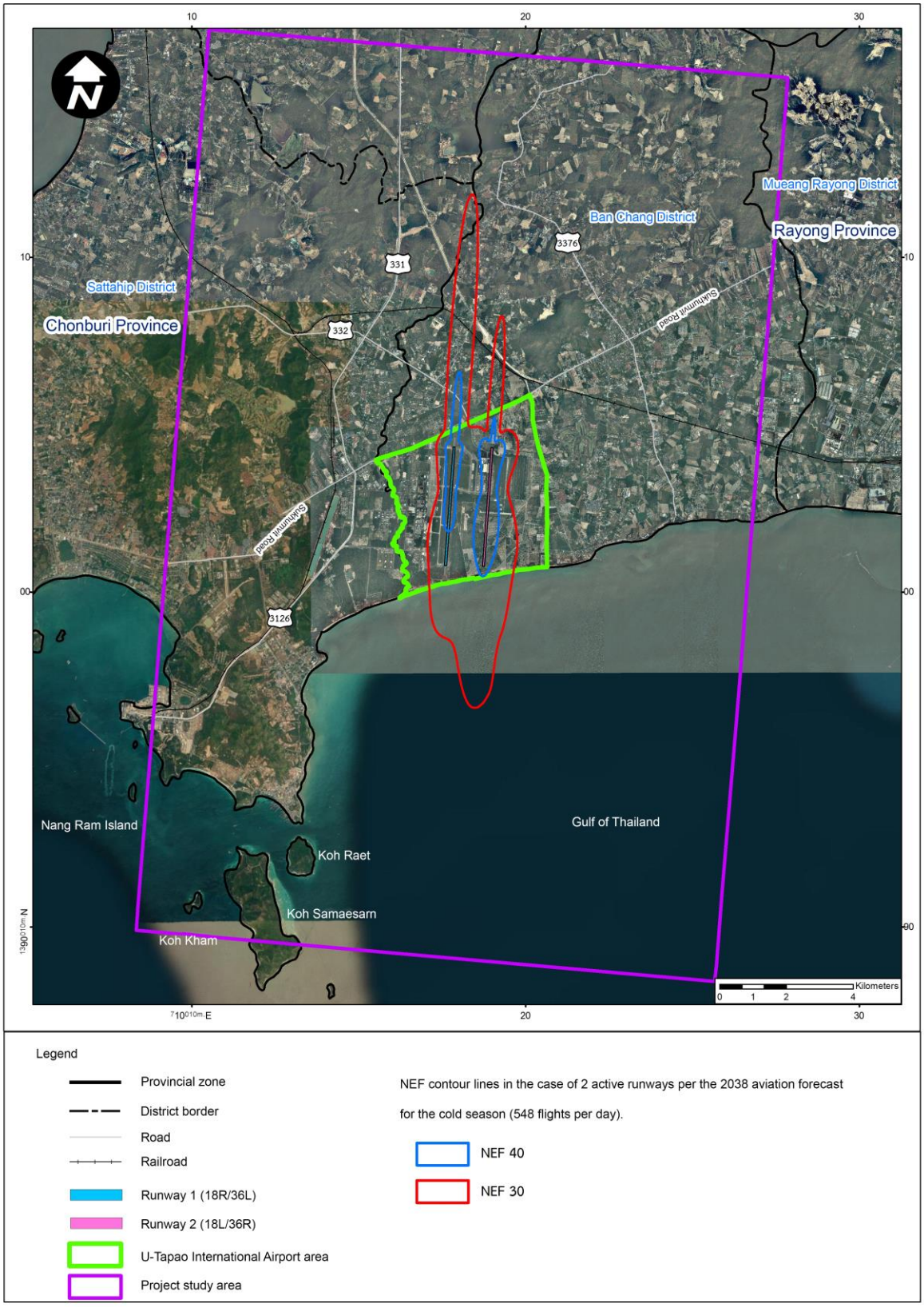


Figure 5.2-29 **NEF contours in Scenario 3: 2038 flight forecast for the hot season (average 548 flights per day)**

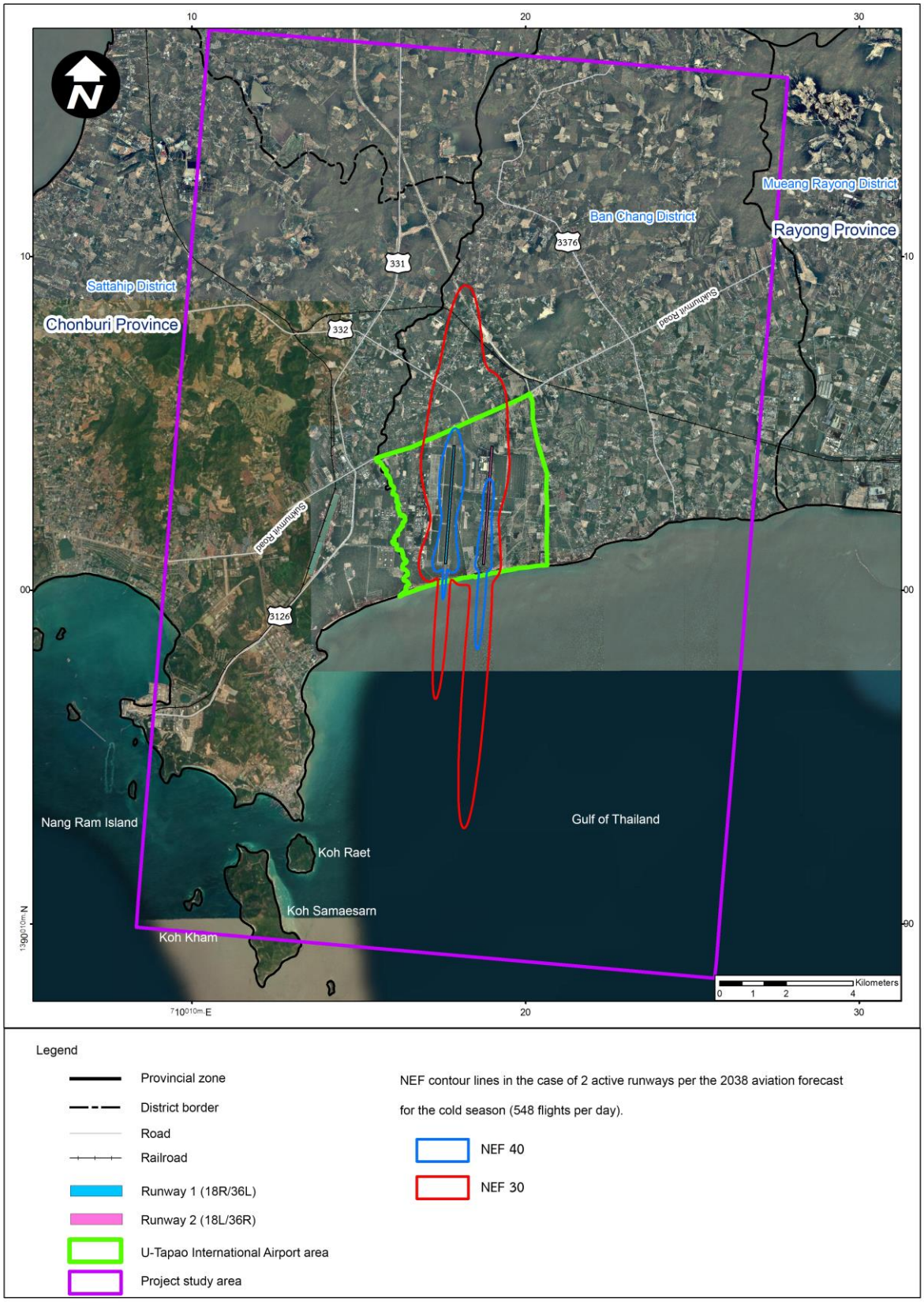


Figure 5.2-30 NEF contours in Scenario 3: 2038 flight forecast for the cold season (average 548 flights per day)

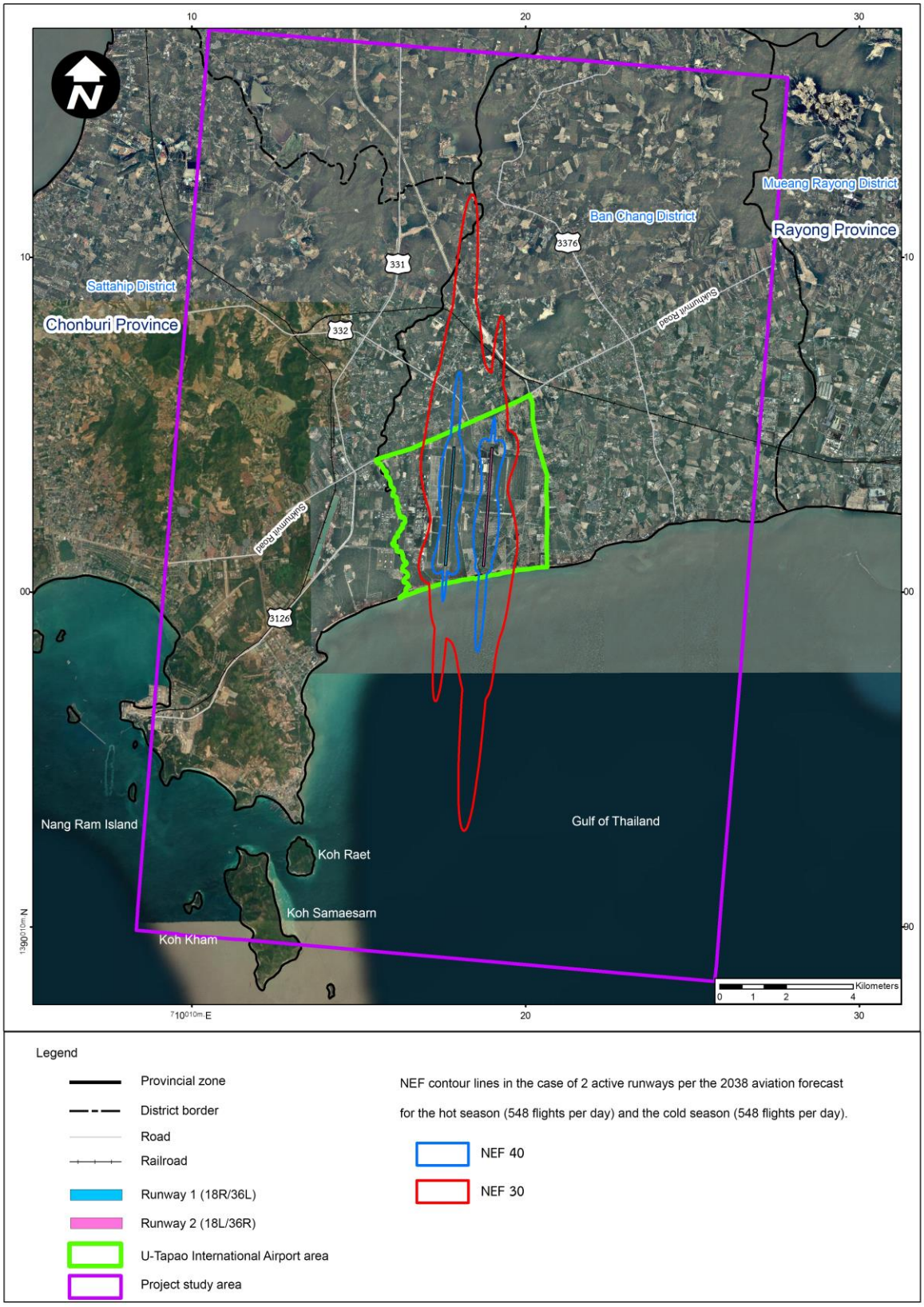


Figure 5.2-31 **NEF contours in Scenario 3: 2038 flight forecast for the hot season (average 548 flights per day) and cold season (average 548 flights per day)**

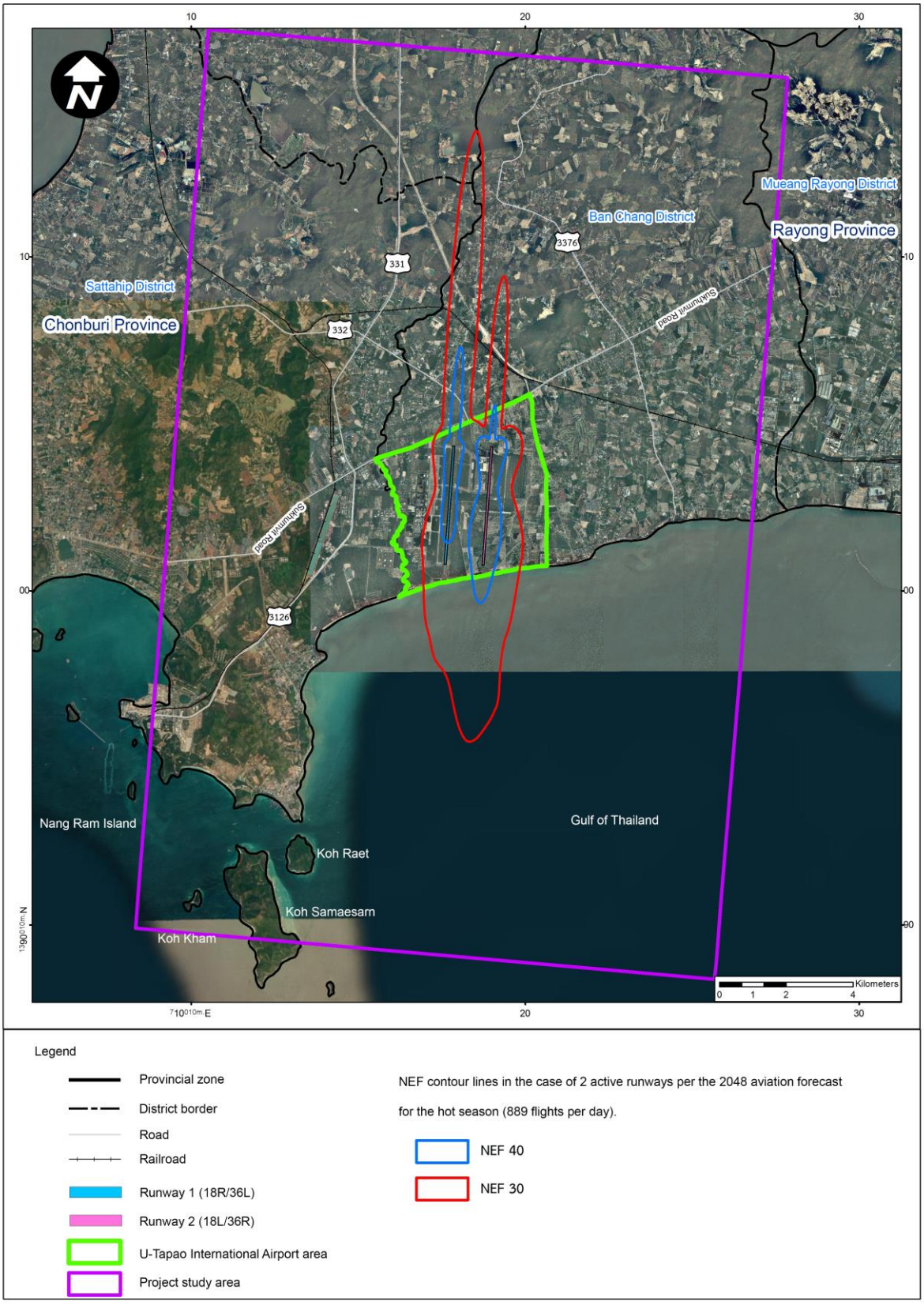


Figure 5.2-32 NEF contours in Scenario 4: 2048 flight forecast for the hot season (average 889 flights per day)

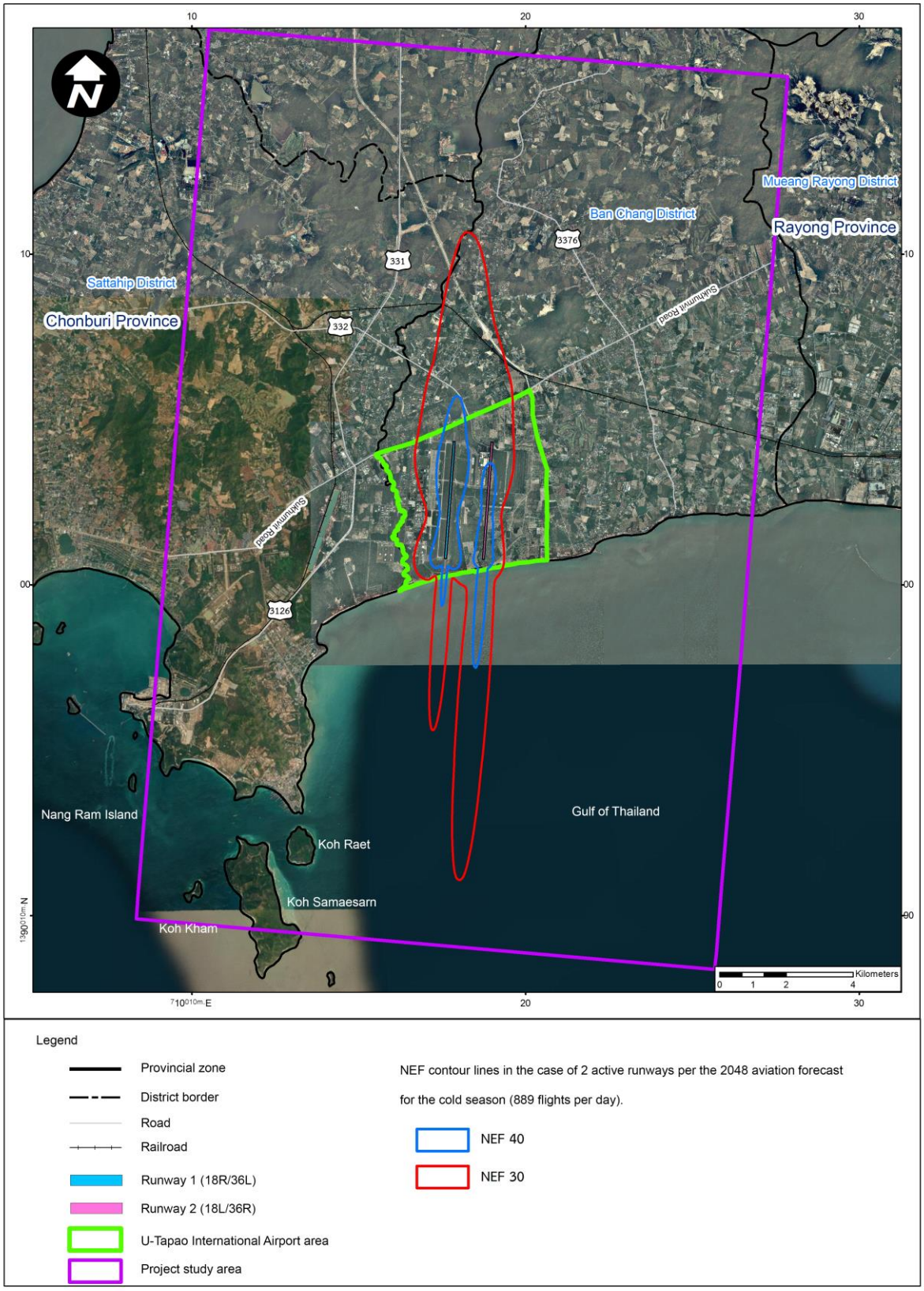


Figure 5.2-33 NEF contours in Scenario 4: 2048 flight forecast for the cold season (average 889 flights per day)

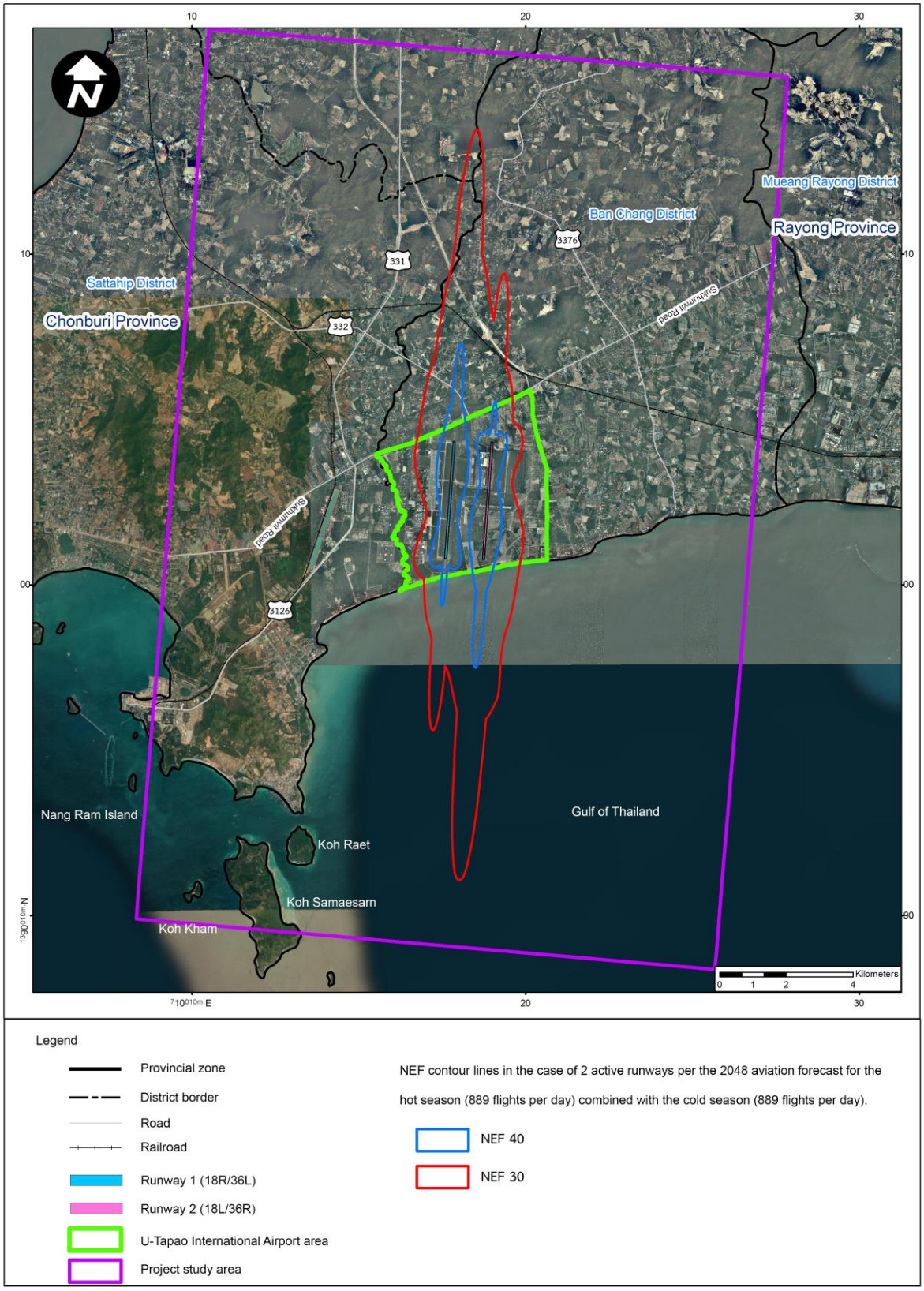


Figure 5.2-34 NEF contours in Scenario 4: 2048 flight forecast for the hot season (average 889 flights per day) and cold season (average 889 flights per day)

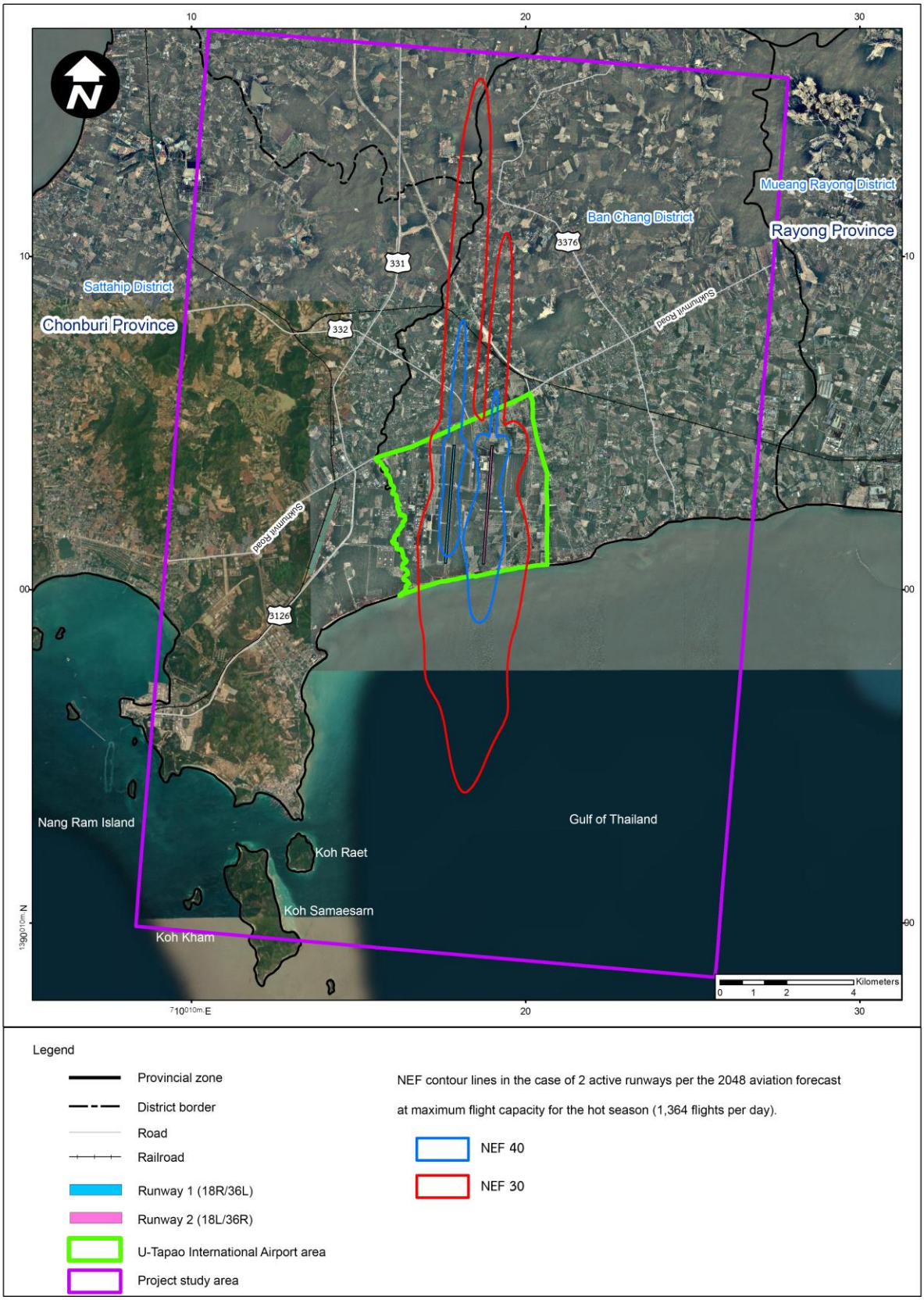


Figure 5.2-35 **-NEF contours in Scenario 5: 2048 peak flight forecast comprising 1,364 flights per day for the hot season**

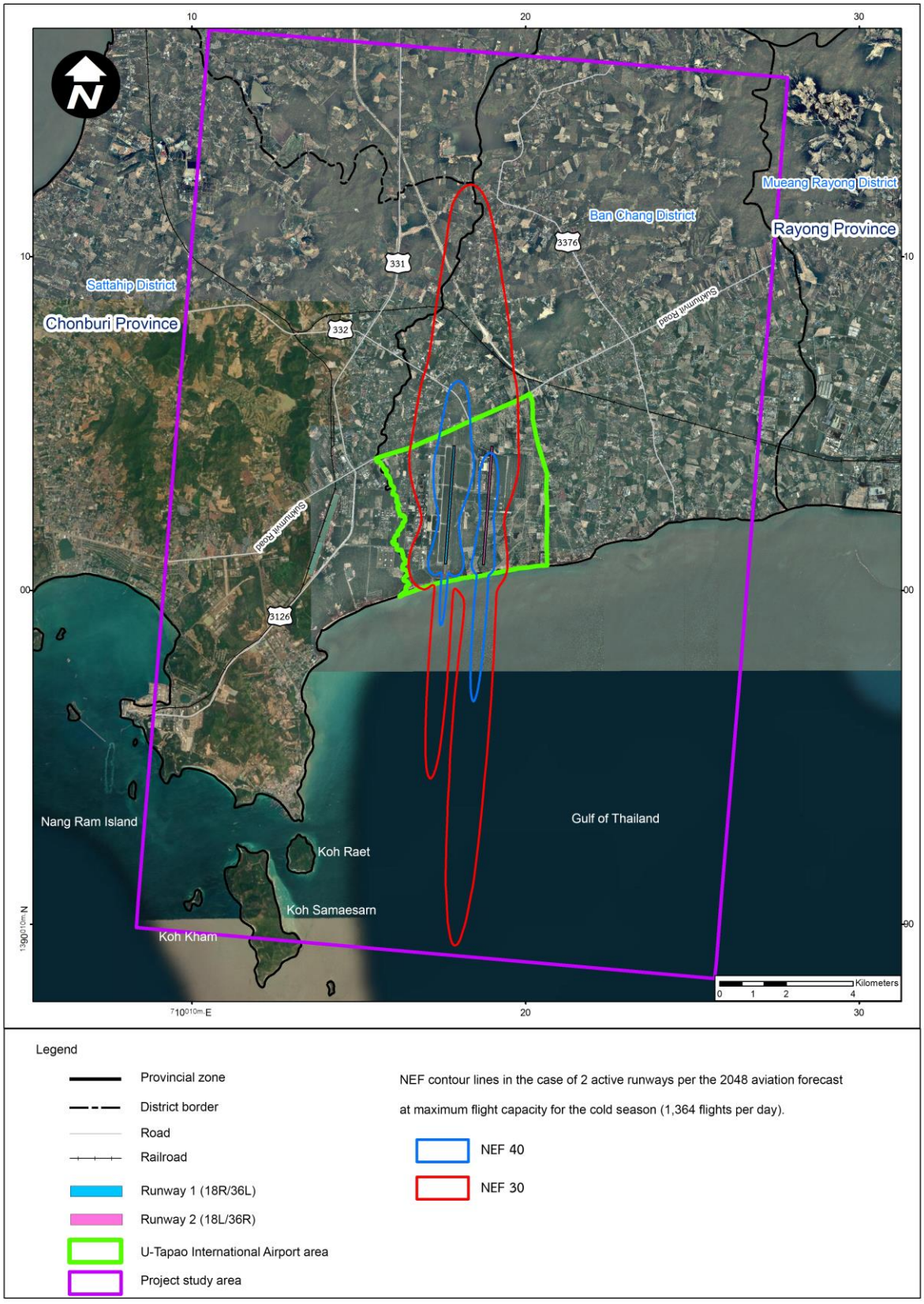


Figure 5.2-35 NEF contours in Scenario 5: 2048 peak flight forecast comprising 1,364 flights per day for the cold season

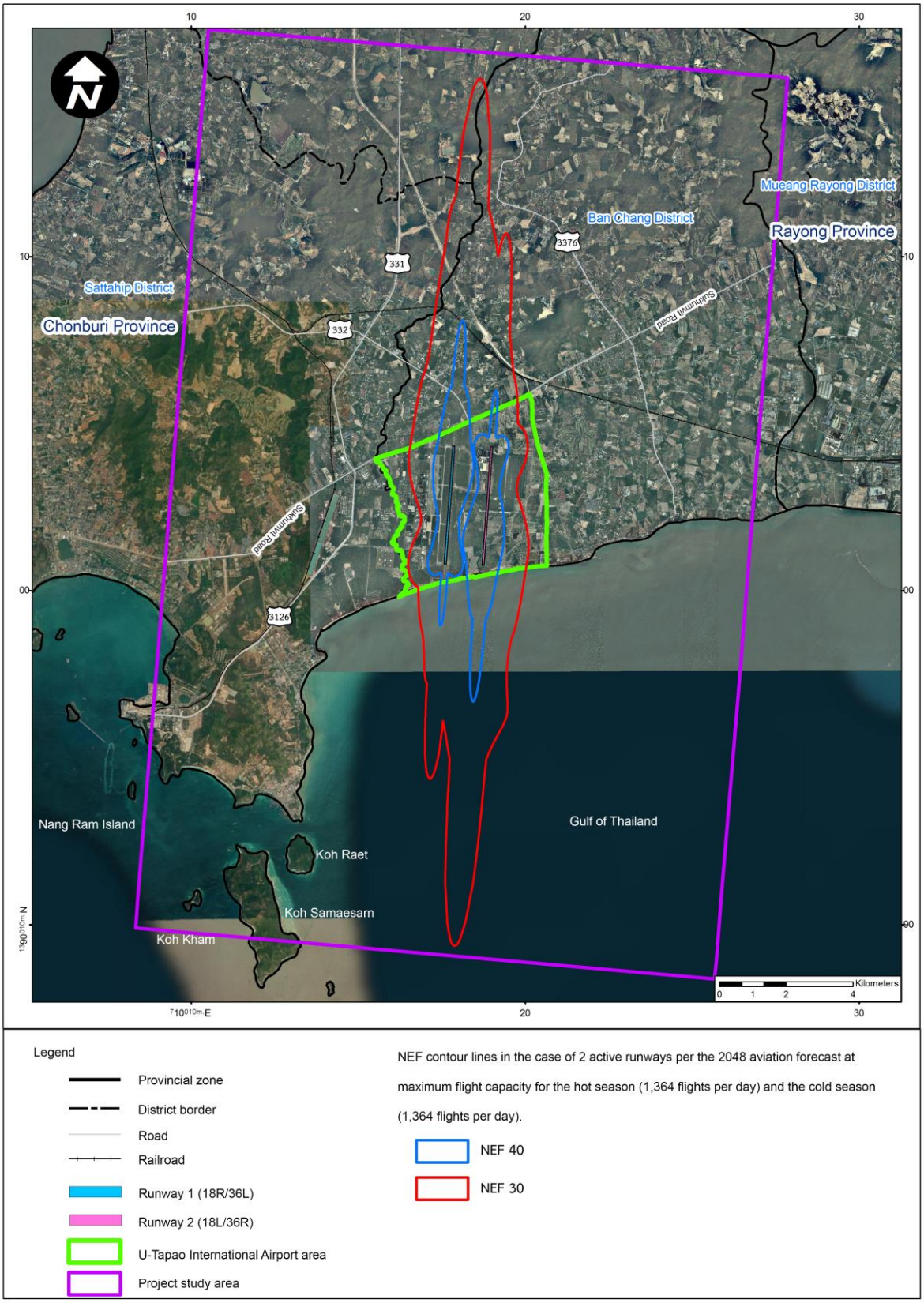


Figure 5.2-37 **-NEF contours in Scenario 5: 2048 peak flight forecast comprising 1,364 flights per day for the hot season and cold season**

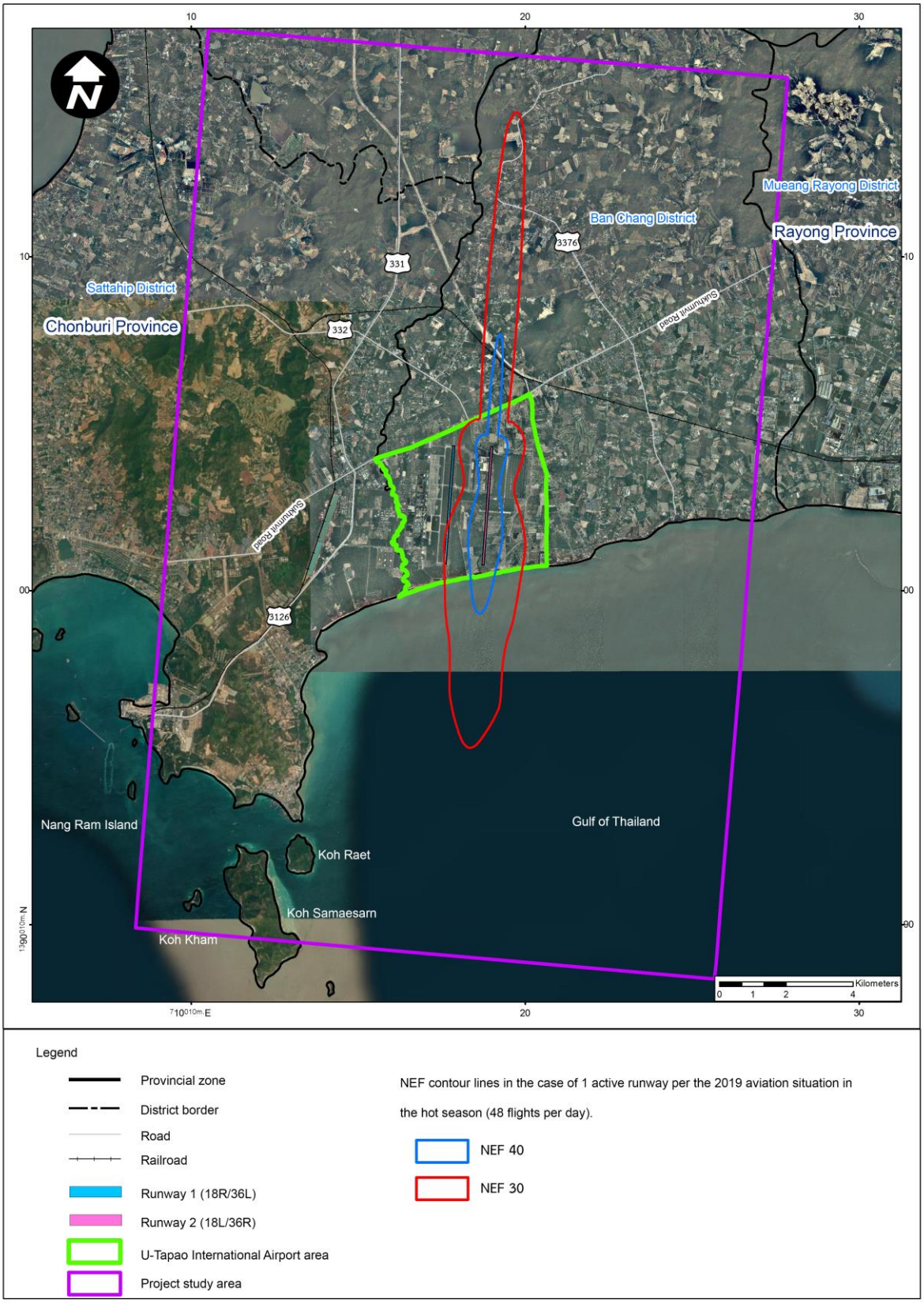


Figure 5.2-36 **NEF contours in Scenario 6: closure of runway 1, hot season 2048 (average 791 flights per day)**

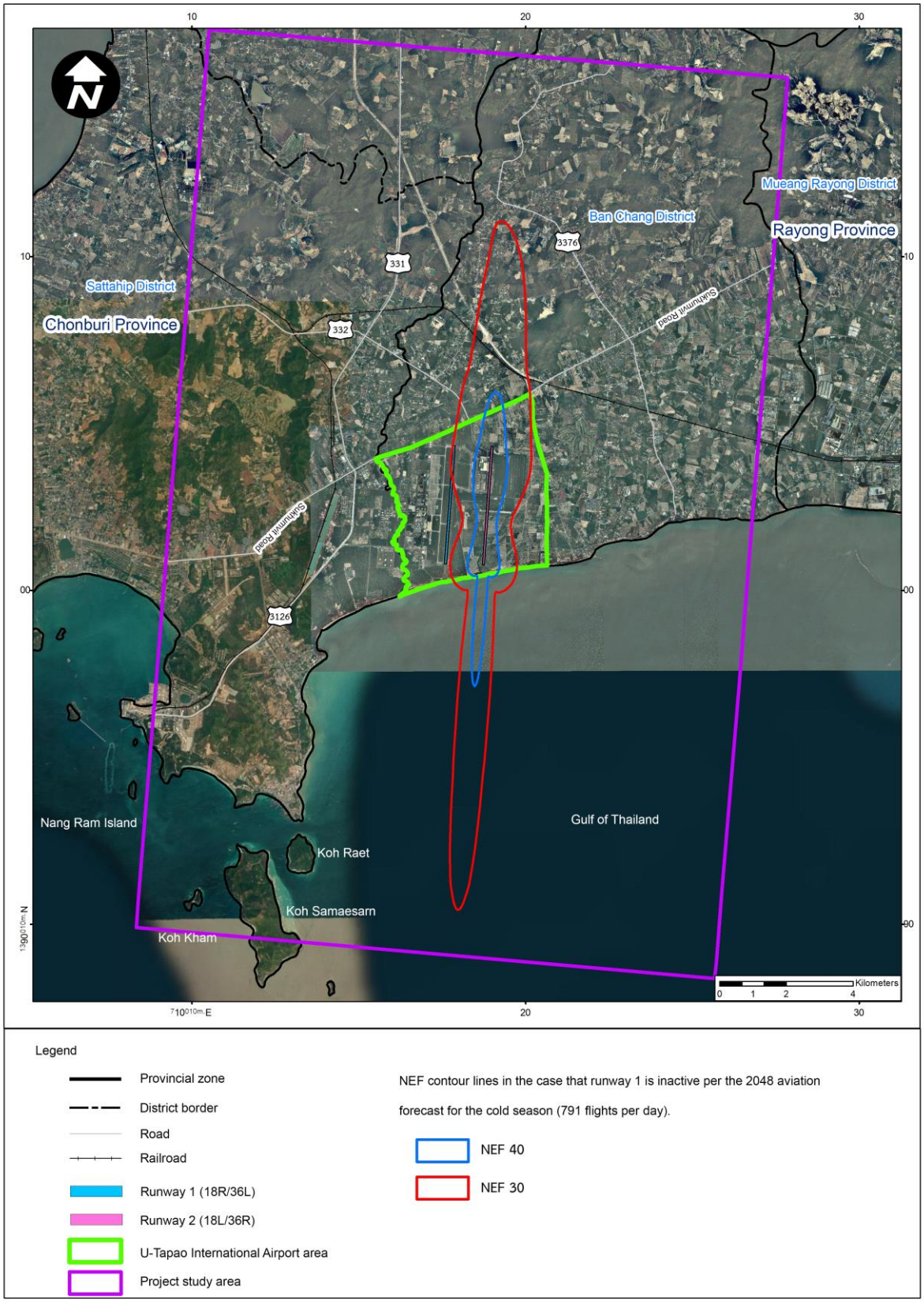


Figure 5.2-37 NEF contours in Scenario 6: closure of runway 1, cold season 2048 (average 791 flights per day)

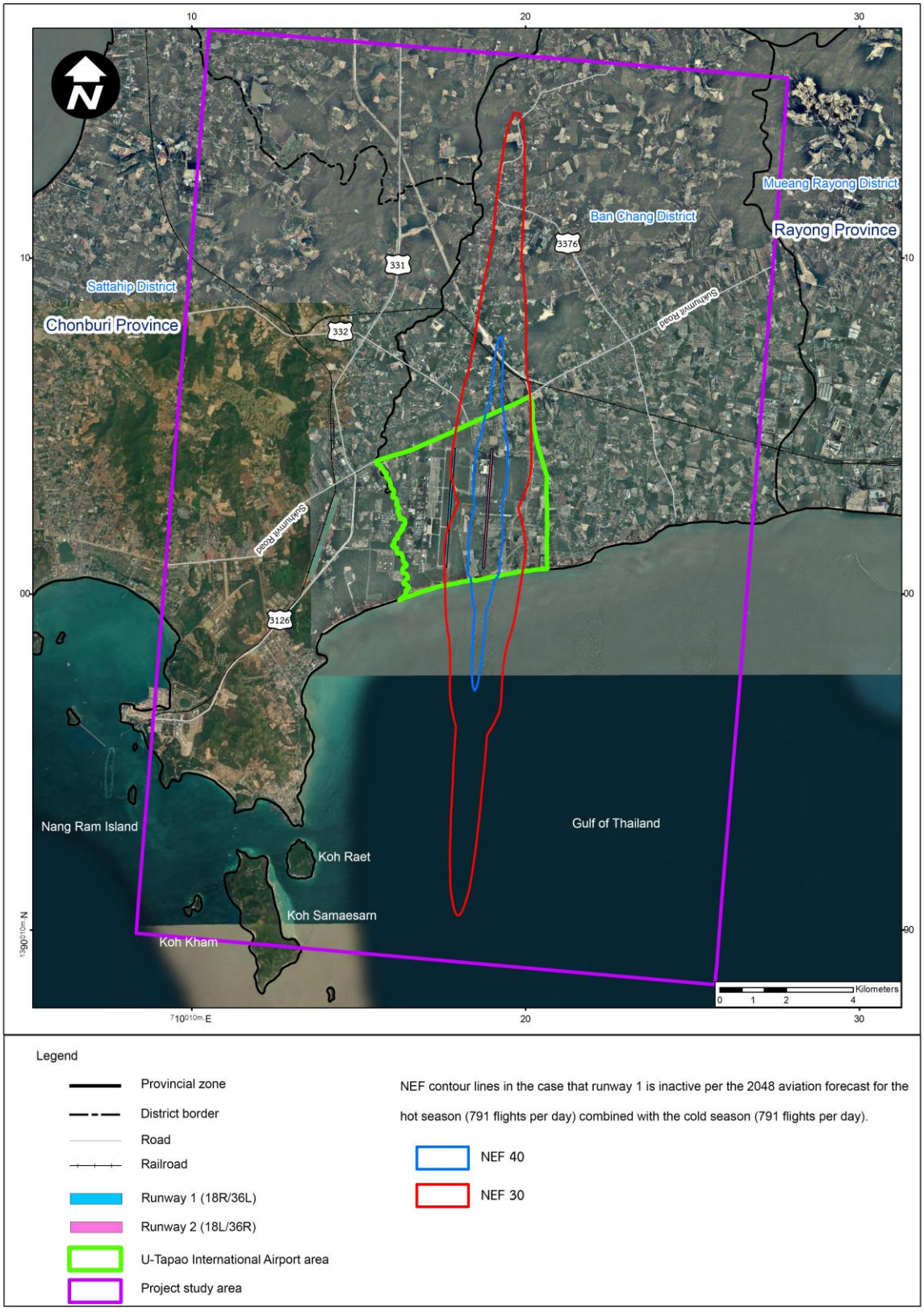


Figure 5.2-38 **NEF contours in Scenario 6: closure of runway 1, hot season and cold season 2048 (average 791 flights per day)**

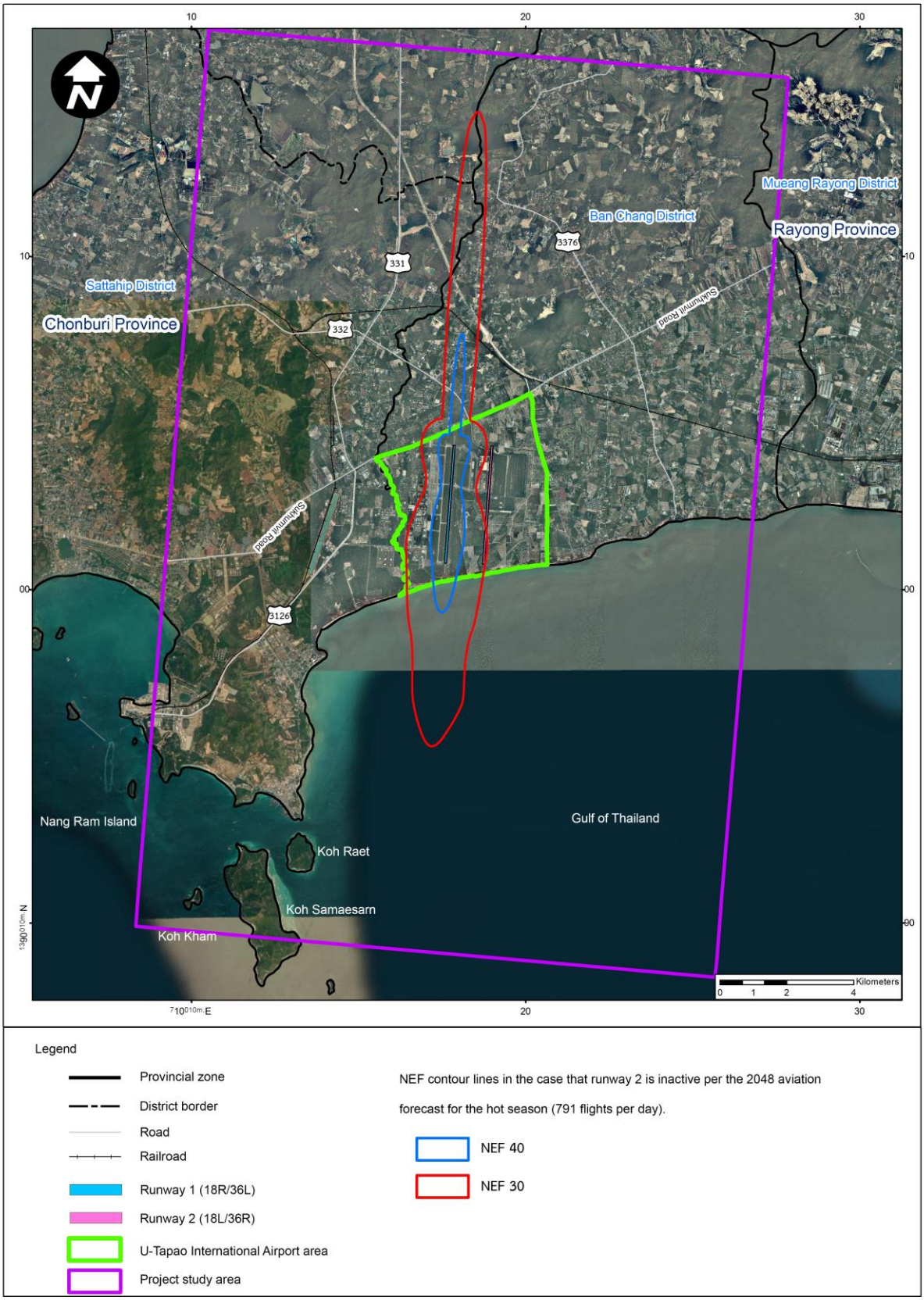


Figure 5.2-39 **NEF contours in Scenario 7: closure of runway 2, hot season 2048 (average 791 flights per day)**

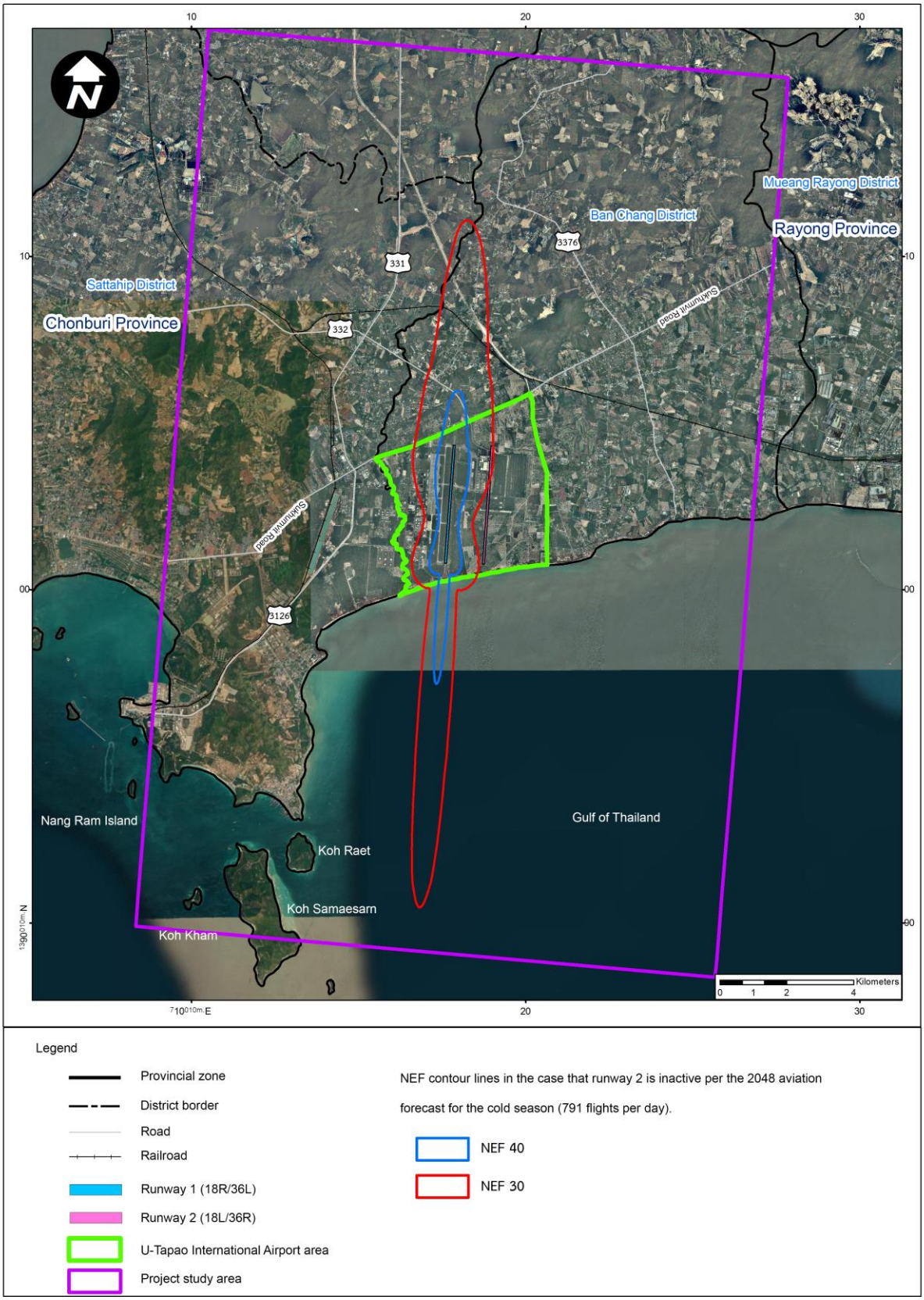


Figure 5.2-40 **NEF contours in Scenario 7: closure of runway 2, cold season 2048 (average 791 flights per day)**

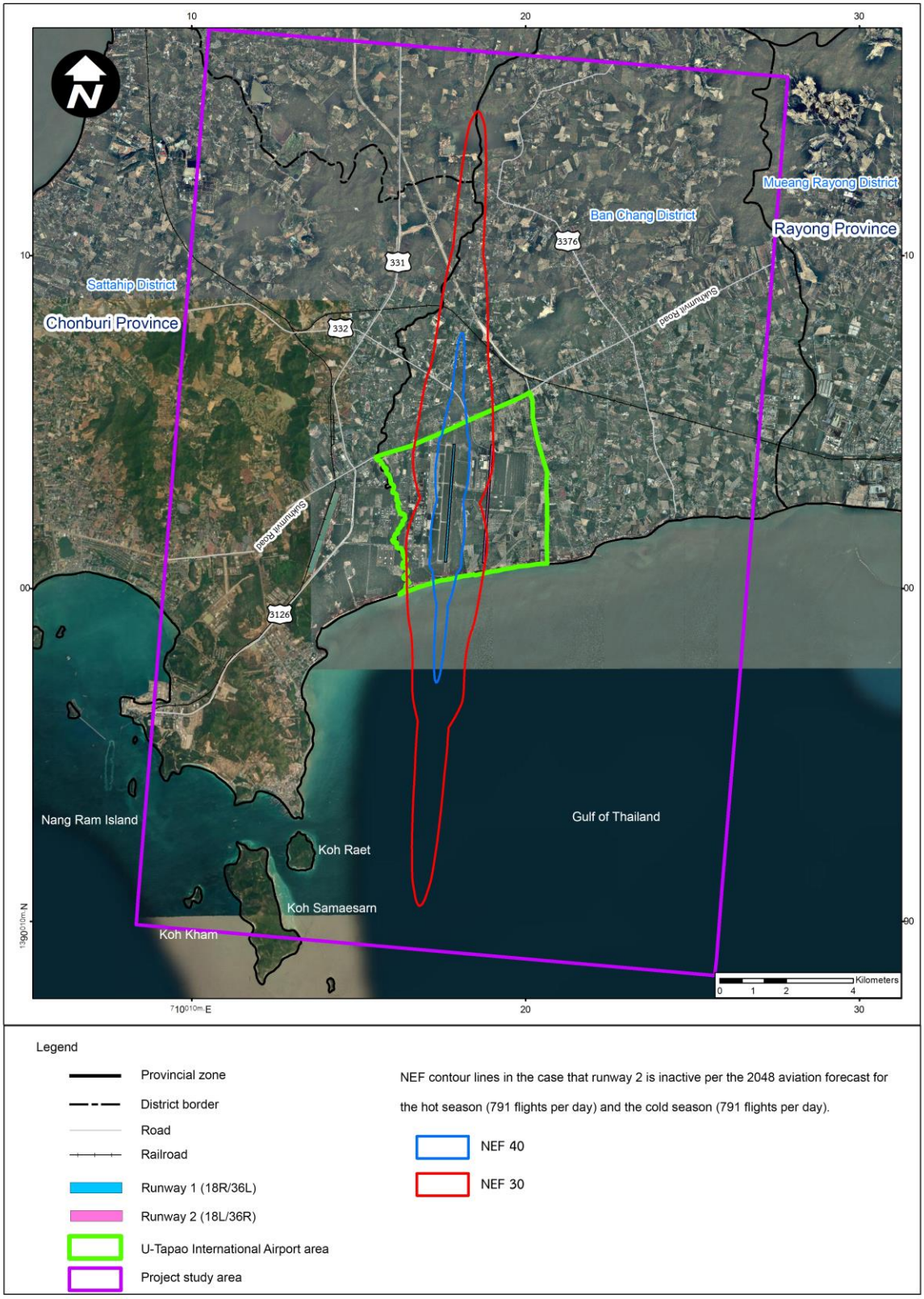


Figure 5.2-41 **NEF contours in Scenario 7: closure of runway 2, hot season and cold season 2048 (average 791 flights per day)**

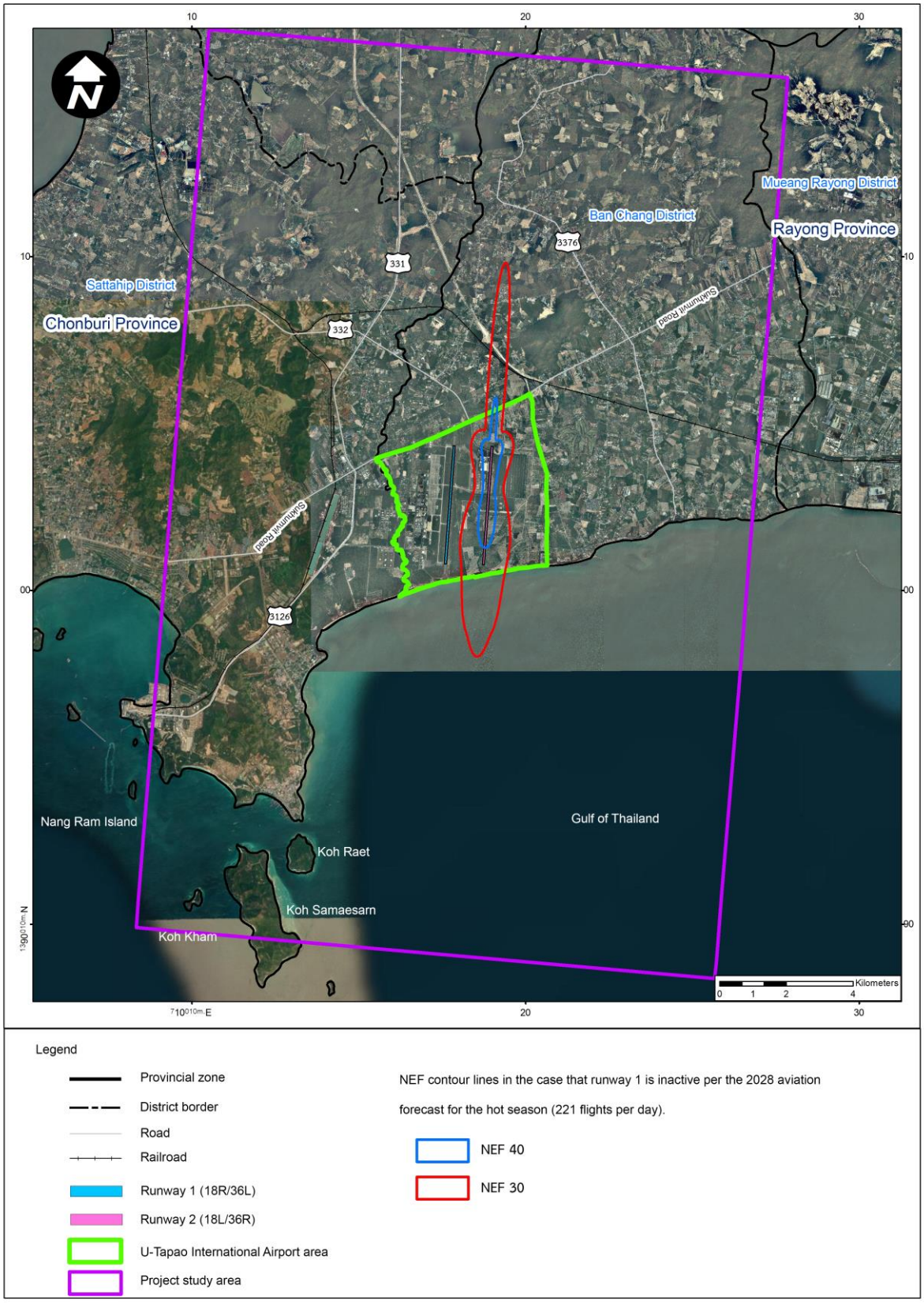


Figure 5.2-42 NEF contours in Scenario 8: closure of runway 1, hot season 2028 (average 221 flights per day)

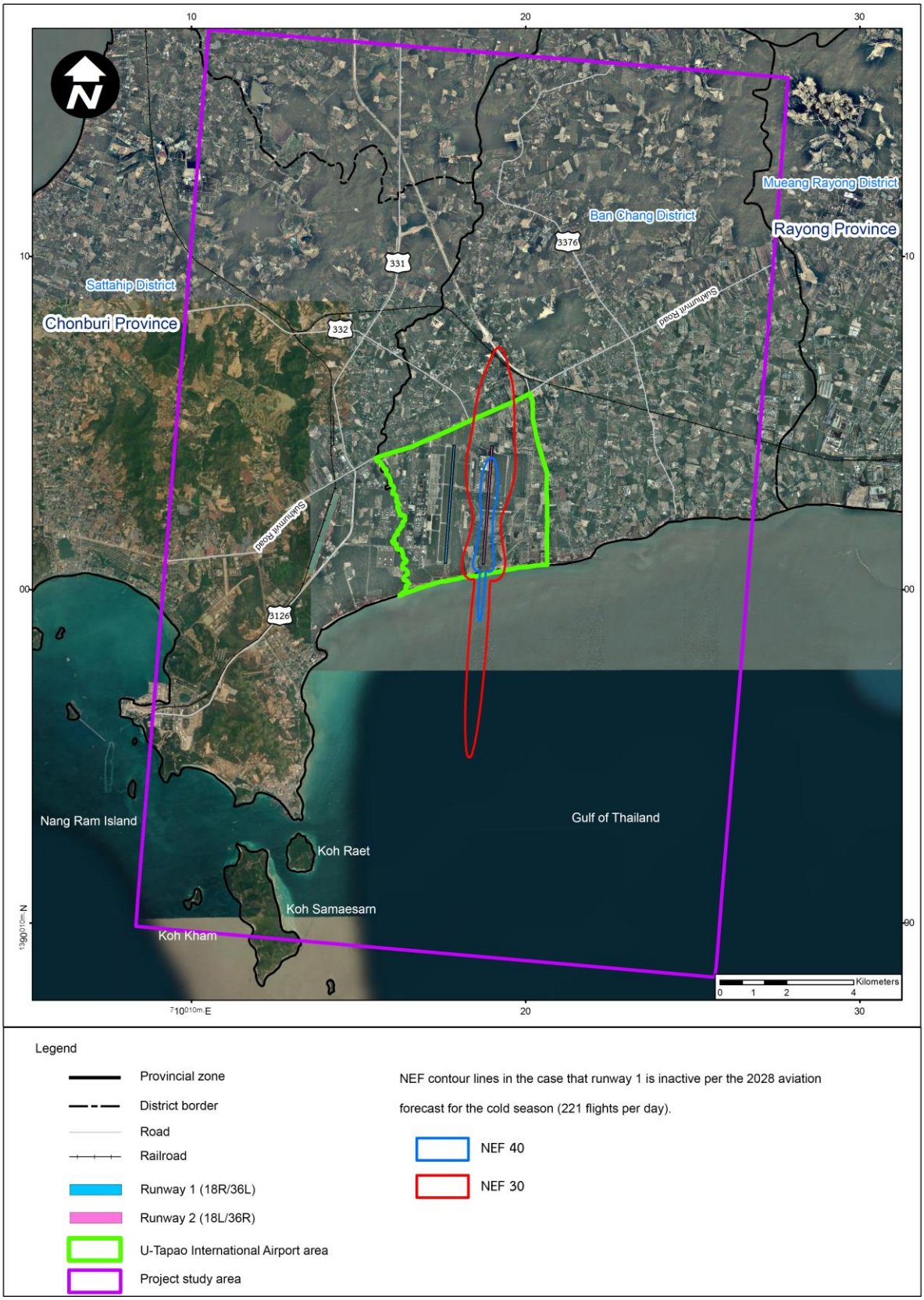


Figure 5.2-43 **NEF contours in Scenario 8: closure of runway 1, cold season 2028 (average 221 flights per day)**

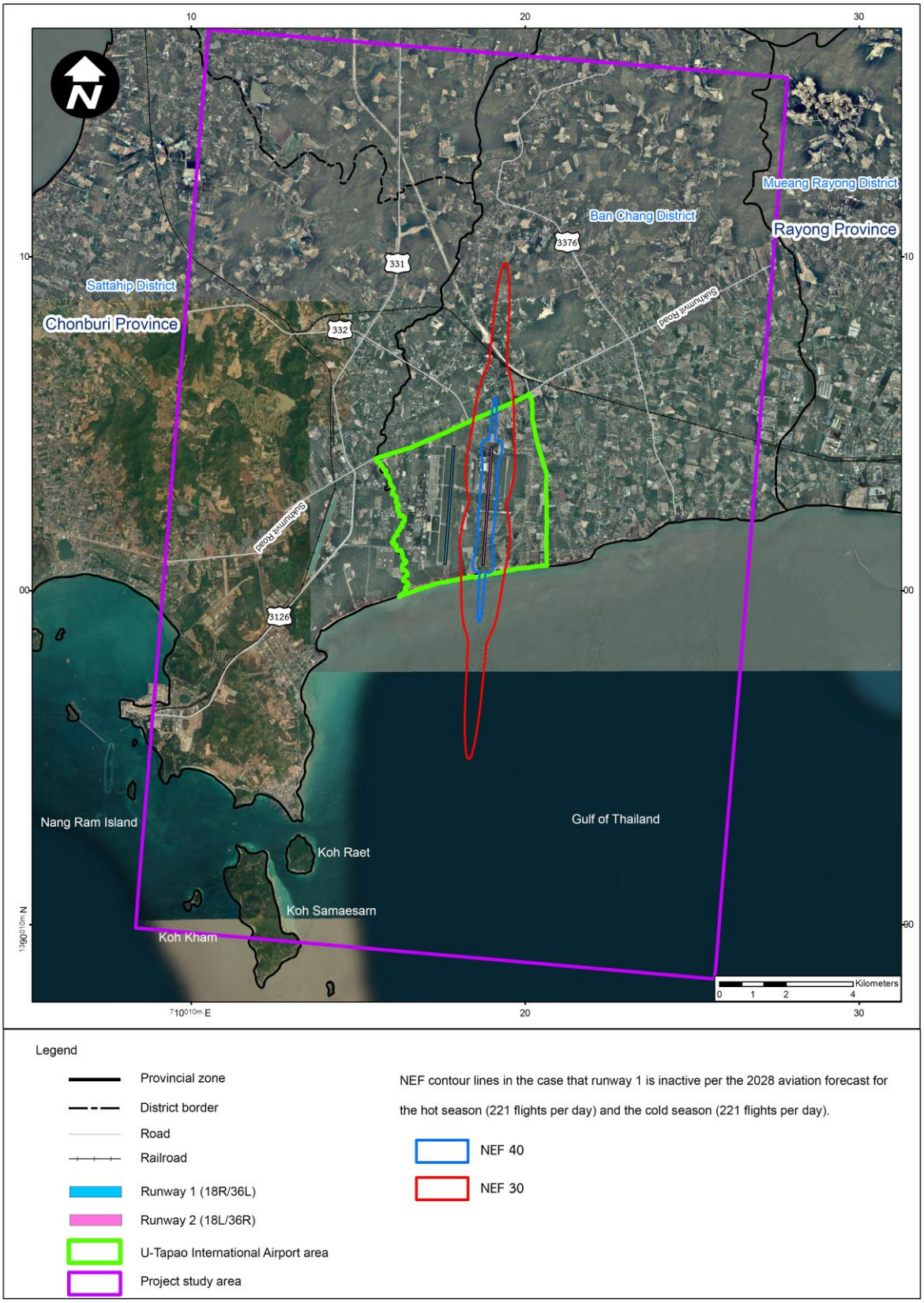


Figure 5.2-44 NEF contours in Scenario 8: closure of runway 1, hot season and cold season 2028 (average 221 flights per day)

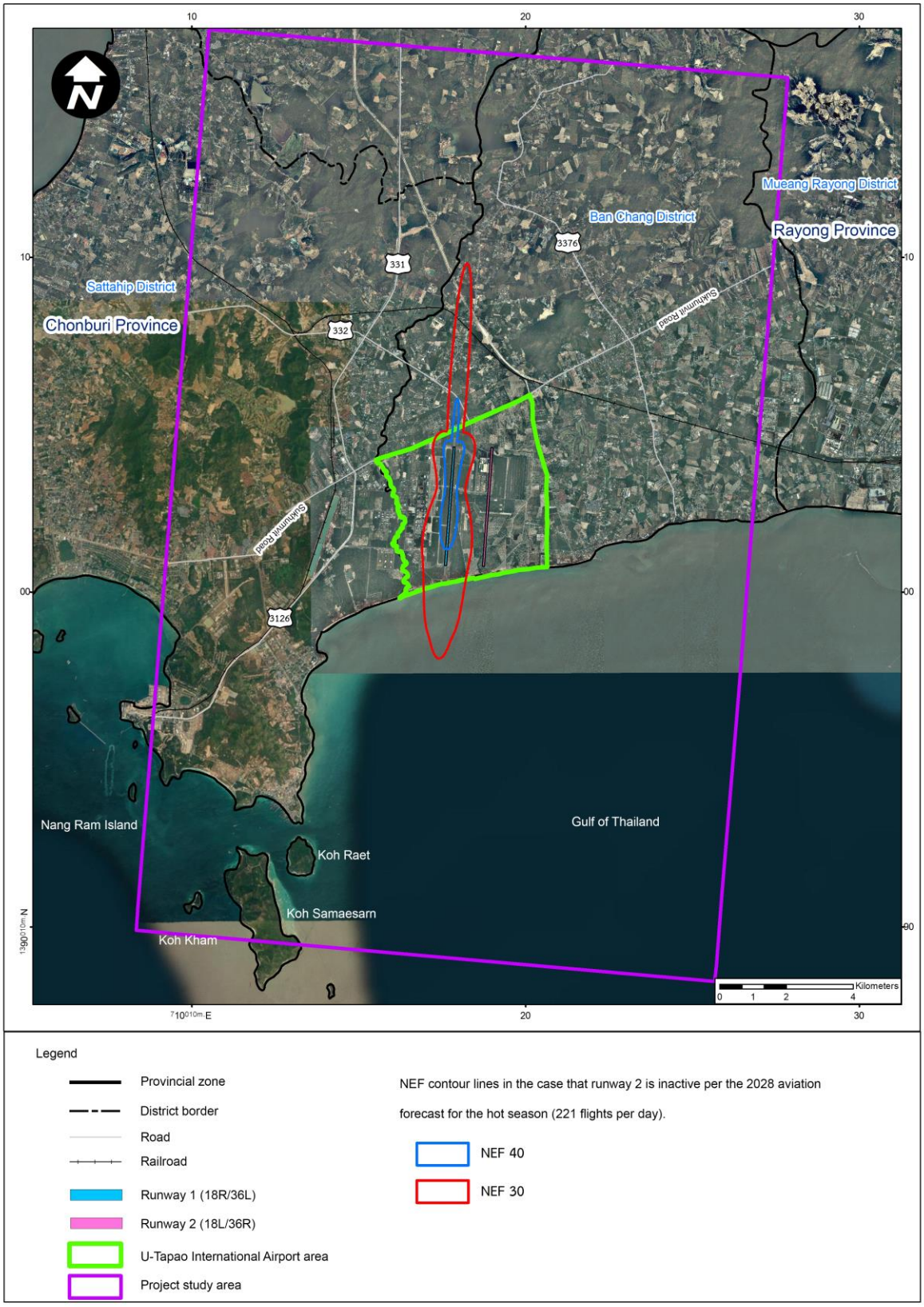


Figure 5.2-45 **NEF contours in Scenario 9: closure of runway 2, hot season 2028 (average 221 flights per day)**

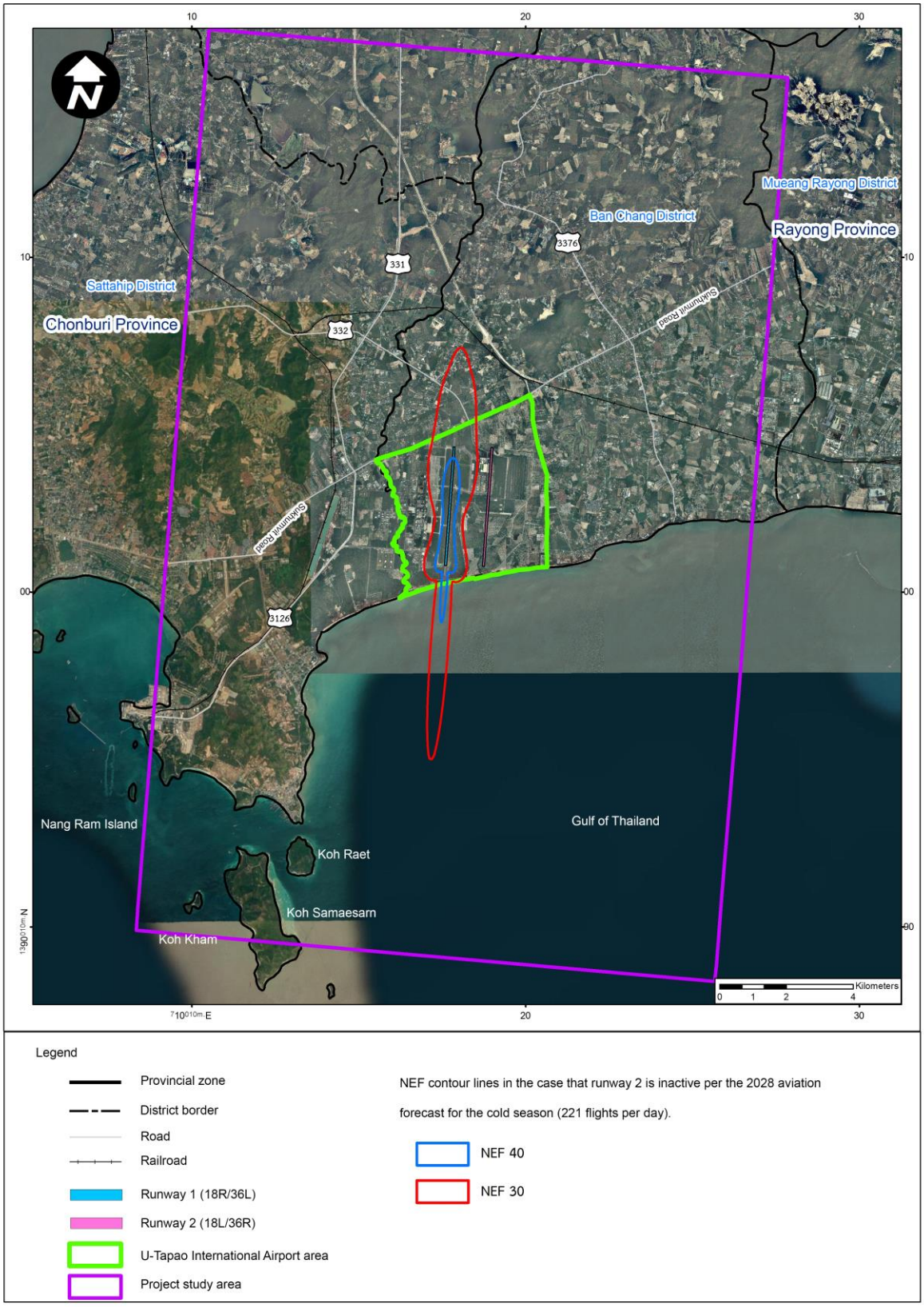


Figure 5.2-46 **NEF contours in Scenario 9: closure of runway 2, cold season 2028 (average 221 flights per day)**

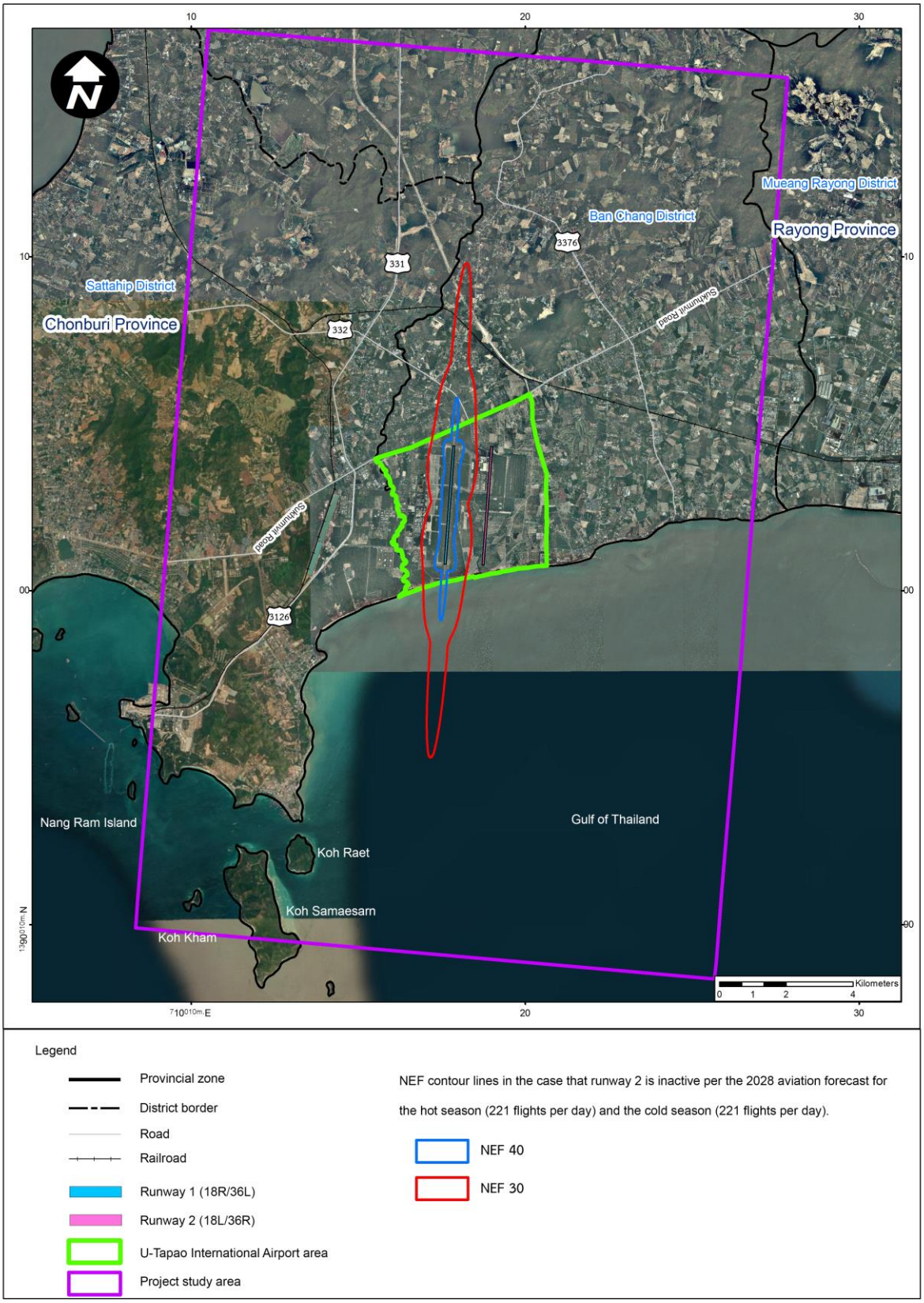


Figure 5.2-47 NEF contours in Scenario 9: closure of runway 2, hot season and cold season 2028 (average 221 flights per day)

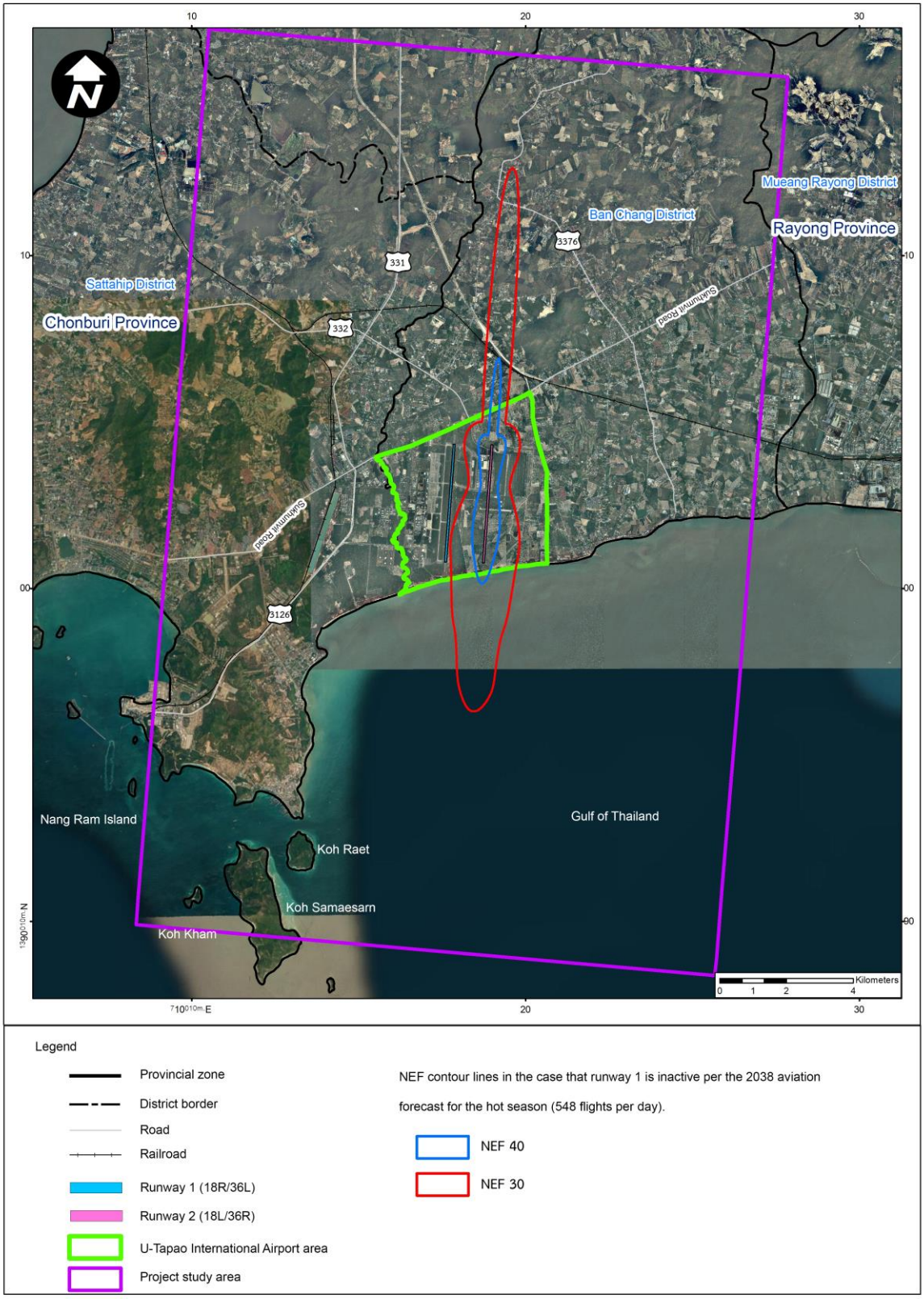


Figure 5.2-48 NEF contours in Scenario 10: closure of runway 1, hot season 2038 (average 548 flights per day)

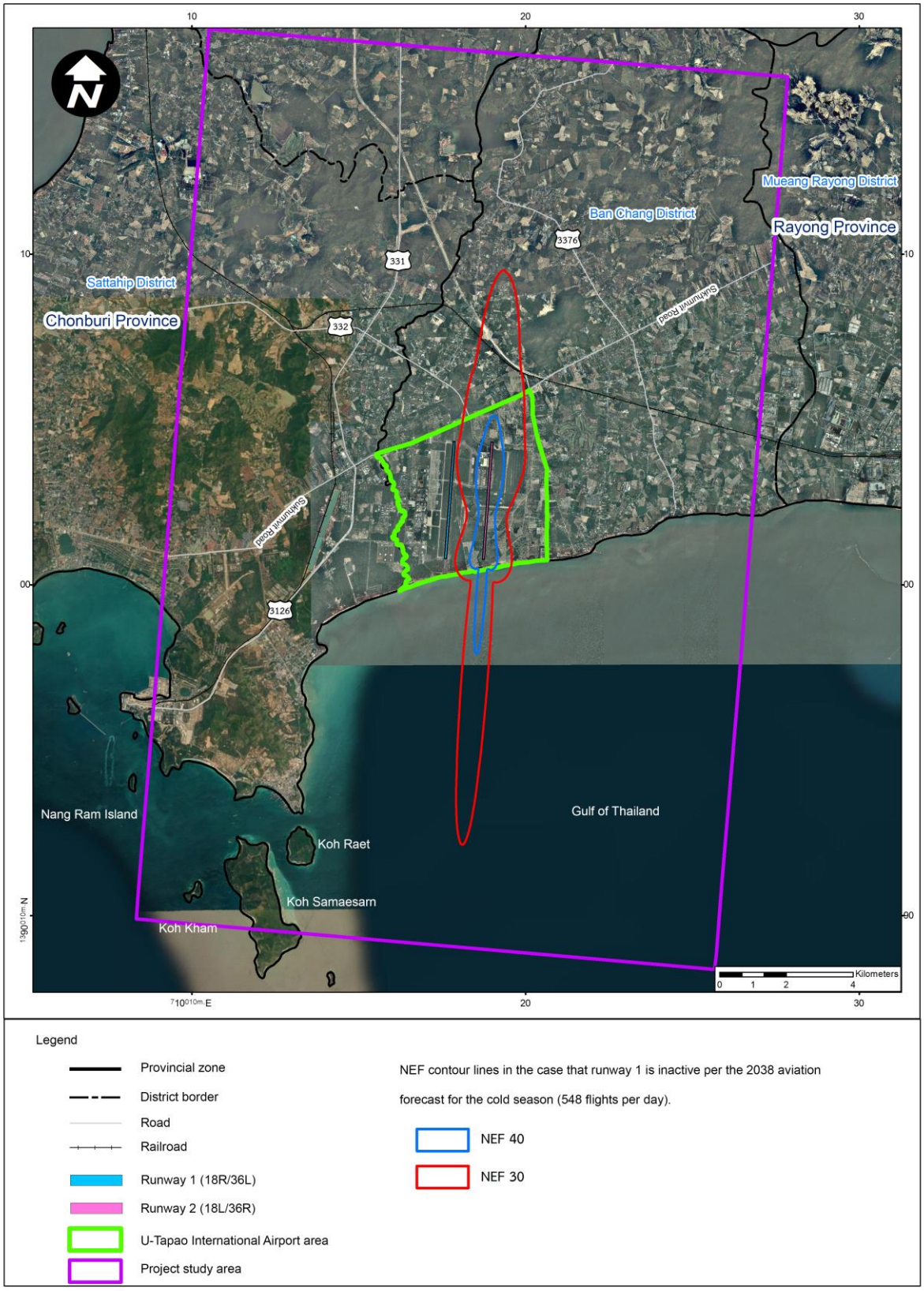


Figure 5.2-49 **NEF contours in Scenario 10: closure of runway 1, cold season 2038 (average 548 flights per day)**

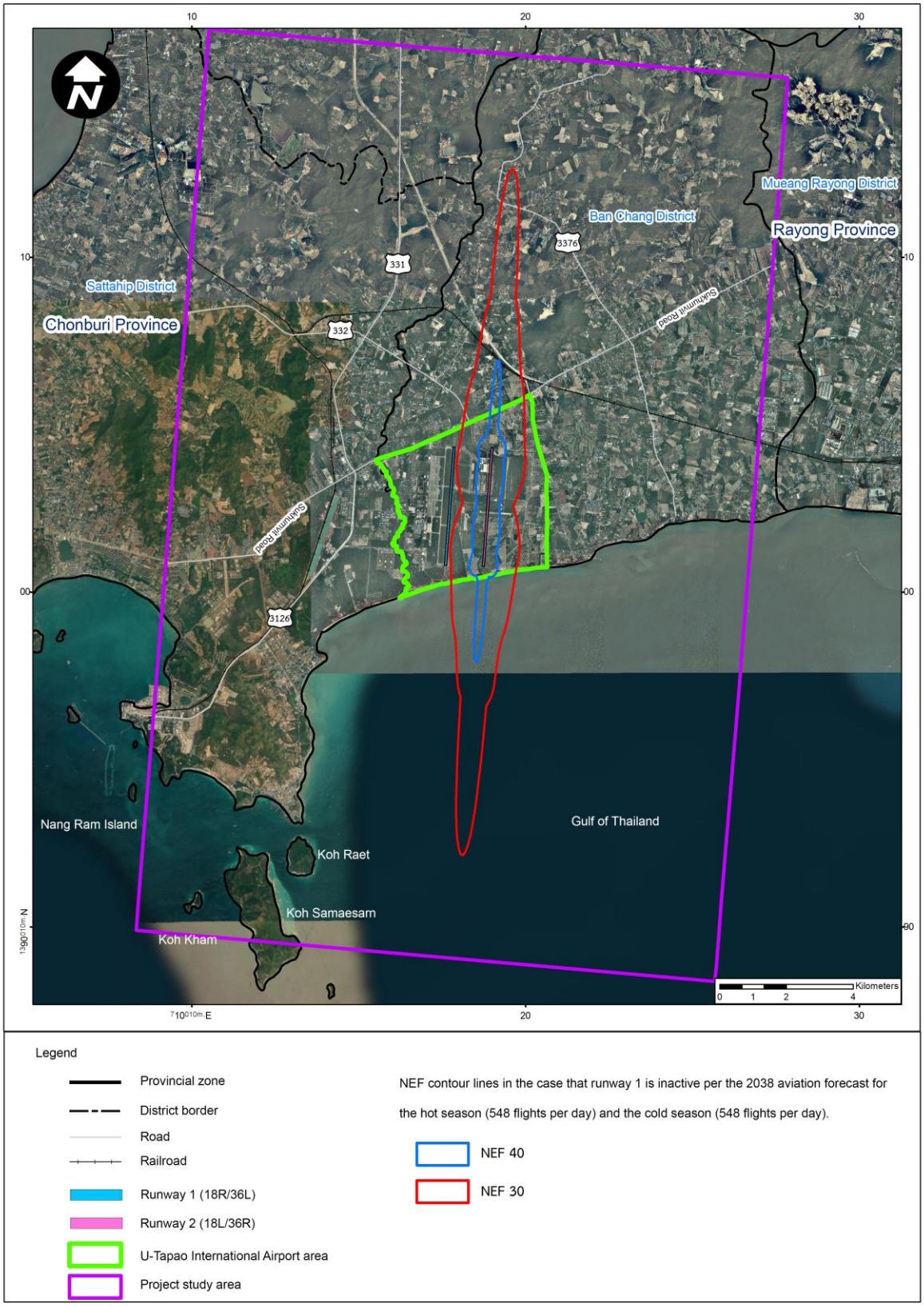


Figure 5.2-50 **NEF contours in Scenario 10: closure of runway 1, hot season and cold season 2038 (average 548 flights per day)**

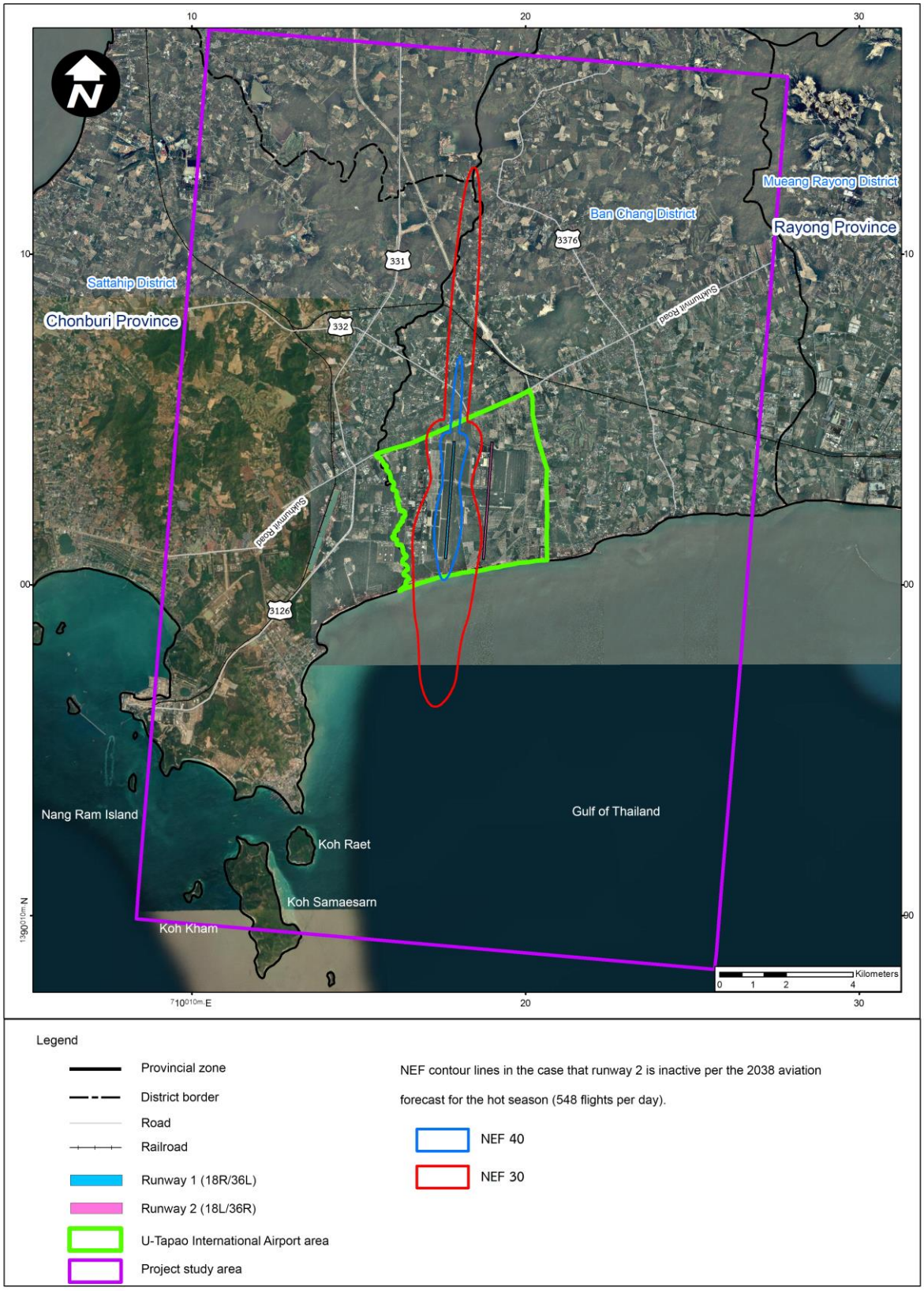


Figure 5.2-51 **NEF contours in Scenario 11: closure of runway 2, hot season 2038 (average 548 flights per day)**

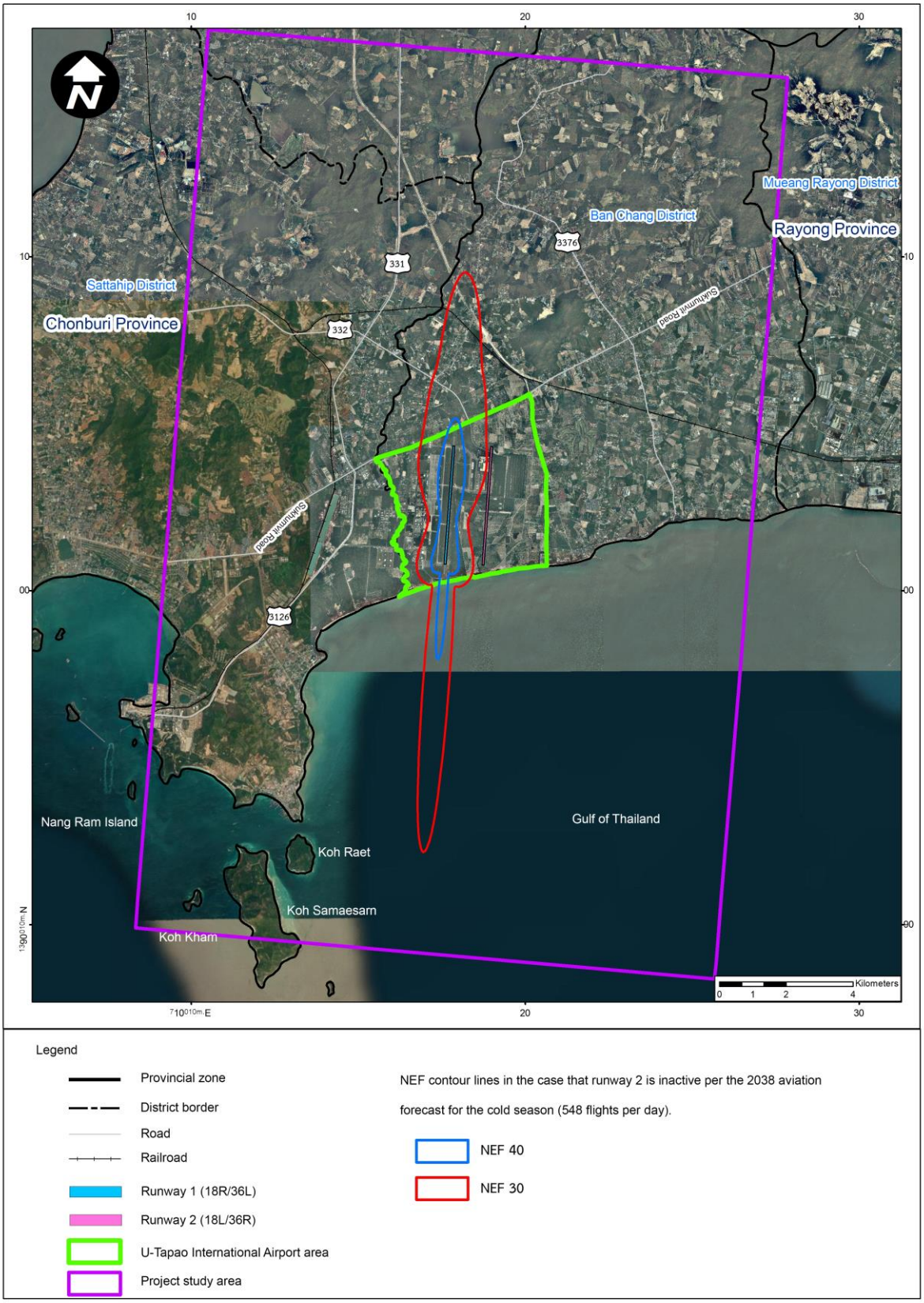


Figure 5.2-52 **NEF contours in Scenario 11: closure of runway 2, cold season 2038 (average 548 flights per day)**

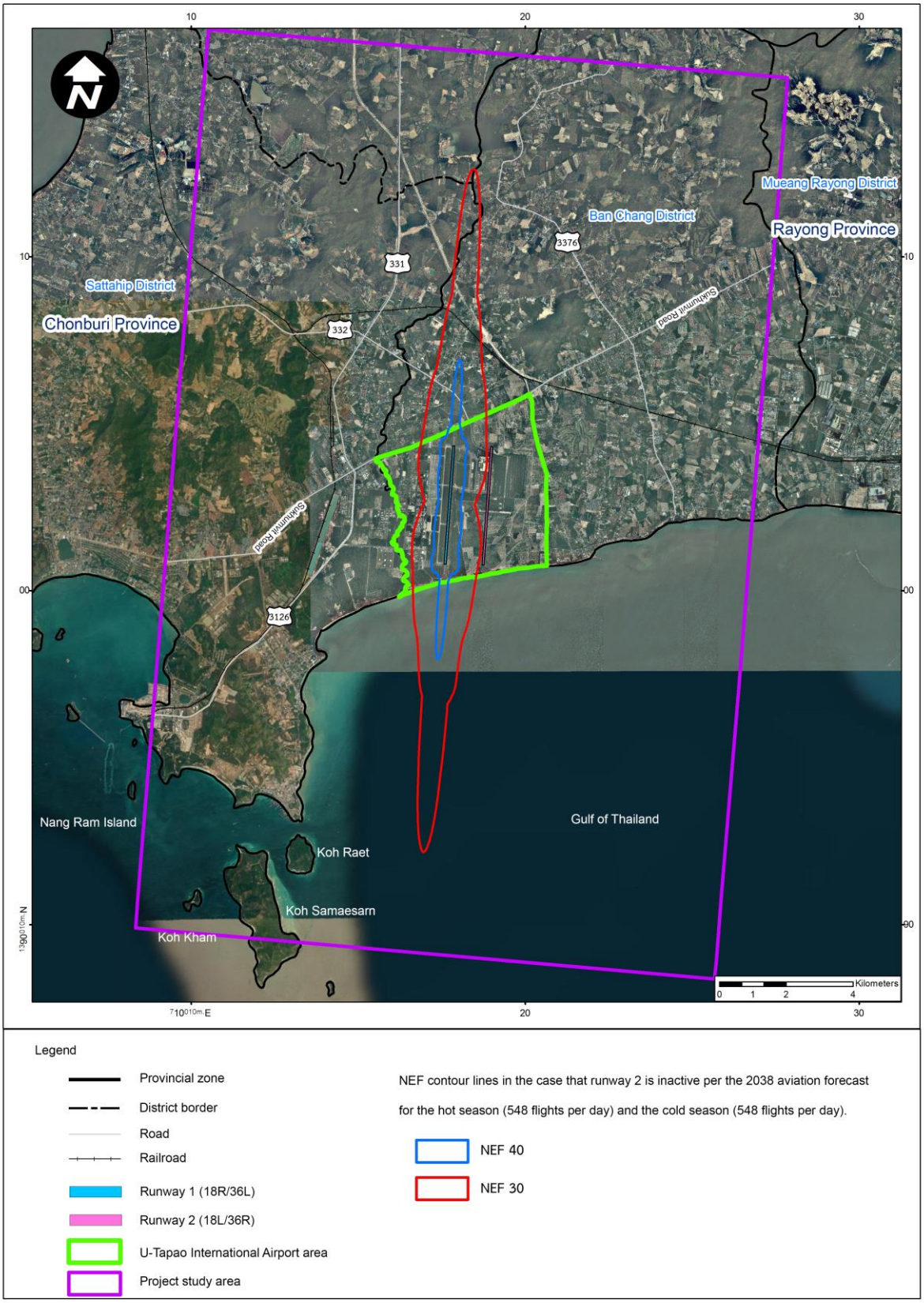


Figure 5.2-53 NEF contours in Scenario 11: closure of runway 2, hot season and cold season 2038 (average 548 flights per day)

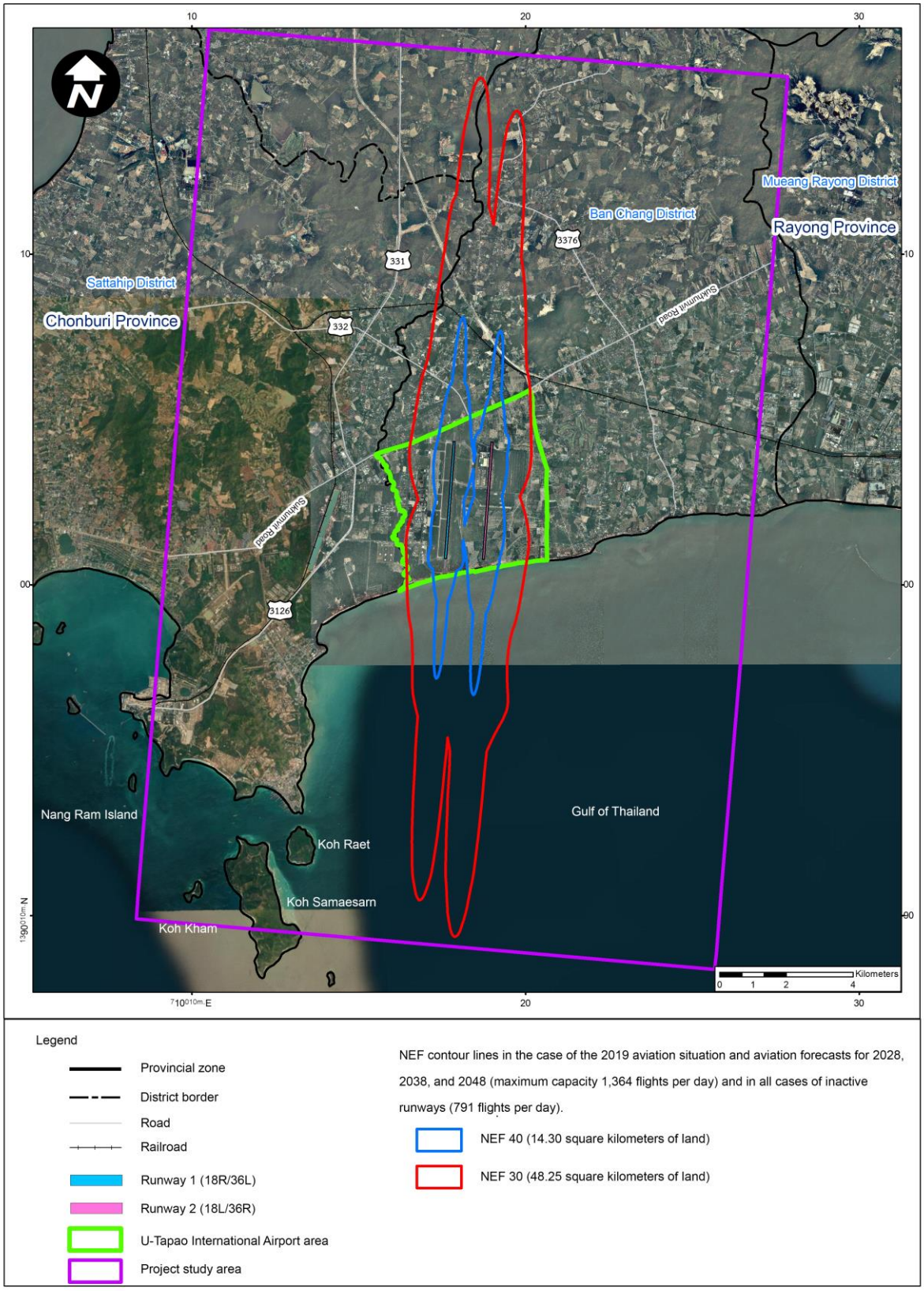


Figure 5.2- 54 **NEF contour map of all study scenario areas in all cases (total 11 cases), maximum 1,364 flights per day**

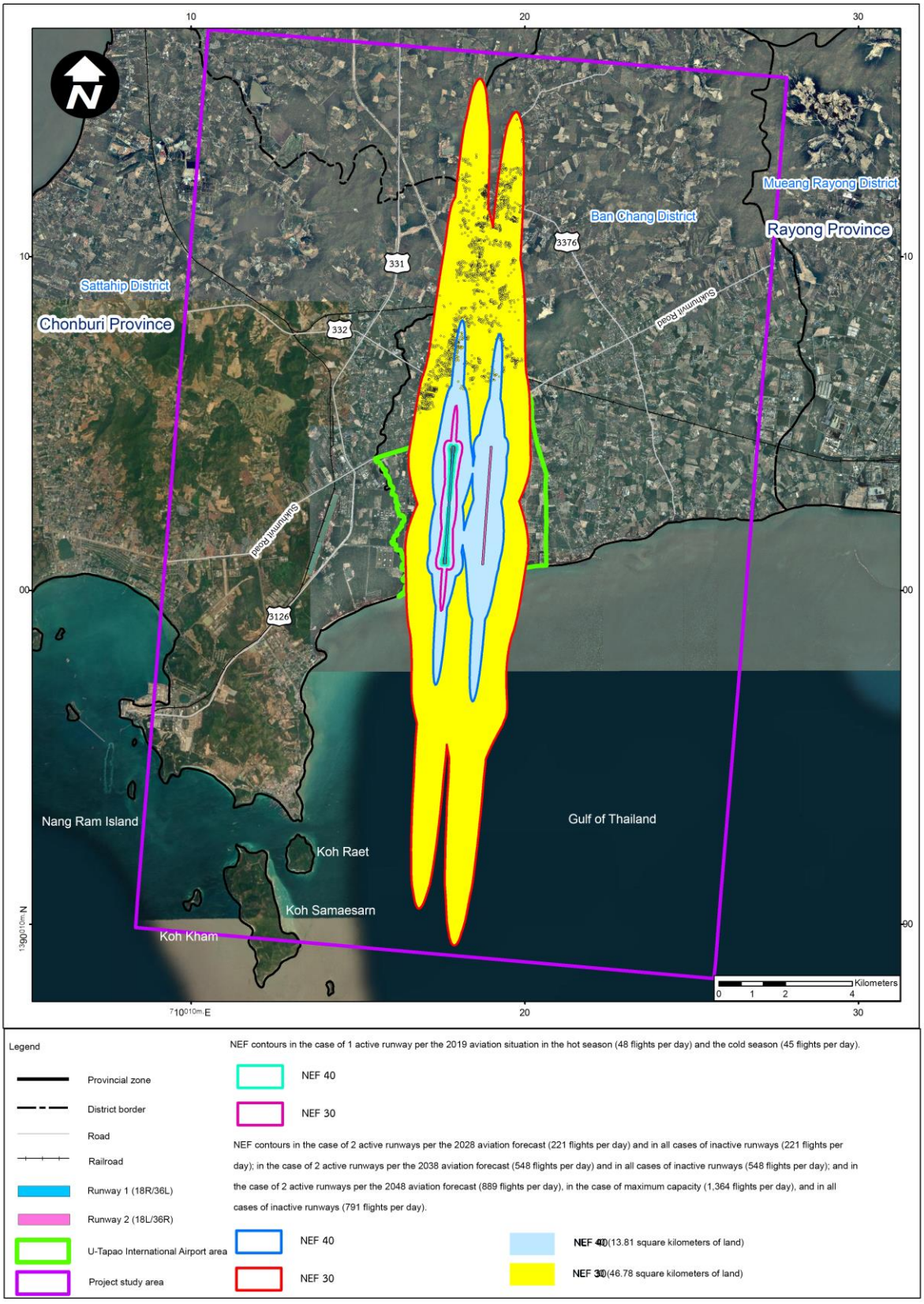


Figure 5.2- 55 NEF contour map of all study scenario areas in all cases (cases 2-11), maximum 1,364 flights per day, as a spatial comparison with NEF contour map from the aviation situation, 2019.

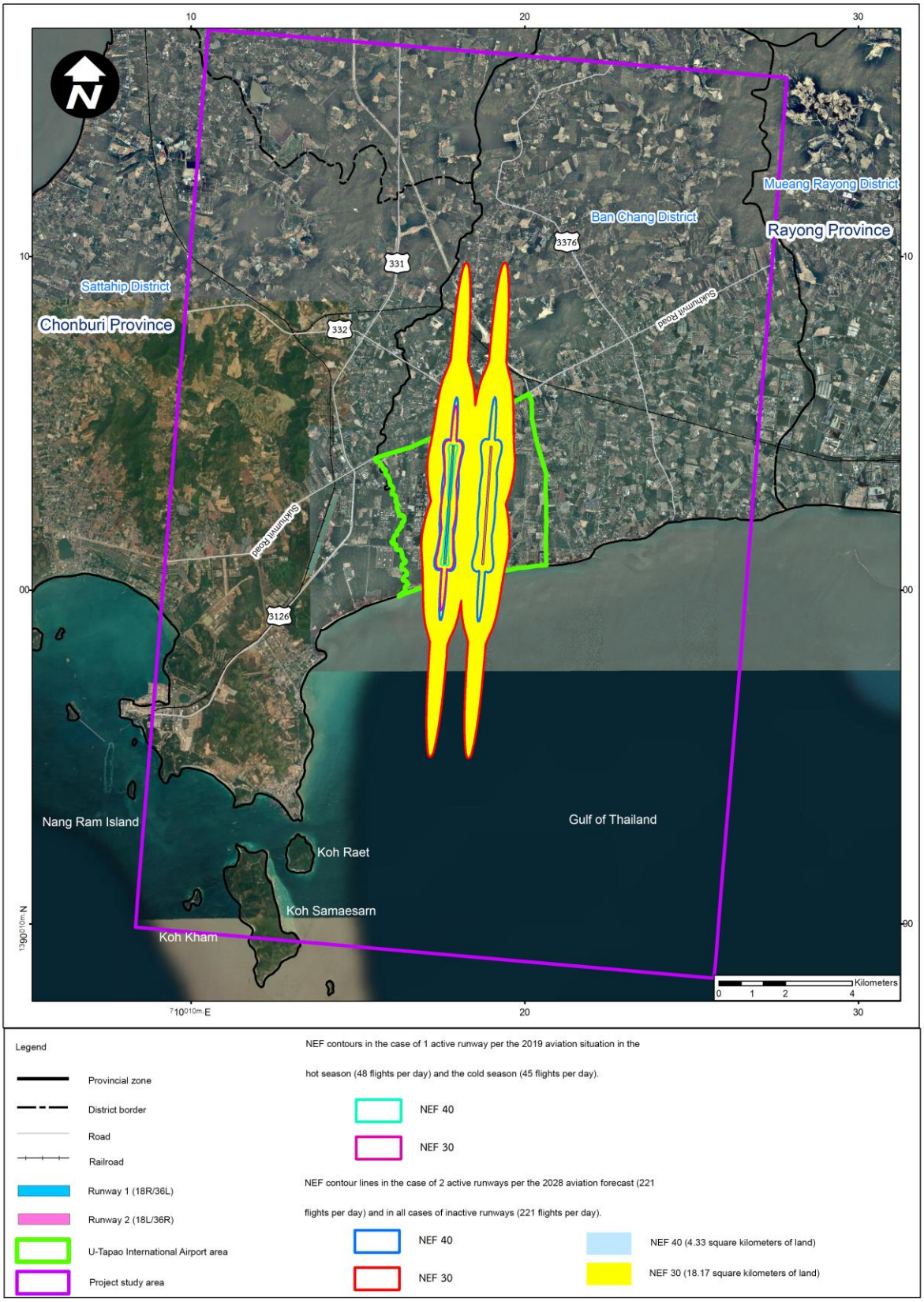


Figure 5.2- 56 Drafted NEF contour map from 2028 flight forecast (maximum 221 flights per day) as a spatial comparison with NEF contour map from the aviation situation, 2019.

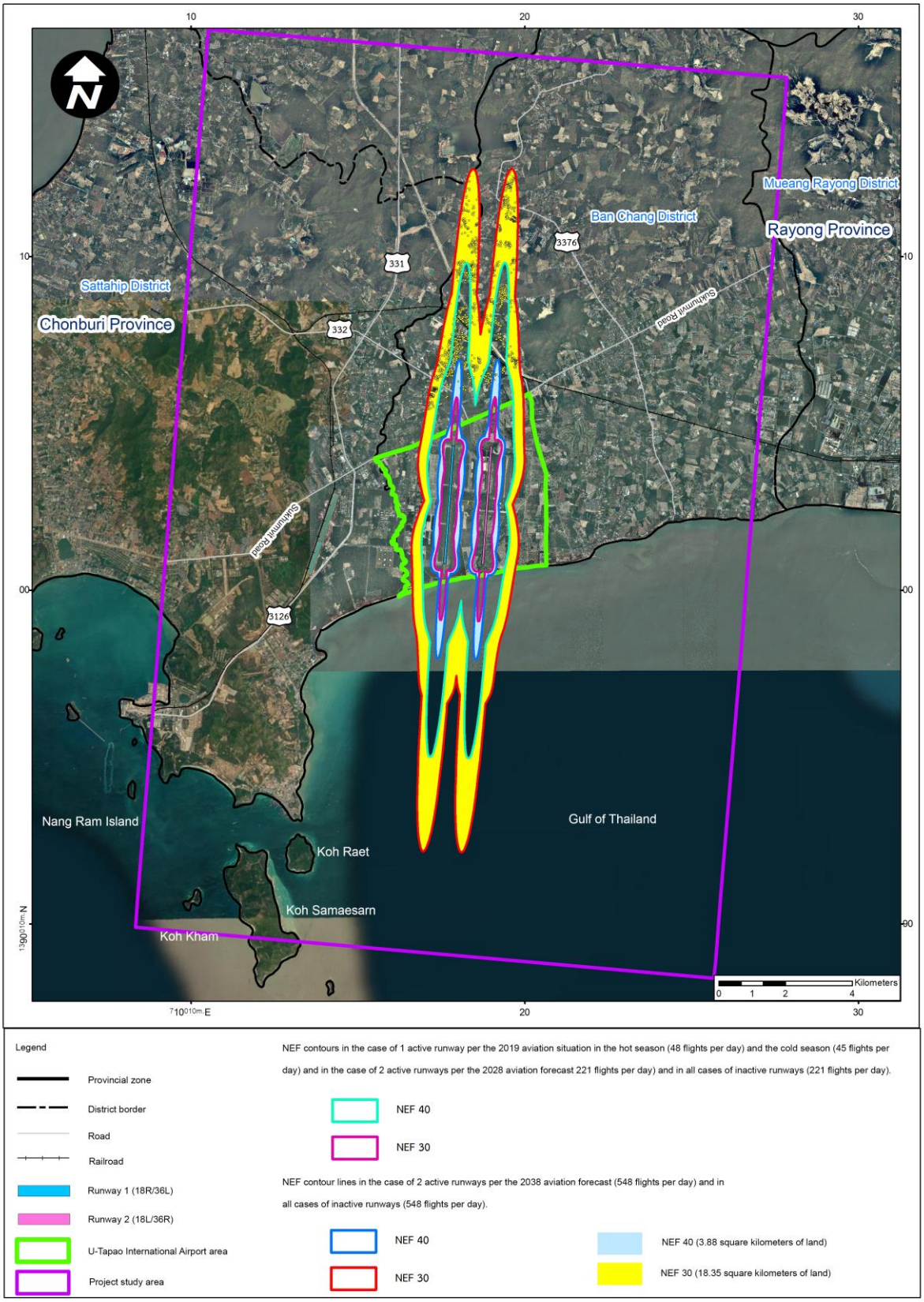


Figure 5.2- 57 Drafted NEF contour map from 2028 and 2038 flight forecast (maximum 548 flights per day) as a spatial comparison with NEF contour map from the aviation situation, 2019.

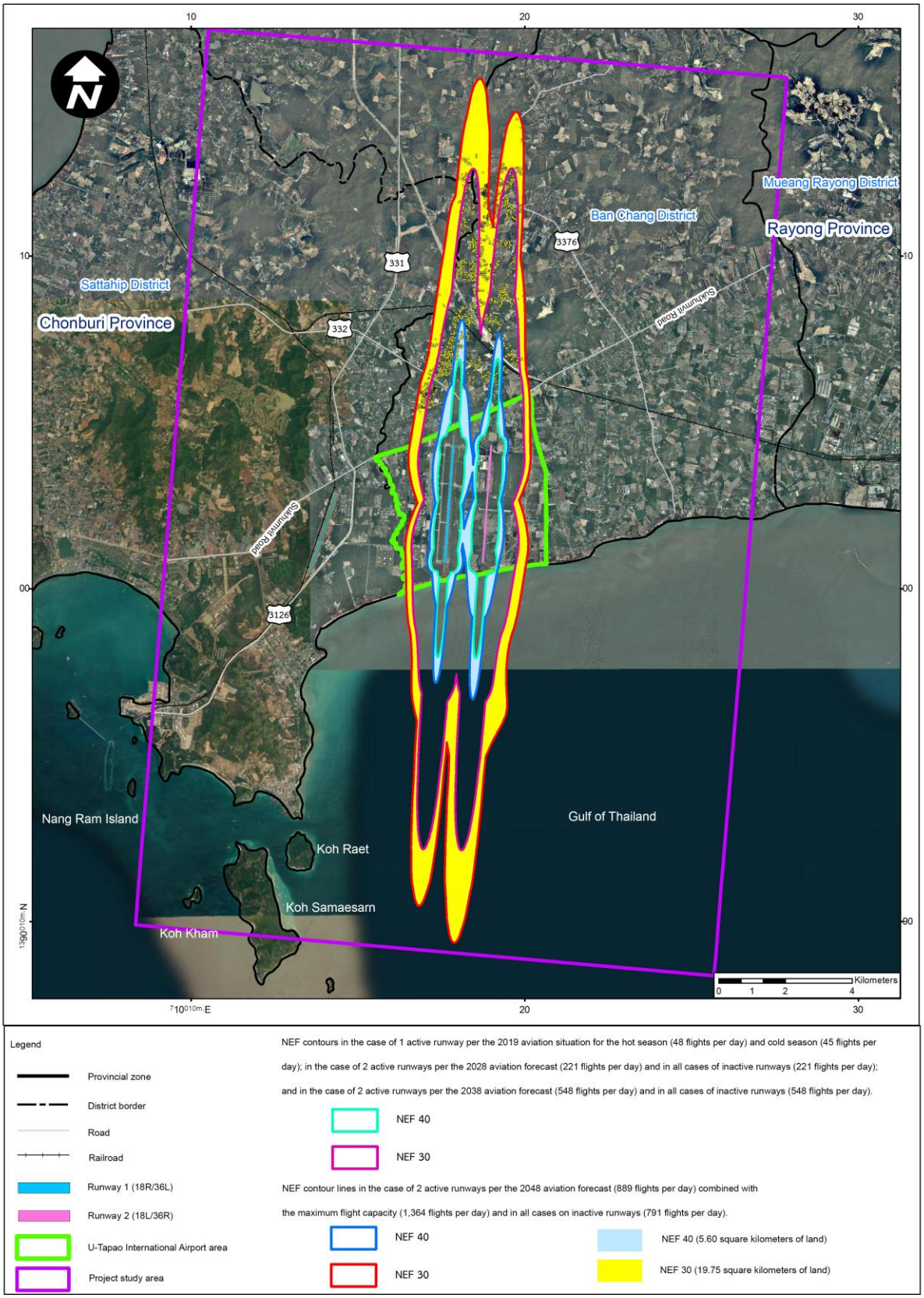


Figure 5.2- 58 Drafted NEF contour map from 2048 flight forecast (maximum 1,364 flights per day) as a spatial comparison with NEF contour map from aviation situations in 2019, 2028, and 2038

5.2.2 Vibrations

5.2.2.1 Construction Phase

(1) Study Methods

Study the project construction activities and identify construction activities that may have impacts from vibration, and assess the potential impact.

(2) Study Results

The main activities that may cause vibrations during the construction of Runway 2 in U-Tapao International Airport are the construction of the runway, as well as the construction of the runway underpass, soil excavation and transportation, filling and grinding of soil using machinery, and paving of surfaces with asphaltic concrete etc. In this respect, the level of vibration depends on the type of machinery and equipment used and the construction method, as well as the distance between the receiving point to the source of vibration.

To assess vibration from construction machinery and equipment, the vibration level can be calculated at various distances using the peak particle velocity based on formula (6).

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5} \quad \text{Formula (6)}$$

When PPV_{equip} = Peak particle velocity caused by machine operation at various distances (inches per second)

PPV_{ref} = Peak particle velocity at 25 feet or 7.62 meters (inches per second)

D = Distance from machinery to nearby communities (feet)

Vibration impact is assessed by comparing the peak particle velocity calculated from formula (6) with the impact of vibrations on humans and vibrations to prevent impact on buildings. It was found that there were 178 sensitive areas and communities at a range of 1,120 - 13,740 meters. The peak particle velocity from operation of the bore piling machine was between 0.00001 - 0.00041 inches per second. The level of impact on people in the area was at a level that could not be felt, and when considering the impacts on building structures, it was found that it did not impact/cause damage to buildings of any type. Therefore, impact level is low. Details are as shown in Table 5.2-43 Level andTable 5.2-44 respectively.

Table 5.2- 43 Level of vibration from construction activities

Peak particle velocity millimeters per second (inches per second)		Impact on humans	Impact on building structures	
Level 1	0 to 0.15 (0 to 0.006)	Cannot be felt	A	No impact/damage to any type of structures
Level 2	0.15 to 0.3 (0.006 to 0.012)	Slightly felt, or possible to recognize	B	No impact/damage to any type of structures
Level 3	2.0 (0.079)	Vibrations felt	C	Higher levels of vibration will result in destruction or damage to historical sites.
Level 4	2.5 (0.098)	Will create annoyance if vibration is continuous.	D	No risk of general damage to buildings or architectural structures.
Level 5	5 (0.197)	Vibration disturbs people living in buildings.	E	Level that will result in damage to the architectural structure of a typical house with plaster walls and ceilings (a mixture of mortar, sand, water and various fibers). In the case of a flexible wall/ceiling, will become slightly damaged.
Level 6	10 to 15 (0.394 to 0.591)	People will become displeased if vibration is continuous.	F	Vibration levels are greater than normal traffic, which will cause damage to architectural structure and cause slight damage to structure.

Source: Whiffin, A.C., and Leonard, D.R., A Survey of Traffic Induced Vibration, Eng., 1971.

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	Educational Institution	1,420	0.0003	0.0073	1	A
2	Wat Phala School	Educational Institution	2,620	0.0001	0.0029	1	A
3	Phala Subdistrict Municipality Child Development Center	Educational Institution	2,880	0.0001	0.0025	1	A
4	Ban Khlong Sai School	Educational Institution	3,030	0.0001	0.0024	1	A
5	Rayong English Program School	Educational Institution	2,800	0.0001	0.0026	1	A
6	Rayong Garden International School	Educational Institution	2,900	0.0001	0.0025	1	A
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	Educational Institution	2,510	0.0001	0.0031	1	A
8	Wat Khiri Pawanaram School	Educational Institution	2,570	0.0001	0.0030	1	A
9	Ban Khlong Bang Phai School	Educational Institution	1,550	0.0003	0.0064	1	A
10	Pattanavechsuksa School	Educational Institution	1,740	0.0002	0.0054	1	A
11	Pattanavech College	Educational Institution	1,860	0.0002	0.0049	1	A
12	Saeng Song La Child Development Center 3	Educational Institution	2,610	0.0001	0.0029	1	A
13	Wat Sa Kaeo School	Educational Institution	2,720	0.0001	0.0028	1	A
14	Wat Sombun Naram School (Tem Rat Memorial)	Educational Institution	6,240	0.0000	0.0008	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	Educational Institution	6,240	0.0000	0.0008	1	A
16	Sajjaseuksa School	Educational Institution	5,620	0.0000	0.0009	1	A
17	Ban Chang District Center for Non-Formal and Informal Education	Educational Institution	6,820	0.0000	0.0007	1	A
18	Wat Suwan Rangsan Community School	Educational Institution	6,750	0.0000	0.0007	1	A
19	Ban Yai Ra Child Development Center	Educational Institution	6,790	0.0000	0.0007	1	A
20	Wat Samnak Kathon School	Educational Institution	8,520	0.0000	0.0005	1	A
21	Ban Sam Nak Thon Child Development Center	Educational Institution	8,570	0.0000	0.0005	1	A
22	Burapatit Child Development Center, Sam Nak Thon SAO	Educational Institution	11,160	0.0000	0.0003	1	A
23	Wat Chak Mak School	Educational Institution	11,130	0.0000	0.0003	1	A
24	St. Andrews International School, Green Valley, Rayong,	Educational Institution	12,360	0.0000	0.0003	1	A
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	Educational Institution	5,140	0.0000	0.0011	1	A
26	Ban Phayun School	Educational Institution	5,140	0.0000	0.0011	1	A
27	Rakpasa Kindergarten	Educational Institution	4,590	0.0000	0.0013	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
28	Wat Ban Chang School (Boonrawdprachanukul)	Educational Institution	4,830	0.0000	0.0012	1	A
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	Educational Institution	6,940	0.0000	0.0007	1	A
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	Educational Institution	6,940	0.0000	0.0007	1	A
31	Wat Prachummit Bamrung School	Educational Institution	7,550	0.0000	0.0006	1	A
32	Udom Wittayanukun School	Educational Institution	8,660	0.0000	0.0005	1	A
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	Educational Institution	8,590	0.0000	0.0005	1	A
34	Wat Noen Kraprok School	Educational Institution	8,590	0.0000	0.0005	1	A
35	Chonnabot Phatthana Kindergarten	Educational Institution	8,170	0.0000	0.0005	1	A
36	Aksorn Business Administration Technological College	Educational Institution	5,790	0.0000	0.0009	1	A
37	Banchang Karnchanakul Wittaya School	Educational Institution	5,570	0.0000	0.0009	1	A
38	Ban Khao Huai Mahat School	Educational Institution	10,040	0.0000	0.0004	1	A
39	Ban Phudon - Huai Mahat Child Development Center	Educational Institution	10,040	0.0000	0.0004	1	A
40	Ban Map Fakthong School	Educational Institution	13,740	0.0000	0.0002	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
41	Phuru Yor. Sor. Sor. 80 School	Educational Institution	12,460	0.0000	0.0003	1	A
42	Khao Chi Chan School	Educational Institution	9,460	0.0000	0.0004	1	A
43	Ban Khalot Child Development Center	Educational Institution	3,120	0.0001	0.0023	1	A
44	Ban Khalot School	Educational Institution	3,150	0.0001	0.0022	1	A
45	Phlu Ta Luang Wittaya School	Educational Institution	4,460	0.0001	0.0013	1	A
46	Athittan Kindergarten School	Educational Institution	4,490	0.0001	0.0013	1	A
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	Educational Institution	5,410	0.0000	0.0010	1	A
48	Ban Khao Bai Si School	Educational Institution	5,460	0.0000	0.0010	1	A
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	Educational Institution	6,330	0.0000	0.0008	1	A
50	Ban KM. 5 School	Educational Institution	6,620	0.0000	0.0007	1	A
51	Royal Thai Fleet Sattahip District School	Educational Institution	8,260	0.0000	0.0005	1	A
52	RTN. 8 Nursery	Educational Institution	7,740	0.0000	0.0006	1	A
53	Juk Samet School	Educational Institution	7,820	0.0000	0.0006	1	A
54	Juk Samet Child Development Center	Educational Institution	7,990	0.0000	0.0005	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
55	Ban Chong Samaesarn Child Development Center	Educational Institution	8,520	0.0000	0.0005	1	A
56	Samaesarn Subdistrict NFE Center	Educational Institution	8,610	0.0000	0.0005	1	A
57	Ban Chong Samaesarn School	Educational Institution	8,230	0.0000	0.0005	1	A
58	Wat Phala Vipassana Office	Meditation Retreat	2,470	0.0001	0.0032	1	A
59	Wat Phala	Community Temple	2,510	0.0001	0.0031	1	A
60	Chao Li Hu Ong Yea Shrine	Chinese Shrine	840	0.0006	0.0161	1	A
61	Wat Khlong Sai	Community Temple	1,640	0.0002	0.0059	1	A
62	Wat Khiri Pawanaram	Community Temple	1,630	0.0002	0.0060	1	A
63	Ban Chang Christ Church	Church	2,200	0.0001	0.0038	1	A
64	Ban Chang Church	Church	2,540	0.0001	0.0031	1	A
65	Wat Ban Khlong Bang Phai	Community Temple	1,460	0.0003	0.0070	1	A
66	Admiral Prince Abhakara Kiartivongse Monument	Monument	1,330	0.0003	0.0081	1	A
67	Royal Thai Naval Air Division Naval Aviation Museum	Museum	1,240	0.0004	0.0090	1	A
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	Monument	1,010	0.0005	0.0122	1	A
69	Somdej Phra Pathom (Air Defense Regiment 1)	Religious Ceremonial Site	660	0.0009	0.0231	1	A
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	Monument	550	0.0012	0.0304	1	A
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	Monument	90	0.0181	0.4593	2	B
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	Religious Ceremonial Site	40	0.0610	1.5501	2	B

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	Shrine	180	0.0064	0.1624	2	B
74	Wat Sa Kaeo	Community Temple	1,720	0.0002	0.0055	1	A
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	Place to worship King Taksin the Great	1,200	0.0004	0.0094	1	A
76	Wat Sombun Naram	Community Temple	5,070	0.0000	0.0011	1	A
77	Ban Chang Abundant Grace Church	Church	6,380	0.0000	0.0008	1	A
78	Wat Samnak Kathon	Community Temple	7,140	0.0000	0.0007	1	A
79	Wat Suwan Rangsan	Community Temple	5,560	0.0000	0.0009	1	A
80	Wat Nong Bot	Community Temple	7,810	0.0000	0.0006	1	A
81	The Shrine of Luang Tia Chak Mak	Chinese Shrine	9,630	0.0000	0.0004	1	A
82	Wat Chak Mak	Community Temple	9,700	0.0000	0.0004	1	A
83	The Shrine of Luang Tia Ban Phayun	Chinese Shrine	4,870	0.0000	0.0012	1	A
84	The Shrine of King Taksin the Great (Ban Chang)	Site for paying homage and respect to His Majesty	4,790	0.0000	0.0012	1	A
85	Wat Chonthararam (Phayun)	Community Temple	4,280	0.0001	0.0014	1	A
86	Masjid Dawatul Islam	Mosque	3,450	0.0001	0.0019	1	A
87	Chinese shrine at the Buddha Dhamma Foundation	Chinese Shrine	4,340	0.0001	0.0014	1	A
88	The Shrine of Luang Tia Ban Chang	Chinese Shrine	3,820	0.0001	0.0017	1	A
89	The Shrine of Laoia Guan Yu Ban Chang	Chinese Shrine	3,920	0.0001	0.0016	1	A
90	Wat Ban Chang	Community Temple	3,900	0.0001	0.0016	1	A
91	Wat Prachummit Bamrung	Community Temple	6,710	0.0000	0.0007	1	A
92	The Shrine of Luang Tia Noen Kraprok 1	Chinese Shrine	7,340	0.0000	0.0006	1	A
93	The Shrine of Luang Tia Noen Kraprok 2	Chinese Shrine	7,540	0.0000	0.0006	1	A
94	Wat Noen Kraprok	Community Temple	7,630	0.0000	0.0006	1	A
95	Wat Phudon Nim Sanoh	Community Temple	8,670	0.0000	0.0005	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
96	Church of Christ Ban Chang	Church	8,560	0.0000	0.0005	1	A
97	Anek Kusala Sala (Viharn Sien)	Place for disseminating Thai-Chinese culture	11,040	0.0000	0.0003	1	A
98	Wat Yan Nasangwararam	First-class woramahawihan monastery	11,080	0.0000	0.0003	1	A
99	Sirisirirak Monastery	Monastery	11,440	0.0000	0.0003	1	A
100	Anan Buraparam Meditation Center	Meditation Center	11,950	0.0000	0.0003	1	A
101	Wat Map Fakthong	Community Temple	13,170	0.0000	0.0003	1	A
102	Khao Chi Chan Image of Lord Buddha	Carving of Buddha image on cliff side	9,080	0.0000	0.0005	1	A
103	Wat Khao Chi Chan	Community Temple	7,420	0.0000	0.0006	1	A
104	Rat Samakkhi Temple	Community Temple	2,990	0.0001	0.0024	1	A
105	The Shrine of Chao Mae Kuan Im	Chinese Shrine	3,220	0.0001	0.0021	1	A
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	Shrine/Monument	2,690	0.0001	0.0028	1	A
107	Prakai Dhamma Meditation Center	Meditation Retreat	5,810	0.0000	0.0009	1	A
108	KM.8 Meditation Center	Meditation Retreat	4,650	0.0000	0.0012	1	A
109	Wat Rangsee Sunthorn (KM.5)	Community Temple	6,670	0.0000	0.0007	1	A
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	Monastery	7,340	0.0000	0.0006	1	A
111	Sattahip Meditation Center (Khao Bandai Kaew)	Meditation Retreat	7,400	0.0000	0.0006	1	A
112	Wat Tung Prong	Community Temple	8,200	0.0000	0.0005	1	A
113	Khao Phlu Ta Luang Meditation Center	Meditation Retreat	4,220	0.0001	0.0014	1	A
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	Memorial site	4,030	0.0001	0.0015	1	A
115	Wat Khao Bai Si Santitham	Community Temple	4,690	0.0000	0.0012	1	A

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116	Welu Amphawan Vipassana Office	Meditation Retreat	4,960	0.0000	0.0011	1	A
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	Monument	5,590	0.0000	0.0009	1	A
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	Monument	5,680	0.0000	0.0009	1	A
119	Samaesarn Pattanakarn Church	Church	6,340	0.0000	0.0008	1	A
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	Place of worship	7,130	0.0000	0.0007	1	A
121	Wat Chong Samaesarn	Community Temple	8,660	0.0000	0.0005	1	A
122	Viharn Luang Por Dam	Significant Buddha Imagefor Eastern Fisherman	8,950	0.0000	0.0005	1	A
123	The Shrine of King Taksin the Great (Samaesarn)	Memorial site	9,230	0.0000	0.0004	1	A
124	Thai Island and Sea Natural History Museum	Museum ofNatural Science	9,160	0.0000	0.0004	1	A
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	Religious Ceremonial Site	9,260	0.0000	0.0004	1	A
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	Monument	9,280	0.0000	0.0004	1	A
127	Eastern-Nong Muang Community Health Service Center	Medical Institution	1,460	0.0003	0.0070	1	A
128	Phala Subdistrict Health Promotion Hospital	Medical Institution	2,860	0.0001	0.0026	1	A
129	Ban Chang Hospital	Medical Institution	4,200	0.0001	0.0014	1	A
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	Medical Institution	1,480	0.0003	0.0069	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	Medical Institution	2,620	0.0001	0.0029	1	A
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	Medical Institution	5,200	0.0000	0.0010	1	A
133	Ban Yai Ra Subdistrict Health Promotion Hospital	Medical Institution	6,760	0.0000	0.0007	1	A
134	Sam Nak Thon Subdistrict Health Promotion Hospital	Medical Institution	8,190	0.0000	0.0005	1	A
135	Ban Chak Mak Subdistrict Health Promotion Hospital	Medical Institution	11,200	0.0000	0.0003	1	A
136	Ban Phayun Subdistrict Health Promotion Hospital	Medical Institution	5,250	0.0000	0.0010	1	A
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	Medical Institution	9,310	0.0000	0.0004	1	A
138	Phudon Huai Mahat Community Health Service Unit	Medical Institution	9,740	0.0000	0.0004	1	A
139	Wat Yan Nasangwararam Hospital	Medical Institution	11,880	0.0000	0.0003	1	A
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	Medical Institution	12,080	0.0000	0.0003	1	A
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	Medical Institution	9,390	0.0000	0.0004	1	A
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	Medical Institution	1,910	0.0002	0.0047	1	A
143	Sattahip Hospital KM.10	Medical Institution	3,460	0.0001	0.0019	1	A
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	Medical Institution	8,590	0.0000	0.0005	1	A
Phala Subdistrict Municipality (Phala Subdistrict, Ban Chang District, Rayong)							
145	Village No. 1 Ban Sakulthong	Community	4,710	0.0000	0.0012	1	A
146	Village No. 2, Ban Kilo 16	Community	1,500	0.0003	0.0068	1	A

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147	Village No. 4, Ban Tung Prong	Community	1,290	0.0003	0.0085	1	A
148	Village No. 5, Phala Subdistrict	Community	1,570	0.0002	0.0063	1	A
149	Village No. 6, Ban Takat	Community	3,110	0.0001	0.0023	1	A
150	Village No. 7, Ban Khlong Sai	Community	1,940	0.0002	0.0046	1	A
Sam Nak Thon Subdistrict Municipality (Sam Nak Thon Subdistrict, Ban Chang District, Rayong Province)							
151	Village No. 1 Ban Sam Nak Thon	Community	6,450	0.0000	0.0008	1	A
152	Village No. 2, Ban Chak Mak	Community	9,810	0.0000	0.0004	1	A
153	Village No. 3, Ban Sa Kaeo	Community	1,870	0.0002	0.0048	1	A
154	Sa Kaeo Community 1	Community	3,590	0.0001	0.0018	1	A
155	Sa Kaeo Community 2	Community	2,610	0.0001	0.0029	1	A
156	Village No. 4, Ban Khlong Bang Phai	Community	1,320	0.0003	0.0082	1	A
157	Village No. 5, Ban Yai Ra	Community	5,130	0.0000	0.0011	1	A
158	Village No. 6, Ban Khao Khrok	Community	4,400	0.0001	0.0013	1	A
159	Village no. 7, Ban Nong Takhian	Community	9,280	0.0000	0.0004	1	A
160	Village No. 8, Ban Cherng Khao	Community	1,880	0.0002	0.0048	1	A
Ban Chang Municipality (Ban Chang Subdistrict, Ban Chang District, Rayong)							
161	Eastern-Nong Muang Community	Community	1,120	0.0004	0.0105	1	A
162	Wat Khiri Pawanaram Community	Community	2,380	0.0001	0.0034	1	A
163	Ban Chang-Phala Community	Community	2,410	0.0001	0.0033	1	A
164	Ruam Sompong Community	Community	3,320	0.0001	0.0021	1	A
165	Ming Mongkol Community	Community	4,080	0.0001	0.0015	1	A
166	Jor Koo Community	Community	4,160	0.0001	0.0015	1	A
167	Wirat Phatthana Department Store Community	Community	4,340	0.0001	0.0014	1	A
168	Thep Chinda Community	Community	4,570	0.0000	0.0013	1	A
169	Health Park Community	Community	4,680	0.0000	0.0012	1	A
170	Wat Ban Chang Community	Community	4,970	0.0000	0.0011	1	A
171	Dong Dang Community	Community	5,060	0.0000	0.0011	1	A
172	Night Market Community	Community	5,190	0.0000	0.0010	1	A

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173	Ruam Mitr Community	Community	5,370	0.0000	0.0010	1	A
174	Ban Chang - Noen Kraprok Community	Community	5,800	0.0000	0.0009	1	A
175	Dao Pitak Community	Community	5,950	0.0000	0.0009	1	A
176	Taiwa Community	Community	7,700	0.0000	0.0006	1	A
177	East Ban Noen Kraprok Community, Prachummit	Community	7,810	0.0000	0.0006	1	A
178	Ban Noen Kraprok Community	Community	8,490	0.0000	0.0005	1	A
179	Nong Yai Community	Community	8,830	0.0000	0.0005	1	A
Ban Chang Subdistrict Municipality (Ban Chang Subdistrict, Ban Chang District, Rayong)							
180	Village No. 1, Pan Din Tai	Community	7,970	0.0000	0.0006	1	A
181	Village No. 2, Ban Prachummit	Community	5,140	0.0000	0.0011	1	A
182	Village No. 3, Ban Noen Samre	Community	4,990	0.0000	0.0011	1	A
183	Village No. 4, Ban Phayun	Community	3,320	0.0001	0.0021	1	A
184	Village No. 6, Ban Noen Kraprok	Community	8,960	0.0000	0.0005	1	A
185	Village No. 7, Ban Khao Phudon Huai Mahat	Community	9,650	0.0000	0.0004	1	A
Huai Yai Subdistrict Municipality (Huai Yai Subdistrict, Bang Lamung District, Chonburi)							
186	Village No. 11, Ban Map Fakthong	Community	8,000	0.0000	0.0005	1	A
187	Village No. 13, Ban Nong Phakkut	Community	10,640	0.0000	0.0004	1	A
Khao Chi Chan Subdistrict Municipality (Na Jomtien Subdistrict, Sattahip District, Chonburi)							
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	Community	10,680	0.0000	0.0004	1	A
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	Community	8,800	0.0000	0.0005	1	A
Kled Kaew Subdistrict Municipality (Bang Sare Subdistrict, Sattahip District, Chonburi)							
190	Village No. 6 (Ban Khao Krating Community)	Community	8,540	0.0000	0.0005	1	A
191	Village No. 7 (Ban Nong Hin Community)	Community	7,230	0.0000	0.0006	1	A
192	Village No. 11 (Ban Khong Wanphen Community)	Community	6,020	0.0000	0.0008	1	A
Phlu Ta Luang Subdistrict, Sattahip District, Chonburi							
193	Village No. 1, Ban Phlu Ta Luang	Community	2,940	0.0001	0.0025	1	A

Table 5.2-44Assessment of vibration levels from construction activities in sensitive areas and communities around the project

Sequence No.	Sensitive area/community	Type	Distance from edge of construction area (meters) Border/fence	Peak particle velocity caused by operation of pile driver (sonic) (inches/second)	Peak particle velocity caused by operation of pile driver (mm/second)	Impact on humans	Impact on building structures
194	Village No. 2, Ban Khalot	Community	2,290	0.0001	0.0036	1	A
195	Village No. 3, Ban Khlong Phai	Community	2,340	0.0001	0.0035	1	A
196	Village No. 4, Ban Khlong Phlu Ta Luang	Community	4,110	0.0001	0.0015	1	A
197	Village No. 5, Ban Khao Bai Si	Community	3,010	0.0001	0.0024	1	A
198	Village No. 6, Ban Khao Tabaek	Community	4,730	0.0000	0.0012	1	A
199	Village No. 7, Ban Nong Ya Noi	Community	5,930	0.0000	0.0009	1	A
200	Village No. 8, Ban Nong Ya	Community	7,120	0.0000	0.0007	1	A
Samaesarn Subdistrict, Sattahip District, Chonburi							
201	Ban Nong Krachong Community	Community	5,840	0.0000	0.0009	1	A

Note: 1/ Calculated using the equation $PPPVequip = PPVref \times (25/D)^{1.5}$ Effects on people and the impact on the building structures can be considered on criteria with reference to Whiffin, A.C., and Leonard, D.R., A Survey of Traffic Induced Vibration, 1971. and can be used to determine the level of impact, as follows:

2/ Effects on people (1 = cannot be felt, 2 = level is possible to recognize, 3 = vibrations felt, 4 = will create annoyance if vibration is continuous, 5 = Vibration disturbs people living in buildings, 6 = people will become displeased if vibration is continuous).

3 /Impacts on building structures (A, B = No impact to any type of structures, C = destruction or damage to archaeological sites, D = No risk of general damage to buildings or architectural structures, E = damage to the architectural structure of a typical house with plaster walls and ceilings, F = causes damage to architectural structures and causes slight damage to structures.)

5.2.2.2 Operation phase

(1) Study Methods

Study the project construction activities and identify construction activities that may have impacts on vibration, and assess the potential impact on the project.

(2) Study Results

The main operations in the operation phase of U-Tapao International Airport are the increased aircraft takeoff-landings which cause more vibrations in the air due to sonic boom from the aircraft (wake vortex), which also increase accordingly and could affect the sensitive areas and communities, especially those located in the areas under the flight path. The nature of this impact causes damage to the roof of buildings or structures, such as roof tiles sliding and falling out, as well as damage to ceilings (refer to the effects from the statistics of complaints and compensation for repairs from sonic boom (wake vortex) for Suvarnabhumi Airport (2016-2019). At U-Tapao International Airport, however, there have not yet been any complaints and compensation for roof repairs caused by the effects from sonic boom (wake vortex) from the past until now). The project has therefore evaluated the impacts from aircraft wake vortex that could affect the 201 sensitive areas and communities located in the project study area, using the data layer and the overlay technique in the geographic information system to analyze and identify the aviation risk areas and using the following information related to U-Tapao International Airport:

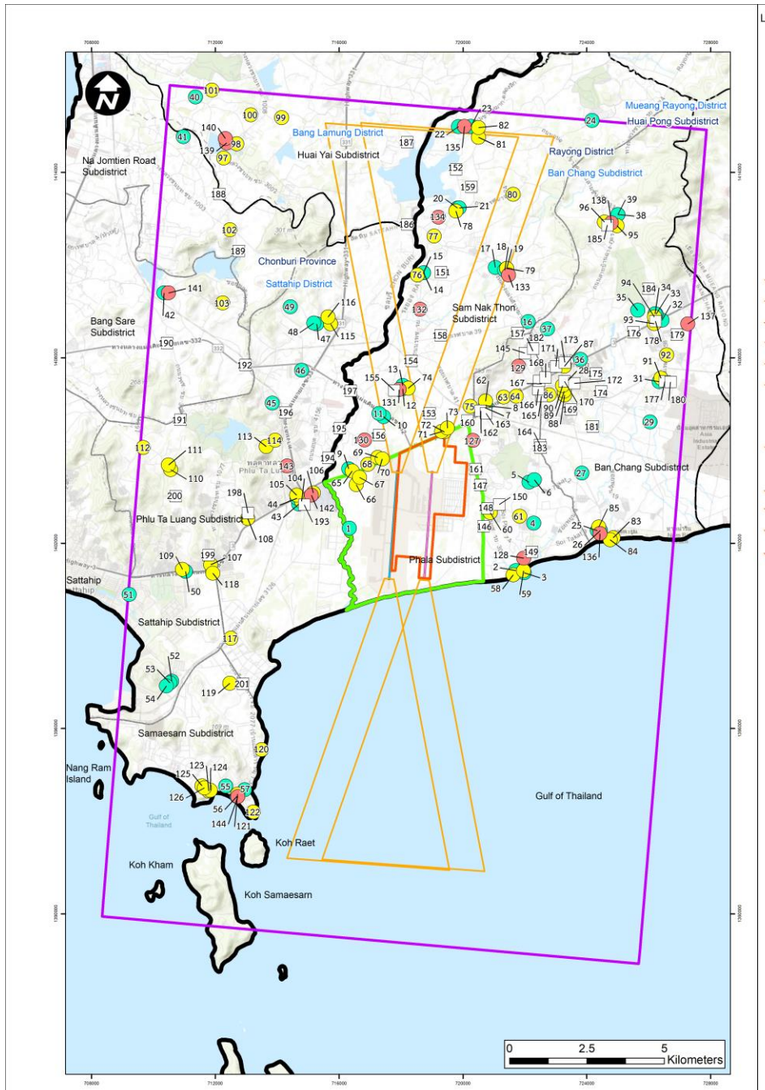
- Information on the U-Tapao International Airport Area
- Information on the Air Safety Zone in 1995
- Information on flight route distribution in the area, both inbound and outbound, at an altitude of about 3,000 feet
- Information on slope in the takeoff - landing from the draft flight route
- Information on NEF contour
- Information on sensitive areas, archaeological sites and religious places

From the assessment, the risk area with potential for wake vortex is located at a distance of 1 - 10 kilometers from the runway touchdown point at a height of approximately 1 – 2,100 feet (MSL.) in the summer, and at a distance of 1-11 kilometers from the runway touchdown point, at a height of approximately 1 – 2,700 feet (MSL.) in the winter. From an inspection of the flight path area of U-Tapao International Airport, it was found that there were a total of 34 sensitive areas and communities that may be affected by wake vortex during the operation phase, including 11 educational institutions, 11 religious sites, 3 healthcare facilities and 9 community sites, with details shown inTable 5.2-45 Sensitive (Reference the concept analysis from the study of use of land to reduce the impact of noise from Suvarnabhumi Airport, Environmental Research and Training Center, Department of Environmental Quality Promotion, 2013).

Table 5.2-45 Sensitiveareas and communities in the study area compared to wake vortex area.

Type of sensitive area/community			
Educational institutions (11 sites)	Religious sites (11 sites)	Healthcare facilities (3 sites)	Community sites (9 sites)
- Pattanavechsuksa School - Pattanavech College - Saeng Song La Child Development Center 3 - Wat Sa Kaeo School - Wat Sombun Naram School (Tem Rat Memorial) - Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School - Ban Chang District Center for Non-Formal and Informal Education - Wat Suwan Rangsan Community School - Ban Yai Ra Child Development Center - Wat Samnak Kathon School - Ban Sam Nak Thon Child Development Center	- Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion) - Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion) - Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion) - Wat Sa Kaeo - Wat Sombun Naram - Ban Chang Abundant Grace Church - Wat Samnak Kathon - Wat Suwan Rangsan - Wat Nong Bot - The Shrine of Luang Tia Chak Mak - Wat Chak Mak	- Ban Sa Kaeo Subdistrict Health Promotion Hospital - Ban Khao Khrok Subdistrict Health Promotion Hospital - Sam Nak Thon Subdistrict Health Promotion Hospital	Sam Nak Thon Subdistrict Municipality (Sam Nak Thon Subdistrict, Ban Chang District, Rayong Province) - Village No. 1 Ban Sam Nak Thon - Village No. 2, Ban Chak Mak - Village No. 3, Ban Sa Kaeo - Sa Kaeo Community 1 - Sa Kaeo Community 2 - Village No. 6, Ban Khao Khrok - Village no. 7, Ban Nong Takhian Huai Yai Subdistrict Municipality (Huai Yai Subdistrict, Bang Lamung District, Chonburi), including - Village No. 11, Ban Map Fakthong - Village No. 13, Ban Nong Phakkut

In 34 of the sensitive and community areas which may be affected by vibrations caused by wake vortex that results in damage to buildings in the wake vortex area, the impact is expectedto be moderate. The project has implemented preventive measures and corrective measures, including environmental impact monitoring measures to reduce the impact of noise and payment of compensation for impacted people to demonstrate social responsibility and to help and alleviate the troubles of the public in the affected areas, as detailed in Chapter 7 Health and Environmental Action Plans, Health and Environmental Impact Prevention and Resolution Measures and Health and Environmental Impact Monitoring Measures and the Table of SPR.1 Project Measures.



Legend

Educational Institutions

1 Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division
2 Wat Phala School
3 Phala Subdistrict Municipality Child Development Center
4 Ban Khlong Sai School
5 Rayong English Program School
6 Rayong Garden International School
7 Ban Chang Municipality School 1 (Wat Khiri Pawanaram)
8 Wat Khiri Pawanaram School
9 Ban Khlong Bang Phai School
★10 Pattanavechsuksa School
★11 Pattanavech College
★12 Saeng Song La Child Development Center 3
★13 Wat Sa Kaeo School
★14 Wat Sombun Naram School (Tem Rat Memorial)
★15 Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School
16 Sajjaseuksa School
★17 Ban Chang District Center for Non-Formal and Informal Education
★18 Wat Suwan Rangsan Community School
★19 Ban Yai Ra Child Development Center
★20 Wat Samnak Kathon School
★21 Ban Sam Nak Thon Child Development Center
22 Burapatit Child Development Center, Sam Nak Thon SAO
23 Wat Chak Mak School
24 St. Andrews International School, Green Valley, Rayong,
25 Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)
26 Ban Phayun School
27 Rakpasa Kindergarten
28 Wat Ban Chang School (Boonrawdprachanukul)
29 Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)
30 Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)
31 Wat Prachummit Bamrung School
32 Udom Wittayanukun School
33 Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)
34 Wat Noen Kraprok School
35 Chonnabot Phatthana Kindergarten
36 Aksorn Business Administration Technological College
37 Banchang Kamchanakul Wittaya School
38 Ban Khao Huai Mahat School
39 Ban Phudon - Huai Mahat Child Development Center
40 Ban Map Fakthong School
41 Phuru Yor. Sor. Sor. 80 School
42 Khao Chi Chan School
43 Ban Khalot Child Development Center
44 Ban Khalot School
45 Phlu Ta Luang Wittaya School
46 Athittan Kindergarten School
47 Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si
48 Ban Khao Bai Si School
49 Chaleo-Pavana Memorial School (Chonburi Special Education)
50 Ban KM. 5 School
51 Royal Thai Fleet Sattahip District School
52 RTN. 8 Nursery
53 Juk Samet School
54 Juk Samet Child Development Center
55 Ban Chong Samaesam Child Development Center
56 Samaesarn Subdistrict NFE Center
57 Ban Chong Samae San School
58 Wat Phala Vipassana Office
59 Wat Phala
60 Chao Li Su Ong Yea Shrine
61 Wat Khlong Sai
62 Wat Khiri Pawanaram
63 Ban Chang Christ Church
64 Ban Chang Church
65 Wat Ban Khlong Bang Phai
66 Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)
67 Royal Thai Naval Air Division Naval Aviation Museum
68 The Royal Monument of King Taksin the Great (Air Defense Regiment 1)
69 Somdej Phra Pathom (Air Defense Regiment 1)
70 Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)
★71 Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)
★72 Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)
★73 Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)
★74 Wat Sa Kaeo
75 The Shrine of King Taksin the Great
★76 Wat Sombun Naram
★77 Ban Chang Abundant Grace Church
★78 Wat Samnak Kathon
★79 Wat Suwan Rangsan
★80 Wat Nong Bot
★81 The Shrine of Luang Tia Chak Mak
★82 Wat Chak Mak
83 The Shrine of Luang Tia Ban Phayun
84 The Shrine of King Taksin the Great (Ban Chang)
85 Wat Chonthararam (Phayun)
86 Masjid Dawatul Islam
87 Chinese shrine at the Buddha Dhamma Foundation
88 The Shrine of Luang Tia Ban Chang
89 The Shrine of Laoia Guan Yu Ban Chang
90 Wat Ban Chang
91 Wat Prachummit Bamrung
92 The Shrine of Luang Tia Noen Kraprok 1
93 The Shrine of Luang Tia Noen Kraprok 2
94 Wat Noen Kraprok
95 Wat Phudon Nim Sanoh
96 Church of Christ Ban Chang
97 Anek Kusala Sala (Viharn Sien)
98 Wat Yan Nasangwararam
99 Sirisirirak Monastery
100 Anan Buraparam Meditation Center
101 Wat Map Fakthong
102 Khao Chi Chan Image of Lord Buddha
103 Wat Khao Chi Chan
104 Rat Samakkhi Temple
105 The Shrine of Chao Mae Kuan Im
106 The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani
107 Prakai Dhamma Meditation Center
108 KM.8 Meditation Center
109 Wat Rangsee Sunthorn (KM.5)
110 Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch
111 Sattahip Meditation Center (Khao Bandai Kaew)
112 Wat Tung Prong
113 Khao Phlu Ta Luang Meditation Center
114 His Majesty's Admiral Prince Abhakara Kiartivongse's Court
115 Wat Khao Bai Si Santitham
116 Welu Amphawan Vipassana Office
117 The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3
118 The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6
119 Samaesarn Pattanakarn Church
120 His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)
121 Wat Chong Samaesan
122 Viharn Luang Por Dam
123 The Shrine of King Taksin the Great (Samaesarn)
124 Thai Island and Sea Natural History Museum
125 Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)
126 The Royal Monument of King Taksin the Great (Naval Special Warfare Command)

Medical Institutions

127 Eastern-Nong Muang Community Health Service Center
128 Phala Subdistrict Health Promotion Hospital
129 Ban Chang Hospital
130 Ban Khlong Bang Phai Subdistrict Health Promotion Hospital
★131 Ban Sa Kaeo Subdistrict Health Promotion Hospital
★132 Ban Khao Khrok Subdistrict Health Promotion Hospital
133 Ban Yai Ra Subdistrict Health Promotion Hospital
★134 Sam Nak Thon Subdistrict Health Promotion Hospital
135 Ban Chak Mak Subdistrict Health Promotion Hospital
136 Ban Phayun Subdistrict Health Promotion Hospital
137 Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)
138 Phudon-Huai Mahat Community Health Service Unit
139 Wat Yan Nasangwararam Hospital
140 Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi
141 Ban Khong Wanphen Subdistrict Health Promotion Hospital
142 Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department
143 Sattahip Hospital KM.10
144 Ban Chong Samaesarn Subdistrict Health Promotion Hospital

Communities

145 Village No. 1 Ban Sakulthong
146 Village No. 2, Ban Kilo 16
147 Village No. 4, Ban Tung Prong
148 Village No. 5, Phala Subdistrict
149 Village No. 6, Ban Takat
150 Village No. 7, Ban Khlong Sai
151 Village No. 1, Ban Sam Nak Thon
152 Village No. 2, Ban Chak Mak
153 Village No. 3, Ban Sa Kaeo
154 Sa Kaeo Community 1
155 Sa Kaeo Community 2
156 Village No. 4, Ban Khlong Bang Phai
157 Village No. 5, Ban Yai Ra
158 Village No. 6, Ban Khao Khrok
159 Village no. 7, Ban Nong Takhian
160 Village No. 8, Ban Cherng Khao
161 Eastern-Nong Muang Community
162 Wat Khiri Pawanaram Community
163 Ban Chang-Phla Community
164 Ruam Sompong Community
165 Ming Monkol Community
166 Jor Koo Community
167 Wirat Phatthana Department Store Community
168 Thep Chinda Community
169 Health Park Community
170 Wat Ban Chang Community
171 Dong Dang Community
172 Night Market Community
173 Ruam Mitr Community
174 Ban Chang - Noen Kraprok Community
175 Dao Pitak Community
176 Taiwa Community
177 East Ban Noen Kraprok Community, Prachummit
178 Ban Noen Kraprok Community
179 Nong Yai Community
180 Village No. 1, Ban Din Tai
181 Village No. 2, Ban Prachummit
182 Village No. 3, Ban Noen Samre
183 Village No. 4, Ban Phayun
184 Village No. 6, Ban Noen Kraprok
185 Village No. 7, Ban Khao Phudon Huai Mahat
186 Village No. 11, Ban Map Fakthong
187 Village No. 13, Ban Nong Phakkut
188 Village No. 6, Khao Chi Chan Subdistrict Municipality
189 Village No. 7, Khao Chi Chan Subdistrict Municipality
190 Village No. 6 (Ban Khao Krating Community)
191 Village No. 7 (Ban Nong Hin Community)
192 Village No. 11 (Ban Khong Wanphen Community)
193 Village No. 1, Ban Phlu Ta Luang
194 Village No. 2, Ban Khalot
195 Village No. 3, Ban Khlong Phai
196 Village No. 4, Ban Khlong Phlu Ta Luang
197 Village No. 5, Ban Khao Bai Si
198 Village No. 6, Ban Khao Tabaek
199 Village No. 7, Ban Nong Ya Noi
200 Village No. 8, Ban Nong Ya
201 Ban Nong Krachong Community

Provincial zone
District zone
Subdistrict zone
Runway 1 (Current)
Runway 2
Airport extension area (project area)
U-Tapao International Airport area
Project study area
Wake Vortex
★ Sensitive areas in the wake-vortex

Image 5.2-59 Sensitive areas and communities in the study area compared to wake vortex area.

5.2.3 Air quality

5.2.3.1 Construction Phase

(1) Study Methods

Sources of particulate matter during the construction phase are caused by particle dispersion from stripping topsoil and the transportation of construction materials. These activities may cause particle dispersion, which may impact for short periods during construction activities and will clear into the atmosphere. However, the expected impact that may occur from construction, using the AERMOD version 9.9.0 mathematical model has been detailed as follows:

1) Mathematical Model

In assessing the impact of air pollution due to the implementation of the project, the Consultant chose to use the AERMOD air quality model (The American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee's Dispersion Model). The AERMOD model was developed with the expectation of replacing the ISC model. In 1991 the American Society of Metological Society (AMS) collaborated with the United States Environmental Protection Agency: (USEPA) to propose a method for predicting the concentration of air pollutants using the theory "Planetary Boundary Layer". A working group called AERMIC (AMS/EPA Regulatory Model Improvement Committee) was established to improve the existing mathematical models. At present, the AERMOD mathematical model is classified as the Preferred/Recommended Model (Source: http://www.epa.gov/ttn/scram/dispersionindex.htm). It can generally be used without needing to repeat calibrations, as the model has been tested and calibrated by the US.EPA. (Appendix W : 40 CFR Part 51 Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule, US.EPA. 2005)

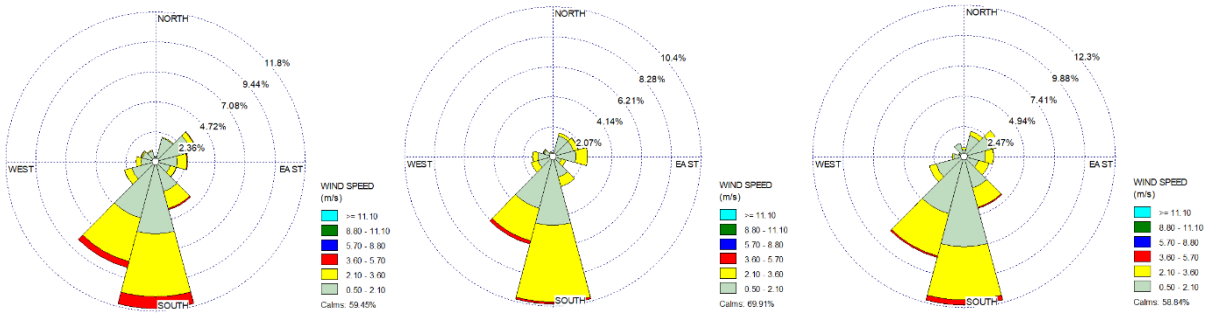
The AERMOD mathematical model is Steady-State Plume Model which uses Gaussian Plume Equation as the baseline equation for assessing emissions. It is similar to ISCST, but has been further updated from ISCST by using the Planetary Boundary Layer (PBL) for analyzing the atmospheric emissions for calculating the spread of air pollution. The AERMOD model divides atmospheric layers into 2 parts, i.e.

- The Stable Boundary Layer (SBL) is the atmosphere adjacent to the earth's surface and is mainly influenced by the friction of the earth's surface.
- The Convective Boundary Layer (CBL) is the atmosphere adjacent to the earth's surface and is mainly influenced by heating of the earth's surface.

2) Meteorological data

Meteorological data is important data used in studying and assessing the concentration of air pollution by mathematical modeling. The AERMET mathematical model program is a processing program which uses surface meteorological data, upper air meteorological data, and meteorological data of the area based on land use characteristics. In this study, the AERMET program of the U.S.EPA. system was used to prepare the meteorological data for the AERMOD model.

- Surface Meteorological Data includes temperature, wind speed, wind direction, cloud base height, and cloud cover volume. This will be prepared and processed together with the Upper Air Meteorological Data by the AERMET program before it is used with the AERMOD mathematical model. Consideration of the location closest to the study area or similar to the study area was made for the selection of surface meteorological data. This study used surface meteorological data from the monitoring station of the U-Tapao International Airport from the Royal Thai Naval Air Division from 2016-2018 show the Wind Rose, as shown in Figure 5.2-60
- Upper Air Meteorological Data, namely temperature, atmospheric pressure, wind direction and speed, using meteorological data from Bangkok Bangna Air Monitoring Station of the Department of Meteorological Data, 2016-2018



Year 2016 Year 2017 Year 2018

Figure 5.2-60 Wind Rose at U-Tapao International Airport between 2016-2018

3) Information imported into the AERMAP program

The AERMOD mathematical model imports the study site's height data to process using the AERMAP program, which considers using the SRTM1 (Shuttle Radar Topography Mission) database, which has a resolution of 1-arc second (30 m x 30 m).

(2) Study Results

Sources of pollution

From the assessment of the nature of the project activities, it was found that the sources of air quality pollution originated from the following construction activities:

1) Particulate assessment from site preparation activities and leveling the ground

Air pollution occurring during the construction period includes particulates, caused by various activities, such as ground level preparation and compacting during construction of the runway. The particulate volume varies on a daily basis, depending on various factors, such as work characteristics, daily climate characteristics, soil composition, soil moisture, wind speed and direction, and the construction period etc. In order to assess the impact of particle dispersion, reference is made to the flow rate data from the U.S. EPA (The Environmental Protection Agency) "Compilations of Emission Factor, AP-42" (1995) which states that large-scale construction activities will release total suspended particles (TSP) at at approximately 2.69 grams/hectare/month. In this regard, 1 month is set to have 30 days and 8 hours a day. Therefore, the rate of total suspended particles (TSP) in the construction of the runway can be assessed as being 3.46 x 10- ^{5} grams per square meter per second.

Regarding the ventilation rate particulates no larger than 10 microns (PM_{10}) reference is made to California Air Resources Board (2013), which estimated PM_{10} from construction activities as 1.56 grams per square meter per month, therefore, the PM_{10} ventilation rate is 6.02 x 10 $^{-6}$ grams per square meter per second.

In this regard, the construction activities of the project consisting of stripping topsoil for construction of each area, will continue gradually. The project is limited to strip topsoil of no more than 10,000 square meters per day per area.

2) Evaluation of engine emissions from construction machinery

The significant air pollution emitted from the engines of construction equipment, include carbon monoxide (CO) and nitrogen oxide (NO_x) gas, which is considered in the form of nitrogen dioxide ($NO_{2)\ gas,}$which may have a direct impact on human health. Therefore, in assessing CO and NO_2 gas concentrations resulting from construction activities of the project, consideration was made using the AERMOD model to predict the impacts of such project activities. During the construction period, there is exhaust emissions from machinery used during the preparation of the area, ground level adjustment, construction of the runway and construction of other facilities. The forecast of the pollution Emission rate from machinery and the various equipment used in the construction can be referenced from "Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines", U.S. EPA (2018). The emission of air pollutants from the machinery is limited to 8 hours per day on working days.

When considering project construction activities, cases in which construction work will be conducted at the same time comprise: 1) construction work on Runway 2; 2) construction work on the parallel taxiway; 3) construction work on the runway underpass; 4) construction work on aircraft aprons and aircraft stand taxilanes; 5) construction work on Passenger Terminal 3; 6) construction work on the warehouse; 7) construction work on the control tower; 8) construction work on the ground transportation center; 9) construction work on the car park building; 10) construction work on the firefighting building; 11) road construction work; 12) construction work on office buildings/shops; 13) construction work on the aviation support area; and 14) construction work on the high-speed train station (underground), with the rate of air pollution from the machinery used in such construction activities as shown in Table 5.2-46 andTable 5.2-47

Table 5.2-46Emission rate of air pollution from machinery used in construction activities

Machinery	Number (vehicles)	Emission Rate [1/] (grams/horsepower-hours)			Emission Rate from Project Machinery (grams/second)		
		PM_{10}	CO	NO_X	PM_{10}	CO	NO_X
1. Land adjustments/soil quality improvement/groundwork							
Backhoe 135 horsepower	1	0.002	0.230	1.992	0.000003	0.0005	0.0044
Grader 135 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Bulldozer 100 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Truck 160 horsepower	3	0.004	0.691	5.975	0.000009	0.0015	0.0133
RIC Machine 270 horsepower	1	0.004	1.890	2.487	0.000009	0.0042	0.0055
Compactor 142 hp	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Total	8	0.013	3.501	16.430	0.000030	0.0077	0.0364

Table 5.2-46Emission rate of air pollution from machinery used in construction activities

Machinery	Number (vehicles)	Emission Rate [1/] (grams/horsepower-hours)			Emission Rate from Project Machinery (grams/second)		
		PM_{10}	CO	NO_X	PM_{10}	CO	NO_X
2. Filling work for embankments and safety areas around the taxiways/pavement structure construction work							
Backhoe 135 horsepower	1	0.002	0.230	1.992	0.000003	0.0005	0.0044
Grader 135 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Bulldozer 100 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Truck 160 horsepower	3	0.004	0.691	5.975	0.000009	0.0015	0.0132
Vibratory Roller 142 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Static Steel Roller 110 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Pneumatic Rubber Tyre Roller 133 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Total	9	0.011	2.071	17.927	0.000027	0.0045	0.0396
3. Pavement Structure/Surface Work							
Backhoe 135 horsepower	1	0.002	0.230	1.992	0.000003	0.0005	0.0044
Grader 135 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Bulldozer 100 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Truck 160 horsepower	3	0.004	0.691	5.975	0.000009	0.0015	0.0133
Concrete truck 280 horsepower	3	0.013	5.670	7.460	0.000028	0.0126	0.0166
Total	9	0.021	7.051	19.411	0.000046	0.0156	0.0431
4. Excavations and driving of piling/extraction of piling heads and runway underpass roof							
Backhoe 135 horsepower	2	0.003	0.460	3.984	0.000007	0.0010	0.0089
Bulldozer 100 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Grader 135 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Truck 160 horsepower	2	0.003	0.460	3.984	0.000006	0.0010	0.0089
Crane 280 horsepower	2	0.008	3.780	4.973	0.000019	0.0084	0.0111
Concrete Truck 280 horsepower	2	0.008	3.780	4.973	0.000019	0.0084	0.0111
Concrete Pump 190 horsepower	2	0.008	3.780	4.973	0.000019	0.0084	0.0111
Total	12	0.032	12.720	16.871	0.00076	0.0282	0.0599
5. Foundation work							
Pile drilling machine 525 horsepower	1	0.004	1.890	2.487	0.000010	0.0042	0.0055
Backhoe 135 horsepower	1	0.002	0.230	1.992	0.000003	0.0005	0.0044
Truck 160 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Concrete truck 280 horsepower	1	0.004	1.890	2.487	0.000009	0.0042	0.0055
Total	4	0.011	4.240	8.958	0.000025	0.0094	0.0198
6. Structural work							
Concrete truck 280 horsepower	2	0.008	3.780	4.973	0.000019	0.0084	0.0111
Concrete Pump 190 horsepower	2	0.008	3.780	4.973	0.000019	0.0084	0.0111
Crane 450 horsepower	2	0.009	3.780	4.973	0.000020	0.0084	0.0111
Truck 160 horsepower	2	0.003	0.460	3.984	0.000006	0.0010	0.0089
Total	8	0.028	11.800	18.903	0.000064	0.0262	0.0422
7. Architecture and System Work							
Crane 280 horsepower	2	0.008	3.780	4.973	0.000019	0.0084	0.0111
Truck 160 horsepower	2	0.003	0.460	3.984	0.000006	0.0010	0.0089
Total	4	0.011	4.240	8.957	0.000025	0.0094	0.0200
8. Construction work within station/system work and architectural work inside electric train station							
Backhoe 135 horsepower	1	0.002	0.230	1.992	0.000003	0.0005	0.0044
Truck 160 horsepower	3	0.004	0.691	5.975	0.000009	0.0015	0.0133

Table 5.2-46Emission rate of air pollution from machinery used in construction activities

Machinery	Number (vehicles)	Emission Rate [1/] (grams/horsepower-hours)			Emission Rate from Project Machinery (grams/second)		
		PM_{10}	CO	NO_X	PM_{10}	CO	NO_X
Bulldozer 100 horsepower	1	0.001	0.230	1.992	0.000003	0.0005	0.0044
Concrete truck 280 horsepower	3	0.013	5.670	7.460	0.000028	0.0126	0.0166
Scissor lift 25 horsepower	1	0.001	0.470	2.784	0.000003	0.0010	0.0062
Total	9	0.021	7.291	20.203	0.000046	0.0161	0.0449

Note : [1/] Modified from "Exhaust and Crankcase Emission Factors for Non-road Compression-Ignition Engines, U.S. EPA, July 2018

Table 5.2-47 Summary of air pollution emission rates from machinery

Activity	Pollution emission rate from machinery (grams/second)		
	PM_{10}	CO	NO_x
Runway 2	0.00003	0.00450	0.03960
Parallel taxiways	0.00003	0.00450	0.03960
Runway underpass	0.00076	0.02820	0.05990
Aircraft stand taxilane	0.00003	0.00770	0.03640
Terminal 3	0.00006	0.02620	0.04220
Warehouse building	0.00003	0.00940	0.01980
Control tower	0.00003	0.00940	0.02000
Ground transportation center	0.00008	0.03093	0.05196
Parking building	0.00008	0.03093	0.05196
Fire-fighting building	0.00008	0.03093	0.05196
Road	0.00005	0.01560	0.04310
Office building/store	0.00006	0.02620	0.04220
Flight support area	0.00003	0.00940	0.01980
High speed train station (underground)	0.00005	0.01610	0.04490

3) Air quality assessment results

The air quality assessment from the construction of the 2nd runway parallel taxiway, runway underpass, 3rd terminal, flight control tower, roads, office buildings/shops, aviation support area, high-speed train (underground) station, consists of total suspended particles (TSP), PM_{10}, carbon monoxide (CO), and nitrogen dioxide ($NO_{2)\ gas.}$ The source of pollutants include, stripping topsoil, and emissions from construction machinery. The results of the air quality assessment are shown in Table 5.2-48 Results andFigure 5.2-61 to Figure 5.2-64 with details as follows:

1. Total suspended particles (TSP)

The baseline values from the 24-hour average measurement of total suspended particles (TSP) was in the range of 71.000-142.000 micrograms per cubic meter, while the projected total 24-hour average measurement of total suspended particles (TSP) from construction activities in sensitive areas and communities around the project, the concentration range was in the range of 1.627 - 132.226 micrograms per cubic meter, with the Cmax in the Eastern-Nong Muang community, which is located 1,120 meters from the construction area. When the model is combined with the baseline values, the TSP concentration is in the range of 79.852 - 274.226 micrograms per cubic meter and found that all sites were within general atmospheric air quality standard range (according to Announcement of the National Environment Board No. 24 (2004) Re: Determination of General Atmospheric Air Quality Standards, which requires that 24-hour average TSP must not exceed 330 micrograms per cubic meter).

2. Particulates smaller than 10 microns (PM_{10})

The baseline value from the 24-hour average measurement of particulate matter with a diameter of less than 10 microns (PM_{10}): was in the range of 42.000-64.000 micrograms per cubic meter, while the projected amount of PM10 from construction activities was in the range of 0.350 - 26.912 micrograms per cubic meter, with the Cmax being in Eastern-Nong Muang Community, located 1,120 meters away from the construction area. When the model is combined with the baseline values, the PM10 particles are within the range of 43.668 - 90.912 micrograms per cubic meter. When compared with the general atmospheric air quality standards (according to Announcement of the National Environment Board No. 24 (2004) Re: Determination of General Atmospheric Air Quality Standards, which requires that 24-hour average PM10 concentration must not exceed 120 micrograms per cubic meter), it was found that all sites were within standard range.

3. Carbon monoxide (CO)

The baseline values from the 1-hour average measurements of carbon monoxide (CO) were in the range of 1,470.000-2,240.000 micrograms per cubic meter, while the projected carbon monoxide from construction activities was in the range of 2.174 - 135.462 micrograms per cubic meter, with the Cmax being in the area of Ban Sa Kaeo Subdistrict Health Promotion Hospital, located 2,620 meters away from the construction area. When the model is combined with the baseline values, carbon monoxide is within the range of 1,506.131 - 2,375.462 micrograms per cubic meter. When compared with the general atmospheric air quality standards (according to Announcement No. 10 of the National Environment Board 1995 Re: Determination of General Atmospheric Air

Quality Standards, which requires that the 1-hour average CO concentration must not exceed 34,200 micrograms per cubic meter), it was found that all sites were within standard range.

4. Nitrogen dioxide (NO_2)

The baseline values from the 1-hour average measurements of nitrogen monoxide (NO_2) were in the range of 17.700-79.800 micrograms per cubic meter, while the projected carbon monoxide from construction activities was in the range of 2.487 - 154.511 micrograms per cubic meter, with the Cmax being in the area of Ban Sa Kaeo Subdistrict Health Promotion Hospital, located 2,620 meters away from the construction area. When the model is combined with the baseline values, nitrogen dioxide is within the range of 32.411 - 243.111 micrograms per cubic meter. When compared with the general atmospheric air quality standards (according to Announcement No. 33 of the National Environment Board (2009) Re: Determination of Standards for Nitrogen Dioxide in General Atmospheric Air, which requires that the 1-hour average nitrogen dioxide concentrations (NO_2) must not exceed 320 micrograms per cubic meter), it was found that all sites were within standard range when considered overall.

Overall, it is expected that the impacts of air pollution from construction activities of the project are low to moderate.

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Table 5.2-48Results of evaluation for atmospheric air quality during construction phase

Unit: micrograms per cubic meter

Sensitive area/community	Distance from project area (meters)	Results of measurement at current state[4/]				Assessment results from the model				The results of the measurement in the current state combined with the assessment results from the model.			
		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
1. Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	1,420	142.000	64.000	2,240.000	79.800	32.664	6.828	26.620	30.751	174.664	70.828	2,266.620	110.551
2. Wat Phala School	2,620	89.000	53.000	1,760.000	17.700	30.735	6.222	43.490	51.192	119.735	59.222	1,803.490	68.892
3. Phala Subdistrict Municipality Child Development Center	2,880	142.000	64.000	2,240.000	79.800	28.244	5.736	34.129	40.159	170.244	69.736	2,274.129	119.959
4. Ban Khlong Sai School	3,030	142.000	64.000	2,240.000	79.800	30.341	6.238	17.102	20.167	172.341	70.238	2,257.102	99.967
5. Rayong English Program School	2,800	142.000	64.000	2,240.000	79.800	35.386	7.386	22.012	26.775	177.386	71.386	2,262.012	106.575
6. Rayong Garden International School	2,900	142.000	64.000	2,240.000	79.800	39.156	8.113	22.786	28.288	181.156	72.113	2,262.786	108.088
7. Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	2,510	142.000	64.000	2,240.000	79.800	9.283	1.742	7.209	8.195	151.283	65.742	2,247.209	87.995
8. Wat Khiri Pawanaram School	2,570	71.000	42.000	1,740.000	25.000	8.852	1.668	6.542	7.411	79.852	43.668	1,746.542	32.411
9. Ban Khlong Bang Phai School	1,550	74.000	53.000	1,470.000	79.800	66.164	13.514	36.131	41.922	140.164	66.514	1,506.131	121.722
10. Pattanavechsuksa School	1,740	142.000	64.000	2,240.000	24.300	66.562	15.981	50.436	57.442	208.562	79.981	2,290.436	81.742
11. Pattanavech College	1,860	142.000	64.000	2,240.000	79.800	61.375	14.901	47.970	54.126	203.375	78.901	2,287.970	133.926
12. Saeng Song La Child Development Center 3	2,610	142.000	64.000	2,240.000	79.800	102.857	24.424	130.264	147.434	244.857	88.424	2,370.264	227.234
13. Wat Sa Kaeo School	2,720	89.000	53.000	1,470.000	18.100	97.005	23.175	125.898	141.715	186.005	76.175	1,595.898	159.815
14. Wat Sombun Naram School (Tem Rat Memorial)	6,240	142.000	64.000	2,240.000	79.800	29.754	7.053	21.310	24.036	171.754	71.053	2,261.310	103.836
15. Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	6,240	142.000	64.000	2,240.000	79.800	29.754	7.053	21.310	24.036	171.754	71.053	2,261.310	103.836
16. Sajjaseuksa School	5,620	142.000	64.000	2,240.000	79.800	11.707	2.890	10.983	12.338	153.707	66.890	2,250.983	92.138
17. Ban Chang District Center for Non-Formal and Informal Education	6,820	142.000	64.000	2,240.000	79.800	19.334	4.204	13.121	15.165	161.334	68.204	2,253.121	94.965
18. Wat Suwan Rangsan Community School	6,750	142.000	64.000	2,240.000	79.800	13.116	2.733	11.305	12.858	155.116	66.733	2,251.305	92.658
19. Ban Yai Ra Child Development Center	6,790	142.000	64.000	2,240.000	79.800	11.750	2.541	10.215	11.659	153.750	66.541	2,250.215	91.459
20. Wat Samnak Kathon School	8,520	142.000	64.000	2,240.000	79.800	13.317	3.059	11.672	14.055	155.317	67.059	2,251.672	93.855
21. Ban Sam Nak Thon Child Development Center	8,570	142.000	64.000	2,240.000	79.800	13.686	3.128	11.763	14.271	155.686	67.128	2,251.763	94.071
22. Burapatit Child Development Center, Sam Nak Thon SAO	11,160	142.000	64.000	2,240.000	79.800	8.335	1.779	8.531	10.809	150.335	65.779	2,248.531	90.609
23. Wat Chak Mak School	11,130	142.000	64.000	2,240.000	79.800	8.787	1.978	7.980	9.829	150.787	65.978	2,247.980	89.629
24. St. Andrews International School, Green Valley, Rayong,	12,360	142.000	64.000	2,240.000	79.800	2.758	0.584	2.344	2.751	144.758	64.584	2,242.344	82.551
25. Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	5,140	142.000	64.000	2,240.000	79.800	22.678	4.557	12.828	15.389	164.678	68.557	2,252.828	95.189
26. Ban Phayun School	5,140	142.000	64.000	2,240.000	79.800	22.399	4.496	12.763	15.357	164.399	68.496	2,252.763	95.157
27. Rakpasa Kindergarten	4,590	142.000	64.000	2,240.000	79.800	34.805	7.074	18.620	22.592	176.805	71.074	2,258.620	102.392
28. Wat Ban Chang School (Boonrawdprachanukul)	4,830	142.000	64.000	2,240.000	79.800	13.709	3.311	24.172	26.275	155.709	67.311	2,264.172	106.075
29. Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	6,940	142.000	64.000	2,240.000	79.800	12.266	2.576	12.385	14.305	154.266	66.576	2,252.385	94.105
30. Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	6,940	142.000	64.000	2,240.000	79.800	12.266	2.576	12.385	14.305	154.266	66.576	2,252.385	94.105
31. Wat Prachummit Bamrung School	7,550	142.000	64.000	2,240.000	79.800	7.114	1.583	9.400	10.770	149.114	65.583	2,249.400	90.570

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Table 5.2-48Results of evaluation for atmospheric air quality during construction phase

Unit: micrograms per cubic meter

Sensitive area/community	Distance from project area (meters)	Results of measurement at current state[4/]				Assessment results from the model				The results of the measurement in the current state combined with the assessment results from the model.			
		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
32. Udom Wittayanukun School	8,660	142.000	64.000	2,240.000	79.800	4.326	0.898	6.971	8.032	146.326	64.898	2,246.971	87.832
33. Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	8,590	142.000	64.000	2,240.000	79.800	3.635	0.787	5.706	6.488	145.635	64.787	2,245.706	86.288
34. Wat Noen Kraprok School	8,590	142.000	64.000	2,240.000	79.800	3.594	0.782	5.623	6.375	145.594	64.782	2,245.623	86.175
35. Chonnabot Phatthana Kindergarten	8,170	142.000	64.000	2,240.000	79.800	5.464	1.037	4.722	5.267	147.464	65.037	2,244.722	85.067
36. Aksorn Business Administration Technological College	5,790	142.000	64.000	2,240.000	79.800	12.527	2.528	19.763	21.997	154.527	66.528	2,259.763	101.797
37. Banchang Karnchanakul Wittaya School	5,570	142.000	64.000	2,240.000	79.800	11.608	2.583	11.537	12.996	153.608	66.583	2,251.537	92.796
38. Ban Khao Huai Mahat School	10,040	142.000	64.000	2,240.000	79.800	2.363	0.463	2.174	2.487	144.363	64.463	2,242.174	82.287
39. Ban Phudon - Huai Mahat Child Development Center	10,040	142.000	64.000	2,240.000	79.800	2.363	0.463	2.174	2.487	144.363	64.463	2,242.174	82.287
40. Ban Map Fakthong School	13,740	142.000	64.000	2,240.000	79.800	10.097	2.227	8.774	10.146	152.097	66.227	2,248.774	89.946
41. Phuru Yor. Sor. Sor. 80 School	12,460	142.000	64.000	2,240.000	79.800	9.749	2.209	9.650	11.018	151.749	66.209	2,249.650	90.818
42. Khao Chi Chan School	9,460	142.000	64.000	2,240.000	79.800	4.229	0.958	8.884	10.411	146.229	64.958	2,248.884	90.211
43. Ban Khalot Child Development Center	3,120	142.000	64.000	2,240.000	79.800	31.109	6.964	19.905	23.286	173.109	70.964	2,259.905	103.086
44. Ban Khalot School	3,150	142.000	64.000	2,240.000	79.800	29.769	6.865	22.820	25.755	171.769	70.865	2,262.820	105.555
45. Phlu Ta Luang Wittaya School	4,460	142.000	64.000	2,240.000	79.800	10.199	2.398	14.488	17.095	152.199	66.398	2,254.488	96.895
46. Athittan Kindergarten School	4,490	142.000	64.000	2,240.000	79.800	17.835	3.984	19.927	23.223	159.835	67.984	2,259.927	103.023
47. Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	5,410	142.000	64.000	2,240.000	79.800	19.724	4.559	18.313	20.907	161.724	68.559	2,258.313	100.707
48. Ban Khao Bai Si School	5,460	142.000	64.000	2,240.000	79.800	16.593	3.782	17.535	20.029	158.593	67.782	2,257.535	99.829
49. Chaleo-Pavana Memorial School (Chonburi Special Education)	6,330	142.000	64.000	2,240.000	79.800	7.129	1.655	10.875	12.540	149.129	65.655	2,250.875	92.340
50. Ban KM. 5 School	6,620	142.000	64.000	2,240.000	79.800	16.987	3.537	11.389	13.263	158.987	67.537	2,251.389	93.063
51. Royal Thai Fleet Sattahip District School	8,260	142.000	64.000	2,240.000	79.800	13.248	2.744	8.360	9.719	155.248	66.744	2,248.360	89.519
52. RTN. 8 Nursery	7,740	142.000	64.000	2,240.000	79.800	10.071	2.059	9.751	11.154	152.071	66.059	2,249.751	90.954
53. Juk Samet School	7,820	142.000	64.000	2,240.000	79.800	10.032	2.051	9.679	11.066	152.032	66.051	2,249.679	90.866
54. Juk Samet Child Development Center	7,990	142.000	64.000	2,240.000	79.800	9.959	2.036	9.530	10.893	151.959	66.036	2,249.530	90.693
55. Ban Chong Samaesarn Child Development Center	8,520	142.000	64.000	2,240.000	79.800	9.565	1.833	9.157	10.403	151.565	65.833	2,249.157	90.203
56. Samaesarn Subdistrict NFE Center	8,610	142.000	64.000	2,240.000	79.800	9.822	1.889	9.135	10.467	151.822	65.889	2,249.135	90.267
57. Ban Chong Samaesarn School	8,230	142.000	64.000	2,240.000	79.800	10.844	2.077	8.747	10.122	152.844	66.077	2,248.747	89.922
58. Wat Phala Vipassana Office	2,470	142.000	64.000	2,240.000	79.800	27.064	5.980	49.355	57.064	169.064	69.980	2,289.355	136.864
59. Wat Phala	2,510	142.000	64.000	2,240.000	79.800	29.825	6.052	32.942	38.748	171.825	70.052	2,272.942	118.548
60. Chao Li Hu Ong Yea Shrine	840	142.000	64.000	2,240.000	79.800	38.655	9.587	28.925	33.503	180.655	73.587	2,268.925	113.303
61. Wat Khlong Sai	1,640	142.000	64.000	2,240.000	79.800	35.571	7.651	19.441	22.739	177.571	71.651	2,259.441	102.539
62. Wat Khiri Pawanaram	1,630	142.000	64.000	2,240.000	79.800	7.047	1.350	5.044	5.614	149.047	65.350	2,245.044	85.414
63. Ban Chang Christ Church	2,200	142.000	64.000	2,240.000	79.800	6.490	1.250	5.883	6.682	148.490	65.250	2,245.883	86.482
64. Ban Chang Church	2,540	142.000	64.000	2,240.000	79.800	8.163	1.573	7.654	8.805	150.163	65.573	2,247.654	88.605
65. Wat Ban Khlong Bang Phai	1,460	142.000	64.000	2,240.000	79.800	61.697	12.477	38.085	43.914	203.697	76.477	2,278.085	123.714
66. Admiral Prince Abhakara Kiartivongse Monument	1,330	142.000	64.000	2,240.000	79.800	56.245	12.870	38.404	41.454	198.245	76.870	2,278.404	121.254

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Unit: micrograms per cubic meter

Sensitive area/community	Distance from project area (meters)	Results of measurement at current state[4/]				Assessment results from the model				The results of the measurement in the current state combined with the assessment results from the model.			
		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
67. Royal Thai Naval Air Division Naval Aviation Museum	1,240	142.000	64.000	2,240.000	79.800	59.111	11.664	41.855	46.164	201.111	75.664	2,281.855	125.964
68. The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	1,010	142.000	64.000	2,240.000	79.800	93.802	20.742	46.426	52.579	235.802	84.742	2,286.426	132.379
69. Somdej Phra Pathom (Air Defense Regiment 1)	660	142.000	64.000	2,240.000	79.800	86.972	19.886	52.168	58.524	228.972	83.886	2,292.168	138.324
70. Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	550	142.000	64.000	2,240.000	79.800	92.894	21.377	56.861	64.338	234.894	85.377	2,296.861	144.138
71. Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	90	142.000	64.000	2,240.000	79.800	60.792	16.295	37.925	42.925	202.792	80.295	2,277.925	122.725
72. Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	40	142.000	64.000	2,240.000	79.800	58.308	14.374	34.165	38.592	200.308	78.374	2,274.165	118.392
73. Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	180	142.000	64.000	2,240.000	79.800	50.975	12.450	28.980	32.752	192.975	76.450	2,268.980	112.552
74. Wat Sa Kaeo	1,720	142.000	64.000	2,240.000	79.800	79.164	18.858	125.685	146.193	221.164	82.858	2,365.685	225.993
75. The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	1,200	142.000	64.000	2,240.000	79.800	6.723	1.453	4.828	5.448	148.723	65.453	2,244.828	85.248
76. Wat Sombun Naram	5,070	142.000	64.000	2,240.000	79.800	27.755	6.481	21.743	24.741	169.755	70.481	2,261.743	104.541
77. Ban Chang Abundant Grace Church	6,380	142.000	64.000	2,240.000	79.800	21.206	5.029	15.727	17.743	163.206	69.029	2,255.727	97.543
78. Wat Samnak Kathon	7,140	142.000	64.000	2,240.000	79.800	13.106	3.026	11.608	14.015	155.106	67.026	2,251.608	93.815
79. Wat Suwan Rangsan	5,560	142.000	64.000	2,240.000	79.800	11.750	2.541	10.215	11.659	153.750	66.541	2,250.215	91.459
80. Wat Nong Bot	7,810	142.000	64.000	2,240.000	79.800	9.726	2.243	7.111	8.285	151.726	66.243	2,247.111	88.085
81. The Shrine of Luang Tia Chak Mak	9,630	142.000	64.000	2,240.000	79.800	10.069	2.240	8.502	10.470	152.069	66.240	2,248.502	90.270
82. Wat Chak Mak	9,700	142.000	64.000	2,240.000	79.800	10.232	2.282	8.375	10.325	152.232	66.282	2,248.375	90.125
83. The Shrine of Luang Tia Ban Phayun	4,870	142.000	64.000	2,240.000	79.800	17.847	3.640	11.393	13.554	159.847	67.640	2,251.393	93.354
84. The Shrine of King Taksin the Great (Ban Chang)	4,790	142.000	64.000	2,240.000	79.800	17.077	3.521	12.220	14.189	159.077	67.521	2,252.220	93.989
85. Wat Chonthararam (Phayun)	4,280	142.000	64.000	2,240.000	79.800	23.444	4.719	13.094	15.612	165.444	68.719	2,253.094	95.412
86. Masjid Dawatul Islam	3,450	142.000	64.000	2,240.000	79.800	13.824	2.669	14.586	16.015	155.824	66.669	2,254.586	95.815
87. Chinese shrine at the Buddha Dhamma Foundation	4,340	142.000	64.000	2,240.000	79.800	16.150	3.446	27.135	30.575	158.150	67.446	2,267.135	110.375
88. The Shrine of Luang Tia Ban Chang	3,820	142.000	64.000	2,240.000	79.800	10.520	2.315	20.294	22.903	152.520	66.315	2,260.294	102.703
89. The Shrine of Laoia Guan Yu Ban Chang	3,920	142.000	64.000	2,240.000	79.800	12.832	3.017	24.122	27.193	154.832	67.017	2,264.122	106.993
90. Wat Ban Chang	3,900	142.000	64.000	2,240.000	79.800	16.144	3.892	28.160	30.831	158.144	67.892	2,268.160	110.631
91. Wat Prachummit Bamrung	6,710	142.000	64.000	2,240.000	79.800	7.586	1.506	9.016	10.388	149.586	65.506	2,249.016	90.188
92. The Shrine of Luang Tia Noen Kraprok 1	7,340	142.000	64.000	2,240.000	79.800	6.771	1.379	10.054	11.906	148.771	65.379	2,250.054	91.706
93. The Shrine of Luang Tia Noen Kraprok 2	7,540	142.000	64.000	2,240.000	79.800	5.033	1.048	7.842	9.018	147.033	65.048	2,247.842	88.818
94. Wat Noen Kraprok	7,630	142.000	64.000	2,240.000	79.800	4.038	0.867	6.270	7.168	146.038	64.867	2,246.270	86.968
95. Wat Phudon Nim Sanoh	8,670	142.000	64.000	2,240.000	79.800	2.195	0.431	2.429	2.779	144.195	64.431	2,242.429	82.579
96. Church of Christ Ban Chang	8,560	142.000	64.000	2,240.000	79.800	2.621	0.515	2.341	2.668	144.621	64.515	2,242.341	82.468
97. Anek Kusala Sala (Viharn Sien)	11,040	142.000	64.000	2,240.000	79.800	11.081	2.467	11.311	12.978	153.081	66.467	2,251.311	92.778
98. Wat Yan Nasangwararam	11,080	142.000	64.000	2,240.000	79.800	10.471	2.396	10.812	12.443	152.471	66.396	2,250.812	92.243
99. Sirisirirak Monastery	11,440	142.000	64.000	2,240.000	79.800	6.512	1.548	9.034	10.564	148.512	65.548	2,249.034	90.364
100. Anan Buraparam Meditation Center	11,950	142.000	64.000	2,240.000	79.800	7.164	1.640	12.022	13.796	149.164	65.640	2,252.022	93.596
101. Wat Map Fakthong	13,170	142.000	64.000	2,240.000	79.800	9.743	2.180	9.096	10.465	151.743	66.180	2,249.096	90.265

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Draft Version

Table 5.2-48Results of evaluation for atmospheric air quality during construction phase

Unit: micrograms per cubic meter

Sensitive area/community	Distance from project area (meters)	Results of measurement at current state[4/]				Assessment results from the model				The results of the measurement in the current state combined with the assessment results from the model.			
		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
102. Khao Chi Chan Image of Lord Buddha	9,080	142.000	64.000	2,240.000	79.800	3.582	0.800	5.985	6.930	145.582	64.800	2,245.985	86.730
103. Wat Khao Chi Chan	7,420	142.000	64.000	2,240.000	79.800	3.026	0.683	7.202	8.379	145.026	64.683	2,247.202	88.179
104. Rat Samakkhi Temple	2,990	142.000	64.000	2,240.000	79.800	31.965	7.226	21.033	24.188	173.965	71.226	2,261.033	103.988
105. The Shrine of Chao Mae Kuan Im	3,220	142.000	64.000	2,240.000	79.800	27.379	6.428	21.903	25.407	169.379	70.428	2,261.903	105.207
106. The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	2,690	142.000	64.000	2,240.000	79.800	33.891	7.924	23.695	27.417	175.891	71.924	2,263.695	107.217
107. Prakai Dhamma Meditation Center	5,810	142.000	64.000	2,240.000	79.800	18.568	3.836	12.748	14.804	160.568	67.836	2,252.748	94.604
108. KM.8 Meditation Center	4,650	142.000	64.000	2,240.000	79.800	21.189	4.773	15.150	17.742	163.189	68.773	2,255.150	97.542
109. Wat Rangsee Sunthorn (KM.5)	6,670	142.000	64.000	2,240.000	79.800	17.400	3.645	11.379	13.157	159.400	67.645	2,251.379	92.957
110. Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	7,340	142.000	64.000	2,240.000	79.800	2.850	0.648	3.990	4.739	144.850	64.648	2,243.990	84.539
111. Sattahip Meditation Center (Khao Bandai Kaew)	7,400	142.000	64.000	2,240.000	79.800	3.654	0.860	5.459	6.389	145.654	64.860	2,245.459	86.189
112. Wat Tung Prong	8,200	142.000	64.000	2,240.000	79.800	2.848	0.605	4.808	5.752	144.848	64.605	2,244.808	85.552
113. Khao Phlu Ta Luang Meditation Center	4,220	142.000	64.000	2,240.000	79.800	1.627	0.350	2.634	3.149	143.627	64.350	2,242.634	82.949
114. His Majesty's Admiral Prince Abhakara Kiartivongse's Court	4,030	142.000	64.000	2,240.000	79.800	25.663	5.980	18.558	21.716	167.663	69.980	2,258.558	101.516
115. Wat Khao Bai Si Santitham	4,690	142.000	64.000	2,240.000	79.800	20.663	4.789	18.935	21.647	162.663	68.789	2,258.935	101.447
116. Welu Amphawan Vipassana Office	4,960	142.000	64.000	2,240.000	79.800	18.103	4.219	17.364	19.840	160.103	68.219	2,257.364	99.640
117. The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	5,590	142.000	64.000	2,240.000	79.800	12.039	2.349	10.897	12.584	154.039	66.349	2,250.897	92.384
118. The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	5,680	142.000	64.000	2,240.000	79.800	16.066	3.361	11.916	13.783	158.066	67.361	2,251.916	93.583
119. Samaesarn Pattanakarn Church	6,340	142.000	64.000	2,240.000	79.800	15.163	3.373	11.404	13.060	157.163	67.373	2,251.404	92.860
120. His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	7,130	142.000	64.000	2,240.000	79.800	10.668	2.089	12.502	14.324	152.668	66.089	2,252.502	94.124
121. Wat Chong Samaesarn	8,660	142.000	64.000	2,240.000	79.800	9.741	1.877	9.216	10.545	151.741	65.877	2,249.216	90.345
122. Viharn Luang Por Dam	8,950	142.000	64.000	2,240.000	79.800	9.376	1.916	8.313	9.475	151.376	65.916	2,248.313	89.275
123. The Shrine of King Taksin the Great (Samaesarn)	9,230	142.000	64.000	2,240.000	79.800	11.158	2.126	7.732	8.946	153.158	66.126	2,247.732	88.746
124. Thai Island and Sea Natural History Museum	9,160	142.000	64.000	2,240.000	79.800	10.708	2.043	7.390	8.578	152.708	66.043	2,247.390	88.378
125. Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	9,260	142.000	64.000	2,240.000	79.800	10.439	2.047	7.718	8.990	152.439	66.047	2,247.718	88.790
126. The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	9,280	142.000	64.000	2,240.000	79.800	11.142	2.118	7.732	8.968	153.142	66.118	2,247.732	88.768
127. Eastern-Nong Muang Community Health Service Center	1,460	142.000	64.000	2,240.000	79.800	50.519	9.680	38.611	42.503	192.519	73.680	2,278.611	122.303
128. Phala Subdistrict Health Promotion Hospital	2,860	142.000	64.000	2,240.000	79.800	27.066	5.669	18.011	21.912	169.066	69.669	2,258.011	101.712
129. Ban Chang Hospital	4,200	142.000	64.000	2,240.000	79.800	5.070	0.959	3.457	3.916	147.070	64.959	2,243.457	83.716
130. Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	1,480	142.000	64.000	2,240.000	79.800	42.140	9.859	37.046	41.976	184.140	73.859	2,277.046	121.776

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Draft Version

Table 5.2-48Results of evaluation for atmospheric air quality during construction phase

Unit: micrograms per cubic meter

Sensitive area/community	Distance from project area (meters)	Results of measurement at current state[4/]				Assessment results from the model				The results of the measurement in the current state combined with the assessment results from the model.			
		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
131. Ban Sa Kaeo Subdistrict Health Promotion Hospital	2,620	142.000	64.000	2,240.000	79.800	99.882	23.531	135.462	154.511	241.882	87.531	2,375.462	234.311
132. Ban Khao Khrok Subdistrict Health Promotion Hospital	5,200	142.000	64.000	2,240.000	79.800	39.356	9.353	28.223	31.589	181.356	73.353	2,268.223	111.389
133. Ban Yai Ra Subdistrict Health Promotion Hospital	6,760	142.000	64.000	2,240.000	79.800	13.493	2.920	11.338	12.970	155.493	66.920	2,251.338	92.770
134. Sam Nak Thon Subdistrict Health Promotion Hospital	8,190	142.000	64.000	2,240.000	79.800	16.776	3.754	13.768	16.469	158.776	67.754	2,253.768	96.269
135. Ban Chak Mak Subdistrict Health Promotion Hospital	11,200	142.000	64.000	2,240.000	79.800	8.012	1.809	8.468	10.686	150.012	65.809	2,248.468	90.486
136. Ban Phayun Subdistrict Health Promotion Hospital	5,250	142.000	64.000	2,240.000	79.800	20.797	4.214	12.673	15.020	162.797	68.214	2,252.673	94.820
137. Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	9,310	142.000	64.000	2,240.000	79.800	3.413	0.707	6.518	7.341	145.413	64.707	2,246.518	87.141
138. Phudon Huai Mahat Community Health Service Unit	9,740	142.000	64.000	2,240.000	79.800	2.525	0.495	2.385	2.692	144.525	64.495	2,242.385	82.492
139. Wat Yan Nasangwararam Hospital	11,880	142.000	64.000	2,240.000	79.800	10.935	2.483	11.688	13.347	152.935	66.483	2,251.688	93.147
140. Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	12,080	142.000	64.000	2,240.000	79.800	10.702	2.430	11.438	13.085	152.702	66.430	2,251.438	92.885
141. Ban Khong Wanphen Subdistrict Health Promotion Hospital	9,390	142.000	64.000	2,240.000	79.800	4.010	0.866	8.427	9.851	146.010	64.866	2,248.427	89.651
142. Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	1,910	142.000	64.000	2,240.000	79.800	34.733	8.020	25.534	28.607	176.733	72.020	2,265.534	108.407
143. Sattahip Hospital KM.10	3,460	142.000	64.000	2,240.000	79.800	35.183	7.317	22.450	26.423	177.183	71.317	2,262.450	106.223
144. Ban Chong Samaesarn Subdistrict Health Promotion Hospital	8,590	142.000	64.000	2,240.000	79.800	9.999	1.920	9.124	10.478	151.999	65.920	2,249.124	90.278
145. Village No. 1 Ban Sakulthong	4,710	142.000	64.000	2,240.000	79.800	6.229	1.445	6.776	7.723	148.229	65.445	2,246.776	87.523
146. Village No. 2, Ban Kilo 16	1,500	142.000	64.000	2,240.000	79.800	50.972	12.022	39.615	45.767	192.972	76.022	2,279.615	125.567
147. Village No. 4, Ban Tung Prong	1,290	142.000	64.000	2,240.000	79.800	84.981	17.232	36.188	46.044	226.981	81.232	2,276.188	125.844
148. Village No. 5, Phala Subdistrict	1,570	142.000	64.000	2,240.000	79.800	53.629	10.964	28.862	33.481	195.629	74.964	2,268.862	113.281
149. Village No. 6, Ban Takat	3,110	142.000	64.000	2,240.000	79.800	24.695	5.567	15.499	18.486	166.695	69.567	2,255.499	98.286
150. Village No. 7, Ban Khlong Sai	1,940	142.000	64.000	2,240.000	79.800	55.028	11.019	26.479	30.827	197.028	75.019	2,266.479	110.627
151. Village No. 1 Ban Sam Nak Thon	6,450	142.000	64.000	2,240.000	79.800	21.922	5.059	20.133	23.181	163.922	69.059	2,260.133	102.981
152. Village No. 2, Ban Chak Mak	9,810	142.000	64.000	2,240.000	79.800	9.662	2.138	10.319	12.784	151.662	66.138	2,250.319	92.584
153. Village No. 3, Ban Sa Kaeo	1,870	142.000	64.000	2,240.000	79.800	103.682	26.476	55.765	61.829	245.682	90.476	2,295.765	141.629
154. Sa Kaeo Community 1	3,590	142.000	64.000	2,240.000	79.800	57.944	14.229	49.748	66.143	199.944	78.229	2,289.748	145.943
155. Sa Kaeo Community 2	2,610	142.000	64.000	2,240.000	79.800	69.280	16.333	93.696	108.999	211.280	80.333	2,333.696	188.799
156. Village No. 4, Ban Khlong Bang Phai	1,320	142.000	64.000	2,240.000	79.800	65.141	14.710	48.544	54.671	207.141	78.710	2,288.544	134.471
157. Village No. 5, Ban Yai Ra	5,130	142.000	64.000	2,240.000	79.800	4.693	0.952	5.235	5.911	146.693	64.952	2,245.235	85.711
158. Village No. 6, Ban Khao Khrok	4,400	142.000	64.000	2,240.000	79.800	40.133	9.428	28.409	31.904	182.133	73.428	2,268.409	111.704
159. Village no. 7, Ban Nong Takhian	9,280	142.000	64.000	2,240.000	79.800	11.247	2.508	9.692	11.801	153.247	66.508	2,249.692	91.601
160. Village No. 8, Ban Cherng Khao	1,880	142.000	64.000	2,240.000	79.800	15.023	2.995	11.276	12.863	157.023	66.995	2,251.276	92.663
161. Eastern-Nong Muang Community	1,120	142.000	64.000	2,240.000	79.800	132.226	26.912	44.268	52.446	274.226	90.912	2,284.268	132.246
162. Wat Khiri Pawanaram Community	2,380	142.000	64.000	2,240.000	79.800	14.165	2.917	11.028	12.578	156.165	66.917	2,251.028	92.378

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		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
163. Ban Chang-Phala Community	2,410	142.000	64.000	2,240.000	79.800	13.056	2.656	11.030	12.466	155.056	66.656	2,251.030	92.266
164. Ruam Sompong Community	3,320	142.000	64.000	2,240.000	79.800	25.414	5.213	22.415	25.800	167.414	69.213	2,262.415	105.600
165. Ming Mongkol Community	4,080	142.000	64.000	2,240.000	79.800	13.297	2.620	12.780	14.701	155.297	66.620	2,252.780	94.501
166. Jor Koo Community	4,160	142.000	64.000	2,240.000	79.800	14.400	2.851	12.931	14.746	156.400	66.851	2,252.931	94.546
167. Wirat Phatthana Department Store Community	4,340	142.000	64.000	2,240.000	79.800	14.064	2.752	10.975	12.176	156.064	66.752	2,250.975	91.976
168. Thep Chinda Community	4,570	142.000	64.000	2,240.000	79.800	15.387	3.041	12.125	13.529	157.387	67.041	2,252.125	93.329
169. Health Park Community	4,680	142.000	64.000	2,240.000	79.800	13.254	2.661	14.177	16.118	155.254	66.661	2,254.177	95.918
170. Wat Ban Chang Community	4,970	142.000	64.000	2,240.000	79.800	16.245	3.854	25.305	27.533	158.245	67.854	2,265.305	107.333
171. Dong Dang Community	5,060	142.000	64.000	2,240.000	79.800	15.371	3.060	10.624	11.782	157.371	67.060	2,250.624	91.582
172. Night Market Community	5,190	142.000	64.000	2,240.000	79.800	16.726	3.944	29.475	32.980	158.726	67.944	2,269.475	112.780
173. Ruam Mitr Community	5,370	142.000	64.000	2,240.000	79.800	16.855	3.409	28.255	31.621	158.855	67.409	2,268.255	111.421
174. Ban Chang - Noen Kraprok Community	5,800	142.000	64.000	2,240.000	79.800	12.251	2.453	12.310	15.371	154.251	66.453	2,252.310	95.171
175. Dao Pitak Community	5,950	142.000	64.000	2,240.000	79.800	10.345	2.476	19.679	21.883	152.345	66.476	2,259.679	101.683
176. Taiwa Community	7,700	142.000	64.000	2,240.000	79.800	5.653	1.202	8.285	9.432	147.653	65.202	2,248.285	89.232
177. East Ban Noen Kraprok Community, Prachummit	7,810	142.000	64.000	2,240.000	79.800	7.437	1.653	9.750	11.234	149.437	65.653	2,249.750	91.034
178. Ban Noen Kraprok Community	8,490	142.000	64.000	2,240.000	79.800	4.669	0.980	7.323	8.368	146.669	64.980	2,247.323	88.168
179. Nong Yai Community	8,830	142.000	64.000	2,240.000	79.800	3.627	0.843	7.718	8.784	145.627	64.843	2,247.718	88.584
180. Village No. 1, Pan Din Tai	7,970	142.000	64.000	2,240.000	79.800	7.302	1.643	9.659	11.214	149.302	65.643	2,249.659	91.014
181. Village No. 2, Ban Prachummit	5,140	142.000	64.000	2,240.000	79.800	13.471	2.970	16.844	18.749	155.471	66.970	2,256.844	98.549
182. Village No. 3, Ban Noen Samre	4,990	142.000	64.000	2,240.000	79.800	8.151	1.879	8.099	9.175	150.151	65.879	2,248.099	88.975
183. Village No. 4, Ban Phayun	3,320	142.000	64.000	2,240.000	79.800	26.216	5.297	24.343	27.888	168.216	69.297	2,264.343	107.688
184. Village No. 6, Ban Noen Kraprok	8,960	142.000	64.000	2,240.000	79.800	3.936	0.767	4.477	5.165	145.936	64.767	2,244.477	84.965
185. Village No. 7, Ban Khao Phudon Huai Mahat	9,650	142.000	64.000	2,240.000	79.800	2.633	0.515	2.445	2.827	144.633	64.515	2,242.445	82.627
186. Village No. 11, Ban Map Fakthong	8,000	142.000	64.000	2,240.000	79.800	23.712	5.356	17.624	20.339	165.712	69.356	2,257.624	100.139
187. Village No. 13, Ban Nong Phakkut	10,640	142.000	64.000	2,240.000	79.800	12.331	2.789	9.912	12.516	154.331	66.789	2,249.912	92.316
188. Village No. 6, Khao Chi Chan Subdistrict Municipality	10,680	142.000	64.000	2,240.000	79.800	9.177	2.071	10.595	12.102	151.177	66.071	2,250.595	91.902
189. Village No. 7, Khao Chi Chan Subdistrict Municipality	8,800	142.000	64.000	2,240.000	79.800	6.527	1.506	9.551	11.000	148.527	65.506	2,249.551	90.800
190. Village No. 6 (Ban Khao Krating Community)	8,540	142.000	64.000	2,240.000	79.800	3.773	0.830	8.103	9.519	145.773	64.830	2,248.103	89.319
191. Village No. 7 (Ban Nong Hin Community)	7,230	142.000	64.000	2,240.000	79.800	8.925	2.057	9.714	11.475	150.925	66.057	2,249.714	91.275
192. Village No. 11 (Ban Khong Wanphen Community)	6,020	142.000	64.000	2,240.000	79.800	10.404	2.541	12.445	14.590	152.404	66.541	2,252.445	94.390
193. Village No. 1, Ban Phlu Ta Luang	2,940	142.000	64.000	2,240.000	79.800	32.060	7.079	21.308	24.371	174.060	71.079	2,261.308	104.171
194. Village No. 2, Ban Khalot	2,290	142.000	64.000	2,240.000	79.800	52.815	11.746	26.325	31.013	194.815	75.746	2,266.325	110.813
195. Village No. 3, Ban Khlong Phai	2,340	142.000	64.000	2,240.000	79.800	27.267	6.446	25.950	30.764	169.267	70.446	2,265.950	110.564
196. Village No. 4, Ban Khlong Phlu Ta Luang	4,110	142.000	64.000	2,240.000	79.800	14.763	3.321	17.948	21.138	156.763	67.321	2,257.948	100.938
197. Village No. 5, Ban Khao Bai Si	3,010	142.000	64.000	2,240.000	79.800	37.062	8.510	32.179	35.952	179.062	72.510	2,272.179	115.752
198. Village No. 6, Ban Khao Tabaek	4,730	142.000	64.000	2,240.000	79.800	19.989	4.549	15.759	18.436	161.989	68.549	2,255.759	98.236
199. Village No. 7, Ban Nong Ya Noi	5,930	142.000	64.000	2,240.000	79.800	18.298	3.991	12.311	14.426	160.298	67.991	2,252.311	94.226
200. Village No. 8, Ban Nong Ya	7,120	142.000	64.000	2,240.000	79.800	6.637	1.320	7.745	9.196	148.637	65.320	2,247.745	88.996

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Table 5.2-48Results of evaluation for atmospheric air quality during construction phase

Unit: micrograms per cubic meter

Sensitive area/community	Distance from project area (meters)	Results of measurement at current state[4/]				Assessment results from the model				The results of the measurement in the current state combined with the assessment results from the model.			
		TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.	TSP 24 hrs.	PM_{10} 24 hrs.	CO 1 hr.	NO_2 1 hr.
201. Ban Nong Krachong Community	5,840	142.000	64.000	2,240.000	79.800	13.124	2.707	11.248	12.892	155.124	66.707	2,251.248	92.692
Standard		330[1/]	120[1/]	34,200[2/]	320[3/]	330[1/]	120[1/]	34,200[2/]	320[3/]	330[1/]	120[1/]	34,200[2/]	320[3/]

Notes:
[1/] Standards according to the Announcement of the National Environment Board No. 24 (2004) Re: Determination of General Atmospheric Air Quality Standards.
[2/] Standards according to the Announcement of the National Environment Board No. 10 (1995) Re: Determination of General Atmospheric Air Quality Standards.
[3/] Standards according to the Announcement of the National Environment Board No. 33 (2009) Re: Determination of General Atmospheric Nitrogen Dioxide Standards.
[4/] The results of the monitoring of air atmospheric quality in general were highest between 18-24 July 2019 and between 3-10 November 2019. In order to evaluate the impact of air quality for sensitive areas and communities that are not representative of the general atmospheric air quality measurement points, choose the highest current level of measurement as a test result.
Maximum 24-hour average total suspended particulates (TSP) in the area of Pattanavechsuksa School was 142 micrograms per cubic meter, Wat Khiri Pawanaram School 71 micrograms per cubic meter, Wat Phala School 89 micrograms per cubic meter, Ban Khlong Bang Phai School 74 micrograms per cubic meter, and Wat Sa Kaeo School 89 micrograms per cubic meter.
Maximum 24-hour average PM10 in the area of Pattanavechsuksa School was 64 micrograms per cubic meter, Wat Khiri Pawanaram School 42 micrograms per cubic meter, Wat Phala School 53 micrograms per cubic meter, Ban Khlong Bang Phai School 53 micrograms per cubic meter, and Wat Sa Kaeo School 53 micrograms per cubic meter.
Maximum 1-hour average carbon monoxide in the area of Pattanavechsuksa School was 2,244.581 micrograms per cubic meter, Wat Khiri Pawanaram School 1,740.695 micrograms per cubic meter, Wat Phala School 1,763.599 micrograms per cubic meter, Ban Khlong Bang Phai School 1,465.849 micrograms per cubic meter, and Wat Sa Kaeo School 1,465.849 micrograms per cubic meter.
Maximum 1-hour average nitrogen dioxide in the area of Pattanavechsuksa School was 24.270 micrograms per cubic meter, Wat Khiri Pawanaram School 25.022 micrograms per cubic meter, Wat Phala School 17.685 micrograms per cubic meter, Ban Khlong Bang Phai School 79.771 micrograms per cubic meter, and Wat Sa Kaeo School 18.061 micrograms per cubic meter.
[5/] Representative of sensitive areas to measure general air quality

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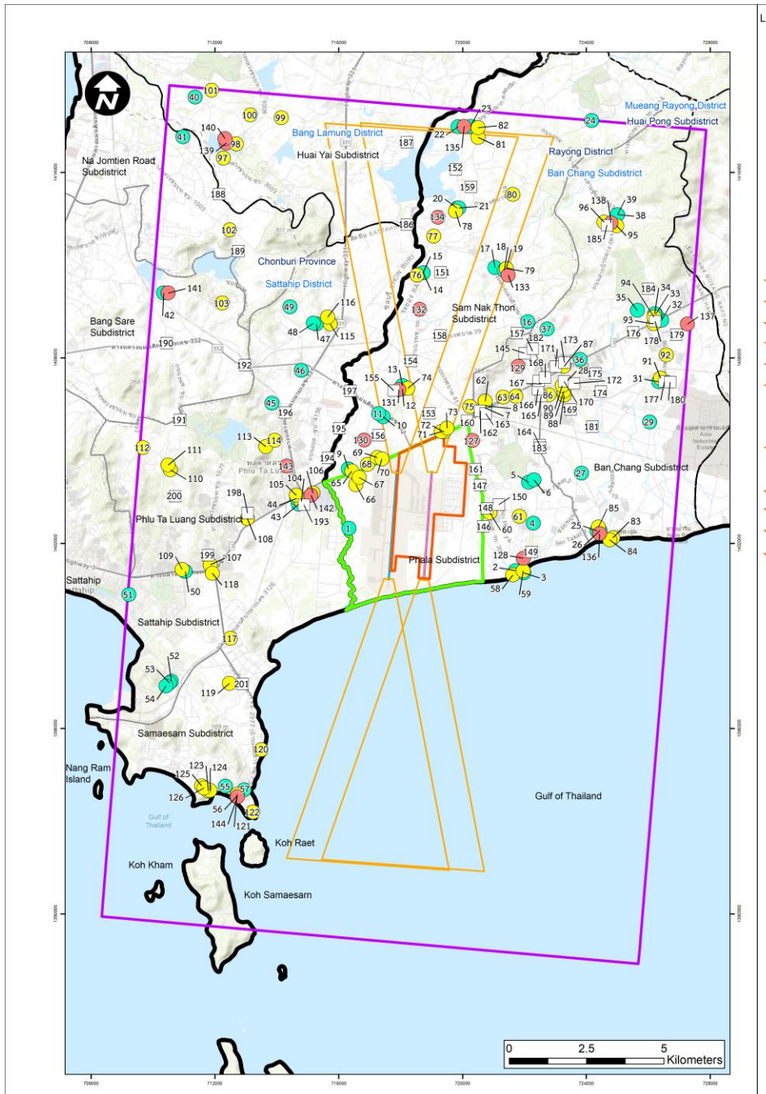

Legend

Educational Institutions

1 Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division
2 Wat Phala School
3 Phala Subdistrict Municipality Child Development Center
4 Ban Khlong Sai School
5 Rayong English Program School
6 Rayong Garden International School
7 Ban Chang Municipality School 1 (Wat Khiri Pawanaram)
8 Wat Khiri Pawanaram School
9 Ban Khlong Bang Phai School
10 Pattanavechsuksa School
11 Pattanavech College
12 Saeng Song La Child Development Center 3
13 Wat Sa Kaeo School
14 Wat Sombun Naram School (Tem Rat Memorial)
15 Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School
16 Sajjaseuksa School
17 Ban Chang District Center for Non-Formal and Informal Education
18 Wat Suwan Rangsan Community School
19 Ban Yai Ra Child Development Center
20 Wat Samnak Kathon School
21 Ban Sam Nak Thon Child Development Center
22 Burapatit Child Development Center, Sam Nak Thon SAO
23 Wat Chak Mak School
24 St. Andrews International School, Green Valley, Rayong,
25 Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)
26 Ban Phayun School
27 Rakpasa Kindergarten
28 Wat Ban Chang School (Boonrawdprachanukul)
29 Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)
30 Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)
31 Wat Prachummit Bamrung School
32 Udom Wittayanukun School
33 Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)
34 Wat Noen Kraprok School
35 Chonnabot Phatthana Kindergarten
36 Aksorn Business Administration Technological College
37 Banchang Kamchanakul Wittaya School
38 Ban Khao Huai Mahat School
39 Ban Phudon - Huai Mahat Child Development Center
40 Ban Map Fakthong School
41 Phuru Yor. Sor. Sor. 80 School
42 Khao Chi Chan School
43 Ban Khalot Child Development Center
44 Ban Khalot School
45 Phlu Ta Luang Wittaya School
46 Athittan Kindergarten School
47 Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si
48 Ban Khao Bai Si School
49 Chaleo-Pavana Memorial School (Chonburi Special Education)
50 Ban KM. 5 School
51 Royal Thai Fleet Sattahip District School
52 RTN. 8 Nursery
53 Juk Samet School
54 Juk Samet Child Development Center
55 Ban Chong Samaesarn Child Development Center
56 Samaesarn Subdistrict NFE Center
57 Ban Chong Samae San School
58 Wat Phala Vipassana Office
59 Wat Phala
60 Chao Li Su Ong Yea Shrine
61 Wat Khlong Sai
62 Wat Khiri Pawanaram
63 Ban Chang Christ Church
64 Ban Chang Church
65 Wat Ban Khlong Bang Phai
66 Admiral Prince Abhakara Kiartivongse Monument
67 Royal Thai Naval Air Division Naval Aviation Museum
68 The Royal Monument of King Taksin the Great (Air Defense Regiment 1)
69 Somdej Phra Pathom (Air Defense Regiment 1)
70 Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)
71 Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)
72 Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)
73 Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)
74 Wat Sa Kaeo
75 The Shrine of King Taksin the Great
76 Wat Sombun Naram
77 Ban Chang Abundant Grace Church
78 Wat Samnak Kathon
79 Wat Suwan Rangsan
80 Wat Nong Bot
81 The Shrine of Luang Tia Chak Mak
82 Wat Chak Mak
83 The Shrine of Luang Tia Ban Phayun
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87 Chinese shrine at the Buddha Dhamma Foundation
88 The Shrine of Luang Tia Ban Chang
89 The Shrine of Laoia Guan Yu Ban Chang
90 Wat Ban Chang
91 Wat Prachummit Bamrung
92 The Shrine of Luang Tia Noen Kraprok 1
93 The Shrine of Luang Tia Noen Kraprok 2
94 Wat Noen Kraprok
95 Wat Phudon Nim Sanoh
96 Church of Christ Ban Chang
97 Anek Kusala Sala (Viharn Sien)
98 Wat Yan Nasangwararam
99 Sirisirirak Monastery
100 Anan Buraparam Meditation Center
101 Wat Map Fakthong
102 Khao Chi Chan Image of Lord Buddha
103 Wat Khao Chi Chan
104 Rat Samakkhi Temple
105 The Shrine of Chao Mae Kuan Im
106 The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani
107 Prakai Dhamma Meditation Center
108 KM.8 Meditation Center
109 Wat Rangsee Sunthorn (KM.5)
110 Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch
111 Sattahip Meditation Center (Khao Bandai Kaew)
112 Wat Tung Prong
113 Khao Phlu Ta Luang Meditation Center
114 His Majesty's Admiral Prince Abhakara Kiartivongse's Court
115 Wat Khao Bai Si Santitham
116 Welu Amphawan Vipassana Office
117 The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3
118 The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6
119 Samaesarn Pattanakarn Church
120 His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)
121 Wat Chong Samaesan
122 Viharn Luang Por Dam
123 The Shrine of King Taksin the Great (Samaesarn)
124 Thai Island and Sea Natural History Museum
125 Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)
126 The Royal Monument of King Taksin the Great (Naval Special Warfare Command)

Medical Institutions

127 Eastern-Nong Muang Community Health Service Center
128 Phala Subdistrict Health Promotion Hospital
129 Ban Chang Hospital
130 Ban Khlong Bang Phai Subdistrict Health Promotion Hospital
131 Ban Sa Kaeo Subdistrict Health Promotion Hospital
132 Ban Khao Khrok Subdistrict Health Promotion Hospital
133 Ban Yai Ra Subdistrict Health Promotion Hospital
134 Sam Nak Thon Subdistrict Health Promotion Hospital
135 Ban Chak Mak Subdistrict Health Promotion Hospital
136 Ban Phayun Subdistrict Health Promotion Hospital
137 Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)
138 Phudon-Huai Mahat Community Health Service Unit
139 Wat Yan Nasangwararam Hospital
140 Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi
141 Ban Khong Wanphen Subdistrict Health Promotion Hospital
142 Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department
143 Sattahip Hospital KM.10
144 Ban Chong Samaesarn Subdistrict Health Promotion Hospital

Communities

145 Village No. 1 Ban Sakulthong
146 Village No. 2, Ban Kilo 16
147 Village No. 4, Ban Tung Prong
148 Village No. 5, Phala Subdistrict
149 Village No. 6, Ban Takat
150 Village No. 7, Ban Khlong Sai
151 Village No. 1, Ban Sam Nak Thon
152 Village No. 2, Ban Chak Mak
153 Village No. 3, Ban Sa Kaeo
154 Sa Kaeo Community 1
155 Sa Kaeo Community 2
156 Village No. 4, Ban Khlong Bang Phai
157 Village No. 5, Ban Yai Ra
158 Village No. 6, Ban Khao Khrok
159 Village no. 7, Ban Nong Takhian
160 Village No. 8, Ban Cherng Khao
161 Eastern-Nong Muang Community
162 Wat Khiri Pawanaram Community
163 Ban Chang-Phla Community
164 Ruam Sompong Community
165 Ming Monkol Community
166 Jor Koo Community
167 Wirat Phatthana Department Store Community
168 Thep Chinda Community
169 Health Park Community
170 Wat Ban Chang Community
171 Dong Dang Community
172 Night Market Community
173 Ruam Mitr Community
174 Ban Chang - Noen Kraprok Community
175 Dao Pitak Community
176 Taiwa Community
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178 Ban Noen Kraprok Community
179 Nong Yai Community
180 Village No. 1, Ban Din Tai
181 Village No. 2, Ban Prachummit
182 Village No. 3, Ban Noen Samre
183 Village No. 4, Ban Phayun
184 Village No. 6, Ban Noen Kraprok
185 Village No. 7, Ban Khao Phudon Huai Mahat
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187 Village No. 13, Ban Nong Phakkut
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193 Village No. 1, Ban Phlu Ta Luang
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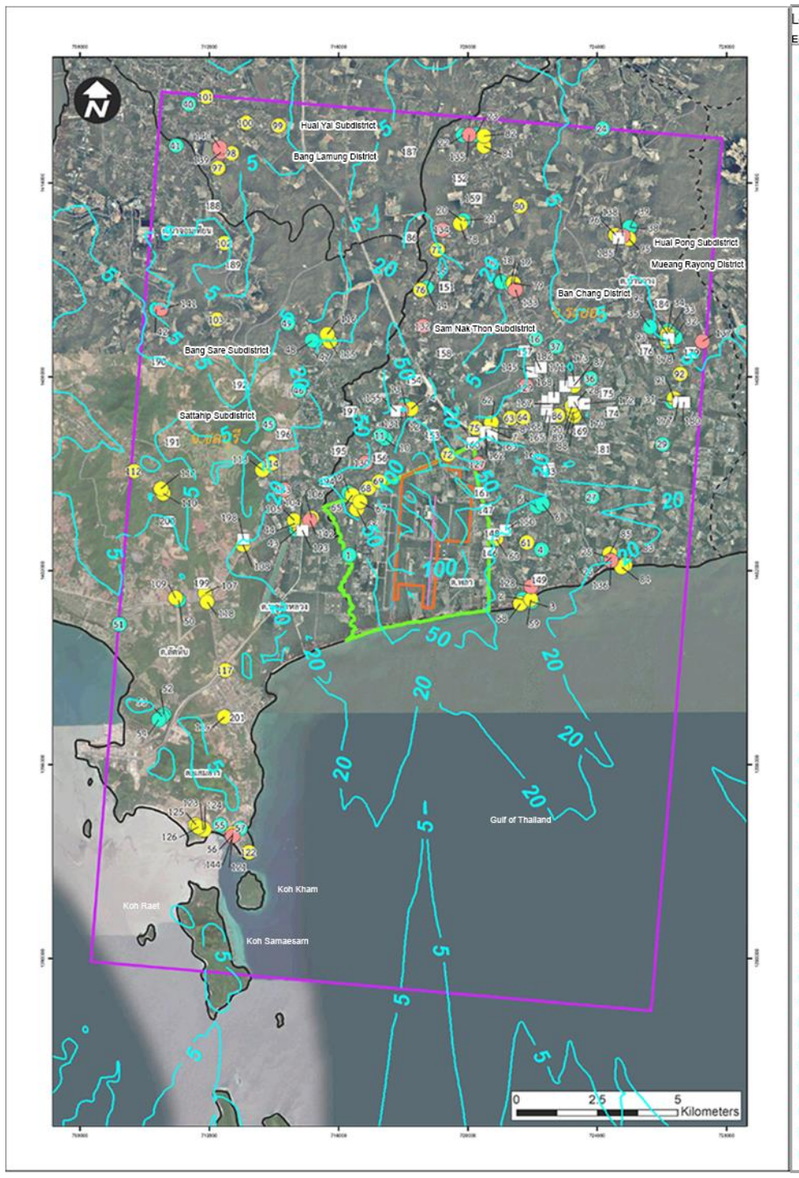
196 Village No. 4, Ban Khlong Phlu Ta Luang
197 Village No. 5, Ban Khao Bai Si
198 Village No. 6, Ban Khao Tabaek
199 Village No. 7, Ban Nong Ya Noi
200 Village No. 8, Ban Nong Ya
201 Ban Nong Krachong Community

Provincial zone
District zone
Subdistrict zone
Runway 1 (Current)
Runway 2
Airport extension area (project area)
U-Tapao International Airport area
Project study area
Wake Vortex
Sensitive areas in the wake-vortex

Figure 5.2-61 Line showing the TSP concentration during the construction phase



Legend

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54. Juk Samet Child Development Center
55. Ban Chong Samaesarn Child Development Center
56. Samaesarn Subdistrict NFE Center
57. Ban Chong Samae San School

Religious Sites

58. Wat Phala Vipassana Office
59. Wat Phala
60. Chao Li Su Ong Yea Shrine
61. Wat Khlong Sai
62. Wat Khiri Pawanaram
63. Ban Chang Christ Church
64. Ban Chang Church
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153. Village No. 3, Ban Sa Kaeo
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155. Sa Kaeo Community 2
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157. Village No. 5, Ban Yai Ra
158. Village No. 6, Ban Khao Khrok
159. Village no. 7, Ban Nong Takhian
160. Village No. 8, Ban Cherng Khao
161. Eastern-Nong Muang Community
162. Wat Khiri Pawanaram Community
163. Ban Chang-Phla Community
164. Ruam Sompong Community
165. Ming Monkol Community
166. Jor Koo Community
167. Wirat Phatthana Department Store Community
168. Thep Chinda Community
169. 169. Health Park Community
170. 170. Wat Ban Chang Community
171. 171. Dong Dang Community
172. 172. Night Market Community
173. 173. Ruam Mitr Community
174. 174. Ban Chang - Noen Kraprok Community
175. 175. Dao Pitak Community
176. 176. Taiwa Community
177. East Ban Noen Kraprok Community, Prachummit
178. 178. Ban Noen Kraprok Community
179. 179. Nong Yai Community
180. 180. Village No. 1, Ban Din Tai
181. 181. Village No. 2, Ban Prachummit
182. 182. Village No. 3, Ban Noen Samre
183. 183. Village No. 4, Ban Phayun
184. 184. Village No. 6, Ban Noen Kraprok
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195. Village No. 3, Ban Khlong Phai
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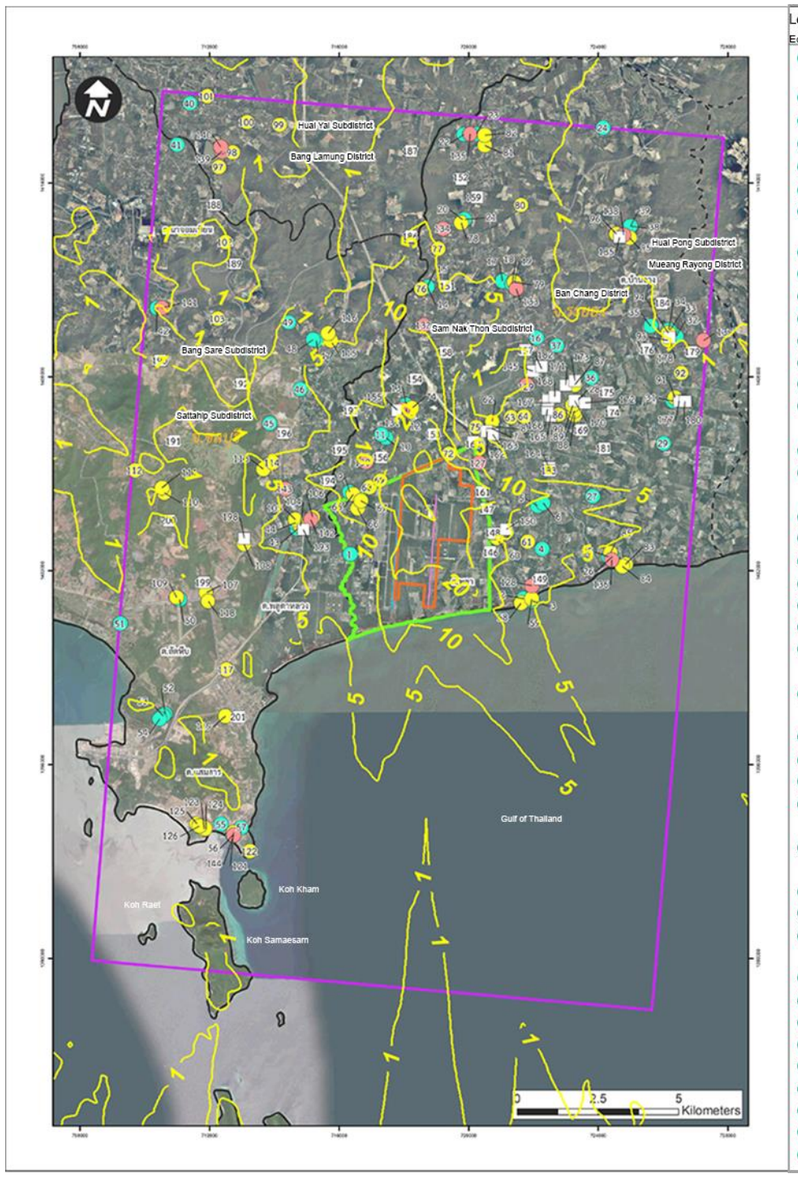
197. Village No. 5, Ban Khao Bai Si
198. Village No. 6, Ban Khao Tabaek
199. Village No. 7, Ban Nong Ya Noi
200. Village No. 8, Ban Nong Ya
201. Ban Nong Krachong Community

- Provincial zone
- District zone
- Subdistrict zone
- Runway 1 (Current)
- Runway 2
- Airport extension area (project area)
- U-Tapao International Airport area
- Project study area

Figure 5.2-62 Line showing the PM10 concentration in the construction phase



Legend

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52. RTN. 8 Nursery
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54. Juk Samet Child Development Center
55. Ban Chong Samaesarn Child Development Center
56. Samaesarn Subdistrict NFE Center
57. Ban Chong Samae San School

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59. Wat Phala
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64. Ban Chang Church
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99. Sirisirirak Monastery
100. Anan Buraparam Meditation Center
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102. Khao Chi Chan Image of Lord Buddha
103. Wat Khao Chi Chan
104. Rat Samakkhi Temple
105. The Shrine of Chao Mae Kuan Im
106. The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani
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108. KM.8 Meditation Center
109. Wat Rangsee Sunthorn (KM.5)
110. Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch
111. Sattahip Meditation Center (Khao Bandai Kaew)
112. Wat Tung Prong
113. Khao Phlu Ta Luang Meditation Center
114. His Majesty's Admiral Prince Abhakara Kiartivongse's Court
115. Wat Khao Bai Si Santitham
116. Welu Amphawan Vipassana Office
117. The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3
118. The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6
119. Samaesarn Pattanakarn Church
120. His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)
121. Wat Chong Samaesan
122. Viharn Luang Por Dam
123. The Shrine of King Taksin the Great (Samaesarn)
124. Thai Island and Sea Natural History Museum
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137. Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)
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140. Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi
141. Ban Khong Wanphen Subdistrict Health Promotion Hospital
142. Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department
143. Sattahip Hospital KM.10
144. Ban Chong Samaesarn Subdistrict Health Promotion Hospital

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150. Village No. 7, Ban Khlong Sai
151. Village No. 1, Ban Sam Nak Thon
152. Village No. 2, Ban Chak Mak
153. Village No. 3, Ban Sa Kaeo
154. Sa Kaeo Community 1
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156. Village No. 4, Ban Khlong Bang Phai
157. Village No. 5, Ban Yai Ra
158. Village No. 6, Ban Khao Khrok
159. Village no. 7, Ban Nong Takhian
160. Village No. 8, Ban Cherng Khao
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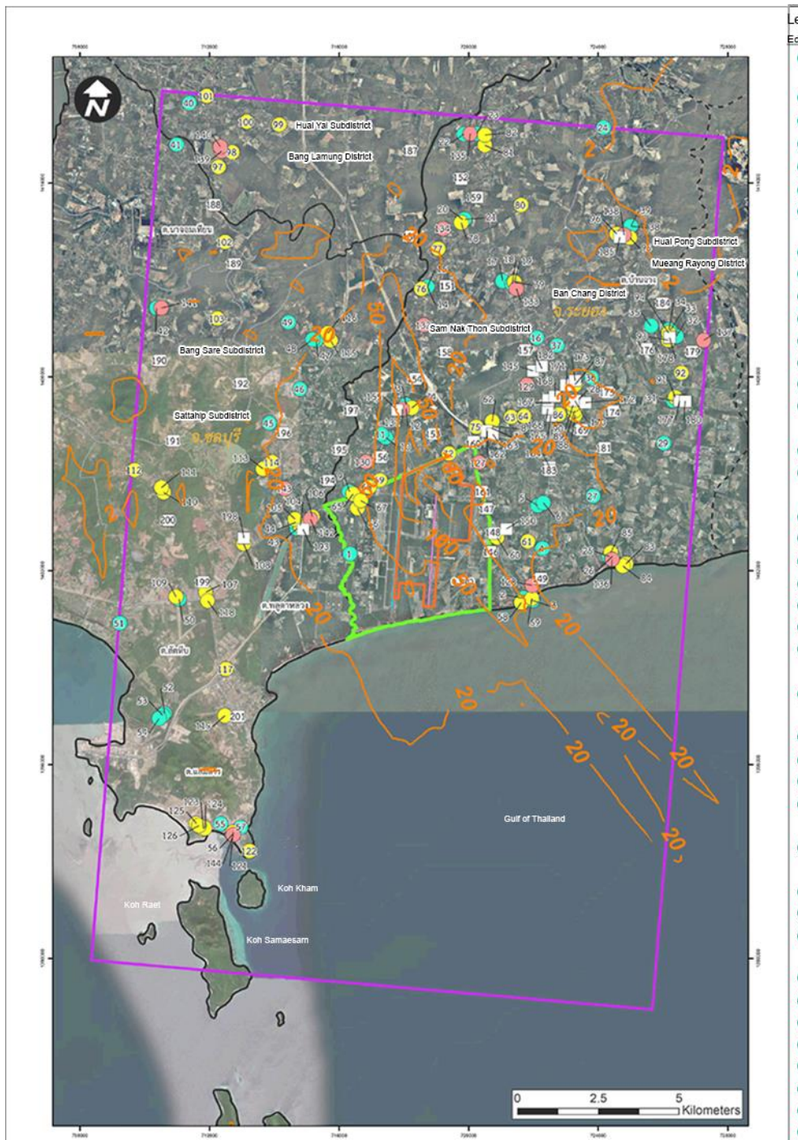
Provincial zone
District zone
Subdistrict zone
Runway 1 (Current)
Runway 2
Airport extension area (project area)
U-Tapao International Airport area
Project study area

Figure 5.2-63 Line showing the concentration of carbon monoxide in the construction phase



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- Provincial zone
- District zone
- Subdistrict zone
- Runway 1 (Current)
- Runway 2
- Airport extension area (project area)
- U-Tapao International Airport area
- Project study area

Figure 5.2-64 Line showing the concentration of nitrogen dioxide in the construction phase

5.2.3.2 Operation phase

(1) Study Methods

The study of air quality assessment and noise studies were conducted in all 11 scenarios (flight number forecast information, with reference to Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018), which included the normal scenario, the worst case (peak hour) and the scenario of one of the runways being closed, is shown in Table 5.2-49 Study **This uses annual flight data classified by aircraft type in each route and is the data for importing into Aviation Environmental Design Tool (AEDT) model to assess the rate of air emissions from sources within U-Tapao International Airport and related activities. It is also used to calculate the concentration of pollutants spread to the surrounding environment, and inputs data into the AERMOD air quality model to assess the spread of air pollutants.**

The assessment of the impact of air quality from U-Tapao International Airport begins with the use of the AEDT model to calculate various emissions rates, such as sulfur dioxide, nitrogen oxide, carbon monoxide, particulates and some volatile organic matter. These are then used to determine the pollution emission rate from the AEDT and are used to input into the AERMOD air quality model to assess the impact of air quality. This guideline is based on Emissions and Dispersion Modeling System (EDMS) User's Manual, FAA-AEE-07-01, (Rev. 8 – 11/15/10), November 2010 as shown in Figure 5.2-65 Air pollution assessment

Subject to changes and approval by the Government of Thailand

Table 5.2-49 Study scenarios for studying of the project's impact on air

Study scenario[1/,2/]	Number of flights per year	The runway's ability to support flights (flights per hour)	Proportion of flights (Percentage)		Number of flights per day	
			Daytime	Nighttime	Hot season	Cold season
Normal cases						
Scenario 1: Aviation situation in 2019 (1 runway)	17,052	35	90	10	48	45
Scenario 2: Peak flight forecast for 2028 (2 runways)	80,600	70	70	30	221	221
Scenario 3: Peak flight forecast for 2038 (2 runways)	200,000	70	70	30	548	548
Scenario 4: Peak flight forecast for 2048 (2 runways)	324,200	70	70	30	889	889
Peak Hour						
Scenario 5: Peak flight forecast	-	70	70	30	1,364	1,364
In the case of runway closure						
Scenario 6: Closure of Runway 1 (2048)	-	35	66	34	791	791
Scenario 7: Closure of Runway 2 (2048)	-	35	66	34	791	791
Additional scenarios (for considering phased compensation)						
Scenario 8: Closure of Runway 1 (2028)	-	35	70	30	221	221
Scenario 9: Closure of Runway 2 (2028)	-	35	70	30	221	221
Scenario 10: Closure of Runway 1 (2038)	-	35	70	30	548	548
Scenario 11: Closure of Runway 2 (2038)	-	35	70	30	548	548

Note : [1/] Forecasted flight data is based on the Full Version of Complete Feasibility Study Master Plan for U-Tapao Airport Development Project and Surrounding Areas, Rayong (December 2018) scenarios 2-5 (Aggressive Forecast) and scenarios 6-11 (Baseline Forecast)

[2/] Case 2-11 references statistical models for monthly flights comprising data from the 2018 flight situation of Suvarnabhumi Airport from Airports of Thailand Public Company Limited

[3/] Added phase-by-phase study results, in scenarios of runway closure for 2028 and 2038, for consideration of compensation measures.

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The assessment of the impact of air quality from U-Tapao International Airport begins with the use of the AEDT model to calculate various emissions rates, such as sulfur dioxide, nitrogen oxide, carbon monoxide, particulates and some volatile organic matter. These are then used to determine the pollution emission rate from the AEDT and are used to input into the AERMOD air quality model to assess the impact of air quality. This guideline is based on Emissions and Dispersion Modeling System (EDMS) User's Manual, FAA-AEE-07-01, (Rev. 8 – 11/15/10), November 2010 as shown in Figure 5.2-65 Air pollution assessment

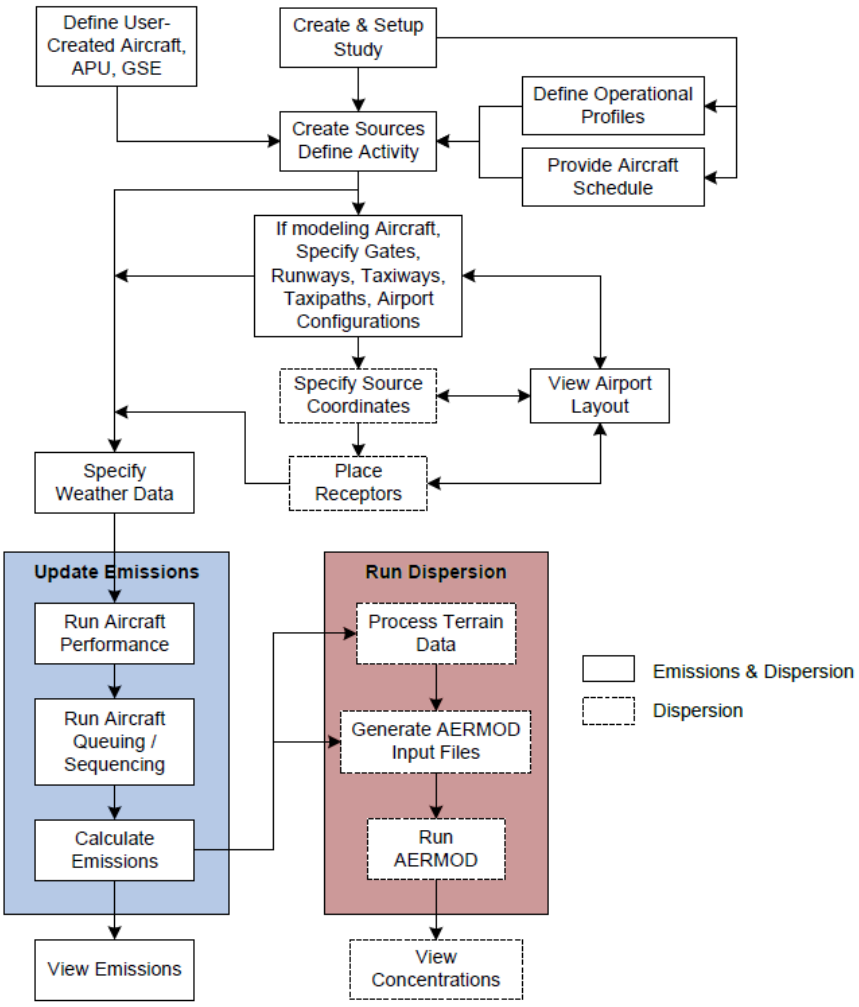

Figure 5.2-65 Air pollution assessment procedures from U-Tapao International Airport using the AEDT model and the AERMOD air quality model

From FigureFigure 5.2-65 Air pollution assessment Air pollution impact assessment from U-Tapao International Airport using the AEDT model and the AERMOD air quality model has the following procedures in brief:

- Collect activities in U-Tapao International Airport, type of aircraft, time and frequency of activities in U-Tapao International Airport, such as number of flights, times of use, and taxi services in U-Tapao International Airport.
- Import the collected data into the AEDT model to calculate the emissions ratefrom U-Tapao International Airport in the blue tab.
- Import the pollutant emission rate from the airport results into the AERMOD air quality model.
- Using the AERMOD air quality model to assess the impacts of air pollutionfrom U-Tapao International Airport Additional imported information is meteorological data and the study site's topographical height data that results in the concentration of air pollutants, as shown in the red tab.

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- **Information on the volume and type of aircraft used at U-Tapao International Airport**

For information on air traffic volume, direction and distribution of flight routes used to import into the AEDT model to estimate air pollution emission rates, use the same data as the mathematical model input used to for the noise impact assessment, which includes forecasted number of flights and aircraft (trips per year), simulated flight information for 2019 and the information on flight distribution of aircraft forecasts for 2028, 2038 and 2048. A summary of the information on the volume and type of aircraft used at U-Tapao International Airport in each scenario can be summarized as shown in section 5.2.1.2. Noise Operation Phase.

- **Air pollution emission rate**

The information on volume and type of aircraft to be used at U-Tapao International Airport will be imported into the AEDT model then ordered to calculate the emission rate for 45 Hazardous Air Pollutants (HAPs) and 17 types of results were chosen for display, consisting of carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, Acetaldehyde, Acrolein, Benzene, 1,3-Butadiene, Isopropylbenzene or Cumene, Ethylbenzene, Formaldehyde, Naphthalene, Styrene, Toluene, Xylene and Volatile Organic Compounds (VOCs).

The results of the results of the air pollution emission rate for all 11 scenarios of the study are shown inTable 5.2-50

Draft Version

Table 5.2-50 Evaluation results of air pollution emission rate for the study using the AEDT model

Pollutants Air	Air pollution emission rate (g/m^2/s)								
	Scenario 1: Aviation situation in 2019 (1 runway)	Scenario 2: Peak flight forecast for 2028 (2 runways)		Scenario 3: Peak flight forecast for 2038 (2 runways)		Scenario 4: Peak flight forecast for 2048 (2 runways)		Scenario 5: Worst case (peak hour) for peak flight forecast	
	Runway 1 (36L/18R)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)
CO	0.00000559989	0.00000806853	0.00003227441	0.00005002857	0.00004919221	0.00008065827	0.00007886172	0.00012385350	0.00012122768
VOCs	0.00000060572	0.00000109556	0.00000438225	0.00000682898	0.00000666325	0.00001091698	0.00001063784	0.00001675490	0.00001632764
NO_2	0.00000072347	0.00000183893	0.00000736311	0.00001160973	0.00001085262	0.00001732194	0.00001618131	0.00002658222	0.00002483379
SO_2	0.00000022324	0.00000045247	0.00000181056	0.00000283076	0.00000273214	0.00000433135	0.00000417648	0.00000664667	0.00000641037
PM_{10}	0.00000003642	0.00000006143	0.00000024573	0.00000037836	0.00000037148	0.00000060374	0.00000059047	0.00000092699	0.00000090711
$PM_{2.5}$	0.00000003617	0.00000006102	0.00000024409	0.00000037601	0.00000036909	0.00000059972	0.00000058658	0.00000092077	0.00000090105
Formaldehyde (IRIS, CAA)	0.00000006348	0.00000011506	0.00000041915	0.00000063485	0.00000062868	0.00000102745	0.00000100479	0.00000156652	0.00000153294
Benzene (IRIS, CAA)	0.00000000965	0.00000000961	0.00000003410	0.00000008754	0.00000008659	0.00000014119	0.00000013798	0.00000021481	0.00000021008
Acetaldehyde (IRIS, CAA)	0.00000002200	0.00000003989	0.00000014540	0.00000022024	0.00000021812	0.00000035649	0.00000034864	0.00000054356	0.00000053193
Naphthalene (IRIS, CAA)	0.00000000264	0.00000000486	0.00000001815	0.00000002756	0.00000002736	0.00000004481	0.00000004389	0.00000006850	0.00000006712
Isopropylbenzene (cumene) (IRIS, CAA)	0.00000000001	0.00000000003	0.00000000010	0.00000000015	0.00000000015	0.00000000025	0.00000000024	0.00000000038	0.00000000037
Ethylbenzene (IRIS, CAA)	0.00000000140	0.00000000205	0.00000000646	0.00000000959	0.00000000940	0.00000001517	0.00000001473	0.00000002279	0.00000002217
Styrene (IRIS, CAA)	0.00000000151	0.00000000278	0.00000001036	0.00000001574	0.00000001563	0.00000002559	0.00000002507	0.00000003912	0.00000003834
1,3-butadiene (IRIS, CAA)	0.00000000824	0.00000001515	0.00000005658	0.00000008594	0.00000008532	0.00000013972	0.00000013685	0.00000021359	0.00000020930
Acrolein (IRIS, CAA)	0.00000001195	0.00000002200	0.00000008214	0.00000012475	0.00000012385	0.00000020283	0.00000019866	0.00000031007	0.00000030384
Toluene (IRIS, CAA)	0.00000000559	0.00000000793	0.00000002429	0.00000003595	0.00000003515	0.00000005653	0.00000005484	0.00000008465	0.00000008224
M & P-xylene (IRIS, CAA)	0.00000000447	0.00000000604	0.00000001759	0.00000002584	0.00000002515	0.00000004022	0.00000003891	0.00000005985	0.00000005799

Notes: (IRIS, CAA) : Identified in IRIS as having toxic characteristics and Identified as a HAP in Section 112 of the CAA

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Table 5.2-50 Evaluation results of air pollution emission rate for the study using the AEDT model

Pollutants Air	Air pollution emission rate (g/m^2/s)											
	Scenario 6: In the event that a runway is closed Runway 1 Closure Scenario (2048).		Scenario 7: In the event that a runway is closed Runway 2 Closure Scenario (2048).		Scenario 8: In the event that a runway is closed Runway 1 Closure Scenario (2028).		Scenario 9: In the event that a runway is closed Runway 2 Closure Scenario (2028).		Scenario 10: In the event that a runway is closed Runway 1 Closure Scenario (2038).		Scenario 11: In the event that a runway is closed Runway 2 Closure Scenario (2038).	
	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)	Runway 1 (36L/18R)	Runway 2 (36R/18L)
CO	0	0.00013769809	0.00013741959	0	0	0.00004035473	0.00003933128	0	0	0.00009971063	0.00009948783	0
VOCs	0	0.00001909386	0.00001908043	0	0	0.00000547821	0.00000525286	0	0	0.00001350867	0.00001350145	0
NO_2	0	0.00002983141	0.00002978754	0	0	0.00000920449	0.00000911719	0	0	0.00002249077	0.00002245987	0
SO_2	0	0.00000756302	0.00000755718	0	0	0.00000226336	0.00000225288	0	0	0.00000556895	0.00000556449	0
PM_{10}	0	0.00000103987	0.00000103792	0	0	0.00000030726	0.00000029580	0	0	0.00000075259	0.00000075129	0
$PM_{2.5}$	0	0.00000103470	0.00000103288	0	0	0.00000030521	0.00000029388	0	0	0.00000074766	0.00000074645	0
Formaldehyde (IRIS, CAA)	0	0.00000178881	0.00000180921	0	0	0.00000052058	0.00000047171	0	0	0.00000125019	0.00000126152	0
Benzene (IRIS, CAA)	0	0.00000024522	0.00000024802	0	0	0.00000007200	0.00000006518	0	0	0.00000017170	0.00000017324	0
Acetaldehyde (IRIS, CAA)	0	0.00000062069	0.00000062777	0	0	0.00000018059	0.00000016364	0	0	0.00000043377	0.00000043771	0
Naphthalene (IRIS, CAA)	0	0.00000007820	0.00000007910	0	0	0.00000002252	0.00000002046	0	0	0.00000005453	0.00000005503	0
Isopropylbenzene (cumene) (IRIS, CAA)	0	0.00000000043	0.00000000044	0	0	0.00000000012	0.00000000011	0	0	0.00000000030	0.00000000031	0
Ethylbenzene (IRIS, CAA)	0	0.00000002601	0.00000002630	0	0	0.00000000802	0.00000000720	0	0	0.00000001841	0.00000001857	0
Styrene (IRIS, CAA)	0	0.00000004467	0.00000004518	0	0	0.00000001286	0.00000001169	0	0	0.00000003114	0.00000003143	0
1,3-butadiene (IRIS, CAA)	0	0.00000024385	0.00000024666	0	0	0.00000007023	0.00000006380	0	0	0.00000017003	0.00000017159	0
Acrolein (IRIS, CAA)	0	0.00000035400	0.00000035807	0	0	0.00000010196	0.00000009262	0	0	0.00000024683	0.00000024909	0
Toluene (IRIS, CAA)	0	0.00000009661	0.00000009768	0	0	0.00000003016	0.00000002702	0	0	0.00000006858	0.00000006916	0
M & P-xylene (IRIS, CAA)	0	0.00000006830	0.00000006904	0	0	0.00000002184	0.00000001949	0	0	0.00000004875	0.00000004915	0

Notes: (IRIS, CAA) : Identified in IRIS as having toxic characteristics and Identified as a HAP in Section 112 of the CAA

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(2) Study Results

Study of the impact of air pollution in the operation phase of the project by usinga mathematical model (AERMOD) to produce the main average air pollution concentration values in various times, as appears in the atmospheric air quality standard, and of volatile organic matter at various points of impact. The highest 24-hour average and annual average are comprised of 17 air quality indexes, consisting of carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, Acetaldehyde, Acrolein, Benzene, 1,3-Butadiene, Isopropylbenzene or Cumene, Ethylbenzene, Formaldehyde, Naphthalene, Styrene, Toluene, Xylene and Volatile Organic Compounds (VOCs), as detailed in TableTable **5.2-**51 Air Quality

Table 5.2-51Air Quality Index used to assess the impact of air quality during operation phase

Pollutants		Concentration value per period
General Atmospheric Air Quality	Carbon monoxide (CO)	Maximum 1-hour average
		Maximum 8-hour average
	Nitrogen dioxide (NO_2)	Maximum 1-hour average
		1-year average
	Sulfur dioxide (SO_2)	Maximum 24-hour average
		1-year average
	Particulates smaller than 10 microns (PM_{10})	Maximum 24-hour average
		1-year average
	Particulates smaller than 2.5 microns ($PM_{2.5}$)	Maximum 24-hour average
		1-year average
Volatile Organic Compounds	Acetaldehyde	Maximum 24-hour average
		1-year average
	Acrolein	Maximum 24-hour average
		1-year average
	Benzene	Maximum 24-hour average
		1-year average
	1,3-Butadiene	Maximum 24-hour average
		1-year average
	Isopropylbenzene or Cumene	Maximum 24-hour average
		1-year average
	Ethylbenzene	Maximum 24-hour average
		1-year average
Volatile Organic Compounds (continued)	Formaldehyde	Maximum 24-hour average
		1-year average
	Naphthalene	Maximum 24-hour average
		1-year average
	Styrene	Maximum 24-hour average
		1-year average
	Toluene	Maximum 24-hour average
		1-year average
	Xylene	Maximum 24-hour average
		1-year average
	Volatile Organic Compounds (VOC)	Maximum 24-hour average

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Table 5.2-51Air Quality Index used to assess the impact of air quality during operation phase

Pollutants		Concentration value per period
		1-year average

1) General Atmospheric Air Quality

The predicted emission of air pollutants in the general atmospheric air quality index consisted of carbon monoxide (CO), nitrogen dioxide ($NO_{2)}$, sulfurdioxide ($SO_{2,}$) PM_{10} and $PM_{2.5}$, and using the AERMOD model, it was found that the Cmax of carbon monoxide (CO) was 1-houraverage maximum and 8-hours average maximum, nitrogen dioxide (NO_2) 1-year average, sulfur dioxide (SO_2) 24-hours average maximum and 1-year average, including PM_{10} and $PM_{2.5}$ 24-hour average maximum and 1-year average. No scenarios exceeded the general atmospheric air quality standards. However, the Cmax of nitrogen dioxide (NO_2) was 1-hour average maximum, mostly exceeding the values for General Atmospheric Nitrogen Dioxide Standards.

In this regard, the details for the air pollutant emission forecasts for each type of general atmospheric air quality index are as follows:

1.1) Carbon monoxide (CO)

Based on the forecast of carbon monoxide (CO) emissions using the AERMOD model, taking into account the Cmax 1-hour average, and 8-hour average, it was found that for all scenarios, the Cmax 1-hour average, and 8-hour average was within the standard as per the National Environment Board Announcement No. 10 (1995) issued under the National Environmental Quality Promotion and Conservation Act of 1992 Re: Determination of General Atmospheric Air Quality Standards. which requires that 1-hour average concentrations of carbon monoxide must not exceed 34.2 milligrams per cubic meter (34,200 micrograms per cubic meter) and 8-year average concentrations must not exceed 10.26 milligrams per cubic meter (10,260 micrograms per cubic meter).

When comparing the Cmax 1-hour average and 8-hour averages for CO in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 5,085.05330 and 2,860.35711 micrograms per cubic meter respectively. In Scenario 1 (aviation situation in 2019 (1 runway)), the maximum 1-hour average and 8-year average was the lowest, comprising 183.13152 and 82.89661 micrograms per cubic meters, respectively.

In this regard, when considering the CO concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shownTable 5.2-52 and Addendum 5-3, item 1, carbon monoxide (CO) concentration values (Figure 1-1 to Figure 1-22), it was found that all carbon monoxide (CO) concentrations were in accordance with standard criteria.

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Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		183.13152	1,192.18056	1,818.59401	2,915.46829	4,481.71882	5,085.05330	4,493.99686	1,490.25985	1,286.23737	3,682.21554	3,253.51376	82.89661	672.80235	1,036.58901	1,661.92556	2,554.70951	2,860.35711	2,034.25983	838.27545	582.23027	2,071.25684	1,472.74076
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718920.00	719692.23	719692.23	719692.23	719692.23	719692.23	718920.00	719692.23	718920.00	719692.23	718920.00
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1406208.00	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406208.00	1405801.29	1406208.00	1405801.29	1406208.00
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	19.18766	101.73846	279.59692	449.73948	690.89716	328.23586	470.85992	96.19500	134.76592	237.68388	340.88792	8.94852	45.90893	130.26662	209.56315	321.92668	146.97775	219.59425	43.07429	62.85058	106.43030	158.97939
2	Wat Phala School	13.74292	97.11878	238.83886	383.98764	589.94535	331.50188	337.24735	97.15217	96.52435	240.04888	244.15658	6.12362	42.46517	105.98425	170.40535	261.80141	143.53313	150.27206	42.06478	43.00972	103.93596	108.79229
3	Phala Subdistrict Municipality Child Development Center	12.70450	92.28764	223.12099	358.72683	551.13275	318.91493	311.76500	93.46335	89.23099	230.93436	225.70815	5.50295	39.36484	97.07684	156.07505	239.78771	134.12110	135.04090	39.30643	38.65037	97.12048	97.76541
4	Ban Khlong Sai School	12.84476	87.87685	220.48543	354.51309	544.65186	295.96442	315.20690	86.73732	90.21611	214.31532	228.19998	5.73646	46.50879	109.53886	176.07235	270.52232	163.16516	140.77112	47.81828	40.29043	118.15201	101.91391
5	Rayong English Program School	14.81050	99.52923	251.49051	404.37838	621.25791	343.30881	363.44570	100.61239	104.02264	248.59858	263.12336	4.55144	31.00528	75.69046	121.68540	186.95450	113.23717	111.69111	33.18605	31.96737	81.99790	80.86089
6	Rayong Garden International School	14.15950	102.92165	252.27491	405.58289	623.12541	358.72377	347.47030	105.13000	99.45029	259.76094	251.55768	4.29661	31.66241	75.45243	121.28882	186.34937	112.43371	105.43760	32.95058	30.17754	81.41609	76.33354
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	6.32758	102.45329	176.10155	282.67214	434.41019	425.43726	155.27707	124.68150	44.44222	308.06986	112.41577	2.77548	34.11803	70.70271	113.57181	174.51738	131.66726	68.10947	38.58729	19.49377	95.34359	49.30913
8	Wat Khiri Pawanaram School	6.22922	93.83708	164.45693	264.02547	405.75223	388.22340	152.86344	113.77535	43.75140	281.12237	110.66837	2.72143	32.48123	67.84377	108.98414	167.46643	122.05772	66.78317	35.77105	19.11417	88.38507	48.34894
9	Ban Khlong Bang Phai School	26.27875	122.95475	344.84773	554.85353	852.32835	387.34245	644.87320	113.51718	184.57067	280.48445	466.86811	10.58891	59.33069	161.77643	260.21109	399.74378	188.04021	259.84897	55.10833	74.37198	136.16467	188.12256
10	Pattanavechsuksa School	48.57390	168.36720	471.06805	759.08409	1,165.71126	674.92238	1,191.99020	197.79728	341.16231	488.72834	862.96378	21.97235	57.99305	236.43631	380.82733	584.87978	156.03629	539.19535	45.72904	154.32437	112.98982	390.36064
11	Pattanavech College	44.29911	166.00262	448.84348	722.92013	1,110.27975	642.97032	1,087.08798	188.43320	311.13800	465.59105	787.01784	18.54346	47.92326	197.98511	318.90584	489.77639	144.29092	455.05141	42.28686	130.24133	104.48470	329.44305
12	Saeng Song La Child Development Center 3	43.69458	202.66446	413.80784	666.94552	1,024.17662	859.05541	1,072.25288	251.76054	306.89201	622.06372	776.27769	18.37821	81.47032	166.44361	268.32714	412.02970	310.44319	450.99629	90.98056	129.08071	224.79975	326.50727
13	Wat Sa Kaeo School	42.42989	203.82759	403.51851	650.34742	998.69253	865.12843	1,041.21770	253.54034	298.00936	626.46135	753.80919	21.86833	82.33603	196.28804	316.45580	485.92894	316.03509	536.64276	92.61937	153.59378	228.84899	388.51264
14	Wat Sombun Naram School (Tem Rat Memorial)	47.11017	193.33451	443.58554	714.84538	1,097.76069	803.03547	1,156.07049	235.34296	330.88164	581.49827	836.95903	15.95488	61.25017	177.34271	285.60264	438.64518	254.80716	391.52829	74.67550	112.06023	184.51230	283.45429
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	47.11017	193.33451	443.58554	714.84538	1,097.76069	803.03547	1,156.07049	235.34296	330.88164	581.49827	836.95903	15.95488	61.25017	177.34271	285.60264	438.64518	254.80716	391.52829	74.67550	112.06023	184.51230	283.45429
16	Sajjaseuksa School	9.58764	205.65202	316.00228	506.62488	778.78605	875.08293	235.27797	256.45767	67.33946	633.66965	170.33392	2.29606	77.08843	117.67030	188.64338	289.98626	328.73806	56.34477	96.34218	16.12657	238.04754	40.79186
17	Ban Chang District Center for Non-Formal and Informal Education	14.27841	253.28877	390.68762	626.38060	962.86974	1,076.42809	350.38830	315.46524	100.28546	779.46877	253.67022	4.62190	80.50027	128.47372	206.03038	316.69365	338.18250	113.42014	99.11003	32.46224	244.88649	82.11265

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Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
18	Wat Suwan Rangsan Community School	11.70077	159.55850	245.68605	393.94459	605.55752	679.47472	287.13368	199.13142	82.18120	492.02481	207.87584	3.32304	54.73889	86.02416	137.93958	212.03447	231.17751	81.54652	67.75043	23.33962	167.40147	59.03714
19	Ban Yai Ra Child Development Center	10.54338	121.52423	188.11073	301.60160	463.61839	515.84806	258.73165	151.17789	74.05219	373.53861	187.31366	2.95310	38.09439	65.24156	104.83131	161.07695	160.62646	72.46822	47.07427	20.74130	116.31368	52.46473
20	Wat Samnak Kathon School	13.61713	226.05152	346.94740	556.23228	855.04420	962.25152	334.16059	282.00389	95.64089	696.79063	241.92186	4.46226	84.61193	135.04636	216.57091	332.89568	355.44589	109.50264	104.16936	31.34101	257.38735	79.27650
21	Ban Sam Nak Thon Child Development Center	13.57328	224.35484	343.79279	551.16814	847.26156	955.53143	333.08465	280.03445	95.33294	691.92445	241.14291	4.33599	81.61705	130.15335	208.72279	320.83256	342.96779	106.40404	100.51244	30.45415	248.35164	77.03321
22	Burapatit Child Development Center, Sam Nak Thon SAO	10.27100	113.74518	175.00636	280.58870	431.31833	484.90167	252.04747	142.10854	72.13910	351.12955	182.47452	2.99183	45.95079	70.62297	113.27555	174.11251	195.99774	73.41872	57.44041	21.01334	141.92692	53.15287
23	Wat Chak Mak School	9.82854	87.01736	150.94194	242.49221	372.61088	371.03655	241.18960	108.73846	69.03144	268.67694	174.61376	2.96426	35.92250	57.89990	92.85932	142.73405	150.39107	72.74224	44.07462	20.81973	108.90197	52.66312
24	St. Andrews International School, Green Valley, Rayong,	2.51511	25.89111	52.79465	84.79794	130.30499	98.30043	61.72008	28.80858	17.66505	71.18182	44.68341	0.53767	5.90261	10.38098	16.65883	25.60331	23.92035	13.19424	7.01026	3.77636	17.32133	9.55222
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	11.76808	81.54914	203.58644	327.33411	502.89802	275.58606	288.78548	80.76510	82.65397	199.55883	209.07169	4.19706	31.45534	76.22254	122.53653	188.26343	108.40307	102.99471	31.76933	29.47836	78.49740	74.56496
26	Ban Phayun School	11.81168	81.13947	202.42487	325.46547	500.02745	274.32826	289.85546	80.39648	82.96021	198.64802	209.84633	4.14238	30.95824	75.09642	120.72676	185.48275	106.61835	101.65280	31.24629	29.09429	77.20504	73.59346
27	Rakpasa Kindergarten	11.94973	94.69906	224.85327	361.44248	555.32575	330.57320	293.24315	96.88000	83.92981	239.37640	212.29890	3.37340	28.31458	65.75022	105.67933	162.37078	100.19004	82.78241	29.36237	23.69335	72.55014	59.93189
28	Wat Ban Chang School (Boonrawdprachanukul)	24.71414	120.58513	287.75424	463.06902	711.31193	461.59979	606.47824	135.27953	173.58156	334.25606	439.07136	10.35151	73.51170	181.79139	292.27844	449.04424	250.00252	254.02325	73.26742	72.70459	181.03314	183.90492
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	18.12654	103.17578	250.99072	403.50398	619.93572	354.67996	444.82029	103.94489	127.31306	256.83272	322.03604	3.72046	28.09750	64.03562	102.91388	158.12467	100.52632	91.29901	29.46092	26.13090	72.79364	66.09764
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	18.12654	103.17578	250.99072	403.50398	619.93572	354.67996	444.82029	103.94489	127.31306	256.83272	322.03604	3.72046	28.09750	64.03562	102.91388	158.12467	100.52632	91.29901	29.46092	26.13090	72.79364	66.09764
31	Wat Prachummit Bamrung School	20.12768	104.27135	288.94900	464.86209	714.10497	347.46952	493.92768	101.83175	141.36820	251.61146	357.58826	6.22394	31.34043	89.70401	144.31409	221.69089	95.45303	152.73385	27.97410	43.71431	69.11995	110.57455
32	Udom Wittayanukun School	6.05626	72.21453	134.25671	215.70754	331.44768	307.83174	148.61903	90.21524	42.53660	222.90874	107.59555	2.14522	33.25184	50.96023	81.69946	125.58926	141.61440	52.64302	41.50247	15.06708	102.54657	38.11191
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	4.55762	49.93303	105.28409	169.15545	259.91829	192.94238	111.84265	56.54499	32.01075	139.71445	80.97060	1.63732	16.40742	36.03982	57.90991	88.98045	59.93685	40.17939	17.56550	11.49984	43.40179	29.08863
34	Wat Noen Kraprok School	4.50571	49.73618	103.21551	165.83391	254.81395	191.78956	110.56887	56.20714	31.64618	138.87967	80.04842	1.61129	16.09187	35.38345	56.85555	87.36029	58.75059	39.54054	17.21784	11.31699	42.54279	28.62612
35	Chonnabot Phatthana Kindergarten	5.90073	70.79948	133.19159	213.98680	328.80649	301.86205	144.80220	88.46572	41.44418	218.58593	104.83228	1.98186	38.96638	60.41351	96.86330	148.89676	165.31723	48.63430	48.44898	13.91974	119.71038	35.20972
36	Aksorn Business Administration Technological College	14.67007	132.57886	286.26912	459.94479	706.73239	496.76509	359.99951	145.58531	103.03630	359.72015	260.62843	8.13056	87.02446	187.42312	301.12611	462.69933	321.30722	199.52161	94.16445	57.10555	232.66667	144.44743

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
37	Banchang Karnchanakul Wittaya School	10.66004	198.99056	312.44654	501.00424	770.12195	840.64259	261.59451	246.36436	74.87158	608.73053	189.38628	3.40939	72.27763	114.11214	182.98476	281.27402	304.76927	83.66549	89.31773	23.94609	220.69113	60.57121
38	Ban Khao Huai Mahat School	2.74424	22.08453	48.37758	77.73351	119.44038	83.25309	67.34286	24.39871	19.27436	60.28567	48.75413	0.64289	7.37412	14.82270	23.80605	36.58222	28.19240	15.77626	8.26225	4.51536	20.41483	11.42152
39	Ban Phudon - Huai Mahat Child Development Center	2.74424	22.08453	48.37758	77.73351	119.44038	83.25309	67.34286	24.39871	19.27436	60.28567	48.75413	0.64289	7.37412	14.82270	23.80605	36.58222	28.19240	15.77626	8.26225	4.51536	20.41483	11.42152
40	Ban Map Fakthong School	20.92658	93.58035	283.63189	456.40307	701.08207	270.61721	513.53256	79.30889	146.97936	195.96075	371.78158	4.67700	21.32705	64.01885	103.01144	158.23729	71.20794	114.77230	20.86868	32.84925	51.56346	83.09157
41	Phuru Yor. Sor. Sor. 80 School	13.27682	99.64143	216.53645	347.91805	534.59314	366.12059	325.80944	107.29776	93.25068	265.11717	235.87589	3.14958	25.45984	50.31142	80.79493	124.15810	98.12632	77.28981	28.75756	22.12130	71.05574	55.95542
42	Khao Chi Chan School	17.26322	145.25911	336.11216	540.23785	830.04427	523.08704	423.63455	153.29940	121.24944	378.78054	306.69822	4.86992	24.20985	61.57648	99.11169	152.23781	87.18117	119.50657	25.54990	34.20426	63.13009	86.51904
43	Ban Khalot Child Development Center	16.85329	92.30254	247.10169	397.42254	610.54122	296.71728	413.57498	86.95796	118.37026	214.86048	299.41541	7.67491	39.44489	111.83294	179.90783	276.37095	121.11106	188.34010	35.49362	53.90526	87.69958	136.35237
44	Ban Khalot School	17.49398	93.45313	249.60498	401.44471	616.72146	300.94237	429.29744	88.19619	122.87023	217.91997	310.79798	8.03658	41.61389	117.57574	189.14373	290.55976	128.14175	197.21538	37.55408	56.44548	92.79068	142.77779
45	Phlu Ta Luang Wittaya School	39.54271	128.81267	444.56367	715.77356	1,099.37955	411.91935	970.36712	120.71985	277.73105	298.28121	702.51557	11.89956	30.28147	123.33224	198.68656	305.13486	106.02045	292.01189	31.07107	83.57741	76.77209	211.40751
46	Athittan Kindergarten School	20.79003	113.85450	279.67448	449.66576	690.84328	420.74122	510.18164	123.30525	146.02028	304.66935	369.35562	6.49362	22.48464	73.69387	118.66963	182.26306	80.24857	159.35175	23.51818	45.60844	58.11001	115.36571
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	51.25149	160.15200	551.78981	888.75803	1,364.96912	428.76037	1,257.69734	125.65539	359.96850	310.47621	910.53370	10.55726	43.28665	137.10908	220.66345	338.95103	119.78319	259.07237	35.10447	74.14971	86.73804	187.56032
48	Ban Khao Bai Si School	33.28212	164.55502	435.18984	699.89477	1,075.22580	590.63179	816.73400	173.09452	233.75935	427.69140	591.28998	8.23975	39.98191	116.45726	187.36720	287.82387	165.22839	202.20130	48.42294	57.87251	119.64605	146.38744
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	9.32108	118.29629	180.33342	289.09901	444.40948	504.68304	228.73680	147.90580	65.46730	365.45374	165.59832	1.59239	35.78213	54.54320	87.44013	134.41494	152.65949	39.07677	44.73941	11.18425	110.54459	28.29037
50	Ban KM. 5 School	17.70693	103.31189	276.77137	445.14271	683.85102	331.92866	434.52318	97.27724	124.36590	240.35792	314.58125	3.80546	22.39715	59.58840	95.83563	147.22845	72.33643	93.38485	21.19940	26.72790	52.38064	67.60772
51	Royal Thai Fleet Sattahip District School	14.62811	97.73722	247.53020	398.01462	611.47985	327.07080	358.96969	95.85356	102.74156	236.84023	259.88288	3.14595	22.28716	54.39060	87.44209	134.34395	76.45651	77.20083	22.40686	22.09583	55.36409	55.89099
52	RTN. 8 Nursery	13.53020	68.84297	196.09255	315.46382	484.60769	223.75462	332.02733	65.57503	95.03032	162.02637	240.37745	3.97549	20.65452	58.26719	93.73366	143.99242	64.00334	97.55748	18.75725	27.92216	46.34643	70.62858
53	Juk Samet School	13.68026	69.49316	198.09462	318.68561	489.55664	225.62295	335.70972	66.12258	96.08427	163.37928	243.04338	3.97459	20.67266	58.28880	93.76823	144.04558	64.24769	97.53546	18.82886	27.91585	46.52338	70.61263
54	Juk Samet Child Development Center	13.96787	70.90808	202.18907	325.27296	499.67585	229.12056	342.76761	67.14761	98.10432	165.91198	248.15307	4.02047	20.77718	58.75717	94.52283	145.20444	64.77997	98.66111	18.98485	28.23803	46.90881	71.42757
55	Ban Chong Samaesarn Child Development Center	11.60464	73.58396	179.18307	288.13143	442.65901	283.53118	284.77463	83.09355	81.50601	205.31209	206.16796	3.25106	23.22878	51.74422	83.15069	127.76178	85.80602	79.78010	25.14689	22.83405	62.13431	57.75831
56	Samaesarn Subdistrict NFE Center	12.18594	69.83945	174.56085	280.83620	431.41017	251.56532	299.03948	73.72542	85.58879	182.16480	216.49527	2.71862	19.46937	47.09817	75.71514	116.32788	76.63216	66.71412	22.45833	19.09440	55.49128	48.29894
57	Ban Chong Samaesarn School	12.56082	70.94676	185.03852	297.66383	457.26882	258.97549	308.23896	75.89709	88.22179	187.53069	223.15541	2.86512	19.97429	46.09926	74.09240	113.83977	73.48808	70.30927	21.53691	20.12338	53.21457	50.90172
58	Wat Phala Vipassana Office	14.27429	99.46662	247.78219	398.38980	612.06523	336.62425	350.28709	98.65336	100.25649	243.75813	253.59694	5.97136	40.61118	102.13248	164.21805	252.29388	136.55915	146.53545	40.02094	41.94025	98.88593	106.08710
59	Wat Phala	13.09348	93.23514	227.56336	365.88021	562.11959	321.73292	321.31029	94.28921	91.96297	232.97494	232.61864	5.81187	40.93785	101.55579	163.28055	250.85662	138.93333	142.62158	40.71673	40.82006	100.60513	103.25359
60	Chao Li Hu Ong Yea Shrine	14.71299	117.16128	271.80505	436.93738	671.31072	428.53020	361.05262	125.58794	103.33772	310.30954	261.39085	7.19041	57.51936	136.11736	218.79958	336.16808	201.20372	176.45060	58.96611	50.50234	145.69670	127.74474

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
61	Wat Khlong Sai	13.96878	96.11332	236.42402	380.10568	583.98110	328.01709	342.79010	96.13089	98.11076	237.52546	248.16936	6.70502	49.77521	121.04341	194.59451	298.97134	171.14728	164.53931	50.15757	47.09318	123.93207	119.12134
62	Wat Khiri Pawanaram	5.35380	62.05115	113.50146	182.30421	280.13831	260.95294	131.38067	76.47662	37.60277	188.96262	95.11552	2.39337	24.30328	52.73015	84.72829	130.18780	93.24341	58.73265	27.32654	16.81001	67.51991	42.52061
63	Ban Chang Christ Church	5.17150	75.95176	133.81124	214.77955	330.08533	314.17241	126.90716	92.07347	36.32239	227.50018	91.87683	2.13204	27.00327	51.96762	83.48458	128.28232	106.90263	52.31973	31.32960	14.97455	77.41089	37.87786
64	Ban Chang Church	6.40839	90.69354	175.28511	281.45309	432.52178	361.51371	157.26008	105.94763	45.00978	261.78121	113.85140	2.97634	37.19464	71.40508	114.64965	176.18872	145.26604	73.03845	42.57264	20.90451	105.19081	52.87757
65	Wat Ban Khlong Bang Phai	27.87424	124.46853	351.53819	565.59166	868.83152	391.00380	684.02622	114.59020	195.77675	283.13573	495.21368	10.61053	60.86685	164.26346	264.19990	405.87495	194.46128	260.37946	56.99013	74.52381	140.81433	188.50662
66	Admiral Prince Abhakara Kiartivongse Monument	26.44998	117.83027	322.81934	519.26871	797.70768	379.26860	649.07512	111.15100	185.77331	274.63798	469.91017	9.88046	60.73301	159.14043	255.92757	393.17637	198.37823	242.46367	58.13805	69.39610	143.65069	175.53615
67	Royal Thai Naval Air Division Naval Aviation Museum	28.60952	122.22225	339.23752	545.70703	838.31393	392.91243	702.06971	115.14955	200.94101	284.51781	508.27660	9.39487	61.64458	157.25808	252.87040	388.48867	205.25245	230.54754	60.15266	65.98555	148.62848	166.90924
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	37.04399	145.48461	404.75006	651.50276	1,000.71434	468.61593	909.04936	137.33573	260.18115	339.33663	658.12343	9.89198	58.89969	141.90315	228.11945	350.48144	203.73365	242.74637	59.70755	69.47701	147.52868	175.74081
69	Somdej Phra Pathom (Air Defense Regiment 1)	45.76451	160.55191	449.74774	723.94335	1,111.98065	515.45861	1,123.04832	151.06376	321.43029	373.25660	813.05201	18.31804	48.29788	173.24733	279.22951	428.79055	182.10602	449.51970	53.36921	128.65809	131.86757	325.43826
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	52.64823	165.24523	501.46316	808.19744	1,241.09360	554.01827	1,291.97310	162.36431	369.77865	401.17862	935.34829	24.76569	45.64360	236.02968	380.40277	584.15890	178.74233	607.74317	52.38343	173.94360	129.43183	439.98713
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	39.22225	336.46094	515.33316	826.17848	1,270.01129	1,433.21847	962.50311	420.02862	275.48027	1,037.82970	696.82227	18.85735	125.17250	235.43898	377.97963	580.87702	493.30613	462.75420	144.57160	132.44596	357.21543	335.01963
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	31.13221	327.23775	503.47310	807.19175	1,240.81648	1,391.86277	763.97576	407.90864	218.65929	1,007.88299	553.09466	14.38767	124.86795	225.46745	361.87909	556.16137	500.68092	353.06949	146.73291	101.05285	362.55570	255.61131
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	36.02289	339.50837	518.18666	830.73138	1,277.01660	1,447.85463	883.99183	424.31800	253.00937	1,048.42811	639.98255	13.51104	133.86887	270.26829	434.07628	667.03187	510.72531	331.55731	149.67659	94.89579	369.82910	240.03716
74	Wat Sa Kaeo	59.61223	213.53705	532.87150	859.11599	1,319.19666	907.79230	1,462.86757	266.04370	418.69075	657.35534	1,059.07056	24.47983	92.18806	225.76902	363.93030	558.84403	376.65676	600.72820	110.38556	171.93582	272.74667	434.90851
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	5.67759	68.09165	118.28119	189.79572	291.70575	277.28511	139.32651	81.26303	39.87697	200.78915	100.86805	2.60734	26.99327	48.43556	77.82810	119.58528	112.91890	63.98351	33.09277	18.31287	81.76743	46.32207
76	Wat Sombun Naram	49.41719	186.92395	457.93952	738.16026	1,133.50976	748.67116	1,212.68420	219.41059	347.08518	542.13170	877.94559	18.65389	65.48080	188.79002	303.84806	466.72432	274.99962	457.76134	80.59324	131.01694	199.13417	331.40495
77	Ban Chang Abundant Grace Church	27.29857	178.97109	303.04137	486.43786	747.57672	748.04952	669.89930	219.22841	191.73345	541.68156	484.98623	9.64685	98.53951	161.22978	258.60630	397.49548	410.34668	236.73097	120.25895	67.75533	297.14240	171.38585
78	Wat Samnak Kathon	13.86653	226.81699	348.44432	558.63603	858.73811	965.21614	340.28077	282.87272	97.39256	698.93739	246.35268	4.55595	87.09556	139.08370	223.04635	342.84896	365.81247	111.80186	107.20746	31.99907	264.89405	80.94106
79	Wat Suwan Rangsan	10.54338	121.52423	188.11073	301.60160	463.61839	515.84806	258.73165	151.17789	74.05219	373.53861	187.31366	2.95310	38.09439	65.24156	104.83131	161.07695	160.62646	72.46822	47.07427	20.74130	116.31368	52.46473

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
80	Wat Nong Bot	7.43475	75.66235	137.67829	221.05166	339.70513	305.28896	182.44681	89.47003	52.21853	221.06745	132.08581	2.64113	19.22502	42.25304	67.89372	104.32082	73.36133	64.81258	21.49976	18.55016	53.12279	46.92229
81	The Shrine of Luang Tia Chak Mak	10.08548	113.77450	193.51238	310.46909	477.18729	467.07892	247.49498	136.88528	70.83612	338.22364	179.17866	2.83467	42.56986	66.51689	106.65522	163.94692	180.13390	69.56191	52.79125	19.90948	130.43951	50.36066
82	Wat Chak Mak	10.25810	116.66150	202.09206	324.28410	498.40584	497.21020	251.73096	145.71576	72.04851	360.04247	182.24538	2.98606	46.75774	73.70342	118.18590	181.66923	197.26842	73.27708	57.81281	20.97281	142.84705	53.05033
83	The Shrine of Luang Tia Ban Phayun	10.74738	74.53032	185.96547	299.00171	459.36990	251.95666	263.73769	73.84011	75.48498	182.44818	190.93787	3.89401	28.86445	70.23165	112.90767	173.46914	99.21200	95.55795	29.07574	27.34986	71.84192	69.18098
84	The Shrine of King Taksin the Great (Ban Chang)	10.68101	74.03625	184.81100	297.14609	456.51886	250.21494	262.10915	73.32967	75.01887	181.18696	189.75886	3.93115	29.34948	71.22115	114.49699	175.91137	101.05311	96.46925	29.61530	27.61069	73.17511	69.84073
85	Wat Chonthararam (Phayun)	11.74290	81.49284	203.33098	326.92253	502.26595	275.50063	288.16762	80.74006	82.47713	199.49697	208.62438	4.09619	30.64502	74.30781	119.45876	183.53468	105.56594	100.51937	30.93786	28.76988	76.44296	72.77289
86	Masjid Dawatul Islam	13.87687	149.36846	298.79580	479.86894	737.40760	572.38044	340.53468	167.74565	97.46523	414.47514	246.53650	6.65360	98.33995	194.71871	312.70172	480.52969	378.66370	163.27763	110.97373	46.73207	274.19995	118.20792
87	Chinese shrine at the Buddha Dhamma Foundation	23.84600	139.32332	316.93210	509.34786	782.60203	499.00733	585.17435	146.24244	167.48412	361.34381	423.64800	14.17892	80.54722	218.30293	351.12282	539.40768	256.49130	347.94678	75.16906	99.58666	185.73183	251.90263
88	The Shrine of Luang Tia Ban Chang	19.34880	107.18278	266.96856	429.56111	659.85853	427.40432	474.81431	125.25798	135.89771	309.49426	343.75077	6.70803	73.04648	154.07016	247.51132	380.32512	272.66250	164.61309	79.90830	47.11430	197.44181	119.17475
89	The Shrine of Laoia Guan Yu Ban Chang	24.49087	113.08425	274.95948	442.42356	679.61540	440.97097	600.99930	129.23391	172.01342	319.31822	435.10478	9.39353	70.14160	168.20961	270.40303	415.44747	243.32906	230.51471	71.31165	65.97615	176.20072	166.88547
90	Wat Ban Chang	27.88791	124.91137	305.92613	492.53433	756.50664	472.17365	684.36152	138.37838	195.87271	341.91287	495.45642	12.49948	71.27090	192.84843	310.17917	476.50919	227.23811	306.73369	66.59592	87.79097	164.54885	222.06564
91	Wat Prachummit Bamrung	20.75871	104.44168	290.49598	467.39347	717.98086	345.46401	509.41301	101.24400	145.80029	250.15921	368.79915	6.45037	30.50532	89.95674	144.73768	222.33650	95.17714	158.29027	27.89325	45.30463	68.92017	114.59722
92	The Shrine of Luang Tia Noen Kraprok 1	11.97758	148.13117	306.48137	492.30556	756.49076	558.36895	293.92643	163.63935	84.12537	404.32906	212.79358	3.44990	43.73083	80.00109	128.41371	197.35209	174.39916	84.65951	51.11059	24.23060	126.28684	61.29085
93	The Shrine of Luang Tia Noen Kraprok 2	6.90730	156.90463	241.33465	386.91821	594.77156	667.43860	169.50334	195.60404	48.51395	483.30915	122.71514	2.46321	71.43370	110.06791	176.46801	271.26633	303.68488	60.44645	88.99993	17.30052	219.90589	43.76135
94	Wat Noen Kraprok	5.13657	53.90209	116.76573	187.60918	288.27164	207.05688	126.05002	60.68148	36.07707	149.93512	91.25629	1.83766	18.07920	39.93777	64.17515	98.60662	65.83791	45.09570	19.29490	12.90695	47.67489	32.64788
95	Wat Phudon Nim Sanoh	2.76891	22.77002	48.12061	77.30760	118.78984	86.24847	67.94840	25.27656	19.44767	62.45470	49.19252	0.67423	7.25805	14.17610	22.76380	34.98174	28.12570	16.54549	8.24271	4.73552	20.36653	11.97842
96	Church of Christ Ban Chang	2.74698	23.80065	49.40701	79.41884	122.02059	91.85692	67.41019	26.92021	19.29363	66.51592	48.80287	0.67370	7.88620	16.50048	26.50660	40.73031	29.55850	16.53244	8.66261	4.73179	21.40406	11.96897
97	Anek Kusala Sala (Viharn Sien)	24.51389	110.72023	333.92663	537.32424	825.38831	321.69195	601.56414	94.27720	172.17508	232.94527	435.51370	5.06583	23.93071	70.60717	113.60504	174.51253	75.20864	124.31417	22.04115	35.58025	54.46047	89.99959
98	Wat Yan Nasangwararam	27.37453	130.26586	339.55484	546.05515	838.89726	427.12834	671.76329	125.17710	192.26694	309.29442	486.33570	4.64076	30.92669	78.40632	126.07354	193.68977	103.42002	113.88306	30.30897	32.59474	74.88905	82.44779
99	Sirisirirak Monastery	9.79716	145.47407	236.79764	380.21199	584.29239	608.02590	240.41968	178.19215	68.81108	440.28691	174.05636	2.29344	34.83641	59.85763	96.04148	147.61264	142.46076	56.28047	41.75051	16.10817	103.15944	40.74531
100	Anan Buraparam Meditation Center	18.83255	145.87193	331.20133	532.49284	818.10014	527.44713	462.14553	154.57720	132.27176	381.93779	334.57897	6.41142	34.58410	76.55918	123.02267	189.02681	125.79558	157.33446	36.86650	45.03106	91.09176	113.90525
101	Wat Map Fakthong	18.25534	118.05405	275.68311	443.11352	680.81711	416.31924	447.98101	122.00931	128.21769	301.46728	324.32430	4.38453	27.75358	71.84344	115.53151	177.49058	91.45716	107.59505	26.80305	30.79503	66.22644	77.89547
102	Khao Chi Chan Image of Lord Buddha	5.35372	46.22758	92.81396	149.06325	229.06238	176.83350	131.37889	51.82401	37.60226	128.04960	95.11422	0.89669	7.70460	15.81171	25.40770	39.03947	29.47225	22.00462	8.63734	6.29800	21.34160	15.93066
103	Wat Khao Chi Chan	6.18952	54.93155	122.35123	196.62890	302.11733	215.05084	151.88904	63.02424	43.47252	155.72374	109.96293	1.03159	18.32582	28.49676	45.69096	70.23514	77.67140	25.31484	22.76290	7.24542	56.24383	18.32716
104	Rat Samakkhi Temple	17.54310	93.28718	250.25304	402.49451	618.33199	299.41231	430.50286	87.74778	123.21523	216.81202	311.67066	8.03575	41.44194	117.30808	188.71458	289.90008	127.41320	197.19511	37.34057	56.43967	92.26311	142.76312
105	The Shrine of Chao Mae Kuan Im	17.76064	93.11606	254.08500	408.77778	627.94871	298.96063	435.84123	87.61541	124.74314	216.48495	315.53547	8.22587	42.45461	120.13255	193.25805	296.87976	130.56504	201.86054	38.26427	57.77498	94.54545	146.14074
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom	18.65844	102.74896	282.32440	454.12239	697.63156	323.67775	457.87298	94.85917	131.04890	234.38323	331.48578	9.18567	48.30799	135.52111	218.00609	334.89957	149.63818	225.41388	43.85397	64.51623	108.35679	163.19263

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
	Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani																					
107	Prakai Dhamma Meditation Center	16.10260	100.22056	261.25006	420.12939	645.43916	328.60176	395.15345	96.30224	113.09779	237.94884	286.07879	4.02052	23.85500	62.82949	101.04383	155.23092	77.62658	98.66249	22.74977	28.23842	56.21137	71.42857
108	KM.8 Meditation Center	13.00603	84.78955	216.86639	348.72440	535.74943	281.80117	319.16437	82.58654	91.34878	204.05934	231.06506	4.25869	27.74278	70.97913	114.13567	175.34793	92.18467	104.50704	27.01626	29.91120	66.75325	75.65984
109	Wat Rangsee Sunthorn (KM.5)	14.60934	101.90682	253.75904	407.99876	626.82815	344.97564	358.50928	101.10088	102.60978	249.80557	259.54956	3.44352	23.13604	58.46522	94.00785	144.42689	77.54115	84.50311	22.72473	24.18583	56.14950	61.17762
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	3.07467	27.61299	62.80371	100.93300	155.08141	104.93083	75.45166	30.75173	21.59519	75.98306	54.62465	1.12025	8.66178	20.75014	33.35642	51.24889	30.06883	27.49064	8.81217	7.86816	21.77360	19.90237
111	Sattahip Meditation Center (Khao Bandai Kaew)	3.72549	36.92675	74.39766	119.49073	183.61745	141.12051	91.42239	41.35772	26.16622	102.18893	66.18697	1.18159	8.85096	21.45179	34.48626	52.98421	30.83383	28.99596	9.03637	8.29900	22.32755	20.99217
112	Wat Tung Prong	3.55737	33.97126	69.20161	111.22898	170.89684	129.63365	87.29684	37.99131	24.98543	93.87100	63.20019	1.01077	8.04690	19.07531	30.66255	47.11048	29.54270	24.80412	8.65798	7.09924	21.39261	17.95741
113	Khao Phlu Ta Luang Meditation Center	2.37456	20.36393	46.38477	74.55163	114.54525	75.83802	58.27096	22.22560	16.67787	54.91623	42.18636	0.57988	5.33214	11.02386	17.70772	27.21021	20.10663	14.23004	5.89258	4.07281	14.55972	10.30211
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	38.91134	106.24021	363.20254	585.35930	898.89822	373.50060	954.87365	109.46059	273.29662	270.46122	691.29878	8.72192	35.13157	98.62844	158.82444	243.93552	122.08115	214.03349	35.77792	61.25903	88.40204	154.95358
115	Wat Khao Bai Si Santitham	68.51060	164.70548	659.10105	1,062.20308	1,631.16941	456.48956	1,681.23126	133.78189	481.18913	330.55562	1,217.15907	11.41843	50.94643	140.95193	226.72945	348.30421	159.60921	280.20521	46.77615	80.19819	115.57706	202.85984
116	Welu Amphawan Vipassana Office	46.09593	167.30928	487.68136	784.81201	1,205.53254	603.42543	1,131.18130	176.84391	323.75805	436.95560	818.94003	8.02654	49.78414	122.34926	196.70357	302.20875	170.00641	196.96901	49.82322	56.37496	123.10594	142.59943
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	13.21405	77.74484	196.03078	315.20016	484.25180	280.13178	324.26924	82.09730	92.80986	202.85050	234.76083	3.18616	19.09817	50.57670	81.34053	124.96070	67.14995	78.18747	19.67941	22.37822	48.62497	56.60529
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	15.97829	101.70097	261.99731	421.30910	647.25812	336.29483	392.10292	98.55682	112.22469	243.51958	283.87030	4.31756	24.67445	66.69906	107.27892	164.80614	78.73182	105.95164	23.07368	30.32467	57.01170	76.70569
119	Samaesarn Pattanakarn Church	23.61884	119.43441	341.17802	548.87635	843.16834	364.37292	579.59978	106.78557	165.88861	263.85164	419.61219	4.54162	22.02055	61.75189	99.36618	152.63703	78.97473	111.45003	23.14486	31.89837	57.18760	80.68635
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	15.94268	90.14449	214.71952	345.15816	530.30469	315.15936	391.22895	92.36272	111.97455	228.21485	283.23757	3.52719	25.95761	62.58969	100.61779	154.58850	92.73621	86.55621	27.17790	24.77346	67.15263	62.66400
121	Wat Chong Samaesarn	12.34762	70.92505	175.34007	282.09856	433.34674	254.38300	303.00728	74.55119	86.72442	184.20516	219.36783	2.72349	19.37449	47.53867	76.42838	117.42217	77.94465	66.83369	22.84298	19.12863	56.44169	48.38551
122	Viharn Luang Por Dam	14.04613	83.70524	183.98039	295.62648	454.23930	305.67111	344.68821	89.58203	98.65402	221.34417	249.54353	2.67851	17.85817	43.60992	70.13054	107.74084	72.71353	65.72982	21.30991	18.81269	52.65370	47.58634
123	The Shrine of King Taksin the Great (Samaesarn)	11.73191	83.10950	182.82274	293.76759	451.38269	316.59626	287.89791	92.78382	82.39994	229.25535	208.42912	3.32688	24.41152	59.50481	95.66351	146.97530	83.80817	81.64077	24.56138	23.36660	60.68761	59.10538

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
124	Thai Island and Sea Natural History Museum	11.35090	82.40948	178.26511	286.41894	440.09883	312.90085	278.54797	91.70082	79.72387	226.57941	201.66006	3.06275	23.83699	56.96806	91.57671	140.69900	82.87241	75.15912	24.28714	21.51147	60.01001	54.41286
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	11.43463	91.65622	191.18481	307.11677	471.92026	344.07744	280.60255	100.83764	80.31191	249.15517	203.14751	3.55471	22.61177	58.41529	93.93684	144.31503	74.62088	87.23159	21.86890	24.96676	54.03487	63.15295
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	11.76370	89.11052	191.55792	307.87945	473.04329	336.78481	288.67787	98.70042	82.62317	243.87439	208.99379	3.60858	23.74126	60.49980	97.28298	149.45748	79.10863	88.55358	23.18411	25.34513	57.28456	64.11004
127	Eastern-Nong Muang Community Health Service Center	47.65586	191.77690	427.35104	688.97948	1,057.95096	781.79621	1,169.46163	229.11844	334.71435	566.11838	846.65379	29.14928	82.45757	271.19700	437.13746	671.26570	310.98063	715.31516	91.13807	204.73203	225.18893	517.86590
128	Phala Subdistrict Health Promotion Hospital	12.93659	91.38097	226.44505	364.07463	559.34785	316.98415	317.46023	92.89750	90.86103	229.53623	229.83132	6.28699	44.25913	109.81927	176.56669	271.26877	150.18278	154.28091	44.01357	44.15710	108.75115	111.69457
129	Ban Chang Hospital	4.28851	43.33453	85.91572	138.01825	212.07962	171.50976	105.23877	50.26380	30.12063	124.19455	76.18959	1.67158	16.56945	35.07911	56.37256	86.61635	64.82336	41.02012	18.99757	11.74047	46.94023	29.69729
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	35.10225	147.59687	425.14309	684.01494	1,050.74700	497.31568	861.39942	145.74667	246.54315	360.11884	623.62635	9.51652	40.79314	111.99726	180.32113	276.96131	150.28729	233.53278	44.04420	66.83996	108.82682	169.07046
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	42.06415	194.01691	395.18873	636.49332	977.54585	822.02160	1,032.24256	240.90717	295.44056	595.24660	747.31146	15.18570	78.54492	187.37086	301.19781	462.76288	273.38537	372.65295	80.12015	106.65787	197.96526	269.78913
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	65.38705	202.37252	594.54618	958.45875	1,471.76756	834.75237	1,604.58025	244.63813	459.25067	604.46528	1,161.66612	22.23123	77.47537	217.74161	350.85665	538.80834	326.66571	545.54813	95.73484	156.14261	236.54689	394.95986
133	Ban Yai Ra Subdistrict Health Promotion Hospital	10.97326	172.25816	267.53660	428.95727	659.38481	730.38920	269.28088	214.05276	77.07151	528.89327	194.95097	2.88627	69.82705	109.81454	176.08833	270.67472	294.82711	70.82829	86.40401	20.27193	213.49176	51.27748
134	Sam Nak Thon Subdistrict Health Promotion Hospital	21.09478	227.52275	372.87831	598.08913	919.30163	948.45980	517.66015	277.96199	148.16072	686.80370	374.76983	6.45226	131.85633	206.21822	330.65884	508.27728	557.77706	158.33670	163.46589	45.31792	403.90046	114.63084
135	Ban Chak Mak Subdistrict Health Promotion Hospital	9.90980	110.91934	170.53979	273.41603	420.29599	471.88633	243.18376	138.29417	69.60219	341.70481	176.05747	3.03779	40.98000	66.90839	107.31684	164.95377	170.78276	74.54646	50.05074	21.33612	123.66811	53.96932
136	Ban Phayun Subdistrict Health Promotion Hospital	11.56902	80.03938	199.94408	321.47872	493.90184	270.36834	283.90066	79.23596	81.25587	195.78055	205.53524	4.18085	31.23968	75.78459	121.83312	187.18253	107.58260	102.59687	31.52888	29.36449	77.90328	74.27694
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	6.74403	168.41264	267.76325	429.39415	660.03433	708.42797	165.49665	207.61665	47.36719	512.99058	119.81442	1.96391	55.06484	85.07172	136.39518	209.66563	233.89037	48.19381	68.54548	13.79366	169.36593	34.89082
138	Phudon Huai Mahat Community Health Service Unit	2.87279	22.81943	50.53090	81.20228	124.76763	88.83728	70.49750	26.03525	20.17725	64.32932	51.03799	0.68324	7.90244	15.91797	25.56543	39.28572	30.18186	16.76654	8.84530	4.79879	21.85544	12.13845
139	Wat Yan Nasangwararam Hospital	21.97557	128.02221	343.19551	551.97693	847.97475	411.11419	539.27445	120.48388	154.34700	297.69817	390.41791	4.84163	27.81095	75.01076	120.64634	185.34205	88.89199	118.81233	26.05128	34.00555	64.36893	86.01643
140	Somdej Phra Sangkharat Yanasangwon Hospital	22.50562	129.44010	346.57336	557.40676	856.31720	416.05353	552.28166	121.93144	158.06983	301.27487	399.83472	4.76381	28.02817	74.81753	120.33023	184.85802	90.29714	116.90268	26.46309	33.45899	65.38644	84.63390

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
	for the Elderly, Chonburi																					
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	7.92380	194.97226	311.21448	499.08818	767.15881	819.03479	194.44781	240.03183	55.65336	593.08378	140.77416	1.65470	32.49538	51.86908	83.18136	127.85980	136.50580	40.60597	40.00531	11.62193	98.84730	29.39746
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	18.16475	100.21078	275.12937	442.54762	679.85061	315.88348	445.75795	92.57493	127.58143	228.73921	322.71488	8.70522	46.96851	130.24231	209.50436	321.84225	146.87680	213.62365	43.04470	61.14172	106.35720	154.65687
143	Sattahip Hospital KM.10	15.21023	103.86402	260.79077	419.32047	644.21747	349.63219	373.25479	102.46556	106.83013	253.17750	270.22484	6.25960	40.39172	103.74014	166.81880	256.28476	133.85093	153.60897	39.22725	43.96478	96.92484	111.20811
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	12.23400	69.63905	176.35230	283.71205	435.82981	251.76715	300.21903	73.78457	85.92639	182.31096	217.34923	2.73426	19.59282	46.86769	75.34059	115.75363	75.78738	67.09796	22.21076	19.20426	54.87956	48.57683
145	Village No. 1 Ban Sakulthong	5.46136	80.93272	145.48354	233.63064	359.02199	329.37179	134.02027	96.52791	38.35826	238.50643	97.02650	1.81202	25.74607	45.63054	73.22906	112.54621	104.01616	44.46645	30.48367	12.72685	75.32073	32.19232
146	Village No. 2, Ban Kilo 16	16.42921	105.73583	271.85697	437.16029	671.61147	369.60534	403.16838	108.31902	115.39177	267.64056	291.88135	9.35527	55.69400	147.92149	237.89938	365.47584	180.10786	229.57583	52.78362	65.70744	130.42065	166.20575
147	Village No. 4, Ban Tung Prong	18.66016	133.43140	321.42055	516.79891	793.97928	509.36701	457.91529	149.27851	131.06101	368.84552	331.51641	6.99415	70.67361	154.84453	248.80577	382.29907	258.53249	171.63441	75.76727	49.12389	187.20990	124.25797
148	Village No. 5, Phala Subdistrict	15.94920	114.95422	273.26734	439.38223	675.03881	426.65873	391.38907	125.03947	112.02038	308.95436	283.35349	7.51354	53.95522	132.86213	213.60730	328.17849	184.01098	184.38020	53.92749	52.77189	133.24700	133.48553
149	Village No. 6, Ban Takat	12.30899	87.57844	216.09292	347.42727	533.77259	301.50683	302.05912	88.36162	86.45305	218.32871	218.68140	6.01387	43.38360	106.64461	171.45505	263.41772	148.12628	147.57870	43.41088	42.23884	107.26198	106.84238
150	Village No. 7, Ban Khlong Sai	15.92949	109.27571	271.21616	436.09231	669.98196	388.76383	390.90528	113.93374	111.88191	281.51371	283.00325	7.03325	51.09519	125.26681	201.39189	309.41242	174.76124	172.59390	51.21670	49.39850	126.54903	124.95261
151	Village No. 1 Ban Sam Nak Thon	39.94632	147.99472	391.94902	631.59785	969.93092	611.90434	980.27173	179.32879	280.56587	443.09539	709.68620	10.80594	82.95678	149.63866	240.76749	369.85018	350.26040	265.17481	102.64966	75.89630	253.63240	191.97830
152	Village No. 2, Ban Chak Mak	11.80456	184.35923	282.11131	452.27574	695.24453	785.54858	289.68068	230.21814	82.91019	568.83557	209.71979	3.78100	71.55040	111.98857	179.60455	276.07064	305.15953	92.78466	89.43210	26.55611	220.97372	67.17320
153	Village No. 3, Ban Sa Kaeo	151.35195	293.80098	1,352.15389	2,180.00172	3,347.45157	1,253.23782	3,714.13509	367.28229	1,063.03130	907.50116	2,688.91813	82.89661	123.13835	746.22206	1,203.04053	1,847.31658	441.11499	2,034.25983	129.27612	582.23027	319.42250	1,472.74076
154	Sa Kaeo Community 1	93.58158	188.81958	837.57358	1,350.35886	2,073.51669	798.53433	2,296.46607	234.02383	657.27693	578.23888	1,662.56991	35.32672	92.15662	323.98531	522.26696	801.97782	383.05433	866.90797	112.26047	248.11976	277.37932	627.61437
155	Sa Kaeo Community 2	42.75993	186.05686	424.09439	683.36018	1,049.43243	781.71287	1,049.31693	229.09402	300.32746	566.05804	759.67278	15.95104	77.31205	225.31204	362.50359	556.85918	231.79481	391.43418	67.93134	112.03329	167.84848	283.38616
156	Village No. 4, Ban Khlong Bang Phai	49.22149	162.76038	492.07383	792.57544	1,217.25006	588.46579	1,207.88166	172.45973	345.71064	426.12294	874.46870	21.33462	44.10959	210.97848	339.96311	522.07794	119.30995	523.54568	34.96577	149.84523	86.39535	379.03077
157	Village No. 5, Ban Yai Ra	5.04390	51.49331	94.76624	152.25801	233.95394	212.43146	123.77582	62.25659	35.42617	153.82699	89.60984	1.75975	15.74818	35.85994	57.63151	88.54948	61.01916	43.18387	17.88268	12.35976	44.18551	31.26378
158	Village No. 6, Ban Khao Khrok	103.52428	177.79192	930.25158	1,499.74330	2,302.91101	749.14756	2,540.45727	219.55021	727.11022	542.47667	1,839.21194	38.08741	82.29101	368.84540	594.40837	912.80782	343.25742	934.65445	100.59732	267.50964	248.56137	676.66071
159	Village no. 7, Ban Nong Takhian	10.87970	127.67333	212.73710	341.26523	524.53493	528.16590	266.98483	154.78784	76.41435	382.45827	193.28870	2.99431	48.34053	74.76133	119.86551	184.25607	205.25721	73.47951	60.15406	21.03074	148.63193	53.19688
160	Village No. 8, Ban Cherng Khao	10.64548	388.16567	591.64802	948.49132	1,458.04241	1,656.08986	261.23717	485.34481	74.76930	1,199.21650	189.12757	4.25374	206.34717	320.92505	514.56340	790.97533	874.52411	104.38551	256.29391	29.87642	633.26500	75.57186
161	Eastern-Nong Muang Community	18.89286	160.13830	355.94110	572.07680	878.97268	621.18187	463.62550	182.04773	132.69534	449.81348	335.65042	8.58683	81.76241	182.47704	293.23401	450.55627	296.05194	210.71849	86.76297	60.31023	214.37869	152.55362
162	Wat Khiri Pawanaram Community	9.90325	338.38875	515.93289	827.11168	1,271.45430	1,443.57711	243.02298	423.06440	69.55618	1,045.33065	175.94107	3.91036	162.97357	248.66717	398.65005	612.81297	695.08119	95.95905	203.70516	27.46466	503.32585	69.47136

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
163	Ban Chang-Phala Community	9.91752	348.73617	531.58115	852.19645	1,310.01562	1,487.83646	243.37326	436.03534	69.65643	1,077.37996	176.19466	4.42076	154.04749	234.95677	376.66917	579.02383	657.09446	108.48416	192.57251	31.04950	475.81870	78.53915
164	Ruam Sompong Community	13.00140	120.11187	270.67300	434.98325	668.34861	432.53153	319.05077	126.76059	91.31627	313.20701	230.98282	4.05766	47.34334	99.49956	159.84137	245.61269	177.04577	99.57388	51.88622	28.49927	128.20332	72.08838
165	Ming Mongkol Community	10.42279	241.77461	389.99447	625.47299	961.41344	1,011.92390	255.77231	296.56121	73.20519	732.75965	185.17119	4.30209	155.79280	249.80059	400.61298	615.78664	653.42490	105.57201	191.49709	30.21601	473.16148	76.43085
166	Jor Koo Community	10.47235	258.29454	402.61275	645.55008	992.32192	1,093.86616	256.98856	320.57576	73.55330	792.09612	186.05171	4.41849	152.31595	242.93581	389.58889	598.84584	640.01918	108.42854	187.56832	31.03359	463.45405	78.49888
167	Wirat Phatthana Department Store Community	9.47597	418.45358	642.95018	1,030.79764	1,584.54693	1,780.62505	232.53764	521.84193	66.55514	1,289.39558	168.35001	3.92393	220.27663	343.62325	550.96939	846.93412	932.61529	96.29217	273.31850	27.56001	675.33029	69.71253
168	Thep Chinda Community	10.85119	250.14438	403.46031	647.06911	994.60891	1,046.98670	266.28517	306.83695	76.21410	758.14952	192.78217	4.36544	139.56416	229.12017	367.50846	564.88292	580.48608	107.12664	170.12115	30.66097	420.34463	77.55635
169	Health Park Community	28.77337	103.88184	277.59954	447.37100	687.00611	377.64112	706.09054	110.67404	202.09183	273.45948	511.18756	9.35443	41.36726	113.38488	182.53248	280.36460	150.30524	229.55515	44.04946	65.70152	108.83982	166.19078
170	Wat Ban Chang Community	26.22756	126.90721	304.21693	489.69724	752.17451	476.65385	643.61704	139.69138	184.21114	345.15709	465.95869	12.30658	74.63237	196.67223	316.29354	485.91305	242.76549	302.00006	71.14648	86.43614	175.79262	218.63864
171	Dong Dang Community	10.94787	228.08776	417.46842	670.10126	1,029.84181	939.59422	268.65765	275.36379	76.89314	680.38391	194.49977	4.15799	127.19638	218.93585	351.28630	539.91444	519.81226	102.03604	152.33967	29.20397	376.40919	73.87091
172	Night Market Community	28.25812	109.83193	300.62282	484.04687	743.45518	431.88976	693.44635	126.57251	198.47290	312.74228	502.03356	11.41189	64.66053	168.43468	270.86747	416.13032	212.11683	280.04466	62.16438	80.15224	153.59915	202.74362
173	Ruam Mitr Community	26.43927	141.54260	328.79900	528.47458	811.97330	500.73507	648.81232	146.74878	185.69809	362.59491	469.71991	15.51000	80.31037	226.91039	365.03007	560.75371	247.29833	380.61103	72.47491	108.93558	179.07497	275.55053
174	Ban Chang - Noen Kraprok Community	26.40261	94.53180	284.59468	458.39221	704.00606	335.83113	647.91272	98.42093	185.44062	243.18381	469.06863	8.19407	37.11051	104.65842	168.36242	258.63620	124.17881	201.08032	36.39268	57.55167	89.92101	145.57589
175	Dao Pitak Community	19.36291	102.21154	272.96938	439.18237	674.64820	368.07513	475.16048	107.87057	135.99679	266.53250	344.00139	6.14416	61.71673	128.87303	207.02117	318.11149	231.55805	150.77589	67.86196	43.15392	167.67703	109.15705
176	Taiwa Community	7.20903	155.98887	239.52158	384.00657	590.29723	663.91224	176.90752	194.57058	50.63312	480.75563	128.07554	2.54990	85.41534	131.60098	210.99109	324.33519	363.13431	62.57394	106.42258	17.90943	262.95473	45.30158
177	East Ban Noen Kraprok Community, Prachummit	21.25509	104.21811	280.85444	451.95777	694.24645	342.47049	521.59397	100.36670	149.28663	247.99153	377.61779	6.46438	28.42780	86.88464	139.81384	214.76713	89.14806	158.63420	26.12633	45.40307	64.55436	114.84622
178	Ban Noen Kraprok Community	6.19454	83.41505	138.08470	221.87244	340.91607	355.50347	152.01242	104.18623	43.50783	257.42904	110.05226	2.22966	40.68789	62.43324	100.09391	153.86512	173.21322	54.71524	50.76303	15.66018	125.42807	39.61213
179	Nong Yai Community	7.15669	222.99976	378.68408	607.54996	933.79901	916.03211	175.62322	268.45852	50.26553	663.32199	127.14574	2.06188	74.89325	116.93948	187.50337	288.22433	316.98650	50.59803	92.89819	14.48178	229.53793	36.63139
180	Village No. 1, Pan Din Tai	21.13138	103.91606	274.33886	441.43270	678.09099	344.91298	518.55813	101.08251	148.41774	249.76020	375.41994	6.12958	28.44611	84.65671	136.21492	209.24296	89.72567	150.41815	26.29561	43.05153	64.97262	108.89806
181	Village No. 2, Ban Prachummit	17.02714	93.43662	215.45029	346.27791	532.04153	332.38249	417.84143	97.41024	119.59137	240.68656	302.50418	5.35418	28.41331	66.02304	106.11817	163.04492	104.87299	131.39018	30.73478	37.60549	75.94118	95.12240
182	Village No. 3, Ban Noen Samre	6.71496	85.73279	163.99809	263.33007	404.67119	349.59820	164.78327	102.45559	47.16301	253.15288	119.29796	2.19282	25.77702	50.09079	80.48071	123.66323	104.62323	53.81122	30.66159	15.40143	75.76033	38.95765
183	Village No. 4, Ban Phayun	12.96598	118.08945	264.94501	425.76856	654.19315	426.31650	318.18155	124.93917	91.06749	308.70654	230.35353	3.83164	45.37125	94.97085	152.56285	234.42951	170.02128	94.02740	49.82758	26.91180	123.11671	68.07291
184	Village No. 6, Ban Noen Kraprok	3.69926	43.96972	89.27028	143.38102	220.32790	168.11536	90.77888	49.26901	25.98204	121.73658	65.72108	1.09072	13.93065	26.09327	41.88972	64.37622	55.00037	26.76593	16.11878	7.66074	39.82716	19.37770
185	Village No. 7, Ban Khao Phudon Huai Mahat	2.90046	23.59085	51.35277	82.52914	126.80452	92.17429	71.17653	27.01322	20.37160	66.74573	51.52959	0.69619	8.13688	16.58068	26.63153	40.92344	30.90343	17.08429	9.05677	4.88974	22.37796	12.36849
186	Village No. 11, Ban Map Fakthong	41.39677	154.31162	403.90998	650.50451	999.07522	597.77289	1,015.86536	175.18734	290.75320	432.86245	735.45488	22.71694	55.79668	238.10549	383.56385	589.06823	200.88447	557.46738	58.87255	159.55404	145.46552	403.58902
187	Village No. 13, Ban Nong Phakkut	10.10701	161.63015	248.78542	398.86579	613.13676	687.37350	248.02325	201.44629	70.98731	497.74452	179.56110	2.64593	50.44316	78.10223	125.22306	192.49132	214.10386	64.93040	62.74672	18.58388	155.03802	47.00759

Table 5.2-52 Forecasted results of carbon monoxide emission in the atmosphere, operation phase

Area		The concentration value of carbon monoxide (micrograms per cubic meter)																				
		1-hour average											8-hour average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	25.47749	135.20407	305.54049	491.02382	754.45244	486.09764	625.21049	142.45904	178.94296	351.99558	452.63292	5.71760	35.10952	72.38417	116.50687	178.95736	134.48969	140.30832	39.41445	40.15797	97.38738	101.57885
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	8.51845	208.07982	320.19208	513.34759	789.11859	884.99462	209.04051	259.36246	59.82997	640.84696	151.33882	1.41974	68.32146	104.93657	168.23710	258.61498	290.76030	34.84008	85.21217	9.97166	210.54688	25.22314
190	Village No. 6 (Ban Khao Krating Community)	6.58132	146.55154	224.97936	360.69153	554.45739	623.79222	161.50374	182.81273	46.22436	451.70370	116.92367	1.91458	24.42526	44.37832	71.30022	109.55755	103.96537	46.98317	30.46879	13.44716	75.28395	34.01435
191	Village No. 7 (Ban Nong Hin Community)	7.67897	204.09721	322.65728	517.40275	795.32132	860.21545	188.43992	252.10051	53.93383	622.90373	136.42463	2.16202	61.28485	95.78503	153.58495	236.08566	259.30310	53.05543	75.99311	15.18512	187.76793	38.41048
192	Village No. 11 (Ban Khong Wanphen Community)	30.98203	131.86235	396.88610	638.62795	981.00327	417.70558	760.29040	122.41560	217.60450	302.47116	550.42657	9.68847	31.44143	113.20102	182.26491	279.94513	94.86089	237.75226	27.80057	68.04763	68.69117	172.12523
193	Village No. 1, Ban Phlu Ta Luang	16.71674	91.96703	245.06194	394.13409	605.49168	296.68029	410.22414	86.94712	117.41121	214.83369	296.98950	7.58374	40.06254	112.16009	180.42486	277.16798	124.30664	186.10289	36.43014	53.26494	90.01358	134.73270
194	Village No. 2, Ban Khalot	22.00878	109.66411	300.20654	482.87855	741.80957	348.95035	540.08941	102.26573	154.58025	252.68376	391.00791	9.29361	48.39093	136.37476	219.38339	337.01415	149.32855	228.06255	43.76323	65.27432	108.13257	165.11018
195	Village No. 3, Ban Khlong Phai	26.46063	130.88753	357.63128	575.26674	883.73216	421.66992	649.33645	123.57742	185.84811	305.34184	470.09937	5.68104	38.59022	92.28598	148.35105	227.92729	134.11002	139.41103	39.30318	39.90116	97.11245	100.92925
196	Village No. 4, Ban Khlong Phlu Ta Luang	20.83674	137.66316	327.97214	527.21044	810.01159	479.54313	511.32779	140.53813	146.34832	347.24929	370.18540	6.30087	34.61297	81.11268	130.37703	200.31574	121.80442	154.62161	35.69682	44.25461	88.20166	111.94123
197	Village No. 5, Ban Khao Bai Si	28.77439	140.17295	365.32022	587.99911	903.18282	480.52987	706.11560	140.82731	202.09900	347.96382	511.20570	6.56874	32.41089	86.28546	138.83963	213.27364	109.34719	161.19499	32.04602	46.13600	79.18106	116.70015
198	Village No. 6, Ban Khao Tabaek	13.69298	83.55988	219.56554	353.10675	542.46948	272.38226	336.02185	79.82617	96.17360	197.23888	243.26935	4.84144	27.32509	71.75572	115.39770	177.28284	89.11324	118.80749	26.11612	34.00417	64.52915	86.01292
199	Village No. 7, Ban Nong Ya Noi	14.85451	98.24557	249.83043	401.72063	617.17129	327.84789	364.52548	96.08130	104.33169	237.40294	263.90509	4.13000	26.40243	68.06912	109.46005	168.16361	87.25718	101.34906	25.57218	29.00735	63.18513	73.37357
200	Village No. 8, Ban Nong Ya	4.97707	74.51460	113.82358	182.47749	280.50765	317.68728	122.13584	93.10356	34.95678	230.04538	88.42254	1.75102	34.23041	52.18946	83.66690	128.61460	146.02873	42.96957	42.79616	12.29842	105.74309	31.10863
201	Ban Nong Krachong Community	19.16997	124.76460	319.32691	513.48402	788.87110	414.46243	470.42586	121.46514	134.64169	300.12272	340.57367	5.08925	24.22747	71.21727	114.58502	176.01839	72.08096	124.88885	21.12453	35.74473	52.19565	90.41564
Standard*		34,200*											10,260*									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecastScenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* The carbon monoxide (CO) standard for 1-hour and 8-hours referenced the National Environment Board Announcement No. 10 (1995) issued under the National Environmental Quality Promotion and Conservation Act of 1992 Re: Determination of General Atmospheric Air Quality Standards.

1.2) Nitrogen dioxide (NO_2)

From the nitrogen dioxide (NO_2) emission forecast projected by the AERMOD model based on Cmax 1-hour average and 1-year average values, it was found that the Cmax 1-hour average in all scenarios occurred outside of the project area to the north. Most had values higher than the standards in the Announcement of the National Environment Board No. 33 (2009) Re: Determination of General Atmospheric Nitrogen Dioxide Standards, which determine that the 1-hour average of nitrogen dioxide must not exceed 0.32 milligrams per cubic meter (320 micrograms per cubic meter). However, the 1-year average Cmax mostly occurred in the project area. (within the area of U-Tapao International Airport) and all are within the standard which must not exceed 0.057 milligrams per cubic meter (57 micrograms per cubic meter[PF1]).

When comparing the Cmax of NO_2 for 1-hour average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 1,101.64461 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 23.65938 micrograms per cubic meter. The 1-hour average concentration of NO_2 for scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest concentration value, comprising 27.64979 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.57863 micrograms per cubic meter.

In this regard, when considering the NO_2 concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-53 and Addendum 5-3, item 2, nitrogen dioxide (NO_2) concentration contours (Figure 2-1 to Figure 2-22), it was found that most 1-hour average maximum nitrogen dioxide (NO_2) concentrations were in accordance with standard criteria, while the 1-year average was within all criteria.

Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																				
		1-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		23.65938	271.98468	401.23403	598.24311	918.13689	1,101.64461	974.12991	339.91324	298.15651	830.56338	734.49804	0.57863	6.05349	12.07764	18.01725	27.64979	23.71328	23.82391	7.31675	7.29190	17.87816	17.96333
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	2.47892	23.20481	63.57834	94.83465	145.53787	71.11022	102.06477	21.94111	31.23944	53.61216	76.95726	0.05119	0.43523	1.27122	1.89623	2.91004	1.23614	2.10780	0.38141	0.64514	0.93197	1.58929
2	Wat Phala School	1.77549	22.15228	54.06984	80.64680	123.76537	71.81778	73.10257	22.15943	22.37485	54.14561	55.11965	0.02707	0.35945	0.86279	1.28686	1.97490	1.17755	1.11456	0.36333	0.34114	0.88779	0.84038
3	Phala Subdistrict Municipality Child Development Center	1.64134	21.05053	50.52313	75.35700	115.64729	69.09090	67.57895	21.31805	20.68421	52.08973	50.95482	0.02525	0.33797	0.80870	1.20619	1.85109	1.10929	1.03949	0.34227	0.31816	0.83633	0.78378
4	Ban Khlong Sai School	1.65946	20.04403	49.95602	74.51174	114.34999	64.11882	68.32503	19.78391	20.91256	48.34113	51.51736	0.02411	0.35580	0.82099	1.22449	1.87918	1.19324	0.99266	0.36818	0.30383	0.89962	0.74847
5	Rayong English Program School	1.91342	22.70176	56.99724	85.01437	130.46787	74.37568	78.78139	22.94867	24.11299	56.07409	59.40150	0.02708	0.40760	0.93389	1.39288	2.13760	1.37252	1.11500	0.42349	0.34127	1.03478	0.84071
6	Rayong Garden International School	1.82931	23.47592	57.10373	85.17177	130.70969	77.71523	75.31852	23.97909	23.05309	58.59188	56.79048	0.02669	0.39900	0.91638	1.36677	2.09753	1.34170	1.09884	0.41398	0.33633	1.01155	0.82853
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.81748	23.37282	39.34691	58.67681	90.05076	92.16829	33.65824	28.43859	10.30194	69.48848	25.37846	0.02319	0.76125	1.40725	2.09859	3.22068	2.84539	0.95471	0.87795	0.29221	2.14522	0.71986
8	Wat Khiri Pawanaram School	0.80477	21.40735	36.75796	54.81615	84.12581	84.10614	33.13506	25.95101	10.14180	63.41018	24.98397	0.02210	0.68174	1.27668	1.90390	2.92189	2.53448	0.90992	0.78201	0.27850	1.91082	0.68608
9	Ban Khlong Bang Phai School	3.39504	28.04346	78.61228	117.26347	179.95754	83.91529	139.78431	25.89212	42.78444	63.26629	105.39796	0.04513	0.33659	1.05128	1.56820	2.40662	0.89893	1.85825	0.27737	0.56876	0.67773	1.40113
10	Pattanavechsuksa School	6.27543	38.40905	108.82359	162.35730	249.15534	146.21766	258.37875	45.11556	79.08320	110.23794	194.81866	0.11318	0.66416	2.37108	3.53714	5.42820	1.52532	4.65983	0.47064	1.42626	1.14999	3.51353
11	Pattanavech College	5.72315	37.86812	103.24833	154.03074	236.37887	139.29545	235.63989	42.97971	72.12341	105.01908	177.67346	0.09660	0.58527	2.05093	3.05952	4.69523	1.37638	3.97742	0.42468	1.21739	1.03770	2.99900
12	Saeng Song La Child Development Center 3	5.64505	46.23568	95.76041	142.87117	219.25114	186.10892	232.42419	57.42404	71.13916	140.31317	175.24882	0.16290	1.02195	3.51008	5.23620	8.03564	2.46286	6.70710	0.75992	2.05287	1.85682	5.05718
13	Wat Sa Kaeo School	5.48166	46.50110	93.36111	139.29114	213.75725	187.42460	225.69693	57.82999	69.08012	141.30511	170.17643	0.18557	1.09163	3.89161	5.80543	8.90918	2.51177	7.64035	0.77501	2.33852	1.89370	5.76086
14	Wat Sombun Naram School (Tem Rat Memorial)	6.08632	44.10627	102.53365	152.97431	234.75590	173.97255	250.59271	53.67936	76.70009	131.16320	188.94795	0.11742	1.06052	3.00746	4.48605	6.88450	3.08751	4.83445	0.95265	1.47970	2.32777	3.64519
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	6.08632	44.10627	102.53365	152.97431	234.75590	173.97255	250.59271	53.67936	76.70009	131.16320	188.94795	0.11742	1.06052	3.00746	4.48605	6.88450	3.08751	4.83445	0.95265	1.47970	2.32777	3.64519
16	Sajjaseuksa School	1.23866	46.91744	69.75395	104.00440	159.61772	189.58118	50.99944	58.49541	15.60964	142.93102	38.45379	0.02436	1.10822	1.93312	2.88270	4.42407	4.23905	1.00312	1.30796	0.30703	3.19595	0.75636
17	Ban Chang District Center for Non-Formal and Informal Education	1.84468	57.78522	86.26228	128.61909	197.39432	233.20133	75.95104	71.95444	23.24669	175.81758	57.26740	0.03726	1.18985	2.21203	3.29876	5.06258	4.43695	1.53400	1.36902	0.46952	3.34515	1.15665
18	Wat Suwan Rangsan Community School	1.51166	36.40170	54.29892	80.96204	124.25389	147.20390	62.23981	45.41987	19.05003	110.98150	46.92908	0.02772	0.88713	1.64854	2.45844	3.77294	3.30870	1.14135	1.02090	0.34934	2.49453	0.86058

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Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																					
		1-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	1.36213	27.72446	41.78955	62.31965	95.64135	111.75522	56.08331	34.48215	17.16568	84.25566	42.28705	0.02491	0.73666	1.39225	2.07625	3.18640	2.72798	1.02581	0.84172	0.31398	2.05671	0.77347
20	Wat Samnak Kathon School	1.75924	51.57140	76.57871	114.18012	175.23462	208.46570	72.43348	64.32224	22.17006	157.16863	54.61515	0.03466	0.97215	1.85924	2.77270	4.25523	3.58169	1.42714	1.10513	0.43681	2.70035	1.07607
21	Ban Sam Nak Thon Child Development Center	1.75358	51.18435	75.87412	113.12940	173.62209	207.00984	72.20025	63.87303	22.09867	156.07101	54.43929	0.03401	0.96448	1.83993	2.74391	4.21103	3.55732	1.40035	1.09761	0.42861	2.68197	1.05587
22	Burapatit Child Development Center, Sam Nak Thon SAO	1.32694	25.94987	38.64695	57.62364	88.43614	105.05088	54.63443	32.41352	16.72222	79.20105	41.19459	0.02464	0.58248	1.16167	1.73246	2.65878	2.10613	1.01467	0.64985	0.31056	1.58788	0.76506
23	Wat Chak Mak School	1.26978	19.85218	33.94353	50.62324	77.69024	80.38272	52.28086	24.80215	16.00185	60.60298	39.41998	0.02157	0.52871	1.04463	1.55790	2.39088	1.91992	0.88817	0.59239	0.27185	1.44749	0.66969
24	St. Andrews International School, Green Valley, Rayong,	0.32494	5.90616	11.84967	17.67210	27.12102	21.29617	13.37860	6.57095	4.09485	16.05583	10.08752	0.00463	0.07305	0.16465	0.24558	0.37688	0.24828	0.19072	0.07661	0.05837	0.18718	0.14380
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	1.52036	18.60078	46.11774	68.78657	105.56386	59.70398	62.59786	18.42170	19.15962	45.01264	47.19905	0.02094	0.25954	0.64015	0.95481	1.46531	0.83586	0.86227	0.25790	0.26392	0.63018	0.65015
26	Ban Phayun School	1.52599	18.50734	45.85333	68.39217	104.95858	59.43148	62.82979	18.33763	19.23061	44.80720	47.37392	0.02089	0.25718	0.63597	0.94858	1.45575	0.82689	0.85991	0.25514	0.26320	0.62342	0.64838
27	Rakpasa Kindergarten	1.54383	21.60074	50.82812	75.81017	116.34306	71.61659	63.56411	22.09735	19.45537	53.99393	47.92761	0.02267	0.28610	0.70052	1.04485	1.60350	0.92570	0.93331	0.28562	0.28566	0.69791	0.70372
28	Wat Ban Chang School (Boonrawdprachanukul)	3.19290	27.50751	65.69491	97.99698	150.39001	100.00267	131.46173	30.85590	40.23711	75.39506	99.12269	0.04917	0.71576	1.65986	2.47567	3.79932	2.39349	2.02467	0.73851	0.61970	1.80452	1.52661
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	2.34183	23.53398	56.79505	84.71101	130.00264	76.83917	96.42035	23.70878	29.51183	57.93139	72.70135	0.01956	0.25798	0.62082	0.92597	1.42104	0.84379	0.80526	0.26035	0.24647	0.63616	0.60717
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	2.34183	23.53398	56.79505	84.71101	130.00264	76.83917	96.42035	23.70878	29.51183	57.93139	72.70135	0.01956	0.25798	0.62082	0.92597	1.42104	0.84379	0.80526	0.26035	0.24647	0.63616	0.60717
31	Wat Prachummit Bamrung School	2.60036	23.78329	65.80486	98.15776	150.63732	75.27707	107.06499	23.22679	32.76988	56.75367	80.72745	0.01994	0.31683	0.71227	1.06233	1.63032	1.07827	0.82104	0.33270	0.25130	0.81294	0.61907
32	Udom Wittayanukun School	0.78243	16.47505	30.21726	45.06643	69.16225	66.68980	32.21503	20.57719	9.86021	50.27947	24.29027	0.00717	0.31670	0.55502	0.82765	1.27020	1.20926	0.29530	0.37312	0.09038	0.91169	0.22266
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.58881	11.39067	23.69339	35.33658	54.23011	41.79975	24.24329	12.89734	7.42026	31.51410	18.27954	0.00579	0.16816	0.31909	0.47585	0.73028	0.62164	0.23845	0.19181	0.07298	0.46867	0.17979
34	Wat Noen Kraprok School	0.58211	11.34574	23.23035	34.64604	53.17036	41.54999	23.96718	12.82028	7.33575	31.32580	18.07136	0.00580	0.16493	0.31444	0.46893	0.71967	0.60847	0.23883	0.18774	0.07310	0.45874	0.18008
35	Chonnabot Phatthana Kindergarten	0.76233	16.15222	29.96569	44.69099	68.58612	65.39650	31.38768	20.17814	9.60698	49.30441	23.66645	0.00882	0.32469	0.58700	0.87537	1.34343	1.22469	0.36296	0.37788	0.11109	0.92333	0.27368
36	Aksorn Business Administration Technological College	1.89528	30.24248	64.43330	96.09673	147.47709	107.62101	78.03439	33.20654	23.88435	81.13875	58.83826	0.03845	0.73530	1.55672	2.32171	3.56306	2.58312	1.58303	0.79702	0.48453	1.94749	1.19361
37	Banchang Karnchanakul Wittaya School	1.37721	45.39737	69.06961	102.98611	158.05456	182.11990	56.70387	56.19323	17.35562	137.30573	42.75496	0.02690	1.00197	1.80771	2.69575	4.13715	3.78242	1.10757	1.16707	0.33900	2.85168	0.83512

Subject to changes and approval by the Government of Thailand

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Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																				
		1-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.35454	5.03765	10.89621	16.25091	24.93981	18.03626	14.59741	5.56510	4.46790	13.59808	11.00651	0.00461	0.09021	0.18964	0.28283	0.43405	0.31804	0.18970	0.09813	0.05806	0.23978	0.14304
39	Ban Phudon - Huai Mahat Child Development Center	0.35454	5.03765	10.89621	16.25091	24.93981	18.03626	14.59741	5.56510	4.46790	13.59808	11.00651	0.00461	0.09021	0.18964	0.28283	0.43405	0.31804	0.18970	0.09813	0.05806	0.23978	0.14304
40	Ban Map Fakthong School	2.70358	21.34255	64.71351	96.53222	148.14227	58.62750	111.31459	18.08956	34.07058	44.20106	83.93167	0.01216	0.10449	0.30358	0.45284	0.69495	0.29810	0.50066	0.09198	0.15324	0.22475	0.37750
41	Phuru Yor. Sor. Sor. 80 School	1.71528	22.72908	48.75277	72.71086	111.58736	79.31771	70.62326	24.47354	21.61599	59.80003	53.25024	0.00858	0.09501	0.24556	0.36627	0.56210	0.29658	0.35321	0.09151	0.10811	0.22360	0.26632
42	Khao Chi Chan School	2.23029	33.13430	75.91694	113.22892	173.76844	113.32350	91.82808	34.96605	28.10625	85.43803	69.23875	0.01317	0.17569	0.42097	0.62788	0.96358	0.57615	0.54231	0.17777	0.16599	0.43438	0.40890
43	Ban Khalot Child Development Center	2.17733	21.05273	56.12955	83.72270	128.48515	64.28192	89.64754	19.83423	27.43884	48.46409	67.59462	0.02846	0.26760	0.74445	1.11045	1.70414	0.79115	1.17160	0.24411	0.35860	0.59647	0.88339
44	Ban Khalot School	2.26011	21.31519	56.69319	84.56332	129.77523	65.19726	93.05558	20.11666	28.48196	49.15420	70.16430	0.02780	0.25947	0.72438	1.08050	1.65819	0.76497	1.14453	0.23603	0.35031	0.57674	0.86298
45	Phlu Ta Luang Wittaya School	5.10866	29.37999	101.94549	152.08084	233.38763	89.23972	210.33918	27.53498	64.37950	67.28054	158.59663	0.04053	0.29081	0.92721	1.38314	2.12262	0.76083	1.66883	0.23475	0.51079	0.57361	1.25830
46	Athittan Kindergarten School	2.68593	25.96977	63.34661	94.48402	145.00067	91.15092	110.58824	28.12468	33.84826	68.72145	83.38400	0.02869	0.21492	0.66971	0.99901	1.53313	0.57527	1.18135	0.17750	0.36158	0.43372	0.89074
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	6.62135	36.52347	126.96647	189.41533	290.68068	92.88822	272.62159	28.66073	83.44257	70.03126	205.55783	0.03987	0.29687	0.92803	1.38435	2.12448	0.79215	1.64169	0.24442	0.50248	0.59722	1.23784
48	Ban Khao Bai Si School	4.29983	37.53262	98.80795	147.38079	226.17828	127.95664	177.03729	39.48111	54.18663	96.47040	133.48686	0.03008	0.29308	0.80204	1.19633	1.83595	0.87762	1.23864	0.27079	0.37912	0.66166	0.93394
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	1.20422	26.98818	39.78491	59.31958	91.03907	109.33639	49.58156	33.73582	15.17566	82.43203	37.38470	0.00714	0.17334	0.34334	0.51204	0.78582	0.62874	0.29405	0.19400	0.09000	0.47402	0.22172
50	Ban KM. 5 School	2.28762	23.56378	62.87076	93.77791	143.91639	71.91024	94.18832	22.18796	28.82866	54.21532	71.01839	0.02137	0.22119	0.58893	0.87845	1.34812	0.67603	0.88004	0.20859	0.26936	0.50968	0.66355
51	Royal Thai Fleet Sattahip District School	1.88985	22.29299	56.10488	83.68347	128.42539	70.85782	77.81116	21.86323	23.81603	53.42186	58.66994	0.01667	0.19422	0.49130	0.73280	1.12460	0.61521	0.68630	0.18982	0.21006	0.46383	0.51748
52	RTN. 8 Nursery	1.74801	15.70140	44.64464	66.59387	102.19801	48.47502	71.97107	14.95700	22.02852	36.54679	54.26649	0.01864	0.19490	0.51659	0.77054	1.18250	0.59764	0.76758	0.18440	0.23494	0.45058	0.57876
53	Juk Samet School	1.76740	15.84968	45.10167	67.27562	103.24425	48.87978	72.76927	15.08189	22.27283	36.85196	54.86834	0.01862	0.19457	0.51584	0.76942	1.18080	0.59651	0.76673	0.18405	0.23468	0.44973	0.57811
54	Juk Samet Child Development Center	1.80456	16.17239	46.03438	68.66690	105.37937	49.63752	74.29916	15.31569	22.74109	37.42324	56.02188	0.01865	0.19406	0.51548	0.76889	1.17998	0.59412	0.76804	0.18332	0.23508	0.44793	0.57910
55	Ban Chong Samaesarn Child Development Center	1.49924	16.78585	40.63243	60.60585	93.00909	61.42523	61.72846	18.95280	18.89352	46.31035	46.54351	0.01007	0.14920	0.34381	0.51278	0.78695	0.50077	0.41470	0.15451	0.12693	0.37755	0.31268
56	Samaesarn Subdistrict NFE Center	1.57434	15.93072	39.75695	59.30347	91.00977	54.50003	64.82054	16.81602	19.83993	41.08923	48.87496	0.00820	0.13080	0.29368	0.43801	0.67220	0.44546	0.33771	0.13745	0.10336	0.33584	0.25463
57	Ban Chong Samaesarn School	1.62277	16.18348	42.10682	62.80793	96.38801	56.10540	66.81464	17.31136	20.45027	42.29957	50.37852	0.00803	0.12927	0.28927	0.43143	0.66210	0.44107	0.33048	0.13609	0.10115	0.33254	0.24919
58	Wat Phala Vipassana Office	1.84414	22.68765	56.12430	83.71168	128.46881	72.92751	75.92910	22.50184	23.23998	54.98227	57.25086	0.02727	0.35582	0.85987	1.28252	1.96823	1.16077	1.12274	0.35816	0.34364	0.87514	0.84655
59	Wat Phala	1.69159	21.26663	51.54296	76.87839	117.98206	69.70140	69.64802	21.50642	21.31750	52.55001	52.51490	0.02590	0.34513	0.82732	1.23396	1.89371	1.13152	1.06652	0.34913	0.32643	0.85309	0.80416
60	Chao Li Hu Ong Yea Shrine	1.90082	26.72517	61.46899	91.68157	140.70021	92.83836	78.26266	28.64534	23.95422	69.99366	59.01038	0.03854	0.67284	1.46581	2.18616	3.35503	2.32909	1.58688	0.71864	0.48570	1.75597	1.19652
61	Wat Khlong Sai	1.80467	21.92293	53.52370	79.83222	122.51527	71.06283	74.30403	21.92649	22.74258	53.57643	56.02555	0.02763	0.40592	0.93823	1.39935	2.14753	1.36002	1.13779	0.41963	0.34825	1.02536	0.85790
62	Wat Khiri Pawanaram	0.69167	14.15618	25.47514	37.99254	58.30640	56.53380	28.47840	17.44355	8.71652	42.62255	21.47283	0.01705	0.42481	0.83589	1.24660	1.91314	1.54551	0.70209	0.47687	0.21489	1.16521	0.52938

Subject to changes and approval by the Government of Thailand

Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																					
		1-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.66812	17.32713	29.85033	44.51381	68.31512	68.06346	27.50871	21.00103	8.41972	51.31512	20.74168	0.01675	0.50261	0.94683	1.41201	2.16699	1.86381	0.68963	0.57508	0.21108	1.40518	0.51998
64	Ban Chang Church	0.82792	20.68906	39.24313	58.52426	89.81624	78.31966	34.08808	24.16559	10.43350	59.04757	25.70256	0.01783	0.75242	1.32837	1.98089	3.04007	2.86478	0.73423	0.88393	0.22473	2.15984	0.55361
65	Wat Ban Khlong Bang Phai	3.60117	28.38879	80.10391	119.48781	183.37123	84.70850	148.27122	26.13687	45.38207	63.86431	111.79712	0.04964	0.35970	1.14083	1.70180	2.61164	0.94609	2.04399	0.29192	0.62561	0.71329	1.54118
66	Admiral Prince Abhakara Kiartivongse Monument	3.41716	26.87522	73.41279	109.50402	168.05019	82.16614	140.69513	25.35242	43.06322	61.94755	106.08472	0.05812	0.41761	1.33048	1.98470	3.04580	1.09339	2.39309	0.33737	0.73247	0.82434	1.80440
67	Royal Thai Naval Air Division Naval Aviation Museum	3.69616	27.87694	77.19382	115.14672	176.70924	85.12199	152.18237	26.26445	46.57917	64.17606	114.74615	0.06035	0.41735	1.35755	2.02509	3.10778	1.06938	2.48494	0.32996	0.76058	0.80624	1.87366
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	4.78584	33.18275	92.60384	138.14091	211.99576	101.52267	197.04779	31.32489	60.31134	76.54103	148.57486	0.07736	0.47840	1.65670	2.47142	3.79271	1.14158	3.18512	0.35223	0.97488	0.86067	2.40159
69	Somdej Phra Pathom (Air Defense Regiment 1)	5.91247	36.61928	102.91208	153.51840	235.59453	111.67085	243.43474	34.45612	74.50921	84.19205	183.55081	0.11362	0.62030	2.31185	3.44883	5.29267	1.34312	4.67793	0.41442	1.43180	1.01262	3.52718
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	6.80180	37.69102	116.01409	173.08835	265.62274	120.02455	280.05129	37.03366	85.71661	90.49016	211.15985	0.14544	0.73470	2.87191	4.28440	6.57494	1.47890	5.98816	0.45631	1.83283	1.11499	4.51510
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	5.06725	76.76027	113.72888	169.57131	260.24472	310.49771	208.63456	95.80429	63.85776	234.09367	157.31133	0.23261	2.90335	7.14066	10.65055	16.34496	9.36740	9.57744	2.89032	2.93141	7.06237	7.22143
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	4.02207	74.65598	111.14571	165.72047	254.33462	301.53826	165.60128	93.03985	50.68636	227.33887	124.86406	0.19992	2.95358	6.81258	10.16086	15.59351	9.90754	8.23152	3.05698	2.51946	7.46960	6.20660
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	4.65392	77.45560	114.33123	170.46885	261.62229	313.66854	191.61626	96.78265	58.64889	236.48425	144.47947	0.18256	3.39490	7.24942	10.81191	16.59274	11.87438	7.51647	3.66385	2.30060	8.95245	5.66745
74	Wat Sa Kaeo	7.70150	48.71629	123.65534	184.49612	283.12788	196.66746	317.09480	60.68189	97.05469	148.27358	239.09081	0.21560	1.27708	4.53433	6.76422	10.38057	2.95386	8.87676	0.91141	2.71695	2.22700	6.69311
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.73351	15.53376	26.31475	39.23999	60.22167	60.07206	30.20076	18.53528	9.24369	45.29016	22.77150	0.02008	0.49051	0.96998	1.44658	2.22003	1.78049	0.82679	0.54937	0.25306	1.34237	0.62340
76	Wat Sombun Naram	6.38437	42.64231	106.08170	158.27230	242.88545	162.19487	262.86443	50.04534	80.45615	122.28364	198.20089	0.11721	1.02699	2.95548	4.40855	6.76555	2.95382	4.82587	0.91140	1.47708	2.22697	3.63873
77	Ban Chang Abundant Grace Church	3.52679	40.82973	67.63716	100.86351	154.79459	162.06019	145.20903	50.00379	44.44481	122.18211	109.48822	0.07763	0.99532	2.42195	3.61240	5.54381	3.23310	3.19628	0.99757	0.97830	2.43753	2.41001
78	Wat Samnak Kathon	1.79146	51.74602	76.91396	114.68009	176.00192	209.10797	73.76010	64.52041	22.57610	157.65286	55.61543	0.03524	0.98779	1.88935	2.81760	4.32413	3.63915	1.45075	1.12286	0.44404	2.74367	1.09387
79	Wat Suwan Rangsan	1.36213	27.72446	41.78955	62.31965	95.64135	111.75522	56.08331	34.48215	17.16568	84.25566	42.28705	0.02491	0.73666	1.39225	2.07625	3.18640	2.72798	1.02581	0.84172	0.31398	2.05671	0.77347
80	Wat Nong Bot	0.96052	17.26071	30.79480	45.92390	70.47888	66.13892	39.54762	20.40721	12.10453	49.86414	29.81907	0.01664	0.35164	0.72294	1.07819	1.65467	1.25332	0.68503	0.38671	0.20967	0.94492	0.51651
81	The Shrine of Luang Tia Chak Mak	1.30298	25.95559	42.99699	64.11506	98.39769	101.18969	53.64763	31.22215	16.42018	76.28999	40.45053	0.02255	0.60389	1.16743	1.74102	2.67191	2.21447	0.92832	0.68328	0.28413	1.66956	0.69996
82	Wat Chak Mak	1.32528	26.61519	44.96599	67.05242	102.90543	107.71744	54.56583	33.23629	16.70122	81.21146	41.14286	0.02321	0.62870	1.21216	1.80772	2.77427	2.30813	0.95566	0.71217	0.29250	1.74017	0.72057

Draft Version

Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																				
		1-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	1.38849	16.99984	42.12521	62.83152	96.42490	54.58482	57.16843	16.84218	17.49781	41.15315	43.10524	0.01869	0.24116	0.58532	0.87303	1.33980	0.78459	0.76945	0.24209	0.23551	0.59153	0.58017
84	The Shrine of King Taksin the Great (Ban Chang)	1.37992	16.88714	41.86442	62.44257	95.82798	54.20748	56.81543	16.72576	17.38977	40.86867	42.83907	0.01865	0.24294	0.58748	0.87624	1.34473	0.79223	0.76784	0.24444	0.23502	0.59729	0.57895
85	Wat Chonthararam (Phayun)	1.51711	18.58794	46.05881	68.69865	105.42893	59.68547	62.46393	18.41599	19.11863	44.99869	47.09806	0.02086	0.25725	0.63572	0.94820	1.45516	0.82745	0.85874	0.25531	0.26284	0.62384	0.64749
86	Masjid Dawatul Islam	1.79280	34.07351	66.99865	99.91760	153.34179	124.00260	73.81514	38.26109	22.59295	93.48933	55.65693	0.03890	0.94801	1.87584	2.79753	4.29331	3.44020	1.60181	1.06148	0.49027	2.59367	1.20777
87	Chinese shrine at the Buddha Dhamma Foundation	3.08075	31.78017	71.50738	106.65058	163.67317	108.10678	126.84384	33.35642	38.82369	81.50499	95.64079	0.05385	0.78851	1.82456	2.72130	4.17628	2.64013	2.21701	0.81462	0.67857	1.99048	1.67163
88	The Shrine of Luang Tia Ban Chang	2.49974	24.45113	60.87598	90.80713	139.35644	92.59444	102.92193	28.57008	31.50180	69.80977	77.60356	0.03888	0.72985	1.55398	2.31763	3.55681	2.55660	1.60077	0.78884	0.48995	1.92750	1.20698
89	The Shrine of Laoia Guan Yu Ban Chang	3.16406	25.79687	62.70415	93.53427	143.54161	95.53357	130.27410	29.47695	39.87361	72.02566	98.22722	0.04734	0.70903	1.62734	2.42715	3.72486	2.38513	1.94903	0.73593	0.59655	1.79822	1.46957
90	Wat Ban Chang	3.60293	28.49408	70.12273	104.60748	160.53375	102.29343	148.34390	31.56271	45.40431	77.12213	111.85192	0.05658	0.71739	1.75332	2.61513	4.01333	2.32386	2.32944	0.71703	0.71298	1.75203	1.75641
91	Wat Prachummit Bamrung	2.68189	23.82200	66.21067	98.76415	151.56773	74.84259	110.42163	23.09274	33.79727	56.42611	83.25837	0.02042	0.31760	0.71933	1.07286	1.64649	1.07646	0.84084	0.33214	0.25736	0.81158	0.63400
92	The Shrine of Luang Tia Noen Kraprok 1	1.54742	33.79077	68.83946	102.66525	157.55813	120.96710	63.71222	37.32449	19.50070	91.20077	48.03928	0.01533	0.38118	0.75039	1.11908	1.71743	1.38651	0.63112	0.42781	0.19317	1.04533	0.47586
93	The Shrine of Luang Tia Noen Kraprok 2	0.89238	35.79620	53.27548	79.43478	121.91019	144.59635	36.74196	44.61531	11.24579	109.01559	27.70360	0.00948	0.46963	0.80887	1.20618	1.85112	1.80503	0.39050	0.55694	0.11952	1.36087	0.29444
94	Wat Noen Kraprok	0.66361	12.29555	26.28562	39.20283	60.16352	44.85756	27.32292	13.84083	8.36285	33.81948	20.60159	0.00635	0.21185	0.39039	0.58218	0.89347	0.79290	0.26154	0.24465	0.08005	0.59779	0.19720
95	Wat Phudon Nim Sanoh	0.35773	5.19418	10.82199	16.13989	24.76949	18.68519	14.72866	5.76533	4.50807	14.08733	11.10547	0.00465	0.09359	0.19512	0.29100	0.44658	0.33133	0.19135	0.10223	0.05857	0.24980	0.14428
96	Church of Christ Ban Chang	0.35489	5.42937	11.16731	16.65602	25.56139	19.90022	14.61200	6.14023	4.47236	15.00338	11.01751	0.00504	0.09547	0.20270	0.30232	0.46396	0.33492	0.20747	0.10334	0.06350	0.25251	0.15643
97	Anek Kusala Sala (Viharn Sien)	3.16703	25.25167	76.17614	113.63061	174.38221	69.69252	130.39654	21.50368	39.91108	52.54331	98.31954	0.01454	0.13063	0.37135	0.55393	0.85008	0.37957	0.59850	0.11712	0.18319	0.28617	0.45127
98	Wat Yan Nasangwararam	3.53661	29.71201	77.05113	114.92770	176.37423	92.53465	145.61308	28.55163	44.56848	69.76469	109.79287	0.01684	0.14740	0.42438	0.63302	0.97147	0.42381	0.69325	0.13077	0.21219	0.31953	0.52271
99	Sirisirirak Monastery	1.26573	33.18786	52.98718	79.01955	121.27032	131.72496	52.11397	40.64383	15.95077	99.31146	39.29415	0.01076	0.18685	0.40778	0.60818	0.93335	0.64620	0.44309	0.19938	0.13562	0.48719	0.33409
100	Anan Buraparam Meditation Center	2.43304	33.27420	74.99399	111.85609	171.66094	114.26808	100.17581	35.25750	30.66128	86.15018	75.53298	0.01442	0.18131	0.44455	0.66306	1.01757	0.58611	0.59351	0.18084	0.18166	0.44189	0.44751
101	Wat Map Fakthong	2.35847	26.92822	62.27317	92.87956	142.53898	90.19293	97.10547	27.82909	29.72153	67.99919	73.21794	0.01258	0.12647	0.34118	0.50891	0.78100	0.38281	0.51807	0.11812	0.15857	0.28861	0.39063
102	Khao Chi Chan Image of Lord Buddha	0.69167	10.54529	20.81551	31.04303	47.64118	38.30986	28.47801	11.82053	8.71640	28.88297	21.47254	0.00308	0.04322	0.10156	0.15147	0.23246	0.14342	0.12670	0.04425	0.03878	0.10813	0.09553
103	Wat Khao Chi Chan	0.79964	12.53083	27.60007	41.16436	63.17362	46.58940	32.92384	14.37519	10.07716	35.12517	24.82472	0.00347	0.10030	0.19054	0.28416	0.43609	0.37062	0.14294	0.11435	0.04375	0.27942	0.10778
104	Rat Samakkhi Temple	2.26645	21.27729	56.84983	84.79716	130.13406	64.86578	93.31687	20.01438	28.56193	48.90429	70.36131	0.02898	0.26931	0.75346	1.12388	1.72476	0.79264	1.19332	0.24457	0.36524	0.59760	0.89976
105	The Shrine of Chao Mae Kuan Im	2.29456	21.23826	57.87127	86.32375	132.47630	64.76793	94.47402	19.98419	28.91611	48.83051	71.23381	0.02726	0.25376	0.70939	1.05815	1.62389	0.74736	1.12252	0.23060	0.34358	0.56346	0.84639
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	2.41055	23.43504	64.19314	95.75158	146.94507	70.12273	99.24968	21.63642	30.37782	52.86766	74.83468	0.03089	0.28282	0.79679	1.18853	1.82397	0.82776	1.27173	0.25541	0.38924	0.62408	0.95889

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		1-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	2.08035	22.85905	59.28247	88.42437	135.70080	71.18949	85.65444	21.96557	26.21666	53.67192	64.58381	0.02239	0.23391	0.62012	0.92496	1.41949	0.71714	0.92167	0.22127	0.28210	0.54067	0.69494
108	KM.8 Meditation Center	1.68029	19.33963	49.17409	73.34621	112.56117	61.05044	69.18286	18.83716	21.17512	46.02778	52.16417	0.02329	0.23789	0.63710	0.95030	1.45838	0.72398	0.95887	0.22338	0.29349	0.54583	0.72299
109	Wat Rangsee Sunthorn (KM.5)	1.88743	23.24425	57.47714	85.72949	131.56546	74.73679	77.71136	23.06009	23.78548	56.34634	58.59469	0.02188	0.22564	0.60172	0.89753	1.37739	0.68885	0.90089	0.21254	0.27574	0.51934	0.67927
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.39723	6.29863	14.16990	21.13387	32.43347	22.73260	16.35509	7.01416	5.00588	17.13880	12.33180	0.00235	0.04167	0.09027	0.13463	0.20662	0.14467	0.09657	0.04464	0.02956	0.10907	0.07282
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.48131	8.42361	16.69137	24.89265	38.20229	30.57287	19.81694	9.43328	6.06547	23.04981	14.94206	0.00287	0.05623	0.11816	0.17623	0.27045	0.19826	0.11812	0.06117	0.03615	0.14947	0.08906
112	Wat Tung Prong	0.45959	7.74940	15.63073	23.31300	35.77764	28.08431	18.92268	8.66543	5.79175	21.17362	14.26778	0.00232	0.04371	0.09293	0.13859	0.21270	0.15321	0.09542	0.04727	0.02921	0.11551	0.07195
113	Khao Phlu Ta Luang Meditation Center	0.30678	4.64524	10.47271	15.61981	23.97118	16.42983	12.63096	5.06944	3.86602	12.38695	9.52380	0.00138	0.02364	0.05181	0.07727	0.11859	0.08158	0.05679	0.02517	0.01738	0.06150	0.04282
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	5.02709	24.23341	84.01920	125.35310	192.36789	80.91654	206.98078	24.96686	63.35158	61.00544	156.06438	0.05308	0.29438	1.08689	1.62142	2.48827	0.64602	2.18567	0.19933	0.66898	0.48705	1.64800
115	Wat Khao Bai Si Santitham	8.85112	37.55925	152.41347	227.39337	348.95990	98.89557	364.42786	30.51430	111.54215	74.56038	274.78013	0.05336	0.34949	1.17149	1.74757	2.68188	0.86646	2.19699	0.26735	0.67244	0.65325	1.65654
116	Welu Amphawan Vipassana Office	5.95529	38.15941	111.35117	166.10259	254.90750	130.72830	245.19766	40.33631	75.04880	98.56004	184.88007	0.04104	0.33809	1.00314	1.49636	2.29638	0.94714	1.68973	0.29224	0.51718	0.71408	1.27407
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	1.70717	17.73295	44.42417	66.26091	101.68776	60.68878	70.28940	18.72557	21.51381	45.75511	52.99851	0.01721	0.20394	0.51233	0.76416	1.17273	0.64898	0.70874	0.20024	0.21693	0.48928	0.53439
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	2.06429	23.19687	59.42442	88.63556	136.02499	72.85615	84.99320	22.47982	26.01427	54.92847	64.08523	0.02235	0.23586	0.62252	0.92854	1.42499	0.72547	0.92006	0.22384	0.28161	0.54695	0.69373
119	Samaesarn Pattanakarn Church	3.05140	27.24002	77.68440	115.87755	177.83098	78.93909	125.63549	24.35671	38.45384	59.51458	94.72968	0.01804	0.20206	0.51976	0.77525	1.18975	0.63285	0.74285	0.19527	0.22737	0.47712	0.56011
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	2.05969	20.56182	48.83737	72.85033	111.79903	68.27728	84.80376	21.06700	25.95628	51.47632	63.94239	0.01122	0.15418	0.36529	0.54483	0.83613	0.50908	0.46205	0.15708	0.14142	0.38381	0.34839
121	Wat Chong Samaesarn	1.59523	16.17829	39.94539	59.58477	91.44143	55.11047	65.68061	17.00437	20.10317	41.54946	49.52345	0.00833	0.13212	0.29719	0.44324	0.68023	0.44951	0.34293	0.13870	0.10496	0.33890	0.25857
122	Viharn Luang Por Dam	1.81467	19.09379	41.44493	61.81224	94.86148	66.22171	74.71547	20.43276	22.86852	49.92656	56.33578	0.00665	0.10306	0.23367	0.34851	0.53485	0.34910	0.27368	0.10772	0.08377	0.26320	0.20636
123	The Shrine of King Taksin the Great (Samaesarn)	1.51569	18.95789	41.18574	61.42572	94.26828	68.58858	62.40547	21.16305	19.10073	51.71101	47.05398	0.01170	0.16418	0.38596	0.57566	0.88344	0.54464	0.48190	0.16805	0.14750	0.41062	0.36335
124	Thai Island and Sea Natural History Museum	1.46646	18.79836	40.12728	59.84646	91.84476	67.78799	60.37875	20.91603	18.48041	51.10743	45.52583	0.01103	0.16040	0.37204	0.55489	0.85156	0.53630	0.45395	0.16548	0.13894	0.40434	0.34228
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	1.47728	20.90797	42.95976	64.06934	98.32577	74.54220	60.82410	23.00005	18.61672	56.19963	45.86163	0.01198	0.16928	0.39682	0.59186	0.90831	0.56251	0.49310	0.17356	0.15093	0.42409	0.37180

Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																				
		1-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	1.51979	20.32739	43.24880	64.50454	98.99292	72.96230	62.57453	22.51257	19.15248	55.00850	47.18146	0.01217	0.16930	0.39924	0.59546	0.91383	0.56060	0.50106	0.17297	0.15336	0.42266	0.37780
127	Eastern-Nong Muang Community Health Service Center	6.15682	43.74967	99.15329	147.93830	227.02629	169.37120	253.49540	52.25961	77.58853	127.69410	191.13660	0.15798	1.85542	4.67808	6.97762	10.70825	5.89025	6.50473	1.81744	1.99093	4.44084	4.90459
128	Phala Subdistrict Health Promotion Hospital	1.67132	20.84343	51.28020	76.48629	117.38034	68.67261	68.81347	21.18898	21.06206	51.77437	51.88564	0.02672	0.36500	0.86662	1.29258	1.98367	1.20365	1.10004	0.37139	0.33669	0.90746	0.82943
129	Ban Chang Hospital	0.55405	9.88564	19.31098	28.80012	44.19887	37.15650	22.81182	11.46467	6.98212	28.01342	17.20021	0.01112	0.25771	0.51667	0.77054	1.18253	0.92958	0.45796	0.28682	0.14017	0.70084	0.34531
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	4.53498	33.66571	96.87599	144.50606	221.76533	107.74029	186.71908	33.24335	57.14998	81.22868	140.78697	0.06298	0.40822	1.37636	2.05319	3.15089	1.00538	2.59296	0.31021	0.79364	0.75798	1.95510
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	5.43441	44.26282	90.89480	135.60095	208.09615	178.08578	223.75146	54.94849	68.48466	134.26428	168.70954	0.14686	0.92047	3.16315	4.71866	7.24141	2.21695	6.04649	0.68404	1.85068	1.67143	4.55908
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	8.44757	46.16784	137.85224	205.67592	315.63082	180.84382	347.81279	55.79949	106.45670	136.34365	262.25231	0.16367	1.21029	3.79712	5.66419	8.69248	3.21802	6.73868	0.99292	2.06254	2.42617	5.08100
133	Ban Yai Ra Subdistrict Health Promotion Hospital	1.41767	39.29883	59.09855	88.11789	135.23620	158.23420	58.36999	48.82328	17.86558	119.29757	44.01122	0.02863	0.93516	1.73047	2.58062	3.96044	3.49399	1.17862	1.07807	0.36075	2.63423	0.88868
134	Sam Nak Thon Subdistrict Health Promotion Hospital	2.72531	51.90589	82.65897	123.25321	189.15798	205.47781	112.20930	63.40033	34.34443	154.91597	84.60628	0.05955	1.00444	2.21303	3.30061	5.06535	3.45615	2.45205	1.06640	0.75051	2.60570	1.84886
135	Ban Chak Mak Subdistrict Health Promotion Hospital	1.28028	25.30513	37.64628	56.13132	86.14591	102.23119	52.71311	31.54351	16.13415	77.07520	39.74591	0.02336	0.57163	1.12990	1.68506	2.58603	2.07537	0.96184	0.64036	0.29440	1.56469	0.72523
136	Ban Phayun Subdistrict Health Promotion Hospital	1.49464	18.25640	45.29382	67.55769	103.67794	58.57359	61.53901	18.07292	18.83553	44.16041	46.40067	0.02030	0.25574	0.62661	0.93462	1.43432	0.82711	0.83570	0.25520	0.25579	0.62358	0.63012
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.87128	38.42121	59.24094	88.33209	135.56460	153.47643	35.87347	47.35526	10.97996	115.71055	27.04874	0.00782	0.38066	0.65730	0.98017	1.50427	1.46167	0.32213	0.45100	0.09859	1.10200	0.24288
138	Phudon Huai Mahat Community Health Service Unit	0.37115	5.20527	11.39226	16.99096	26.07550	19.24603	15.28121	5.93838	4.67719	14.51017	11.52210	0.00503	0.09910	0.20789	0.31005	0.47583	0.34975	0.20695	0.10791	0.06334	0.26368	0.15604
139	Wat Yan Nasangwararam Hospital	2.83910	29.19979	77.96147	116.28722	178.46032	89.06529	116.89447	27.48116	35.77844	67.14903	88.13892	0.01527	0.13923	0.39299	0.58620	0.89961	0.40690	0.62851	0.12555	0.19237	0.30678	0.47390
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	2.90758	29.52321	78.72514	117.42624	180.20832	90.13536	119.71394	27.81133	36.64141	67.95579	90.26482	0.01533	0.13874	0.39312	0.58640	0.89991	0.40418	0.63138	0.12471	0.19325	0.30472	0.47607
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	1.02370	44.48039	68.87205	102.69307	157.60454	177.43870	42.14899	54.74884	12.90074	133.77644	31.78051	0.00557	0.19725	0.35926	0.53575	0.82221	0.74176	0.22940	0.22887	0.07021	0.55924	0.17297

Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																				
		1-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	2.34677	22.85614	62.55532	93.30855	143.19587	68.43416	96.62360	21.11541	29.57404	51.59459	72.85460	0.03043	0.28229	0.79039	1.17897	1.80930	0.83034	1.25289	0.25620	0.38348	0.62602	0.94468
143	Sattahip Hospital KM.10	1.96506	23.69057	59.08990	88.13538	135.25760	75.74560	80.90763	23.37136	24.76378	57.10691	61.00470	0.02369	0.22117	0.61740	0.92094	1.41331	0.65208	0.97544	0.20120	0.29856	0.49163	0.73548
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	1.58055	15.88505	40.15708	59.90017	91.92553	54.54376	65.07622	16.82952	19.91818	41.12220	49.06774	0.00814	0.13020	0.29205	0.43558	0.66847	0.44368	0.33518	0.13690	0.10259	0.33450	0.25273
145	Village No. 1 Ban Sakulthong	0.70557	18.46307	32.59984	48.61693	74.61162	71.35631	29.05057	22.01704	8.89164	53.79770	21.90425	0.01657	0.46924	0.89542	1.33535	2.04935	1.73051	0.68215	0.53395	0.20879	1.30468	0.51434
146	Village No. 2, Ban Kilo 16	2.12255	24.11720	61.65592	91.96389	141.13286	80.07266	87.39178	24.70648	26.74841	60.36921	65.89377	0.04047	0.62311	1.41624	2.11229	3.24166	2.10774	1.66633	0.65034	0.51002	1.58909	1.25642
147	Village No. 4, Ban Tung Prong	2.41077	30.43745	72.81856	108.61215	166.68247	110.35114	99.25885	34.04892	30.38062	83.19708	74.84159	0.04826	0.96348	2.01369	3.00322	4.60896	3.40656	1.98690	1.05110	0.60814	2.56831	1.49813
148	Village No. 5, Phala Subdistrict	2.06053	26.22092	61.91799	92.35363	141.73118	92.43291	84.83846	28.52024	25.96691	69.68799	63.96856	0.03723	0.70115	1.49135	2.22422	3.41345	2.45733	1.53272	0.75821	0.46913	1.85266	1.15568
149	Village No. 6, Ban Takat	1.59024	19.97631	48.93164	72.98324	112.00437	65.31955	65.47508	20.15439	20.04027	49.24639	49.36849	0.02537	0.35510	0.83546	1.24609	1.91233	1.17744	1.04454	0.36330	0.31971	0.88770	0.78759
150	Village No. 7, Ban Khlong Sai	2.05798	24.92584	61.46345	91.67587	140.69101	84.22322	84.73360	25.98714	25.93481	63.49845	63.88949	0.03401	0.57782	1.26996	1.89407	2.90677	1.99083	1.40011	0.61427	0.42854	1.50095	1.05569
151	Village No. 1 Ban Sam Nak Thon	5.16080	33.76071	90.55475	135.10162	207.32845	132.56520	212.48613	40.90309	65.03663	99.94494	160.21544	0.10205	1.16413	2.97116	4.43167	6.80109	3.66550	4.20180	1.13099	1.28606	2.76353	3.16818
152	Village No. 2, Ban Chak Mak	1.52507	42.05976	62.25524	92.82334	142.45797	170.18413	62.79190	52.51043	19.21901	128.30699	47.34536	0.03041	0.79886	1.55158	2.31391	3.55112	2.92336	1.25225	0.90200	0.38328	2.20401	0.94420
153	Village No. 3, Ban Sa Kaeo	19.55367	67.02791	313.78254	468.16970	718.45355	271.50604	805.08513	83.77338	246.41619	204.69666	607.03757	0.43966	2.65242	9.31768	13.89988	21.33117	6.21861	18.10226	1.91876	5.54064	4.68840	13.64918
154	Sa Kaeo Community 1	12.09012	43.07703	194.35086	289.97495	444.99582	172.99741	497.78768	53.37848	152.36021	130.42801	375.33400	0.22593	1.34528	4.76192	7.10373	10.90159	3.12379	9.30208	0.96385	2.84713	2.35512	7.01381
155	Sa Kaeo Community 2	5.52430	42.44647	97.93423	146.11038	224.22278	169.35315	227.45254	52.25404	69.61747	127.68049	171.50017	0.13750	0.83589	2.92343	4.36108	6.69265	1.97059	5.66139	0.60803	1.73281	1.48568	4.26871
156	Village No. 4, Ban Khlong Bang Phai	6.35909	37.12254	113.35521	169.11256	259.52305	127.48739	261.82342	39.33633	80.13753	96.11662	197.41596	0.10659	0.59691	2.19097	3.26848	5.01590	1.32068	4.38872	0.40750	1.34328	0.99570	3.30911
157	Village No. 5, Ban Yai Ra	0.65164	11.74704	21.32788	31.80865	48.81590	46.02193	26.82995	14.20010	8.21197	34.69733	20.22990	0.01413	0.29686	0.61138	0.91180	1.39931	1.05721	0.58182	0.32620	0.17808	0.79706	0.43870
158	Village No. 6, Ban Khao Khrok	13.37465	40.56097	215.81375	321.99715	494.13726	162.29808	550.67582	50.07719	168.54793	122.36146	415.21188	0.21219	1.63433	5.01904	7.48687	11.48965	4.43630	8.73666	1.36882	2.67407	3.34466	6.58748
159	Village no. 7, Ban Nong Takhian	1.40559	29.12658	47.20854	70.39390	108.03407	114.42380	57.87229	35.30555	17.71324	86.26758	43.63595	0.02549	0.70766	1.35658	2.02309	3.10480	2.60459	1.04948	0.80365	0.32122	1.96368	0.79132
160	Village No. 8, Ban Cherng Khao	1.37533	88.55634	130.52735	194.61717	298.68328	358.78139	56.62642	110.70226	17.33191	270.49620	42.69656	0.04061	3.12188	5.10095	7.60621	11.67330	12.22998	1.67212	3.77357	0.51179	9.22055	1.26078
161	Eastern-Nong Muang Community	2.44083	36.52928	80.35496	119.84734	183.92566	134.57512	100.49661	41.52325	30.75947	101.46028	75.77487	0.05765	1.20834	2.49007	3.71365	5.69926	4.30191	2.37343	1.32736	0.72645	3.24334	1.78958
162	Wat Khiri Pawanaram Community	1.27943	77.20020	113.82570	169.71495	260.46528	312.74184	52.67826	96.49672	16.12348	235.78559	39.71963	0.03507	2.50953	4.13027	6.15883	9.45199	9.80612	1.44406	3.02569	0.44199	7.39313	1.08883
163	Ban Chang-Phala Community	1.28128	79.56087	117.27609	174.85946	268.36069	322.33035	52.75419	99.45526	16.14672	243.01466	39.77688	0.03273	2.48000	4.05795	6.05096	9.28645	9.71058	1.34769	2.99621	0.41249	7.32110	1.01617
164	Ruam Sompong Community	1.67969	27.39809	61.04423	91.04466	139.72338	93.70522	69.15824	28.91281	21.16759	70.64721	52.14560	0.03691	0.51622	1.21487	1.81199	2.78079	1.71138	1.51963	0.52805	0.46512	1.29027	1.14581
165	Ming Mongkol Community	1.34656	55.15754	86.36517	128.77775	197.63686	219.22691	55.44184	67.64262	16.96934	165.28183	41.80338	0.02603	1.20234	2.09233	3.12011	4.78842	4.60320	1.07171	1.42032	0.32802	3.47049	0.80808
166	Jor Koo Community	1.35296	58.92703	88.95835	132.64028	203.56548	236.97918	55.70548	73.12010	17.05004	178.66581	42.00216	0.02611	1.24301	2.15330	3.21101	4.92793	4.76711	1.07513	1.47089	0.32907	3.59407	0.81066

Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																				
		1-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	1.22423	95.46598	141.92341	211.61037	324.76284	385.76114	50.40544	119.02688	15.42783	290.83706	38.00591	0.02414	1.41690	2.38529	3.55687	5.45874	5.49201	0.99373	1.69456	0.30415	4.14059	0.74927
168	Thep Chinda Community	1.40190	57.06699	89.34671	133.22346	204.45977	226.82304	57.72063	69.98641	17.66683	171.00879	43.52160	0.02875	1.16526	2.07113	3.08854	4.73996	4.42497	1.18366	1.36533	0.36229	3.33612	0.89249
169	Health Park Community	3.71733	23.69580	64.18499	95.76067	146.95521	81.81356	153.05394	25.24363	46.84594	61.68173	115.40331	0.04684	0.55196	1.38972	2.07284	3.18110	1.75389	1.92856	0.54116	0.59028	1.32231	1.45414
170	Wat Ban Chang Community	3.38843	28.94920	69.62376	103.86102	159.38859	103.26404	139.51203	31.86219	42.70110	77.85390	105.19265	0.05440	0.72918	1.74391	2.60107	3.99177	2.39405	2.23980	0.73869	0.68555	1.80495	1.68882
171	Dong Dang Community	1.41439	52.03265	93.15987	138.92376	213.20549	203.55714	58.23490	62.80770	17.82423	153.46792	43.90936	0.03098	1.04235	1.91740	2.85936	4.38824	3.90405	1.27548	1.20460	0.39039	2.94338	0.96171
172	Night Market Community	3.65076	25.05514	68.97089	102.89045	157.89853	93.56618	150.31315	28.86991	46.00705	70.54239	113.33675	0.05159	0.63244	1.56681	2.33697	3.58645	2.03101	2.12427	0.62667	0.65019	1.53124	1.60171
173	Ruam Mitr Community	3.41578	32.28606	74.25416	110.74869	169.96217	108.48108	140.63817	33.47192	43.04578	81.78719	106.04177	0.05590	0.78821	1.84932	2.75826	4.23300	2.61778	2.30142	0.80772	0.70441	1.97362	1.73528
174	Ban Chang - Noen Kraprok Community	3.41104	21.56057	65.48582	97.69525	149.92514	72.75569	140.44317	22.44882	42.98610	54.85273	105.89474	0.03581	0.46987	1.13303	1.68993	2.59348	1.53491	1.47436	0.47360	0.45126	1.15721	1.11167
175	Dao Pitak Community	2.50156	23.31452	62.20130	92.78322	142.38918	79.74115	102.99696	24.60419	31.52476	60.11928	77.66014	0.03228	0.59621	1.27585	1.90283	2.92022	2.08309	1.32913	0.64274	0.40681	1.57050	1.00217
176	Taiwa Community	0.93136	35.58730	52.86915	78.82881	120.98023	143.83238	38.34691	44.37959	11.73702	108.43961	28.91373	0.01052	0.51584	0.88973	1.32677	2.03619	1.98156	0.43322	0.61141	0.13260	1.49396	0.32665
177	East Ban Noen Kraprok Community, Prachummit	2.74602	23.77088	64.10996	95.63251	146.76144	74.19406	113.06200	22.89263	34.60542	55.93716	85.24922	0.02031	0.30003	0.69200	1.03211	1.58394	1.00647	0.83604	0.31055	0.25589	0.75881	0.63038
178	Ban Noen Kraprok Community	0.80029	19.03034	31.09711	46.37901	71.17656	77.01758	32.95059	23.76383	10.08534	58.06589	24.84488	0.00779	0.34959	0.61113	0.91133	1.39861	1.33608	0.32089	0.41225	0.09822	1.00731	0.24196
179	Nong Yai Community	0.92460	50.87339	84.13254	125.45427	192.53529	198.45256	38.06853	61.23268	11.65181	149.61942	28.70383	0.01022	0.45656	0.79861	1.19091	1.82768	1.74451	0.42069	0.53827	0.12876	1.31524	0.31720
180	Village No. 1, Pan Din Tai	2.73003	23.70217	62.57236	93.33788	143.24019	74.72321	112.40395	23.05590	34.40400	56.33610	84.75305	0.01932	0.28736	0.66124	0.98623	1.51353	0.96526	0.79559	0.29783	0.24351	0.72774	0.59988
181	Village No. 2, Ban Prachummit	2.19979	21.31310	48.64018	72.54560	111.33327	72.00856	90.57234	22.21829	27.72190	54.28945	68.29193	0.02883	0.36106	0.88682	1.32272	2.02992	1.16594	1.18703	0.35975	0.36332	0.87904	0.89503
182	Village No. 3, Ban Noen Samre	0.86753	19.55826	36.70722	54.74152	84.01109	75.73824	35.71883	23.36909	10.93263	57.10136	26.93215	0.01749	0.59758	1.09588	1.63425	2.50807	2.24099	0.71999	0.69146	0.22037	1.68955	0.54287
183	Village No. 4, Ban Phayun	1.67512	26.93682	59.74040	89.09981	136.73872	92.35877	68.96982	28.49737	21.10992	69.63209	52.00354	0.03464	0.49239	1.15178	1.71788	2.63637	1.63821	1.42605	0.50547	0.43648	1.23510	1.07525
184	Village No. 6, Ban Noen Kraprok	0.47792	10.03019	20.03216	29.87502	45.84862	36.42113	19.67746	11.23777	6.02277	27.45900	14.83688	0.00592	0.14071	0.28015	0.41781	0.64120	0.50915	0.24356	0.15710	0.07455	0.38386	0.18365
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.37472	5.38157	11.58525	17.27894	26.51743	19.96898	15.42840	6.16144	4.72224	15.05522	11.63308	0.00520	0.10172	0.21389	0.31899	0.48955	0.35859	0.21407	0.11064	0.06552	0.27035	0.16141
186	Village No. 11, Ban Map Fakthong	5.34819	35.19838	92.85636	138.52641	212.58579	129.50371	220.20150	39.95846	67.39811	97.63679	166.03285	0.08481	0.76336	2.16833	3.23438	4.96362	2.21940	3.49177	0.68480	1.06874	1.67328	2.63281
187	Village No. 13, Ban Nong Phakkut	1.30576	36.87428	54.92300	81.89133	125.68030	148.91512	53.76213	45.94787	16.45523	112.27164	40.53687	0.02541	0.54619	1.11761	1.66678	2.55797	1.95119	1.04624	0.60204	0.32023	1.47106	0.78887
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	3.29152	30.84065	68.91661	102.78613	157.74261	105.30998	135.52218	32.49347	41.47991	79.39640	102.18429	0.01297	0.12901	0.34970	0.52161	0.80049	0.38909	0.53406	0.12005	0.16346	0.29334	0.40268
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	1.10053	47.47130	70.68571	105.39382	161.75006	191.72848	45.31214	59.15796	13.86890	144.54994	34.16554	0.00559	0.18257	0.33790	0.50391	0.77334	0.68206	0.23033	0.21045	0.07050	0.51423	0.17367
190	Village No. 6 (Ban Khao Krating Community)	0.85026	33.43427	49.65850	74.04166	113.63329	135.14064	35.00795	41.69774	10.71505	101.88664	26.39614	0.00410	0.17462	0.30787	0.45910	0.70458	0.66520	0.16900	0.20525	0.05173	0.50152	0.12743

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Table 5.2-53 Forecasted results of nitrogen dioxide emission in the atmosphere, operation phase

Area		The concentration value of nitrogen dioxide (micrograms per cubic meter)																					
		1-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.99207	46.56228	71.35910	106.40051	163.29458	186.36023	40.84670	57.50158	12.50214	140.50265	30.79859	0.00801	0.35065	0.61533	0.91760	1.40823	1.33817	0.32972	0.41289	0.10092	1.00889	0.24861
192	Village No. 11 (Ban Khong Wanphen Community)	4.00267	30.07353	90.53243	135.04552	207.24644	90.49327	164.80243	27.92176	50.44185	68.22563	124.26173	0.02753	0.24193	0.69525	1.03707	1.59153	0.69667	1.13355	0.21496	0.34695	0.52524	0.85470
193	Village No. 1, Ban Phlu Ta Luang	2.15969	20.97626	55.65635	83.01668	127.40170	64.27391	88.92120	19.83176	27.21653	48.45805	67.04696	0.02909	0.27529	0.76354	1.13891	1.74783	0.81579	1.19758	0.25171	0.36655	0.61505	0.90298
194	Village No. 2, Ban Khalot	2.84339	25.01230	68.24965	101.80216	156.23061	75.59788	117.07112	23.32578	35.83251	56.99554	88.27212	0.02785	0.24430	0.70261	1.04805	1.60839	0.70300	1.14654	0.21691	0.35093	0.53001	0.86449
195	Village No. 3, Ban Khlong Phai	3.41854	29.85304	81.33135	121.31553	186.17670	91.35212	140.75178	28.18676	43.08056	68.87314	106.12743	0.03166	0.25375	0.76347	1.13886	1.74774	0.70199	1.30363	0.21660	0.39901	0.52925	0.98294
196	Village No. 4, Ban Khlong Phlu Ta Luang	2.69197	31.40075	74.14893	110.59337	169.72351	103.88998	110.83668	32.05533	33.92430	78.32582	83.57132	0.02935	0.21614	0.67955	1.01370	1.55566	0.57351	1.20824	0.17696	0.36981	0.43238	0.91102
197	Village No. 5, Ban Khao Bai Si	3.71746	31.97281	83.53770	124.61570	191.23966	104.10375	153.05937	32.12129	46.84760	78.48699	115.40741	0.04026	0.29946	0.93657	1.39709	2.14403	0.79867	1.65752	0.24643	0.50732	0.60214	1.24978
198	Village No. 6, Ban Khao Tabaek	1.76904	19.05887	49.83897	74.33898	114.08453	59.00989	72.83693	18.20754	22.29354	44.48935	54.91935	0.02207	0.22741	0.60662	0.90484	1.38861	0.69412	0.90854	0.21417	0.27808	0.52332	0.68504
199	Village No. 7, Ban Nong Ya Noi	1.91910	22.40889	56.63550	84.47510	129.64023	71.02617	79.01545	21.91518	24.18463	53.54879	59.57798	0.02228	0.23368	0.61850	0.92255	1.41579	0.71731	0.91736	0.22133	0.28078	0.54080	0.69169
200	Village No. 8, Ban Nong Ya	0.64300	16.99979	25.19357	37.57416	57.66404	68.82494	26.47447	21.23598	8.10316	51.88921	19.96186	0.00552	0.23743	0.41787	0.62314	0.95632	0.90506	0.22735	0.27926	0.06959	0.68235	0.17143
201	Ban Nong Krachong Community	2.47663	28.45753	72.40880	108.00226	165.74626	89.79066	101.97068	27.70497	31.21064	67.69591	76.88632	0.01599	0.19353	0.48198	0.71890	1.10326	0.61937	0.65851	0.19111	0.20155	0.46696	0.49652
Standard*		320*											57*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Standard 1-hour and 1-year values for nitrogen dioxide are referenced from Announcement of the National Environment Board No. 33 (2009) Re: Determination of General Atmospheric Nitrogen Dioxide Standards.

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1.3) Sulfur dioxide (SO_2)

From the sulfur dioxide (SO_2) emission forecast projected by the AERMOD model based on Cmax 24-hour average and 1-year average values, it was found that the Cmax 24-hour average in all scenarios occurred outside of the project area to the north while the 1-year average mostly occurred in the project area (within the area of U-Tapao International Airport). The Cmax for all scenarios were within the standards in the Announcement of the National Environment Board No. 24 (2004) Re: Determination of General Atmospheric Air Quality Standards., which determine that the 24-hour average of sulfur dioxide must not exceed 0.3 milligrams per cubic meter (300 micrograms per cubic meter) and 1 year must not exceed 0.1 milligrams per cubic meter (100 micrograms per cubic meter).

When comparing the SO_2 Cmax 24-hour average and 1-year averages in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest SO_2 24-hour average Cmax value, comprising 80.11215 micrograms per cubic meter. Scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest SO_2 1-year average maximum concentration value, comprising 6.96533 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), the SO_2 24-hour average and 1-year average concentration was the lowest, comprising 1.70751 and 0.17855 micrograms per cubic meters, respectively.

In this regard, when considering the PM_{10} concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table Table 5.2-54 and Addendum 5-3, item 4, PM_{10} concentration contours (Figure 4-1 to Figure 4-22), it was found that all PM_{10} concentrations were in accordance with standard criteria.[PF2]

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Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		1.70751	19.24116	29.32880	44.83482	68.81561	80.11215	57.80328	23.97539	17.23191	58.99042	42.56158	0.17855	1.48859	2.96700	4.53872	6.96533	6.01190	6.04421	1.79920	1.80186	4.42685	4.45046
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.21059	1.58664	4.42049	6.76120	10.37637	4.84459	7.12900	1.44985	2.12525	3.56730	5.24921	0.01580	0.10704	0.31352	0.47955	0.73596	0.31339	0.53476	0.09379	0.15942	0.23077	0.39375
2	Wat Phala School	0.08148	0.79739	1.98725	3.03930	4.66447	2.64092	2.75835	0.79036	0.82230	1.94464	2.03102	0.00835	0.08840	0.21377	0.32692	0.50174	0.29854	0.28277	0.08934	0.08430	0.21983	0.20821
3	Phala Subdistrict Municipality Child Development Center	0.07316	0.73713	1.81624	2.77773	4.26304	2.45963	2.47665	0.73610	0.73832	1.81115	1.82360	0.00779	0.08312	0.20038	0.30645	0.47032	0.28123	0.26372	0.08417	0.07862	0.20708	0.19418
4	Ban Khlong Sai School	0.09226	1.01910	2.42553	3.70947	5.69303	3.47577	3.12326	1.04020	0.93109	2.55937	2.29971	0.00744	0.08750	0.20362	0.31140	0.47791	0.30252	0.25184	0.09053	0.07508	0.22276	0.18543
5	Rayong English Program School	0.10437	0.96341	2.45797	3.75928	5.76941	3.14064	3.53307	0.93991	1.05325	2.31260	2.60146	0.00836	0.10024	0.23166	0.35429	0.54374	0.34797	0.28288	0.10414	0.08433	0.25623	0.20829
6	Rayong Garden International School	0.09896	0.97877	2.42911	3.71507	5.70158	3.25057	3.35001	0.97281	0.99868	2.39355	2.46667	0.00824	0.09812	0.22731	0.34762	0.53351	0.34015	0.27878	0.10180	0.08311	0.25047	0.20527
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.05461	1.03874	2.04145	3.12158	4.79095	3.92177	1.84856	1.17368	0.55108	2.88779	1.36113	0.00716	0.18720	0.35132	0.53719	0.82447	0.72138	0.24221	0.21589	0.07221	0.53118	0.17835
8	Wat Khiri Pawanaram School	0.05414	0.98729	1.95457	2.98876	4.58708	3.71502	1.83277	1.11181	0.54637	2.73555	1.34950	0.00682	0.16765	0.31859	0.48714	0.74767	0.64255	0.23085	0.19230	0.06882	0.47314	0.16998
9	Ban Khlong Bang Phai School	0.16776	1.36134	3.66844	5.61081	8.61091	4.26610	5.67920	1.27673	1.69304	3.14134	4.18169	0.01393	0.08279	0.25892	0.39605	0.60781	0.22790	0.47144	0.06820	0.14054	0.16781	0.34713
10	Pattanavechsuksa School	0.47056	1.68190	7.06566	10.80938	16.58830	3.04158	15.92945	0.91026	4.74878	2.23966	11.72914	0.03492	0.16336	0.58253	0.89112	1.36756	0.38671	1.18222	0.11573	0.35243	0.28475	0.87049
11	Pattanavech College	0.39246	1.36560	5.83693	8.92968	13.70365	2.93718	13.28573	0.87902	3.96065	2.16279	9.78252	0.02981	0.14396	0.50404	0.77104	1.18328	0.34895	1.00909	0.10443	0.30082	0.25695	0.74301
12	Saeng Song La Child Development Center 3	0.29672	2.59435	5.66178	8.65822	13.28822	9.29964	10.04460	2.78313	2.99443	6.84777	7.39602	0.05027	0.25136	0.86296	1.32007	2.02584	0.62440	1.70162	0.18686	0.50727	0.45977	1.25293
13	Wat Sa Kaeo School	0.33811	2.66003	5.71921	8.74594	13.42289	9.61060	11.44565	2.87619	3.41210	7.07675	8.42764	0.05726	0.26851	0.95613	1.46261	2.24459	0.63680	1.93839	0.19058	0.57786	0.46890	1.42727
14	Wat Sombun Naram School (Tem Rat Memorial)	0.26504	2.25574	4.34266	6.64289	10.19455	9.13714	8.97230	2.73450	2.67476	6.72812	6.60647	0.03623	0.26083	0.74220	1.13522	1.74221	0.78276	1.22652	0.23426	0.36564	0.57638	0.90311
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.26504	2.25574	4.34266	6.64289	10.19455	9.13714	8.97230	2.73450	2.67476	6.72812	6.60647	0.03623	0.26083	0.74220	1.13522	1.74221	0.78276	1.22652	0.23426	0.36564	0.57638	0.90311
16	Sajjaseuksa School	0.04914	2.14476	3.34551	5.11441	7.84990	8.86276	1.66344	2.65238	0.49589	6.52607	1.22482	0.00752	0.27252	0.48356	0.73934	1.13475	1.07470	0.25450	0.32163	0.07587	0.79136	0.18739
17	Ban Chang District Center for Non-Formal and Informal Education	0.08362	2.68271	4.30400	6.57989	10.09915	10.98069	2.83083	3.28622	0.84391	8.08561	2.08439	0.01150	0.29260	0.55214	0.84424	1.29574	1.12488	0.38918	0.33665	0.11602	0.82830	0.28656
18	Wat Suwan Rangsan Community School	0.05939	1.76776	2.76129	4.22129	6.47909	7.30148	2.01060	2.18513	0.59939	5.37643	1.48044	0.00855	0.21816	0.41149	0.62919	0.96568	0.83884	0.28956	0.25104	0.08632	0.61768	0.21321

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.05272	1.29307	2.03333	3.10846	4.77104	5.32896	1.78468	1.59481	0.53204	3.92397	1.31409	0.00769	0.18116	0.34733	0.53109	0.81511	0.69161	0.26025	0.20698	0.07758	0.50927	0.19163
20	Wat Samnak Kathon School	0.06932	1.84595	2.92009	4.46412	6.85178	7.59216	2.34663	2.27213	0.69956	5.59047	1.72787	0.01070	0.23907	0.46365	0.70897	1.08811	0.90805	0.36207	0.27175	0.10794	0.66864	0.26660
21	Ban Sam Nak Thon Child Development Center	0.06734	1.78061	2.81423	4.30228	6.60338	7.32564	2.27949	2.19236	0.67954	5.39422	1.67843	0.01049	0.23718	0.45888	0.70166	1.07689	0.90187	0.35527	0.26990	0.10591	0.66409	0.26159
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.05301	1.05806	1.65322	2.52735	3.87913	4.36972	1.79447	1.30774	0.53495	3.21764	1.32130	0.00760	0.14324	0.28932	0.44241	0.67899	0.53396	0.25742	0.15980	0.07674	0.39318	0.18955
23	Wat Chak Mak School	0.04776	0.75710	1.33190	2.03639	3.12549	2.99577	1.61672	0.89655	0.48196	2.20593	1.19042	0.00666	0.13002	0.26024	0.39794	0.61075	0.48675	0.22533	0.14567	0.06717	0.35842	0.16592
24	St. Andrews International School, Green Valley, Rayong,	0.01166	0.14788	0.25943	0.39679	0.60896	0.58687	0.39488	0.17563	0.11772	0.43214	0.29075	0.00143	0.01797	0.04086	0.06249	0.09591	0.06294	0.04839	0.01884	0.01442	0.04635	0.03563
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.06400	0.69298	1.66152	2.54105	3.89982	2.35279	2.16663	0.70412	0.64590	1.73247	1.59533	0.00646	0.06383	0.15850	0.24240	0.37202	0.21191	0.21876	0.06342	0.06522	0.15604	0.16108
26	Ban Phayun School	0.06288	0.67997	1.63108	2.49450	3.82838	2.30794	2.12863	0.69070	0.63457	1.69944	1.56735	0.00644	0.06325	0.15745	0.24081	0.36957	0.20964	0.21816	0.06274	0.06504	0.15437	0.16064
27	Rakpasa Kindergarten	0.07831	0.90016	2.11177	3.22958	4.95655	3.09706	2.65086	0.92687	0.79025	2.28051	1.95187	0.00699	0.07036	0.17347	0.26531	0.40718	0.23469	0.23678	0.07024	0.07059	0.17281	0.17435
28	Wat Ban Chang School (Boonrawdprachanukul)	0.13935	1.53539	3.65768	5.59387	8.58507	5.23367	4.71736	1.56629	1.40631	3.85380	3.47348	0.01517	0.17603	0.41162	0.62950	0.96611	0.60681	0.51367	0.18160	0.15313	0.44682	0.37822
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.06488	0.59448	1.37992	2.11033	3.23880	2.05830	2.19625	0.61599	0.65473	1.51562	1.61714	0.00603	0.06345	0.15380	0.23522	0.36100	0.21392	0.20430	0.06402	0.06090	0.15752	0.15043
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.06488	0.59448	1.37992	2.11033	3.23880	2.05830	2.19625	0.61599	0.65473	1.51562	1.61714	0.00603	0.06345	0.15380	0.23522	0.36100	0.21392	0.20430	0.06402	0.06090	0.15752	0.15043
31	Wat Prachummit Bamrung School	0.12728	0.89951	2.58205	3.94935	6.06101	2.67970	4.30883	0.80196	1.28452	1.97319	3.17267	0.00615	0.07792	0.17678	0.27035	0.41491	0.27337	0.20830	0.08181	0.06210	0.20129	0.15338
32	Udom Wittayanukun School	0.02851	0.62680	0.95108	1.45391	2.23156	2.61352	0.96501	0.78216	0.28768	1.92446	0.71055	0.00221	0.07788	0.13881	0.21224	0.32575	0.30658	0.07492	0.09175	0.02233	0.22575	0.05516
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.02176	0.37881	0.72251	1.10476	1.69557	1.44952	0.73653	0.43380	0.21957	1.06735	0.54232	0.00179	0.04135	0.07959	0.12170	0.18679	0.15760	0.06050	0.04717	0.01803	0.11605	0.04454
34	Wat Noen Kraprok School	0.02141	0.37922	0.72577	1.10975	1.70324	1.44894	0.72482	0.43363	0.21608	1.06692	0.53370	0.00179	0.04056	0.07842	0.11992	0.18404	0.15426	0.06059	0.04617	0.01806	0.11359	0.04462
35	Chonnabot Phatthana Kindergarten	0.02906	0.77829	1.19382	1.82501	2.80114	3.23388	0.98360	0.96781	0.29322	2.38126	0.72424	0.00272	0.07985	0.14666	0.22424	0.34416	0.31049	0.09209	0.09292	0.02745	0.22863	0.06780
36	Aksorn Business Administration Technological College	0.11053	1.84156	3.84234	5.87564	9.01772	6.75656	3.74166	2.02205	1.11544	4.97518	2.75505	0.01186	0.18083	0.38701	0.59183	0.90831	0.65489	0.40162	0.19599	0.11973	0.48222	0.29572
37	Banchang Karnchanakul Wittaya School	0.04531	1.35159	2.17789	3.32956	5.11037	5.57977	1.53368	1.66987	0.45721	4.10865	1.12928	0.00830	0.24640	0.45167	0.69060	1.05994	0.95894	0.28100	0.28698	0.08377	0.70611	0.20690

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.01618	0.26485	0.55538	0.84929	1.30345	0.96928	0.54790	0.29008	0.16334	0.71373	0.40343	0.00142	0.02218	0.04716	0.07211	0.11067	0.08063	0.04813	0.02413	0.01435	0.05937	0.03544
39	Ban Phudon - Huai Mahat Child Development Center	0.01618	0.26485	0.55538	0.84929	1.30345	0.96928	0.54790	0.29008	0.16334	0.71373	0.40343	0.00142	0.02218	0.04716	0.07211	0.11067	0.08063	0.04813	0.02413	0.01435	0.05937	0.03544
40	Ban Map Fakthong School	0.06305	0.59301	1.32025	2.01902	3.09868	2.10271	2.13429	0.62928	0.63626	1.54832	1.57152	0.00375	0.02570	0.07488	0.11453	0.17577	0.07558	0.12702	0.02262	0.03787	0.05565	0.09353
41	Phuru Yor. Sor. Sor. 80 School	0.07095	0.52172	1.46997	2.24836	3.45053	1.87074	2.40193	0.55986	0.71605	1.37752	1.76859	0.00265	0.02337	0.06073	0.09288	0.14255	0.07519	0.08961	0.02250	0.02671	0.05537	0.06598
42	Khao Chi Chan School	0.06471	0.75860	1.61810	2.47442	3.79764	2.75218	2.19069	0.82365	0.65307	2.02656	1.61305	0.00406	0.04321	0.10430	0.15952	0.24482	0.14607	0.13758	0.04371	0.04102	0.10756	0.10131
43	Ban Khalot Child Development Center	0.13680	1.02399	2.86145	4.37663	6.71678	3.11913	4.63094	0.93347	1.38055	2.29677	3.40985	0.00878	0.06582	0.18380	0.28112	0.43144	0.20058	0.29724	0.06003	0.08861	0.14769	0.21886
44	Ban Khalot School	0.14186	1.06797	2.97654	4.55266	6.98694	3.25994	4.80241	0.97561	1.43166	2.40045	3.53610	0.00858	0.06381	0.17883	0.27352	0.41977	0.19394	0.29037	0.05804	0.08656	0.14281	0.21381
45	Phlu Ta Luang Wittaya School	0.21606	0.74084	3.05272	4.67042	7.16724	1.94104	7.31414	0.58090	2.18044	1.42928	5.38553	0.01251	0.07153	0.22827	0.34918	0.53587	0.19289	0.42339	0.05773	0.12622	0.14203	0.31175
46	Athittan Kindergarten School	0.10996	0.47815	1.77954	2.72228	4.17772	1.46921	3.72236	0.43969	1.10969	1.08185	2.74084	0.00885	0.05286	0.16495	0.25232	0.38722	0.14585	0.29971	0.04365	0.08935	0.10739	0.22068
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.17183	0.83427	2.65712	4.06443	6.23754	2.50583	5.81686	0.74993	1.73408	1.84516	4.28306	0.01230	0.07302	0.22856	0.34962	0.53655	0.20083	0.41650	0.06010	0.12417	0.14788	0.30668
48	Ban Khao Bai Si School	0.11639	0.84740	2.25910	3.45544	5.30300	3.32697	3.94001	0.99567	1.17457	2.44981	2.90110	0.00928	0.07208	0.19809	0.30298	0.46498	0.22250	0.31425	0.06659	0.09368	0.16384	0.23139
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.02821	0.77342	1.16714	1.78418	2.73849	3.23056	0.95510	0.96682	0.28473	2.37882	0.70325	0.00220	0.04263	0.08553	0.13078	0.20072	0.15940	0.07460	0.04770	0.02224	0.11737	0.05493
50	Ban KM. 5 School	0.05094	0.44377	1.15615	1.76826	2.71377	1.42557	1.72444	0.42663	0.51408	1.04972	1.26974	0.00660	0.05440	0.14555	0.22261	0.34164	0.17139	0.22327	0.05129	0.06656	0.12620	0.16440
51	Royal Thai Fleet Sattahip District School	0.04193	0.41674	1.01636	1.55440	2.38557	1.39978	1.41950	0.41892	0.42317	1.03072	1.04520	0.00514	0.04776	0.12157	0.18593	0.28534	0.15597	0.17412	0.04668	0.05191	0.11485	0.12821
52	RTN. 8 Nursery	0.05939	0.47655	1.17604	1.79882	2.76062	1.60418	2.01061	0.48009	0.59939	1.18123	1.48045	0.00575	0.04793	0.12768	0.19528	0.29970	0.15152	0.19474	0.04534	0.05805	0.11157	0.14339
53	Juk Samet School	0.05931	0.47001	1.17546	1.79795	2.75928	1.58351	2.00766	0.47390	0.59851	1.16601	1.47828	0.00575	0.04785	0.12750	0.19500	0.29927	0.15123	0.19452	0.04526	0.05799	0.11136	0.14323
54	Juk Samet Child Development Center	0.05992	0.45686	1.18431	1.81148	2.78004	1.54169	2.02830	0.46139	0.60466	1.13522	1.49347	0.00576	0.04773	0.12740	0.19486	0.29905	0.15063	0.19485	0.04508	0.05809	0.11091	0.14347
55	Ban Chong Samaesarn Child Development Center	0.04320	0.48277	1.02397	1.56586	2.40322	1.75658	1.46246	0.52570	0.43598	1.29345	1.07684	0.00311	0.03669	0.08527	0.13041	0.20014	0.12696	0.10521	0.03799	0.03136	0.09348	0.07747
56	Samaesarn Subdistrict NFE Center	0.04701	0.38979	0.87998	1.34580	2.06544	1.55137	1.59151	0.46428	0.47445	1.14235	1.17186	0.00253	0.03217	0.07289	0.11147	0.17108	0.11293	0.08568	0.03380	0.02554	0.08316	0.06309
57	Ban Chong Samaesarn School	0.04786	0.37350	0.87441	1.33729	2.05237	1.47321	1.62018	0.44089	0.48300	1.08479	1.19297	0.00248	0.03179	0.07180	0.10981	0.16852	0.11182	0.08384	0.03347	0.02500	0.08234	0.06174
58	Wat Phala Vipassana Office	0.07938	0.76012	1.91075	2.92232	4.48493	2.50306	2.68708	0.74910	0.80105	1.84312	1.97855	0.00841	0.08751	0.21301	0.32577	0.49996	0.29428	0.28484	0.08807	0.08492	0.21670	0.20973
59	Wat Phala	0.07730	0.76774	1.90231	2.90938	4.46508	2.55245	2.61691	0.76388	0.78013	1.87949	1.92688	0.00799	0.08488	0.20498	0.31350	0.48113	0.28687	0.27058	0.08585	0.08066	0.21123	0.19923
60	Chao Li Hu Ong Yea Shrine	0.10979	1.17655	2.83180	4.33083	6.64664	3.98502	3.71673	1.19261	1.10801	2.93436	2.73670	0.01189	0.16547	0.36412	0.55682	0.85459	0.59048	0.40260	0.17672	0.12002	0.43480	0.29644
61	Wat Khlong Sai	0.10655	1.07702	2.65038	4.05345	6.22091	3.59672	3.60689	1.07640	1.07526	2.64844	2.65582	0.00853	0.09983	0.23268	0.35585	0.54613	0.34480	0.28866	0.10319	0.08605	0.25389	0.21255
62	Wat Khiri Pawanaram	0.04909	0.80269	1.68361	2.57456	3.95133	2.93723	1.66197	0.87903	0.49546	2.16282	1.22374	0.00526	0.10447	0.20827	0.31847	0.48877	0.39183	0.17812	0.11726	0.05310	0.28852	0.13115

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.03778	0.77184	1.48547	2.27139	3.48610	2.94175	1.27888	0.88038	0.38125	2.16615	0.94166	0.00517	0.12360	0.23623	0.36122	0.55439	0.47252	0.17496	0.14141	0.05216	0.34794	0.12883
64	Ban Chang Church	0.03955	0.81753	1.43029	2.18681	3.35636	3.24182	1.33888	0.97019	0.39914	2.38711	0.98584	0.00550	0.18503	0.33215	0.50784	0.77944	0.72629	0.18628	0.21736	0.05553	0.53480	0.13716
65	Wat Ban Khlong Bang Phai	0.17058	1.40579	3.76262	5.75482	8.83193	4.42789	5.77458	1.32515	1.72148	3.26047	4.25193	0.01532	0.08847	0.28089	0.42967	0.65939	0.23986	0.51857	0.07178	0.15459	0.17662	0.38183
66	Admiral Prince Abhakara Kiartivongse Monument	0.18634	1.43461	3.73697	5.71549	8.77160	4.60915	6.30790	1.37939	1.88047	3.39393	4.64462	0.01793	0.10271	0.32756	0.50105	0.76894	0.27720	0.60714	0.08296	0.18100	0.20412	0.44705
67	Royal Thai Naval Air Division Naval Aviation Museum	0.15413	1.43790	3.65280	5.58665	8.57391	4.70130	5.21773	1.40697	1.55547	3.46179	3.84191	0.01862	0.10265	0.33409	0.51104	0.78428	0.27111	0.63044	0.08114	0.18794	0.19963	0.46420
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.18297	1.26320	2.96722	4.53786	6.96440	4.34282	6.19389	1.29969	1.84648	3.19783	4.56067	0.02387	0.11767	0.40724	0.62296	0.95603	0.28942	0.80808	0.08661	0.24090	0.21311	0.59500
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.36179	0.95659	4.82465	7.38169	11.32785	3.55723	12.24730	1.06458	3.65108	2.61936	9.01790	0.03506	0.15258	0.56757	0.86824	1.33244	0.34051	1.18681	0.10191	0.35380	0.25074	0.87387
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.48872	1.23299	6.56302	10.04131	15.40931	3.50359	16.54422	1.04853	4.93205	2.57986	12.18180	0.04488	0.18072	0.70452	1.07777	1.65398	0.37494	1.51922	0.11221	0.45290	0.27608	1.11863
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.39257	3.08623	7.27305	11.12292	17.07070	12.31865	13.28958	3.68664	3.96180	9.07081	9.78535	0.07178	0.71403	1.76809	2.70409	4.15002	2.37487	2.42983	0.71073	0.72436	1.74873	1.78913
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.31695	3.05622	6.76996	10.35303	15.88929	11.55968	10.72934	3.45950	3.19856	8.51195	7.90020	0.06169	0.72637	1.68965	2.58401	3.96577	2.51181	2.08837	0.75172	0.62257	1.84956	1.53770
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.31438	5.16995	9.54017	14.58702	22.38819	20.06515	10.64238	6.00495	3.17263	14.77493	7.83617	0.05633	0.83488	1.80183	2.75540	4.22886	3.01045	1.90696	0.90095	0.56849	2.21674	1.40413
74	Wat Sa Kaeo	0.37951	2.92406	5.46605	8.35775	12.82745	11.28680	12.84738	3.37783	3.82997	8.31101	9.45975	0.06653	0.31412	1.11411	1.70429	2.61548	0.74888	2.25207	0.22412	0.67137	0.55143	1.65824
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.06028	0.79467	1.63465	2.49991	3.83670	3.26428	2.04050	0.97691	0.60830	2.40365	1.50245	0.00620	0.12062	0.24164	0.36950	0.56709	0.45140	0.20976	0.13509	0.06253	0.33239	0.15445
76	Wat Sombun Naram	0.28919	2.34313	4.22852	6.46851	9.92686	9.31036	9.78984	2.78634	2.91848	6.85567	7.20843	0.03617	0.25258	0.72914	1.11526	1.71157	0.74887	1.22434	0.22412	0.36499	0.55143	0.90150
77	Ban Chang Abundant Grace Church	0.14519	1.84268	2.98996	4.57106	7.01588	7.51270	4.91516	2.24835	1.46527	5.53196	3.61912	0.02395	0.24478	0.59985	0.91741	1.40796	0.81967	0.81091	0.24531	0.24174	0.60356	0.59709
78	Wat Samnak Kathon	0.07128	1.90013	3.00743	4.59764	7.05671	7.81359	2.41312	2.33839	0.71938	5.75352	1.77682	0.01087	0.24291	0.47116	0.72044	1.10573	0.92262	0.36806	0.27611	0.10972	0.67937	0.27101
79	Wat Suwan Rangsan	0.05272	1.29307	2.03333	3.10846	4.77104	5.32896	1.78468	1.59481	0.53204	3.92397	1.31409	0.00769	0.18116	0.34733	0.53109	0.81511	0.69161	0.26025	0.20698	0.07758	0.50927	0.19163
80	Wat Nong Bot	0.04821	0.58486	1.34639	2.05905	3.16010	2.03488	1.63195	0.60898	0.48651	1.49838	1.20164	0.00513	0.08648	0.17989	0.27508	0.42218	0.31775	0.17379	0.09509	0.05181	0.23397	0.12797
81	The Shrine of Luang Tia Chak Mak	0.04396	0.86444	1.53371	2.34509	3.59923	3.47284	1.48830	1.03933	0.44368	2.55722	1.09586	0.00696	0.14851	0.29103	0.44502	0.68300	0.56142	0.23552	0.16802	0.07021	0.41340	0.17342
82	Wat Chak Mak	0.04632	0.92786	1.71560	2.62317	4.02604	3.71330	1.56801	1.11129	0.46744	2.73428	1.15455	0.00716	0.15461	0.30221	0.46210	0.70923	0.58517	0.24245	0.17512	0.07228	0.43089	0.17852

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.05448	0.58674	1.40957	2.15574	3.30847	1.98963	1.84425	0.59544	0.54980	1.46506	1.35795	0.00577	0.05931	0.14498	0.22173	0.34029	0.19891	0.19521	0.05953	0.05820	0.14647	0.14374
84	The Shrine of King Taksin the Great (Ban Chang)	0.05446	0.58944	1.41349	2.16172	3.31765	2.00101	1.84373	0.59885	0.54964	1.47344	1.35757	0.00575	0.05975	0.14553	0.22256	0.34157	0.20085	0.19480	0.06011	0.05807	0.14790	0.14344
85	Wat Chonthararam (Phayun)	0.06447	0.69199	1.66452	2.54565	3.90688	2.34467	2.18248	0.70170	0.65063	1.72649	1.60700	0.00644	0.06327	0.15739	0.24071	0.36942	0.20978	0.21786	0.06278	0.06495	0.15447	0.16042
86	Masjid Dawatul Islam	0.09091	2.11861	4.07159	6.22574	9.55519	8.07993	3.07742	2.41810	0.91742	5.94964	2.26596	0.01200	0.23313	0.46729	0.71455	1.09668	0.87218	0.40639	0.26102	0.12115	0.64222	0.29923
87	Chinese shrine at the Buddha Dhamma Foundation	0.19676	1.77233	4.56758	6.98581	10.72119	5.73737	6.66068	1.71704	1.98564	4.22470	4.90438	0.01662	0.19392	0.45249	0.69200	1.06203	0.66934	0.56246	0.20032	0.16768	0.49287	0.41415
88	The Shrine of Luang Tia Ban Chang	0.10915	1.48832	3.06175	4.68191	7.18565	5.49888	3.69495	1.64567	1.10151	4.04909	2.72066	0.01200	0.17949	0.38627	0.59069	0.90657	0.64816	0.40612	0.19398	0.12107	0.47727	0.29903
89	The Shrine of Laoia Guan Yu Ban Chang	0.13166	1.44775	3.35802	5.13547	7.88158	5.01489	4.45713	1.50082	1.32873	3.69270	3.28187	0.01461	0.17437	0.40366	0.61733	0.94744	0.60469	0.49448	0.18097	0.14741	0.44526	0.36409
90	Wat Ban Chang	0.16869	1.50812	3.89886	5.96305	9.15155	4.87135	5.71062	1.45786	1.70241	3.58701	4.20483	0.01746	0.17643	0.43420	0.66407	1.01915	0.58916	0.59099	0.17632	0.17618	0.43382	0.43515
91	Wat Prachummit Bamrung	0.13169	0.87836	2.59253	3.96545	6.08570	2.55405	4.45800	0.76436	1.32899	1.88067	3.28250	0.00630	0.07811	0.17850	0.27297	0.41894	0.27291	0.21332	0.08167	0.06359	0.20096	0.15707
92	The Shrine of Luang Tia Noen Kraprok 1	0.07193	1.10917	2.36582	3.61784	5.55250	4.02411	2.43505	1.20431	0.72592	2.96314	1.79297	0.00473	0.09374	0.18696	0.28588	0.43877	0.35151	0.16012	0.10520	0.04773	0.25884	0.11790
93	The Shrine of Luang Tia Noen Kraprok 2	0.03273	1.34985	2.05944	3.14826	4.83217	5.61854	1.10805	1.68147	0.33033	4.13720	0.81588	0.00293	0.11549	0.20242	0.30949	0.47502	0.45762	0.09907	0.13695	0.02953	0.33697	0.07295
94	Wat Noen Kraprok	0.02442	0.41142	0.78825	1.20529	1.84987	1.57123	0.82666	0.47023	0.24644	1.15697	0.60868	0.00196	0.05210	0.09747	0.14904	0.22874	0.20102	0.06635	0.06016	0.01978	0.14802	0.04886
95	Wat Phudon Nim Sanoh	0.01466	0.26662	0.54333	0.83084	1.27515	0.98960	0.49614	0.29616	0.14790	0.72869	0.36531	0.00143	0.02302	0.04853	0.07421	0.11390	0.08400	0.04855	0.02514	0.01447	0.06185	0.03575
96	Church of Christ Ban Chang	0.01928	0.27470	0.60003	0.91759	1.40827	0.98423	0.65267	0.29455	0.19457	0.72473	0.48058	0.00155	0.02348	0.05039	0.07706	0.11826	0.08491	0.05264	0.02541	0.01569	0.06252	0.03876
97	Anek Kusala Sala (Viharn Sien)	0.06831	0.73140	1.64172	2.51065	3.85321	2.58169	2.31249	0.77263	0.68938	1.90103	1.70273	0.00449	0.03213	0.09164	0.14017	0.21511	0.09623	0.15184	0.02880	0.04527	0.07086	0.11180
98	Wat Yan Nasangwararam	0.07202	0.58732	1.49317	2.28369	3.50481	2.03949	2.43788	0.61036	0.72677	1.50177	1.79506	0.00520	0.03625	0.10470	0.16014	0.24576	0.10745	0.17588	0.03216	0.05243	0.07912	0.12950
99	Sirisirirak Monastery	0.05127	0.74244	1.40331	2.14573	3.29325	2.85220	1.73548	0.85359	0.51737	2.10021	1.27786	0.00332	0.04595	0.10129	0.15490	0.23773	0.16383	0.11241	0.04903	0.03351	0.12063	0.08277
100	Anan Buraparam Meditation Center	0.09569	0.66061	1.53240	2.34423	3.59753	2.34452	3.23920	0.70165	0.96565	1.72638	2.38508	0.00445	0.04459	0.11008	0.16836	0.25838	0.14859	0.15058	0.04447	0.04489	0.10942	0.11087
101	Wat Map Fakthong	0.05938	0.52681	1.36634	2.08973	3.20713	1.83192	2.01031	0.54824	0.59930	1.34893	1.48023	0.00388	0.03110	0.08429	0.12893	0.19786	0.09705	0.13144	0.02904	0.03918	0.07146	0.09678
102	Khao Chi Chan Image of Lord Buddha	0.01293	0.17819	0.39333	0.60149	0.92314	0.63479	0.43784	0.18998	0.13053	0.46743	0.32239	0.00095	0.01063	0.02518	0.03850	0.05909	0.03636	0.03214	0.01088	0.00958	0.02677	0.02367
103	Wat Khao Chi Chan	0.01371	0.34518	0.57621	0.88094	1.35210	1.42202	0.46405	0.42557	0.13834	1.04710	0.34169	0.00107	0.02467	0.04753	0.07267	0.11154	0.09396	0.03627	0.02812	0.01081	0.06919	0.02670
104	Rat Samakkhi Temple	0.14214	1.06434	2.97374	4.54839	6.98037	3.24240	4.81185	0.97036	1.43447	2.38754	3.54305	0.00894	0.06624	0.18600	0.28449	0.43660	0.20095	0.30275	0.06014	0.09025	0.14797	0.22292
105	The Shrine of Chao Mae Kuan Im	0.14456	1.08251	3.02443	4.62591	7.09935	3.29787	4.89367	0.98696	1.45887	2.42838	3.60330	0.00841	0.06241	0.17512	0.26786	0.41108	0.18947	0.28479	0.05670	0.08490	0.13952	0.20969
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.15891	1.20493	3.34722	5.11961	7.85702	3.68773	5.37942	1.10364	1.60368	2.71546	3.96096	0.00953	0.06956	0.19667	0.30081	0.46165	0.20986	0.32264	0.06280	0.09618	0.15453	0.23757

Draft Version

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.05827	0.51031	1.33068	2.03520	3.12344	1.63830	1.97246	0.49030	0.58801	1.20636	1.45235	0.00691	0.05753	0.15327	0.23442	0.35976	0.18181	0.23383	0.05441	0.06971	0.13388	0.17217
108	KM.8 Meditation Center	0.09597	0.74914	2.05384	3.14134	4.82101	2.31671	3.24878	0.69333	0.96850	1.70590	2.39214	0.00719	0.05851	0.15743	0.24079	0.36953	0.18355	0.24327	0.05493	0.07252	0.13515	0.17912
109	Wat Rangsee Sunthorn (KM.5)	0.04972	0.44446	1.14906	1.75741	2.69712	1.43562	1.68307	0.42964	0.50174	1.05711	1.23927	0.00675	0.05549	0.14870	0.22744	0.34905	0.17464	0.22856	0.05226	0.06814	0.12860	0.16829
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.01804	0.24344	0.54091	0.82720	1.26954	0.86414	0.61067	0.25861	0.18205	0.63631	0.44965	0.00072	0.01025	0.02243	0.03430	0.05264	0.03668	0.02450	0.01098	0.00730	0.02701	0.01804
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.02120	0.26781	0.60809	0.92994	1.42722	0.98493	0.71763	0.29476	0.21393	0.72525	0.52840	0.00089	0.01383	0.02938	0.04493	0.06896	0.05026	0.02997	0.01504	0.00893	0.03701	0.02207
112	Wat Tung Prong	0.01678	0.23768	0.48937	0.74839	1.14858	0.89450	0.56797	0.26770	0.16932	0.65867	0.41821	0.00072	0.01075	0.02310	0.03532	0.05422	0.03884	0.02421	0.01162	0.00722	0.02860	0.01782
113	Khao Phlu Ta Luang Meditation Center	0.00899	0.13825	0.27786	0.42489	0.65210	0.51654	0.30433	0.15459	0.09072	0.38035	0.22408	0.00043	0.00581	0.01287	0.01968	0.03020	0.02068	0.01441	0.00619	0.00430	0.01523	0.01061
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.17188	0.74210	2.26211	3.46101	5.31123	2.56324	5.81871	0.76711	1.73463	1.88743	4.28442	0.01638	0.07241	0.26688	0.40826	0.62653	0.16378	0.55451	0.04902	0.16531	0.12060	0.40830
115	Wat Khao Bai Si Santitham	0.20042	0.99047	3.19990	4.89513	7.51224	3.02093	6.78460	0.90408	2.02258	2.22445	4.99562	0.01647	0.08596	0.28814	0.44076	0.67642	0.21967	0.55739	0.06574	0.16616	0.16175	0.41041
116	Welu Amphawan Vipassana Office	0.14221	0.96669	2.59325	3.96674	6.08762	3.20562	4.81422	0.95935	1.43518	2.36045	3.54480	0.01266	0.08315	0.24732	0.37830	0.58057	0.24012	0.42869	0.07186	0.12780	0.17681	0.31565
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.06887	0.65795	1.65553	2.53198	3.88587	2.16518	2.33157	0.64798	0.69507	1.59433	1.71678	0.00531	0.05016	0.12679	0.19391	0.29760	0.16453	0.17981	0.04924	0.05360	0.12115	0.13240
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.06558	0.48999	1.31013	2.00391	3.07537	1.58322	2.22004	0.47382	0.66182	1.16580	1.63466	0.00690	0.05801	0.15388	0.23535	0.36119	0.18392	0.23342	0.05504	0.06959	0.13543	0.17187
119	Samaesarn Pattanakarn Church	0.06035	0.51966	1.21857	1.86359	2.86012	1.78840	2.04301	0.53522	0.60905	1.31689	1.50430	0.00557	0.04969	0.12855	0.19662	0.30175	0.16044	0.18846	0.04802	0.05618	0.11814	0.13877
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.05573	0.49655	1.17567	1.79799	2.75944	1.69892	1.88655	0.50844	0.56240	1.25100	1.38910	0.00346	0.03792	0.09053	0.13846	0.21250	0.12907	0.11722	0.03863	0.03495	0.09504	0.08631
121	Wat Chong Samaesarn	0.04715	0.39751	0.88840	1.35870	2.08523	1.57605	1.59603	0.47167	0.47580	1.16052	1.17519	0.00257	0.03249	0.07376	0.11280	0.17311	0.11396	0.08700	0.03411	0.02594	0.08392	0.06406
122	Viharn Luang Por Dam	0.03559	0.39696	0.90901	1.39014	2.13351	1.38536	1.20490	0.41460	0.35920	1.02010	0.88719	0.00205	0.02535	0.05798	0.08867	0.13609	0.08851	0.06943	0.02649	0.02070	0.06517	0.05113
123	The Shrine of King Taksin the Great (Samaesarn)	0.04789	0.51742	1.24160	1.89885	2.91422	1.75584	1.62131	0.52547	0.48333	1.29291	1.19380	0.00361	0.04038	0.09568	0.14632	0.22456	0.13808	0.12226	0.04132	0.03645	0.10167	0.09002
124	Thai Island and Sea Natural History Museum	0.04443	0.50570	1.19059	1.82081	2.79446	1.73620	1.50407	0.51960	0.44838	1.27845	1.10747	0.00340	0.03945	0.09226	0.14109	0.21654	0.13597	0.11517	0.04069	0.03433	0.10012	0.08480
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.05185	0.48228	1.22667	1.87610	2.87927	1.57553	1.75534	0.47151	0.52329	1.16014	1.29249	0.00370	0.04163	0.09838	0.15045	0.23090	0.14261	0.12510	0.04268	0.03729	0.10501	0.09211

Subject to changes and approval by the Government of Thailand

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.05240	0.50501	1.26625	1.93660	2.97214	1.66581	1.77391	0.49853	0.52883	1.22662	1.30616	0.00376	0.04164	0.09896	0.15134	0.23227	0.14213	0.12712	0.04253	0.03790	0.10465	0.09360
127	Eastern-Nong Muang Community Health Service Center	0.46175	1.93940	6.49066	9.93023	15.23896	7.30211	15.63144	2.18532	4.65994	5.37689	11.50970	0.04875	0.45631	1.15762	1.77049	2.71719	1.49332	1.65027	0.44691	0.49197	1.09961	1.21513
128	Phala Subdistrict Health Promotion Hospital	0.08529	0.86995	2.13334	3.26268	5.00731	2.91181	2.88710	0.87142	0.86068	2.14410	2.12582	0.00824	0.08976	0.21478	0.32847	0.50411	0.30515	0.27908	0.09132	0.08320	0.22470	0.20549
129	Ban Chang Hospital	0.03012	0.57515	1.15765	1.77020	2.71686	2.14745	1.01951	0.64267	0.30393	1.58127	0.75068	0.00343	0.06338	0.12866	0.19673	0.30194	0.23567	0.11619	0.07053	0.03464	0.17354	0.08555
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.18777	0.76579	2.47930	3.79335	5.82122	2.76398	6.35634	0.82718	1.89491	2.03525	4.68029	0.01943	0.10041	0.33849	0.51779	0.79463	0.25489	0.65784	0.07628	0.19611	0.18769	0.48438
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.26087	2.48610	6.23393	9.53420	14.63230	8.20031	8.83115	2.45413	2.63268	6.03829	6.50253	0.04531	0.22640	0.77766	1.18958	1.82559	0.56205	1.53402	0.16821	0.45731	0.41387	1.12952
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.41527	2.72855	5.51684	8.43994	12.95210	11.04944	14.05775	3.30680	4.19080	8.13623	10.35097	0.05050	0.29768	0.93512	1.43038	2.19516	0.81585	1.70963	0.24416	0.50966	0.60075	1.25883
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.05143	2.09200	3.25557	4.97690	7.63886	8.65145	1.74094	2.58914	0.51900	6.37048	1.28188	0.00883	0.22997	0.43200	0.66055	1.01381	0.88581	0.29902	0.26510	0.08914	0.65227	0.22017
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.11432	2.46571	3.82016	5.83997	8.96356	10.21188	3.86999	3.05614	1.15370	7.51950	2.84954	0.01838	0.24702	0.54956	0.84042	1.28983	0.87622	0.62210	0.26223	0.18545	0.64520	0.45806
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.04980	0.90245	1.44752	2.21298	3.39658	3.71462	1.68568	1.11168	0.50252	2.73525	1.24120	0.00721	0.14057	0.28148	0.43042	0.66060	0.52616	0.24402	0.15747	0.07275	0.38744	0.17968
136	Ban Phayun Subdistrict Health Promotion Hospital	0.06161	0.66919	1.60262	2.45097	3.76157	2.27364	2.08572	0.68044	0.62178	1.67419	1.53576	0.00626	0.06289	0.15517	0.23731	0.36421	0.20969	0.21202	0.06276	0.06321	0.15441	0.15611
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.02610	1.02971	1.57547	2.40842	3.69661	4.28211	0.88345	1.28152	0.26337	3.15312	0.65050	0.00241	0.09361	0.16448	0.25148	0.38597	0.37057	0.08172	0.11090	0.02436	0.27287	0.06018
138	Phudon Huai Mahat Community Health Service Unit	0.01733	0.28150	0.59154	0.90457	1.38830	1.02914	0.58669	0.30799	0.17490	0.75780	0.43199	0.00155	0.02437	0.05170	0.07906	0.12133	0.08867	0.05250	0.02654	0.01565	0.06529	0.03866
139	Wat Yan Nasangwararam Hospital	0.06547	0.67975	1.42631	2.18152	3.34798	2.53646	2.21648	0.75909	0.66076	1.86772	1.63203	0.00471	0.03424	0.09700	0.14836	0.22768	0.10316	0.15946	0.03087	0.04754	0.07596	0.11741
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.06443	0.66522	1.42226	2.17531	3.33845	2.48977	2.18116	0.74512	0.65023	1.83334	1.60603	0.00473	0.03412	0.09702	0.14839	0.22774	0.10247	0.16018	0.03067	0.04775	0.07545	0.11795
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.02528	1.03963	1.62240	2.48022	3.80679	4.29539	0.85578	1.28549	0.25512	3.16290	0.63013	0.00172	0.04851	0.08974	0.13721	0.21058	0.18806	0.05820	0.05628	0.01735	0.13847	0.04285

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.15168	1.17942	3.23912	4.95424	7.60325	3.64239	5.13458	1.09007	1.53069	2.68207	3.78068	0.00939	0.06943	0.19511	0.29843	0.45799	0.21051	0.31786	0.06300	0.09476	0.15501	0.23405
143	Sattahip Hospital KM.10	0.10817	1.00384	2.55552	3.90847	5.99838	3.27734	3.66167	0.98082	1.09159	2.41326	2.69615	0.00731	0.05439	0.15242	0.23313	0.35778	0.16532	0.24747	0.04948	0.07377	0.12173	0.18222
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.04728	0.38402	0.87552	1.33897	2.05495	1.53278	1.60068	0.45872	0.47718	1.12866	1.17861	0.00251	0.03202	0.07249	0.11085	0.17013	0.11248	0.08504	0.03366	0.02535	0.08283	0.06261
145	Village No. 1 Ban Sakulthong	0.03648	0.64339	1.32183	2.02129	3.10222	2.44049	1.23482	0.73037	0.36812	1.79705	0.90922	0.00511	0.11539	0.22331	0.34147	0.52408	0.43873	0.17306	0.13130	0.05159	0.32306	0.12743
146	Village No. 2, Ban Kilo 16	0.14188	1.13314	3.07503	4.70322	7.21803	3.53203	4.80294	1.05704	1.43182	2.60080	3.53649	0.01249	0.15324	0.35139	0.53739	0.82475	0.53436	0.42275	0.15992	0.12603	0.39348	0.31128
147	Village No. 4, Ban Tung Prong	0.11406	1.32224	2.88948	4.41872	6.78163	4.73624	3.86134	1.41743	1.15112	3.48752	2.84317	0.01489	0.23694	0.50081	0.76584	1.17538	0.86365	0.50408	0.25847	0.15027	0.63595	0.37117
148	Village No. 5, Phala Subdistrict	0.11542	1.10370	2.77601	4.24565	6.51586	3.63305	3.90723	1.08727	1.16480	2.67519	2.87696	0.01149	0.17243	0.37071	0.56690	0.87006	0.62299	0.38886	0.18645	0.11592	0.45874	0.28632
149	Village No. 6, Ban Takat	0.08362	0.88443	2.13911	3.27148	5.02083	2.98641	2.83058	0.89375	0.84383	2.19904	2.08421	0.00783	0.08733	0.20710	0.31673	0.48609	0.29851	0.26500	0.08934	0.07900	0.21981	0.19513
150	Village No. 7, Ban Khlong Sai	0.11109	1.08222	2.70196	4.13238	6.34203	3.57997	3.76075	1.07139	1.12113	2.63610	2.76910	0.01049	0.14210	0.31539	0.48231	0.74022	0.50473	0.35521	0.15105	0.10589	0.37165	0.26155
151	Village No. 1 Ban Sam Nak Thon	0.30655	1.58891	4.79919	7.34180	11.26695	6.51432	10.37728	1.94956	3.09360	4.79680	7.64098	0.03149	0.28630	0.73501	1.12415	1.72525	0.92930	1.06601	0.27811	0.31779	0.68428	0.78492
152	Village No. 2, Ban Chak Mak	0.06144	1.51783	2.42200	3.70270	5.68309	6.27282	2.07974	1.87728	0.62000	4.61898	1.53135	0.00938	0.19645	0.38674	0.59137	0.90762	0.74114	0.31770	0.22180	0.09471	0.54574	0.23393
153	Village No. 3, Ban Sa Kaeo	1.59563	3.51554	20.45978	31.30443	48.03906	14.30130	54.01593	4.27999	16.10285	10.53074	39.77288	0.13567	0.65241	2.28984	3.50281	5.37559	1.57657	4.59261	0.47182	1.36912	1.16091	3.38162
154	Sa Kaeo Community 1	0.54767	3.02669	7.12581	10.90268	16.73106	11.93436	18.53999	3.57163	5.52701	8.78784	13.65132	0.06971	0.33089	1.17010	1.78993	2.74690	0.79196	2.35997	0.23701	0.70354	0.58316	1.73769
155	Sa Kaeo Community 2	0.38866	2.45432	7.44322	11.38511	17.47244	6.96137	13.15717	2.08335	3.92232	5.12599	9.68786	0.04243	0.20560	0.71850	1.09909	1.68672	0.49959	1.43632	0.14951	0.42818	0.36787	1.05758
156	Village No. 4, Ban Khlong Bang Phai	0.43094	1.21301	5.97697	9.14442	14.03303	2.83456	14.58845	0.84831	4.34901	2.08722	10.74173	0.03289	0.14682	0.53803	0.82305	1.26308	0.33483	1.11343	0.10020	0.33193	0.24655	0.81984
157	Village No. 5, Ban Yai Ra	0.04512	0.48792	1.17036	1.78990	2.74701	1.65609	1.52733	0.49562	0.45532	1.21946	1.12460	0.00436	0.07300	0.15212	0.23261	0.35701	0.26803	0.14761	0.08021	0.04400	0.19736	0.10869
158	Village No. 6, Ban Khao Khrok	0.83739	2.26868	11.48078	17.56511	26.95535	7.80649	28.34756	2.33627	8.45078	5.74829	20.87281	0.06548	0.40197	1.23657	1.89147	2.90278	1.12471	2.21652	0.33660	0.66077	0.82818	1.63207
159	Village no. 7, Ban Nong Takhian	0.04857	1.00232	1.73945	2.65963	4.08201	4.03873	1.64409	1.20868	0.49012	2.97391	1.21057	0.00787	0.17403	0.33828	0.51725	0.79387	0.66033	0.26626	0.19762	0.07937	0.48623	0.19605
160	Village No. 8, Ban Cherng Khao	0.08143	5.67291	8.72252	13.33422	20.46625	23.55326	2.75676	7.04885	0.82183	17.34340	2.02985	0.01253	0.76769	1.27899	1.95538	3.00118	3.10060	0.42422	0.92793	0.12647	2.28312	0.31236
161	Eastern-Nong Muang Community	0.12071	1.53585	3.41544	5.22311	8.01616	5.73126	4.08636	1.71521	1.21820	4.22020	3.00886	0.01779	0.29715	0.61954	0.94740	1.45403	1.09064	0.60215	0.32640	0.17951	0.80309	0.44337
162	Wat Khiri Pawanaram Community	0.06542	4.44767	6.89121	10.53477	16.16944	18.41992	2.21473	5.51258	0.66024	13.56347	1.63075	0.01082	0.61711	1.03532	1.58287	2.42944	2.48609	0.36636	0.74402	0.10922	1.83063	0.26976
163	Ban Chang-Phala Community	0.05874	4.35317	6.59115	10.07578	15.46504	18.16372	1.98864	5.43591	0.59284	13.37482	1.46427	0.01010	0.60985	1.01742	1.55548	2.38740	2.46187	0.34191	0.73677	0.10193	1.81279	0.25176
164	Ruam Sompong Community	0.06254	0.88528	1.85466	2.83613	4.35279	3.27775	2.11699	0.98094	0.63110	2.41356	1.55878	0.01139	0.12695	0.30115	0.46056	0.70684	0.43388	0.38554	0.12985	0.11493	0.31949	0.28388
165	Ming Mongkol Community	0.05936	3.41036	5.39295	8.24453	12.65416	14.02808	2.00940	4.19822	0.59903	10.32955	1.47956	0.00803	0.29567	0.52343	0.80030	1.22831	1.16702	0.27190	0.34926	0.08106	0.85934	0.20020
166	Jor Koo Community	0.06260	3.42113	5.38393	8.23070	12.63296	14.09531	2.11931	4.21834	0.63179	10.37906	1.56048	0.00806	0.30567	0.53877	0.82374	1.26430	1.20858	0.27277	0.36170	0.08131	0.88994	0.20084

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.05766	5.12362	7.89551	12.06999	18.52580	21.25719	1.95193	6.36170	0.58190	15.65269	1.43724	0.00745	0.34843	0.59742	0.91339	1.40190	1.39236	0.25211	0.41670	0.07516	1.02526	0.18563
168	Thep Chinda Community	0.06565	3.17578	5.15475	7.88062	12.09554	12.94637	2.22255	3.87450	0.66257	9.53304	1.63650	0.00887	0.28655	0.51775	0.79162	1.21499	1.12184	0.30030	0.33574	0.08952	0.82607	0.22112
169	Health Park Community	0.18436	0.80693	2.49256	3.81356	5.85225	2.83266	6.24094	0.84774	1.86051	2.08583	4.59531	0.01445	0.13575	0.34391	0.52598	0.80722	0.44465	0.48928	0.13307	0.14586	0.32742	0.36027
170	Wat Ban Chang Community	0.16651	1.58093	3.98774	6.09890	9.36007	5.19391	5.63685	1.55439	1.68042	3.82452	4.15051	0.01679	0.17933	0.43211	0.66086	1.01423	0.60695	0.56825	0.18164	0.16940	0.44693	0.41841
171	Dong Dang Community	0.06664	2.88371	4.88061	7.46185	11.45268	11.57981	2.25596	3.46552	0.67253	8.52677	1.66110	0.00956	0.25633	0.47876	0.73204	1.12354	0.98977	0.32359	0.29621	0.09647	0.72882	0.23827
172	Night Market Community	0.15165	1.32311	3.33045	5.09362	7.81726	4.35301	5.13354	1.30274	1.53038	3.20533	3.77992	0.01592	0.15554	0.38789	0.59323	0.91044	0.51491	0.53894	0.15410	0.16066	0.37915	0.39683
173	Ruam Mitr Community	0.21674	1.78354	4.77672	7.30587	11.21232	5.61503	7.33699	1.68043	2.18725	4.13462	5.40236	0.01725	0.19384	0.45846	0.70114	1.07606	0.66367	0.58388	0.19862	0.17406	0.48869	0.42992
174	Ban Chang - Noen Kraprok Community	0.16631	0.69389	2.47050	3.77952	5.80012	2.30572	5.63014	0.69004	1.67842	1.69782	4.14557	0.01105	0.11556	0.28069	0.42927	0.65882	0.38914	0.37405	0.11646	0.11151	0.28654	0.27542
175	Dao Pitak Community	0.10049	1.20253	2.47605	3.78629	5.81108	4.44102	3.40195	1.32908	1.01417	3.27013	2.50492	0.00996	0.14662	0.31709	0.48490	0.74421	0.52811	0.33721	0.15805	0.10053	0.38888	0.24829
176	Taiwa Community	0.03388	1.64660	2.51149	3.83931	5.89283	6.85432	1.14705	2.05131	0.34195	5.04717	0.84459	0.00325	0.12685	0.22265	0.34042	0.52248	0.50237	0.10991	0.15035	0.03277	0.36992	0.08093
177	East Ban Noen Kraprok Community, Prachummit	0.13245	0.81624	2.50608	3.83332	5.88289	2.28816	4.48363	0.68478	1.33663	1.68488	3.30138	0.00627	0.07379	0.17163	0.26248	0.40283	0.25517	0.21211	0.07636	0.06323	0.18789	0.15618
178	Ban Noen Kraprok Community	0.02963	0.77076	1.17096	1.79004	2.74747	3.21254	1.00299	0.96143	0.29901	2.36555	0.73852	0.00240	0.08597	0.15286	0.23372	0.35871	0.33873	0.08141	0.10137	0.02427	0.24942	0.05995
179	Nong Yai Community	0.02740	1.40050	2.29233	3.50464	5.37905	5.80345	0.92752	1.73681	0.27651	4.27336	0.68295	0.00315	0.11227	0.19975	0.30541	0.46875	0.44228	0.10673	0.13236	0.03182	0.32567	0.07859
180	Village No. 1, Pan Din Tai	0.12583	0.81676	2.44318	3.73705	5.73517	2.34637	4.25959	0.70220	1.26984	1.72774	3.13641	0.00596	0.07067	0.16401	0.25082	0.38495	0.24472	0.20184	0.07324	0.06017	0.18020	0.14862
181	Village No. 2, Ban Prachummit	0.10886	0.58323	1.41277	2.16158	3.31712	2.00227	3.68512	0.59923	1.09858	1.47437	2.71342	0.00890	0.08880	0.21959	0.33584	0.51542	0.29560	0.30116	0.08846	0.08978	0.21766	0.22175
182	Village No. 3, Ban Noen Samre	0.03102	0.68230	1.29921	1.98657	3.04897	2.61273	1.04995	0.78192	0.31300	1.92388	0.77309	0.00540	0.14695	0.27366	0.41844	0.64222	0.56815	0.18266	0.17003	0.05445	0.41835	0.13450
183	Village No. 4, Ban Phayun	0.06635	0.84841	1.77012	2.70684	4.15436	3.11278	2.24617	0.93157	0.66961	2.29209	1.65389	0.01069	0.12109	0.28556	0.43671	0.67024	0.41533	0.36179	0.12430	0.10786	0.30583	0.26640
184	Village No. 6, Ban Noen Kraprok	0.01916	0.32361	0.67267	1.02864	1.57871	1.18953	0.64861	0.35599	0.19336	0.87591	0.47758	0.00183	0.03460	0.06978	0.10670	0.16376	0.12908	0.06179	0.03863	0.01842	0.09505	0.04550
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.01839	0.28694	0.60995	0.93275	1.43154	1.04284	0.62265	0.31209	0.18562	0.76789	0.45847	0.00160	0.02502	0.05318	0.08133	0.12482	0.09091	0.05431	0.02721	0.01619	0.06694	0.03999
186	Village No. 11, Ban Map Fakthong	0.30187	1.63348	4.47872	6.85182	10.51492	6.30799	10.21902	1.88781	3.04642	4.64488	7.52444	0.02617	0.18775	0.53510	0.81845	1.25607	0.56267	0.88587	0.16839	0.26409	0.41432	0.65228
187	Village No. 13, Ban Nong Phakkut	0.05173	1.25991	2.19316	3.35319	5.14654	5.20634	1.75121	1.55812	0.52206	3.83368	1.28945	0.00784	0.13432	0.27813	0.42530	0.65274	0.49468	0.26544	0.14804	0.07913	0.36425	0.19544
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.10490	0.68529	2.03973	3.11992	4.78808	2.58170	3.55128	0.77263	1.05868	1.90103	2.61487	0.00400	0.03173	0.08639	0.13213	0.20278	0.09864	0.13549	0.02952	0.04039	0.07264	0.09977
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.02323	1.51892	2.30745	3.52738	5.41408	6.33102	0.78631	1.89470	0.23441	4.66183	0.57897	0.00173	0.04490	0.08436	0.12898	0.19796	0.17292	0.05844	0.05175	0.01742	0.12733	0.04303
190	Village No. 6 (Ban Khao Krating Community)	0.02544	0.63026	0.96290	1.47199	2.25931	2.62219	0.86126	0.78475	0.25675	1.93084	0.63416	0.00127	0.04294	0.07698	0.11770	0.18065	0.16865	0.04288	0.05047	0.01278	0.12418	0.03157

Table 5.2-54 Forecasted results of sulfur dioxide emission in the atmosphere, operation phase

Area		The concentration value of sulfur dioxide (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.03050	1.50842	2.34606	3.58650	5.50478	6.23925	1.03255	1.86724	0.30782	4.59426	0.76028	0.00247	0.08623	0.15389	0.23529	0.36113	0.33926	0.08365	0.10153	0.02494	0.24981	0.06159
192	Village No. 11 (Ban Khong Wanphen Community)	0.16689	0.72329	2.57166	3.93417	6.03748	2.19001	5.64952	0.65541	1.68420	1.61261	4.15984	0.00850	0.05950	0.17153	0.26236	0.40264	0.17662	0.28759	0.05286	0.08573	0.13006	0.21176
193	Village No. 1, Ban Phlu Ta Luang	0.14380	1.06876	2.99639	4.58305	7.03356	3.24681	4.86807	0.97168	1.45124	2.39079	3.58445	0.00898	0.06770	0.18852	0.28835	0.44253	0.20682	0.30383	0.06190	0.09058	0.15229	0.22372
194	Village No. 2, Ban Khalot	0.13650	1.06079	2.91408	4.45709	6.84027	3.27539	4.62076	0.98023	1.37751	2.41183	3.40235	0.00859	0.06008	0.17334	0.26514	0.40690	0.17823	0.29088	0.05334	0.08672	0.13124	0.21418
195	Village No. 3, Ban Khlong Phai	0.08974	0.72325	1.72645	2.64034	4.05221	2.46224	3.03780	0.73688	0.90561	1.81306	2.23679	0.00977	0.06241	0.18818	0.28784	0.44174	0.17797	0.33073	0.05326	0.09860	0.13105	0.24353
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.12936	0.64722	1.73822	2.65945	4.08117	2.23002	4.37918	0.66738	1.30549	1.64207	3.22447	0.00906	0.05316	0.16735	0.25598	0.39284	0.14540	0.30654	0.04351	0.09138	0.10706	0.22571
197	Village No. 5, Ban Khao Bai Si	0.14058	0.66171	1.91830	2.93492	4.50392	2.13915	4.75900	0.64019	1.41872	1.57516	3.50414	0.01242	0.07365	0.23067	0.35283	0.54148	0.20248	0.42052	0.06060	0.12536	0.14910	0.30964
198	Village No. 6, Ban Khao Tabaek	0.09488	0.73754	2.02588	3.09859	4.75539	2.27747	3.21200	0.68158	0.95754	1.67701	2.36505	0.00681	0.05593	0.14991	0.22929	0.35189	0.17598	0.23050	0.05266	0.06872	0.12958	0.16972
199	Village No. 7, Ban Nong Ya Noi	0.06031	0.51769	1.36144	2.08226	3.19565	1.65187	2.04149	0.49436	0.60860	1.21635	1.50319	0.00688	0.05747	0.15287	0.23382	0.35884	0.18186	0.23274	0.05442	0.06938	0.13391	0.17137
200	Village No. 8, Ban Nong Ya	0.03501	0.95875	1.44728	2.21243	3.39580	4.00427	1.18503	1.19837	0.35327	2.94854	0.87256	0.00170	0.05839	0.10450	0.15977	0.24522	0.22945	0.05768	0.06867	0.01720	0.16896	0.04247
201	Ban Nong Krachong Community	0.06763	0.45300	1.33428	2.04087	3.13209	1.62324	2.28936	0.48579	0.68249	1.19527	1.68569	0.00494	0.04760	0.11931	0.18247	0.28003	0.15703	0.16707	0.04699	0.04980	0.11563	0.12301
Standard*		300*											100										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Standard 24-hour and 1-year values for sulfur dioxide (SO_2) are referenced from Notification No. 24 of the National Environment Board (2004) Re: Determination of General Atmospheric Air Quality Standards.

1.4) Particulates smaller than 10 microns (PM_{10})

From the PM_{10} emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values, it was found that the highest 24-hour average concentration values (Cmax) in all scenarios occurred outside of the project area to the north. However, most of the highest 1-year average maximum concentration values occurred within the project area (in the U-Tapao International Airport vicinity). All values were within standard criteria in accordance with Notification No. 24 of the National Environment Board (2004) Re: Determination of General Atmospheric Air Quality Standards. which requires that 24-hour average concentrations of PM10 particulates must not exceed 0.12 milligrams per cubic meter (120 micrograms per cubic meter) and 1-year average concentrations must not exceed 0.05 milligrams per cubic meter (50 micrograms per cubic meter).

When comparing the 24-hour and 1-year maximum concentration values for PM_{10} particulates in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest PM_{10} 24-hour average maximum concentration value, comprising 11.01529 micrograms per cubic meter. Scenario 5 (Worst Cast Scenario (Peak Hour)) had the highest 1-year average maximum concentration value, comprising 0.97479 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), the PM_{10} 24-hour average and 1-year average concentration was the lowest, comprising 0.27858 and 0.02913 micrograms per cubic meters, respectively.

In this regard, when considering the PM_{10} concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table table 5.2-55 and Addendum 5-3, item 4, PM_{10} concentration contours (Figure 4-1 to Figure 4-22), it was found that all PM_{10} concentrations were in accordance with standard criteria.

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table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.27858	2.61136	3.98690	6.33753	9.73596	11.01529	7.93866	3.25194	2.26251	7.97626	5.74644	0.02913	0.20203	0.39819	0.63479	0.97479	0.82663	0.83011	0.24404	0.23658	0.59857	0.60088
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.03436	0.21536	0.59488	0.94777	1.45553	0.66612	0.97909	0.19665	0.27904	0.48235	0.70872	0.00258	0.01453	0.04217	0.06719	0.10318	0.04309	0.07344	0.01272	0.02093	0.03120	0.05316
2	Wat Phala School	0.01329	0.10823	0.26782	0.42655	0.65510	0.36312	0.37883	0.10720	0.10797	0.26294	0.27422	0.00136	0.01200	0.02882	0.04590	0.07049	0.04105	0.03884	0.01212	0.01107	0.02972	0.02811
3	Phala Subdistrict Municipality Child Development Center	0.01194	0.10005	0.24481	0.38989	0.59880	0.33820	0.34014	0.09984	0.09694	0.24489	0.24621	0.00127	0.01128	0.02702	0.04303	0.06608	0.03867	0.03622	0.01142	0.01032	0.02800	0.02622
4	Ban Khlong Sai School	0.01505	0.13832	0.32709	0.52088	0.79999	0.47791	0.42895	0.14109	0.12225	0.34606	0.31050	0.00121	0.01188	0.02747	0.04374	0.06718	0.04160	0.03459	0.01228	0.00986	0.03012	0.02504
5	Rayong English Program School	0.01703	0.13076	0.33115	0.52746	0.81007	0.43183	0.48523	0.12749	0.13829	0.31269	0.35124	0.00136	0.01361	0.03125	0.04977	0.07643	0.04784	0.03885	0.01412	0.01107	0.03464	0.02812
6	Rayong Garden International School	0.01615	0.13285	0.32738	0.52141	0.80080	0.44695	0.46009	0.13195	0.13112	0.32364	0.33304	0.00134	0.01332	0.03067	0.04883	0.07499	0.04677	0.03829	0.01381	0.01091	0.03387	0.02771
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00891	0.14098	0.27613	0.43943	0.67496	0.53924	0.25388	0.15919	0.07236	0.39047	0.18377	0.00117	0.02541	0.04756	0.07567	0.11623	0.09919	0.03327	0.02928	0.00948	0.07182	0.02408
8	Wat Khiri Pawanaram School	0.00883	0.13400	0.26435	0.42068	0.64617	0.51081	0.25171	0.15080	0.07174	0.36988	0.18220	0.00111	0.02275	0.04312	0.06861	0.10538	0.08835	0.03170	0.02608	0.00904	0.06397	0.02295
9	Ban Khlong Bang Phai School	0.02737	0.18478	0.49388	0.78678	1.20831	0.58658	0.77998	0.17317	0.22229	0.42475	0.56459	0.00227	0.01124	0.03480	0.05546	0.08516	0.03134	0.06475	0.00925	0.01845	0.02269	0.04687
10	Pattanavechsuksa School	0.07677	0.22831	0.94692	1.51006	2.31877	0.41821	2.18774	0.12346	0.62350	0.30283	1.58361	0.00570	0.02217	0.07818	0.12464	0.19140	0.05317	0.16236	0.01570	0.04627	0.03850	0.11753
11	Pattanavech College	0.06403	0.18538	0.78214	1.24732	1.91531	0.40386	1.82465	0.11923	0.52002	0.29244	1.32079	0.00486	0.01954	0.06766	0.10786	0.16563	0.04798	0.13859	0.01416	0.03950	0.03474	0.10032
12	Saeng Song La Child Development Center 3	0.04841	0.35212	0.76451	1.21709	1.86934	1.27868	1.37952	0.37749	0.39316	0.92591	0.99857	0.00820	0.03412	0.11586	0.18469	0.28362	0.08585	0.23370	0.02535	0.06660	0.06217	0.16916
13	Wat Sa Kaeo School	0.05516	0.36103	0.77244	1.22965	1.88865	1.32144	1.57194	0.39012	0.44800	0.95687	1.13786	0.00934	0.03645	0.12833	0.20457	0.31415	0.08756	0.26622	0.02585	0.07587	0.06340	0.19270
14	Wat Sombun Naram School (Tem Rat Memorial)	0.04324	0.30615	0.58317	0.92956	1.42747	1.25634	1.23225	0.37090	0.35119	0.90973	0.89197	0.00591	0.03540	0.09985	0.15910	0.24433	0.10763	0.16845	0.03177	0.04801	0.07793	0.12193
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.04324	0.30615	0.58317	0.92956	1.42747	1.25634	1.23225	0.37090	0.35119	0.90973	0.89197	0.00591	0.03540	0.09985	0.15910	0.24433	0.10763	0.16845	0.03177	0.04801	0.07793	0.12193
16	Sajjaseuksa School	0.00802	0.29108	0.45455	0.72263	1.11012	1.21861	0.22846	0.35976	0.06511	0.88241	0.16537	0.00123	0.03699	0.06553	0.10424	0.16012	0.14777	0.03495	0.04362	0.00996	0.10700	0.02530
17	Ban Chang District Center for Non-Formal and Informal Education	0.01364	0.36409	0.58443	0.92923	1.42747	1.50983	0.38878	0.44573	0.11080	1.09328	0.28142	0.00188	0.03971	0.07474	0.11891	0.18266	0.15467	0.05345	0.04566	0.01523	0.11200	0.03869

Subject to changes and approval by the Government of Thailand

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
18	Wat Suwan Rangsan Community School	0.00969	0.23992	0.37516	0.59643	0.91624	1.00394	0.27613	0.29638	0.07870	0.72696	0.19988	0.00140	0.02961	0.05570	0.08862	0.13613	0.11534	0.03977	0.03405	0.01133	0.08352	0.02879
19	Ban Yai Ra Child Development Center	0.00860	0.17549	0.27622	0.43914	0.67461	0.73272	0.24511	0.21632	0.06985	0.53057	0.17742	0.00125	0.02459	0.04700	0.07479	0.11488	0.09510	0.03574	0.02807	0.01019	0.06886	0.02587
20	Wat Samnak Kathon School	0.01131	0.25053	0.39663	0.63059	0.96872	1.04391	0.32228	0.30818	0.09185	0.75590	0.23329	0.00175	0.03245	0.06273	0.09982	0.15332	0.12486	0.04973	0.03686	0.01417	0.09041	0.03599
21	Ban Sam Nak Thon Child Development Center	0.01099	0.24166	0.38226	0.60774	0.93361	1.00726	0.31306	0.29736	0.08922	0.72937	0.22661	0.00171	0.03219	0.06209	0.09879	0.15175	0.12401	0.04879	0.03661	0.01391	0.08979	0.03532
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00865	0.14360	0.22461	0.35709	0.54856	0.60083	0.24645	0.17738	0.07024	0.43507	0.17839	0.00124	0.01944	0.03912	0.06225	0.09562	0.07342	0.03535	0.02167	0.01008	0.05316	0.02559
23	Wat Chak Mak School	0.00779	0.10275	0.18052	0.28714	0.44108	0.41191	0.22204	0.12161	0.06328	0.29827	0.16072	0.00109	0.01765	0.03519	0.05600	0.08602	0.06693	0.03095	0.01976	0.00882	0.04846	0.02240
24	St. Andrews International School, Green Valley, Rayong,	0.00190	0.02007	0.03500	0.05566	0.08550	0.08069	0.05423	0.02382	0.01546	0.05843	0.03926	0.00023	0.00244	0.00551	0.00878	0.01348	0.00865	0.00665	0.00256	0.00189	0.00627	0.00481
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.01044	0.09406	0.22404	0.35678	0.54796	0.32350	0.29756	0.09551	0.08481	0.23425	0.21539	0.00105	0.00866	0.02136	0.03402	0.05225	0.02914	0.03004	0.00860	0.00856	0.02110	0.02175
26	Ban Phayun School	0.01026	0.09229	0.21993	0.35024	0.53792	0.31734	0.29234	0.09368	0.08332	0.22979	0.21162	0.00105	0.00858	0.02122	0.03380	0.05190	0.02882	0.02996	0.00851	0.00854	0.02087	0.02169
27	Rakpasa Kindergarten	0.01278	0.12218	0.28484	0.45357	0.69663	0.42584	0.36407	0.12572	0.10376	0.30835	0.26353	0.00114	0.00955	0.02338	0.03724	0.05719	0.03227	0.03252	0.00953	0.00927	0.02337	0.02354
28	Wat Ban Chang School (Boonrawdprachanukul)	0.02274	0.20839	0.49325	0.78548	1.20638	0.71962	0.64788	0.21245	0.18464	0.52108	0.46897	0.00248	0.02389	0.05552	0.08841	0.13579	0.08344	0.07055	0.02463	0.02011	0.06042	0.05107
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.01058	0.08069	0.18616	0.29642	0.45526	0.28301	0.30163	0.08355	0.08596	0.20493	0.21834	0.00098	0.00861	0.02074	0.03302	0.05072	0.02941	0.02806	0.00868	0.00800	0.02130	0.02031
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.01058	0.08069	0.18616	0.29642	0.45526	0.28301	0.30163	0.08355	0.08596	0.20493	0.21834	0.00098	0.00861	0.02074	0.03302	0.05072	0.02941	0.02806	0.00868	0.00800	0.02130	0.02031
31	Wat Prachummit Bamrung School	0.02077	0.12209	0.34735	0.55344	0.84994	0.36845	0.59177	0.10878	0.16865	0.26680	0.42836	0.00100	0.01058	0.02386	0.03798	0.05834	0.03759	0.02861	0.01110	0.00815	0.02722	0.02071
32	Udom Wittayanukun School	0.00465	0.08507	0.12930	0.20553	0.31575	0.35935	0.13253	0.10609	0.03777	0.26021	0.09594	0.00036	0.01057	0.01881	0.02992	0.04596	0.04215	0.01029	0.01244	0.00293	0.03052	0.00745
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00355	0.05141	0.09778	0.15558	0.23898	0.19931	0.10116	0.05884	0.02883	0.14432	0.07322	0.00029	0.00561	0.01077	0.01714	0.02632	0.02167	0.00831	0.00640	0.00237	0.01569	0.00601
34	Wat Noen Kraprok School	0.00349	0.05147	0.09821	0.15628	0.24005	0.19923	0.09955	0.05882	0.02837	0.14426	0.07206	0.00029	0.00550	0.01061	0.01688	0.02593	0.02121	0.00832	0.00626	0.00237	0.01536	0.00602
35	Chonnabot Phatthana Kindergarten	0.00474	0.10563	0.16226	0.25794	0.39626	0.44465	0.13509	0.13127	0.03850	0.32198	0.09778	0.00044	0.01084	0.01986	0.03160	0.04854	0.04269	0.01265	0.01260	0.00360	0.03091	0.00915
36	Aksorn Business Administration Technological College	0.01803	0.24994	0.51920	0.82643	1.26935	0.92902	0.51388	0.27426	0.14645	0.67271	0.37197	0.00194	0.02454	0.05227	0.08321	0.12781	0.09005	0.05516	0.02658	0.01572	0.06520	0.03993

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
37	Banchang Karnchanakul Wittaya School	0.00739	0.18344	0.29566	0.47012	0.72218	0.76721	0.21064	0.22650	0.06003	0.55554	0.15247	0.00135	0.03344	0.06117	0.09732	0.14948	0.13185	0.03859	0.03893	0.01100	0.09548	0.02793
38	Ban Khao Huai Mahat School	0.00264	0.03595	0.07504	0.11945	0.18346	0.13327	0.07525	0.03935	0.02145	0.09651	0.05447	0.00023	0.00301	0.00637	0.01014	0.01557	0.01109	0.00661	0.00327	0.00188	0.00803	0.00478
39	Ban Phudon - Huai Mahat Child Development Center	0.00264	0.03595	0.07504	0.11945	0.18346	0.13327	0.07525	0.03935	0.02145	0.09651	0.05447	0.00023	0.00301	0.00637	0.01014	0.01557	0.01109	0.00661	0.00327	0.00188	0.00803	0.00478
40	Ban Map Fakthong School	0.01029	0.08049	0.17822	0.28374	0.43580	0.28912	0.29312	0.08535	0.08354	0.20935	0.21218	0.00061	0.00349	0.01007	0.01605	0.02465	0.01039	0.01744	0.00307	0.00497	0.00752	0.01263
41	Phuru Yor. Sor. Sor. 80 School	0.01158	0.07081	0.19779	0.31513	0.48396	0.25722	0.32988	0.07594	0.09402	0.18626	0.23879	0.00043	0.00317	0.00818	0.01303	0.02001	0.01034	0.01231	0.00305	0.00351	0.00749	0.00891
42	Khao Chi Chan School	0.01056	0.10296	0.21857	0.34793	0.53440	0.37842	0.30087	0.11172	0.08575	0.27402	0.21779	0.00066	0.00586	0.01406	0.02240	0.03440	0.02008	0.01890	0.00593	0.00539	0.01454	0.01368
43	Ban Khalot Child Development Center	0.02232	0.13899	0.38506	0.61348	0.94216	0.42888	0.63601	0.12661	0.18126	0.31055	0.46038	0.00143	0.00893	0.02473	0.03941	0.06052	0.02758	0.04082	0.00814	0.01163	0.01997	0.02955
44	Ban Khalot School	0.02315	0.14496	0.40056	0.63818	0.98008	0.44824	0.65956	0.13233	0.18797	0.32457	0.47743	0.00140	0.00866	0.02406	0.03834	0.05888	0.02667	0.03988	0.00787	0.01137	0.01931	0.02887
45	Phlu Ta Luang Wittaya School	0.03525	0.10056	0.40874	0.65196	1.00109	0.26689	1.00452	0.07879	0.28629	0.19326	0.72713	0.00204	0.00971	0.03067	0.04888	0.07507	0.02652	0.05815	0.00783	0.01657	0.01920	0.04209
46	Athittan Kindergarten School	0.01794	0.06490	0.23874	0.38063	0.58449	0.20201	0.51123	0.05964	0.14570	0.14628	0.37005	0.00144	0.00717	0.02217	0.03533	0.05426	0.02005	0.04116	0.00592	0.01173	0.01452	0.02980
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.02803	0.11324	0.35703	0.56902	0.87382	0.34455	0.79888	0.10172	0.22768	0.24949	0.57828	0.00201	0.00991	0.03072	0.04895	0.07518	0.02761	0.05720	0.00815	0.01630	0.02000	0.04141
48	Ban Khao Bai Si School	0.01899	0.11501	0.30382	0.48412	0.74348	0.45745	0.54112	0.13505	0.15422	0.33125	0.39169	0.00151	0.00978	0.02666	0.04248	0.06523	0.03059	0.04316	0.00903	0.01230	0.02215	0.03124
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00460	0.10497	0.15869	0.25225	0.38751	0.44420	0.13117	0.13114	0.03738	0.32165	0.09495	0.00036	0.00579	0.01156	0.01840	0.02827	0.02192	0.01025	0.00647	0.00292	0.01587	0.00742
50	Ban KM. 5 School	0.00831	0.06023	0.15572	0.24804	0.38094	0.19601	0.23683	0.05787	0.06750	0.14194	0.17143	0.00108	0.00738	0.01960	0.03122	0.04794	0.02357	0.03066	0.00696	0.00874	0.01706	0.02220
51	Royal Thai Fleet Sattahip District School	0.00684	0.05656	0.13701	0.21821	0.33513	0.19247	0.19495	0.05682	0.05556	0.13937	0.14112	0.00084	0.00648	0.01638	0.02609	0.04007	0.02145	0.02391	0.00633	0.00682	0.01553	0.01731
52	RTN. 8 Nursery	0.00969	0.06468	0.15816	0.25202	0.38704	0.22057	0.27614	0.06512	0.07870	0.15972	0.19988	0.00094	0.00651	0.01719	0.02739	0.04206	0.02083	0.02675	0.00615	0.00762	0.01509	0.01936
53	Juk Samet School	0.00968	0.06379	0.15809	0.25190	0.38685	0.21773	0.27573	0.06428	0.07858	0.15766	0.19959	0.00094	0.00649	0.01717	0.02735	0.04200	0.02079	0.02672	0.00614	0.00761	0.01506	0.01934
54	Juk Samet Child Development Center	0.00978	0.06201	0.15927	0.25379	0.38975	0.21198	0.27857	0.06258	0.07939	0.15350	0.20164	0.00094	0.00648	0.01715	0.02733	0.04197	0.02071	0.02676	0.00611	0.00763	0.01500	0.01937
55	Ban Chong Samaesarn Child Development Center	0.00705	0.06552	0.13833	0.22019	0.33820	0.24153	0.20085	0.07130	0.05724	0.17489	0.14539	0.00051	0.00498	0.01150	0.01832	0.02813	0.01746	0.01445	0.00515	0.00412	0.01264	0.01046
56	Samaesarn Subdistrict NFE Center	0.00767	0.05290	0.11864	0.18894	0.29018	0.21331	0.21858	0.06297	0.06229	0.15446	0.15822	0.00041	0.00437	0.00984	0.01566	0.02405	0.01553	0.01177	0.00458	0.00335	0.01124	0.00852
57	Ban Chong Samaesarn School	0.00781	0.05069	0.11791	0.18777	0.28839	0.20256	0.22251	0.05980	0.06342	0.14668	0.16107	0.00040	0.00431	0.00969	0.01543	0.02370	0.01538	0.01152	0.00454	0.00328	0.01113	0.00834
58	Wat Phala Vipassana Office	0.01295	0.10317	0.25748	0.41009	0.62982	0.34417	0.36904	0.10160	0.10518	0.24921	0.26713	0.00137	0.01188	0.02872	0.04573	0.07024	0.04046	0.03912	0.01195	0.01115	0.02930	0.02832
59	Wat Phala	0.01261	0.10420	0.25639	0.40834	0.62714	0.35096	0.35940	0.10361	0.10243	0.25413	0.26016	0.00130	0.01152	0.02764	0.04401	0.06760	0.03944	0.03716	0.01164	0.01059	0.02856	0.02690
60	Chao Li Hu Ong Yea Shrine	0.01791	0.15969	0.38182	0.60805	0.93387	0.54793	0.51045	0.16176	0.14548	0.39676	0.36949	0.00194	0.02246	0.04916	0.07826	0.12021	0.08119	0.05529	0.02397	0.01576	0.05879	0.04002

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
61	Wat Khlong Sai	0.01738	0.14618	0.35725	0.56896	0.87383	0.49454	0.49537	0.14600	0.14118	0.35810	0.35857	0.00139	0.01355	0.03139	0.04998	0.07676	0.04741	0.03964	0.01400	0.01130	0.03433	0.02870
62	Wat Khiri Pawanaram	0.00801	0.10894	0.22748	0.36209	0.55616	0.40386	0.22825	0.11923	0.06505	0.29244	0.16522	0.00086	0.01418	0.02816	0.04482	0.06884	0.05388	0.02446	0.01591	0.00697	0.03901	0.01771
63	Ban Chang Christ Church	0.00616	0.10476	0.20100	0.31984	0.49128	0.40449	0.17564	0.11941	0.05006	0.29289	0.12714	0.00084	0.01677	0.03197	0.05087	0.07814	0.06497	0.02403	0.01918	0.00685	0.04705	0.01739
64	Ban Chang Church	0.00645	0.11096	0.19388	0.30838	0.47370	0.44575	0.18388	0.13159	0.05241	0.32277	0.13310	0.00090	0.02511	0.04500	0.07159	0.10996	0.09986	0.02558	0.02948	0.00729	0.07231	0.01852
65	Wat Ban Khlong Bang Phai	0.02783	0.19081	0.50660	0.80703	1.23941	0.60883	0.79308	0.17974	0.22603	0.44086	0.57407	0.00250	0.01201	0.03774	0.06015	0.09238	0.03298	0.07122	0.00974	0.02030	0.02388	0.05155
66	Admiral Prince Abhakara Kiartivongse Monument	0.03040	0.19472	0.50332	0.80175	1.23131	0.63375	0.86632	0.18710	0.24690	0.45890	0.62709	0.00293	0.01394	0.04401	0.07015	0.10772	0.03811	0.08338	0.01125	0.02376	0.02760	0.06036
67	Royal Thai Naval Air Division Naval Aviation Museum	0.02515	0.19516	0.49215	0.78389	1.20390	0.64642	0.71660	0.19084	0.20423	0.46808	0.51871	0.00304	0.01393	0.04488	0.07153	0.10985	0.03728	0.08658	0.01101	0.02468	0.02699	0.06267
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.02985	0.17145	0.40022	0.63730	0.97881	0.59713	0.85066	0.17629	0.24244	0.43239	0.61576	0.00389	0.01597	0.05467	0.08715	0.13383	0.03979	0.11098	0.01175	0.03163	0.02882	0.08033
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.05903	0.12983	0.64540	1.02965	1.58099	0.48911	1.68203	0.14440	0.47938	0.35417	1.21755	0.00572	0.02071	0.07614	0.12140	0.18642	0.04682	0.16300	0.01382	0.04645	0.03390	0.11799
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.07974	0.16739	0.87805	1.40077	2.15083	0.48174	2.27217	0.14222	0.64757	0.34883	1.64472	0.00732	0.02453	0.09448	0.15064	0.23132	0.05155	0.20865	0.01522	0.05946	0.03733	0.15103
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.06405	0.41888	0.98094	1.56206	2.39909	1.69379	1.82518	0.50004	0.52017	1.22649	1.32117	0.01171	0.09691	0.23830	0.37953	0.58289	0.32654	0.33371	0.09640	0.09511	0.23645	0.24156
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.05171	0.41480	0.91393	1.45505	2.23481	1.58944	1.47356	0.46923	0.41996	1.15092	1.06664	0.01006	0.09859	0.22793	0.36294	0.55743	0.34537	0.28681	0.10196	0.08174	0.25008	0.20761
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.05129	0.70167	1.29187	2.05533	3.15709	2.75892	1.46162	0.81449	0.41656	1.99776	1.05800	0.00919	0.11331	0.24334	0.38738	0.59499	0.41393	0.26190	0.12220	0.07464	0.29973	0.18958
74	Wat Sa Kaeo	0.06192	0.39686	0.74000	1.17738	1.80851	1.55192	1.76445	0.45816	0.50287	1.12376	1.27721	0.01085	0.04264	0.14954	0.23838	0.36607	0.10297	0.30930	0.03040	0.08815	0.07456	0.22389
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00983	0.10785	0.22050	0.35111	0.53926	0.44883	0.28024	0.13250	0.07987	0.32500	0.20285	0.00101	0.01637	0.03267	0.05200	0.07987	0.06207	0.02881	0.01832	0.00821	0.04494	0.02085
76	Wat Sombun Naram	0.04718	0.31801	0.56750	0.90471	1.38928	1.28016	1.34453	0.37793	0.38319	0.92697	0.97325	0.00590	0.03428	0.09808	0.15628	0.24000	0.10297	0.16815	0.03040	0.04792	0.07456	0.12172
77	Ban Chang Abundant Grace Church	0.02369	0.25009	0.40590	0.64541	0.99147	1.03298	0.67504	0.30496	0.19239	0.74799	0.48863	0.00391	0.03322	0.08086	0.12878	0.19778	0.11270	0.11137	0.03327	0.03174	0.08161	0.08062
78	Wat Samnak Kathon	0.01163	0.25788	0.40849	0.64945	0.99768	1.07436	0.33142	0.31717	0.09445	0.77795	0.23990	0.00177	0.03297	0.06374	0.10144	0.15581	0.12686	0.05055	0.03745	0.01441	0.09186	0.03659
79	Wat Suwan Rangsan	0.00860	0.17549	0.27622	0.43914	0.67461	0.73272	0.24511	0.21632	0.06985	0.53057	0.17742	0.00125	0.02459	0.04700	0.07479	0.11488	0.09510	0.03574	0.02807	0.01019	0.06886	0.02587
80	Wat Nong Bot	0.00787	0.07938	0.18166	0.28925	0.44425	0.27979	0.22413	0.08260	0.06388	0.20260	0.16224	0.00084	0.01174	0.02431	0.03869	0.05943	0.04369	0.02387	0.01290	0.00680	0.03164	0.01728

Draft Version

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
81	The Shrine of Luang Tia Chak Mak	0.00717	0.11732	0.20763	0.33036	0.50744	0.47751	0.20440	0.14097	0.05825	0.34577	0.14796	0.00114	0.02016	0.03937	0.06265	0.09623	0.07719	0.03235	0.02279	0.00922	0.05590	0.02341
82	Wat Chak Mak	0.00756	0.12593	0.23231	0.36960	0.56772	0.51057	0.21535	0.15073	0.06137	0.36971	0.15588	0.00117	0.02098	0.04088	0.06506	0.09993	0.08046	0.03330	0.02375	0.00949	0.05826	0.02410
83	The Shrine of Luang Tia Ban Phayun	0.00889	0.07964	0.19006	0.30267	0.46486	0.27357	0.25329	0.08076	0.07219	0.19810	0.18334	0.00094	0.00805	0.01954	0.03113	0.04780	0.02735	0.02681	0.00807	0.00764	0.01980	0.01941
84	The Shrine of King Taksin the Great (Ban Chang)	0.00889	0.08000	0.19059	0.30352	0.46616	0.27514	0.25322	0.08123	0.07217	0.19923	0.18329	0.00094	0.00811	0.01962	0.03124	0.04799	0.02762	0.02675	0.00815	0.00762	0.02000	0.01937
85	Wat Chonthararam (Phayun)	0.01052	0.09392	0.22443	0.35741	0.54893	0.32239	0.29974	0.09518	0.08543	0.23344	0.21697	0.00105	0.00859	0.02121	0.03378	0.05188	0.02884	0.02992	0.00852	0.00853	0.02089	0.02166
86	Masjid Dawatul Islam	0.01483	0.28754	0.55094	0.87668	1.34660	1.11098	0.42265	0.32798	0.12045	0.80447	0.30594	0.00196	0.03164	0.06319	0.10056	0.15446	0.11992	0.05581	0.03540	0.01591	0.08684	0.04040
87	Chinese shrine at the Buddha Dhamma Foundation	0.03210	0.24056	0.61528	0.98005	1.50516	0.78888	0.91477	0.23289	0.26071	0.57123	0.66216	0.00271	0.02632	0.06104	0.09719	0.14927	0.09203	0.07725	0.02717	0.02202	0.06664	0.05592
88	The Shrine of Luang Tia Ban Chang	0.01781	0.20200	0.41382	0.65865	1.01166	0.75609	0.50746	0.22321	0.14463	0.54749	0.36733	0.00196	0.02436	0.05217	0.08305	0.12756	0.08912	0.05578	0.02631	0.01590	0.06453	0.04037
89	The Shrine of Laoia Guan Yu Ban Chang	0.02148	0.19650	0.45301	0.72134	1.10788	0.68954	0.61214	0.20357	0.17446	0.49930	0.44310	0.00238	0.02367	0.05446	0.08671	0.13318	0.08314	0.06791	0.02455	0.01935	0.06021	0.04916
90	Wat Ban Chang	0.02752	0.20470	0.52518	0.83654	1.28475	0.66980	0.78429	0.19774	0.22352	0.48501	0.56771	0.00285	0.02395	0.05853	0.09321	0.14316	0.08101	0.08117	0.02392	0.02313	0.05866	0.05875
91	Wat Prachummit Bamrung	0.02149	0.11922	0.34864	0.55555	0.85317	0.35118	0.61226	0.10367	0.17449	0.25429	0.44319	0.00103	0.01060	0.02409	0.03835	0.05890	0.03752	0.02930	0.01108	0.00835	0.02717	0.02121
92	The Shrine of Luang Tia Noen Kraprok 1	0.01174	0.15054	0.31957	0.50871	0.78134	0.55331	0.33443	0.16335	0.09531	0.40065	0.24208	0.00077	0.01272	0.02528	0.04024	0.06180	0.04833	0.02199	0.01427	0.00627	0.03500	0.01592
93	The Shrine of Luang Tia Noen Kraprok 2	0.00534	0.18320	0.27995	0.44501	0.68364	0.77254	0.15218	0.22807	0.04337	0.55940	0.11016	0.00048	0.01567	0.02744	0.04364	0.06704	0.06292	0.01361	0.01858	0.00388	0.04556	0.00985
94	Wat Noen Kraprok	0.00398	0.05584	0.10667	0.16973	0.26071	0.21604	0.11353	0.06378	0.03236	0.15644	0.08218	0.00032	0.00707	0.01320	0.02100	0.03225	0.02764	0.00911	0.00816	0.00260	0.02001	0.00660
95	Wat Phudon Nim Sanoh	0.00239	0.03619	0.07345	0.11690	0.17955	0.13607	0.06814	0.04017	0.01942	0.09853	0.04932	0.00023	0.00312	0.00656	0.01044	0.01603	0.01155	0.00667	0.00341	0.00190	0.00836	0.00483
96	Church of Christ Ban Chang	0.00315	0.03728	0.08102	0.12898	0.19811	0.13533	0.08964	0.03995	0.02555	0.09799	0.06488	0.00025	0.00319	0.00681	0.01083	0.01664	0.01168	0.00723	0.00345	0.00206	0.00845	0.00523
97	Anek Kusala Sala (Viharn Sien)	0.01115	0.09927	0.22158	0.35280	0.54186	0.35498	0.31760	0.10480	0.09051	0.25704	0.22989	0.00073	0.00436	0.01233	0.01964	0.03017	0.01323	0.02085	0.00391	0.00594	0.00958	0.01510
98	Wat Yan Nasangwararam	0.01175	0.07972	0.20118	0.32043	0.49212	0.28043	0.33482	0.08279	0.09542	0.20306	0.24236	0.00085	0.00492	0.01408	0.02244	0.03446	0.01477	0.02416	0.00436	0.00688	0.01070	0.01748
99	Sirisirirak Monastery	0.00836	0.10076	0.18994	0.30223	0.46423	0.39217	0.23835	0.11578	0.06793	0.28398	0.17253	0.00054	0.00624	0.01367	0.02177	0.03344	0.02253	0.01544	0.00665	0.00440	0.01631	0.01118
100	Anan Buraparam Meditation Center	0.01561	0.08966	0.20556	0.32773	0.50326	0.32237	0.44487	0.09517	0.12679	0.23343	0.32202	0.00073	0.00605	0.01484	0.02363	0.03629	0.02043	0.02068	0.00603	0.00589	0.01479	0.01497
101	Wat Map Fakthong	0.00969	0.07150	0.18404	0.29315	0.45022	0.25189	0.27609	0.07436	0.07869	0.18239	0.19985	0.00063	0.00422	0.01135	0.01808	0.02776	0.01334	0.01805	0.00394	0.00514	0.00966	0.01307
102	Khao Chi Chan Image of Lord Buddha	0.00211	0.02418	0.05310	0.08454	0.12984	0.08728	0.06013	0.02577	0.01714	0.06320	0.04353	0.00015	0.00144	0.00340	0.00541	0.00830	0.00500	0.00441	0.00148	0.00126	0.00362	0.00320
103	Wat Khao Chi Chan	0.00224	0.04685	0.07818	0.12432	0.19098	0.19553	0.06373	0.05772	0.01816	0.14158	0.04613	0.00017	0.00335	0.00643	0.01023	0.01572	0.01292	0.00498	0.00381	0.00142	0.00936	0.00361
104	Rat Samakkhi Temple	0.02319	0.14446	0.40017	0.63756	0.97913	0.44582	0.66086	0.13162	0.18834	0.32283	0.47836	0.00146	0.00899	0.02503	0.03988	0.06124	0.02763	0.04158	0.00816	0.01185	0.02001	0.03010
105	The Shrine of Chao Mae Kuan Im	0.02359	0.14693	0.40699	0.64843	0.99582	0.45345	0.67209	0.13387	0.19155	0.32835	0.48650	0.00137	0.00847	0.02356	0.03754	0.05766	0.02605	0.03911	0.00769	0.01115	0.01886	0.02831
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and	0.02593	0.16355	0.45046	0.71767	1.10217	0.50706	0.73881	0.14969	0.21056	0.36716	0.53479	0.00155	0.00944	0.02646	0.04216	0.06475	0.02886	0.04431	0.00852	0.01263	0.02089	0.03208

Subject to changes and approval by the Government of Thailand

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
	Somdej Phra Srinakarindra Boromarajonani																					
107	Prakai Dhamma Meditation Center	0.00951	0.06926	0.17922	0.28549	0.43845	0.22526	0.27090	0.06650	0.07720	0.16312	0.19609	0.00113	0.00781	0.02064	0.03288	0.05049	0.02500	0.03211	0.00738	0.00915	0.01810	0.02325
108	KM.8 Meditation Center	0.01566	0.10168	0.27645	0.44042	0.67637	0.31854	0.44619	0.09404	0.12716	0.23066	0.32297	0.00117	0.00794	0.02119	0.03376	0.05185	0.02524	0.03341	0.00745	0.00952	0.01827	0.02418
109	Wat Rangsee Sunthorn (KM.5)	0.00811	0.06033	0.15478	0.24654	0.37864	0.19739	0.23115	0.05828	0.06588	0.14294	0.16732	0.00110	0.00753	0.02002	0.03189	0.04898	0.02401	0.03139	0.00709	0.00895	0.01739	0.02272
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00294	0.03304	0.07302	0.11625	0.17855	0.11882	0.08387	0.03508	0.02390	0.08604	0.06071	0.00012	0.00139	0.00303	0.00482	0.00740	0.00504	0.00336	0.00149	0.00096	0.00365	0.00244
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00346	0.03635	0.08206	0.13066	0.20067	0.13543	0.09856	0.03998	0.02809	0.09806	0.07134	0.00014	0.00188	0.00397	0.00632	0.00970	0.00691	0.00412	0.00204	0.00117	0.00500	0.00298
112	Wat Tung Prong	0.00274	0.03226	0.06605	0.10516	0.16151	0.12299	0.07800	0.03631	0.02223	0.08906	0.05646	0.00012	0.00146	0.00312	0.00497	0.00763	0.00534	0.00332	0.00158	0.00095	0.00387	0.00241
113	Khao Phlu Ta Luang Meditation Center	0.00147	0.01876	0.03757	0.05979	0.09184	0.07102	0.04180	0.02097	0.01191	0.05143	0.03025	0.00007	0.00079	0.00174	0.00277	0.00425	0.00284	0.00198	0.00084	0.00056	0.00206	0.00143
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.02804	0.10072	0.30262	0.48278	0.74129	0.35244	0.79914	0.10405	0.22775	0.25521	0.57846	0.00267	0.00983	0.03581	0.05709	0.08766	0.02252	0.07616	0.00665	0.02170	0.01631	0.05513
115	Wat Khao Bai Si Santitham	0.03270	0.13444	0.42921	0.68433	1.05086	0.41537	0.93179	0.12263	0.26556	0.30077	0.67448	0.00269	0.01167	0.03870	0.06168	0.09472	0.03020	0.07655	0.00892	0.02182	0.02187	0.05541
116	Welu Amphawan Vipassana Office	0.02320	0.13121	0.34843	0.55533	0.85280	0.44077	0.66118	0.13012	0.18844	0.31916	0.47860	0.00207	0.01129	0.03326	0.05300	0.08139	0.03302	0.05888	0.00975	0.01678	0.02391	0.04262
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.01124	0.08930	0.22308	0.35531	0.54569	0.29771	0.32022	0.08789	0.09126	0.21557	0.23179	0.00087	0.00681	0.01708	0.02721	0.04179	0.02262	0.02469	0.00668	0.00704	0.01638	0.01788
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.01070	0.06651	0.17621	0.28078	0.43120	0.21769	0.30490	0.06427	0.08690	0.15763	0.22070	0.00112	0.00787	0.02072	0.03301	0.05069	0.02529	0.03206	0.00747	0.00914	0.01831	0.02321
119	Samaesarn Pattanakarn Church	0.00985	0.07053	0.16436	0.26173	0.40198	0.24590	0.28059	0.07260	0.07997	0.17806	0.20310	0.00091	0.00674	0.01732	0.02758	0.04236	0.02206	0.02588	0.00651	0.00738	0.01597	0.01874
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00909	0.06739	0.15856	0.25249	0.38779	0.23360	0.25910	0.06896	0.07384	0.16915	0.18755	0.00056	0.00515	0.01221	0.01944	0.02986	0.01775	0.01610	0.00524	0.00459	0.01285	0.01165
121	Wat Chong Samaesarn	0.00769	0.05395	0.11975	0.19072	0.29292	0.21670	0.21920	0.06398	0.06247	0.15692	0.15867	0.00042	0.00441	0.00995	0.01585	0.02434	0.01567	0.01195	0.00463	0.00341	0.01135	0.00865
122	Viharn Luang Por Dam	0.00581	0.05388	0.12265	0.19529	0.29995	0.19048	0.16548	0.05623	0.04716	0.13793	0.11978	0.00033	0.00344	0.00782	0.01246	0.01913	0.01217	0.00954	0.00359	0.00272	0.00881	0.00690
123	The Shrine of King Taksin the Great (Samaesarn)	0.00781	0.07023	0.16742	0.26661	0.40947	0.24142	0.22267	0.07127	0.06346	0.17482	0.16118	0.00059	0.00548	0.01290	0.02055	0.03156	0.01899	0.01679	0.00560	0.00479	0.01375	0.01215
124	Thai Island and Sea Natural History Museum	0.00725	0.06864	0.16058	0.25571	0.39273	0.23872	0.20657	0.07048	0.05887	0.17286	0.14953	0.00056	0.00535	0.01244	0.01982	0.03043	0.01870	0.01582	0.00552	0.00451	0.01354	0.01145

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00846	0.06546	0.16527	0.26324	0.40428	0.21663	0.24108	0.06395	0.06871	0.15687	0.17450	0.00060	0.00565	0.01327	0.02113	0.03245	0.01961	0.01718	0.00579	0.00490	0.01420	0.01244
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00855	0.06854	0.17063	0.27177	0.41739	0.22905	0.24363	0.06762	0.06943	0.16585	0.17635	0.00061	0.00565	0.01335	0.02125	0.03264	0.01954	0.01746	0.00577	0.00498	0.01415	0.01264
127	Eastern-Nong Muang Community Health Service Center	0.07534	0.26322	0.86900	1.38611	2.12836	1.00403	2.14681	0.29641	0.61184	0.72702	1.55398	0.00795	0.06193	0.15597	0.24843	0.38154	0.20533	0.22665	0.06062	0.06459	0.14868	0.16406
128	Phala Subdistrict Health Promotion Hospital	0.01391	0.11808	0.28757	0.45798	0.70338	0.40037	0.39651	0.11820	0.11301	0.28991	0.28702	0.00135	0.01218	0.02896	0.04612	0.07083	0.04196	0.03833	0.01239	0.01092	0.03038	0.02774
129	Ban Chang Hospital	0.00491	0.07806	0.15652	0.24911	0.38262	0.29527	0.14002	0.08717	0.03991	0.21381	0.10135	0.00056	0.00860	0.01739	0.02768	0.04252	0.03240	0.01596	0.00957	0.00455	0.02346	0.01155
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.03063	0.10394	0.33161	0.52905	0.81233	0.38004	0.87298	0.11220	0.24880	0.27519	0.63191	0.00317	0.01363	0.04546	0.07245	0.11126	0.03505	0.09035	0.01035	0.02575	0.02538	0.06540
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.04256	0.33743	0.84006	1.33798	2.05489	1.12753	1.21286	0.33287	0.34566	0.81645	0.87794	0.00739	0.03073	0.10441	0.16643	0.25558	0.07728	0.21068	0.02282	0.06004	0.05596	0.15250
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.06775	0.37032	0.73931	1.17900	1.81040	1.51928	1.93068	0.44852	0.55024	1.10012	1.39753	0.00824	0.04041	0.12567	0.20028	0.30756	0.11218	0.23480	0.03312	0.06692	0.08123	0.16996
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00839	0.28392	0.44236	0.70323	1.08032	1.18956	0.23910	0.35118	0.06814	0.86137	0.17307	0.00144	0.03121	0.05848	0.09305	0.14292	0.12180	0.04107	0.03596	0.01170	0.08819	0.02973
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.01865	0.33464	0.51912	0.82525	1.26777	1.40412	0.53150	0.41452	0.15148	1.01673	0.38473	0.00300	0.03353	0.07418	0.11811	0.18140	0.12048	0.08544	0.03557	0.02435	0.08724	0.06184
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00812	0.12248	0.19652	0.31247	0.48001	0.51075	0.23151	0.15079	0.06598	0.36984	0.16758	0.00118	0.01908	0.03806	0.06057	0.09304	0.07235	0.03351	0.02136	0.00955	0.05239	0.02426
136	Ban Phayun Subdistrict Health Promotion Hospital	0.01005	0.09083	0.21610	0.34414	0.52854	0.31262	0.28645	0.09229	0.08164	0.22637	0.20735	0.00102	0.00854	0.02091	0.03331	0.05116	0.02883	0.02912	0.00851	0.00830	0.02088	0.02108
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00426	0.13975	0.21415	0.34041	0.52296	0.58878	0.12133	0.17382	0.03458	0.42634	0.08783	0.00039	0.01270	0.02229	0.03546	0.05447	0.05095	0.01122	0.01504	0.00320	0.03690	0.00812
138	Phudon Huai Mahat Community Health Service Unit	0.00283	0.03821	0.07992	0.12722	0.19540	0.14150	0.08058	0.04178	0.02296	0.10246	0.05833	0.00025	0.00331	0.00698	0.01112	0.01708	0.01219	0.00721	0.00360	0.00206	0.00883	0.00522
139	Wat Yan Nasangwararam Hospital	0.01068	0.09226	0.19202	0.30589	0.46978	0.34876	0.30441	0.10296	0.08676	0.25254	0.22035	0.00077	0.00465	0.01305	0.02079	0.03193	0.01418	0.02190	0.00419	0.00624	0.01027	0.01585
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.01051	0.09029	0.19150	0.30506	0.46850	0.34234	0.29956	0.10107	0.08537	0.24789	0.21684	0.00077	0.00463	0.01305	0.02080	0.03194	0.01409	0.02200	0.00416	0.00627	0.01020	0.01592

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00412	0.14110	0.22043	0.35044	0.53834	0.59061	0.11753	0.17436	0.03350	0.42766	0.08508	0.00028	0.00658	0.01215	0.01933	0.02969	0.02586	0.00799	0.00763	0.00228	0.01872	0.00579
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.02475	0.16008	0.43598	0.69457	1.06669	0.50082	0.70518	0.14785	0.20098	0.36265	0.51045	0.00153	0.00942	0.02625	0.04183	0.06424	0.02894	0.04365	0.00855	0.01244	0.02096	0.03160
143	Sattahip Hospital KM.10	0.01765	0.13625	0.34430	0.54840	0.84224	0.45063	0.50289	0.13303	0.14332	0.32630	0.36402	0.00119	0.00738	0.02051	0.03268	0.05018	0.02273	0.03399	0.00671	0.00969	0.01646	0.02460
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00771	0.05212	0.11806	0.18801	0.28875	0.21075	0.21984	0.06222	0.06265	0.15261	0.15913	0.00041	0.00435	0.00978	0.01558	0.02392	0.01547	0.01168	0.00457	0.00333	0.01120	0.00845
145	Village No. 1 Ban Sakulthong	0.00595	0.08732	0.17866	0.28436	0.43677	0.33556	0.16959	0.09907	0.04833	0.24298	0.12276	0.00083	0.01566	0.03021	0.04808	0.07385	0.06032	0.02377	0.01781	0.00677	0.04368	0.01720
146	Village No. 2, Ban Kilo 16	0.02315	0.15380	0.41395	0.65946	1.01278	0.48565	0.65963	0.14337	0.18799	0.35166	0.47748	0.00204	0.02080	0.04741	0.07549	0.11595	0.07347	0.05806	0.02169	0.01655	0.05320	0.04203
147	Village No. 4, Ban Tung Prong	0.01861	0.17946	0.39016	0.62113	0.95400	0.65123	0.53031	0.19226	0.15114	0.47156	0.38387	0.00243	0.03216	0.06766	0.10770	0.16542	0.11875	0.06923	0.03506	0.01973	0.08599	0.05011
148	Village No. 5, Phala Subdistrict	0.01883	0.14980	0.37407	0.59579	0.91502	0.49954	0.53662	0.14747	0.15293	0.36172	0.38843	0.00187	0.02340	0.05007	0.07970	0.12242	0.08566	0.05341	0.02529	0.01522	0.06203	0.03866
149	Village No. 6, Ban Takat	0.01364	0.12004	0.28840	0.45929	0.70540	0.41063	0.38875	0.12123	0.11079	0.29734	0.28140	0.00128	0.01185	0.02793	0.04448	0.06831	0.04104	0.03640	0.01212	0.01037	0.02972	0.02635
150	Village No. 7, Ban Khlong Sai	0.01812	0.14689	0.36413	0.57994	0.89069	0.49224	0.51650	0.14532	0.14720	0.35643	0.37387	0.00171	0.01929	0.04258	0.06778	0.10411	0.06940	0.04878	0.02049	0.01390	0.05025	0.03531
151	Village No. 1 Ban Sam Nak Thon	0.05001	0.21564	0.64356	1.02615	1.57572	0.89571	1.42521	0.26443	0.40618	0.64859	1.03165	0.00514	0.03886	0.09902	0.15772	0.24222	0.12778	0.14641	0.03772	0.04173	0.09252	0.10598
152	Village No. 2, Ban Chak Mak	0.01002	0.20600	0.32892	0.52296	0.80336	0.86250	0.28563	0.25463	0.08140	0.62455	0.20675	0.00153	0.02666	0.05231	0.08324	0.12786	0.10191	0.04363	0.03008	0.01244	0.07379	0.03158
153	Village No. 3, Ban Sa Kaeo	0.26033	0.47712	2.73514	4.36421	6.70091	1.96641	7.41851	0.58052	2.11426	1.42389	5.36993	0.02213	0.08856	0.30737	0.48999	0.75244	0.21678	0.63075	0.06400	0.17976	0.15697	0.45657
154	Sa Kaeo Community 1	0.08935	0.41078	0.95284	1.52028	2.33428	1.64095	2.54627	0.48444	0.72568	1.18823	1.84313	0.01137	0.04492	0.15705	0.25037	0.38447	0.10889	0.32412	0.03215	0.09237	0.07885	0.23461
155	Sa Kaeo Community 2	0.06341	0.33313	1.00066	1.59462	2.44885	0.95718	1.80700	0.28258	0.51499	0.69310	1.30800	0.00692	0.02791	0.09645	0.15375	0.23610	0.06869	0.19726	0.02028	0.05622	0.04974	0.14279
156	Village No. 4, Ban Khlong Bang Phai	0.07031	0.16467	0.80006	1.27620	1.95959	0.38975	2.00357	0.11506	0.57101	0.28222	1.45029	0.00537	0.01993	0.07219	0.11509	0.17674	0.04604	0.15292	0.01359	0.04358	0.03334	0.11069
157	Village No. 5, Ban Yai Ra	0.00736	0.06622	0.15781	0.25131	0.38598	0.22771	0.20976	0.06722	0.05978	0.16489	0.15184	0.00071	0.00991	0.02056	0.03272	0.05025	0.03685	0.02027	0.01088	0.00578	0.02669	0.01467
158	Village No. 6, Ban Khao Khrok	0.13662	0.30798	1.53649	2.45102	3.76349	1.07338	3.89323	0.31688	1.10957	0.77724	2.81814	0.01068	0.05456	0.16622	0.26489	0.40678	0.15465	0.30442	0.04565	0.08676	0.11198	0.22035
159	Village no. 7, Ban Nong Takhian	0.00792	0.13603	0.23556	0.37476	0.57566	0.55532	0.22580	0.16394	0.06435	0.40211	0.16345	0.00128	0.02362	0.04576	0.07283	0.11186	0.09079	0.03657	0.02680	0.01042	0.06574	0.02647
160	Village No. 8, Ban Cherng Khao	0.01329	0.76992	1.18550	1.88453	2.89507	3.23853	0.37861	0.95608	0.10790	2.34505	0.27406	0.00204	0.10419	0.17353	0.27597	0.42392	0.42633	0.05826	0.12586	0.01660	0.30871	0.04217
161	Eastern-Nong Muang Community	0.01969	0.20845	0.46105	0.73404	1.12740	0.78804	0.56122	0.23265	0.15995	0.57062	0.40624	0.00290	0.04033	0.08372	0.13326	0.20467	0.14996	0.08270	0.04427	0.02357	0.10859	0.05986
162	Wat Khiri Pawanaram Community	0.01067	0.60363	0.93644	1.48868	2.28694	2.53271	0.30417	0.74771	0.08669	1.83395	0.22017	0.00177	0.08375	0.14045	0.22337	0.34312	0.34183	0.05032	0.10092	0.01434	0.24752	0.03642
163	Ban Chang-Phala Community	0.00958	0.59080	0.89612	1.42442	2.18825	2.49748	0.27312	0.73731	0.07784	1.80845	0.19770	0.00165	0.08277	0.13804	0.21952	0.33722	0.33850	0.04696	0.09993	0.01338	0.24511	0.03399
164	Ruam Sompong Community	0.01020	0.12015	0.25060	0.39889	0.61267	0.45069	0.29075	0.13305	0.08286	0.32634	0.21046	0.00186	0.01723	0.04061	0.06467	0.09933	0.05966	0.05295	0.01761	0.01509	0.04320	0.03833

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
165	Ming Mongkol Community	0.00968	0.46285	0.73252	1.16461	1.78908	1.92884	0.27597	0.56943	0.07865	1.39669	0.19976	0.00131	0.04013	0.07093	0.11284	0.17333	0.16046	0.03734	0.04737	0.01064	0.11619	0.02703
166	Jor Koo Community	0.01021	0.46431	0.73137	1.16276	1.78624	1.93808	0.29106	0.57216	0.08295	1.40338	0.21069	0.00131	0.04149	0.07302	0.11615	0.17842	0.16618	0.03746	0.04906	0.01068	0.12033	0.02712
167	Wirat Phatthana Department Store Community	0.00941	0.69537	1.07304	1.70579	2.62048	2.92283	0.26808	0.86288	0.07640	2.11644	0.19405	0.00122	0.04729	0.08101	0.12885	0.19793	0.19145	0.03462	0.05652	0.00987	0.13863	0.02506
168	Thep Chinda Community	0.01071	0.43101	0.69978	1.11270	1.70930	1.78010	0.30524	0.52552	0.08699	1.28899	0.22095	0.00145	0.03889	0.07014	0.11158	0.17139	0.15425	0.04124	0.04554	0.01175	0.11169	0.02985
169	Health Park Community	0.03008	0.10952	0.33351	0.53204	0.81693	0.38949	0.85713	0.11498	0.24428	0.28203	0.62044	0.00236	0.01842	0.04634	0.07380	0.11335	0.06114	0.06720	0.01805	0.01915	0.04427	0.04864
170	Wat Ban Chang Community	0.02717	0.21458	0.53733	0.85583	1.31439	0.71415	0.77416	0.21083	0.22063	0.51712	0.56038	0.00274	0.02434	0.05826	0.09278	0.14250	0.08345	0.07804	0.02464	0.02224	0.06043	0.05649
171	Dong Dang Community	0.01087	0.39138	0.66200	1.05283	1.61728	1.59220	0.30983	0.47005	0.08830	1.15293	0.22427	0.00156	0.03479	0.06482	0.10313	0.15841	0.13609	0.04444	0.04018	0.01267	0.09855	0.03217
172	Night Market Community	0.02474	0.17958	0.44878	0.71478	1.09777	0.59853	0.70504	0.17670	0.20093	0.43340	0.51034	0.00260	0.02111	0.05227	0.08326	0.12787	0.07080	0.07402	0.02090	0.02109	0.05127	0.05358
173	Ruam Mitr Community	0.03536	0.24208	0.64313	1.02453	1.57345	0.77206	1.00766	0.22793	0.28718	0.55905	0.72940	0.00281	0.02631	0.06183	0.09846	0.15122	0.09125	0.08019	0.02694	0.02285	0.06608	0.05805
174	Ban Chang - Noen Kraprok Community	0.02713	0.09418	0.33104	0.52793	0.81065	0.31703	0.77324	0.09359	0.22037	0.22957	0.55971	0.00180	0.01568	0.03784	0.06026	0.09256	0.05351	0.05137	0.01580	0.01464	0.03874	0.03719
175	Dao Pitak Community	0.01640	0.16321	0.33465	0.53265	0.81813	0.61063	0.46722	0.18027	0.13316	0.44216	0.33820	0.00163	0.01990	0.04282	0.06817	0.10471	0.07261	0.04631	0.02144	0.01320	0.05258	0.03352
176	Taiwa Community	0.00553	0.22347	0.34140	0.54269	0.83370	0.94246	0.15754	0.27823	0.04490	0.68244	0.11403	0.00053	0.01722	0.03018	0.04800	0.07374	0.06908	0.01509	0.02039	0.00430	0.05002	0.01093
177	East Ban Noen Kraprok Community, Prachummit	0.02161	0.11079	0.33687	0.53684	0.82442	0.31462	0.61578	0.09288	0.17550	0.22782	0.44574	0.00102	0.01001	0.02315	0.03687	0.05662	0.03508	0.02913	0.01036	0.00830	0.02541	0.02109
178	Ban Noen Kraprok Community	0.00483	0.10461	0.15919	0.25304	0.38873	0.44172	0.13775	0.13040	0.03926	0.31985	0.09971	0.00039	0.01167	0.02071	0.03295	0.05061	0.04657	0.01118	0.01375	0.00319	0.03373	0.00809
179	Nong Yai Community	0.00447	0.19007	0.31100	0.49458	0.75975	0.79796	0.12738	0.23558	0.03630	0.57781	0.09221	0.00051	0.01524	0.02707	0.04306	0.06614	0.06081	0.01466	0.01795	0.00418	0.04403	0.01061
180	Village No. 1, Pan Din Tai	0.02053	0.11086	0.32851	0.52348	0.80392	0.32262	0.58501	0.09524	0.16673	0.23361	0.42346	0.00097	0.00959	0.02213	0.03523	0.05411	0.03365	0.02772	0.00993	0.00790	0.02436	0.02007
181	Village No. 2, Ban Prachummit	0.01776	0.07916	0.18890	0.30140	0.46278	0.27531	0.50611	0.08128	0.14424	0.19935	0.36635	0.00145	0.01205	0.02960	0.04714	0.07239	0.04064	0.04136	0.01200	0.01179	0.02943	0.02994
182	Village No. 3, Ban Noen Samre	0.00506	0.09260	0.17583	0.27978	0.42975	0.35925	0.14420	0.10606	0.04110	0.26013	0.10438	0.00088	0.01994	0.03705	0.05895	0.09055	0.07812	0.02509	0.02306	0.00715	0.05657	0.01816
183	Village No. 4, Ban Phayun	0.01083	0.11515	0.23919	0.38073	0.58477	0.42800	0.30849	0.12636	0.08792	0.30992	0.22330	0.00174	0.01644	0.03851	0.06133	0.09419	0.05711	0.04969	0.01686	0.01416	0.04135	0.03597
184	Village No. 6, Ban Noen Kraprok	0.00313	0.04392	0.09090	0.14469	0.22223	0.16356	0.08908	0.04829	0.02539	0.11843	0.06448	0.00030	0.00470	0.00943	0.01501	0.02306	0.01775	0.00849	0.00524	0.00242	0.01285	0.00614
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00300	0.03894	0.08240	0.13116	0.20145	0.14339	0.08551	0.04233	0.02437	0.10383	0.06190	0.00026	0.00340	0.00718	0.01144	0.01757	0.01250	0.00746	0.00369	0.00213	0.00905	0.00540
186	Village No. 11, Ban Map Fakthong	0.04925	0.22170	0.60012	0.95705	1.46959	0.86734	1.40347	0.25606	0.39999	0.62805	1.01591	0.00427	0.02548	0.07199	0.11470	0.17615	0.07737	0.12167	0.02284	0.03467	0.05602	0.08807
187	Village No. 13, Ban Nong Phakkut	0.00844	0.17099	0.29727	0.47285	0.72634	0.71586	0.24051	0.21134	0.06855	0.51836	0.17409	0.00128	0.01823	0.03759	0.05983	0.09189	0.06802	0.03645	0.02008	0.01039	0.04925	0.02639
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.01712	0.09301	0.27427	0.43704	0.67117	0.35498	0.48773	0.10480	0.13900	0.25704	0.35305	0.00065	0.00431	0.01163	0.01853	0.02845	0.01356	0.01861	0.00400	0.00530	0.00982	0.01347
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00379	0.20614	0.31369	0.49864	0.76603	0.87050	0.10799	0.25699	0.03078	0.63034	0.07817	0.00028	0.00609	0.01142	0.01817	0.02791	0.02378	0.00803	0.00702	0.00229	0.01722	0.00581

table 5.2-55 Forecasted results of PM10 particulate emission in the atmosphere, operation phase

Area		The concentration value of PM10 particulates (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
190	Village No. 6 (Ban Khao Krating Community)	0.00415	0.08554	0.13089	0.20806	0.31963	0.36055	0.11828	0.10644	0.03371	0.26107	0.08562	0.00021	0.00583	0.01043	0.01659	0.02549	0.02319	0.00589	0.00685	0.00168	0.01679	0.00426
191	Village No. 7 (Ban Nong Hin Community)	0.00498	0.20472	0.31878	0.50678	0.77852	0.85789	0.14181	0.25327	0.04042	0.62120	0.10265	0.00040	0.01170	0.02085	0.03317	0.05095	0.04665	0.01149	0.01377	0.00327	0.03378	0.00832
192	Village No. 11 (Ban Khong Wanphen Community)	0.02723	0.09817	0.34478	0.54977	0.84420	0.30112	0.77590	0.08890	0.22113	0.21805	0.56164	0.00139	0.00808	0.02307	0.03676	0.05646	0.02429	0.03950	0.00717	0.01126	0.01759	0.02859
193	Village No. 1, Ban Phlu Ta Luang	0.02346	0.14506	0.40320	0.64240	0.98656	0.44643	0.66858	0.13180	0.19054	0.32326	0.48395	0.00146	0.00919	0.02537	0.04042	0.06208	0.02844	0.04173	0.00840	0.01189	0.02059	0.03020
194	Village No. 2, Ban Khalot	0.02227	0.14398	0.39222	0.62487	0.95965	0.45036	0.63461	0.13296	0.18086	0.32611	0.45937	0.00140	0.00816	0.02332	0.03715	0.05706	0.02451	0.03995	0.00723	0.01139	0.01774	0.02892
195	Village No. 3, Ban Khlong Phai	0.01464	0.09816	0.23281	0.37074	0.56940	0.33855	0.41721	0.09995	0.11890	0.24515	0.30200	0.00159	0.00847	0.02530	0.04032	0.06192	0.02447	0.04542	0.00722	0.01295	0.01772	0.03288
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.02111	0.08784	0.23255	0.37100	0.56965	0.30662	0.60143	0.09052	0.17141	0.22203	0.43535	0.00148	0.00722	0.02249	0.03584	0.05504	0.01999	0.04210	0.00590	0.01200	0.01448	0.03047
197	Village No. 5, Ban Khao Bai Si	0.02294	0.08981	0.25671	0.40951	0.62879	0.29413	0.65360	0.08683	0.18627	0.21298	0.47311	0.00203	0.01000	0.03100	0.04940	0.07587	0.02784	0.05775	0.00822	0.01646	0.02016	0.04181
198	Village No. 6, Ban Khao Tabaek	0.01548	0.10011	0.27268	0.43441	0.66715	0.31315	0.44113	0.09245	0.12572	0.22675	0.31932	0.00111	0.00759	0.02018	0.03215	0.04938	0.02420	0.03166	0.00714	0.00902	0.01752	0.02291
199	Village No. 7, Ban Nong Ya Noi	0.00984	0.07027	0.18335	0.29206	0.44854	0.22713	0.28038	0.06705	0.07991	0.16447	0.20295	0.00112	0.00780	0.02058	0.03279	0.05036	0.02501	0.03196	0.00738	0.00911	0.01811	0.02314
200	Village No. 8, Ban Nong Ya	0.00571	0.13012	0.19678	0.31279	0.48052	0.55058	0.16275	0.16254	0.04638	0.39868	0.11781	0.00028	0.00792	0.01416	0.02252	0.03460	0.03155	0.00792	0.00931	0.00226	0.02285	0.00573
201	Ban Nong Krachong Community	0.01103	0.06149	0.17944	0.28593	0.43910	0.22319	0.31442	0.06589	0.08961	0.16162	0.22759	0.00081	0.00646	0.01608	0.02561	0.03933	0.02159	0.02294	0.00637	0.00654	0.01563	0.01661
Standard*		120*											50*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Standard 24-hour and 1-year values for particulate matter not more than 10 microns in size are referenced from Notification No. 24 of the National Environment Board (2004) Re: Determination of General Atmospheric Air Quality Standards.

1.5) Particulates smaller than 2.5 microns ($PM_{2.5}$)

From the $PM_{2.5}$ emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values, it was found that the highest 24-hour average concentration values (Cmax) in all scenarios occurred outside of the project area to the north. However, most of the highest 1-year average maximum concentration values occurred within the project area (in the U-Tapao International Airport vicinity). All values were within standard criteria in accordance with Notification No. 36 of the National Environment Board (2010) Re: Determination of Standards for PM2.5 Particulates in the General Atmosphere. which requires that 24-hour average concentrations of PM2.5 particulates must not exceed 0.05 milligrams per cubic meter (50 micrograms per cubic meter) and 1-year average concentrations must not exceed 0.025 milligrams per cubic meter (25 micrograms per cubic meter).

When comparing the 24-hour and 1-year maximum concentration values for $PM_{2.5}$ particulates in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest $PM_{2.5}$ 24-hour average maximum concentration value, comprising 10.96021 micrograms per cubic meter. Scenario 5 (Worst Cast Scenario (Peak Hour)) had the highest 1-year average maximum concentration value, comprising 0.96826 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), the $PM_{2.5}$ 24-hour average and 1-year average concentration was the lowest, comprising 0.27663 and 0.02893 micrograms per cubic meters, respectively.

In this regard, when considering the PM2.5 concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-56 and Addendum 5-3, item 5, PM2.5 concentration contours (Figure 5-1 to Figure 5-22), it was found that all PM2.5 concentrations were in accordance with standard criteria.

Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.27663	2.59394	3.96126	6.29577	9.67091	10.96021	7.90041	3.23298	2.24782	7.91969	5.70942	0.02893	0.20068	0.39569	0.63057	0.96826	0.82249	0.82611	0.24261	0.23504	0.59432	0.59701
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.03412	0.21392	0.59113	0.94148	1.44578	0.66279	0.97438	0.19551	0.27723	0.47892	0.70416	0.00256	0.01443	0.04190	0.06674	0.10249	0.04288	0.07309	0.01265	0.02080	0.03098	0.05282
2	Wat Phala School	0.01320	0.10751	0.26612	0.42372	0.65071	0.36131	0.37700	0.10658	0.10727	0.26108	0.27245	0.00135	0.01192	0.02864	0.04559	0.07002	0.04084	0.03865	0.01205	0.01100	0.02951	0.02793
3	Phala Subdistrict Municipality Child Development Center	0.01185	0.09938	0.24326	0.38731	0.59479	0.33650	0.33850	0.09926	0.09631	0.24315	0.24463	0.00126	0.01121	0.02685	0.04274	0.06564	0.03848	0.03605	0.01135	0.01026	0.02780	0.02605
4	Ban Khlong Sai School	0.01495	0.13740	0.32502	0.51743	0.79464	0.47552	0.42688	0.14027	0.12146	0.34361	0.30850	0.00121	0.01180	0.02729	0.04345	0.06673	0.04139	0.03442	0.01221	0.00979	0.02991	0.02488
5	Rayong English Program School	0.01691	0.12989	0.32906	0.52396	0.80464	0.42967	0.48289	0.12674	0.13739	0.31048	0.34897	0.00135	0.01351	0.03106	0.04944	0.07592	0.04761	0.03866	0.01404	0.01100	0.03440	0.02794
6	Rayong Garden International School	0.01603	0.13196	0.32532	0.51796	0.79544	0.44471	0.45787	0.13118	0.13027	0.32134	0.33089	0.00133	0.01323	0.03047	0.04851	0.07449	0.04654	0.03810	0.01373	0.01084	0.03363	0.02754
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00885	0.14004	0.27437	0.43652	0.67044	0.53654	0.25266	0.15827	0.07189	0.38770	0.18259	0.00116	0.02524	0.04726	0.07517	0.11546	0.09869	0.03311	0.02911	0.00942	0.07131	0.02392
8	Wat Khiri Pawanaram School	0.00877	0.13310	0.26266	0.41790	0.64184	0.50826	0.25050	0.14992	0.07127	0.36726	0.18103	0.00110	0.02260	0.04284	0.06816	0.10468	0.08791	0.03155	0.02593	0.00898	0.06352	0.02280
9	Ban Khlong Bang Phai School	0.02718	0.18354	0.49076	0.78156	1.20021	0.58365	0.77622	0.17216	0.22085	0.42174	0.56095	0.00226	0.01116	0.03458	0.05509	0.08459	0.03118	0.06444	0.00920	0.01833	0.02253	0.04657
10	Pattanavechsuksa School	0.07623	0.22679	0.94101	1.50002	2.30322	0.41612	2.17720	0.12274	0.61946	0.30068	1.57341	0.00566	0.02203	0.07769	0.12381	0.19011	0.05291	0.16158	0.01561	0.04597	0.03823	0.11677
11	Pattanavech College	0.06358	0.18414	0.77726	1.23903	1.90247	0.40184	1.81586	0.11853	0.51665	0.29036	1.31228	0.00483	0.01941	0.06724	0.10714	0.16452	0.04774	0.13792	0.01408	0.03924	0.03450	0.09967
12	Saeng Song La Child Development Center 3	0.04807	0.34977	0.75966	1.20903	1.85683	1.27229	1.37287	0.37529	0.39061	0.91934	0.99214	0.00814	0.03389	0.11514	0.18346	0.28172	0.08542	0.23257	0.02520	0.06617	0.06173	0.16807
13	Wat Sa Kaeo School	0.05478	0.35862	0.76754	1.22152	1.87602	1.31483	1.56436	0.38784	0.44509	0.95008	1.13053	0.00928	0.03620	0.12752	0.20321	0.31204	0.08712	0.26493	0.02570	0.07538	0.06295	0.19146
14	Wat Sombun Naram School (Tem Rat Memorial)	0.04294	0.30410	0.57951	0.92339	1.41791	1.25006	1.22631	0.36874	0.34891	0.90328	0.88622	0.00587	0.03517	0.09923	0.15804	0.24270	0.10709	0.16764	0.03159	0.04770	0.07738	0.12115
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.04294	0.30410	0.57951	0.92339	1.41791	1.25006	1.22631	0.36874	0.34891	0.90328	0.88622	0.00587	0.03517	0.09923	0.15804	0.24270	0.10709	0.16764	0.03159	0.04770	0.07738	0.12115
16	Sajjaseuksa School	0.00796	0.28914	0.45163	0.71787	1.10270	1.21252	0.22735	0.35766	0.06469	0.87615	0.16430	0.00122	0.03674	0.06511	0.10355	0.15905	0.14703	0.03478	0.04337	0.00990	0.10624	0.02514
17	Ban Chang District Center for Non-Formal and Informal Education	0.01355	0.36166	0.58068	0.92311	1.41794	1.50228	0.38691	0.44313	0.11008	1.08553	0.27961	0.00186	0.03945	0.07426	0.11813	0.18144	0.15390	0.05319	0.04540	0.01513	0.11120	0.03844
18	Wat Suwan Rangsan Community School	0.00962	0.23832	0.37275	0.59250	0.91012	0.99892	0.27480	0.29466	0.07819	0.72181	0.19859	0.00139	0.02941	0.05534	0.08804	0.13522	0.11476	0.03958	0.03385	0.01126	0.08293	0.02860

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Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00854	0.17432	0.27445	0.43625	0.67010	0.72906	0.24393	0.21505	0.06940	0.52681	0.17628	0.00125	0.02442	0.04670	0.07429	0.11411	0.09462	0.03557	0.02791	0.01012	0.06837	0.02571
20	Wat Samnak Kathon School	0.01123	0.24886	0.39408	0.62644	0.96224	1.03869	0.32073	0.30639	0.09125	0.75054	0.23178	0.00173	0.03223	0.06233	0.09916	0.15230	0.12423	0.04949	0.03664	0.01408	0.08977	0.03576
21	Ban Sam Nak Thon Child Development Center	0.01091	0.24005	0.37980	0.60374	0.92738	1.00223	0.31155	0.29563	0.08864	0.72419	0.22515	0.00170	0.03198	0.06169	0.09814	0.15073	0.12339	0.04856	0.03640	0.01382	0.08916	0.03509
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00859	0.14264	0.22317	0.35473	0.54490	0.59783	0.24526	0.17634	0.06978	0.43198	0.17725	0.00123	0.01931	0.03887	0.06184	0.09498	0.07305	0.03518	0.02155	0.01001	0.05279	0.02543
23	Wat Chak Mak School	0.00774	0.10207	0.17937	0.28525	0.43813	0.40985	0.22097	0.12090	0.06287	0.29615	0.15969	0.00108	0.01753	0.03497	0.05563	0.08545	0.06659	0.03080	0.01964	0.00876	0.04812	0.02226
24	St. Andrews International School, Green Valley, Rayong,	0.00189	0.01994	0.03477	0.05530	0.08493	0.08029	0.05397	0.02368	0.01536	0.05802	0.03900	0.00023	0.00242	0.00548	0.00872	0.01339	0.00861	0.00661	0.00254	0.00188	0.00622	0.00478
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.01037	0.09343	0.22262	0.35442	0.54429	0.32189	0.29613	0.09495	0.08425	0.23259	0.21401	0.00105	0.00861	0.02123	0.03380	0.05190	0.02899	0.02990	0.00855	0.00851	0.02095	0.02161
26	Ban Phayun School	0.01019	0.09167	0.21854	0.34792	0.53432	0.31575	0.29094	0.09314	0.08278	0.22816	0.21025	0.00104	0.00853	0.02109	0.03357	0.05156	0.02868	0.02982	0.00846	0.00848	0.02072	0.02155
27	Rakpasa Kindergarten	0.01269	0.12136	0.28304	0.45057	0.69196	0.42371	0.36231	0.12498	0.10308	0.30617	0.26183	0.00113	0.00949	0.02323	0.03699	0.05681	0.03211	0.03236	0.00947	0.00921	0.02320	0.02339
28	Wat Ban Chang School (Boonrawdprachanukul)	0.02258	0.20700	0.49013	0.78028	1.19830	0.71602	0.64476	0.21121	0.18345	0.51739	0.46595	0.00246	0.02373	0.05517	0.08783	0.13488	0.08302	0.07021	0.02449	0.01998	0.05999	0.05074
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.01051	0.08015	0.18498	0.29446	0.45221	0.28160	0.30018	0.08306	0.08541	0.20348	0.21693	0.00098	0.00855	0.02060	0.03280	0.05038	0.02927	0.02792	0.00863	0.00794	0.02115	0.02018
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.01051	0.08015	0.18498	0.29446	0.45221	0.28160	0.30018	0.08306	0.08541	0.20348	0.21693	0.00098	0.00855	0.02060	0.03280	0.05038	0.02927	0.02792	0.00863	0.00794	0.02115	0.02018
31	Wat Prachummit Bamrung School	0.02062	0.12128	0.34516	0.54977	0.84425	0.36661	0.58892	0.10814	0.16756	0.26491	0.42560	0.00100	0.01050	0.02371	0.03773	0.05795	0.03740	0.02847	0.01103	0.00810	0.02702	0.02057
32	Udom Wittayanukun School	0.00462	0.08450	0.12847	0.20418	0.31364	0.35756	0.13189	0.10547	0.03753	0.25837	0.09532	0.00036	0.01050	0.01869	0.02972	0.04565	0.04194	0.01024	0.01237	0.00291	0.03031	0.00740
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00352	0.05107	0.09716	0.15456	0.23738	0.19831	0.10067	0.05850	0.02864	0.14330	0.07275	0.00029	0.00557	0.01070	0.01702	0.02615	0.02156	0.00827	0.00636	0.00235	0.01558	0.00598
34	Wat Noen Kraprok School	0.00347	0.05113	0.09759	0.15525	0.23844	0.19823	0.09907	0.05847	0.02819	0.14324	0.07159	0.00029	0.00547	0.01054	0.01677	0.02576	0.02110	0.00828	0.00623	0.00236	0.01525	0.00598
35	Chonnabot Phatthana Kindergarten	0.00471	0.10492	0.16122	0.25624	0.39361	0.44243	0.13444	0.13051	0.03825	0.31969	0.09715	0.00044	0.01076	0.01973	0.03139	0.04821	0.04248	0.01259	0.01253	0.00358	0.03069	0.00910
36	Aksorn Business Administration Technological College	0.01791	0.24828	0.51590	0.82096	1.26086	0.92437	0.51140	0.27267	0.14550	0.66794	0.36958	0.00192	0.02438	0.05194	0.08266	0.12696	0.08960	0.05489	0.02643	0.01562	0.06474	0.03967
37	Banchang Karnchanakul Wittaya School	0.00734	0.18221	0.29376	0.46702	0.71736	0.76337	0.20962	0.22518	0.05964	0.55160	0.15149	0.00134	0.03322	0.06078	0.09667	0.14848	0.13119	0.03841	0.03870	0.01093	0.09480	0.02775

Subject to changes and approval by the Government of Thailand

Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00262	0.03571	0.07456	0.11866	0.18224	0.13261	0.07489	0.03912	0.02131	0.09582	0.05412	0.00023	0.00299	0.00633	0.01007	0.01547	0.01103	0.00658	0.00325	0.00187	0.00797	0.00475
39	Ban Phudon - Huai Mahat Child Development Center	0.00262	0.03571	0.07456	0.11866	0.18224	0.13261	0.07489	0.03912	0.02131	0.09582	0.05412	0.00023	0.00299	0.00633	0.01007	0.01547	0.01103	0.00658	0.00325	0.00187	0.00797	0.00475
40	Ban Map Fakthong School	0.01021	0.07995	0.17709	0.28186	0.43288	0.28767	0.29171	0.08486	0.08300	0.20787	0.21081	0.00061	0.00346	0.01001	0.01594	0.02448	0.01034	0.01736	0.00305	0.00494	0.00747	0.01255
41	Phuru Yor. Sor. Sor. 80 School	0.01150	0.07034	0.19655	0.31304	0.48072	0.25594	0.32829	0.07549	0.09341	0.18494	0.23725	0.00043	0.00315	0.00813	0.01294	0.01988	0.01029	0.01225	0.00303	0.00348	0.00743	0.00885
42	Khao Chi Chan School	0.01048	0.10227	0.21718	0.34563	0.53082	0.37653	0.29942	0.11107	0.08519	0.27207	0.21638	0.00066	0.00583	0.01397	0.02225	0.03417	0.01998	0.01880	0.00589	0.00535	0.01444	0.01359
43	Ban Khalot Child Development Center	0.02216	0.13806	0.38263	0.60942	0.93585	0.42673	0.63295	0.12587	0.18009	0.30835	0.45741	0.00142	0.00887	0.02458	0.03914	0.06011	0.02744	0.04063	0.00809	0.01156	0.01983	0.02936
44	Ban Khalot School	0.02298	0.14399	0.39804	0.63395	0.97351	0.44600	0.65638	0.13156	0.18675	0.32227	0.47435	0.00139	0.00860	0.02391	0.03808	0.05848	0.02653	0.03969	0.00783	0.01129	0.01917	0.02868
45	Phlu Ta Luang Wittaya School	0.03500	0.09989	0.40620	0.64762	0.99437	0.26556	0.99968	0.07833	0.28443	0.19189	0.72244	0.00203	0.00964	0.03048	0.04856	0.07457	0.02639	0.05787	0.00778	0.01646	0.01907	0.04182
46	Athittan Kindergarten School	0.01781	0.06447	0.23725	0.37810	0.58058	0.20100	0.50876	0.05929	0.14475	0.14524	0.36767	0.00143	0.00713	0.02203	0.03510	0.05389	0.01995	0.04096	0.00589	0.01166	0.01442	0.02960
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.02784	0.11248	0.35479	0.56524	0.86797	0.34282	0.79503	0.10112	0.22620	0.24772	0.57455	0.00199	0.00984	0.03052	0.04863	0.07467	0.02748	0.05693	0.00810	0.01620	0.01985	0.04114
48	Ban Khao Bai Si School	0.01886	0.11425	0.30191	0.48091	0.73850	0.45517	0.53851	0.13426	0.15322	0.32890	0.38917	0.00150	0.00972	0.02649	0.04219	0.06480	0.03044	0.04295	0.00898	0.01222	0.02200	0.03104
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00457	0.10427	0.15767	0.25058	0.38492	0.44198	0.13054	0.13037	0.03714	0.31937	0.09434	0.00036	0.00575	0.01149	0.01828	0.02808	0.02181	0.01020	0.00643	0.00290	0.01576	0.00737
50	Ban KM. 5 School	0.00825	0.05983	0.15474	0.24640	0.37839	0.19503	0.23569	0.05753	0.06706	0.14093	0.17033	0.00107	0.00733	0.01947	0.03101	0.04762	0.02345	0.03052	0.00692	0.00868	0.01694	0.02205
51	Royal Thai Fleet Sattahip District School	0.00679	0.05619	0.13615	0.21676	0.33288	0.19150	0.19401	0.05649	0.05520	0.13838	0.14021	0.00083	0.00644	0.01628	0.02591	0.03980	0.02134	0.02380	0.00629	0.00677	0.01542	0.01720
52	RTN. 8 Nursery	0.00962	0.06425	0.15717	0.25035	0.38444	0.21947	0.27481	0.06474	0.07819	0.15858	0.19860	0.00093	0.00646	0.01708	0.02721	0.04178	0.02073	0.02662	0.00611	0.00757	0.01498	0.01923
53	Juk Samet School	0.00961	0.06337	0.15709	0.25023	0.38426	0.21664	0.27440	0.06390	0.07807	0.15654	0.19830	0.00093	0.00645	0.01706	0.02717	0.04172	0.02069	0.02659	0.00610	0.00756	0.01495	0.01921
54	Juk Samet Child Development Center	0.00971	0.06159	0.15827	0.25211	0.38714	0.21092	0.27722	0.06222	0.07888	0.15241	0.20034	0.00093	0.00643	0.01705	0.02715	0.04169	0.02061	0.02663	0.00608	0.00758	0.01489	0.01925
55	Ban Chong Samaesarn Child Development Center	0.00700	0.06509	0.13745	0.21874	0.33594	0.24032	0.19989	0.07089	0.05687	0.17365	0.14445	0.00050	0.00495	0.01143	0.01820	0.02794	0.01737	0.01438	0.00512	0.00409	0.01255	0.01039
56	Samaesarn Subdistrict NFE Center	0.00762	0.05255	0.11789	0.18769	0.28824	0.21224	0.21752	0.06261	0.06189	0.15336	0.15720	0.00041	0.00434	0.00977	0.01556	0.02389	0.01545	0.01171	0.00456	0.00333	0.01116	0.00846
57	Ban Chong Samaesarn School	0.00775	0.05035	0.11717	0.18653	0.28646	0.20155	0.22144	0.05945	0.06300	0.14564	0.16003	0.00040	0.00429	0.00963	0.01533	0.02354	0.01530	0.01146	0.00451	0.00326	0.01105	0.00828
58	Wat Phala Vipassana Office	0.01286	0.10248	0.25585	0.40737	0.62561	0.34245	0.36726	0.10101	0.10449	0.24745	0.26541	0.00136	0.01180	0.02853	0.04543	0.06977	0.04026	0.03893	0.01188	0.01108	0.02909	0.02813
59	Wat Phala	0.01252	0.10351	0.25477	0.40564	0.62294	0.34920	0.35767	0.10301	0.10176	0.25233	0.25848	0.00129	0.01144	0.02746	0.04372	0.06714	0.03925	0.03698	0.01158	0.01052	0.02836	0.02673
60	Chao Li Hu Ong Yea Shrine	0.01779	0.15862	0.37940	0.60403	0.92762	0.54519	0.50799	0.16082	0.14453	0.39395	0.36711	0.00193	0.02231	0.04885	0.07775	0.11940	0.08078	0.05503	0.02383	0.01566	0.05837	0.03977
61	Wat Khlong Sai	0.01726	0.14521	0.35499	0.56519	0.86797	0.49207	0.49298	0.14515	0.14026	0.35556	0.35626	0.00138	0.01346	0.03119	0.04965	0.07625	0.04717	0.03945	0.01391	0.01123	0.03409	0.02851
62	Wat Khiri Pawanaram	0.00795	0.10822	0.22603	0.35970	0.55243	0.40184	0.22715	0.11853	0.06463	0.29037	0.16416	0.00085	0.01408	0.02798	0.04453	0.06838	0.05361	0.02435	0.01581	0.00693	0.03873	0.01759

Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00612	0.10406	0.19972	0.31773	0.48799	0.40246	0.17479	0.11872	0.04973	0.29081	0.12632	0.00084	0.01666	0.03177	0.05053	0.07761	0.06465	0.02391	0.01907	0.00680	0.04671	0.01728
64	Ban Chang Church	0.00641	0.11021	0.19264	0.30634	0.47054	0.44352	0.18299	0.13083	0.05207	0.32048	0.13225	0.00089	0.02494	0.04471	0.07111	0.10923	0.09936	0.02546	0.02931	0.00724	0.07180	0.01840
65	Wat Ban Khlong Bang Phai	0.02764	0.18953	0.50341	0.80168	1.23111	0.60578	0.78926	0.17869	0.22456	0.43773	0.57037	0.00248	0.01193	0.03751	0.05976	0.09176	0.03282	0.07088	0.00968	0.02017	0.02371	0.05122
66	Admiral Prince Abhakara Kiartivongse Monument	0.03019	0.19342	0.50015	0.79643	1.22307	0.63058	0.86215	0.18601	0.24530	0.45565	0.62305	0.00291	0.01385	0.04374	0.06968	0.10700	0.03792	0.08298	0.01119	0.02361	0.02740	0.05997
67	Royal Thai Naval Air Division Naval Aviation Museum	0.02497	0.19386	0.48904	0.77869	1.19584	0.64319	0.71315	0.18972	0.20290	0.46476	0.51537	0.00302	0.01384	0.04460	0.07106	0.10911	0.03709	0.08617	0.01094	0.02452	0.02680	0.06227
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.02964	0.17031	0.39769	0.63308	0.97225	0.59414	0.84657	0.17526	0.24086	0.42932	0.61179	0.00387	0.01587	0.05433	0.08657	0.13294	0.03960	0.11045	0.01168	0.03142	0.02861	0.07982
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.05861	0.12896	0.64139	1.02280	1.57038	0.48667	1.67393	0.14355	0.47627	0.35166	1.20971	0.00568	0.02057	0.07567	0.12059	0.18517	0.04659	0.16221	0.01374	0.04615	0.03366	0.11723
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.07918	0.16627	0.87258	1.39145	2.13640	0.47933	2.26122	0.14139	0.64336	0.34636	1.63413	0.00727	0.02437	0.09389	0.14964	0.22977	0.05130	0.20764	0.01513	0.05908	0.03707	0.15006
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.06360	0.41609	0.97473	1.55171	2.38303	1.68532	1.81639	0.49713	0.51680	1.21779	1.31266	0.01163	0.09627	0.23680	0.37702	0.57899	0.32491	0.33210	0.09584	0.09449	0.23477	0.24000
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.05135	0.41204	0.90814	1.44542	2.21985	1.58149	1.46646	0.46650	0.41724	1.14276	1.05977	0.00999	0.09793	0.22649	0.36054	0.55370	0.34364	0.28543	0.10137	0.08121	0.24831	0.20628
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.05093	0.69699	1.28363	2.04175	3.13597	2.74513	1.45457	0.80974	0.41385	1.98359	1.05118	0.00913	0.11256	0.24180	0.38482	0.59101	0.41186	0.26064	0.12149	0.07416	0.29761	0.18836
74	Wat Sa Kaeo	0.06148	0.39421	0.73528	1.16961	1.79641	1.54416	1.75595	0.45549	0.49960	1.11579	1.26898	0.01078	0.04235	0.14860	0.23680	0.36361	0.10245	0.30781	0.03022	0.08758	0.07403	0.22244
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00977	0.10713	0.21910	0.34879	0.53565	0.44659	0.27889	0.13173	0.07935	0.32270	0.20155	0.00100	0.01626	0.03247	0.05166	0.07934	0.06176	0.02867	0.01822	0.00816	0.04462	0.02072
76	Wat Sombun Naram	0.04685	0.31589	0.56395	0.89870	1.37997	1.27376	1.33805	0.37573	0.38070	0.92040	0.96698	0.00586	0.03406	0.09746	0.15524	0.23839	0.10245	0.16734	0.03022	0.04761	0.07403	0.12093
77	Ban Chang Abundant Grace Church	0.02352	0.24842	0.40330	0.64116	0.98484	1.02782	0.67179	0.30318	0.19114	0.74269	0.48549	0.00388	0.03300	0.08035	0.12792	0.19646	0.11214	0.11083	0.03308	0.03153	0.08103	0.08010
78	Wat Samnak Kathon	0.01155	0.25616	0.40587	0.64517	0.99102	1.06898	0.32982	0.31532	0.09384	0.77243	0.23835	0.00176	0.03275	0.06334	0.10077	0.15476	0.12622	0.05031	0.03723	0.01431	0.09121	0.03635
79	Wat Suwan Rangsan	0.00854	0.17432	0.27445	0.43625	0.67010	0.72906	0.24393	0.21505	0.06940	0.52681	0.17628	0.00125	0.02442	0.04670	0.07429	0.11411	0.09462	0.03557	0.02791	0.01012	0.06837	0.02571
80	Wat Nong Bot	0.00781	0.07885	0.18050	0.28733	0.44127	0.27839	0.22305	0.08212	0.06346	0.20116	0.16119	0.00083	0.01166	0.02415	0.03844	0.05903	0.04347	0.02375	0.01282	0.00676	0.03141	0.01717
81	The Shrine of Luang Tia Chak Mak	0.00712	0.11654	0.20631	0.32817	0.50404	0.47512	0.20342	0.14015	0.05788	0.34332	0.14700	0.00113	0.02002	0.03912	0.06223	0.09558	0.07681	0.03219	0.02266	0.00916	0.05550	0.02326
82	Wat Chak Mak	0.00750	0.12509	0.23082	0.36715	0.56392	0.50802	0.21431	0.14985	0.06098	0.36709	0.15488	0.00116	0.02084	0.04062	0.06463	0.09926	0.08006	0.03314	0.02361	0.00943	0.05785	0.02395

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Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00883	0.07911	0.18886	0.30067	0.46175	0.27220	0.25207	0.08029	0.07172	0.19669	0.18216	0.00093	0.00800	0.01942	0.03092	0.04748	0.02721	0.02668	0.00803	0.00759	0.01966	0.01928
84	The Shrine of King Taksin the Great (Ban Chang)	0.00882	0.07947	0.18939	0.30151	0.46304	0.27376	0.25200	0.08075	0.07170	0.19781	0.18211	0.00093	0.00806	0.01949	0.03104	0.04766	0.02748	0.02663	0.00811	0.00758	0.01986	0.01924
85	Wat Chonthararam (Phayun)	0.01044	0.09330	0.22301	0.35505	0.54526	0.32078	0.29830	0.09462	0.08487	0.23179	0.21557	0.00104	0.00853	0.02108	0.03356	0.05154	0.02870	0.02978	0.00847	0.00847	0.02074	0.02152
86	Masjid Dawatul Islam	0.01473	0.28562	0.54743	0.87089	1.33759	1.10542	0.42061	0.32607	0.11967	0.79876	0.30397	0.00194	0.03143	0.06278	0.09989	0.15342	0.11932	0.05554	0.03520	0.01580	0.08622	0.04014
87	Chinese shrine at the Buddha Dhamma Foundation	0.03188	0.23895	0.61140	0.97356	1.49508	0.78493	0.91037	0.23154	0.25902	0.56718	0.65790	0.00269	0.02614	0.06065	0.09655	0.14828	0.09157	0.07688	0.02701	0.02187	0.06617	0.05556
88	The Shrine of Luang Tia Ban Chang	0.01768	0.20065	0.41119	0.65430	1.00489	0.75231	0.50502	0.22191	0.14369	0.54361	0.36496	0.00194	0.02420	0.05184	0.08250	0.12670	0.08868	0.05551	0.02616	0.01579	0.06408	0.04011
89	The Shrine of Laoia Guan Yu Ban Chang	0.02133	0.19519	0.45014	0.71657	1.10047	0.68609	0.60919	0.20238	0.17333	0.49576	0.44025	0.00237	0.02351	0.05411	0.08614	0.13229	0.08273	0.06758	0.02440	0.01923	0.05978	0.04884
90	Wat Ban Chang	0.02733	0.20333	0.52186	0.83100	1.27615	0.66645	0.78051	0.19659	0.22207	0.48157	0.56406	0.00283	0.02379	0.05816	0.09259	0.14220	0.08060	0.08077	0.02378	0.02298	0.05824	0.05837
91	Wat Prachummit Bamrung	0.02133	0.11843	0.34645	0.55186	0.84745	0.34942	0.60931	0.10307	0.17336	0.25249	0.44033	0.00102	0.01053	0.02393	0.03810	0.05851	0.03734	0.02916	0.01101	0.00830	0.02698	0.02107
92	The Shrine of Luang Tia Noen Kraprok 1	0.01165	0.14954	0.31754	0.50535	0.77612	0.55054	0.33282	0.16240	0.09469	0.39781	0.24052	0.00077	0.01264	0.02512	0.03997	0.06139	0.04809	0.02188	0.01419	0.00623	0.03475	0.01582
93	The Shrine of Luang Tia Noen Kraprok 2	0.00530	0.18198	0.27815	0.44208	0.67907	0.76868	0.15145	0.22674	0.04309	0.55543	0.10945	0.00047	0.01557	0.02726	0.04335	0.06659	0.06261	0.01354	0.01847	0.00385	0.04524	0.00979
94	Wat Noen Kraprok	0.00396	0.05547	0.10599	0.16861	0.25897	0.21496	0.11299	0.06341	0.03215	0.15533	0.08165	0.00032	0.00702	0.01311	0.02086	0.03203	0.02750	0.00907	0.00811	0.00258	0.01987	0.00655
95	Wat Phudon Nim Sanoh	0.00237	0.03594	0.07298	0.11612	0.17835	0.13539	0.06781	0.03994	0.01929	0.09783	0.04901	0.00023	0.00310	0.00651	0.01037	0.01592	0.01149	0.00664	0.00339	0.00189	0.00830	0.00480
96	Church of Christ Ban Chang	0.00312	0.03704	0.08051	0.12813	0.19678	0.13465	0.08921	0.03972	0.02538	0.09730	0.06447	0.00025	0.00317	0.00676	0.01076	0.01653	0.01162	0.00719	0.00343	0.00205	0.00839	0.00520
97	Anek Kusala Sala (Viharn Sien)	0.01107	0.09861	0.22018	0.35046	0.53823	0.35320	0.31607	0.10419	0.08993	0.25522	0.22841	0.00073	0.00433	0.01225	0.01951	0.02997	0.01317	0.02075	0.00388	0.00590	0.00951	0.01500
98	Wat Yan Nasangwararam	0.01167	0.07918	0.19991	0.31831	0.48882	0.27902	0.33320	0.08230	0.09480	0.20162	0.24080	0.00084	0.00489	0.01399	0.02229	0.03423	0.01470	0.02404	0.00434	0.00684	0.01062	0.01737
99	Sirisirirak Monastery	0.00831	0.10009	0.18873	0.30023	0.46112	0.39021	0.23720	0.11510	0.06749	0.28196	0.17142	0.00054	0.00620	0.01359	0.02163	0.03321	0.02241	0.01536	0.00661	0.00437	0.01620	0.01110
100	Anan Buraparam Meditation Center	0.01550	0.08906	0.20427	0.32555	0.49989	0.32076	0.44273	0.09461	0.12596	0.23177	0.31995	0.00072	0.00601	0.01474	0.02347	0.03605	0.02033	0.02058	0.00600	0.00586	0.01469	0.01487
101	Wat Map Fakthong	0.00962	0.07103	0.18288	0.29121	0.44721	0.25063	0.27476	0.07393	0.07818	0.18110	0.19856	0.00063	0.00419	0.01128	0.01796	0.02758	0.01328	0.01796	0.00392	0.00511	0.00959	0.01298
102	Khao Chi Chan Image of Lord Buddha	0.00210	0.02402	0.05276	0.08398	0.12898	0.08685	0.05984	0.02562	0.01703	0.06275	0.04325	0.00015	0.00143	0.00337	0.00537	0.00825	0.00497	0.00439	0.00147	0.00125	0.00359	0.00318
103	Wat Khao Chi Chan	0.00222	0.04654	0.07768	0.12350	0.18970	0.19455	0.06343	0.05739	0.01805	0.14058	0.04584	0.00017	0.00333	0.00639	0.01017	0.01561	0.01285	0.00496	0.00379	0.00141	0.00929	0.00358
104	Rat Samakkhi Temple	0.02303	0.14350	0.39765	0.63333	0.97257	0.44360	0.65767	0.13085	0.18712	0.32054	0.47528	0.00145	0.00893	0.02487	0.03961	0.06083	0.02749	0.04138	0.00811	0.01177	0.01987	0.02990
105	The Shrine of Chao Mae Kuan Im	0.02342	0.14595	0.40443	0.64413	0.98915	0.45118	0.66886	0.13309	0.19030	0.32602	0.48336	0.00136	0.00841	0.02342	0.03730	0.05727	0.02592	0.03892	0.00765	0.01107	0.01873	0.02813
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.02574	0.16246	0.44762	0.71291	1.09478	0.50452	0.73525	0.14882	0.20919	0.36456	0.53134	0.00154	0.00938	0.02629	0.04188	0.06431	0.02871	0.04410	0.00847	0.01255	0.02075	0.03187

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Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00944	0.06880	0.17809	0.28359	0.43551	0.22414	0.26959	0.06611	0.07670	0.16196	0.19483	0.00112	0.00776	0.02051	0.03266	0.05015	0.02487	0.03196	0.00734	0.00909	0.01797	0.02310
108	KM.8 Meditation Center	0.01555	0.10100	0.27470	0.43750	0.67184	0.31695	0.44404	0.09349	0.12634	0.22902	0.32089	0.00116	0.00789	0.02106	0.03354	0.05151	0.02511	0.03325	0.00741	0.00946	0.01814	0.02403
109	Wat Rangsee Sunthorn (KM.5)	0.00805	0.05992	0.15380	0.24491	0.37610	0.19641	0.23004	0.05794	0.06545	0.14192	0.16624	0.00109	0.00748	0.01989	0.03168	0.04865	0.02389	0.03124	0.00705	0.00889	0.01726	0.02258
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00292	0.03282	0.07256	0.11548	0.17736	0.11822	0.08346	0.03487	0.02375	0.08543	0.06032	0.00012	0.00138	0.00301	0.00479	0.00736	0.00502	0.00335	0.00148	0.00095	0.00363	0.00242
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00343	0.03611	0.08154	0.12979	0.19933	0.13475	0.09808	0.03975	0.02791	0.09737	0.07088	0.00014	0.00186	0.00394	0.00628	0.00964	0.00688	0.00410	0.00203	0.00117	0.00497	0.00296
112	Wat Tung Prong	0.00272	0.03204	0.06563	0.10446	0.16043	0.12238	0.07763	0.03610	0.02209	0.08843	0.05610	0.00012	0.00145	0.00310	0.00493	0.00758	0.00531	0.00331	0.00157	0.00094	0.00384	0.00239
113	Khao Phlu Ta Luang Meditation Center	0.00146	0.01864	0.03733	0.05940	0.09123	0.07067	0.04159	0.02085	0.01183	0.05106	0.03006	0.00007	0.00078	0.00173	0.00275	0.00422	0.00283	0.00197	0.00083	0.00056	0.00204	0.00142
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.02785	0.10005	0.30073	0.47957	0.73632	0.35068	0.79529	0.10344	0.22627	0.25340	0.57473	0.00265	0.00976	0.03558	0.05671	0.08707	0.02241	0.07579	0.00661	0.02156	0.01619	0.05477
115	Wat Khao Bai Si Santitham	0.03247	0.13354	0.42653	0.67979	1.04381	0.41330	0.92730	0.12191	0.26384	0.29864	0.67014	0.00267	0.01159	0.03845	0.06127	0.09408	0.03005	0.07618	0.00886	0.02168	0.02172	0.05505
116	Welu Amphawan Vipassana Office	0.02304	0.13033	0.34625	0.55164	0.84708	0.43856	0.65800	0.12936	0.18721	0.31690	0.47552	0.00205	0.01121	0.03305	0.05264	0.08084	0.03285	0.05859	0.00969	0.01667	0.02374	0.04234
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.01116	0.08871	0.22167	0.35296	0.54204	0.29622	0.31867	0.08738	0.09067	0.21404	0.23030	0.00086	0.00676	0.01698	0.02703	0.04151	0.02251	0.02458	0.00664	0.00699	0.01627	0.01776
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.01062	0.06606	0.17511	0.27892	0.42831	0.21660	0.30343	0.06389	0.08633	0.15651	0.21928	0.00112	0.00782	0.02059	0.03279	0.05035	0.02516	0.03190	0.00742	0.00908	0.01818	0.02306
119	Samaesarn Pattanakarn Church	0.00978	0.07006	0.16332	0.26000	0.39929	0.24467	0.27923	0.07217	0.07945	0.17680	0.20179	0.00090	0.00670	0.01721	0.02740	0.04208	0.02195	0.02576	0.00647	0.00733	0.01586	0.01862
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00903	0.06694	0.15755	0.25082	0.38519	0.23243	0.25785	0.06856	0.07336	0.16795	0.18634	0.00056	0.00511	0.01213	0.01931	0.02966	0.01766	0.01602	0.00521	0.00456	0.01276	0.01158
121	Wat Chong Samaesarn	0.00764	0.05359	0.11900	0.18946	0.29095	0.21562	0.21814	0.06360	0.06207	0.15580	0.15765	0.00042	0.00438	0.00989	0.01574	0.02418	0.01559	0.01189	0.00460	0.00338	0.01127	0.00859
122	Viharn Luang Por Dam	0.00577	0.05352	0.12188	0.19400	0.29794	0.18953	0.16468	0.05591	0.04686	0.13695	0.11901	0.00033	0.00342	0.00777	0.01237	0.01900	0.01211	0.00949	0.00357	0.00270	0.00875	0.00686
123	The Shrine of King Taksin the Great (Samaesarn)	0.00776	0.06976	0.16636	0.26484	0.40673	0.24022	0.22160	0.07086	0.06305	0.17358	0.16014	0.00059	0.00544	0.01282	0.02041	0.03135	0.01889	0.01671	0.00557	0.00475	0.01365	0.01208
124	Thai Island and Sea Natural History Museum	0.00720	0.06818	0.15957	0.25402	0.39011	0.23753	0.20557	0.07007	0.05849	0.17164	0.14856	0.00055	0.00532	0.01237	0.01969	0.03023	0.01860	0.01574	0.00549	0.00448	0.01344	0.01138
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00840	0.06502	0.16423	0.26150	0.40158	0.21555	0.23992	0.06358	0.06826	0.15575	0.17338	0.00060	0.00561	0.01318	0.02099	0.03223	0.01951	0.01710	0.00576	0.00486	0.01410	0.01236

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Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00849	0.06809	0.16956	0.26997	0.41460	0.22790	0.24245	0.06723	0.06898	0.16468	0.17522	0.00061	0.00561	0.01326	0.02111	0.03242	0.01944	0.01737	0.00574	0.00494	0.01405	0.01256
127	Eastern-Nong Muang Community Health Service Center	0.07481	0.26146	0.86358	1.37689	2.11409	0.99901	2.13647	0.29468	0.60787	0.72187	1.54397	0.00790	0.06152	0.15499	0.24678	0.37898	0.20430	0.22556	0.06026	0.06417	0.14763	0.16300
128	Phala Subdistrict Health Promotion Hospital	0.01382	0.11729	0.28575	0.45495	0.69867	0.39837	0.39460	0.11751	0.11227	0.28785	0.28517	0.00134	0.01210	0.02878	0.04581	0.07036	0.04175	0.03814	0.01231	0.01085	0.03017	0.02757
129	Ban Chang Hospital	0.00488	0.07754	0.15553	0.24746	0.38006	0.29379	0.13934	0.08666	0.03965	0.21229	0.10070	0.00056	0.00854	0.01728	0.02750	0.04223	0.03224	0.01588	0.00951	0.00452	0.02330	0.01148
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.03042	0.10324	0.32954	0.52553	0.80688	0.37814	0.86877	0.11154	0.24718	0.27324	0.62784	0.00315	0.01354	0.04517	0.07197	0.11052	0.03487	0.08991	0.01029	0.02558	0.02520	0.06498
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.04226	0.33518	0.83475	1.32912	2.04113	1.12189	1.20702	0.33093	0.34342	0.81066	0.87228	0.00734	0.03053	0.10375	0.16533	0.25387	0.07689	0.20967	0.02268	0.05965	0.05556	0.15152
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.06728	0.36784	0.73469	1.17116	1.79826	1.51168	1.92138	0.44591	0.54667	1.09232	1.38853	0.00818	0.04014	0.12488	0.19895	0.30550	0.11162	0.23367	0.03292	0.06648	0.08065	0.16887
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00833	0.28203	0.43951	0.69860	1.07310	1.18361	0.23795	0.34914	0.06770	0.85526	0.17196	0.00143	0.03100	0.05811	0.09243	0.14197	0.12119	0.04087	0.03575	0.01163	0.08757	0.02954
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.01852	0.33241	0.51578	0.81981	1.25930	1.39710	0.52894	0.41211	0.15049	1.00952	0.38225	0.00298	0.03330	0.07371	0.11733	0.18019	0.11988	0.08503	0.03536	0.02419	0.08662	0.06145
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00807	0.12166	0.19526	0.31041	0.47681	0.50820	0.23039	0.14991	0.06555	0.36722	0.16650	0.00117	0.01895	0.03782	0.06017	0.09242	0.07198	0.03335	0.02123	0.00949	0.05201	0.02410
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00998	0.09022	0.21473	0.34186	0.52501	0.31106	0.28507	0.09175	0.08111	0.22477	0.20601	0.00101	0.00848	0.02078	0.03309	0.05082	0.02869	0.02898	0.00846	0.00824	0.02073	0.02094
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00423	0.13882	0.21277	0.33817	0.51946	0.58584	0.12075	0.17281	0.03436	0.42332	0.08726	0.00039	0.01262	0.02215	0.03523	0.05411	0.05070	0.01117	0.01495	0.00318	0.03663	0.00807
138	Phudon Huai Mahat Community Health Service Unit	0.00281	0.03795	0.07941	0.12638	0.19409	0.14080	0.08019	0.04153	0.02281	0.10174	0.05795	0.00025	0.00329	0.00694	0.01104	0.01696	0.01213	0.00718	0.00358	0.00204	0.00877	0.00519
139	Wat Yan Nasangwararam Hospital	0.01061	0.09164	0.19080	0.30387	0.46664	0.34702	0.30294	0.10236	0.08619	0.25075	0.21893	0.00076	0.00462	0.01297	0.02065	0.03172	0.01411	0.02179	0.00416	0.00620	0.01020	0.01575
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.01044	0.08968	0.19029	0.30303	0.46536	0.34063	0.29812	0.10048	0.08482	0.24613	0.21544	0.00077	0.00460	0.01297	0.02066	0.03173	0.01402	0.02189	0.00414	0.00623	0.01013	0.01582
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00410	0.14015	0.21902	0.34813	0.53475	0.58766	0.11697	0.17334	0.03328	0.42463	0.08453	0.00028	0.00654	0.01207	0.01920	0.02950	0.02573	0.00795	0.00759	0.00226	0.01859	0.00575

Subject to changes and approval by the Government of Thailand

Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.02457	0.15902	0.43323	0.68997	1.05955	0.49832	0.70178	0.14699	0.19967	0.36008	0.50716	0.00152	0.00936	0.02609	0.04155	0.06381	0.02880	0.04344	0.00850	0.01236	0.02081	0.03140
143	Sattahip Hospital KM.10	0.01752	0.13534	0.34213	0.54477	0.83660	0.44838	0.50047	0.13226	0.14239	0.32399	0.36168	0.00118	0.00733	0.02038	0.03246	0.04985	0.02262	0.03382	0.00667	0.00962	0.01634	0.02444
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00766	0.05177	0.11731	0.18676	0.28682	0.20970	0.21878	0.06186	0.06225	0.15153	0.15810	0.00041	0.00432	0.00972	0.01547	0.02376	0.01539	0.01162	0.00454	0.00331	0.01112	0.00840
145	Village No. 1 Ban Sakulthong	0.00591	0.08674	0.17752	0.28248	0.43384	0.33389	0.16877	0.09849	0.04802	0.24126	0.12197	0.00083	0.01556	0.03002	0.04776	0.07336	0.06002	0.02365	0.01771	0.00673	0.04337	0.01709
146	Village No. 2, Ban Kilo 16	0.02299	0.15278	0.41134	0.65509	1.00599	0.48322	0.65645	0.14254	0.18677	0.34917	0.47440	0.00202	0.02066	0.04711	0.07499	0.11517	0.07311	0.05778	0.02156	0.01644	0.05283	0.04176
147	Village No. 4, Ban Tung Prong	0.01848	0.17826	0.38768	0.61702	0.94761	0.64797	0.52776	0.19113	0.15016	0.46821	0.38140	0.00241	0.03194	0.06723	0.10699	0.16431	0.11816	0.06890	0.03485	0.01960	0.08538	0.04979
148	Village No. 5, Phala Subdistrict	0.01870	0.14880	0.37171	0.59184	0.90890	0.49704	0.53403	0.14661	0.15194	0.35916	0.38593	0.00186	0.02325	0.04975	0.07918	0.12160	0.08523	0.05315	0.02514	0.01512	0.06159	0.03841
149	Village No. 6, Ban Takat	0.01355	0.11924	0.28658	0.45625	0.70068	0.40857	0.38688	0.12052	0.11007	0.29523	0.27959	0.00127	0.01177	0.02775	0.04418	0.06785	0.04084	0.03622	0.01205	0.01031	0.02951	0.02618
150	Village No. 7, Ban Khlong Sai	0.01800	0.14591	0.36183	0.57610	0.88472	0.48978	0.51401	0.14447	0.14625	0.35391	0.37146	0.00170	0.01916	0.04231	0.06733	0.10341	0.06905	0.04855	0.02037	0.01381	0.04990	0.03509
151	Village No. 1 Ban Sam Nak Thon	0.04966	0.21421	0.63953	1.01933	1.56516	0.89123	1.41834	0.26289	0.40355	0.64399	1.02500	0.00510	0.03860	0.09839	0.15667	0.24060	0.12714	0.14570	0.03750	0.04145	0.09187	0.10529
152	Village No. 2, Ban Chak Mak	0.00995	0.20462	0.32680	0.51951	0.79799	0.85819	0.28425	0.25314	0.08088	0.62012	0.20542	0.00152	0.02649	0.05198	0.08269	0.12701	0.10140	0.04342	0.02991	0.01235	0.07327	0.03138
153	Village No. 3, Ban Sa Kaeo	0.25851	0.47394	2.71815	4.33516	6.65595	1.95657	7.38277	0.57714	2.10054	1.41379	5.33533	0.02198	0.08797	0.30545	0.48674	0.74740	0.21569	0.62771	0.06362	0.17859	0.15586	0.45363
154	Sa Kaeo Community 1	0.08873	0.40804	0.94692	1.51016	2.31862	1.63275	2.53400	0.48162	0.72097	1.17980	1.83126	0.01129	0.04462	0.15607	0.24870	0.38189	0.10835	0.32256	0.03196	0.09177	0.07829	0.23310
155	Sa Kaeo Community 2	0.06297	0.33091	0.99437	1.58404	2.43244	0.95239	1.79829	0.28093	0.51165	0.68818	1.29958	0.00687	0.02772	0.09585	0.15273	0.23452	0.06835	0.19631	0.02016	0.05585	0.04939	0.14187
156	Village No. 4, Ban Khlong Bang Phai	0.06982	0.16357	0.79507	1.26771	1.94644	0.38780	1.99391	0.11439	0.56731	0.28022	1.44095	0.00533	0.01980	0.07174	0.11433	0.17555	0.04581	0.15218	0.01351	0.04330	0.03310	0.10998
157	Village No. 5, Ban Yai Ra	0.00731	0.06578	0.15681	0.24965	0.38339	0.22657	0.20875	0.06683	0.05939	0.16372	0.15086	0.00071	0.00984	0.02042	0.03250	0.04992	0.03667	0.02017	0.01082	0.00574	0.02650	0.01458
158	Village No. 6, Ban Khao Khrok	0.13566	0.30593	1.52692	2.43472	3.73824	1.06801	3.87448	0.31504	1.10236	0.77173	2.79998	0.01061	0.05420	0.16517	0.26313	0.40406	0.15387	0.30295	0.04539	0.08619	0.11119	0.21893
159	Village no. 7, Ban Nong Takhian	0.00787	0.13513	0.23406	0.37229	0.57181	0.55254	0.22471	0.16299	0.06393	0.39926	0.16239	0.00127	0.02346	0.04547	0.07234	0.11111	0.09034	0.03639	0.02665	0.01035	0.06528	0.02630
160	Village No. 8, Ban Cherng Khao	0.01319	0.76478	1.17787	1.87211	2.87573	3.22234	0.37679	0.95051	0.10720	2.32842	0.27229	0.00203	0.10350	0.17242	0.27415	0.42109	0.42420	0.05798	0.12513	0.01650	0.30652	0.04190
161	Eastern-Nong Muang Community	0.01956	0.20706	0.45813	0.72918	1.11986	0.78410	0.55851	0.23129	0.15891	0.56658	0.40362	0.00288	0.04006	0.08319	0.13237	0.20330	0.14921	0.08230	0.04401	0.02342	0.10782	0.05948
162	Wat Khiri Pawanaram Community	0.01060	0.59960	0.93042	1.47886	2.27166	2.52004	0.30270	0.74335	0.08613	1.82095	0.21876	0.00175	0.08320	0.13956	0.22189	0.34083	0.34012	0.05007	0.10033	0.01425	0.24577	0.03619
163	Ban Chang-Phala Community	0.00952	0.58686	0.89036	1.41503	2.17363	2.48499	0.27180	0.73301	0.07733	1.79562	0.19642	0.00164	0.08222	0.13716	0.21807	0.33496	0.33681	0.04673	0.09935	0.01330	0.24337	0.03377
164	Ruam Sompong Community	0.01013	0.11935	0.24900	0.39625	0.60857	0.44843	0.28935	0.13228	0.08232	0.32403	0.20910	0.00185	0.01712	0.04036	0.06425	0.09867	0.05936	0.05269	0.01751	0.01499	0.04289	0.03808
165	Ming Mongkol Community	0.00962	0.45976	0.72782	1.15694	1.77713	1.91919	0.27464	0.56611	0.07814	1.38678	0.19848	0.00130	0.03986	0.07048	0.11209	0.17217	0.15966	0.03716	0.04710	0.01057	0.11537	0.02686
166	Jor Koo Community	0.01014	0.46121	0.72667	1.15510	1.77430	1.92839	0.28966	0.56883	0.08241	1.39343	0.20933	0.00131	0.04121	0.07255	0.11538	0.17722	0.16535	0.03728	0.04877	0.01061	0.11948	0.02694

Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00934	0.69073	1.06614	1.69454	2.60297	2.90821	0.26679	0.85785	0.07591	2.10143	0.19280	0.00121	0.04697	0.08049	0.12800	0.19660	0.19049	0.03446	0.05619	0.00980	0.13765	0.02490
168	Thep Chinda Community	0.01064	0.42814	0.69529	1.10536	1.69788	1.77120	0.30377	0.52246	0.08643	1.27985	0.21953	0.00144	0.03863	0.06969	0.11084	0.17024	0.15348	0.04104	0.04527	0.01168	0.11090	0.02966
169	Health Park Community	0.02987	0.10879	0.33143	0.52850	0.81145	0.38754	0.85300	0.11431	0.24269	0.28003	0.61644	0.00234	0.01830	0.04604	0.07332	0.11259	0.06083	0.06687	0.01794	0.01903	0.04396	0.04833
170	Wat Ban Chang Community	0.02698	0.21315	0.53394	0.85016	1.30559	0.71058	0.77043	0.20960	0.21920	0.51346	0.55677	0.00272	0.02418	0.05789	0.09217	0.14155	0.08304	0.07767	0.02449	0.02210	0.06000	0.05613
171	Dong Dang Community	0.01080	0.38876	0.65776	1.04588	1.60647	1.58424	0.30834	0.46731	0.08773	1.14475	0.22283	0.00155	0.03456	0.06440	0.10245	0.15735	0.13541	0.04423	0.03994	0.01258	0.09785	0.03196
172	Night Market Community	0.02457	0.17839	0.44594	0.71005	1.09042	0.59554	0.70164	0.17567	0.19963	0.43033	0.50706	0.00258	0.02097	0.05194	0.08270	0.12701	0.07045	0.07366	0.02078	0.02096	0.05090	0.05323
173	Ruam Mitr Community	0.03511	0.24046	0.63908	1.01774	1.56291	0.76820	1.00280	0.22660	0.28532	0.55509	0.72470	0.00279	0.02613	0.06144	0.09781	0.15021	0.09080	0.07980	0.02678	0.02271	0.06561	0.05767
174	Ban Chang - Noen Kraprok Community	0.02694	0.09356	0.32897	0.52442	0.80522	0.31545	0.76951	0.09305	0.21894	0.22794	0.55611	0.00179	0.01558	0.03760	0.05986	0.09194	0.05324	0.05112	0.01570	0.01455	0.03847	0.03695
175	Dao Pitak Community	0.01628	0.16212	0.33252	0.52913	0.81265	0.60758	0.46497	0.17922	0.13229	0.43903	0.33602	0.00161	0.01977	0.04255	0.06772	0.10400	0.07225	0.04609	0.02131	0.01311	0.05221	0.03331
176	Taiwa Community	0.00549	0.22198	0.33921	0.53911	0.82813	0.93775	0.15678	0.27661	0.04461	0.67760	0.11330	0.00053	0.01710	0.02999	0.04769	0.07324	0.06873	0.01502	0.02027	0.00427	0.04966	0.01086
177	East Ban Noen Kraprok Community, Prachummit	0.02146	0.11005	0.33475	0.53328	0.81890	0.31305	0.61281	0.09234	0.17436	0.22620	0.44286	0.00102	0.00995	0.02301	0.03662	0.05624	0.03491	0.02899	0.01030	0.00825	0.02523	0.02095
178	Ban Noen Kraprok Community	0.00480	0.10391	0.15817	0.25137	0.38614	0.43951	0.13709	0.12964	0.03900	0.31758	0.09907	0.00039	0.01159	0.02058	0.03273	0.05028	0.04634	0.01113	0.01367	0.00317	0.03349	0.00804
179	Nong Yai Community	0.00444	0.18880	0.30901	0.49132	0.75467	0.79397	0.12677	0.23420	0.03607	0.57371	0.09161	0.00051	0.01514	0.02689	0.04277	0.06570	0.06051	0.01459	0.01785	0.00415	0.04372	0.01054
180	Village No. 1, Pan Din Tai	0.02039	0.11012	0.32644	0.52001	0.79853	0.32101	0.58219	0.09469	0.16564	0.23196	0.42073	0.00097	0.00953	0.02199	0.03500	0.05375	0.03348	0.02759	0.00988	0.00785	0.02419	0.01994
181	Village No. 2, Ban Prachummit	0.01764	0.07863	0.18773	0.29940	0.45968	0.27393	0.50367	0.08080	0.14330	0.19794	0.36399	0.00144	0.01197	0.02941	0.04683	0.07191	0.04044	0.04116	0.01193	0.01171	0.02922	0.02975
182	Village No. 3, Ban Noen Samre	0.00502	0.09198	0.17471	0.27793	0.42687	0.35745	0.14350	0.10544	0.04083	0.25829	0.10371	0.00087	0.01981	0.03682	0.05856	0.08994	0.07773	0.02497	0.02293	0.00710	0.05617	0.01804
183	Village No. 4, Ban Phayun	0.01075	0.11438	0.23767	0.37821	0.58086	0.42586	0.30700	0.12562	0.08735	0.30772	0.22186	0.00173	0.01633	0.03827	0.06092	0.09356	0.05682	0.04945	0.01676	0.01407	0.04106	0.03574
184	Village No. 6, Ban Noen Kraprok	0.00310	0.04363	0.09032	0.14373	0.22075	0.16274	0.08865	0.04800	0.02522	0.11759	0.06407	0.00030	0.00466	0.00937	0.01492	0.02291	0.01766	0.00845	0.00521	0.00240	0.01276	0.00610
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00298	0.03868	0.08187	0.13029	0.20011	0.14267	0.08510	0.04208	0.02421	0.10309	0.06150	0.00026	0.00337	0.00714	0.01136	0.01745	0.01244	0.00742	0.00367	0.00211	0.00899	0.00536
186	Village No. 11, Ban Map Fakthong	0.04891	0.22022	0.59637	0.95069	1.45974	0.86300	1.39671	0.25456	0.39739	0.62359	1.00937	0.00424	0.02531	0.07154	0.11394	0.17497	0.07698	0.12108	0.02271	0.03445	0.05562	0.08750
187	Village No. 13, Ban Nong Phakkut	0.00838	0.16985	0.29537	0.46973	0.72148	0.71228	0.23935	0.21011	0.06810	0.51469	0.17297	0.00127	0.01811	0.03735	0.05943	0.09128	0.06768	0.03628	0.01996	0.01032	0.04890	0.02622
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.01700	0.09239	0.27254	0.43414	0.66667	0.35320	0.48538	0.10419	0.13810	0.25522	0.35077	0.00065	0.00428	0.01156	0.01840	0.02826	0.01350	0.01852	0.00398	0.00527	0.00975	0.01338
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00376	0.20477	0.31168	0.49535	0.76091	0.86615	0.10747	0.25549	0.03058	0.62587	0.07767	0.00028	0.00605	0.01135	0.01805	0.02772	0.02366	0.00799	0.00698	0.00227	0.01709	0.00577
190	Village No. 6 (Ban Khao Krating Community)	0.00412	0.08497	0.13005	0.20669	0.31750	0.35874	0.11771	0.10582	0.03349	0.25922	0.08507	0.00021	0.00579	0.01036	0.01648	0.02532	0.02307	0.00586	0.00681	0.00167	0.01667	0.00423

Draft Version

Table 5.2-56 Forecasted results of PM2.5 particulate emission in the atmosphere, operation phase

Area		The concentration value of 2.5 PM particulates (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00494	0.20335	0.31673	0.50344	0.77332	0.85360	0.14113	0.25179	0.04015	0.61680	0.10199	0.00040	0.01162	0.02072	0.03295	0.05061	0.04641	0.01143	0.01369	0.00325	0.03354	0.00826
192	Village No. 11 (Ban Khong Wanphen Community)	0.02704	0.09752	0.34262	0.54611	0.83854	0.29962	0.77216	0.08838	0.21970	0.21650	0.55802	0.00138	0.00802	0.02293	0.03652	0.05608	0.02416	0.03931	0.00713	0.01118	0.01746	0.02841
193	Village No. 1, Ban Phlu Ta Luang	0.02330	0.14410	0.40066	0.63814	0.97995	0.44420	0.66536	0.13103	0.18931	0.32097	0.48084	0.00145	0.00913	0.02521	0.04015	0.06166	0.02830	0.04153	0.00835	0.01182	0.02045	0.03001
194	Village No. 2, Ban Khalot	0.02211	0.14302	0.38975	0.62073	0.95322	0.44811	0.63155	0.13218	0.17969	0.32380	0.45641	0.00139	0.00810	0.02317	0.03691	0.05667	0.02438	0.03976	0.00719	0.01131	0.01762	0.02873
195	Village No. 3, Ban Khlong Phai	0.01454	0.09751	0.23134	0.36829	0.56559	0.33686	0.41520	0.09937	0.11813	0.24341	0.30005	0.00158	0.00841	0.02514	0.04005	0.06150	0.02435	0.04520	0.00718	0.01286	0.01759	0.03267
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.02096	0.08726	0.23111	0.36853	0.56583	0.30509	0.59854	0.08999	0.17030	0.22045	0.43255	0.00147	0.00717	0.02235	0.03560	0.05467	0.01989	0.04190	0.00587	0.01192	0.01437	0.03028
197	Village No. 5, Ban Khao Bai Si	0.02278	0.08921	0.25511	0.40679	0.62458	0.29266	0.65045	0.08633	0.18507	0.21147	0.47006	0.00201	0.00993	0.03080	0.04908	0.07536	0.02770	0.05748	0.00817	0.01635	0.02002	0.04154
198	Village No. 6, Ban Khao Tabaek	0.01537	0.09944	0.27096	0.43153	0.66269	0.31158	0.43901	0.09191	0.12491	0.22514	0.31726	0.00110	0.00754	0.02006	0.03194	0.04905	0.02408	0.03150	0.00710	0.00896	0.01740	0.02277
199	Village No. 7, Ban Nong Ya Noi	0.00977	0.06980	0.18219	0.29012	0.44554	0.22599	0.27903	0.06666	0.07939	0.16330	0.20165	0.00111	0.00775	0.02045	0.03257	0.05002	0.02488	0.03181	0.00734	0.00905	0.01798	0.02299
200	Village No. 8, Ban Nong Ya	0.00567	0.12925	0.19552	0.31073	0.47731	0.54783	0.16197	0.16160	0.04608	0.39585	0.11705	0.00028	0.00787	0.01407	0.02237	0.03436	0.03139	0.00788	0.00926	0.00224	0.02268	0.00570
201	Ban Nong Krachong Community	0.01096	0.06108	0.17831	0.28403	0.43616	0.22208	0.31290	0.06551	0.08903	0.16047	0.22613	0.00080	0.00642	0.01598	0.02544	0.03906	0.02148	0.02283	0.00634	0.00650	0.01552	0.01650
Standard*		50*											25*									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Standard 24-hour and 1-year values for particulate matter not more than 2.5 microns in size ($PM_{2.5}$) are referenced from Notification No. 36 of the National Environment Board (2010) Re: Determination of Standards for PM2.5 Particulates in the General Atmosphere.

Subject to changes and approval by the Government of Thailand

2) Volatile Organic Compounds

From the VOC air pollutant emission forecast for acetaldehyde, acrolein, benzene, 1,3-butadiene, isopropylbenzene or cumene, ethylbenzene, formaldehyde, naphthalene, styrene, toluene, xylene, and VOCs projected by the AERMOD mathematical model, it was found that the highest 24-hour average concentration values (Cmax) for acetaldehyde, benzene, and 1-3-butadiene were not above surveillance range for VOCs in the atmosphere within 24 hours. However, the concentration values for acrolein were above such surveillance range. When comparing 1-year standard values for VOCs in the atmosphere for Thailand, it was found the 1-year average maximum concentration values (Cmax from benzene and 1,3-butadiene were not above the Thai 1-year standard criteria for volatile organic compounds.

In this regard, when comparing between concentrations values from models and standard values set by foreign agencies, such as concentrations allowed for long-term exposure without affecting health (RfC: Reference Concentration) as determined by the U.S.EPA Integrated Risk Information System, it was found that the maximum concentrations from the 1-year average model for acetaldehyde, benzene, 1,3-butadiene, isopropylbenzene or cumene, ethylbenzene, naphthalene, styrene, toluene, and xylene were within RfC range. However, maximum concentration values for the acrolein model were above RfC range.

Nonetheless, the project has established measures to prevent and resolve impacts on air quality. Details are as shown in Chapter 7 Health and Environmental Action Plans, Health and Environmental Impact Prevention and Resolution Measures, and Health and Environmental Impact Monitoring Measures.

The impacts from the air pollutant emission forecasts for each type of volatile organic compound are detailed as follows:

2.1) Acetaldehyde

From the acetaldehyde emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values, it was found that the highest 24-hour average concentration values (Cmax) in all scenarios occurred outside of the project area to the north. However, most of the highest 1-year average maximum concentration values occurred within the project area (in the U-Tapao International Airport vicinity). All maximum concentration values for all cases were within standard criteria in accordance with the Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours. Also, when comparing with the 1-year average maximum concentration value with foreign standard reference ranges of acetaldehyde concentrations allowed for long-term exposure without affecting health (Reference Concentration; RfC for Acetaldehyde is equal to 9 micrograms per cubic meter), it was found that they were also not above such range.

When comparing the 24-hour and 1-year maximum concentration values for acetaldehyde in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest acetaldehyde 24-hour average maximum concentration value, comprising 6.57485 micrograms per cubic meter. Scenario 5 (Worst Cast Scenario (Peak Hour)) had the highest 1-year average maximum concentration value, comprising 0.57160 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), the acetaldehyde 24-hour average and 1-year average concentration was the lowest, comprising 0.16827 and 0.01759 micrograms per cubic meters, respectively.

In this regard, when considering the acetaldehyde concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table Table 5.2-57 and Addendum 5-3, item 6, acetaldehyde concentration contours (Figure 6-1 to Figure 6-22), it was found that all acetaldehyde concentrations were in accordance with standard criteria.

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.16827	1.54565	2.34070	3.74196	5.70917	6.57485	4.80167	1.91293	1.25164	4.59477	3.34794	0.01759	0.11993	0.23227	0.37482	0.57160	0.49340	0.50209	0.14355	0.13088	0.34481	0.35008
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.02075	0.13077	0.34748	0.55962	0.85350	0.39760	0.59220	0.11568	0.15437	0.27786	0.41291	0.00156	0.00885	0.02462	0.03967	0.06050	0.02572	0.04442	0.00748	0.01158	0.01797	0.03097
2	Wat Phala School	0.00803	0.06533	0.15655	0.25186	0.38414	0.21674	0.22913	0.06306	0.05973	0.15147	0.15976	0.00082	0.00723	0.01685	0.02710	0.04134	0.02450	0.02349	0.00713	0.00612	0.01712	0.01638
3	Phala Subdistrict Municipality Child Development Center	0.00721	0.06036	0.14311	0.23021	0.35113	0.20186	0.20573	0.05873	0.05363	0.14107	0.14345	0.00077	0.00680	0.01580	0.02540	0.03875	0.02308	0.02191	0.00672	0.00571	0.01613	0.01527
4	Ban Khlong Sai School	0.00909	0.08331	0.19126	0.30756	0.46911	0.28526	0.25945	0.08299	0.06763	0.19935	0.18090	0.00073	0.00715	0.01606	0.02583	0.03939	0.02483	0.02092	0.00722	0.00545	0.01735	0.01459
5	Rayong English Program School	0.01028	0.07903	0.19354	0.31144	0.47501	0.25775	0.29349	0.07499	0.07650	0.18013	0.20463	0.00082	0.00818	0.01828	0.02938	0.04482	0.02856	0.02350	0.00831	0.00613	0.01996	0.01638
6	Rayong Garden International School	0.00975	0.08018	0.19138	0.30787	0.46958	0.26678	0.27828	0.07762	0.07254	0.18643	0.19403	0.00081	0.00801	0.01793	0.02883	0.04398	0.02792	0.02316	0.00812	0.00604	0.01951	0.01615
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00538	0.08420	0.16171	0.25946	0.39579	0.32186	0.15356	0.09364	0.04003	0.22493	0.10707	0.00071	0.01515	0.02786	0.04468	0.06816	0.05920	0.02012	0.01723	0.00524	0.04137	0.01403
8	Wat Khiri Pawanaram School	0.00534	0.08005	0.15480	0.24839	0.37891	0.30489	0.15225	0.08871	0.03969	0.21307	0.10615	0.00067	0.01357	0.02526	0.04051	0.06180	0.05273	0.01918	0.01534	0.00500	0.03685	0.01337
9	Ban Khlong Bang Phai School	0.01653	0.11199	0.28855	0.46456	0.70853	0.35012	0.47177	0.10187	0.12297	0.24468	0.32894	0.00137	0.00687	0.02031	0.03274	0.04994	0.01870	0.03916	0.00544	0.01021	0.01307	0.02731
10	Pattanavechsuksa School	0.04637	0.14255	0.55195	0.89164	1.35967	0.24962	1.32325	0.07263	0.34493	0.17445	0.92263	0.00344	0.01367	0.04561	0.07359	0.11223	0.03174	0.09821	0.00923	0.02560	0.02218	0.06847
11	Pattanavech College	0.03867	0.11591	0.45587	0.73650	1.12309	0.24106	1.10363	0.07013	0.28768	0.16846	0.76950	0.00294	0.01203	0.03947	0.06369	0.09712	0.02864	0.08382	0.00833	0.02185	0.02001	0.05845
12	Saeng Song La Child Development Center 3	0.02924	0.21123	0.44733	0.71863	1.09616	0.76323	0.83440	0.22206	0.21750	0.53337	0.58178	0.00495	0.02099	0.06760	0.10905	0.16631	0.05124	0.14135	0.01491	0.03685	0.03581	0.09856
13	Wat Sa Kaeo School	0.03332	0.21643	0.45203	0.72605	1.10749	0.78875	0.95078	0.22948	0.24784	0.55121	0.66293	0.00564	0.02247	0.07486	0.12079	0.18421	0.05226	0.16102	0.01521	0.04197	0.03652	0.11227
14	Wat Sombun Naram School (Tem Rat Memorial)	0.02612	0.18168	0.34028	0.54887	0.83704	0.74989	0.74532	0.21818	0.19428	0.52405	0.51967	0.00357	0.02152	0.05832	0.09394	0.14327	0.06424	0.10189	0.01869	0.02656	0.04489	0.07104
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.02612	0.18168	0.34028	0.54887	0.83704	0.74989	0.74532	0.21818	0.19428	0.52405	0.51967	0.00357	0.02152	0.05832	0.09394	0.14327	0.06424	0.10189	0.01869	0.02656	0.04489	0.07104
16	Sajjaseuksa School	0.00484	0.17242	0.26680	0.42668	0.65097	0.72737	0.13818	0.21163	0.03602	0.50832	0.09635	0.00074	0.02200	0.03841	0.06155	0.09389	0.08820	0.02114	0.02566	0.00551	0.06164	0.01474
17	Ban Chang District Center for Non-Formal and Informal Education	0.00824	0.21586	0.34293	0.54866	0.83707	0.90119	0.23515	0.26220	0.06130	0.62979	0.16396	0.00113	0.02368	0.04378	0.07021	0.10711	0.09232	0.03233	0.02686	0.00843	0.06452	0.02254
18	Wat Suwan Rangsan Community School	0.00585	0.14211	0.22020	0.35216	0.53728	0.59924	0.16702	0.17435	0.04354	0.41877	0.11645	0.00084	0.01766	0.03263	0.05233	0.07983	0.06884	0.02405	0.02003	0.00627	0.04811	0.01677

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00520	0.10398	0.16211	0.25929	0.39559	0.43735	0.14825	0.12725	0.03864	0.30564	0.10337	0.00076	0.01467	0.02753	0.04416	0.06736	0.05676	0.02162	0.01651	0.00564	0.03967	0.01507
20	Wat Samnak Kathon School	0.00683	0.14846	0.23277	0.37233	0.56806	0.62309	0.19493	0.18129	0.05081	0.43544	0.13592	0.00105	0.01937	0.03674	0.05894	0.08991	0.07452	0.03008	0.02168	0.00784	0.05208	0.02097
21	Ban Sam Nak Thon Child Development Center	0.00664	0.14320	0.22434	0.35884	0.54747	0.60122	0.18935	0.17492	0.04936	0.42016	0.13203	0.00103	0.01921	0.03636	0.05833	0.08898	0.07402	0.02951	0.02153	0.00769	0.05173	0.02058
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00522	0.08506	0.13183	0.21084	0.32168	0.35863	0.14906	0.10434	0.03886	0.25062	0.10393	0.00075	0.01162	0.02290	0.03676	0.05607	0.04382	0.02138	0.01275	0.00557	0.03062	0.01491
23	Wat Chak Mak School	0.00471	0.06111	0.10583	0.16954	0.25865	0.24586	0.13430	0.07153	0.03501	0.17182	0.09364	0.00066	0.01055	0.02060	0.03307	0.05044	0.03995	0.01872	0.01162	0.00488	0.02792	0.01305
24	St. Andrews International School, Green Valley, Rayong,	0.00115	0.01193	0.02052	0.03287	0.05014	0.04816	0.03280	0.01401	0.00855	0.03366	0.02287	0.00014	0.00147	0.00323	0.00518	0.00791	0.00517	0.00402	0.00150	0.00105	0.00361	0.00280
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00631	0.05667	0.13100	0.21066	0.32132	0.19309	0.17998	0.05618	0.04692	0.13494	0.12549	0.00064	0.00523	0.01249	0.02009	0.03064	0.01739	0.01817	0.00506	0.00474	0.01215	0.01267
26	Ban Phayun School	0.00620	0.05561	0.12860	0.20680	0.31543	0.18941	0.17682	0.05511	0.04609	0.13237	0.12329	0.00064	0.00518	0.01240	0.01996	0.03044	0.01721	0.01812	0.00501	0.00472	0.01202	0.01264
27	Rakpasa Kindergarten	0.00772	0.07353	0.16657	0.26782	0.40849	0.25418	0.22020	0.07395	0.05740	0.17763	0.15354	0.00069	0.00576	0.01367	0.02199	0.03354	0.01926	0.01967	0.00560	0.00513	0.01346	0.01371
28	Wat Ban Chang School (Boonrawdprachanukul)	0.01373	0.12552	0.28842	0.46379	0.70740	0.42953	0.39187	0.12497	0.10215	0.30017	0.27323	0.00150	0.01438	0.03247	0.05220	0.07962	0.04980	0.04267	0.01449	0.01112	0.03480	0.02975
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00639	0.04854	0.10887	0.17502	0.26696	0.16893	0.18244	0.04915	0.04756	0.11805	0.12721	0.00059	0.00519	0.01212	0.01950	0.02974	0.01756	0.01697	0.00511	0.00442	0.01227	0.01183
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00639	0.04854	0.10887	0.17502	0.26696	0.16893	0.18244	0.04915	0.04756	0.11805	0.12721	0.00059	0.00519	0.01212	0.01950	0.02974	0.01756	0.01697	0.00511	0.00442	0.01227	0.01183
31	Wat Prachummit Bamrung School	0.01254	0.07426	0.20286	0.32679	0.49839	0.21992	0.35793	0.06399	0.09330	0.15369	0.24957	0.00061	0.00636	0.01395	0.02243	0.03421	0.02244	0.01730	0.00653	0.00451	0.01568	0.01206
32	Udom Wittayanukun School	0.00281	0.05034	0.07592	0.12135	0.18515	0.21449	0.08016	0.06241	0.02090	0.14990	0.05589	0.00022	0.00629	0.01103	0.01767	0.02695	0.02516	0.00622	0.00732	0.00162	0.01758	0.00434
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00214	0.03067	0.05728	0.09186	0.14014	0.11896	0.06118	0.03461	0.01595	0.08314	0.04266	0.00018	0.00335	0.00631	0.01012	0.01544	0.01293	0.00503	0.00376	0.00131	0.00904	0.00350
34	Wat Noen Kraprok School	0.00211	0.03071	0.05753	0.09228	0.14076	0.11892	0.06021	0.03460	0.01569	0.08310	0.04198	0.00018	0.00329	0.00621	0.00997	0.01521	0.01266	0.00503	0.00368	0.00131	0.00885	0.00351
35	Chonnabot Phatthana Kindergarten	0.00286	0.06253	0.09526	0.15230	0.23236	0.26541	0.08171	0.07722	0.02130	0.18548	0.05697	0.00027	0.00646	0.01164	0.01866	0.02846	0.02548	0.00765	0.00741	0.00199	0.01781	0.00533
36	Aksorn Business Administration Technological College	0.01089	0.14965	0.30391	0.48797	0.74433	0.55451	0.31082	0.16133	0.08102	0.38752	0.21672	0.00117	0.01471	0.03059	0.04913	0.07495	0.05375	0.03336	0.01564	0.00870	0.03756	0.02326
37	Banchang Karnchanakul Wittaya School	0.00446	0.10866	0.17346	0.27758	0.42349	0.45794	0.12740	0.13323	0.03321	0.32002	0.08883	0.00082	0.01992	0.03585	0.05746	0.08766	0.07870	0.02334	0.02290	0.00608	0.05500	0.01628

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00159	0.02153	0.04392	0.07053	0.10758	0.07955	0.04551	0.02314	0.01186	0.05559	0.03173	0.00014	0.00180	0.00373	0.00599	0.00913	0.00662	0.00400	0.00193	0.00104	0.00462	0.00279
39	Ban Phudon - Huai Mahat Child Development Center	0.00159	0.02153	0.04392	0.07053	0.10758	0.07955	0.04551	0.02314	0.01186	0.05559	0.03173	0.00014	0.00180	0.00373	0.00599	0.00913	0.00662	0.00400	0.00193	0.00104	0.00462	0.00279
40	Ban Map Fakthong School	0.00621	0.04833	0.10426	0.16754	0.25555	0.17257	0.17729	0.05021	0.04621	0.12060	0.12362	0.00037	0.00212	0.00588	0.00948	0.01445	0.00620	0.01055	0.00180	0.00275	0.00433	0.00736
41	Phuru Yor. Sor. Sor. 80 School	0.00699	0.04303	0.11553	0.18607	0.28379	0.15353	0.19953	0.04467	0.05201	0.10729	0.13912	0.00026	0.00192	0.00478	0.00769	0.01173	0.00617	0.00744	0.00180	0.00194	0.00431	0.00519
42	Khao Chi Chan School	0.00638	0.06170	0.12791	0.20544	0.31337	0.22587	0.18198	0.06572	0.04744	0.15785	0.12688	0.00040	0.00353	0.00822	0.01322	0.02017	0.01199	0.01143	0.00349	0.00298	0.00838	0.00797
43	Ban Khalot Child Development Center	0.01348	0.08441	0.22492	0.36224	0.55246	0.25599	0.38469	0.07448	0.10028	0.17890	0.26822	0.00087	0.00543	0.01445	0.02327	0.03549	0.01646	0.02469	0.00479	0.00644	0.01150	0.01722
44	Ban Khalot School	0.01398	0.08802	0.23397	0.37682	0.57470	0.26755	0.39893	0.07784	0.10399	0.18697	0.27815	0.00085	0.00526	0.01406	0.02264	0.03453	0.01592	0.02412	0.00463	0.00629	0.01112	0.01682
45	Phlu Ta Luang Wittaya School	0.02129	0.06200	0.23814	0.38496	0.58701	0.15930	0.60758	0.04635	0.15838	0.11133	0.42363	0.00123	0.00594	0.01790	0.02886	0.04402	0.01583	0.03517	0.00461	0.00917	0.01106	0.02452
46	Athittan Kindergarten School	0.01084	0.04015	0.13923	0.22475	0.34273	0.12058	0.30921	0.03508	0.08060	0.08427	0.21560	0.00087	0.00439	0.01294	0.02086	0.03181	0.01197	0.02490	0.00348	0.00649	0.00836	0.01736
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.01693	0.06931	0.20838	0.33598	0.51239	0.20566	0.48320	0.05983	0.12596	0.14372	0.33691	0.00121	0.00606	0.01793	0.02891	0.04408	0.01648	0.03460	0.00480	0.00902	0.01152	0.02412
48	Ban Khao Bai Si School	0.01147	0.06895	0.17741	0.28586	0.43596	0.27305	0.32729	0.07944	0.08532	0.19082	0.22820	0.00091	0.00594	0.01558	0.02508	0.03825	0.01826	0.02610	0.00531	0.00680	0.01276	0.01820
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00278	0.06211	0.09318	0.14894	0.22724	0.26513	0.07934	0.07714	0.02068	0.18529	0.05532	0.00022	0.00346	0.00677	0.01087	0.01658	0.01308	0.00620	0.00381	0.00162	0.00914	0.00432
50	Ban KM. 5 School	0.00502	0.03644	0.09100	0.14646	0.22338	0.11700	0.14325	0.03404	0.03734	0.08176	0.09988	0.00065	0.00447	0.01145	0.01843	0.02811	0.01407	0.01855	0.00409	0.00483	0.00983	0.01293
51	Royal Thai Fleet Sattahip District School	0.00413	0.03411	0.08010	0.12884	0.19651	0.11488	0.11792	0.03342	0.03074	0.08028	0.08222	0.00051	0.00392	0.00957	0.01540	0.02349	0.01280	0.01446	0.00372	0.00377	0.00895	0.01008
52	RTN. 8 Nursery	0.00585	0.03900	0.09236	0.14881	0.22695	0.13166	0.16702	0.03830	0.04354	0.09201	0.11645	0.00057	0.00394	0.01005	0.01617	0.02466	0.01244	0.01618	0.00362	0.00422	0.00869	0.01128
53	Juk Samet School	0.00584	0.03846	0.09231	0.14874	0.22684	0.12996	0.16677	0.03781	0.04347	0.09082	0.11628	0.00057	0.00393	0.01003	0.01615	0.02463	0.01241	0.01616	0.00361	0.00421	0.00867	0.01127
54	Juk Samet Child Development Center	0.00590	0.03738	0.09300	0.14985	0.22854	0.12653	0.16849	0.03681	0.04392	0.08842	0.11748	0.00057	0.00392	0.01002	0.01614	0.02461	0.01236	0.01619	0.00360	0.00422	0.00864	0.01129
55	Ban Chong Samaesarn Child Development Center	0.00426	0.03926	0.08096	0.13001	0.19832	0.14416	0.12149	0.04194	0.03167	0.10075	0.08471	0.00031	0.00300	0.00673	0.01082	0.01650	0.01042	0.00874	0.00303	0.00228	0.00728	0.00609
56	Samaesarn Subdistrict NFE Center	0.00463	0.03145	0.06937	0.11156	0.17016	0.12732	0.13221	0.03704	0.03446	0.08898	0.09218	0.00025	0.00262	0.00575	0.00925	0.01411	0.00927	0.00712	0.00270	0.00186	0.00648	0.00496
57	Ban Chong Samaesarn School	0.00472	0.03049	0.06895	0.11087	0.16911	0.12091	0.13459	0.03518	0.03508	0.08449	0.09384	0.00024	0.00259	0.00567	0.00911	0.01390	0.00918	0.00696	0.00267	0.00182	0.00641	0.00486
58	Wat Phala Vipassana Office	0.00782	0.06230	0.15050	0.24214	0.36932	0.20543	0.22321	0.05977	0.05818	0.14356	0.15563	0.00083	0.00716	0.01679	0.02700	0.04119	0.02415	0.02366	0.00703	0.00617	0.01688	0.01650
59	Wat Phala	0.00762	0.06288	0.14988	0.24111	0.36775	0.20948	0.21738	0.06095	0.05667	0.14639	0.15157	0.00079	0.00694	0.01616	0.02599	0.03964	0.02354	0.02248	0.00685	0.00586	0.01645	0.01567
60	Chao Li Hu Ong Yea Shrine	0.01082	0.09623	0.22325	0.35903	0.54761	0.32705	0.30875	0.09515	0.08048	0.22856	0.21527	0.00117	0.01348	0.02876	0.04621	0.07049	0.04846	0.03344	0.01410	0.00872	0.03387	0.02332
61	Wat Khlong Sai	0.01050	0.08819	0.20885	0.33595	0.51240	0.29519	0.29962	0.08588	0.07810	0.20629	0.20891	0.00084	0.00815	0.01836	0.02951	0.04501	0.02830	0.02398	0.00823	0.00625	0.01978	0.01672
62	Wat Khiri Pawanaram	0.00484	0.06524	0.13315	0.21380	0.32612	0.24106	0.13806	0.07014	0.03599	0.16846	0.09626	0.00052	0.00847	0.01649	0.02646	0.04037	0.03216	0.01480	0.00936	0.00386	0.02247	0.01032

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00372	0.06251	0.11773	0.18885	0.28808	0.24143	0.10624	0.07024	0.02769	0.16872	0.07407	0.00051	0.01001	0.01873	0.03004	0.04582	0.03878	0.01453	0.01128	0.00379	0.02710	0.01013
64	Ban Chang Church	0.00390	0.06598	0.11366	0.18208	0.27778	0.26606	0.11122	0.07741	0.02899	0.18593	0.07755	0.00054	0.01495	0.02638	0.04227	0.06448	0.05961	0.01547	0.01734	0.00403	0.04166	0.01079
65	Wat Ban Khlong Bang Phai	0.01681	0.11561	0.29599	0.47652	0.72677	0.36340	0.47969	0.10573	0.12504	0.25396	0.33446	0.00151	0.00735	0.02203	0.03552	0.05417	0.01969	0.04308	0.00573	0.01123	0.01376	0.03004
66	Admiral Prince Abhakara Kiartivongse Monument	0.01836	0.11781	0.29413	0.47340	0.72202	0.37828	0.52399	0.11006	0.13659	0.26435	0.36535	0.00177	0.00853	0.02569	0.04142	0.06317	0.02275	0.05043	0.00662	0.01315	0.01590	0.03517
67	Royal Thai Naval Air Division Naval Aviation Museum	0.01519	0.11792	0.28765	0.46285	0.70595	0.38584	0.43343	0.11226	0.11298	0.26964	0.30221	0.00184	0.00854	0.02619	0.04224	0.06441	0.02225	0.05237	0.00647	0.01365	0.01555	0.03651
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.01803	0.10320	0.23405	0.37630	0.57396	0.35642	0.51452	0.10370	0.13412	0.24908	0.35875	0.00235	0.00983	0.03190	0.05146	0.07848	0.02375	0.06713	0.00691	0.01750	0.01660	0.04680
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.03565	0.07764	0.37585	0.60798	0.92705	0.29194	1.01737	0.08494	0.26520	0.20402	0.70936	0.00345	0.01281	0.04441	0.07168	0.10931	0.02795	0.09859	0.00813	0.02570	0.01953	0.06874
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.04816	0.10679	0.51136	0.82711	1.26119	0.28754	1.37431	0.08366	0.35824	0.20095	0.95823	0.00442	0.01523	0.05509	0.08895	0.13564	0.03077	0.12620	0.00895	0.03290	0.02150	0.08799
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.03869	0.25217	0.57364	0.92233	1.40680	1.01100	1.10395	0.29415	0.28777	0.70653	0.76973	0.00707	0.05848	0.13930	0.22410	0.34180	0.19491	0.20184	0.05671	0.05261	0.13621	0.14073
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.03123	0.24900	0.53470	0.85914	1.31046	0.94871	0.89128	0.27602	0.23233	0.66300	0.62144	0.00608	0.05931	0.13330	0.21430	0.32687	0.20615	0.17348	0.05998	0.04522	0.14406	0.12096
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.03098	0.41805	0.75699	1.21357	1.85130	1.64676	0.88405	0.47912	0.23044	1.15082	0.61640	0.00555	0.06794	0.14240	0.22873	0.34889	0.24707	0.15841	0.07188	0.04129	0.17266	0.11045
74	Wat Sa Kaeo	0.03740	0.23656	0.43356	0.69519	1.06050	0.92631	1.06722	0.26951	0.27819	0.64735	0.74412	0.00656	0.02628	0.08723	0.14076	0.21465	0.06146	0.18708	0.01788	0.04877	0.04295	0.13044
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00594	0.06392	0.12895	0.20731	0.31621	0.26790	0.16950	0.07794	0.04418	0.18722	0.11818	0.00061	0.00979	0.01913	0.03070	0.04684	0.03705	0.01742	0.01078	0.00454	0.02589	0.01215
76	Wat Sombun Naram	0.02850	0.18906	0.33103	0.53420	0.81464	0.76411	0.81323	0.22231	0.21198	0.53399	0.56702	0.00356	0.02086	0.05728	0.09228	0.14073	0.06146	0.10171	0.01788	0.02651	0.04295	0.07091
77	Ban Chang Abundant Grace Church	0.01431	0.14832	0.23814	0.38108	0.58139	0.61657	0.40830	0.17939	0.10643	0.43089	0.28468	0.00236	0.02004	0.04727	0.07604	0.11598	0.06727	0.06736	0.01957	0.01756	0.04701	0.04697
78	Wat Samnak Kathon	0.00702	0.15282	0.23972	0.38346	0.58504	0.64127	0.20046	0.18657	0.05225	0.44814	0.13977	0.00107	0.01968	0.03734	0.05989	0.09136	0.07572	0.03057	0.02203	0.00797	0.05292	0.02132
79	Wat Suwan Rangsan	0.00520	0.10398	0.16211	0.25929	0.39559	0.43735	0.14825	0.12725	0.03864	0.30564	0.10337	0.00076	0.01467	0.02753	0.04416	0.06736	0.05676	0.02162	0.01651	0.00564	0.03967	0.01507
80	Wat Nong Bot	0.00475	0.04773	0.10625	0.17079	0.26050	0.16700	0.13556	0.04859	0.03534	0.11671	0.09452	0.00051	0.00703	0.01423	0.02285	0.03485	0.02608	0.01444	0.00759	0.00376	0.01822	0.01007
81	The Shrine of Luang Tia Chak Mak	0.00433	0.06968	0.12165	0.19506	0.29756	0.28502	0.12363	0.08292	0.03223	0.19918	0.08620	0.00069	0.01204	0.02306	0.03699	0.05643	0.04608	0.01956	0.01341	0.00510	0.03220	0.01364
82	Wat Chak Mak	0.00456	0.07503	0.13612	0.21823	0.33291	0.30475	0.13025	0.08867	0.03395	0.21297	0.09082	0.00071	0.01253	0.02394	0.03841	0.05860	0.04803	0.02014	0.01397	0.00525	0.03356	0.01404

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Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00537	0.04799	0.11113	0.17872	0.27259	0.16329	0.15320	0.04751	0.03993	0.11411	0.10682	0.00057	0.00485	0.01143	0.01838	0.02803	0.01632	0.01622	0.00475	0.00423	0.01141	0.01131
84	The Shrine of King Taksin the Great (Ban Chang)	0.00537	0.04820	0.11144	0.17922	0.27335	0.16422	0.15316	0.04778	0.03992	0.11477	0.10679	0.00057	0.00489	0.01147	0.01845	0.02814	0.01648	0.01618	0.00480	0.00422	0.01152	0.01128
85	Wat Chonthararam (Phayun)	0.00635	0.05660	0.13123	0.21104	0.32189	0.19243	0.18130	0.05599	0.04726	0.13448	0.12641	0.00063	0.00518	0.01240	0.01995	0.03042	0.01722	0.01810	0.00501	0.00472	0.01203	0.01262
86	Masjid Dawatul Islam	0.00896	0.17158	0.32271	0.51764	0.78963	0.66312	0.25564	0.19293	0.06664	0.46342	0.17824	0.00118	0.01891	0.03700	0.05938	0.09057	0.07158	0.03376	0.02083	0.00880	0.05002	0.02354
87	Chinese shrine at the Buddha Dhamma Foundation	0.01939	0.14546	0.35958	0.57868	0.88260	0.47087	0.55330	0.13700	0.14423	0.32906	0.38578	0.00164	0.01584	0.03570	0.05739	0.08753	0.05493	0.04672	0.01598	0.01218	0.03839	0.03258
88	The Shrine of Luang Tia Ban Chang	0.01076	0.12087	0.24225	0.38890	0.59323	0.45130	0.30694	0.13130	0.08001	0.31538	0.21401	0.00118	0.01460	0.03053	0.04904	0.07480	0.05319	0.03374	0.01548	0.00879	0.03717	0.02352
89	The Shrine of Laoia Guan Yu Ban Chang	0.01297	0.11820	0.26494	0.42592	0.64965	0.41157	0.37025	0.11975	0.09651	0.28763	0.25816	0.00144	0.01424	0.03185	0.05120	0.07810	0.04963	0.04108	0.01444	0.01071	0.03468	0.02864
90	Wat Ban Chang	0.01662	0.12379	0.30692	0.49394	0.75336	0.39979	0.47438	0.11632	0.12366	0.27939	0.33076	0.00172	0.01445	0.03421	0.05504	0.08394	0.04835	0.04909	0.01407	0.01280	0.03379	0.03423
91	Wat Prachummit Bamrung	0.01298	0.07263	0.20358	0.32803	0.50028	0.20961	0.37032	0.06099	0.09653	0.14649	0.25821	0.00062	0.00637	0.01409	0.02264	0.03454	0.02240	0.01772	0.00652	0.00462	0.01565	0.01236
92	The Shrine of Luang Tia Noen Kraprok 1	0.00709	0.09022	0.18702	0.30037	0.45817	0.33026	0.20228	0.09609	0.05273	0.23080	0.14104	0.00047	0.00760	0.01480	0.02376	0.03624	0.02885	0.01330	0.00839	0.00347	0.02016	0.00927
93	The Shrine of Luang Tia Noen Kraprok 2	0.00323	0.10844	0.16436	0.26275	0.40089	0.46112	0.09204	0.13416	0.02399	0.32225	0.06418	0.00029	0.00932	0.01609	0.02577	0.03931	0.03756	0.00823	0.01093	0.00215	0.02625	0.00574
94	Wat Noen Kraprok	0.00241	0.03332	0.06248	0.10022	0.15288	0.12895	0.06867	0.03752	0.01790	0.09012	0.04788	0.00019	0.00421	0.00773	0.01240	0.01891	0.01650	0.00551	0.00480	0.00144	0.01153	0.00384
95	Wat Phudon Nim Sanoh	0.00144	0.02164	0.04300	0.06902	0.10529	0.08122	0.04121	0.02363	0.01074	0.05676	0.02874	0.00014	0.00187	0.00384	0.00616	0.00940	0.00689	0.00403	0.00201	0.00105	0.00482	0.00281
96	Church of Christ Ban Chang	0.00190	0.02237	0.04741	0.07616	0.11617	0.08078	0.05422	0.02350	0.01413	0.05645	0.03780	0.00015	0.00191	0.00398	0.00640	0.00976	0.00697	0.00437	0.00203	0.00114	0.00487	0.00305
97	Anek Kusala Sala (Viharn Sien)	0.00673	0.05963	0.12963	0.20831	0.31774	0.21188	0.19210	0.06165	0.05007	0.14807	0.13394	0.00044	0.00265	0.00720	0.01160	0.01769	0.00790	0.01261	0.00230	0.00329	0.00552	0.00879
98	Wat Yan Nasangwararam	0.00710	0.04817	0.11758	0.18920	0.28857	0.16738	0.20251	0.04870	0.05279	0.11697	0.14120	0.00051	0.00299	0.00822	0.01325	0.02021	0.00882	0.01461	0.00257	0.00381	0.00616	0.01019
99	Sirisirirak Monastery	0.00505	0.06009	0.11128	0.17845	0.27222	0.23408	0.14416	0.06811	0.03758	0.16359	0.10052	0.00033	0.00374	0.00800	0.01285	0.01961	0.01345	0.00934	0.00391	0.00243	0.00940	0.00651
100	Anan Buraparam Meditation Center	0.00943	0.05383	0.11987	0.19351	0.29510	0.19242	0.26908	0.05598	0.07014	0.13447	0.18761	0.00044	0.00365	0.00867	0.01395	0.02128	0.01220	0.01251	0.00355	0.00326	0.00852	0.00872
101	Wat Map Fakthong	0.00585	0.04325	0.10755	0.17309	0.26400	0.15035	0.16699	0.04374	0.04353	0.10507	0.11644	0.00038	0.00256	0.00663	0.01067	0.01628	0.00797	0.01092	0.00232	0.00285	0.00557	0.00761
102	Khao Chi Chan Image of Lord Buddha	0.00127	0.01452	0.03107	0.04992	0.07614	0.05210	0.03637	0.01516	0.00948	0.03641	0.02536	0.00009	0.00087	0.00199	0.00319	0.00487	0.00298	0.00267	0.00087	0.00070	0.00209	0.00186
103	Wat Khao Chi Chan	0.00135	0.02781	0.04585	0.07341	0.11199	0.11671	0.03855	0.03396	0.01005	0.08156	0.02688	0.00011	0.00200	0.00377	0.00604	0.00922	0.00771	0.00301	0.00224	0.00079	0.00539	0.00210
104	Rat Samakkhi Temple	0.01401	0.08773	0.23374	0.37645	0.57415	0.26611	0.39972	0.07742	0.10419	0.18597	0.27870	0.00088	0.00546	0.01462	0.02354	0.03591	0.01649	0.02515	0.00480	0.00656	0.01153	0.01754
105	The Shrine of Chao Mae Kuan Im	0.01425	0.08923	0.23773	0.38287	0.58393	0.27066	0.40651	0.07875	0.10597	0.18915	0.28344	0.00083	0.00515	0.01376	0.02217	0.03381	0.01555	0.02366	0.00452	0.00617	0.01087	0.01649
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.01566	0.09929	0.26313	0.42376	0.64629	0.30265	0.44686	0.08806	0.11648	0.21151	0.31157	0.00094	0.00574	0.01546	0.02489	0.03797	0.01722	0.02680	0.00501	0.00699	0.01204	0.01869

Subject to changes and approval by the Government of Thailand

Draft Version

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00574	0.04191	0.10473	0.16857	0.25710	0.13446	0.16385	0.03912	0.04271	0.09396	0.11424	0.00068	0.00473	0.01206	0.01941	0.02961	0.01492	0.01942	0.00434	0.00506	0.01043	0.01354
108	KM.8 Meditation Center	0.00946	0.06169	0.16149	0.26005	0.39661	0.19013	0.26987	0.05532	0.07035	0.13287	0.18817	0.00071	0.00481	0.01238	0.01994	0.03041	0.01506	0.02021	0.00438	0.00527	0.01053	0.01409
109	Wat Rangsee Sunthorn (KM.5)	0.00490	0.03648	0.09045	0.14557	0.22203	0.11782	0.13981	0.03428	0.03644	0.08234	0.09748	0.00067	0.00456	0.01170	0.01883	0.02872	0.01433	0.01899	0.00417	0.00495	0.01002	0.01324
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00178	0.01984	0.04272	0.06864	0.10470	0.07092	0.05073	0.02063	0.01322	0.04956	0.03537	0.00007	0.00083	0.00177	0.00285	0.00434	0.00301	0.00204	0.00088	0.00053	0.00210	0.00142
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00209	0.02184	0.04800	0.07715	0.11767	0.08083	0.05961	0.02352	0.01554	0.05649	0.04156	0.00009	0.00112	0.00232	0.00373	0.00569	0.00413	0.00249	0.00120	0.00065	0.00288	0.00174
112	Wat Tung Prong	0.00165	0.01927	0.03864	0.06209	0.09471	0.07341	0.04718	0.02136	0.01230	0.05130	0.03290	0.00007	0.00087	0.00183	0.00293	0.00447	0.00319	0.00201	0.00093	0.00052	0.00223	0.00140
113	Khao Phlu Ta Luang Meditation Center	0.00089	0.01122	0.02200	0.03530	0.05385	0.04239	0.02528	0.01233	0.00659	0.02963	0.01763	0.00004	0.00047	0.00102	0.00163	0.00249	0.00170	0.00120	0.00049	0.00031	0.00119	0.00083
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.01694	0.06060	0.17623	0.28507	0.43467	0.21037	0.48335	0.06121	0.12600	0.14701	0.33702	0.00161	0.00608	0.02088	0.03371	0.05140	0.01344	0.04606	0.00391	0.01201	0.00939	0.03212
115	Wat Khao Bai Si Santitham	0.01975	0.08164	0.25030	0.40408	0.61620	0.24793	0.56359	0.07213	0.14691	0.17326	0.39296	0.00162	0.00717	0.02258	0.03642	0.05554	0.01803	0.04630	0.00525	0.01207	0.01260	0.03228
116	Welu Amphawan Vipassana Office	0.01401	0.07919	0.20337	0.32790	0.50006	0.26309	0.39991	0.07654	0.10424	0.18386	0.27884	0.00125	0.00688	0.01942	0.03129	0.04772	0.01971	0.03561	0.00573	0.00928	0.01377	0.02483
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00679	0.05393	0.13039	0.20980	0.31999	0.17770	0.19368	0.05170	0.05049	0.12418	0.13504	0.00052	0.00411	0.00999	0.01607	0.02451	0.01350	0.01494	0.00393	0.00389	0.00944	0.01041
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00646	0.04022	0.10290	0.16579	0.25285	0.12994	0.18442	0.03780	0.04807	0.09080	0.12858	0.00068	0.00477	0.01211	0.01949	0.02973	0.01509	0.01939	0.00439	0.00505	0.01055	0.01352
119	Samaesarn Pattanakarn Church	0.00595	0.04245	0.09612	0.15454	0.23572	0.14678	0.16971	0.04270	0.04424	0.10257	0.11833	0.00055	0.00408	0.01012	0.01629	0.02484	0.01317	0.01566	0.00383	0.00408	0.00920	0.01092
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00549	0.04058	0.09272	0.14908	0.22739	0.13943	0.15671	0.04057	0.04085	0.09744	0.10927	0.00034	0.00310	0.00714	0.01148	0.01751	0.01059	0.00974	0.00308	0.00254	0.00740	0.00679
121	Wat Chong Samaesarn	0.00465	0.03208	0.07001	0.11261	0.17176	0.12935	0.13258	0.03763	0.03456	0.09039	0.09244	0.00025	0.00265	0.00582	0.00936	0.01427	0.00935	0.00723	0.00272	0.00188	0.00654	0.00504
122	Viharn Luang Por Dam	0.00351	0.03239	0.07174	0.11531	0.17589	0.11370	0.10009	0.03308	0.02609	0.07946	0.06979	0.00020	0.00207	0.00458	0.00736	0.01122	0.00726	0.00577	0.00211	0.00150	0.00508	0.00402
123	The Shrine of King Taksin the Great (Samaesarn)	0.00472	0.04231	0.09789	0.15742	0.24011	0.14410	0.13468	0.04193	0.03511	0.10070	0.09391	0.00036	0.00330	0.00755	0.01213	0.01851	0.01133	0.01016	0.00330	0.00265	0.00792	0.00708
124	Thai Island and Sea Natural History Museum	0.00438	0.04132	0.09391	0.15099	0.23029	0.14249	0.12494	0.04146	0.03257	0.09958	0.08712	0.00034	0.00322	0.00728	0.01170	0.01785	0.01116	0.00957	0.00325	0.00249	0.00780	0.00667
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00511	0.03955	0.09659	0.15543	0.23707	0.12930	0.14581	0.03762	0.03801	0.09036	0.10167	0.00036	0.00340	0.00776	0.01248	0.01903	0.01170	0.01039	0.00341	0.00271	0.00818	0.00725

Subject to changes and approval by the Government of Thailand

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00516	0.04139	0.09974	0.16047	0.24475	0.13671	0.14736	0.03978	0.03841	0.09554	0.10274	0.00037	0.00340	0.00780	0.01255	0.01914	0.01166	0.01056	0.00339	0.00275	0.00815	0.00736
127	Eastern-Nong Muang Community Health Service Center	0.04550	0.15725	0.50627	0.81845	1.24802	0.59929	1.29849	0.17436	0.33848	0.41881	0.90537	0.00480	0.03742	0.09116	0.14669	0.22373	0.12256	0.13709	0.03566	0.03573	0.08565	0.09558
128	Phala Subdistrict Health Promotion Hospital	0.00840	0.07122	0.16812	0.27042	0.41245	0.23897	0.23983	0.06953	0.06252	0.16700	0.16722	0.00081	0.00734	0.01693	0.02723	0.04154	0.02504	0.02318	0.00729	0.00604	0.01750	0.01616
129	Ban Chang Hospital	0.00297	0.04667	0.09164	0.14709	0.22437	0.17624	0.08469	0.05128	0.02208	0.12317	0.05905	0.00034	0.00514	0.01018	0.01634	0.02493	0.01934	0.00965	0.00563	0.00252	0.01352	0.00673
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.01850	0.06231	0.19309	0.31239	0.47633	0.22684	0.52802	0.06600	0.13764	0.15853	0.36816	0.00191	0.00837	0.02652	0.04278	0.06524	0.02092	0.05465	0.00609	0.01424	0.01462	0.03810
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.02571	0.20375	0.49104	0.79002	1.20496	0.67300	0.73360	0.19581	0.19123	0.47032	0.51150	0.00447	0.01890	0.06092	0.09827	0.14987	0.04613	0.12743	0.01342	0.03322	0.03224	0.08885
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.04092	0.21977	0.43093	0.69616	1.06157	0.90683	1.16777	0.26384	0.30440	0.63373	0.81422	0.00498	0.02471	0.07335	0.11826	0.18035	0.06696	0.14202	0.01948	0.03702	0.04679	0.09902
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00507	0.16816	0.25965	0.41522	0.63350	0.71003	0.14462	0.20658	0.03770	0.49620	0.10083	0.00087	0.01861	0.03426	0.05494	0.08381	0.07270	0.02484	0.02115	0.00647	0.05081	0.01732
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.01127	0.19817	0.30472	0.48727	0.74342	0.83810	0.32148	0.24384	0.08380	0.58569	0.22415	0.00181	0.02013	0.04340	0.06974	0.10637	0.07191	0.05168	0.02092	0.01347	0.05025	0.03603
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00491	0.07257	0.11530	0.18450	0.28148	0.30486	0.14003	0.08870	0.03650	0.21305	0.09763	0.00071	0.01140	0.02229	0.03577	0.05456	0.04318	0.02027	0.01256	0.00528	0.03018	0.01413
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00607	0.05472	0.12636	0.20320	0.30993	0.18660	0.17326	0.05429	0.04516	0.13040	0.12080	0.00062	0.00515	0.01223	0.01967	0.03000	0.01721	0.01761	0.00501	0.00459	0.01203	0.01228
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00257	0.08273	0.12572	0.20100	0.30666	0.35144	0.07339	0.10225	0.01913	0.24560	0.05117	0.00024	0.00756	0.01307	0.02094	0.03194	0.03041	0.00679	0.00885	0.00177	0.02125	0.00473
138	Phudon Huai Mahat Community Health Service Unit	0.00171	0.02288	0.04678	0.07512	0.11458	0.08446	0.04874	0.02457	0.01270	0.05903	0.03398	0.00015	0.00198	0.00409	0.00656	0.01001	0.00728	0.00436	0.00212	0.00114	0.00509	0.00304
139	Wat Yan Nasangwararam Hospital	0.00645	0.05516	0.11218	0.18062	0.27547	0.20817	0.18412	0.06057	0.04799	0.14548	0.12838	0.00046	0.00282	0.00762	0.01228	0.01872	0.00847	0.01325	0.00246	0.00345	0.00592	0.00924
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00635	0.05396	0.11189	0.18012	0.27472	0.20434	0.18119	0.05945	0.04723	0.14280	0.12633	0.00047	0.00282	0.00762	0.01228	0.01873	0.00841	0.01331	0.00245	0.00347	0.00588	0.00928
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00249	0.08358	0.12938	0.20691	0.31569	0.35253	0.07109	0.10257	0.01853	0.24636	0.04957	0.00017	0.00392	0.00712	0.01141	0.01741	0.01543	0.00483	0.00449	0.00126	0.01079	0.00337

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.01495	0.09713	0.25469	0.41012	0.62549	0.29893	0.42653	0.08697	0.11118	0.20891	0.29739	0.00093	0.00572	0.01533	0.02470	0.03767	0.01728	0.02640	0.00503	0.00688	0.01207	0.01841
143	Sattahip Hospital KM.10	0.01066	0.08233	0.20123	0.32381	0.49388	0.26897	0.30417	0.07826	0.07929	0.18797	0.21208	0.00072	0.00448	0.01198	0.01929	0.02943	0.01357	0.02056	0.00395	0.00536	0.00948	0.01433
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00466	0.03097	0.06903	0.11101	0.16932	0.12580	0.13297	0.03660	0.03466	0.08791	0.09271	0.00025	0.00261	0.00572	0.00920	0.01403	0.00923	0.00706	0.00269	0.00184	0.00645	0.00493
145	Village No. 1 Ban Sakulthong	0.00359	0.05225	0.10459	0.16790	0.25612	0.20029	0.10258	0.05827	0.02674	0.13997	0.07152	0.00050	0.00935	0.01770	0.02839	0.04330	0.03601	0.01438	0.01048	0.00375	0.02516	0.01002
146	Village No. 2, Ban Kilo 16	0.01398	0.09326	0.24184	0.38939	0.59388	0.28988	0.39898	0.08434	0.10400	0.20258	0.27818	0.00123	0.01250	0.02773	0.04458	0.06799	0.04386	0.03512	0.01276	0.00915	0.03065	0.02449
147	Village No. 4, Ban Tung Prong	0.01124	0.10766	0.22829	0.36675	0.55941	0.38871	0.32076	0.11309	0.08361	0.27164	0.22365	0.00147	0.01926	0.03960	0.06359	0.09700	0.07088	0.04187	0.02062	0.01092	0.04953	0.02920
148	Village No. 5, Phala Subdistrict	0.01137	0.09047	0.21865	0.35179	0.53656	0.29817	0.32457	0.08675	0.08461	0.20837	0.22631	0.00113	0.01403	0.02930	0.04706	0.07179	0.05113	0.03230	0.01488	0.00842	0.03573	0.02252
149	Village No. 6, Ban Takat	0.00824	0.07235	0.16862	0.27119	0.41364	0.24510	0.23513	0.07131	0.06129	0.17128	0.16395	0.00077	0.00714	0.01633	0.02626	0.04006	0.02450	0.02201	0.00713	0.00574	0.01712	0.01535
150	Village No. 7, Ban Khlong Sai	0.01095	0.08868	0.21285	0.34243	0.52229	0.29381	0.31240	0.08548	0.08143	0.20533	0.21782	0.00103	0.01158	0.02491	0.04002	0.06105	0.04142	0.02951	0.01205	0.00769	0.02895	0.02057
151	Village No. 1 Ban Sam Nak Thon	0.03021	0.12783	0.37524	0.60590	0.92397	0.53463	0.86203	0.15555	0.22470	0.37362	0.60105	0.00310	0.02349	0.05787	0.09312	0.14203	0.07627	0.08855	0.02219	0.02308	0.05330	0.06174
152	Village No. 2, Ban Chak Mak	0.00605	0.12211	0.19301	0.30878	0.47109	0.51481	0.17276	0.14978	0.04503	0.35977	0.12046	0.00092	0.01593	0.03063	0.04915	0.07498	0.06083	0.02639	0.01770	0.00688	0.04251	0.01840
153	Village No. 3, Ban Sa Kaeo	0.15724	0.29716	1.59226	2.57693	3.92922	1.17372	4.48706	0.34149	1.16964	0.82024	3.12858	0.01337	0.05455	0.17931	0.28932	0.44121	0.12939	0.38150	0.03765	0.09945	0.09042	0.26600
154	Sa Kaeo Community 1	0.05397	0.24439	0.55477	0.89768	1.36876	0.97946	1.54010	0.28497	0.40146	0.68449	1.07383	0.00687	0.02768	0.09162	0.14783	0.22544	0.06500	0.19604	0.01891	0.05110	0.04542	0.13669
155	Sa Kaeo Community 2	0.03830	0.20328	0.58421	0.94156	1.43596	0.57132	1.09295	0.16622	0.28490	0.39926	0.76206	0.00418	0.01719	0.05627	0.09078	0.13845	0.04100	0.11931	0.01193	0.03110	0.02865	0.08319
156	Village No. 4, Ban Khlong Bang Phai	0.04247	0.10427	0.46606	0.75355	1.14905	0.23263	1.21185	0.06768	0.31589	0.16257	0.84496	0.00324	0.01231	0.04211	0.06796	0.10363	0.02748	0.09249	0.00800	0.02411	0.01920	0.06449
157	Village No. 5, Ban Yai Ra	0.00445	0.03990	0.09227	0.14839	0.22633	0.13592	0.12687	0.03954	0.03307	0.09498	0.08846	0.00043	0.00593	0.01203	0.01932	0.02947	0.02200	0.01226	0.00640	0.00320	0.01537	0.00855
158	Village No. 6, Ban Khao Khrok	0.08252	0.19551	0.89497	1.44725	2.20681	0.64068	2.35481	0.18640	0.61382	0.44773	1.64188	0.00645	0.03332	0.09703	0.15641	0.23853	0.09231	0.18412	0.02686	0.04800	0.06451	0.12838
159	Village no. 7, Ban Nong Takhian	0.00479	0.08077	0.13803	0.22128	0.33756	0.33146	0.13657	0.09644	0.03560	0.23164	0.09522	0.00078	0.01410	0.02680	0.04300	0.06559	0.05419	0.02212	0.01577	0.00577	0.03787	0.01542
160	Village No. 8, Ban Cherng Khao	0.00802	0.45583	0.69594	1.11271	1.69767	1.93303	0.22900	0.56241	0.05969	1.35088	0.15967	0.00123	0.06185	0.10179	0.16294	0.24859	0.25447	0.03524	0.07404	0.00919	0.17783	0.02457
161	Eastern-Nong Muang Community	0.01190	0.12515	0.26973	0.43342	0.66110	0.47037	0.33945	0.13685	0.08848	0.32871	0.23668	0.00175	0.02415	0.04900	0.07868	0.12002	0.08951	0.05002	0.02604	0.01304	0.06255	0.03488
162	Wat Khiri Pawanaram Community	0.00645	0.35747	0.54968	0.87898	1.34106	1.51173	0.18398	0.43983	0.04796	1.05646	0.12828	0.00107	0.04973	0.08238	0.13189	0.20121	0.20404	0.03043	0.05936	0.00793	0.14259	0.02122
163	Ban Chang-Phala Community	0.00579	0.34962	0.52615	0.84104	1.28319	1.49071	0.16519	0.43372	0.04306	1.04177	0.11518	0.00100	0.04913	0.08097	0.12962	0.19774	0.20205	0.02840	0.05878	0.00740	0.14120	0.01980
164	Ruam Sompong Community	0.00616	0.07195	0.14668	0.23553	0.35926	0.26901	0.17586	0.07827	0.04584	0.18799	0.12262	0.00112	0.01038	0.02375	0.03819	0.05825	0.03561	0.03203	0.01036	0.00835	0.02488	0.02233
165	Ming Mongkol Community	0.00585	0.27428	0.42989	0.68764	1.04912	1.15129	0.16692	0.33496	0.04351	0.80457	0.11638	0.00079	0.02387	0.04158	0.06662	0.10164	0.09578	0.02259	0.02787	0.00589	0.06693	0.01575
166	Jor Koo Community	0.00617	0.27510	0.42924	0.68655	1.04745	1.15681	0.17605	0.33657	0.04589	0.80843	0.12275	0.00079	0.02467	0.04281	0.06858	0.10462	0.09919	0.02266	0.02886	0.00591	0.06932	0.01580

Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00568	0.41172	0.62991	1.00717	1.53665	1.74459	0.16215	0.50758	0.04227	1.21919	0.11305	0.00073	0.02810	0.04750	0.07608	0.11606	0.11427	0.02094	0.03325	0.00546	0.07986	0.01460
168	Thep Chinda Community	0.00647	0.25563	0.41056	0.65699	1.00233	1.06252	0.18462	0.30913	0.04813	0.74253	0.12873	0.00087	0.02315	0.04111	0.06588	0.10050	0.09207	0.02495	0.02679	0.00650	0.06434	0.01739
169	Health Park Community	0.01817	0.06618	0.19424	0.31415	0.47903	0.23248	0.51843	0.06764	0.13514	0.16247	0.36147	0.00142	0.01113	0.02708	0.04358	0.06647	0.03649	0.04064	0.01062	0.01059	0.02550	0.02834
170	Wat Ban Chang Community	0.01641	0.12961	0.31407	0.50533	0.77074	0.42627	0.46825	0.12402	0.12206	0.29789	0.32648	0.00165	0.01467	0.03407	0.05478	0.08356	0.04981	0.04720	0.01449	0.01230	0.03481	0.03291
171	Dong Dang Community	0.00657	0.23245	0.38823	0.62164	0.94837	0.95036	0.18740	0.27650	0.04885	0.66415	0.13066	0.00094	0.02074	0.03798	0.06089	0.09289	0.08123	0.02688	0.02363	0.00701	0.05677	0.01874
172	Night Market Community	0.01494	0.10846	0.26231	0.42205	0.64372	0.35725	0.42644	0.10394	0.11116	0.24966	0.29733	0.00157	0.01274	0.03056	0.04916	0.07498	0.04226	0.04477	0.01230	0.01167	0.02953	0.03121
173	Ruam Mitr Community	0.02136	0.14668	0.37576	0.60494	0.92264	0.46083	0.60948	0.13408	0.15887	0.32205	0.42496	0.00170	0.01584	0.03616	0.05814	0.08867	0.05447	0.04850	0.01585	0.01264	0.03806	0.03382
174	Ban Chang - Noen Kraprok Community	0.01639	0.05723	0.19294	0.31172	0.47535	0.18923	0.46769	0.05506	0.12191	0.13224	0.32610	0.00109	0.00946	0.02212	0.03558	0.05427	0.03194	0.03107	0.00929	0.00810	0.02232	0.02166
175	Dao Pitak Community	0.00990	0.09766	0.19590	0.31450	0.47974	0.36448	0.28260	0.10604	0.07366	0.25471	0.19704	0.00098	0.01193	0.02506	0.04025	0.06140	0.04334	0.02801	0.01261	0.00730	0.03029	0.01953
176	Taiwa Community	0.00334	0.13227	0.20044	0.32043	0.48888	0.56254	0.09528	0.16367	0.02484	0.39312	0.06644	0.00032	0.01024	0.01769	0.02834	0.04324	0.04123	0.00913	0.01200	0.00238	0.02881	0.00637
177	East Ban Noen Kraprok Community, Prachummit	0.01305	0.06766	0.19666	0.31698	0.48342	0.18779	0.37245	0.05464	0.09709	0.13124	0.25969	0.00062	0.00603	0.01354	0.02177	0.03320	0.02094	0.01762	0.00609	0.00459	0.01463	0.01229
178	Ban Noen Kraprok Community	0.00292	0.06191	0.09346	0.14941	0.22795	0.26366	0.08332	0.07671	0.02172	0.18425	0.05809	0.00024	0.00694	0.01214	0.01946	0.02968	0.02780	0.00676	0.00809	0.00176	0.01943	0.00472
179	Nong Yai Community	0.00270	0.11255	0.18241	0.29202	0.44551	0.47629	0.07705	0.13858	0.02008	0.33285	0.05372	0.00031	0.00907	0.01587	0.02542	0.03878	0.03630	0.00887	0.01056	0.00231	0.02537	0.00618
180	Village No. 1, Pan Din Tai	0.01240	0.06759	0.19181	0.30910	0.47140	0.19257	0.35384	0.05603	0.09224	0.13457	0.24671	0.00059	0.00577	0.01294	0.02080	0.03173	0.02008	0.01677	0.00584	0.00437	0.01404	0.01169
181	Village No. 2, Ban Prachummit	0.01073	0.04765	0.10998	0.17797	0.27136	0.16433	0.30612	0.04781	0.07980	0.11484	0.21344	0.00088	0.00727	0.01730	0.02783	0.04245	0.02426	0.02502	0.00706	0.00652	0.01695	0.01744
182	Village No. 3, Ban Noen Samre	0.00306	0.05524	0.10300	0.16520	0.25200	0.21443	0.08722	0.06239	0.02274	0.14985	0.06081	0.00053	0.01189	0.02171	0.03481	0.05310	0.04663	0.01517	0.01357	0.00396	0.03259	0.01058
183	Village No. 4, Ban Phayun	0.00654	0.06894	0.14001	0.22480	0.34291	0.25547	0.18659	0.07433	0.04864	0.17853	0.13010	0.00105	0.00989	0.02252	0.03621	0.05523	0.03409	0.03005	0.00992	0.00783	0.02382	0.02095
184	Village No. 6, Ban Noen Kraprok	0.00189	0.02629	0.05321	0.08543	0.13032	0.09763	0.05388	0.02840	0.01404	0.06822	0.03757	0.00018	0.00281	0.00552	0.00887	0.01352	0.01059	0.00513	0.00308	0.00134	0.00740	0.00358
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00181	0.02334	0.04822	0.07744	0.11813	0.08559	0.05172	0.02490	0.01348	0.05981	0.03606	0.00016	0.00203	0.00420	0.00675	0.01030	0.00746	0.00451	0.00217	0.00118	0.00521	0.00315
186	Village No. 11, Ban Map Fakthong	0.02975	0.13214	0.34977	0.56511	0.86173	0.51770	0.84888	0.15062	0.22128	0.36179	0.59188	0.00258	0.01549	0.04204	0.06773	0.10329	0.04618	0.07359	0.01344	0.01918	0.03227	0.05131
187	Village No. 13, Ban Nong Phakkut	0.00510	0.10128	0.17427	0.27919	0.42592	0.42729	0.14547	0.12432	0.03792	0.29861	0.10143	0.00077	0.01091	0.02200	0.03532	0.05388	0.04060	0.02205	0.01181	0.00575	0.02837	0.01537
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.01034	0.05650	0.16014	0.25806	0.39356	0.21188	0.29500	0.06165	0.07690	0.14807	0.20569	0.00039	0.00261	0.00679	0.01094	0.01668	0.00810	0.01126	0.00236	0.00293	0.00566	0.00785
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00229	0.12200	0.18418	0.29442	0.44920	0.51959	0.06532	0.15117	0.01703	0.36311	0.04554	0.00017	0.00363	0.00669	0.01073	0.01636	0.01419	0.00485	0.00413	0.00127	0.00992	0.00338
190	Village No. 6 (Ban Khao Krating Community)	0.00251	0.05063	0.07684	0.12285	0.18743	0.21520	0.07154	0.06261	0.01865	0.15039	0.04988	0.00012	0.00347	0.00611	0.00980	0.01495	0.01384	0.00356	0.00403	0.00093	0.00967	0.00248

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Table 5.2-57Acetaldehyde emission forecast, operation phase

Area		Acetaldehyde concentration (micrograms per cubic meters)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00301	0.12125	0.18711	0.29922	0.45652	0.51206	0.08577	0.14898	0.02236	0.35785	0.05980	0.00024	0.00696	0.01222	0.01959	0.02988	0.02784	0.00695	0.00810	0.00181	0.01946	0.00485
192	Village No. 11 (Ban Khong Wanphen Community)	0.01645	0.05965	0.20101	0.32462	0.49502	0.17974	0.46930	0.05229	0.12233	0.12561	0.32722	0.00084	0.00491	0.01348	0.02171	0.03311	0.01450	0.02389	0.00422	0.00623	0.01013	0.01666
193	Village No. 1, Ban Phlu Ta Luang	0.01417	0.08812	0.23551	0.37931	0.57850	0.26647	0.40439	0.07753	0.10541	0.18622	0.28196	0.00088	0.00558	0.01482	0.02387	0.03640	0.01697	0.02524	0.00494	0.00658	0.01186	0.01760
194	Village No. 2, Ban Khalot	0.01345	0.08736	0.22913	0.36896	0.56272	0.26881	0.38384	0.07821	0.10006	0.18786	0.26763	0.00085	0.00496	0.01362	0.02194	0.03346	0.01463	0.02416	0.00426	0.00630	0.01022	0.01685
195	Village No. 3, Ban Khlong Phai	0.00884	0.05913	0.13613	0.21891	0.33389	0.20208	0.25235	0.05879	0.06578	0.14122	0.17595	0.00096	0.00517	0.01477	0.02381	0.03631	0.01461	0.02747	0.00425	0.00716	0.01021	0.01916
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.01275	0.05287	0.13543	0.21906	0.33403	0.18302	0.36378	0.05325	0.09482	0.12790	0.25364	0.00089	0.00441	0.01313	0.02116	0.03227	0.01193	0.02546	0.00347	0.00664	0.00834	0.01775
197	Village No. 5, Ban Khao Bai Si	0.01385	0.05431	0.14952	0.24180	0.36871	0.17556	0.39533	0.05108	0.10305	0.12269	0.27564	0.00122	0.00611	0.01809	0.02917	0.04449	0.01662	0.03493	0.00483	0.00911	0.01161	0.02436
198	Village No. 6, Ban Khao Tabaek	0.00935	0.06074	0.15929	0.25650	0.39121	0.18691	0.26682	0.05438	0.06955	0.13062	0.18604	0.00067	0.00460	0.01179	0.01899	0.02896	0.01444	0.01915	0.00420	0.00499	0.01009	0.01335
199	Village No. 7, Ban Nong Ya Noi	0.00594	0.04253	0.10714	0.17245	0.26302	0.13557	0.16958	0.03944	0.04421	0.09474	0.11824	0.00068	0.00472	0.01203	0.01936	0.02953	0.01493	0.01933	0.00434	0.00504	0.01043	0.01348
200	Village No. 8, Ban Nong Ya	0.00345	0.07699	0.11554	0.18468	0.28178	0.32863	0.09844	0.09561	0.02566	0.22966	0.06864	0.00017	0.00472	0.00830	0.01330	0.02029	0.01883	0.00479	0.00548	0.00125	0.01316	0.00334
201	Ban Nong Krachong Community	0.00666	0.03745	0.10478	0.16883	0.25748	0.13322	0.19017	0.03876	0.04957	0.09310	0.13260	0.00049	0.00390	0.00940	0.01512	0.02306	0.01289	0.01388	0.00375	0.00362	0.00901	0.00968
Standard*		860*											9**										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Surveillance range values of acetaldehyde within 24 hours, as referenced from Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours.
** Acetaldehyde concentrations allowed for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS : USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

Subject to changes and approval by the Government of Thailand

2.2) Acrolein

From the acrolein emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values, it was found that the highest 24-hour average concentration values (Cmax) in all scenarios occurred outside of the project area to the north. However, most of the highest 1-year average maximum concentration values (Cmax) occurred within the project area (in the U-Tapao International Airport vicinity). Most 24-hour average maximum concentration values for all scenarios exceeded Thai surveillance ranges for volatile organic compounds in the general atmosphere in 24 hours, which determine that values must not exceed 0.55 micrograms per meter in accordance with the Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours. Also, when comparing with the 1-year average maximum concentration value (Cmax) with foreign standard reference ranges of acrolein concentrations allowed for long-term exposure without affecting health (Reference Concentration; RfC for Acrolein is equal to 0.02 micrograms per cubic meter), it was found that they were also above such ranges.

When comparing the 24-hour and 1-year maximum concentration values for acrolein in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest acrolein 24-hour average maximum concentration value, comprising 3.74980 micrograms per cubic meter. Scenario 5 (Worst Cast Scenario (Peak Hour)) had the highest 1-year average maximum concentration value, comprising 0.32617 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), the acrolein 24-hour average and 1-year average concentration was the lowest, comprising 0.09144 and 0.00956 micrograms per cubic meters, respectively.

In this regard, when considering the acrolein concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-58 and Addendum 5-3, item 7, acrolein concentration contours (Figure 7-1 to Figure 7-22), it was found that some acrolein concentration values were above the 24-hour surveillance range and most were above the allowed values for long-term exposure without affecting health (RfC).

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.09144	0.87310	1.32903	2.13218	3.26114	3.74980	2.73880	1.08003	0.70841	2.61458	1.90523	0.00956	0.06769	0.13165	0.21334	0.32617	0.28140	0.28638	0.08105	0.07408	0.19621	0.19922
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	719692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.01128	0.07337	0.19702	0.31859	0.48714	0.22676	0.33778	0.06531	0.08737	0.15811	0.23498	0.00085	0.00496	0.01396	0.02258	0.03453	0.01467	0.02534	0.00422	0.00655	0.01023	0.01763
2	Wat Phala School	0.00436	0.03671	0.08878	0.14340	0.21928	0.12361	0.13069	0.03560	0.03381	0.08619	0.09092	0.00045	0.00407	0.00956	0.01543	0.02360	0.01397	0.01340	0.00402	0.00347	0.00974	0.00932
3	Phala Subdistrict Municipality Child Development Center	0.00392	0.03392	0.08116	0.13108	0.20043	0.11513	0.11735	0.03316	0.03035	0.08027	0.08163	0.00042	0.00382	0.00896	0.01447	0.02212	0.01316	0.01250	0.00379	0.00323	0.00918	0.00869
4	Ban Khlong Sai School	0.00494	0.04684	0.10848	0.17513	0.26779	0.16269	0.14798	0.04686	0.03828	0.11344	0.10294	0.00040	0.00402	0.00911	0.01471	0.02249	0.01416	0.01193	0.00408	0.00309	0.00987	0.00830
5	Rayong English Program School	0.00559	0.04439	0.10976	0.17732	0.27114	0.14700	0.16740	0.04234	0.04330	0.10250	0.11645	0.00045	0.00460	0.01037	0.01673	0.02559	0.01629	0.01340	0.00469	0.00347	0.01136	0.00932
6	Rayong Garden International School	0.00530	0.04506	0.10854	0.17530	0.26804	0.15215	0.15873	0.04382	0.04106	0.10609	0.11042	0.00044	0.00451	0.01017	0.01642	0.02510	0.01592	0.01321	0.00459	0.00342	0.01110	0.00919
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00292	0.04745	0.09176	0.14778	0.22599	0.18357	0.08759	0.05287	0.02266	0.12799	0.06093	0.00038	0.00854	0.01581	0.02545	0.03892	0.03377	0.01148	0.00973	0.00297	0.02354	0.00798
8	Wat Khiri Pawanaram School	0.00290	0.04511	0.08783	0.14147	0.21635	0.17389	0.08684	0.05008	0.02246	0.12125	0.06041	0.00037	0.00765	0.01433	0.02307	0.03529	0.03008	0.01094	0.00866	0.00283	0.02097	0.00761
9	Ban Khlong Bang Phai School	0.00898	0.06286	0.16362	0.26448	0.40441	0.19968	0.26909	0.05751	0.06960	0.13923	0.18719	0.00075	0.00385	0.01152	0.01864	0.02850	0.01067	0.02234	0.00307	0.00578	0.00744	0.01554
10	Pattanavechsuksa School	0.02520	0.07940	0.31278	0.50743	0.77578	0.14237	0.75476	0.04100	0.19522	0.09927	0.52504	0.00187	0.00764	0.02585	0.04189	0.06404	0.01810	0.05601	0.00521	0.01449	0.01262	0.03897
11	Pattanavech College	0.02102	0.06454	0.25833	0.41914	0.64079	0.13748	0.62950	0.03960	0.16282	0.09586	0.43791	0.00160	0.00673	0.02237	0.03625	0.05542	0.01633	0.04781	0.00470	0.01237	0.01139	0.03326
12	Saeng Song La Child Development Center 3	0.01589	0.11889	0.25376	0.40924	0.62580	0.43529	0.47593	0.12537	0.12310	0.30351	0.33108	0.00269	0.01173	0.03832	0.06207	0.09490	0.02923	0.08062	0.00842	0.02085	0.02038	0.05609
13	Wat Sa Kaeo School	0.01811	0.12184	0.25643	0.41348	0.63228	0.44984	0.54231	0.12956	0.14027	0.31366	0.37726	0.00307	0.01256	0.04243	0.06875	0.10512	0.02981	0.09184	0.00858	0.02376	0.02078	0.06389
14	Wat Sombun Naram School (Tem Rat Memorial)	0.01419	0.10256	0.19288	0.31242	0.47766	0.42768	0.42512	0.12318	0.10996	0.29820	0.29573	0.00194	0.01207	0.03307	0.05348	0.08177	0.03664	0.05811	0.01055	0.01503	0.02555	0.04043
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.01419	0.10256	0.19288	0.31242	0.47766	0.42768	0.42512	0.12318	0.10996	0.29820	0.29573	0.00194	0.01207	0.03307	0.05348	0.08177	0.03664	0.05811	0.01055	0.01503	0.02555	0.04043
16	Sajjaseuksa School	0.00263	0.09737	0.15148	0.24311	0.37183	0.41484	0.07882	0.11948	0.02039	0.28925	0.05483	0.00040	0.01241	0.02180	0.03506	0.05362	0.05030	0.01206	0.01449	0.00312	0.03507	0.00839
17	Ban Chang District Center for Non-Formal and Informal Education	0.00448	0.12188	0.19468	0.31260	0.47810	0.51397	0.13413	0.14804	0.03469	0.35837	0.09331	0.00062	0.01335	0.02485	0.03999	0.06116	0.05265	0.01844	0.01516	0.00477	0.03671	0.01283
18	Wat Suwan Rangsan Community School	0.00318	0.08026	0.12502	0.20065	0.30689	0.34176	0.09526	0.09843	0.02464	0.23829	0.06627	0.00046	0.00995	0.01852	0.02981	0.04558	0.03926	0.01372	0.01131	0.00355	0.02738	0.00954

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00282	0.05872	0.09204	0.14774	0.22595	0.24943	0.08456	0.07184	0.02187	0.17392	0.05882	0.00041	0.00827	0.01562	0.02515	0.03846	0.03237	0.01233	0.00932	0.00319	0.02257	0.00858
20	Wat Samnak Kathon School	0.00371	0.08384	0.13215	0.21214	0.32446	0.35537	0.11119	0.10235	0.02876	0.24778	0.07735	0.00057	0.01092	0.02085	0.03357	0.05134	0.04250	0.01716	0.01224	0.00444	0.02964	0.01193
21	Ban Sam Nak Thon Child Development Center	0.00361	0.08087	0.12736	0.20445	0.31270	0.34289	0.10801	0.09876	0.02794	0.23908	0.07513	0.00056	0.01083	0.02063	0.03323	0.05081	0.04221	0.01683	0.01216	0.00435	0.02943	0.01171
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00284	0.04804	0.07485	0.12013	0.18374	0.20453	0.08502	0.05891	0.02199	0.14261	0.05915	0.00041	0.00655	0.01299	0.02093	0.03201	0.02499	0.01220	0.00720	0.00315	0.01743	0.00848
23	Wat Chak Mak School	0.00256	0.03448	0.06006	0.09658	0.14771	0.14022	0.07660	0.04039	0.01981	0.09777	0.05329	0.00036	0.00594	0.01169	0.01883	0.02880	0.02278	0.01068	0.00656	0.00276	0.01589	0.00743
24	St. Andrews International School, Green Valley, Rayong,	0.00062	0.00673	0.01164	0.01872	0.02863	0.02747	0.01871	0.00791	0.00484	0.01915	0.01302	0.00008	0.00082	0.00183	0.00295	0.00451	0.00295	0.00229	0.00085	0.00059	0.00205	0.00159
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00343	0.03186	0.07430	0.11995	0.18342	0.11013	0.10266	0.03172	0.02655	0.07679	0.07141	0.00035	0.00294	0.00708	0.01144	0.01749	0.00992	0.01037	0.00286	0.00268	0.00692	0.00721
26	Ban Phayun School	0.00337	0.03126	0.07294	0.11775	0.18006	0.10803	0.10086	0.03111	0.02609	0.07532	0.07016	0.00035	0.00291	0.00703	0.01136	0.01737	0.00981	0.01034	0.00283	0.00267	0.00684	0.00719
27	Rakpasa Kindergarten	0.00419	0.04135	0.09448	0.15250	0.23319	0.14496	0.12560	0.04175	0.03249	0.10108	0.08737	0.00037	0.00324	0.00775	0.01252	0.01914	0.01098	0.01122	0.00316	0.00290	0.00766	0.00780
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00746	0.07057	0.16358	0.26409	0.40382	0.24497	0.22351	0.07056	0.05781	0.17081	0.15549	0.00081	0.00809	0.01842	0.02973	0.04545	0.02840	0.02434	0.00818	0.00630	0.01980	0.01693
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00347	0.02730	0.06175	0.09966	0.15240	0.09634	0.10406	0.02775	0.02692	0.06718	0.07239	0.00032	0.00292	0.00688	0.01110	0.01698	0.01001	0.00968	0.00288	0.00250	0.00698	0.00673
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00347	0.02730	0.06175	0.09966	0.15240	0.09634	0.10406	0.02775	0.02692	0.06718	0.07239	0.00032	0.00292	0.00688	0.01110	0.01698	0.01001	0.00968	0.00288	0.00250	0.00698	0.00673
31	Wat Prachummit Bamrung School	0.00682	0.04165	0.11502	0.18603	0.28445	0.12543	0.20416	0.03613	0.05281	0.08746	0.14202	0.00033	0.00358	0.00792	0.01277	0.01953	0.01280	0.00987	0.00369	0.00255	0.00892	0.00687
32	Udom Wittayanukun School	0.00153	0.02844	0.04311	0.06915	0.10576	0.12233	0.04572	0.03523	0.01183	0.08530	0.03181	0.00012	0.00355	0.00626	0.01006	0.01539	0.01435	0.00355	0.00413	0.00092	0.01001	0.00247
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00117	0.01729	0.03250	0.05232	0.08002	0.06785	0.03490	0.01954	0.00903	0.04731	0.02428	0.00010	0.00189	0.00358	0.00576	0.00881	0.00738	0.00287	0.00212	0.00074	0.00514	0.00199
34	Wat Noen Kraprok School	0.00115	0.01731	0.03265	0.05256	0.08038	0.06782	0.03434	0.01953	0.00888	0.04729	0.02389	0.00010	0.00185	0.00353	0.00568	0.00868	0.00722	0.00287	0.00208	0.00074	0.00503	0.00200
35	Chonnabot Phatthana Kindergarten	0.00156	0.03532	0.05409	0.08678	0.13273	0.15137	0.04660	0.04360	0.01205	0.10554	0.03242	0.00015	0.00364	0.00660	0.01063	0.01625	0.01453	0.00436	0.00419	0.00113	0.01013	0.00304
36	Aksorn Business Administration Technological College	0.00592	0.08427	0.17241	0.27790	0.42497	0.31625	0.17728	0.09109	0.04586	0.22051	0.12333	0.00064	0.00828	0.01735	0.02798	0.04279	0.03065	0.01903	0.00883	0.00492	0.02137	0.01324
37	Banchang Karnchanakul Wittaya School	0.00243	0.06137	0.09847	0.15815	0.24188	0.26117	0.07267	0.07522	0.01880	0.18210	0.05055	0.00044	0.01123	0.02034	0.03273	0.05006	0.04488	0.01331	0.01293	0.00344	0.03130	0.00926

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00087	0.01212	0.02492	0.04017	0.06142	0.04537	0.02596	0.01307	0.00671	0.03163	0.01806	0.00008	0.00102	0.00211	0.00341	0.00521	0.00377	0.00228	0.00109	0.00059	0.00263	0.00159
39	Ban Phudon - Huai Mahat Child Development Center	0.00087	0.01212	0.02492	0.04017	0.06142	0.04537	0.02596	0.01307	0.00671	0.03163	0.01806	0.00008	0.00102	0.00211	0.00341	0.00521	0.00377	0.00228	0.00109	0.00059	0.00263	0.00159
40	Ban Map Fakthong School	0.00338	0.02719	0.05914	0.09540	0.14589	0.09842	0.10113	0.02835	0.02616	0.06863	0.07035	0.00020	0.00119	0.00333	0.00539	0.00825	0.00354	0.00602	0.00102	0.00156	0.00247	0.00419
41	Phuru Yor. Sor. Sor. 80 School	0.00380	0.02414	0.06550	0.10593	0.16197	0.08756	0.11381	0.02522	0.02944	0.06105	0.07917	0.00014	0.00108	0.00271	0.00438	0.00670	0.00352	0.00425	0.00101	0.00110	0.00245	0.00295
42	Khao Chi Chan School	0.00347	0.03474	0.07257	0.11699	0.17891	0.12882	0.10380	0.03710	0.02685	0.08982	0.07221	0.00022	0.00199	0.00466	0.00753	0.01151	0.00684	0.00652	0.00197	0.00169	0.00477	0.00453
43	Ban Khalot Child Development Center	0.00733	0.04736	0.12753	0.20622	0.31532	0.14600	0.21942	0.04205	0.05675	0.10180	0.15264	0.00047	0.00304	0.00819	0.01325	0.02025	0.00939	0.01408	0.00270	0.00364	0.00655	0.00980
44	Ban Khalot School	0.00760	0.04938	0.13267	0.21452	0.32801	0.15259	0.22754	0.04395	0.05886	0.10639	0.15829	0.00046	0.00295	0.00797	0.01289	0.01971	0.00908	0.01376	0.00261	0.00356	0.00633	0.00957
45	Phlu Ta Luang Wittaya School	0.01157	0.03465	0.13493	0.21906	0.33490	0.09085	0.34655	0.02617	0.08964	0.06335	0.24108	0.00067	0.00333	0.01015	0.01643	0.02512	0.00903	0.02006	0.00260	0.00519	0.00630	0.01396
46	Athittan Kindergarten School	0.00589	0.02242	0.07891	0.12792	0.19557	0.06877	0.17637	0.01981	0.04562	0.04795	0.12269	0.00047	0.00246	0.00734	0.01188	0.01816	0.00683	0.01420	0.00197	0.00367	0.00476	0.00988
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00920	0.03881	0.11813	0.19125	0.29241	0.11729	0.27561	0.03378	0.07129	0.08178	0.19173	0.00066	0.00339	0.01016	0.01645	0.02516	0.00940	0.01973	0.00271	0.00510	0.00655	0.01373
48	Ban Khao Bai Si School	0.00623	0.03882	0.10059	0.16273	0.24881	0.15572	0.18668	0.04485	0.04829	0.10858	0.12987	0.00050	0.00333	0.00883	0.01428	0.02183	0.01041	0.01489	0.00300	0.00385	0.00726	0.01036
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00151	0.03509	0.05291	0.08487	0.12980	0.15121	0.04525	0.04355	0.01171	0.10543	0.03148	0.00012	0.00195	0.00384	0.00619	0.00946	0.00746	0.00353	0.00215	0.00091	0.00520	0.00246
50	Ban KM. 5 School	0.00273	0.02047	0.05160	0.08339	0.12750	0.06673	0.08171	0.01922	0.02113	0.04653	0.05684	0.00035	0.00251	0.00649	0.01049	0.01605	0.00802	0.01058	0.00231	0.00274	0.00559	0.00736
51	Royal Thai Fleet Sattahip District School	0.00225	0.01917	0.04543	0.07336	0.11218	0.06552	0.06726	0.01887	0.01740	0.04568	0.04679	0.00028	0.00220	0.00543	0.00877	0.01341	0.00730	0.00825	0.00210	0.00213	0.00509	0.00574
52	RTN. 8 Nursery	0.00318	0.02192	0.05236	0.08471	0.12953	0.07509	0.09527	0.02163	0.02464	0.05235	0.06627	0.00031	0.00221	0.00570	0.00921	0.01408	0.00709	0.00923	0.00204	0.00239	0.00494	0.00642
53	Juk Samet School	0.00318	0.02162	0.05234	0.08467	0.12947	0.07412	0.09513	0.02135	0.02461	0.05168	0.06617	0.00031	0.00221	0.00569	0.00919	0.01406	0.00708	0.00922	0.00204	0.00238	0.00494	0.00641
54	Juk Samet Child Development Center	0.00321	0.02101	0.05273	0.08531	0.13044	0.07216	0.09610	0.02078	0.02486	0.05032	0.06685	0.00031	0.00220	0.00568	0.00919	0.01405	0.00705	0.00923	0.00203	0.00239	0.00492	0.00642
55	Ban Chong Samaesarn Child Development Center	0.00231	0.02210	0.04593	0.07404	0.11323	0.08222	0.06929	0.02368	0.01792	0.05733	0.04820	0.00017	0.00169	0.00382	0.00616	0.00942	0.00594	0.00499	0.00171	0.00129	0.00414	0.00347
56	Samaesarn Subdistrict NFE Center	0.00252	0.01774	0.03934	0.06352	0.09713	0.07261	0.07541	0.02091	0.01950	0.05063	0.05246	0.00014	0.00148	0.00326	0.00527	0.00805	0.00529	0.00406	0.00152	0.00105	0.00369	0.00282
57	Ban Chong Samaesarn School	0.00256	0.01715	0.03910	0.06313	0.09654	0.06896	0.07677	0.01986	0.01986	0.04808	0.05340	0.00013	0.00146	0.00322	0.00519	0.00793	0.00523	0.00397	0.00151	0.00103	0.00365	0.00276
58	Wat Phala Vipassana Office	0.00425	0.03501	0.08535	0.13787	0.21081	0.11716	0.12732	0.03374	0.03293	0.08169	0.08857	0.00045	0.00403	0.00952	0.01538	0.02351	0.01377	0.01350	0.00397	0.00349	0.00960	0.00939
59	Wat Phala	0.00414	0.03534	0.08500	0.13728	0.20992	0.11947	0.12399	0.03441	0.03207	0.08330	0.08625	0.00043	0.00390	0.00916	0.01480	0.02263	0.01343	0.01282	0.00387	0.00332	0.00936	0.00892
60	Chao Li Hu Ong Yea Shrine	0.00588	0.05410	0.12662	0.20443	0.31260	0.18653	0.17610	0.05372	0.04555	0.13006	0.12251	0.00064	0.00759	0.01632	0.02632	0.04024	0.02764	0.01908	0.00796	0.00493	0.01927	0.01327
61	Wat Khlong Sai	0.00571	0.04956	0.11844	0.19128	0.29249	0.16835	0.17090	0.04849	0.04420	0.11738	0.11889	0.00046	0.00459	0.01041	0.01680	0.02570	0.01614	0.01368	0.00465	0.00354	0.01125	0.00951
62	Wat Khiri Pawanaram	0.00263	0.03674	0.07554	0.12176	0.18620	0.13748	0.07875	0.03960	0.02037	0.09586	0.05478	0.00028	0.00477	0.00936	0.01507	0.02305	0.01834	0.00844	0.00528	0.00218	0.01279	0.00587

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00202	0.03524	0.06681	0.10756	0.16450	0.13769	0.06060	0.03966	0.01567	0.09601	0.04215	0.00028	0.00564	0.01063	0.01711	0.02616	0.02212	0.00829	0.00637	0.00214	0.01542	0.00577
64	Ban Chang Church	0.00212	0.03722	0.06451	0.10373	0.15863	0.15174	0.06344	0.04370	0.01641	0.10580	0.04413	0.00029	0.00843	0.01497	0.02408	0.03682	0.03400	0.00883	0.00979	0.00228	0.02370	0.00614
65	Wat Ban Khlong Bang Phai	0.00914	0.06490	0.16784	0.27129	0.41482	0.20726	0.27361	0.05969	0.07077	0.14451	0.19033	0.00082	0.00411	0.01249	0.02022	0.03091	0.01123	0.02457	0.00323	0.00636	0.00783	0.01709
66	Admiral Prince Abhakara Kiartivongse Monument	0.00998	0.06616	0.16679	0.26953	0.41212	0.21574	0.29888	0.06214	0.07731	0.15043	0.20791	0.00096	0.00478	0.01456	0.02358	0.03605	0.01297	0.02877	0.00374	0.00744	0.00905	0.02001
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00825	0.06625	0.16313	0.26353	0.40296	0.22005	0.24722	0.06338	0.06395	0.15343	0.17198	0.00100	0.00478	0.01485	0.02404	0.03676	0.01269	0.02987	0.00366	0.00773	0.00885	0.02078
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00980	0.05803	0.13275	0.21427	0.32765	0.20327	0.29347	0.05855	0.07591	0.14173	0.20415	0.00128	0.00550	0.01808	0.02929	0.04478	0.01355	0.03829	0.00390	0.00990	0.00945	0.02663
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.01937	0.04374	0.21293	0.34594	0.52886	0.16650	0.58029	0.04796	0.15010	0.11610	0.40368	0.00188	0.00715	0.02517	0.04080	0.06237	0.01594	0.05623	0.00459	0.01455	0.01111	0.03912
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.02617	0.05916	0.28971	0.47064	0.71949	0.16399	0.78389	0.04723	0.20276	0.11435	0.54531	0.00240	0.00849	0.03122	0.05062	0.07740	0.01755	0.07198	0.00505	0.01862	0.01224	0.05007
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.02102	0.14180	0.32536	0.52519	0.80308	0.57660	0.62968	0.16607	0.16287	0.40204	0.43803	0.00384	0.03287	0.07900	0.12760	0.19511	0.11116	0.11513	0.03202	0.02978	0.07751	0.08009
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.01697	0.14013	0.30331	0.48925	0.74814	0.54107	0.50837	0.15584	0.13149	0.37727	0.35365	0.00330	0.03336	0.07561	0.12203	0.18660	0.11757	0.09895	0.03386	0.02559	0.08198	0.06883
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.01684	0.23573	0.42958	0.69126	1.05716	0.93919	0.50425	0.27051	0.13043	0.65486	0.35078	0.00302	0.03825	0.08078	0.13026	0.19919	0.14091	0.09035	0.04059	0.02337	0.09825	0.06285
74	Wat Sa Kaeo	0.02032	0.13338	0.24604	0.39598	0.60557	0.52830	0.60873	0.15216	0.15745	0.36836	0.42346	0.00356	0.01469	0.04944	0.08011	0.12249	0.03505	0.10671	0.01010	0.02760	0.02444	0.07423
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00323	0.03609	0.07314	0.11805	0.18051	0.15279	0.09668	0.04401	0.02501	0.10653	0.06726	0.00033	0.00551	0.01085	0.01749	0.02674	0.02113	0.00994	0.00609	0.00257	0.01473	0.00691
76	Wat Sombun Naram	0.01549	0.10667	0.18763	0.30405	0.46486	0.43579	0.46386	0.12552	0.11998	0.30386	0.32268	0.00194	0.01170	0.03248	0.05253	0.08032	0.03505	0.05801	0.01010	0.01501	0.02444	0.04036
77	Ban Chang Abundant Grace Church	0.00778	0.08374	0.13519	0.21712	0.33206	0.35165	0.23289	0.10128	0.06024	0.24519	0.16201	0.00128	0.01126	0.02681	0.04329	0.06620	0.03837	0.03842	0.01105	0.00994	0.02675	0.02673
78	Wat Samnak Kathon	0.00382	0.08630	0.13610	0.21848	0.33416	0.36573	0.11434	0.10534	0.02957	0.25501	0.07954	0.00058	0.01109	0.02118	0.03411	0.05217	0.04318	0.01744	0.01244	0.00451	0.03011	0.01213
79	Wat Suwan Rangsan	0.00282	0.05872	0.09204	0.14774	0.22595	0.24943	0.08456	0.07184	0.02187	0.17392	0.05882	0.00041	0.00827	0.01562	0.02515	0.03846	0.03237	0.01233	0.00932	0.00319	0.02257	0.00858
80	Wat Nong Bot	0.00258	0.02685	0.06026	0.09725	0.14871	0.09525	0.07732	0.02743	0.02000	0.06641	0.05379	0.00027	0.00396	0.00807	0.01301	0.01990	0.01487	0.00823	0.00428	0.00213	0.01037	0.00573
81	The Shrine of Luang Tia Chak Mak	0.00235	0.03932	0.06903	0.11111	0.16991	0.16255	0.07052	0.04682	0.01824	0.11334	0.04906	0.00037	0.00678	0.01308	0.02107	0.03222	0.02628	0.01116	0.00757	0.00289	0.01832	0.00776
82	Wat Chak Mak	0.00248	0.04231	0.07725	0.12431	0.19010	0.17381	0.07429	0.05006	0.01922	0.12119	0.05168	0.00038	0.00706	0.01359	0.02188	0.03346	0.02739	0.01149	0.00789	0.00297	0.01910	0.00799

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00292	0.02698	0.06303	0.10176	0.15560	0.09313	0.08738	0.02682	0.02260	0.06493	0.06079	0.00031	0.00273	0.00648	0.01046	0.01600	0.00931	0.00925	0.00268	0.00239	0.00649	0.00643
84	The Shrine of King Taksin the Great (Ban Chang)	0.00292	0.02710	0.06321	0.10205	0.15604	0.09366	0.08736	0.02698	0.02260	0.06531	0.06077	0.00031	0.00275	0.00651	0.01050	0.01606	0.00940	0.00923	0.00271	0.00239	0.00656	0.00642
85	Wat Chonthararam (Phayun)	0.00345	0.03182	0.07443	0.12016	0.18375	0.10975	0.10341	0.03161	0.02675	0.07652	0.07194	0.00034	0.00291	0.00703	0.01136	0.01737	0.00982	0.01032	0.00283	0.00267	0.00685	0.00718
86	Masjid Dawatul Islam	0.00487	0.09671	0.18312	0.29483	0.45088	0.37820	0.14581	0.10893	0.03772	0.26370	0.10143	0.00064	0.01066	0.02099	0.03382	0.05171	0.04082	0.01926	0.01176	0.00498	0.02846	0.01339
87	Chinese shrine at the Buddha Dhamma Foundation	0.01054	0.08170	0.20391	0.32947	0.50379	0.26855	0.31559	0.07735	0.08163	0.18725	0.21954	0.00089	0.00891	0.02025	0.03268	0.04997	0.03133	0.02665	0.00902	0.00689	0.02184	0.01854
88	The Shrine of Luang Tia Ban Chang	0.00585	0.06808	0.13744	0.22149	0.33870	0.25739	0.17507	0.07413	0.04528	0.17946	0.12179	0.00064	0.00822	0.01732	0.02793	0.04270	0.03034	0.01924	0.00874	0.00498	0.02115	0.01339
89	The Shrine of Laoia Guan Yu Ban Chang	0.00705	0.06648	0.15028	0.24253	0.37086	0.23473	0.21118	0.06761	0.05462	0.16367	0.14691	0.00078	0.00801	0.01807	0.02915	0.04458	0.02830	0.02343	0.00815	0.00606	0.01973	0.01630
90	Wat Ban Chang	0.00903	0.06953	0.17405	0.28123	0.43002	0.22801	0.27058	0.06567	0.06999	0.15898	0.18823	0.00093	0.00812	0.01940	0.03134	0.04792	0.02758	0.02800	0.00794	0.00724	0.01923	0.01948
91	Wat Prachummit Bamrung	0.00705	0.04072	0.11542	0.18674	0.28552	0.11955	0.21123	0.03443	0.05464	0.08336	0.14694	0.00034	0.00358	0.00799	0.01289	0.01972	0.01277	0.01011	0.00368	0.00261	0.00891	0.00703
92	The Shrine of Luang Tia Noen Kraprok 1	0.00385	0.05079	0.10610	0.17106	0.26158	0.18836	0.11538	0.05425	0.02984	0.13133	0.08026	0.00025	0.00428	0.00840	0.01353	0.02069	0.01645	0.00759	0.00474	0.00196	0.01147	0.00528
93	The Shrine of Luang Tia Noen Kraprok 2	0.00175	0.06125	0.09332	0.14972	0.22899	0.26299	0.05250	0.07575	0.01358	0.18337	0.03652	0.00016	0.00526	0.00913	0.01468	0.02245	0.02142	0.00469	0.00617	0.00121	0.01494	0.00327
94	Wat Noen Kraprok	0.00131	0.01878	0.03545	0.05708	0.08729	0.07354	0.03917	0.02118	0.01013	0.05128	0.02725	0.00010	0.00238	0.00439	0.00706	0.01080	0.00941	0.00314	0.00271	0.00081	0.00656	0.00219
95	Wat Phudon Nim Sanoh	0.00078	0.01219	0.02440	0.03931	0.06011	0.04632	0.02351	0.01334	0.00608	0.03230	0.01635	0.00008	0.00105	0.00218	0.00351	0.00537	0.00393	0.00230	0.00113	0.00059	0.00274	0.00160
96	Church of Christ Ban Chang	0.00103	0.01259	0.02689	0.04337	0.06632	0.04607	0.03092	0.01327	0.00800	0.03212	0.02151	0.00008	0.00108	0.00226	0.00364	0.00557	0.00397	0.00249	0.00114	0.00065	0.00277	0.00173
97	Anek Kusala Sala (Viharn Sien)	0.00366	0.03355	0.07353	0.11862	0.18139	0.12084	0.10957	0.03480	0.02834	0.08426	0.07622	0.00024	0.00149	0.00408	0.00660	0.01010	0.00450	0.00719	0.00130	0.00186	0.00314	0.00500
98	Wat Yan Nasangwararam	0.00386	0.02706	0.06668	0.10772	0.16472	0.09546	0.11551	0.02750	0.02988	0.06656	0.08035	0.00028	0.00168	0.00466	0.00754	0.01153	0.00503	0.00833	0.00145	0.00216	0.00351	0.00580
99	Sirisirirak Monastery	0.00275	0.03388	0.06314	0.10164	0.15544	0.13350	0.08223	0.03845	0.02127	0.09309	0.05720	0.00018	0.00211	0.00454	0.00732	0.01119	0.00767	0.00533	0.00221	0.00138	0.00535	0.00371
100	Anan Buraparam Meditation Center	0.00512	0.03029	0.06794	0.11014	0.16839	0.10974	0.15348	0.03161	0.03970	0.07652	0.10677	0.00024	0.00205	0.00492	0.00794	0.01215	0.00696	0.00713	0.00200	0.00185	0.00485	0.00496
101	Wat Map Fakthong	0.00318	0.02429	0.06099	0.09855	0.15069	0.08575	0.09525	0.02470	0.02464	0.05979	0.06626	0.00021	0.00144	0.00376	0.00608	0.00929	0.00454	0.00623	0.00131	0.00161	0.00317	0.00433
102	Khao Chi Chan Image of Lord Buddha	0.00069	0.00817	0.01762	0.02843	0.04347	0.02971	0.02075	0.00856	0.00537	0.02072	0.01443	0.00005	0.00049	0.00113	0.00182	0.00278	0.00170	0.00152	0.00049	0.00039	0.00119	0.00106
103	Wat Khao Chi Chan	0.00073	0.01570	0.02603	0.04182	0.06396	0.06656	0.02199	0.01917	0.00569	0.04641	0.01530	0.00006	0.00113	0.00214	0.00344	0.00526	0.00440	0.00172	0.00127	0.00044	0.00307	0.00120
104	Rat Samakkhi Temple	0.00761	0.04922	0.13253	0.21432	0.32770	0.15177	0.22799	0.04371	0.05897	0.10582	0.15860	0.00048	0.00306	0.00829	0.01340	0.02050	0.00941	0.01434	0.00271	0.00371	0.00656	0.00998
105	The Shrine of Chao Mae Kuan Im	0.00774	0.05006	0.13479	0.21797	0.33328	0.15436	0.23187	0.04446	0.05997	0.10763	0.16130	0.00045	0.00289	0.00780	0.01262	0.01930	0.00887	0.01349	0.00255	0.00349	0.00618	0.00939
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00851	0.05571	0.14920	0.24125	0.36887	0.17261	0.25488	0.04972	0.06593	0.12035	0.17731	0.00051	0.00322	0.00876	0.01417	0.02167	0.00982	0.01529	0.00283	0.00395	0.00685	0.01063

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00312	0.02353	0.05939	0.09597	0.14675	0.07668	0.09346	0.02209	0.02417	0.05347	0.06501	0.00037	0.00266	0.00684	0.01105	0.01690	0.00851	0.01108	0.00245	0.00287	0.00593	0.00771
108	KM.8 Meditation Center	0.00514	0.03462	0.09157	0.14805	0.22637	0.10844	0.15393	0.03123	0.03982	0.07561	0.10708	0.00038	0.00270	0.00702	0.01135	0.01736	0.00859	0.01153	0.00247	0.00298	0.00599	0.00802
109	Wat Rangsee Sunthorn (KM.5)	0.00266	0.02049	0.05129	0.08288	0.12673	0.06720	0.07975	0.01935	0.02063	0.04685	0.05547	0.00036	0.00256	0.00663	0.01072	0.01639	0.00817	0.01083	0.00235	0.00280	0.00570	0.00753
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00097	0.01116	0.02423	0.03909	0.05977	0.04045	0.02893	0.01165	0.00748	0.02820	0.02013	0.00004	0.00047	0.00101	0.00162	0.00248	0.00172	0.00116	0.00049	0.00030	0.00120	0.00081
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00114	0.01229	0.02723	0.04393	0.06718	0.04610	0.03400	0.01328	0.00879	0.03214	0.02365	0.00005	0.00063	0.00132	0.00212	0.00325	0.00235	0.00142	0.00068	0.00037	0.00164	0.00099
112	Wat Tung Prong	0.00090	0.01086	0.02192	0.03536	0.05407	0.04187	0.02691	0.01206	0.00696	0.02919	0.01872	0.00004	0.00049	0.00104	0.00167	0.00255	0.00182	0.00115	0.00052	0.00030	0.00127	0.00080
113	Khao Phlu Ta Luang Meditation Center	0.00048	0.00632	0.01248	0.02011	0.03075	0.02418	0.01442	0.00696	0.00373	0.01686	0.01003	0.00002	0.00027	0.00058	0.00093	0.00142	0.00097	0.00068	0.00028	0.00018	0.00067	0.00047
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00920	0.03408	0.09984	0.16221	0.24797	0.11998	0.27570	0.03456	0.07131	0.08366	0.19179	0.00088	0.00339	0.01184	0.01918	0.02933	0.00767	0.02627	0.00221	0.00680	0.00535	0.01828
115	Wat Khao Bai Si Santitham	0.01073	0.04580	0.14186	0.22998	0.35161	0.14140	0.32146	0.04073	0.08315	0.09859	0.22362	0.00088	0.00401	0.01280	0.02073	0.03169	0.01028	0.02641	0.00296	0.00683	0.00717	0.01837
116	Welu Amphawan Vipassana Office	0.00762	0.04450	0.11529	0.18665	0.28538	0.15004	0.22810	0.04322	0.05900	0.10462	0.15868	0.00068	0.00386	0.01101	0.01781	0.02724	0.01124	0.02031	0.00324	0.00525	0.00784	0.01413
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00369	0.03030	0.07395	0.11945	0.18265	0.10135	0.11047	0.02919	0.02857	0.07066	0.07685	0.00028	0.00231	0.00566	0.00915	0.01399	0.00770	0.00852	0.00222	0.00220	0.00537	0.00593
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00351	0.02259	0.05834	0.09438	0.14431	0.07411	0.10519	0.02134	0.02721	0.05167	0.07317	0.00037	0.00268	0.00687	0.01110	0.01697	0.00861	0.01106	0.00248	0.00286	0.00600	0.00769
119	Samaesarn Pattanakarn Church	0.00323	0.02387	0.05452	0.08800	0.13456	0.08371	0.09680	0.02411	0.02504	0.05837	0.06734	0.00030	0.00229	0.00574	0.00927	0.01418	0.00751	0.00893	0.00216	0.00231	0.00524	0.00621
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00298	0.02282	0.05259	0.08489	0.12981	0.07952	0.08939	0.02290	0.02312	0.05545	0.06218	0.00019	0.00174	0.00405	0.00654	0.00999	0.00604	0.00555	0.00174	0.00144	0.00421	0.00386
121	Wat Chong Samaesarn	0.00252	0.01810	0.03971	0.06412	0.09805	0.07377	0.07562	0.02125	0.01956	0.05144	0.05261	0.00014	0.00149	0.00330	0.00533	0.00815	0.00533	0.00412	0.00154	0.00107	0.00372	0.00287
122	Viharn Luang Por Dam	0.00191	0.01822	0.04069	0.06566	0.10041	0.06484	0.05709	0.01868	0.01477	0.04521	0.03971	0.00011	0.00116	0.00260	0.00419	0.00640	0.00414	0.00329	0.00119	0.00085	0.00289	0.00229
123	The Shrine of King Taksin the Great (Samaesarn)	0.00256	0.02379	0.05552	0.08964	0.13706	0.08219	0.07682	0.02367	0.01987	0.05730	0.05344	0.00019	0.00186	0.00428	0.00691	0.01056	0.00646	0.00579	0.00186	0.00150	0.00451	0.00403
124	Thai Island and Sea Natural History Museum	0.00238	0.02323	0.05326	0.08597	0.13146	0.08127	0.07126	0.02341	0.01843	0.05666	0.04958	0.00018	0.00181	0.00413	0.00666	0.01019	0.00636	0.00546	0.00183	0.00141	0.00444	0.00380
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00278	0.02222	0.05478	0.08850	0.13532	0.07375	0.08317	0.02124	0.02151	0.05142	0.05786	0.00020	0.00191	0.00440	0.00710	0.01086	0.00668	0.00593	0.00192	0.00153	0.00465	0.00412

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00281	0.02326	0.05656	0.09137	0.13971	0.07797	0.08405	0.02246	0.02174	0.05437	0.05847	0.00020	0.00191	0.00443	0.00715	0.01093	0.00665	0.00602	0.00192	0.00156	0.00464	0.00419
127	Eastern-Nong Muang Community Health Service Center	0.02473	0.08860	0.28686	0.46574	0.71202	0.34179	0.74064	0.09844	0.19157	0.23832	0.51522	0.00261	0.02102	0.05170	0.08352	0.12771	0.06990	0.07819	0.02013	0.02023	0.04874	0.05439
128	Phala Subdistrict Health Promotion Hospital	0.00457	0.04003	0.09535	0.15397	0.23544	0.13629	0.13679	0.03926	0.03538	0.09503	0.09516	0.00044	0.00413	0.00960	0.01551	0.02371	0.01428	0.01322	0.00411	0.00342	0.00996	0.00920
129	Ban Chang Hospital	0.00161	0.02629	0.05200	0.08377	0.12811	0.10052	0.04831	0.02895	0.01249	0.07009	0.03360	0.00018	0.00290	0.00578	0.00931	0.01424	0.01103	0.00551	0.00318	0.00142	0.00769	0.00383
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.01006	0.03508	0.10939	0.17775	0.27173	0.12937	0.30117	0.03726	0.07790	0.09021	0.20951	0.00104	0.00468	0.01503	0.02435	0.03723	0.01193	0.03117	0.00344	0.00806	0.00832	0.02168
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.01397	0.11449	0.27847	0.44981	0.68781	0.38383	0.41843	0.11055	0.10823	0.26763	0.29108	0.00243	0.01057	0.03453	0.05594	0.08552	0.02631	0.07268	0.00758	0.01880	0.01834	0.05056
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.02224	0.12405	0.24420	0.39618	0.60569	0.51719	0.66607	0.14896	0.17229	0.36062	0.46335	0.00270	0.01384	0.04158	0.06732	0.10292	0.03819	0.08100	0.01100	0.02095	0.02663	0.05635
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00275	0.09497	0.14742	0.23659	0.36185	0.40495	0.08249	0.11663	0.02134	0.28235	0.05738	0.00047	0.01049	0.01944	0.03129	0.04786	0.04146	0.01417	0.01194	0.00366	0.02891	0.00986
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00612	0.11193	0.17301	0.27764	0.42464	0.47799	0.18337	0.13767	0.04743	0.33328	0.12756	0.00098	0.01133	0.02462	0.03971	0.06073	0.04101	0.02948	0.01181	0.00762	0.02860	0.02050
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00267	0.04098	0.06545	0.10512	0.16077	0.17387	0.07987	0.05008	0.02066	0.12123	0.05556	0.00039	0.00642	0.01264	0.02037	0.03115	0.02463	0.01156	0.00709	0.00299	0.01717	0.00804
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00330	0.03076	0.07167	0.11570	0.17692	0.10642	0.09882	0.03065	0.02556	0.07420	0.06875	0.00034	0.00289	0.00693	0.01120	0.01712	0.00982	0.01005	0.00283	0.00260	0.00684	0.00699
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00140	0.04673	0.07138	0.11453	0.17517	0.20043	0.04186	0.05773	0.01083	0.13975	0.02912	0.00013	0.00426	0.00742	0.01193	0.01824	0.01735	0.00387	0.00500	0.00100	0.01209	0.00269
138	Phudon Huai Mahat Community Health Service Unit	0.00093	0.01288	0.02654	0.04278	0.06542	0.04817	0.02780	0.01387	0.00719	0.03359	0.01934	0.00008	0.00112	0.00232	0.00374	0.00572	0.00415	0.00249	0.00120	0.00064	0.00289	0.00173
139	Wat Yan Nasangwararam Hospital	0.00351	0.03107	0.06361	0.10283	0.15723	0.11872	0.10502	0.03420	0.02716	0.08278	0.07306	0.00025	0.00158	0.00432	0.00699	0.01069	0.00483	0.00756	0.00139	0.00195	0.00337	0.00526
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00345	0.03040	0.06344	0.10255	0.15680	0.11654	0.10335	0.03357	0.02673	0.08126	0.07189	0.00025	0.00158	0.00432	0.00699	0.01069	0.00480	0.00759	0.00138	0.00196	0.00334	0.00528
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00135	0.04720	0.07346	0.11789	0.18032	0.20105	0.04055	0.05791	0.01049	0.14019	0.02821	0.00009	0.00221	0.00404	0.00650	0.00994	0.00880	0.00276	0.00254	0.00071	0.00614	0.00192

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00812	0.05451	0.14441	0.23348	0.35701	0.17049	0.24328	0.04910	0.06293	0.11887	0.16924	0.00050	0.00321	0.00869	0.01406	0.02150	0.00985	0.01506	0.00284	0.00390	0.00687	0.01048
143	Sattahip Hospital KM.10	0.00579	0.04625	0.11412	0.18436	0.28191	0.15340	0.17349	0.04418	0.04488	0.10696	0.12069	0.00039	0.00252	0.00679	0.01098	0.01680	0.00774	0.01173	0.00223	0.00303	0.00540	0.00816
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00253	0.01748	0.03915	0.06321	0.09666	0.07174	0.07584	0.02066	0.01962	0.05002	0.05276	0.00013	0.00147	0.00325	0.00524	0.00801	0.00527	0.00403	0.00152	0.00104	0.00367	0.00280
145	Village No. 1 Ban Sakulthong	0.00195	0.02943	0.05934	0.09562	0.14623	0.11423	0.05851	0.03290	0.01513	0.07965	0.04070	0.00027	0.00527	0.01004	0.01617	0.02473	0.02054	0.00820	0.00591	0.00212	0.01432	0.00570
146	Village No. 2, Ban Kilo 16	0.00760	0.05234	0.13713	0.22168	0.33897	0.16532	0.22757	0.04762	0.05886	0.11527	0.15831	0.00067	0.00703	0.01573	0.02538	0.03881	0.02501	0.02003	0.00720	0.00518	0.01744	0.01393
147	Village No. 4, Ban Tung Prong	0.00611	0.06060	0.12950	0.20885	0.31937	0.22169	0.18296	0.06385	0.04732	0.15457	0.12727	0.00080	0.01085	0.02246	0.03621	0.05538	0.04042	0.02388	0.01164	0.00618	0.02819	0.01661
148	Village No. 5, Phala Subdistrict	0.00618	0.05083	0.12400	0.20030	0.30627	0.17005	0.18513	0.04898	0.04789	0.11857	0.12878	0.00062	0.00790	0.01662	0.02680	0.04098	0.02916	0.01842	0.00840	0.00477	0.02033	0.01282
149	Village No. 6, Ban Takat	0.00448	0.04067	0.09563	0.15442	0.23612	0.13978	0.13412	0.04026	0.03469	0.09747	0.09330	0.00042	0.00401	0.00926	0.01495	0.02287	0.01397	0.01256	0.00402	0.00325	0.00974	0.00873
150	Village No. 7, Ban Khlong Sai	0.00595	0.04983	0.12071	0.19497	0.29813	0.16757	0.17819	0.04826	0.04609	0.11684	0.12396	0.00056	0.00652	0.01413	0.02279	0.03485	0.02362	0.01683	0.00680	0.00435	0.01647	0.01171
151	Village No. 1 Ban Sam Nak Thon	0.01642	0.07218	0.21266	0.34484	0.52721	0.30491	0.49169	0.08782	0.12718	0.21260	0.34204	0.00169	0.01320	0.03282	0.05302	0.08107	0.04350	0.05051	0.01253	0.01306	0.03033	0.03514
152	Village No. 2, Ban Chak Mak	0.00329	0.06895	0.10957	0.17593	0.26907	0.29361	0.09854	0.08457	0.02549	0.20472	0.06855	0.00050	0.00897	0.01738	0.02799	0.04281	0.03469	0.01505	0.00999	0.00389	0.02419	0.01047
153	Village No. 3, Ban Sa Kaeo	0.08545	0.16404	0.90200	1.46621	2.24143	0.66940	2.55935	0.19280	0.66200	0.46674	1.78040	0.00727	0.03049	0.10164	0.16467	0.25177	0.07379	0.21760	0.02125	0.05629	0.05145	0.15138
154	Sa Kaeo Community 1	0.02933	0.13786	0.31428	0.51076	0.78083	0.55861	0.87845	0.16089	0.22722	0.38950	0.61109	0.00373	0.01547	0.05193	0.08414	0.12865	0.03707	0.11182	0.01068	0.02892	0.02585	0.07779
155	Sa Kaeo Community 2	0.02081	0.11390	0.33121	0.53599	0.81951	0.32584	0.62340	0.09385	0.16125	0.22720	0.43367	0.00227	0.00961	0.03189	0.05167	0.07900	0.02338	0.06805	0.00674	0.01760	0.01630	0.04734
156	Village No. 4, Ban Khlong Bang Phai	0.02308	0.05787	0.26406	0.42880	0.65554	0.13268	0.69122	0.03821	0.17879	0.09251	0.48084	0.00176	0.00688	0.02386	0.03868	0.05914	0.01567	0.05276	0.00451	0.01365	0.01093	0.03670
157	Village No. 5, Ban Yai Ra	0.00242	0.02243	0.05233	0.08449	0.12920	0.07752	0.07237	0.02233	0.01872	0.05405	0.05034	0.00023	0.00334	0.00683	0.01100	0.01682	0.01255	0.00699	0.00361	0.00181	0.00875	0.00487
158	Village No. 6, Ban Khao Khrok	0.04484	0.10844	0.50707	0.82353	1.25899	0.36540	1.34314	0.10524	0.34742	0.25478	0.93435	0.00351	0.01867	0.05501	0.08903	0.13613	0.05264	0.10502	0.01516	0.02716	0.03671	0.07306
159	Village no. 7, Ban Nong Takhian	0.00260	0.04559	0.07833	0.12604	0.19276	0.18904	0.07790	0.05445	0.02015	0.13181	0.05419	0.00042	0.00795	0.01521	0.02449	0.03745	0.03091	0.01262	0.00890	0.00326	0.02155	0.00878
160	Village No. 8, Ban Cherng Khao	0.00436	0.25747	0.39514	0.63402	0.96971	1.10245	0.13062	0.31753	0.03379	0.76870	0.09086	0.00067	0.03491	0.05778	0.09283	0.14198	0.14513	0.02010	0.04180	0.00520	0.10119	0.01398
161	Eastern-Nong Muang Community	0.00646	0.07043	0.15301	0.24681	0.37742	0.26826	0.19362	0.07727	0.05008	0.18705	0.13469	0.00095	0.01360	0.02780	0.04481	0.06852	0.05105	0.02853	0.01470	0.00738	0.03559	0.01985
162	Wat Khiri Pawanaram Community	0.00350	0.20190	0.31209	0.50083	0.76601	0.86218	0.10494	0.24833	0.02714	0.60116	0.07300	0.00058	0.02807	0.04676	0.07514	0.11491	0.11637	0.01736	0.03352	0.00449	0.08114	0.01208
163	Ban Chang-Phala Community	0.00315	0.19750	0.29875	0.47923	0.73298	0.85019	0.09422	0.24487	0.02437	0.59280	0.06555	0.00054	0.02773	0.04596	0.07384	0.11294	0.11523	0.01620	0.03319	0.00419	0.08035	0.01127
164	Ruam Sompong Community	0.00335	0.04052	0.08321	0.13413	0.20512	0.15342	0.10031	0.04419	0.02594	0.10697	0.06978	0.00061	0.00583	0.01347	0.02174	0.03325	0.02031	0.01827	0.00585	0.00472	0.01416	0.01271
165	Ming Mongkol Community	0.00318	0.15488	0.24406	0.39179	0.59923	0.65661	0.09521	0.18912	0.02463	0.45783	0.06623	0.00043	0.01347	0.02360	0.03795	0.05804	0.05462	0.01288	0.01573	0.00333	0.03809	0.00896
166	Jor Koo Community	0.00335	0.15536	0.24369	0.39117	0.59828	0.65976	0.10042	0.19002	0.02597	0.46002	0.06985	0.00043	0.01392	0.02429	0.03907	0.05975	0.05657	0.01292	0.01629	0.00334	0.03944	0.00899

Draft Version

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00309	0.23255	0.35764	0.57388	0.87773	0.99498	0.09248	0.28658	0.02392	0.69376	0.06434	0.00040	0.01586	0.02696	0.04334	0.06628	0.06517	0.01195	0.01877	0.00309	0.04544	0.00831
168	Thep Chinda Community	0.00352	0.14432	0.23307	0.37431	0.57248	0.60598	0.10531	0.17454	0.02724	0.42252	0.07326	0.00048	0.01306	0.02333	0.03753	0.05739	0.05251	0.01423	0.01512	0.00368	0.03661	0.00990
169	Health Park Community	0.00987	0.03718	0.11005	0.17876	0.27328	0.13259	0.29570	0.03819	0.07649	0.09245	0.20571	0.00077	0.00625	0.01536	0.02481	0.03794	0.02081	0.02318	0.00599	0.00600	0.01451	0.01613
170	Wat Ban Chang Community	0.00892	0.07282	0.17811	0.28772	0.43995	0.24311	0.26708	0.07002	0.06908	0.16951	0.18579	0.00090	0.00825	0.01932	0.03119	0.04770	0.02841	0.02692	0.00818	0.00696	0.01981	0.01873
171	Dong Dang Community	0.00357	0.13119	0.22037	0.35414	0.54162	0.54201	0.10689	0.15611	0.02765	0.37792	0.07436	0.00051	0.01169	0.02155	0.03468	0.05304	0.04633	0.01533	0.01334	0.00397	0.03230	0.01067
172	Night Market Community	0.00812	0.06094	0.14876	0.24030	0.36744	0.20375	0.24323	0.05868	0.06291	0.14207	0.16920	0.00085	0.00716	0.01733	0.02799	0.04280	0.02410	0.02554	0.00694	0.00660	0.01680	0.01776
173	Ruam Mitr Community	0.01161	0.08234	0.21308	0.34441	0.52662	0.26282	0.34764	0.07570	0.08992	0.18326	0.24183	0.00092	0.00891	0.02051	0.03310	0.05062	0.03106	0.02766	0.00895	0.00716	0.02166	0.01924
174	Ban Chang - Noen Kraprok Community	0.00891	0.03210	0.10934	0.17740	0.27121	0.10792	0.26676	0.03108	0.06900	0.07525	0.18557	0.00059	0.00532	0.01255	0.02026	0.03098	0.01821	0.01772	0.00525	0.00458	0.01270	0.01233
175	Dao Pitak Community	0.00538	0.05501	0.11115	0.17912	0.27391	0.20787	0.16119	0.05987	0.04169	0.14494	0.11213	0.00053	0.00672	0.01422	0.02292	0.03505	0.02472	0.01598	0.00712	0.00413	0.01724	0.01111
176	Taiwa Community	0.00181	0.07472	0.11380	0.18258	0.27926	0.32083	0.05435	0.09241	0.01406	0.22370	0.03781	0.00017	0.00578	0.01004	0.01615	0.02469	0.02351	0.00521	0.00677	0.00135	0.01640	0.00362
177	East Ban Noen Kraprok Community, Prachummit	0.00709	0.03790	0.11149	0.18044	0.27589	0.10710	0.21244	0.03085	0.05495	0.07468	0.14778	0.00034	0.00339	0.00768	0.01240	0.01895	0.01194	0.01005	0.00344	0.00260	0.00833	0.00699
178	Ban Noen Kraprok Community	0.00159	0.03497	0.05307	0.08513	0.13021	0.15037	0.04752	0.04331	0.01229	0.10485	0.03306	0.00013	0.00392	0.00689	0.01108	0.01695	0.01585	0.00386	0.00457	0.00100	0.01105	0.00268
179	Nong Yai Community	0.00147	0.06357	0.10354	0.16637	0.25444	0.27164	0.04395	0.07824	0.01137	0.18940	0.03057	0.00017	0.00511	0.00900	0.01448	0.02215	0.02070	0.00506	0.00596	0.00131	0.01443	0.00352
180	Village No. 1, Pan Din Tai	0.00674	0.03788	0.10874	0.17596	0.26904	0.10983	0.20182	0.03163	0.05220	0.07658	0.14040	0.00032	0.00325	0.00734	0.01185	0.01811	0.01145	0.00956	0.00330	0.00247	0.00799	0.00665
181	Village No. 2, Ban Prachummit	0.00583	0.02680	0.06230	0.10126	0.15480	0.09372	0.17461	0.02699	0.04516	0.06535	0.12146	0.00048	0.00409	0.00981	0.01585	0.02423	0.01384	0.01427	0.00399	0.00369	0.00965	0.00993
182	Village No. 3, Ban Noen Samre	0.00166	0.03114	0.05845	0.09409	0.14389	0.12229	0.04975	0.03522	0.01287	0.08527	0.03461	0.00029	0.00670	0.01232	0.01983	0.03032	0.02659	0.00865	0.00766	0.00224	0.01854	0.00602
183	Village No. 4, Ban Phayun	0.00355	0.03882	0.07943	0.12803	0.19578	0.14570	0.10643	0.04196	0.02753	0.10159	0.07404	0.00057	0.00556	0.01277	0.02062	0.03153	0.01944	0.01714	0.00560	0.00443	0.01355	0.01192
184	Village No. 6, Ban Noen Kraprok	0.00103	0.01481	0.03019	0.04865	0.07440	0.05568	0.03073	0.01604	0.00795	0.03882	0.02138	0.00010	0.00158	0.00313	0.00505	0.00772	0.00604	0.00293	0.00174	0.00076	0.00421	0.00204
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00098	0.01314	0.02736	0.04410	0.06744	0.04881	0.02950	0.01406	0.00763	0.03403	0.02052	0.00009	0.00115	0.00239	0.00385	0.00588	0.00426	0.00257	0.00123	0.00067	0.00297	0.00179
186	Village No. 11, Ban Map Fakthong	0.01617	0.07451	0.19821	0.32160	0.49167	0.29526	0.48419	0.08504	0.12524	0.20587	0.33683	0.00140	0.00869	0.02384	0.03856	0.05895	0.02634	0.04197	0.00759	0.01086	0.01836	0.02920
187	Village No. 13, Ban Nong Phakkut	0.00277	0.05720	0.09891	0.15904	0.24324	0.24369	0.08297	0.07019	0.02146	0.16992	0.05772	0.00042	0.00615	0.01248	0.02012	0.03076	0.02315	0.01258	0.00667	0.00325	0.01614	0.00875
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00562	0.03167	0.09079	0.14690	0.22461	0.12084	0.16826	0.03480	0.04352	0.08426	0.11705	0.00021	0.00147	0.00385	0.00623	0.00952	0.00462	0.00642	0.00133	0.00166	0.00322	0.00447
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00124	0.06892	0.10457	0.16776	0.25659	0.29633	0.03726	0.08535	0.00964	0.20662	0.02592	0.00009	0.00205	0.00380	0.00611	0.00934	0.00809	0.00277	0.00233	0.00072	0.00564	0.00193
190	Village No. 6 (Ban Khao Krating Community)	0.00136	0.02860	0.04363	0.07000	0.10706	0.12274	0.04081	0.03535	0.01056	0.08558	0.02839	0.00007	0.00196	0.00347	0.00558	0.00853	0.00789	0.00203	0.00227	0.00053	0.00550	0.00141

Subject to changes and approval by the Government of Thailand

Table 5.2-58 Acrolein emission forecast, operation phase

Area		Acrolein concentration (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00163	0.06848	0.10623	0.17049	0.26076	0.29204	0.04892	0.08411	0.01265	0.20363	0.03403	0.00013	0.00393	0.00694	0.01116	0.01706	0.01588	0.00396	0.00457	0.00103	0.01107	0.00276
192	Village No. 11 (Ban Khong Wanphen Community)	0.00894	0.03346	0.11391	0.18475	0.28245	0.10251	0.26768	0.02952	0.06924	0.07147	0.18621	0.00045	0.00276	0.00764	0.01236	0.01890	0.00827	0.01363	0.00238	0.00352	0.00576	0.00948
193	Village No. 1, Ban Phlu Ta Luang	0.00770	0.04943	0.13353	0.21594	0.33018	0.15197	0.23066	0.04377	0.05966	0.10596	0.16045	0.00048	0.00313	0.00840	0.01359	0.02078	0.00968	0.01440	0.00279	0.00372	0.00675	0.01001
194	Village No. 2, Ban Khalot	0.00731	0.04902	0.12992	0.21005	0.32118	0.15331	0.21894	0.04416	0.05663	0.10690	0.15230	0.00046	0.00278	0.00772	0.01249	0.01910	0.00834	0.01378	0.00240	0.00356	0.00582	0.00959
195	Village No. 3, Ban Khlong Phai	0.00481	0.03325	0.07721	0.12465	0.19060	0.11525	0.14393	0.03319	0.03723	0.08036	0.10013	0.00052	0.00290	0.00837	0.01355	0.02072	0.00833	0.01567	0.00240	0.00405	0.00581	0.01090
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00693	0.02973	0.07673	0.12465	0.19056	0.10438	0.20749	0.03006	0.05367	0.07278	0.14434	0.00048	0.00247	0.00744	0.01205	0.01842	0.00681	0.01452	0.00196	0.00376	0.00475	0.01010
197	Village No. 5, Ban Khao Bai Si	0.00753	0.03051	0.08471	0.13759	0.21035	0.10013	0.22549	0.02884	0.05832	0.06981	0.15686	0.00067	0.00342	0.01026	0.01661	0.02539	0.00948	0.01992	0.00273	0.00515	0.00661	0.01386
198	Village No. 6, Ban Khao Tabaek	0.00508	0.03408	0.09032	0.14603	0.22329	0.10660	0.15219	0.03070	0.03936	0.07433	0.10587	0.00036	0.00258	0.00669	0.01081	0.01653	0.00824	0.01092	0.00237	0.00282	0.00574	0.00760
199	Village No. 7, Ban Nong Ya Noi	0.00323	0.02388	0.06075	0.09818	0.15013	0.07732	0.09673	0.02227	0.02502	0.05391	0.06729	0.00037	0.00265	0.00682	0.01102	0.01686	0.00851	0.01103	0.00245	0.00285	0.00594	0.00767
200	Village No. 8, Ban Nong Ya	0.00187	0.04350	0.06561	0.10524	0.16096	0.18743	0.05615	0.05398	0.01452	0.13069	0.03906	0.00009	0.00266	0.00471	0.00758	0.01159	0.01074	0.00273	0.00309	0.00071	0.00749	0.00190
201	Ban Nong Krachong Community	0.00362	0.02100	0.05941	0.09611	0.14695	0.07598	0.10847	0.02188	0.02806	0.05298	0.07546	0.00026	0.00219	0.00533	0.00861	0.01316	0.00735	0.00792	0.00212	0.00205	0.00512	0.00551
Standard*		0.55*											0.02**										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Surveillance range values of acrolein within 24 hours, as referenced from Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours.
** Acrolein concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

2.3) Benzene

From the benzene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. The Cmax of all scenarios were within standard criteria for surveillance values for volatile organic compounds in the general atmosphere within 24 hours for Thailand, which is set to no more than 7.6 micrograms per cubic meter according to the Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours. It was also found that most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and had values within the standard range according to Announcement No. 30 (2007) of the National Environment Board Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 1 year, which has the values for benzene set to not exceed 1.7 micrograms per cubic meter. Also, when comparing with the foreign standard reference criteria, which are concentrations that allow for long-term exposure without affecting health (Reference Concentration; RfC for Benzene is equal to 30 micrograms per cubic meter), it was found that they were also not above such range.

When comparing the 24-hour average and 1-year maximum concentration (Cmax) values for benzene in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest benzene 24-hour average Cmax, comprising 2.59753 micrograms per cubic meter. Scenario 5 (Worst Cast Scenario (Peak Hour)) had the highest 1-year average benzene Cmax, comprising 0.22586 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), the 24-hour average and 1-year average benzene Cmax was the lowest, comprising 0.07379 and 0.00772 micrograms per cubic meter, respectively.

In this regard, when considering the benzene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-59 and Addendum 5-3, item 8, benzene concentration contours (Figure 8-1 to Figure 8-22), it was found that all benzene concentrations were in accordance with standard criteria.

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.07379	0.61664	0.92920	1.48096	2.25479	2.59753	1.89705	0.76267	0.49859	1.82193	1.32507	0.00772	0.04789	0.09229	0.14842	0.22586	0.19493	0.19837	0.05723	0.05213	0.13672	0.13856
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00910	0.05260	0.13804	0.22158	0.33721	0.15708	0.23397	0.04612	0.06149	0.11018	0.16342	0.00068	0.00356	0.00978	0.01571	0.02391	0.01016	0.01755	0.00298	0.00461	0.00713	0.01226
2	Wat Phala School	0.00352	0.02623	0.06219	0.09971	0.15176	0.08563	0.09053	0.02514	0.02379	0.06006	0.06323	0.00036	0.00290	0.00669	0.01073	0.01633	0.00968	0.00928	0.00284	0.00244	0.00679	0.00648
3	Phala Subdistrict Municipality Child Development Center	0.00316	0.02423	0.05685	0.09114	0.13872	0.07975	0.08128	0.02342	0.02136	0.05594	0.05677	0.00034	0.00273	0.00627	0.01006	0.01531	0.00912	0.00866	0.00268	0.00227	0.00640	0.00605
4	Ban Khlong Sai School	0.00399	0.03342	0.07597	0.12176	0.18532	0.11270	0.10250	0.03309	0.02694	0.07905	0.07160	0.00032	0.00287	0.00638	0.01022	0.01556	0.00981	0.00827	0.00288	0.00217	0.00688	0.00577
5	Rayong English Program School	0.00451	0.03174	0.07688	0.12331	0.18766	0.10183	0.11595	0.02990	0.03047	0.07143	0.08099	0.00036	0.00328	0.00726	0.01163	0.01771	0.01128	0.00928	0.00331	0.00244	0.00791	0.00648
6	Rayong Garden International School	0.00428	0.03219	0.07602	0.12189	0.18551	0.10540	0.10994	0.03095	0.02890	0.07393	0.07680	0.00036	0.00321	0.00712	0.01141	0.01737	0.01103	0.00915	0.00324	0.00240	0.00774	0.00639
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00236	0.03369	0.06422	0.10271	0.15634	0.12716	0.06067	0.03734	0.01594	0.08919	0.04238	0.00031	0.00606	0.01106	0.01769	0.02692	0.02339	0.00795	0.00687	0.00209	0.01641	0.00555
8	Wat Khiri Pawanaram School	0.00234	0.03203	0.06147	0.09833	0.14967	0.12045	0.06015	0.03537	0.01581	0.08449	0.04201	0.00029	0.00543	0.01003	0.01604	0.02441	0.02083	0.00758	0.00612	0.00199	0.01461	0.00529
9	Ban Khlong Bang Phai School	0.00725	0.04502	0.11463	0.18393	0.27993	0.13832	0.18639	0.04061	0.04899	0.09702	0.13019	0.00060	0.00277	0.00807	0.01297	0.01973	0.00739	0.01547	0.00217	0.00407	0.00518	0.01081
10	Pattanavechsuksa School	0.02033	0.05783	0.21934	0.35310	0.53727	0.09862	0.52279	0.02896	0.13740	0.06917	0.36516	0.00151	0.00553	0.01812	0.02914	0.04435	0.01254	0.03880	0.00368	0.01020	0.00879	0.02710
11	Pattanavech College	0.01696	0.04705	0.18116	0.29166	0.44379	0.09523	0.43602	0.02796	0.11460	0.06680	0.30456	0.00129	0.00486	0.01568	0.02522	0.03838	0.01131	0.03312	0.00332	0.00870	0.00794	0.02313
12	Saeng Song La Child Development Center 3	0.01282	0.08464	0.17767	0.28450	0.43303	0.30153	0.32965	0.08853	0.08664	0.21150	0.23026	0.00217	0.00847	0.02686	0.04318	0.06571	0.02025	0.05585	0.00594	0.01468	0.01420	0.03901
13	Wat Sa Kaeo School	0.01461	0.08670	0.17953	0.28743	0.43750	0.31161	0.37564	0.09149	0.09873	0.21857	0.26238	0.00247	0.00908	0.02974	0.04783	0.07279	0.02065	0.06362	0.00606	0.01672	0.01448	0.04444
14	Wat Sombun Naram School (Tem Rat Memorial)	0.01145	0.07255	0.13520	0.21734	0.33073	0.29626	0.29446	0.08699	0.07739	0.20780	0.20568	0.00157	0.00866	0.02317	0.03720	0.05661	0.02538	0.04025	0.00745	0.01058	0.01780	0.02812
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.01145	0.07255	0.13520	0.21734	0.33073	0.29626	0.29446	0.08699	0.07739	0.20780	0.20568	0.00157	0.00866	0.02317	0.03720	0.05661	0.02538	0.04025	0.00745	0.01058	0.01780	0.02812
16	Sajjaseuksa School	0.00212	0.06880	0.10592	0.16887	0.25710	0.28736	0.05459	0.08437	0.01435	0.20156	0.03813	0.00032	0.00879	0.01525	0.02436	0.03709	0.03485	0.00835	0.01023	0.00220	0.02444	0.00583
17	Ban Chang District Center for Non-Formal and Informal Education	0.00361	0.08616	0.13615	0.21715	0.33061	0.35603	0.09291	0.10454	0.02442	0.24973	0.06489	0.00050	0.00947	0.01739	0.02779	0.04231	0.03647	0.01277	0.01071	0.00336	0.02558	0.00892
18	Wat Suwan Rangsan Community School	0.00257	0.05671	0.08742	0.13938	0.21220	0.23674	0.06599	0.06951	0.01734	0.16605	0.04609	0.00037	0.00706	0.01296	0.02071	0.03153	0.02720	0.00950	0.00799	0.00250	0.01908	0.00664
19	Ban Yai Ra Child Development Center	0.00228	0.04149	0.06436	0.10262	0.15624	0.17278	0.05857	0.05073	0.01539	0.12119	0.04091	0.00033	0.00587	0.01093	0.01748	0.02661	0.02242	0.00854	0.00658	0.00224	0.01573	0.00597

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
20	Wat Samnak Kathon School	0.00300	0.05925	0.09241	0.14736	0.22436	0.24617	0.07701	0.07228	0.02024	0.17266	0.05379	0.00046	0.00775	0.01459	0.02333	0.03551	0.02944	0.01188	0.00864	0.00312	0.02065	0.00830
21	Ban Sam Nak Thon Child Development Center	0.00291	0.05715	0.08906	0.14202	0.21623	0.23752	0.07481	0.06974	0.01966	0.16660	0.05225	0.00045	0.00769	0.01444	0.02309	0.03515	0.02924	0.01166	0.00859	0.00306	0.02051	0.00814
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00229	0.03394	0.05234	0.08345	0.12705	0.14168	0.05889	0.04160	0.01548	0.09938	0.04114	0.00033	0.00465	0.00910	0.01455	0.02215	0.01731	0.00845	0.00508	0.00222	0.01214	0.00590
23	Wat Chak Mak School	0.00206	0.02442	0.04202	0.06711	0.10216	0.09713	0.05306	0.02852	0.01395	0.06813	0.03706	0.00029	0.00422	0.00818	0.01309	0.01993	0.01578	0.00740	0.00463	0.00194	0.01107	0.00517
24	St. Andrews International School, Green Valley, Rayong,	0.00050	0.00477	0.00815	0.01301	0.01980	0.01903	0.01296	0.00559	0.00341	0.01335	0.00905	0.00006	0.00059	0.00128	0.00205	0.00312	0.00204	0.00159	0.00060	0.00042	0.00143	0.00111
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00277	0.02274	0.05203	0.08340	0.12694	0.07629	0.07111	0.02240	0.01869	0.05351	0.04967	0.00028	0.00210	0.00496	0.00795	0.01210	0.00687	0.00718	0.00202	0.00189	0.00482	0.00501
26	Ban Phayun School	0.00272	0.02231	0.05108	0.08188	0.12461	0.07483	0.06986	0.02197	0.01836	0.05249	0.04880	0.00028	0.00208	0.00493	0.00790	0.01202	0.00680	0.00716	0.00200	0.00188	0.00477	0.00500
27	Rakpasa Kindergarten	0.00338	0.02949	0.06616	0.10603	0.16138	0.10042	0.08700	0.02948	0.02287	0.07043	0.06077	0.00030	0.00231	0.00543	0.00871	0.01325	0.00761	0.00777	0.00223	0.00204	0.00534	0.00543
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00602	0.05036	0.11456	0.18362	0.27947	0.16969	0.15482	0.04982	0.04069	0.11903	0.10814	0.00066	0.00577	0.01290	0.02067	0.03146	0.01967	0.01686	0.00578	0.00443	0.01380	0.01178
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00280	0.01947	0.04324	0.06929	0.10546	0.06674	0.07208	0.01960	0.01894	0.04681	0.05035	0.00026	0.00208	0.00482	0.00772	0.01175	0.00694	0.00670	0.00204	0.00176	0.00487	0.00468
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00280	0.01947	0.04324	0.06929	0.10546	0.06674	0.07208	0.01960	0.01894	0.04681	0.05035	0.00026	0.00208	0.00482	0.00772	0.01175	0.00694	0.00670	0.00204	0.00176	0.00487	0.00468
31	Wat Prachummit Bamrung School	0.00550	0.02989	0.08059	0.12939	0.19691	0.08689	0.14141	0.02551	0.03717	0.06094	0.09877	0.00027	0.00255	0.00554	0.00888	0.01351	0.00886	0.00684	0.00260	0.00180	0.00622	0.00478
32	Udom Wittayanukun School	0.00123	0.02008	0.03014	0.04803	0.07312	0.08474	0.03167	0.02488	0.00832	0.05944	0.02212	0.00010	0.00251	0.00438	0.00699	0.01065	0.00994	0.00246	0.00292	0.00065	0.00697	0.00172
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00094	0.01227	0.02275	0.03636	0.05536	0.04700	0.02417	0.01380	0.00635	0.03297	0.01688	0.00008	0.00134	0.00251	0.00401	0.00610	0.00511	0.00199	0.00150	0.00052	0.00358	0.00139
34	Wat Noen Kraprok School	0.00093	0.01228	0.02285	0.03653	0.05560	0.04698	0.02379	0.01379	0.00625	0.03295	0.01662	0.00008	0.00131	0.00247	0.00395	0.00601	0.00500	0.00199	0.00147	0.00052	0.00351	0.00139
35	Chonnabot Phatthana Kindergarten	0.00126	0.02495	0.03782	0.06028	0.09177	0.10485	0.03228	0.03079	0.00848	0.07355	0.02255	0.00012	0.00258	0.00462	0.00739	0.01124	0.01007	0.00302	0.00296	0.00079	0.00706	0.00211
36	Aksorn Business Administration Technological College	0.00478	0.05992	0.12070	0.19317	0.29403	0.21907	0.12280	0.06432	0.03227	0.15366	0.08577	0.00051	0.00589	0.01215	0.01945	0.02961	0.02123	0.01318	0.00623	0.00346	0.01489	0.00921
37	Banchang Karnchanakul Wittaya School	0.00196	0.04336	0.06887	0.10986	0.16726	0.18092	0.05033	0.05312	0.01323	0.12690	0.03516	0.00036	0.00796	0.01423	0.02274	0.03462	0.03109	0.00922	0.00913	0.00242	0.02181	0.00644
38	Ban Khao Huai Mahat School	0.00070	0.00862	0.01744	0.02792	0.04250	0.03143	0.01798	0.00923	0.00473	0.02204	0.01256	0.00006	0.00072	0.00148	0.00237	0.00361	0.00261	0.00158	0.00077	0.00042	0.00183	0.00110

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Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
39	Ban Phudon - Huai Mahat Child Development Center	0.00070	0.00862	0.01744	0.02792	0.04250	0.03143	0.01798	0.00923	0.00473	0.02204	0.01256	0.00006	0.00072	0.00148	0.00237	0.00361	0.00261	0.00158	0.00077	0.00042	0.00183	0.00110
40	Ban Map Fakthong School	0.00272	0.01937	0.04141	0.06633	0.10095	0.06818	0.07005	0.02002	0.01841	0.04782	0.04893	0.00016	0.00085	0.00234	0.00375	0.00571	0.00245	0.00417	0.00072	0.00110	0.00172	0.00291
41	Phuru Yor. Sor. Sor. 80 School	0.00307	0.01731	0.04590	0.07367	0.11212	0.06066	0.07883	0.01781	0.02072	0.04254	0.05506	0.00011	0.00077	0.00190	0.00305	0.00464	0.00244	0.00294	0.00072	0.00077	0.00171	0.00205
42	Khao Chi Chan School	0.00280	0.02472	0.05080	0.08133	0.12379	0.08924	0.07190	0.02620	0.01890	0.06259	0.05022	0.00018	0.00142	0.00327	0.00524	0.00797	0.00474	0.00452	0.00139	0.00119	0.00332	0.00315
43	Ban Khalot Child Development Center	0.00591	0.03395	0.08935	0.14342	0.21827	0.10113	0.15198	0.02969	0.03994	0.07094	0.10616	0.00038	0.00218	0.00574	0.00921	0.01402	0.00650	0.00976	0.00191	0.00256	0.00456	0.00681
44	Ban Khalot School	0.00613	0.03540	0.09295	0.14920	0.22706	0.10570	0.15761	0.03103	0.04142	0.07414	0.11009	0.00037	0.00212	0.00558	0.00896	0.01364	0.00629	0.00953	0.00185	0.00250	0.00441	0.00666
45	Phlu Ta Luang Wittaya School	0.00934	0.02505	0.09464	0.15245	0.23197	0.06294	0.24004	0.01848	0.06309	0.04414	0.16767	0.00054	0.00240	0.00711	0.01143	0.01739	0.00625	0.01390	0.00184	0.00365	0.00439	0.00971
46	Athittan Kindergarten School	0.00475	0.01624	0.05533	0.08900	0.13543	0.04764	0.12216	0.01399	0.03211	0.03341	0.08533	0.00038	0.00177	0.00514	0.00826	0.01257	0.00473	0.00984	0.00139	0.00259	0.00332	0.00687
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00743	0.02795	0.08279	0.13304	0.20245	0.08125	0.19090	0.02386	0.05017	0.05699	0.13334	0.00053	0.00244	0.00712	0.01145	0.01742	0.00651	0.01367	0.00191	0.00359	0.00457	0.00955
48	Ban Khao Bai Si School	0.00503	0.02762	0.07048	0.11319	0.17225	0.10787	0.12931	0.03167	0.03398	0.07566	0.09032	0.00040	0.00239	0.00619	0.00993	0.01511	0.00721	0.01031	0.00212	0.00271	0.00506	0.00720
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00122	0.02478	0.03699	0.05894	0.08975	0.10475	0.03135	0.03076	0.00824	0.07347	0.02189	0.00010	0.00138	0.00269	0.00430	0.00655	0.00517	0.00245	0.00152	0.00064	0.00363	0.00171
50	Ban KM. 5 School	0.00220	0.01464	0.03615	0.05799	0.08825	0.04622	0.05659	0.01357	0.01487	0.03242	0.03953	0.00029	0.00180	0.00455	0.00730	0.01111	0.00556	0.00733	0.00163	0.00193	0.00390	0.00512
51	Royal Thai Fleet Sattahip District School	0.00181	0.01369	0.03182	0.05101	0.07764	0.04539	0.04659	0.01333	0.01224	0.03183	0.03254	0.00022	0.00157	0.00380	0.00610	0.00928	0.00506	0.00571	0.00148	0.00150	0.00355	0.00399
52	RTN. 8 Nursery	0.00257	0.01565	0.03669	0.05892	0.08967	0.05201	0.06599	0.01527	0.01734	0.03648	0.04609	0.00025	0.00158	0.00399	0.00640	0.00974	0.00491	0.00639	0.00144	0.00168	0.00345	0.00446
53	Juk Samet School	0.00256	0.01543	0.03668	0.05889	0.08963	0.05134	0.06589	0.01508	0.01732	0.03601	0.04602	0.00025	0.00158	0.00398	0.00639	0.00973	0.00490	0.00638	0.00144	0.00168	0.00344	0.00446
54	Juk Samet Child Development Center	0.00259	0.01500	0.03695	0.05934	0.09030	0.04999	0.06657	0.01468	0.01750	0.03506	0.04650	0.00025	0.00158	0.00398	0.00639	0.00972	0.00488	0.00639	0.00143	0.00168	0.00343	0.00447
55	Ban Chong Samaesarn Child Development Center	0.00187	0.01572	0.03215	0.05147	0.07834	0.05695	0.04800	0.01672	0.01261	0.03995	0.03353	0.00013	0.00120	0.00267	0.00428	0.00652	0.00412	0.00345	0.00121	0.00091	0.00289	0.00241
56	Samaesarn Subdistrict NFE Center	0.00203	0.01256	0.02755	0.04417	0.06722	0.05030	0.05223	0.01477	0.01373	0.03528	0.03648	0.00011	0.00105	0.00229	0.00366	0.00557	0.00366	0.00281	0.00108	0.00074	0.00257	0.00196
57	Ban Chong Samaesarn School	0.00207	0.01222	0.02739	0.04390	0.06681	0.04777	0.05317	0.01402	0.01397	0.03350	0.03714	0.00011	0.00104	0.00225	0.00361	0.00549	0.00363	0.00275	0.00106	0.00072	0.00254	0.00192
58	Wat Phala Vipassana Office	0.00343	0.02502	0.05978	0.09587	0.14591	0.08116	0.08819	0.02383	0.02318	0.05693	0.06160	0.00036	0.00287	0.00667	0.01069	0.01627	0.00954	0.00935	0.00280	0.00246	0.00669	0.00653
59	Wat Phala	0.00334	0.02524	0.05954	0.09546	0.14528	0.08276	0.08588	0.02430	0.02257	0.05805	0.05999	0.00035	0.00279	0.00642	0.01029	0.01566	0.00930	0.00888	0.00273	0.00233	0.00652	0.00620
60	Chao Li Hu Ong Yea Shrine	0.00474	0.03861	0.08868	0.14214	0.21634	0.12921	0.12198	0.03794	0.03206	0.09063	0.08520	0.00051	0.00540	0.01142	0.01829	0.02785	0.01915	0.01321	0.00562	0.00347	0.01343	0.00923
61	Wat Khlong Sai	0.00460	0.03540	0.08296	0.13301	0.20243	0.11662	0.11837	0.03424	0.03111	0.08180	0.08268	0.00037	0.00327	0.00729	0.01168	0.01778	0.01118	0.00947	0.00328	0.00249	0.00784	0.00662
62	Wat Khiri Pawanaram	0.00212	0.02613	0.05288	0.08464	0.12883	0.09524	0.05454	0.02796	0.01434	0.06680	0.03810	0.00023	0.00339	0.00655	0.01048	0.01595	0.01270	0.00585	0.00373	0.00154	0.00891	0.00408
63	Ban Chang Christ Church	0.00163	0.02501	0.04675	0.07476	0.11380	0.09538	0.04197	0.02801	0.01103	0.06690	0.02932	0.00022	0.00400	0.00744	0.01189	0.01810	0.01532	0.00574	0.00450	0.00151	0.01075	0.00401
64	Ban Chang Church	0.00171	0.02636	0.04513	0.07207	0.10972	0.10511	0.04394	0.03086	0.01155	0.07373	0.03069	0.00024	0.00597	0.01047	0.01673	0.02547	0.02355	0.00611	0.00691	0.00161	0.01652	0.00427

Subject to changes and approval by the Government of Thailand

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
65	Wat Ban Khlong Bang Phai	0.00737	0.04647	0.11758	0.18867	0.28713	0.14357	0.18952	0.04215	0.04981	0.10070	0.13238	0.00066	0.00296	0.00875	0.01406	0.02140	0.00778	0.01702	0.00228	0.00447	0.00545	0.01189
66	Admiral Prince Abhakara Kiartivongse Monument	0.00805	0.04733	0.11684	0.18743	0.28525	0.14945	0.20702	0.04388	0.05441	0.10482	0.14460	0.00078	0.00344	0.01021	0.01640	0.02496	0.00899	0.01993	0.00264	0.00524	0.00630	0.01392
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00666	0.04736	0.11426	0.18325	0.27890	0.15243	0.17124	0.04476	0.04501	0.10692	0.11961	0.00080	0.00344	0.01041	0.01672	0.02545	0.00879	0.02069	0.00258	0.00544	0.00617	0.01445
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00791	0.04139	0.09296	0.14898	0.22675	0.14081	0.20328	0.04134	0.05343	0.09877	0.14199	0.00103	0.00397	0.01267	0.02038	0.03101	0.00938	0.02652	0.00276	0.00697	0.00658	0.01852
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.01563	0.03156	0.14938	0.24078	0.36635	0.11534	0.40194	0.03386	0.10564	0.08090	0.28075	0.00151	0.00518	0.01765	0.02839	0.04319	0.01104	0.03895	0.00324	0.01024	0.00774	0.02721
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.02112	0.04361	0.20323	0.32757	0.49839	0.11360	0.54297	0.03335	0.14270	0.07968	0.37926	0.00194	0.00617	0.02189	0.03522	0.05360	0.01216	0.04986	0.00357	0.01310	0.00853	0.03483
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.01696	0.10115	0.22785	0.36515	0.55577	0.39942	0.43615	0.11727	0.11463	0.28015	0.30465	0.00310	0.02348	0.05534	0.08872	0.13503	0.07700	0.07974	0.02261	0.02096	0.05401	0.05570
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.01370	0.09979	0.21237	0.34012	0.51769	0.37481	0.35213	0.11005	0.09255	0.26289	0.24596	0.00267	0.02379	0.05295	0.08484	0.12913	0.08144	0.06854	0.02391	0.01801	0.05712	0.04787
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.01359	0.16714	0.30059	0.48037	0.73126	0.65059	0.34927	0.19102	0.09180	0.45633	0.24396	0.00243	0.02722	0.05656	0.09055	0.13783	0.09761	0.06258	0.02866	0.01645	0.06846	0.04371
74	Wat Sa Kaeo	0.01640	0.09459	0.17217	0.27518	0.41890	0.36596	0.42164	0.10745	0.11082	0.25669	0.29451	0.00287	0.01062	0.03466	0.05574	0.08482	0.02428	0.07391	0.00713	0.01943	0.01703	0.05163
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00260	0.02551	0.05122	0.08208	0.12492	0.10584	0.06697	0.03108	0.01760	0.07424	0.04678	0.00027	0.00392	0.00760	0.01215	0.01850	0.01464	0.00688	0.00430	0.00181	0.01027	0.00481
76	Wat Sombun Naram	0.01250	0.07553	0.13154	0.21153	0.32189	0.30188	0.32129	0.08863	0.08444	0.21174	0.22442	0.00156	0.00840	0.02276	0.03654	0.05560	0.02428	0.04018	0.00713	0.01056	0.01703	0.02807
77	Ban Chang Abundant Grace Church	0.00627	0.05921	0.09455	0.15083	0.22963	0.24359	0.16131	0.07152	0.04240	0.17086	0.11267	0.00104	0.00804	0.01878	0.03010	0.04582	0.02658	0.02661	0.00780	0.00699	0.01864	0.01859
78	Wat Samnak Kathon	0.00308	0.06099	0.09517	0.15177	0.23106	0.25334	0.07920	0.07439	0.02081	0.17770	0.05532	0.00047	0.00787	0.01483	0.02371	0.03609	0.02991	0.01208	0.00878	0.00317	0.02098	0.00844
79	Wat Suwan Rangsan	0.00228	0.04149	0.06436	0.10262	0.15624	0.17278	0.05857	0.05073	0.01539	0.12119	0.04091	0.00033	0.00587	0.01093	0.01748	0.02661	0.02242	0.00854	0.00658	0.00224	0.01573	0.00597
80	Wat Nong Bot	0.00208	0.01914	0.04220	0.06761	0.10291	0.06598	0.05356	0.01937	0.01408	0.04628	0.03741	0.00022	0.00281	0.00565	0.00904	0.01377	0.01030	0.00570	0.00302	0.00150	0.00723	0.00398
81	The Shrine of Luang Tia Chak Mak	0.00190	0.02783	0.04831	0.07721	0.11754	0.11260	0.04884	0.03306	0.01284	0.07898	0.03412	0.00030	0.00482	0.00916	0.01464	0.02229	0.01820	0.00773	0.00534	0.00203	0.01277	0.00540
82	Wat Chak Mak	0.00200	0.03000	0.05405	0.08638	0.13150	0.12040	0.05146	0.03535	0.01352	0.08445	0.03594	0.00031	0.00501	0.00951	0.01521	0.02315	0.01897	0.00796	0.00557	0.00209	0.01331	0.00556
83	The Shrine of Luang Tia Ban Phayun	0.00235	0.01925	0.04414	0.07075	0.10769	0.06451	0.06053	0.01894	0.01591	0.04525	0.04228	0.00025	0.00195	0.00454	0.00728	0.01107	0.00645	0.00641	0.00189	0.00168	0.00452	0.00447
84	The Shrine of King Taksin the Great (Ban Chang)	0.00235	0.01934	0.04427	0.07095	0.10799	0.06488	0.06051	0.01905	0.01590	0.04551	0.04227	0.00025	0.00196	0.00456	0.00730	0.01112	0.00651	0.00639	0.00191	0.00168	0.00457	0.00447

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
85	Wat Chonthararam (Phayun)	0.00279	0.02271	0.05212	0.08355	0.12716	0.07602	0.07163	0.02232	0.01883	0.05332	0.05003	0.00028	0.00208	0.00493	0.00790	0.01202	0.00680	0.00715	0.00200	0.00188	0.00477	0.00499
86	Masjid Dawatul Islam	0.00393	0.06863	0.12815	0.20491	0.31191	0.26198	0.10100	0.07692	0.02654	0.18376	0.07055	0.00052	0.00757	0.01469	0.02350	0.03578	0.02828	0.01334	0.00830	0.00351	0.01984	0.00932
87	Chinese shrine at the Buddha Dhamma Foundation	0.00850	0.05843	0.14284	0.22911	0.34870	0.18603	0.21860	0.05462	0.05745	0.13048	0.15269	0.00072	0.00635	0.01418	0.02272	0.03458	0.02170	0.01846	0.00637	0.00485	0.01522	0.01289
88	The Shrine of Luang Tia Ban Chang	0.00472	0.04839	0.09621	0.15395	0.23434	0.17829	0.12126	0.05235	0.03187	0.12506	0.08470	0.00052	0.00585	0.01212	0.01941	0.02955	0.02102	0.01333	0.00617	0.00350	0.01474	0.00931
89	The Shrine of Laoia Guan Yu Ban Chang	0.00569	0.04740	0.10524	0.16862	0.25665	0.16260	0.14628	0.04774	0.03845	0.11405	0.10217	0.00063	0.00571	0.01265	0.02027	0.03085	0.01961	0.01623	0.00576	0.00427	0.01375	0.01134
90	Wat Ban Chang	0.00729	0.04973	0.12192	0.19556	0.29763	0.15795	0.18742	0.04638	0.04926	0.11079	0.13091	0.00075	0.00580	0.01359	0.02179	0.03316	0.01910	0.01940	0.00561	0.00510	0.01340	0.01355
91	Wat Prachummit Bamrung	0.00569	0.02924	0.08088	0.12988	0.19766	0.08281	0.14631	0.02431	0.03845	0.05808	0.10219	0.00027	0.00256	0.00560	0.00896	0.01364	0.00885	0.00700	0.00260	0.00184	0.00621	0.00489
92	The Shrine of Luang Tia Noen Kraprok 1	0.00311	0.03614	0.07428	0.11891	0.18099	0.13048	0.07992	0.03831	0.02100	0.09152	0.05582	0.00020	0.00304	0.00588	0.00940	0.01432	0.01140	0.00525	0.00335	0.00138	0.00799	0.00367
93	The Shrine of Luang Tia Noen Kraprok 2	0.00141	0.04326	0.06525	0.10399	0.15833	0.18217	0.03637	0.05349	0.00956	0.12778	0.02540	0.00013	0.00372	0.00639	0.01020	0.01553	0.01484	0.00325	0.00436	0.00085	0.01041	0.00227
94	Wat Noen Kraprok	0.00106	0.01333	0.02481	0.03967	0.06039	0.05094	0.02713	0.01496	0.00713	0.03573	0.01895	0.00008	0.00169	0.00307	0.00491	0.00747	0.00652	0.00218	0.00191	0.00057	0.00457	0.00152
95	Wat Phudon Nim Sanoh	0.00063	0.00866	0.01708	0.02732	0.04159	0.03209	0.01628	0.00942	0.00428	0.02251	0.01137	0.00006	0.00075	0.00152	0.00244	0.00371	0.00272	0.00159	0.00080	0.00042	0.00191	0.00111
96	Church of Christ Ban Chang	0.00083	0.00896	0.01883	0.03015	0.04589	0.03191	0.02142	0.00937	0.00563	0.02238	0.01496	0.00007	0.00077	0.00158	0.00253	0.00385	0.00275	0.00173	0.00081	0.00045	0.00193	0.00121
97	Anek Kusala Sala (Viharn Sien)	0.00295	0.02390	0.05149	0.08247	0.12552	0.08371	0.07589	0.02458	0.01995	0.05871	0.05301	0.00019	0.00107	0.00286	0.00459	0.00699	0.00312	0.00498	0.00092	0.00131	0.00219	0.00348
98	Wat Yan Nasangwararam	0.00311	0.01934	0.04671	0.07491	0.11401	0.06613	0.08001	0.01942	0.02103	0.04638	0.05589	0.00022	0.00121	0.00327	0.00525	0.00798	0.00348	0.00577	0.00102	0.00152	0.00244	0.00403
99	Sirisirirak Monastery	0.00222	0.02403	0.04419	0.07064	0.10753	0.09248	0.05696	0.02715	0.01497	0.06487	0.03978	0.00014	0.00150	0.00318	0.00509	0.00775	0.00531	0.00369	0.00156	0.00097	0.00373	0.00258
100	Anan Buraparam Meditation Center	0.00413	0.02157	0.04763	0.07663	0.11661	0.07602	0.10631	0.02232	0.02794	0.05332	0.07425	0.00019	0.00147	0.00345	0.00552	0.00841	0.00482	0.00494	0.00141	0.00130	0.00338	0.00345
101	Wat Map Fakthong	0.00257	0.01738	0.04272	0.06853	0.10430	0.05940	0.06598	0.01744	0.01734	0.04166	0.04608	0.00017	0.00103	0.00263	0.00423	0.00643	0.00315	0.00431	0.00092	0.00113	0.00221	0.00301
102	Khao Chi Chan Image of Lord Buddha	0.00056	0.00582	0.01234	0.01976	0.03008	0.02058	0.01437	0.00604	0.00378	0.01444	0.01004	0.00004	0.00035	0.00079	0.00126	0.00192	0.00118	0.00105	0.00035	0.00028	0.00083	0.00074
103	Wat Khao Chi Chan	0.00059	0.01111	0.01821	0.02905	0.04423	0.04611	0.01523	0.01354	0.00400	0.03234	0.01064	0.00005	0.00080	0.00150	0.00239	0.00364	0.00305	0.00119	0.00089	0.00031	0.00214	0.00083
104	Rat Samakkhi Temple	0.00614	0.03529	0.09286	0.14905	0.22684	0.10513	0.15792	0.03087	0.04150	0.07374	0.11031	0.00039	0.00220	0.00581	0.00932	0.01419	0.00652	0.00994	0.00191	0.00261	0.00457	0.00694
105	The Shrine of Chao Mae Kuan Im	0.00625	0.03589	0.09444	0.15159	0.23071	0.10693	0.16061	0.03140	0.04221	0.07500	0.11218	0.00036	0.00207	0.00547	0.00878	0.01336	0.00614	0.00935	0.00180	0.00246	0.00431	0.00653
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00687	0.03994	0.10453	0.16778	0.25534	0.11957	0.17655	0.03511	0.04640	0.08387	0.12332	0.00041	0.00231	0.00614	0.00986	0.01500	0.00680	0.01059	0.00200	0.00278	0.00477	0.00740
107	Prakai Dhamma Meditation Center	0.00252	0.01684	0.04160	0.06674	0.10157	0.05312	0.06473	0.01560	0.01701	0.03726	0.04522	0.00030	0.00190	0.00479	0.00769	0.01170	0.00590	0.00767	0.00173	0.00202	0.00413	0.00536
108	KM.8 Meditation Center	0.00415	0.02481	0.06416	0.10296	0.15670	0.07512	0.10662	0.02206	0.02802	0.05269	0.07447	0.00031	0.00193	0.00492	0.00789	0.01201	0.00595	0.00798	0.00175	0.00210	0.00417	0.00558
109	Wat Rangsee Sunthorn (KM.5)	0.00215	0.01466	0.03593	0.05764	0.08772	0.04655	0.05524	0.01367	0.01452	0.03265	0.03858	0.00029	0.00183	0.00465	0.00746	0.01135	0.00566	0.00750	0.00166	0.00197	0.00397	0.00524

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00078	0.00795	0.01697	0.02717	0.04136	0.02802	0.02004	0.00823	0.00527	0.01965	0.01400	0.00003	0.00033	0.00070	0.00113	0.00172	0.00119	0.00080	0.00035	0.00021	0.00083	0.00056
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00092	0.00876	0.01907	0.03054	0.04649	0.03194	0.02355	0.00938	0.00619	0.02240	0.01645	0.00004	0.00045	0.00092	0.00148	0.00225	0.00163	0.00098	0.00048	0.00026	0.00114	0.00069
112	Wat Tung Prong	0.00073	0.00771	0.01535	0.02458	0.03741	0.02900	0.01864	0.00852	0.00490	0.02034	0.01302	0.00003	0.00035	0.00073	0.00116	0.00177	0.00126	0.00079	0.00037	0.00021	0.00088	0.00055
113	Khao Phlu Ta Luang Meditation Center	0.00039	0.00449	0.00874	0.01398	0.02127	0.01675	0.00999	0.00492	0.00263	0.01175	0.00698	0.00002	0.00019	0.00040	0.00065	0.00098	0.00067	0.00047	0.00020	0.00012	0.00047	0.00033
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00743	0.02431	0.07004	0.11290	0.17177	0.08311	0.19096	0.02440	0.05019	0.05829	0.13339	0.00071	0.00246	0.00830	0.01335	0.02031	0.00531	0.01820	0.00156	0.00478	0.00372	0.01271
115	Wat Khao Bai Si Santitham	0.00866	0.03284	0.09946	0.16001	0.24348	0.09795	0.22266	0.02876	0.05852	0.06870	0.15553	0.00071	0.00289	0.00897	0.01442	0.02195	0.00712	0.01829	0.00209	0.00481	0.00500	0.01278
116	Welu Amphawan Vipassana Office	0.00615	0.03179	0.08080	0.12984	0.19758	0.10394	0.15800	0.03052	0.04153	0.07290	0.11036	0.00055	0.00277	0.00771	0.01239	0.01886	0.00779	0.01407	0.00229	0.00370	0.00546	0.00983
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00298	0.02166	0.05180	0.08306	0.12642	0.07020	0.07652	0.02061	0.02011	0.04924	0.05345	0.00023	0.00165	0.00397	0.00636	0.00968	0.00533	0.00590	0.00157	0.00155	0.00374	0.00412
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00283	0.01616	0.04088	0.06564	0.09990	0.05133	0.07286	0.01507	0.01915	0.03601	0.05089	0.00030	0.00192	0.00481	0.00772	0.01174	0.00596	0.00766	0.00175	0.00201	0.00418	0.00535
119	Samaesarn Pattanakarn Church	0.00261	0.01703	0.03818	0.06118	0.09312	0.05799	0.06705	0.01703	0.01762	0.04067	0.04683	0.00024	0.00164	0.00402	0.00645	0.00981	0.00520	0.00619	0.00153	0.00163	0.00365	0.00432
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00241	0.01628	0.03683	0.05902	0.08983	0.05509	0.06191	0.01617	0.01627	0.03864	0.04325	0.00015	0.00124	0.00284	0.00454	0.00692	0.00418	0.00385	0.00123	0.00101	0.00294	0.00269
121	Wat Chong Samaesarn	0.00204	0.01282	0.02781	0.04458	0.06786	0.05110	0.05238	0.01500	0.01377	0.03584	0.03659	0.00011	0.00106	0.00231	0.00370	0.00564	0.00370	0.00286	0.00108	0.00075	0.00259	0.00199
122	Viharn Luang Por Dam	0.00154	0.01299	0.02849	0.04565	0.06948	0.04492	0.03954	0.01319	0.01039	0.03151	0.02762	0.00009	0.00083	0.00182	0.00291	0.00443	0.00287	0.00228	0.00084	0.00060	0.00201	0.00159
123	The Shrine of King Taksin the Great (Samaesarn)	0.00207	0.01698	0.03888	0.06232	0.09486	0.05693	0.05321	0.01672	0.01398	0.03993	0.03717	0.00016	0.00132	0.00300	0.00480	0.00731	0.00448	0.00401	0.00131	0.00105	0.00314	0.00280
124	Thai Island and Sea Natural History Museum	0.00192	0.01657	0.03730	0.05978	0.09098	0.05629	0.04936	0.01653	0.01297	0.03949	0.03448	0.00015	0.00129	0.00289	0.00463	0.00705	0.00441	0.00378	0.00129	0.00099	0.00309	0.00264
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00224	0.01589	0.03837	0.06154	0.09366	0.05108	0.05761	0.01500	0.01514	0.03583	0.04024	0.00016	0.00136	0.00308	0.00494	0.00752	0.00462	0.00411	0.00136	0.00108	0.00324	0.00287
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00226	0.01662	0.03962	0.06353	0.09669	0.05401	0.05822	0.01586	0.01530	0.03788	0.04066	0.00016	0.00137	0.00310	0.00497	0.00756	0.00461	0.00417	0.00135	0.00110	0.00323	0.00291

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Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
127	Eastern-Nong Muang Community Health Service Center	0.01995	0.06292	0.20120	0.32413	0.49317	0.23676	0.51301	0.06952	0.13483	0.16607	0.35833	0.00211	0.01503	0.03621	0.05808	0.08839	0.04842	0.05416	0.01422	0.01423	0.03396	0.03783
128	Phala Subdistrict Health Promotion Hospital	0.00369	0.02859	0.06678	0.10706	0.16295	0.09441	0.09475	0.02772	0.02490	0.06622	0.06618	0.00036	0.00294	0.00673	0.01078	0.01641	0.00989	0.00916	0.00291	0.00241	0.00694	0.00640
129	Ban Chang Hospital	0.00130	0.01868	0.03640	0.05823	0.08863	0.06963	0.03346	0.02044	0.00879	0.04884	0.02337	0.00015	0.00206	0.00404	0.00647	0.00985	0.00764	0.00381	0.00224	0.00100	0.00536	0.00266
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00811	0.02496	0.07674	0.12372	0.18824	0.08962	0.20861	0.02631	0.05483	0.06286	0.14571	0.00084	0.00338	0.01054	0.01694	0.02578	0.00826	0.02159	0.00243	0.00567	0.00580	0.01508
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.01127	0.08181	0.19505	0.31278	0.47604	0.26588	0.28983	0.07807	0.07617	0.18649	0.20244	0.00196	0.00763	0.02420	0.03891	0.05922	0.01822	0.05034	0.00535	0.01323	0.01278	0.03517
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.01795	0.08775	0.17125	0.27569	0.41948	0.35826	0.46136	0.10519	0.12126	0.25129	0.32226	0.00218	0.00996	0.02914	0.04683	0.07126	0.02645	0.05611	0.00777	0.01475	0.01855	0.03919
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00222	0.06710	0.10308	0.16434	0.25020	0.28051	0.05714	0.08236	0.01502	0.19675	0.03991	0.00038	0.00744	0.01361	0.02175	0.03311	0.02872	0.00981	0.00843	0.00258	0.02015	0.00685
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00494	0.07908	0.12097	0.19285	0.29361	0.33111	0.12701	0.09722	0.03338	0.23224	0.08872	0.00079	0.00807	0.01724	0.02761	0.04202	0.02841	0.02042	0.00834	0.00537	0.01993	0.01426
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00215	0.02896	0.04578	0.07302	0.11117	0.12044	0.05532	0.03536	0.01454	0.08448	0.03864	0.00031	0.00456	0.00885	0.01416	0.02155	0.01706	0.00801	0.00501	0.00210	0.01197	0.00559
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00266	0.02196	0.05019	0.08045	0.12244	0.07372	0.06845	0.02165	0.01799	0.05171	0.04781	0.00027	0.00207	0.00486	0.00779	0.01185	0.00680	0.00696	0.00200	0.00183	0.00477	0.00486
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00113	0.03301	0.04991	0.07955	0.12111	0.13884	0.02899	0.04077	0.00762	0.09738	0.02025	0.00010	0.00302	0.00519	0.00829	0.01262	0.01202	0.00268	0.00353	0.00070	0.00843	0.00187
138	Phudon Huai Mahat Community Health Service Unit	0.00075	0.00916	0.01858	0.02974	0.04526	0.03337	0.01925	0.00980	0.00506	0.02340	0.01345	0.00007	0.00079	0.00162	0.00260	0.00396	0.00287	0.00172	0.00084	0.00045	0.00202	0.00120
139	Wat Yan Nasangwararam Hospital	0.00283	0.02208	0.04457	0.07151	0.10884	0.08224	0.07274	0.02415	0.01912	0.05768	0.05081	0.00020	0.00114	0.00303	0.00486	0.00740	0.00334	0.00523	0.00098	0.00138	0.00235	0.00366
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00278	0.02160	0.04445	0.07132	0.10854	0.08073	0.07158	0.02370	0.01881	0.05662	0.05000	0.00020	0.00113	0.00303	0.00486	0.00740	0.00332	0.00526	0.00098	0.00138	0.00233	0.00367
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00109	0.03335	0.05136	0.08189	0.12468	0.13927	0.02809	0.04089	0.00738	0.09769	0.01962	0.00007	0.00157	0.00283	0.00452	0.00688	0.00610	0.00191	0.00179	0.00050	0.00428	0.00133
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00655	0.03906	0.10118	0.16238	0.24712	0.11810	0.16851	0.03468	0.04429	0.08284	0.11770	0.00041	0.00230	0.00609	0.00978	0.01488	0.00683	0.01043	0.00200	0.00274	0.00479	0.00729
143	Sattahip Hospital KM.10	0.00467	0.03307	0.07994	0.12820	0.19512	0.10626	0.12017	0.03120	0.03158	0.07453	0.08394	0.00032	0.00180	0.00476	0.00764	0.01163	0.00536	0.00812	0.00157	0.00213	0.00376	0.00567

Subject to changes and approval by the Government of Thailand

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00204	0.01237	0.02742	0.04395	0.06689	0.04970	0.05253	0.01459	0.01381	0.03486	0.03669	0.00011	0.00105	0.00227	0.00364	0.00554	0.00365	0.00279	0.00107	0.00073	0.00256	0.00195
145	Village No. 1 Ban Sakulthong	0.00158	0.02092	0.04154	0.06647	0.10117	0.07913	0.04053	0.02323	0.01065	0.05550	0.02831	0.00022	0.00374	0.00703	0.01124	0.01711	0.01423	0.00568	0.00418	0.00149	0.00998	0.00397
146	Village No. 2, Ban Kilo 16	0.00613	0.03749	0.09607	0.15417	0.23463	0.11452	0.15763	0.03363	0.04143	0.08033	0.11010	0.00054	0.00501	0.01101	0.01765	0.02686	0.01733	0.01387	0.00509	0.00365	0.01215	0.00969
147	Village No. 4, Ban Tung Prong	0.00493	0.04314	0.09067	0.14519	0.22099	0.15357	0.12673	0.04509	0.03331	0.10771	0.08852	0.00064	0.00772	0.01573	0.02517	0.03832	0.02800	0.01654	0.00822	0.00435	0.01964	0.01156
148	Village No. 5, Phala Subdistrict	0.00499	0.03633	0.08685	0.13928	0.21198	0.11780	0.12823	0.03459	0.03370	0.08262	0.08957	0.00050	0.00562	0.01164	0.01863	0.02836	0.02020	0.01276	0.00593	0.00335	0.01417	0.00891
149	Village No. 6, Ban Takat	0.00361	0.02904	0.06698	0.10737	0.16341	0.09683	0.09290	0.02843	0.02442	0.06792	0.06489	0.00034	0.00286	0.00649	0.01040	0.01582	0.00968	0.00870	0.00284	0.00229	0.00679	0.00607
150	Village No. 7, Ban Khlong Sai	0.00480	0.03560	0.08455	0.13557	0.20634	0.11608	0.12342	0.03408	0.03244	0.08142	0.08621	0.00045	0.00464	0.00989	0.01584	0.02412	0.01637	0.01166	0.00481	0.00306	0.01148	0.00814
151	Village No. 1 Ban Sam Nak Thon	0.01325	0.05102	0.14911	0.23994	0.36510	0.21122	0.34057	0.06202	0.08951	0.14815	0.23789	0.00136	0.00944	0.02299	0.03687	0.05611	0.03013	0.03499	0.00885	0.00919	0.02113	0.02444
152	Village No. 2, Ban Chak Mak	0.00265	0.04874	0.07663	0.12221	0.18606	0.20339	0.06826	0.05972	0.01794	0.14266	0.04768	0.00041	0.00637	0.01217	0.01946	0.02962	0.02403	0.01043	0.00706	0.00274	0.01686	0.00728
153	Village No. 3, Ban Sa Kaeo	0.06895	0.12182	0.63287	1.02060	1.55278	0.46370	1.77275	0.13615	0.46592	0.32524	1.23825	0.00586	0.02204	0.07125	0.11457	0.17434	0.05112	0.15073	0.01501	0.03961	0.03585	0.10528
154	Sa Kaeo Community 1	0.02367	0.09766	0.22050	0.35552	0.54091	0.38696	0.60846	0.11362	0.15992	0.27141	0.42501	0.00301	0.01119	0.03640	0.05854	0.08908	0.02568	0.07745	0.00754	0.02036	0.01801	0.05410
155	Sa Kaeo Community 2	0.01680	0.08189	0.23211	0.37282	0.56736	0.22571	0.43181	0.06627	0.11349	0.15832	0.30161	0.00183	0.00694	0.02236	0.03595	0.05470	0.01620	0.04714	0.00476	0.01239	0.01136	0.03293
156	Village No. 4, Ban Khlong Bang Phai	0.01862	0.04248	0.18522	0.29843	0.45407	0.09191	0.47878	0.02699	0.12583	0.06446	0.33442	0.00142	0.00498	0.01673	0.02691	0.04095	0.01086	0.03654	0.00319	0.00960	0.00761	0.02552
157	Village No. 5, Ban Yai Ra	0.00195	0.01601	0.03665	0.05875	0.08942	0.05370	0.05013	0.01577	0.01317	0.03766	0.03501	0.00019	0.00238	0.00478	0.00765	0.01164	0.00869	0.00484	0.00255	0.00127	0.00610	0.00338
158	Village No. 6, Ban Khao Khrok	0.03619	0.07971	0.35569	0.57316	0.87207	0.25311	0.93034	0.07432	0.24451	0.17754	0.64983	0.00283	0.01343	0.03855	0.06193	0.09425	0.03647	0.07274	0.01071	0.01912	0.02558	0.05081
159	Village no. 7, Ban Nong Takhian	0.00210	0.03226	0.05481	0.08759	0.13334	0.13095	0.05396	0.03845	0.01418	0.09185	0.03769	0.00034	0.00564	0.01064	0.01702	0.02591	0.02141	0.00874	0.00629	0.00230	0.01502	0.00610
160	Village No. 8, Ban Cherng Khao	0.00352	0.18187	0.27627	0.44038	0.67049	0.76368	0.09047	0.22423	0.02378	0.53566	0.06320	0.00054	0.02470	0.04041	0.06449	0.09818	0.10053	0.01392	0.02952	0.00366	0.07051	0.00972
161	Eastern-Nong Muang Community	0.00522	0.05016	0.10713	0.17158	0.26116	0.18583	0.13411	0.05456	0.03525	0.13034	0.09368	0.00077	0.00967	0.01946	0.03115	0.04741	0.03536	0.01976	0.01038	0.00519	0.02480	0.01380
162	Wat Khiri Pawanaram Community	0.00283	0.14264	0.21822	0.34788	0.52965	0.59724	0.07269	0.17536	0.01910	0.41891	0.05077	0.00047	0.01986	0.03271	0.05220	0.07947	0.08061	0.01202	0.02367	0.00316	0.05654	0.00840
163	Ban Chang-Phala Community	0.00254	0.13947	0.20887	0.33286	0.50678	0.58893	0.06527	0.17292	0.01715	0.41308	0.04559	0.00044	0.01962	0.03215	0.05130	0.07810	0.07982	0.01122	0.02344	0.00295	0.05599	0.00784
164	Ruam Sompong Community	0.00270	0.02881	0.05825	0.09324	0.14192	0.10628	0.06948	0.03120	0.01826	0.07454	0.04853	0.00049	0.00416	0.00943	0.01512	0.02301	0.01407	0.01265	0.00413	0.00333	0.00987	0.00884
165	Ming Mongkol Community	0.00257	0.10947	0.17067	0.27216	0.41435	0.45484	0.06595	0.13355	0.01733	0.31903	0.04606	0.00035	0.00954	0.01651	0.02637	0.04015	0.03784	0.00892	0.01111	0.00235	0.02654	0.00623
166	Jor Koo Community	0.00271	0.10979	0.17041	0.27172	0.41369	0.45702	0.06955	0.13419	0.01828	0.32056	0.04858	0.00035	0.00986	0.01700	0.02715	0.04132	0.03919	0.00895	0.01151	0.00235	0.02749	0.00625
167	Wirat Phatthana Department Store Community	0.00249	0.16428	0.25006	0.39861	0.60689	0.68924	0.06406	0.20237	0.01684	0.48344	0.04475	0.00032	0.01122	0.01886	0.03011	0.04584	0.04515	0.00827	0.01326	0.00217	0.03167	0.00578
168	Thep Chinda Community	0.00284	0.10205	0.16300	0.26003	0.39588	0.41977	0.07294	0.12325	0.01917	0.29443	0.05095	0.00038	0.00925	0.01632	0.02608	0.03970	0.03637	0.00986	0.01068	0.00259	0.02551	0.00688
169	Health Park Community	0.00797	0.02658	0.07720	0.12442	0.18930	0.09185	0.20482	0.02697	0.05383	0.06442	0.14307	0.00062	0.00447	0.01076	0.01725	0.02626	0.01442	0.01606	0.00423	0.00422	0.01011	0.01122

Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
170	Wat Ban Chang Community	0.00720	0.05204	0.12476	0.20007	0.30450	0.16841	0.18500	0.04945	0.04862	0.11812	0.12922	0.00073	0.00589	0.01353	0.02169	0.03301	0.01968	0.01865	0.00578	0.00490	0.01380	0.01303
171	Dong Dang Community	0.00288	0.09284	0.15414	0.24605	0.37458	0.37546	0.07404	0.11024	0.01946	0.26335	0.05172	0.00041	0.00829	0.01508	0.02410	0.03669	0.03209	0.01062	0.00942	0.00279	0.02251	0.00742
172	Night Market Community	0.00655	0.04355	0.10420	0.16710	0.25431	0.14114	0.16848	0.04144	0.04428	0.09900	0.11768	0.00069	0.00512	0.01214	0.01946	0.02962	0.01670	0.01769	0.00490	0.00465	0.01171	0.01235
173	Ruam Mitr Community	0.00937	0.05896	0.14927	0.23952	0.36452	0.18206	0.24079	0.05346	0.06329	0.12770	0.16819	0.00075	0.00635	0.01436	0.02302	0.03503	0.02152	0.01916	0.00632	0.00504	0.01509	0.01338
174	Ban Chang - Noen Kraprok Community	0.00719	0.02303	0.07668	0.12345	0.18783	0.07476	0.18478	0.02195	0.04856	0.05244	0.12906	0.00048	0.00379	0.00879	0.01409	0.02144	0.01262	0.01228	0.00370	0.00323	0.00885	0.00857
175	Dao Pitak Community	0.00434	0.03910	0.07780	0.12450	0.18951	0.14399	0.11165	0.04228	0.02934	0.10100	0.07799	0.00043	0.00478	0.00995	0.01593	0.02425	0.01712	0.01107	0.00503	0.00291	0.01201	0.00773
176	Taiwa Community	0.00146	0.05277	0.07957	0.12682	0.19308	0.22224	0.03765	0.06525	0.00989	0.15588	0.02629	0.00014	0.00409	0.00702	0.01122	0.01708	0.01629	0.00361	0.00478	0.00095	0.01143	0.00252
177	East Ban Noen Kraprok Community, Prachummit	0.00572	0.02726	0.07813	0.12551	0.19100	0.07419	0.14715	0.02178	0.03867	0.05204	0.10278	0.00027	0.00242	0.00538	0.00862	0.01312	0.00827	0.00696	0.00243	0.00183	0.00580	0.00486
178	Ban Noen Kraprok Community	0.00128	0.02470	0.03710	0.05913	0.09003	0.10416	0.03292	0.03058	0.00865	0.07306	0.02299	0.00010	0.00277	0.00482	0.00770	0.01172	0.01098	0.00267	0.00322	0.00070	0.00770	0.00187
179	Nong Yai Community	0.00118	0.04491	0.07242	0.11558	0.17597	0.18817	0.03044	0.05525	0.00800	0.13198	0.02126	0.00014	0.00362	0.00630	0.01006	0.01532	0.01434	0.00350	0.00421	0.00092	0.01006	0.00245
180	Village No. 1, Pan Din Tai	0.00544	0.02722	0.07620	0.12239	0.18625	0.07608	0.13980	0.02234	0.03674	0.05336	0.09765	0.00026	0.00231	0.00514	0.00824	0.01253	0.00793	0.00662	0.00233	0.00174	0.00557	0.00463
181	Village No. 2, Ban Prachummit	0.00470	0.01911	0.04371	0.07048	0.10724	0.06492	0.12094	0.01906	0.03179	0.04554	0.08448	0.00038	0.00292	0.00687	0.01102	0.01677	0.00958	0.00988	0.00281	0.00260	0.00672	0.00690
182	Village No. 3, Ban Noen Samre	0.00134	0.02209	0.04090	0.06539	0.09954	0.08471	0.03446	0.02487	0.00906	0.05942	0.02407	0.00023	0.00475	0.00862	0.01378	0.02097	0.01842	0.00599	0.00541	0.00158	0.01292	0.00419
183	Village No. 4, Ban Phayun	0.00287	0.02761	0.05560	0.08899	0.13546	0.10093	0.07372	0.02963	0.01937	0.07079	0.05149	0.00046	0.00397	0.00895	0.01434	0.02182	0.01347	0.01187	0.00395	0.00312	0.00945	0.00829
184	Village No. 6, Ban Noen Kraprok	0.00083	0.01053	0.02113	0.03382	0.05148	0.03857	0.02129	0.01132	0.00559	0.02705	0.01487	0.00008	0.00112	0.00219	0.00351	0.00534	0.00419	0.00203	0.00123	0.00053	0.00294	0.00142
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00079	0.00935	0.01915	0.03066	0.04667	0.03381	0.02043	0.00993	0.00537	0.02372	0.01427	0.00007	0.00081	0.00167	0.00267	0.00407	0.00295	0.00178	0.00087	0.00047	0.00207	0.00124
186	Village No. 11, Ban Map Fakthong	0.01304	0.05284	0.13900	0.22379	0.34052	0.20453	0.33538	0.06005	0.08814	0.14346	0.23426	0.00113	0.00623	0.01670	0.02682	0.04081	0.01824	0.02907	0.00536	0.00764	0.01280	0.02031
187	Village No. 13, Ban Nong Phakkut	0.00224	0.04042	0.06920	0.11051	0.16823	0.16881	0.05747	0.04956	0.01511	0.11840	0.04014	0.00034	0.00437	0.00874	0.01398	0.02129	0.01604	0.00871	0.00471	0.00229	0.01125	0.00608
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00453	0.02276	0.06362	0.10218	0.15550	0.08371	0.11655	0.02458	0.03063	0.05871	0.08141	0.00017	0.00105	0.00270	0.00433	0.00659	0.00320	0.00445	0.00094	0.00117	0.00224	0.00311
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00100	0.04867	0.07311	0.11652	0.17741	0.20527	0.02581	0.06027	0.00678	0.14398	0.01803	0.00007	0.00145	0.00266	0.00425	0.00646	0.00561	0.00192	0.00165	0.00050	0.00393	0.00134
190	Village No. 6 (Ban Khao Krating Community)	0.00110	0.02020	0.03050	0.04862	0.07402	0.08502	0.02827	0.02496	0.00743	0.05963	0.01974	0.00005	0.00139	0.00243	0.00388	0.00590	0.00547	0.00141	0.00161	0.00037	0.00384	0.00098
191	Village No. 7 (Ban Nong Hin Community)	0.00132	0.04838	0.07428	0.11843	0.18030	0.20230	0.03389	0.05940	0.00891	0.14189	0.02367	0.00011	0.00278	0.00485	0.00775	0.01180	0.01100	0.00275	0.00323	0.00072	0.00772	0.00192
192	Village No. 11 (Ban Khong Wanphen Community)	0.00721	0.02400	0.07988	0.12855	0.19561	0.07101	0.18541	0.02085	0.04873	0.04981	0.12951	0.00037	0.00198	0.00535	0.00860	0.01308	0.00573	0.00944	0.00168	0.00248	0.00402	0.00659
193	Village No. 1, Ban Phlu Ta Luang	0.00621	0.03545	0.09356	0.15018	0.22856	0.10527	0.15977	0.03091	0.04199	0.07384	0.11159	0.00039	0.00224	0.00589	0.00945	0.01438	0.00671	0.00997	0.00197	0.00262	0.00470	0.00696
194	Village No. 2, Ban Khalot	0.00590	0.03513	0.09102	0.14609	0.22232	0.10620	0.15165	0.03118	0.03986	0.07449	0.10593	0.00037	0.00200	0.00541	0.00869	0.01322	0.00578	0.00955	0.00170	0.00251	0.00405	0.00667
195	Village No. 3, Ban Khlong Phai	0.00388	0.02372	0.05407	0.08667	0.13191	0.07983	0.09970	0.02344	0.02620	0.05600	0.06964	0.00042	0.00208	0.00587	0.00943	0.01434	0.00577	0.01085	0.00169	0.00285	0.00405	0.00758

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Table 5.2-59 Forecasted results of benzene emissions, operation phase

Area		The concentration value of benzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00559	0.02120	0.05383	0.08676	0.13200	0.07231	0.14372	0.02123	0.03777	0.05072	0.10039	0.00039	0.00178	0.00522	0.00838	0.01275	0.00471	0.01006	0.00138	0.00264	0.00331	0.00703
197	Village No. 5, Ban Khao Bai Si	0.00608	0.02182	0.05943	0.09576	0.14570	0.06936	0.15619	0.02036	0.04105	0.04865	0.10909	0.00054	0.00246	0.00719	0.01155	0.01758	0.00657	0.01380	0.00193	0.00363	0.00460	0.00964
198	Village No. 6, Ban Khao Tabaek	0.00410	0.02442	0.06328	0.10156	0.15456	0.07384	0.10541	0.02168	0.02771	0.05179	0.07363	0.00029	0.00185	0.00468	0.00752	0.01144	0.00571	0.00756	0.00168	0.00199	0.00400	0.00528
199	Village No. 7, Ban Nong Ya Noi	0.00261	0.01709	0.04256	0.06828	0.10391	0.05356	0.06700	0.01573	0.01761	0.03757	0.04680	0.00030	0.00190	0.00478	0.00767	0.01167	0.00590	0.00764	0.00173	0.00201	0.00414	0.00534
200	Village No. 8, Ban Nong Ya	0.00151	0.03071	0.04587	0.07309	0.11129	0.12983	0.03889	0.03812	0.01022	0.09107	0.02717	0.00007	0.00188	0.00330	0.00526	0.00801	0.00744	0.00189	0.00218	0.00050	0.00522	0.00132
201	Ban Nong Krachong Community	0.00292	0.01508	0.04163	0.06685	0.10173	0.05263	0.07513	0.01545	0.01975	0.03692	0.05248	0.00021	0.00157	0.00373	0.00599	0.00911	0.00509	0.00548	0.00149	0.00144	0.00357	0.00383
Standard*		7.6*											1.7**, 30***									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Surveillance range values of benzene within 24 hours, as referenced from Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours.
* Standard 1-year volatile organic values for benzene in the general atmosphere are referenced from Notification of the National Environment Board No. 30 (2009) Re: Determination of General Atmospheric Volatile Organic Standards within 1 Year.
** Benzene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

Subject to changes and approval by the Government of Thailand

2.4) 1,3-Butadiene

From the 1,3-Butadiene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. The Cmax of all scenarios were within standard criteria for surveillance values for volatile organic compounds in the general atmosphere within 24 hours for Thailand, which is set to no more than 5.3 micrograms per cubic meter according to the Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours. It was also found that most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and all had values within the standard general atmospheric volatile organic range within 1 Year for Thailand according to Notification No. 30 (2007) of the National Environment Board Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 1 Year, which has the values for 1,3-Butadiene set to not exceed 0.33 micrograms per cubic meter and the foreign standard reference criteria for 1,3-Butadiene concentrations that allow for long-term exposure without affecting health (Reference Concentration; RfC for 1,3-Butadiene is equal to 2 micrograms per cubic meter).

When comparing the Cmax of 1,3-Butadiene for 24-hour average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 2.58302 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 0.06299 micrograms per cubic meter. The 1-year average concentration of 1,3-Butadiene for scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest concentration value, comprising 0.22468 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.00659 micrograms per cubic meter.

In this regard, when considering the 1,3-Butadiene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shownTable 5.2-60 and Addendum 5-3, item 9, line showing 1,3-Butadiene concentration contours (Figure 9-1 to Figure 9-22), it was found that 1,3-Butadiene concentrations were in accordance with standard criteria.

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.06299	0.60143	0.91551	1.46879	2.24636	2.58302	1.88665	0.74396	0.48799	1.80107	1.31245	0.00659	0.04663	0.09068	0.14696	0.22468	0.19384	0.19728	0.05583	0.05103	0.13516	0.13724
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00777	0.05054	0.13572	0.21946	0.33556	0.15620	0.23268	0.04499	0.06019	0.10892	0.16187	0.00058	0.00342	0.00962	0.01556	0.02379	0.01010	0.01745	0.00291	0.00451	0.00705	0.01214
2	Wat Phala School	0.00301	0.02529	0.06116	0.09878	0.15104	0.08515	0.09003	0.02452	0.02329	0.05937	0.06263	0.00031	0.00280	0.00658	0.01063	0.01625	0.00963	0.00923	0.00277	0.00239	0.00671	0.00642
3	Phala Subdistrict Municipality Child Development Center	0.00270	0.02337	0.05591	0.09030	0.13807	0.07930	0.08084	0.02284	0.02091	0.05530	0.05623	0.00029	0.00263	0.00617	0.00996	0.01524	0.00907	0.00861	0.00261	0.00223	0.00632	0.00599
4	Ban Khlong Sai School	0.00340	0.03227	0.07473	0.12064	0.18446	0.11207	0.10194	0.03228	0.02637	0.07814	0.07092	0.00027	0.00277	0.00628	0.01013	0.01549	0.00975	0.00822	0.00281	0.00213	0.00680	0.00572
5	Rayong English Program School	0.00385	0.03058	0.07561	0.12215	0.18677	0.10126	0.11532	0.02917	0.02983	0.07061	0.08022	0.00031	0.00317	0.00714	0.01153	0.01762	0.01122	0.00923	0.00323	0.00239	0.00782	0.00642
6	Rayong Garden International School	0.00365	0.03104	0.07476	0.12075	0.18464	0.10481	0.10934	0.03019	0.02828	0.07308	0.07606	0.00030	0.00310	0.00701	0.01131	0.01729	0.01097	0.00910	0.00316	0.00235	0.00765	0.00633
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00201	0.03268	0.06321	0.10180	0.15567	0.12645	0.06034	0.03642	0.01561	0.08817	0.04197	0.00026	0.00588	0.01089	0.01753	0.02681	0.02326	0.00791	0.00670	0.00204	0.01622	0.00550
8	Wat Khiri Pawanaram School	0.00200	0.03107	0.06050	0.09746	0.14903	0.11978	0.05982	0.03450	0.01547	0.08352	0.04161	0.00025	0.00527	0.00987	0.01589	0.02431	0.02072	0.00753	0.00597	0.00195	0.01445	0.00524
9	Ban Khlong Bang Phai School	0.00619	0.04330	0.11271	0.18219	0.27857	0.13755	0.18536	0.03962	0.04795	0.09591	0.12895	0.00051	0.00265	0.00793	0.01284	0.01963	0.00735	0.01539	0.00212	0.00398	0.00512	0.01070
10	Pattanavechsuksa School	0.01736	0.05470	0.21546	0.34955	0.53439	0.09807	0.51992	0.02825	0.13448	0.06838	0.36169	0.00129	0.00526	0.01781	0.02885	0.04411	0.01247	0.03859	0.00359	0.00998	0.00869	0.02684
11	Pattanavech College	0.01448	0.04446	0.17795	0.28872	0.44140	0.09470	0.43363	0.02728	0.11216	0.06603	0.30166	0.00110	0.00463	0.01541	0.02497	0.03818	0.01125	0.03294	0.00324	0.00852	0.00784	0.02291
12	Saeng Song La Child Development Center 3	0.01095	0.08190	0.17480	0.28191	0.43108	0.29984	0.32785	0.08636	0.08480	0.20907	0.22807	0.00185	0.00808	0.02639	0.04276	0.06537	0.02013	0.05554	0.00580	0.01437	0.01404	0.03864
13	Wat Sa Kaeo School	0.01247	0.08393	0.17664	0.28483	0.43554	0.30987	0.37358	0.08925	0.09663	0.21606	0.25988	0.00211	0.00865	0.02923	0.04736	0.07241	0.02053	0.06327	0.00591	0.01636	0.01432	0.04401
14	Wat Sombun Naram School (Tem Rat Memorial)	0.00978	0.07065	0.13287	0.21521	0.32903	0.29460	0.29285	0.08485	0.07575	0.20542	0.20372	0.00134	0.00832	0.02278	0.03684	0.05633	0.02524	0.04003	0.00727	0.01035	0.01760	0.02785
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.00978	0.07065	0.13287	0.21521	0.32903	0.29460	0.29285	0.08485	0.07575	0.20542	0.20372	0.00134	0.00832	0.02278	0.03684	0.05633	0.02524	0.04003	0.00727	0.01035	0.01760	0.02785
16	Sajjaseuksa School	0.00181	0.06708	0.10434	0.16747	0.25613	0.28576	0.05429	0.08230	0.01404	0.19925	0.03777	0.00028	0.00855	0.01502	0.02415	0.03693	0.03465	0.00831	0.00998	0.00215	0.02416	0.00578
17	Ban Chang District Center for Non-Formal and Informal Education	0.00308	0.08396	0.13411	0.21534	0.32933	0.35404	0.09240	0.10197	0.02390	0.24687	0.06428	0.00042	0.00920	0.01711	0.02755	0.04213	0.03627	0.01270	0.01045	0.00329	0.02529	0.00884
18	Wat Suwan Rangsan Community School	0.00219	0.05529	0.08612	0.13822	0.21139	0.23542	0.06562	0.06781	0.01697	0.16415	0.04565	0.00032	0.00686	0.01276	0.02053	0.03140	0.02705	0.00945	0.00779	0.00244	0.01886	0.00657

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00194	0.04045	0.06340	0.10177	0.15564	0.17182	0.05825	0.04949	0.01507	0.11980	0.04052	0.00028	0.00570	0.01076	0.01733	0.02650	0.02230	0.00849	0.00642	0.00220	0.01555	0.00591
20	Wat Samnak Kathon School	0.00256	0.05775	0.09103	0.14614	0.22350	0.24479	0.07659	0.07050	0.01981	0.17069	0.05328	0.00039	0.00752	0.01436	0.02312	0.03536	0.02928	0.01182	0.00843	0.00306	0.02041	0.00822
21	Ban Sam Nak Thon Child Development Center	0.00248	0.05570	0.08773	0.14084	0.21540	0.23620	0.07440	0.06803	0.01924	0.16469	0.05176	0.00039	0.00746	0.01421	0.02289	0.03500	0.02908	0.01160	0.00838	0.00300	0.02028	0.00807
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00196	0.03309	0.05156	0.08275	0.12656	0.14089	0.05857	0.04058	0.01515	0.09824	0.04074	0.00028	0.00451	0.00895	0.01442	0.02205	0.01722	0.00840	0.00496	0.00217	0.01200	0.00584
23	Wat Chak Mak School	0.00176	0.02375	0.04137	0.06653	0.10175	0.09659	0.05277	0.02782	0.01365	0.06735	0.03671	0.00025	0.00409	0.00805	0.01297	0.01984	0.01569	0.00735	0.00452	0.00190	0.01094	0.00512
24	St. Andrews International School, Green Valley, Rayong,	0.00043	0.00464	0.00802	0.01290	0.01972	0.01892	0.01289	0.00545	0.00333	0.01319	0.00897	0.00005	0.00057	0.00126	0.00203	0.00311	0.00203	0.00158	0.00058	0.00041	0.00142	0.00110
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00236	0.02195	0.05118	0.08263	0.12635	0.07586	0.07072	0.02185	0.01829	0.05289	0.04919	0.00024	0.00202	0.00488	0.00788	0.01205	0.00683	0.00714	0.00197	0.00185	0.00476	0.00497
26	Ban Phayun School	0.00232	0.02153	0.05024	0.08112	0.12403	0.07441	0.06948	0.02143	0.01797	0.05189	0.04833	0.00024	0.00201	0.00485	0.00783	0.01197	0.00676	0.00712	0.00195	0.00184	0.00471	0.00495
27	Rakpasa Kindergarten	0.00289	0.02849	0.06508	0.10505	0.16063	0.09986	0.08652	0.02876	0.02238	0.06963	0.06019	0.00026	0.00223	0.00534	0.00862	0.01319	0.00757	0.00773	0.00218	0.00200	0.00528	0.00538
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00514	0.04861	0.11268	0.18192	0.27816	0.16875	0.15397	0.04860	0.03983	0.11766	0.10711	0.00056	0.00557	0.01269	0.02048	0.03131	0.01957	0.01677	0.00564	0.00434	0.01364	0.01166
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00239	0.01881	0.04254	0.06865	0.10498	0.06636	0.07168	0.01911	0.01854	0.04627	0.04987	0.00022	0.00201	0.00474	0.00765	0.01169	0.00690	0.00667	0.00199	0.00172	0.00481	0.00464
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00239	0.01881	0.04254	0.06865	0.10498	0.06636	0.07168	0.01911	0.01854	0.04627	0.04987	0.00022	0.00201	0.00474	0.00765	0.01169	0.00690	0.00667	0.00199	0.00172	0.00481	0.00464
31	Wat Prachummit Bamrung School	0.00470	0.02869	0.07923	0.12815	0.19594	0.08640	0.14064	0.02489	0.03638	0.06024	0.09783	0.00023	0.00246	0.00545	0.00880	0.01345	0.00881	0.00680	0.00254	0.00176	0.00615	0.00473
32	Udom Wittayanukun School	0.00105	0.01959	0.02969	0.04763	0.07285	0.08427	0.03150	0.02427	0.00815	0.05876	0.02191	0.00008	0.00244	0.00431	0.00693	0.01060	0.00988	0.00245	0.00285	0.00063	0.00689	0.00170
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00080	0.01191	0.02239	0.03604	0.05512	0.04674	0.02404	0.01346	0.00622	0.03259	0.01672	0.00007	0.00130	0.00247	0.00397	0.00607	0.00508	0.00197	0.00146	0.00051	0.00354	0.00137
34	Wat Noen Kraprok School	0.00079	0.01192	0.02249	0.03621	0.05537	0.04672	0.02366	0.01346	0.00612	0.03257	0.01646	0.00007	0.00128	0.00243	0.00391	0.00598	0.00497	0.00198	0.00143	0.00051	0.00347	0.00138
35	Chonnabot Phatthana Kindergarten	0.00107	0.02433	0.03726	0.05978	0.09143	0.10427	0.03210	0.03003	0.00830	0.07270	0.02233	0.00010	0.00251	0.00455	0.00732	0.01120	0.01001	0.00301	0.00288	0.00078	0.00698	0.00209
36	Aksorn Business Administration Technological College	0.00408	0.05805	0.11877	0.19143	0.29273	0.21785	0.12212	0.06274	0.03159	0.15190	0.08496	0.00044	0.00570	0.01195	0.01928	0.02947	0.02112	0.01311	0.00608	0.00339	0.01472	0.00912
37	Banchang Karnchanakul Wittaya School	0.00167	0.04227	0.06783	0.10894	0.16661	0.17991	0.05006	0.05182	0.01295	0.12544	0.03482	0.00031	0.00774	0.01401	0.02255	0.03448	0.03092	0.00917	0.00891	0.00237	0.02156	0.00638

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Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00060	0.00835	0.01716	0.02767	0.04231	0.03125	0.01788	0.00900	0.00463	0.02179	0.01244	0.00005	0.00070	0.00146	0.00235	0.00359	0.00260	0.00157	0.00075	0.00041	0.00181	0.00109
39	Ban Phudon - Huai Mahat Child Development Center	0.00060	0.00835	0.01716	0.02767	0.04231	0.03125	0.01788	0.00900	0.00463	0.02179	0.01244	0.00005	0.00070	0.00146	0.00235	0.00359	0.00260	0.00157	0.00075	0.00041	0.00181	0.00109
40	Ban Map Fakthong School	0.00233	0.01873	0.04074	0.06572	0.10049	0.06780	0.06966	0.01953	0.01802	0.04727	0.04846	0.00014	0.00082	0.00230	0.00372	0.00568	0.00244	0.00415	0.00070	0.00107	0.00170	0.00288
41	Phuru Yor. Sor. Sor. 80 School	0.00262	0.01663	0.04512	0.07297	0.11157	0.06032	0.07840	0.01737	0.02028	0.04206	0.05454	0.00010	0.00074	0.00187	0.00302	0.00461	0.00242	0.00292	0.00070	0.00076	0.00169	0.00203
42	Khao Chi Chan School	0.00239	0.02393	0.04999	0.08059	0.12324	0.08874	0.07150	0.02556	0.01849	0.06187	0.04974	0.00015	0.00137	0.00321	0.00519	0.00793	0.00471	0.00449	0.00136	0.00116	0.00328	0.00312
43	Ban Khalot Child Development Center	0.00505	0.03262	0.08785	0.14206	0.21720	0.10057	0.15115	0.02897	0.03910	0.07012	0.10515	0.00032	0.00210	0.00564	0.00912	0.01395	0.00647	0.00970	0.00186	0.00251	0.00451	0.00675
44	Ban Khalot School	0.00523	0.03402	0.09139	0.14778	0.22595	0.10511	0.15675	0.03027	0.04054	0.07329	0.10904	0.00032	0.00203	0.00549	0.00888	0.01357	0.00625	0.00948	0.00180	0.00245	0.00436	0.00659
45	Phlu Ta Luang Wittaya School	0.00797	0.02387	0.09295	0.15090	0.23070	0.06258	0.23873	0.01803	0.06175	0.04364	0.16607	0.00046	0.00229	0.00699	0.01132	0.01730	0.00622	0.01382	0.00179	0.00357	0.00434	0.00961
46	Athittan Kindergarten School	0.00406	0.01544	0.05436	0.08812	0.13472	0.04737	0.12149	0.01364	0.03143	0.03303	0.08452	0.00033	0.00169	0.00505	0.00818	0.01251	0.00470	0.00978	0.00135	0.00253	0.00328	0.00681
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00634	0.02673	0.08137	0.13174	0.20143	0.08079	0.18986	0.02327	0.04911	0.05634	0.13207	0.00045	0.00234	0.00700	0.01133	0.01733	0.00648	0.01359	0.00187	0.00352	0.00451	0.00946
48	Ban Khao Bai Si School	0.00429	0.02674	0.06929	0.11210	0.17139	0.10727	0.12860	0.03090	0.03326	0.07480	0.08946	0.00034	0.00229	0.00608	0.00984	0.01504	0.00717	0.01026	0.00207	0.00265	0.00500	0.00714
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00104	0.02417	0.03645	0.05846	0.08941	0.10416	0.03117	0.03000	0.00806	0.07263	0.02169	0.00008	0.00134	0.00265	0.00426	0.00652	0.00514	0.00243	0.00148	0.00063	0.00358	0.00169
50	Ban KM. 5 School	0.00188	0.01410	0.03555	0.05744	0.08783	0.04596	0.05628	0.01324	0.01456	0.03205	0.03915	0.00024	0.00173	0.00447	0.00723	0.01105	0.00553	0.00729	0.00159	0.00188	0.00385	0.00507
51	Royal Thai Fleet Sattahip District School	0.00155	0.01321	0.03129	0.05054	0.07727	0.04513	0.04633	0.01300	0.01198	0.03147	0.03223	0.00019	0.00152	0.00374	0.00604	0.00924	0.00503	0.00568	0.00145	0.00147	0.00351	0.00395
52	RTN. 8 Nursery	0.00219	0.01510	0.03607	0.05836	0.08922	0.05172	0.06562	0.01490	0.01697	0.03606	0.04565	0.00021	0.00152	0.00392	0.00634	0.00970	0.00489	0.00636	0.00141	0.00164	0.00341	0.00442
53	Juk Samet School	0.00219	0.01489	0.03605	0.05833	0.08918	0.05106	0.06553	0.01471	0.01695	0.03560	0.04558	0.00021	0.00152	0.00392	0.00633	0.00968	0.00488	0.00635	0.00140	0.00164	0.00340	0.00442
54	Juk Samet Child Development Center	0.00221	0.01447	0.03632	0.05876	0.08985	0.04971	0.06620	0.01432	0.01712	0.03466	0.04605	0.00021	0.00152	0.00391	0.00633	0.00968	0.00486	0.00636	0.00140	0.00165	0.00339	0.00442
55	Ban Chong Samaesarn Child Development Center	0.00159	0.01523	0.03164	0.05100	0.07799	0.05664	0.04773	0.01631	0.01235	0.03949	0.03321	0.00011	0.00116	0.00263	0.00424	0.00649	0.00409	0.00343	0.00118	0.00089	0.00285	0.00239
56	Samaesarn Subdistrict NFE Center	0.00173	0.01222	0.02710	0.04376	0.06691	0.05002	0.05195	0.01441	0.01344	0.03488	0.03614	0.00009	0.00102	0.00225	0.00363	0.00555	0.00364	0.00280	0.00105	0.00072	0.00254	0.00195
57	Ban Chong Samaesarn School	0.00177	0.01181	0.02694	0.04349	0.06650	0.04750	0.05288	0.01368	0.01368	0.03312	0.03679	0.00009	0.00100	0.00221	0.00357	0.00546	0.00361	0.00274	0.00104	0.00071	0.00251	0.00190
58	Wat Phala Vipassana Office	0.00293	0.02411	0.05879	0.09497	0.14522	0.08070	0.08770	0.02324	0.02269	0.05627	0.06101	0.00031	0.00277	0.00656	0.01059	0.01619	0.00949	0.00930	0.00273	0.00240	0.00662	0.00647
59	Wat Phala	0.00285	0.02434	0.05855	0.09457	0.14460	0.08230	0.08541	0.02370	0.02209	0.05738	0.05942	0.00029	0.00269	0.00631	0.01019	0.01559	0.00925	0.00883	0.00266	0.00228	0.00645	0.00614
60	Chao Li Hu Ong Yea Shrine	0.00405	0.03727	0.08722	0.14082	0.21533	0.12849	0.12131	0.03701	0.03138	0.08959	0.08439	0.00044	0.00522	0.01124	0.01813	0.02772	0.01904	0.01314	0.00548	0.00340	0.01328	0.00914
61	Wat Khlong Sai	0.00393	0.03414	0.08159	0.13177	0.20148	0.11597	0.11773	0.03340	0.03045	0.08086	0.08190	0.00031	0.00316	0.00717	0.01158	0.01770	0.01112	0.00942	0.00320	0.00244	0.00775	0.00655
62	Wat Khiri Pawanaram	0.00181	0.02531	0.05203	0.08388	0.12826	0.09470	0.05425	0.02728	0.01403	0.06603	0.03774	0.00019	0.00329	0.00645	0.01038	0.01588	0.01263	0.00581	0.00364	0.00150	0.00881	0.00404

Subject to changes and approval by the Government of Thailand

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00139	0.02427	0.04602	0.07410	0.11331	0.09485	0.04174	0.02732	0.01080	0.06614	0.02904	0.00019	0.00389	0.00732	0.01178	0.01802	0.01524	0.00571	0.00439	0.00148	0.01062	0.00397
64	Ban Chang Church	0.00146	0.02564	0.04444	0.07145	0.10927	0.10452	0.04370	0.03011	0.01130	0.07288	0.03040	0.00020	0.00581	0.01031	0.01659	0.02536	0.02342	0.00608	0.00674	0.00157	0.01633	0.00423
65	Wat Ban Khlong Bang Phai	0.00629	0.04471	0.11562	0.18688	0.28575	0.14277	0.18848	0.04112	0.04875	0.09955	0.13111	0.00057	0.00283	0.00860	0.01393	0.02129	0.00773	0.01693	0.00223	0.00438	0.00539	0.01177
66	Admiral Prince Abhakara Kiartivongse Monument	0.00687	0.04557	0.11489	0.18567	0.28389	0.14861	0.20588	0.04280	0.05325	0.10362	0.14322	0.00066	0.00329	0.01003	0.01624	0.02483	0.00894	0.01982	0.00257	0.00513	0.00623	0.01379
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00569	0.04563	0.11237	0.18154	0.27757	0.15158	0.17030	0.04366	0.04405	0.10569	0.11847	0.00069	0.00329	0.01023	0.01656	0.02532	0.00874	0.02058	0.00252	0.00532	0.00610	0.01431
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00675	0.03998	0.09144	0.14760	0.22570	0.14002	0.20216	0.04033	0.05229	0.09763	0.14064	0.00088	0.00379	0.01245	0.02018	0.03085	0.00933	0.02637	0.00269	0.00682	0.00651	0.01835
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.01335	0.03013	0.14667	0.23830	0.36430	0.11469	0.39974	0.03303	0.10340	0.07997	0.27808	0.00129	0.00493	0.01734	0.02810	0.04297	0.01098	0.03874	0.00316	0.01002	0.00766	0.02695
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.01803	0.04075	0.19956	0.32420	0.49562	0.11296	0.53999	0.03254	0.13967	0.07877	0.37564	0.00166	0.00585	0.02151	0.03487	0.05331	0.01209	0.04959	0.00348	0.01283	0.00843	0.03449
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.01448	0.09768	0.22412	0.36178	0.55319	0.39718	0.43376	0.11440	0.11219	0.27695	0.30175	0.00265	0.02264	0.05442	0.08790	0.13440	0.07657	0.07931	0.02205	0.02051	0.05339	0.05517
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.01169	0.09653	0.20893	0.33702	0.51534	0.37271	0.35020	0.10735	0.09058	0.25988	0.24362	0.00228	0.02298	0.05208	0.08406	0.12854	0.08099	0.06816	0.02333	0.01763	0.05647	0.04742
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.01160	0.16238	0.29592	0.47619	0.72820	0.64695	0.34736	0.18634	0.08985	0.45110	0.24164	0.00208	0.02635	0.05564	0.08973	0.13721	0.09706	0.06224	0.02796	0.01610	0.06768	0.04330
74	Wat Sa Kaeo	0.01400	0.09188	0.16948	0.27278	0.41714	0.36391	0.41933	0.10482	0.10846	0.25375	0.29171	0.00245	0.01012	0.03406	0.05519	0.08437	0.02415	0.07351	0.00695	0.01901	0.01684	0.05113
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00222	0.02486	0.05038	0.08132	0.12434	0.10525	0.06660	0.03031	0.01723	0.07339	0.04633	0.00023	0.00380	0.00748	0.01205	0.01842	0.01455	0.00685	0.00419	0.00177	0.01015	0.00476
76	Wat Sombun Naram	0.01067	0.07348	0.12925	0.20945	0.32021	0.30019	0.31953	0.08646	0.08265	0.20931	0.22228	0.00133	0.00806	0.02237	0.03619	0.05533	0.02415	0.03996	0.00695	0.01034	0.01684	0.02780
77	Ban Chang Abundant Grace Church	0.00536	0.05768	0.09313	0.14956	0.22873	0.24223	0.16043	0.06977	0.04150	0.16890	0.11160	0.00088	0.00776	0.01847	0.02982	0.04560	0.02643	0.02647	0.00761	0.00685	0.01843	0.01841
78	Wat Samnak Kathon	0.00263	0.05945	0.09375	0.15051	0.23018	0.25193	0.07876	0.07256	0.02037	0.17566	0.05479	0.00040	0.00764	0.01459	0.02350	0.03594	0.02975	0.01201	0.00857	0.00311	0.02074	0.00836
79	Wat Suwan Rangsan	0.00194	0.04045	0.06340	0.10177	0.15564	0.17182	0.05825	0.04949	0.01507	0.11980	0.04052	0.00028	0.00570	0.01076	0.01733	0.02650	0.02230	0.00849	0.00642	0.00220	0.01555	0.00591
80	Wat Nong Bot	0.00178	0.01850	0.04151	0.06699	0.10244	0.06561	0.05327	0.01890	0.01378	0.04575	0.03705	0.00019	0.00273	0.00556	0.00896	0.01371	0.01024	0.00567	0.00295	0.00147	0.00714	0.00395
81	The Shrine of Luang Tia Chak Mak	0.00162	0.02709	0.04755	0.07654	0.11704	0.11197	0.04858	0.03225	0.01256	0.07808	0.03379	0.00026	0.00467	0.00901	0.01451	0.02219	0.01810	0.00769	0.00521	0.00199	0.01262	0.00535
82	Wat Chak Mak	0.00171	0.02914	0.05321	0.08563	0.13095	0.11973	0.05118	0.03448	0.01324	0.08348	0.03560	0.00026	0.00486	0.00936	0.01507	0.02305	0.01887	0.00791	0.00543	0.00205	0.01316	0.00551

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Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00201	0.01858	0.04342	0.07010	0.10719	0.06415	0.06019	0.01848	0.01557	0.04473	0.04187	0.00021	0.00188	0.00446	0.00721	0.01102	0.00641	0.00637	0.00185	0.00165	0.00447	0.00443
84	The Shrine of King Taksin the Great (Ban Chang)	0.00201	0.01867	0.04354	0.07030	0.10749	0.06452	0.06018	0.01858	0.01557	0.04499	0.04186	0.00021	0.00189	0.00448	0.00724	0.01106	0.00648	0.00636	0.00187	0.00164	0.00452	0.00442
85	Wat Chonthararam (Phayun)	0.00238	0.02192	0.05127	0.08278	0.12657	0.07560	0.07123	0.02177	0.01843	0.05271	0.04955	0.00024	0.00201	0.00484	0.00782	0.01196	0.00676	0.00711	0.00195	0.00184	0.00472	0.00495
86	Masjid Dawatul Islam	0.00335	0.06662	0.12614	0.20310	0.31058	0.26052	0.10044	0.07503	0.02598	0.18165	0.06987	0.00044	0.00734	0.01446	0.02330	0.03562	0.02812	0.01326	0.00810	0.00343	0.01961	0.00923
87	Chinese shrine at the Buddha Dhamma Foundation	0.00726	0.05628	0.14046	0.22696	0.34703	0.18499	0.21740	0.05328	0.05623	0.12899	0.15123	0.00061	0.00614	0.01395	0.02251	0.03442	0.02158	0.01836	0.00622	0.00475	0.01505	0.01277
88	The Shrine of Luang Tia Ban Chang	0.00403	0.04690	0.09467	0.15257	0.23331	0.17730	0.12060	0.05107	0.03119	0.12362	0.08390	0.00044	0.00566	0.01193	0.01924	0.02942	0.02090	0.01326	0.00602	0.00343	0.01457	0.00922
89	The Shrine of Laoia Guan Yu Ban Chang	0.00486	0.04580	0.10352	0.16707	0.25546	0.16169	0.14548	0.04657	0.03763	0.11274	0.10120	0.00054	0.00552	0.01244	0.02008	0.03071	0.01950	0.01614	0.00562	0.00417	0.01359	0.01123
90	Wat Ban Chang	0.00622	0.04790	0.11989	0.19373	0.29621	0.15706	0.18639	0.04524	0.04821	0.10952	0.12966	0.00064	0.00559	0.01337	0.02159	0.03301	0.01900	0.01929	0.00547	0.00499	0.01325	0.01342
91	Wat Prachummit Bamrung	0.00486	0.02805	0.07951	0.12864	0.19668	0.08235	0.14550	0.02372	0.03764	0.05742	0.10122	0.00023	0.00247	0.00550	0.00888	0.01358	0.00880	0.00696	0.00253	0.00180	0.00614	0.00484
92	The Shrine of Luang Tia Noen Kraprok 1	0.00265	0.03499	0.07308	0.11783	0.18019	0.12975	0.07948	0.03737	0.02056	0.09047	0.05529	0.00017	0.00295	0.00579	0.00932	0.01425	0.01133	0.00523	0.00326	0.00135	0.00790	0.00364
93	The Shrine of Luang Tia Noen Kraprok 2	0.00121	0.04219	0.06428	0.10313	0.15773	0.18116	0.03617	0.05218	0.00935	0.12631	0.02516	0.00011	0.00362	0.00629	0.01011	0.01546	0.01475	0.00323	0.00425	0.00084	0.01029	0.00225
94	Wat Noen Kraprok	0.00090	0.01294	0.02442	0.03932	0.06013	0.05066	0.02698	0.01459	0.00698	0.03532	0.01877	0.00007	0.00164	0.00302	0.00486	0.00744	0.00648	0.00217	0.00187	0.00056	0.00452	0.00151
95	Wat Phudon Nim Sanoh	0.00054	0.00840	0.01681	0.02708	0.04141	0.03191	0.01619	0.00919	0.00419	0.02225	0.01127	0.00005	0.00073	0.00150	0.00242	0.00370	0.00271	0.00158	0.00078	0.00041	0.00189	0.00110
96	Church of Christ Ban Chang	0.00071	0.00867	0.01852	0.02988	0.04568	0.03173	0.02130	0.00914	0.00551	0.02213	0.01482	0.00006	0.00074	0.00156	0.00251	0.00384	0.00274	0.00172	0.00079	0.00044	0.00191	0.00120
97	Anek Kusala Sala (Viharn Sien)	0.00252	0.02311	0.05065	0.08171	0.12495	0.08324	0.07548	0.02397	0.01952	0.05804	0.05251	0.00017	0.00102	0.00281	0.00455	0.00695	0.00310	0.00496	0.00089	0.00128	0.00216	0.00345
98	Wat Yan Nasangwararam	0.00266	0.01864	0.04593	0.07421	0.11346	0.06576	0.07957	0.01894	0.02058	0.04585	0.05535	0.00019	0.00116	0.00321	0.00520	0.00794	0.00346	0.00574	0.00100	0.00148	0.00242	0.00399
99	Sirisirirak Monastery	0.00189	0.02333	0.04350	0.07002	0.10707	0.09196	0.05664	0.02649	0.01465	0.06412	0.03940	0.00012	0.00145	0.00313	0.00504	0.00771	0.00528	0.00367	0.00152	0.00095	0.00368	0.00255
100	Anan Buraparam Meditation Center	0.00353	0.02087	0.04680	0.07587	0.11599	0.07559	0.10572	0.02177	0.02735	0.05271	0.07355	0.00016	0.00141	0.00339	0.00547	0.00837	0.00479	0.00491	0.00138	0.00127	0.00334	0.00342
101	Wat Map Fakthong	0.00219	0.01673	0.04201	0.06789	0.10380	0.05907	0.06561	0.01701	0.01697	0.04118	0.04565	0.00014	0.00099	0.00259	0.00419	0.00640	0.00313	0.00429	0.00090	0.00111	0.00218	0.00298
102	Khao Chi Chan Image of Lord Buddha	0.00048	0.00563	0.01214	0.01958	0.02994	0.02047	0.01429	0.00590	0.00370	0.01427	0.00994	0.00004	0.00034	0.00078	0.00125	0.00191	0.00117	0.00105	0.00034	0.00027	0.00082	0.00073
103	Wat Khao Chi Chan	0.00051	0.01081	0.01793	0.02881	0.04406	0.04585	0.01515	0.01321	0.00392	0.03197	0.01054	0.00004	0.00078	0.00147	0.00237	0.00363	0.00303	0.00118	0.00087	0.00031	0.00211	0.00082
104	Rat Samakkhi Temple	0.00524	0.03391	0.09129	0.14763	0.22573	0.10454	0.15705	0.03011	0.04062	0.07290	0.10926	0.00033	0.00211	0.00571	0.00923	0.01412	0.00648	0.00988	0.00187	0.00256	0.00452	0.00687
105	The Shrine of Chao Mae Kuan Im	0.00533	0.03449	0.09285	0.15015	0.22958	0.10633	0.15972	0.03063	0.04131	0.07414	0.11111	0.00031	0.00199	0.00538	0.00869	0.01329	0.00611	0.00930	0.00176	0.00240	0.00426	0.00647
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00586	0.03838	0.10277	0.16618	0.25409	0.11890	0.17558	0.03425	0.04541	0.08291	0.12214	0.00035	0.00222	0.00604	0.00976	0.01493	0.00677	0.01053	0.00195	0.00272	0.00472	0.00733

Subject to changes and approval by the Government of Thailand

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00215	0.01621	0.04091	0.06611	0.10109	0.05282	0.06438	0.01521	0.01665	0.03683	0.04479	0.00025	0.00183	0.00471	0.00761	0.01164	0.00586	0.00763	0.00169	0.00197	0.00409	0.00531
108	KM.8 Meditation Center	0.00354	0.02385	0.06308	0.10198	0.15593	0.07470	0.10604	0.02151	0.02743	0.05208	0.07377	0.00027	0.00186	0.00484	0.00782	0.01196	0.00592	0.00794	0.00170	0.00205	0.00413	0.00552
109	Wat Rangsee Sunthorn (KM.5)	0.00183	0.01412	0.03533	0.05709	0.08730	0.04629	0.05493	0.01333	0.01421	0.03228	0.03821	0.00025	0.00176	0.00457	0.00739	0.01129	0.00563	0.00746	0.00162	0.00193	0.00393	0.00519
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00067	0.00769	0.01669	0.02693	0.04117	0.02786	0.01993	0.00802	0.00516	0.01943	0.01387	0.00003	0.00032	0.00069	0.00112	0.00171	0.00118	0.00080	0.00034	0.00021	0.00082	0.00056
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00078	0.00847	0.01876	0.03026	0.04627	0.03176	0.02342	0.00915	0.00606	0.02214	0.01629	0.00003	0.00044	0.00091	0.00146	0.00224	0.00162	0.00098	0.00047	0.00025	0.00113	0.00068
112	Wat Tung Prong	0.00062	0.00748	0.01510	0.02436	0.03724	0.02884	0.01854	0.00831	0.00479	0.02011	0.01290	0.00003	0.00034	0.00071	0.00115	0.00176	0.00125	0.00079	0.00036	0.00020	0.00087	0.00055
113	Khao Phlu Ta Luang Meditation Center	0.00033	0.00435	0.00860	0.01385	0.02118	0.01665	0.00993	0.00480	0.00257	0.01161	0.00691	0.00002	0.00018	0.00040	0.00064	0.00098	0.00067	0.00047	0.00019	0.00012	0.00046	0.00033
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00634	0.02348	0.06877	0.11174	0.17082	0.08265	0.18992	0.02380	0.04912	0.05763	0.13212	0.00060	0.00234	0.00815	0.01322	0.02020	0.00528	0.01810	0.00152	0.00468	0.00368	0.01259
115	Wat Khao Bai Si Santitham	0.00739	0.03155	0.09772	0.15842	0.24220	0.09740	0.22144	0.02805	0.05728	0.06792	0.15405	0.00061	0.00276	0.00882	0.01428	0.02183	0.00708	0.01819	0.00204	0.00471	0.00494	0.01266
116	Welu Amphawan Vipassana Office	0.00525	0.03066	0.07941	0.12857	0.19658	0.10336	0.15713	0.02977	0.04064	0.07207	0.10931	0.00047	0.00266	0.00758	0.01227	0.01876	0.00774	0.01399	0.00223	0.00362	0.00540	0.00973
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00254	0.02087	0.05094	0.08229	0.12582	0.06981	0.07610	0.02011	0.01968	0.04868	0.05294	0.00020	0.00159	0.00390	0.00630	0.00964	0.00530	0.00587	0.00153	0.00152	0.00370	0.00408
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00242	0.01556	0.04019	0.06501	0.09940	0.05105	0.07246	0.01470	0.01874	0.03559	0.05041	0.00025	0.00184	0.00473	0.00764	0.01169	0.00593	0.00762	0.00171	0.00197	0.00413	0.00530
119	Samaesarn Pattanakarn Church	0.00223	0.01644	0.03755	0.06062	0.09269	0.05766	0.06668	0.01661	0.01725	0.04021	0.04639	0.00021	0.00158	0.00395	0.00639	0.00977	0.00517	0.00615	0.00149	0.00159	0.00361	0.00428
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00206	0.01572	0.03622	0.05848	0.08942	0.05478	0.06158	0.01578	0.01593	0.03819	0.04284	0.00013	0.00120	0.00279	0.00450	0.00688	0.00416	0.00383	0.00120	0.00099	0.00290	0.00266
121	Wat Chong Samaesarn	0.00174	0.01247	0.02735	0.04417	0.06754	0.05082	0.05209	0.01464	0.01347	0.03543	0.03624	0.00009	0.00103	0.00227	0.00367	0.00561	0.00367	0.00284	0.00106	0.00073	0.00256	0.00198
122	Viharn Luang Por Dam	0.00131	0.01255	0.02803	0.04523	0.06916	0.04467	0.03933	0.01287	0.01017	0.03115	0.02736	0.00008	0.00080	0.00179	0.00289	0.00441	0.00285	0.00227	0.00082	0.00059	0.00199	0.00158
123	The Shrine of King Taksin the Great (Samaesarn)	0.00177	0.01639	0.03824	0.06175	0.09441	0.05661	0.05292	0.01631	0.01369	0.03947	0.03681	0.00013	0.00128	0.00295	0.00476	0.00728	0.00445	0.00399	0.00128	0.00103	0.00310	0.00278
124	Thai Island and Sea Natural History Museum	0.00164	0.01601	0.03669	0.05922	0.09056	0.05598	0.04909	0.01612	0.01270	0.03903	0.03415	0.00013	0.00125	0.00284	0.00459	0.00702	0.00438	0.00376	0.00126	0.00097	0.00306	0.00261
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00191	0.01531	0.03773	0.06096	0.09321	0.05080	0.05729	0.01463	0.01482	0.03542	0.03986	0.00014	0.00132	0.00303	0.00489	0.00748	0.00460	0.00408	0.00132	0.00106	0.00321	0.00284

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00193	0.01602	0.03896	0.06294	0.09624	0.05371	0.05790	0.01547	0.01498	0.03745	0.04028	0.00014	0.00132	0.00305	0.00492	0.00753	0.00458	0.00415	0.00132	0.00107	0.00320	0.00289
127	Eastern-Nong Muang Community Health Service Center	0.01703	0.06104	0.19760	0.32083	0.49047	0.23544	0.51020	0.06781	0.13196	0.16416	0.35492	0.00180	0.01448	0.03561	0.05753	0.08797	0.04815	0.05386	0.01387	0.01393	0.03357	0.03747
128	Phala Subdistrict Health Promotion Hospital	0.00315	0.02757	0.06568	0.10607	0.16218	0.09388	0.09423	0.02704	0.02437	0.06546	0.06555	0.00030	0.00284	0.00662	0.01068	0.01633	0.00984	0.00911	0.00283	0.00236	0.00686	0.00634
129	Ban Chang Hospital	0.00111	0.01811	0.03582	0.05771	0.08824	0.06924	0.03328	0.01994	0.00861	0.04828	0.02315	0.00013	0.00200	0.00398	0.00641	0.00981	0.00760	0.00379	0.00219	0.00098	0.00530	0.00264
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00693	0.02416	0.07535	0.12244	0.18718	0.08912	0.20747	0.02567	0.05366	0.06214	0.14432	0.00072	0.00323	0.01036	0.01677	0.02565	0.00822	0.02147	0.00237	0.00555	0.00573	0.01494
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.00962	0.07886	0.19182	0.30986	0.47379	0.26440	0.28824	0.07615	0.07456	0.18436	0.20052	0.00167	0.00728	0.02378	0.03853	0.05891	0.01812	0.05007	0.00522	0.01295	0.01264	0.03483
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.01532	0.08545	0.16821	0.27291	0.41723	0.35626	0.45883	0.10261	0.11868	0.24841	0.31919	0.00186	0.00953	0.02864	0.04637	0.07090	0.02631	0.05580	0.00758	0.01443	0.01834	0.03882
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00190	0.06542	0.10155	0.16298	0.24925	0.27894	0.05682	0.08034	0.01470	0.19450	0.03953	0.00033	0.00723	0.01339	0.02156	0.03297	0.02856	0.00976	0.00823	0.00252	0.01991	0.00679
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00422	0.07710	0.11918	0.19125	0.29250	0.32926	0.12631	0.09483	0.03267	0.22958	0.08787	0.00068	0.00780	0.01696	0.02736	0.04183	0.02825	0.02030	0.00814	0.00525	0.01970	0.01412
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00184	0.02823	0.04509	0.07241	0.11074	0.11977	0.05502	0.03450	0.01423	0.08351	0.03827	0.00027	0.00443	0.00871	0.01403	0.02146	0.01696	0.00796	0.00489	0.00206	0.01183	0.00554
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00227	0.02119	0.04937	0.07970	0.12187	0.07331	0.06808	0.02111	0.01761	0.05112	0.04736	0.00023	0.00199	0.00478	0.00771	0.01180	0.00676	0.00692	0.00195	0.00179	0.00471	0.00481
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00096	0.03219	0.04917	0.07889	0.12066	0.13807	0.02883	0.03977	0.00746	0.09627	0.02006	0.00009	0.00294	0.00511	0.00822	0.01257	0.01195	0.00267	0.00344	0.00069	0.00833	0.00186
138	Phudon Huai Mahat Community Health Service Unit	0.00064	0.00888	0.01828	0.02947	0.04506	0.03318	0.01915	0.00956	0.00495	0.02314	0.01332	0.00006	0.00077	0.00160	0.00258	0.00394	0.00286	0.00171	0.00082	0.00044	0.00199	0.00119
139	Wat Yan Nasangwararam Hospital	0.00242	0.02140	0.04382	0.07084	0.10831	0.08178	0.07234	0.02355	0.01871	0.05702	0.05033	0.00017	0.00109	0.00298	0.00481	0.00736	0.00333	0.00520	0.00096	0.00135	0.00232	0.00362
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00238	0.02094	0.04370	0.07064	0.10801	0.08028	0.07119	0.02312	0.01841	0.05597	0.04952	0.00017	0.00109	0.00298	0.00482	0.00736	0.00330	0.00523	0.00095	0.00135	0.00230	0.00364
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00093	0.03251	0.05060	0.08121	0.12421	0.13849	0.02793	0.03989	0.00722	0.09657	0.01943	0.00006	0.00152	0.00278	0.00448	0.00685	0.00606	0.00190	0.00175	0.00049	0.00423	0.00132

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00560	0.03755	0.09948	0.16084	0.24592	0.11744	0.16759	0.03383	0.04335	0.08189	0.11658	0.00035	0.00221	0.00599	0.00969	0.01481	0.00679	0.01037	0.00195	0.00268	0.00473	0.00722
143	Sattahip Hospital KM.10	0.00399	0.03186	0.07861	0.12700	0.19419	0.10567	0.11951	0.03044	0.03091	0.07368	0.08314	0.00027	0.00173	0.00468	0.00757	0.01157	0.00533	0.00808	0.00154	0.00209	0.00372	0.00562
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00174	0.01204	0.02697	0.04354	0.06658	0.04942	0.05224	0.01423	0.01351	0.03446	0.03634	0.00009	0.00101	0.00224	0.00361	0.00552	0.00363	0.00278	0.00104	0.00072	0.00253	0.00193
145	Village No. 1 Ban Sakulthong	0.00135	0.02027	0.04087	0.06587	0.10073	0.07869	0.04030	0.02266	0.01042	0.05487	0.02804	0.00019	0.00363	0.00692	0.01114	0.01703	0.01415	0.00565	0.00407	0.00146	0.00986	0.00393
146	Village No. 2, Ban Kilo 16	0.00523	0.03606	0.09446	0.15271	0.23349	0.11388	0.15676	0.03280	0.04055	0.07941	0.10905	0.00046	0.00485	0.01084	0.01749	0.02674	0.01723	0.01380	0.00496	0.00357	0.01201	0.00960
147	Village No. 4, Ban Tung Prong	0.00421	0.04174	0.08921	0.14387	0.21999	0.15271	0.12603	0.04398	0.03260	0.10648	0.08767	0.00055	0.00747	0.01547	0.02495	0.03815	0.02785	0.01645	0.00802	0.00426	0.01942	0.01145
148	Village No. 5, Phala Subdistrict	0.00426	0.03501	0.08541	0.13798	0.21097	0.11714	0.12753	0.03374	0.03299	0.08168	0.08872	0.00042	0.00544	0.01145	0.01846	0.02823	0.02009	0.01269	0.00579	0.00328	0.01401	0.00883
149	Village No. 6, Ban Takat	0.00308	0.02802	0.06588	0.10637	0.16265	0.09629	0.09239	0.02773	0.02390	0.06714	0.06427	0.00029	0.00276	0.00638	0.01030	0.01575	0.00962	0.00865	0.00277	0.00224	0.00671	0.00602
150	Village No. 7, Ban Khlong Sai	0.00410	0.03432	0.08315	0.13431	0.20536	0.11543	0.12275	0.03325	0.03175	0.08048	0.08539	0.00039	0.00449	0.00973	0.01570	0.02401	0.01627	0.01159	0.00469	0.00300	0.01135	0.00807
151	Village No. 1 Ban Sam Nak Thon	0.01131	0.04972	0.14649	0.23754	0.36316	0.21004	0.33870	0.06050	0.08761	0.14645	0.23562	0.00116	0.00909	0.02261	0.03652	0.05585	0.02996	0.03479	0.00863	0.00900	0.02089	0.02420
152	Village No. 2, Ban Chak Mak	0.00227	0.04750	0.07548	0.12119	0.18534	0.20225	0.06788	0.05825	0.01756	0.14102	0.04722	0.00035	0.00618	0.01197	0.01928	0.02949	0.02390	0.01037	0.00688	0.00268	0.01666	0.00721
153	Village No. 3, Ban Sa Kaeo	0.05886	0.11299	0.62132	1.01000	1.54400	0.46111	1.76303	0.13281	0.45602	0.32152	1.22646	0.00500	0.02100	0.07001	0.11344	0.17343	0.05083	0.14990	0.01464	0.03877	0.03544	0.10428
154	Sa Kaeo Community 1	0.02020	0.09496	0.21648	0.35184	0.53787	0.38479	0.60513	0.11083	0.15652	0.26831	0.42096	0.00257	0.01066	0.03577	0.05796	0.08862	0.02553	0.07703	0.00735	0.01992	0.01780	0.05358
155	Sa Kaeo Community 2	0.01434	0.07846	0.22815	0.36922	0.56451	0.22445	0.42944	0.06465	0.11108	0.15650	0.29874	0.00157	0.00662	0.02197	0.03560	0.05442	0.01611	0.04688	0.00464	0.01213	0.01123	0.03261
156	Village No. 4, Ban Khlong Bang Phai	0.01590	0.03986	0.18190	0.29538	0.45157	0.09139	0.47615	0.02632	0.12316	0.06373	0.33124	0.00121	0.00474	0.01644	0.02664	0.04074	0.01080	0.03634	0.00311	0.00940	0.00753	0.02528
157	Village No. 5, Ban Yai Ra	0.00166	0.01545	0.03605	0.05820	0.08900	0.05340	0.04985	0.01538	0.01289	0.03723	0.03468	0.00016	0.00230	0.00470	0.00758	0.01159	0.00864	0.00482	0.00249	0.00125	0.00603	0.00335
158	Village No. 6, Ban Khao Khrok	0.03089	0.07470	0.34928	0.56729	0.86725	0.25170	0.92524	0.07250	0.23932	0.17550	0.64365	0.00242	0.01286	0.03789	0.06133	0.09377	0.03626	0.07235	0.01044	0.01871	0.02529	0.05033
159	Village no. 7, Ban Nong Takhian	0.00179	0.03140	0.05396	0.08683	0.13278	0.13022	0.05366	0.03751	0.01388	0.09080	0.03733	0.00029	0.00547	0.01048	0.01687	0.02580	0.02129	0.00869	0.00613	0.00225	0.01485	0.00605
160	Village No. 8, Ban Cherng Khao	0.00300	0.17736	0.27219	0.43675	0.66797	0.75942	0.08998	0.21873	0.02327	0.52952	0.06259	0.00046	0.02405	0.03980	0.06395	0.09780	0.09997	0.01385	0.02879	0.00358	0.06971	0.00963
161	Eastern-Nong Muang Community	0.00445	0.04851	0.10540	0.17002	0.25998	0.18479	0.13338	0.05322	0.03450	0.12885	0.09278	0.00066	0.00937	0.01915	0.03087	0.04720	0.03517	0.01965	0.01013	0.00508	0.02452	0.01367
162	Wat Khiri Pawanaram Community	0.00241	0.13908	0.21499	0.34500	0.52765	0.59390	0.07229	0.17106	0.01870	0.41411	0.05029	0.00040	0.01933	0.03221	0.05176	0.07916	0.08016	0.01196	0.02309	0.00309	0.05589	0.00832
163	Ban Chang-Phala Community	0.00217	0.13605	0.20580	0.33013	0.50490	0.58564	0.06491	0.16868	0.01679	0.40835	0.04515	0.00037	0.01910	0.03166	0.05087	0.07779	0.07938	0.01116	0.02286	0.00289	0.05535	0.00776
164	Ruam Sompong Community	0.00231	0.02791	0.05732	0.09240	0.14129	0.10568	0.06910	0.03044	0.01787	0.07369	0.04807	0.00042	0.00402	0.00928	0.01498	0.02290	0.01399	0.01258	0.00403	0.00325	0.00975	0.00875
165	Ming Mongkol Community	0.00219	0.10669	0.16812	0.26989	0.41277	0.45230	0.06559	0.13027	0.01696	0.31538	0.04562	0.00030	0.00928	0.01626	0.02614	0.03998	0.03763	0.00887	0.01084	0.00230	0.02624	0.00617
166	Jor Koo Community	0.00231	0.10702	0.16787	0.26947	0.41211	0.45447	0.06917	0.13090	0.01789	0.31689	0.04812	0.00030	0.00959	0.01674	0.02691	0.04116	0.03897	0.00890	0.01122	0.00230	0.02717	0.00619

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00213	0.16019	0.24636	0.39532	0.60461	0.68538	0.06371	0.19741	0.01648	0.47790	0.04432	0.00027	0.01092	0.01857	0.02986	0.04566	0.04489	0.00823	0.01293	0.00213	0.03130	0.00572
168	Thep Chinda Community	0.00242	0.09942	0.16055	0.25785	0.39434	0.41742	0.07254	0.12023	0.01876	0.29106	0.05046	0.00033	0.00900	0.01607	0.02585	0.03953	0.03617	0.00980	0.01042	0.00254	0.02522	0.00682
169	Health Park Community	0.00680	0.02561	0.07580	0.12314	0.18825	0.09133	0.20370	0.02631	0.05269	0.06368	0.14170	0.00053	0.00431	0.01058	0.01709	0.02613	0.01434	0.01597	0.00413	0.00413	0.01000	0.01111
170	Wat Ban Chang Community	0.00614	0.05016	0.12269	0.19820	0.30305	0.16746	0.18398	0.04823	0.04759	0.11677	0.12799	0.00062	0.00568	0.01331	0.02149	0.03286	0.01957	0.01855	0.00564	0.00480	0.01365	0.01290
171	Dong Dang Community	0.00246	0.09037	0.15180	0.24396	0.37309	0.37336	0.07363	0.10754	0.01905	0.26034	0.05122	0.00035	0.00805	0.01485	0.02389	0.03654	0.03191	0.01056	0.00919	0.00273	0.02225	0.00735
172	Night Market Community	0.00559	0.04198	0.10247	0.16553	0.25311	0.14035	0.16755	0.04042	0.04334	0.09786	0.11656	0.00059	0.00493	0.01194	0.01928	0.02948	0.01660	0.01759	0.00478	0.00455	0.01158	0.01224
173	Ruam Mitr Community	0.00800	0.05672	0.14677	0.23725	0.36276	0.18104	0.23947	0.05214	0.06194	0.12624	0.16659	0.00064	0.00614	0.01413	0.02280	0.03487	0.02140	0.01906	0.00616	0.00493	0.01492	0.01326
174	Ban Chang - Noen Kraprok Community	0.00614	0.02211	0.07531	0.12220	0.18682	0.07434	0.18376	0.02141	0.04753	0.05184	0.12784	0.00041	0.00366	0.00864	0.01396	0.02134	0.01255	0.01221	0.00361	0.00316	0.00875	0.00849
175	Dao Pitak Community	0.00371	0.03789	0.07656	0.12339	0.18868	0.14319	0.11104	0.04124	0.02872	0.09984	0.07724	0.00037	0.00463	0.00979	0.01579	0.02415	0.01703	0.01101	0.00490	0.00285	0.01187	0.00766
176	Taiwa Community	0.00125	0.05147	0.07840	0.12577	0.19236	0.22100	0.03744	0.06365	0.00968	0.15410	0.02604	0.00012	0.00398	0.00692	0.01112	0.01701	0.01620	0.00359	0.00467	0.00093	0.01129	0.00250
177	East Ban Noen Kraprok Community, Prachummit	0.00489	0.02611	0.07680	0.12430	0.19004	0.07378	0.14634	0.02125	0.03785	0.05144	0.10180	0.00023	0.00233	0.00529	0.00854	0.01306	0.00823	0.00692	0.00237	0.00179	0.00574	0.00482
178	Ban Noen Kraprok Community	0.00109	0.02409	0.03656	0.05865	0.08969	0.10358	0.03274	0.02983	0.00847	0.07222	0.02277	0.00009	0.00270	0.00475	0.00763	0.01168	0.01092	0.00266	0.00315	0.00069	0.00762	0.00185
179	Nong Yai Community	0.00101	0.04379	0.07132	0.11460	0.17527	0.18712	0.03027	0.05389	0.00783	0.13047	0.02106	0.00012	0.00352	0.00620	0.00998	0.01526	0.01426	0.00348	0.00411	0.00090	0.00994	0.00242
180	Village No. 1, Pan Din Tai	0.00464	0.02610	0.07491	0.12121	0.18532	0.07565	0.13903	0.02179	0.03596	0.05275	0.09672	0.00022	0.00224	0.00506	0.00816	0.01248	0.00789	0.00659	0.00227	0.00170	0.00550	0.00458
181	Village No. 2, Ban Prachummit	0.00402	0.01846	0.04292	0.06975	0.10663	0.06456	0.12028	0.01859	0.03111	0.04501	0.08367	0.00033	0.00282	0.00676	0.01092	0.01669	0.00953	0.00983	0.00275	0.00254	0.00665	0.00684
182	Village No. 3, Ban Noen Samre	0.00114	0.02145	0.04026	0.06482	0.09912	0.08424	0.03427	0.02426	0.00886	0.05874	0.02384	0.00020	0.00462	0.00849	0.01366	0.02089	0.01832	0.00596	0.00528	0.00154	0.01277	0.00415
183	Village No. 4, Ban Phayun	0.00245	0.02674	0.05471	0.08819	0.13486	0.10036	0.07331	0.02891	0.01896	0.06998	0.05100	0.00039	0.00383	0.00880	0.01420	0.02172	0.01339	0.01181	0.00386	0.00305	0.00934	0.00821
184	Village No. 6, Ban Noen Kraprok	0.00071	0.01020	0.02079	0.03352	0.05125	0.03835	0.02117	0.01105	0.00548	0.02674	0.01473	0.00007	0.00109	0.00216	0.00348	0.00532	0.00416	0.00202	0.00120	0.00052	0.00290	0.00140
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00068	0.00905	0.01884	0.03038	0.04646	0.03362	0.02032	0.00968	0.00526	0.02344	0.01414	0.00006	0.00079	0.00164	0.00265	0.00405	0.00293	0.00177	0.00084	0.00046	0.00204	0.00123
186	Village No. 11, Ban Map Fakthong	0.01114	0.05132	0.13653	0.22153	0.33868	0.20339	0.33354	0.05858	0.08627	0.14182	0.23203	0.00097	0.00599	0.01642	0.02656	0.04061	0.01814	0.02891	0.00523	0.00748	0.01265	0.02011
187	Village No. 13, Ban Nong Phakkut	0.00191	0.03940	0.06814	0.10956	0.16755	0.16787	0.05716	0.04835	0.01478	0.11705	0.03976	0.00029	0.00423	0.00860	0.01386	0.02119	0.01595	0.00866	0.00459	0.00224	0.01112	0.00603
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00387	0.02181	0.06254	0.10119	0.15472	0.08324	0.11591	0.02397	0.02998	0.05804	0.08063	0.00015	0.00101	0.00265	0.00429	0.00656	0.00318	0.00442	0.00092	0.00114	0.00222	0.00308
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00086	0.04747	0.07204	0.11556	0.17675	0.20413	0.02566	0.05879	0.00664	0.14233	0.01785	0.00006	0.00141	0.00262	0.00421	0.00644	0.00558	0.00191	0.00161	0.00049	0.00389	0.00133
190	Village No. 6 (Ban Khao Krating Community)	0.00094	0.01970	0.03005	0.04822	0.07375	0.08455	0.02811	0.02435	0.00727	0.05895	0.01956	0.00005	0.00135	0.00239	0.00384	0.00588	0.00544	0.00140	0.00157	0.00036	0.00379	0.00097

Table 5.2-60 Forecasted results of 1,3-Butadiene emission, operation phase

Area		Concentration value of 1,3-Butadiene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00113	0.04717	0.07318	0.11745	0.17962	0.20117	0.03370	0.05794	0.00872	0.14027	0.02344	0.00009	0.00271	0.00478	0.00769	0.01175	0.01094	0.00273	0.00315	0.00071	0.00763	0.00190
192	Village No. 11 (Ban Khong Wanphen Community)	0.00616	0.02305	0.07847	0.12726	0.19456	0.07061	0.18440	0.02034	0.04769	0.04924	0.12828	0.00031	0.00190	0.00526	0.00851	0.01302	0.00569	0.00939	0.00164	0.00243	0.00397	0.00653
193	Village No. 1, Ban Phlu Ta Luang	0.00530	0.03405	0.09198	0.14875	0.22744	0.10469	0.15889	0.03015	0.04110	0.07299	0.11053	0.00033	0.00216	0.00579	0.00936	0.01431	0.00667	0.00992	0.00192	0.00257	0.00465	0.00690
194	Village No. 2, Ban Khalot	0.00504	0.03377	0.08949	0.14470	0.22124	0.10561	0.15082	0.03042	0.03901	0.07364	0.10492	0.00032	0.00192	0.00532	0.00860	0.01315	0.00575	0.00949	0.00166	0.00246	0.00401	0.00660
195	Village No. 3, Ban Khlong Phai	0.00331	0.02290	0.05318	0.08586	0.13129	0.07939	0.09915	0.02287	0.02565	0.05536	0.06897	0.00036	0.00199	0.00577	0.00934	0.01427	0.00574	0.01079	0.00165	0.00279	0.00400	0.00751
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00477	0.02048	0.05285	0.08587	0.13127	0.07190	0.14293	0.02071	0.03697	0.05013	0.09943	0.00033	0.00170	0.00513	0.00830	0.01269	0.00469	0.01001	0.00135	0.00259	0.00327	0.00696
197	Village No. 5, Ban Khao Bai Si	0.00519	0.02101	0.05835	0.09478	0.14490	0.06897	0.15533	0.01987	0.04018	0.04809	0.10806	0.00046	0.00236	0.00707	0.01144	0.01749	0.00653	0.01373	0.00188	0.00355	0.00455	0.00955
198	Village No. 6, Ban Khao Tabaek	0.00350	0.02348	0.06222	0.10059	0.15381	0.07343	0.10484	0.02115	0.02712	0.05120	0.07293	0.00025	0.00178	0.00461	0.00745	0.01138	0.00567	0.00752	0.00163	0.00195	0.00396	0.00523
199	Village No. 7, Ban Nong Ya Noi	0.00222	0.01645	0.04185	0.06763	0.10341	0.05326	0.06663	0.01534	0.01723	0.03714	0.04635	0.00025	0.00183	0.00470	0.00759	0.01161	0.00586	0.00760	0.00169	0.00196	0.00409	0.00528
200	Village No. 8, Ban Nong Ya	0.00129	0.02996	0.04519	0.07249	0.11087	0.12911	0.03868	0.03719	0.01000	0.09002	0.02691	0.00006	0.00183	0.00324	0.00522	0.00798	0.00740	0.00188	0.00213	0.00049	0.00516	0.00131
201	Ban Nong Krachong Community	0.00249	0.01446	0.04092	0.06621	0.10123	0.05234	0.07472	0.01507	0.01933	0.03649	0.05198	0.00018	0.00151	0.00367	0.00593	0.00907	0.00506	0.00545	0.00146	0.00141	0.00353	0.00379
Standard*		5.3*											0.33**, 2***									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* Surveillance range values of 1,3-Butadiene within 24 hours, as referenced from Pollution Control Department Announcement Re: Determination of Surveillance Values for Volatile Organic Compounds in the General Atmosphere within 24 Hours.
* Standard 1-year volatile organic values for 1,3-Butadiene in the general atmosphere are referenced from Notification of the National Environment Board No. 30 (2007) Re: Determination of General Atmospheric Volatile Organic Standards within 1 Year.
** 1,3-Butadiene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

2.5) Isopropylbenzene or Cumene

From the Isopropylbenzene or Cumene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. Most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and had values within the foreign standard reference ranges of Isopropylbenzene or Cumene concentrations that allow for long-term exposure without affecting health (RfC for Isopropylbenzene or Cumene is equal to 400 micrograms per cubic meter).

When comparing the Cmax 24-hour average for Isopropylbenzene or Cumene in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 0.0045972 micrograms per cubic meter. In Scenario 1 (aviation situation in 2019 (1 runway)), it had the lowest value comprising 0.0001117 micrograms per cubic meter.

For the 1-year average Cmax for Isopropylbenzene or Cumene, it was found that Scenario 5 (Worst case scenario (peak hour) for peak flight forecast) had the highest value, comprising 0.0003996 micrograms per cubic meter. In Scenario 1 (aviation situation in 2019 (1 runway)), it had the lowest value comprising 0.00001117 micrograms per cubic meter.

In this regard, when considering the Isopropylbenzene or Cumene values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-61 and Addendum 5-3, item 10, Isopropylbenzene or Cumene concentration contours (Figure 10-1 to Figure 10-22), it was found that the 1-year average Isopropylbenzene or Cumene concentrations were in accordance with standard criteria.

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Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.0001117	0.0010736	0.0016311	0.0026081	0.0039926	0.0045972	0.0033502	0.0013241	0.0008643	0.0031990	0.0023329	0.0000117	0.0000832	0.0001615	0.0002609	0.0003996	0.0003450	0.0003503	0.0000994	0.0000904	0.0002401	0.0002439
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.0000138	0.0000902	0.0002417	0.0003896	0.0005968	0.0002780	0.0004132	0.0000801	0.0001066	0.0001935	0.0002877	0.0000010	0.0000061	0.0000171	0.0000276	0.0000423	0.0000180	0.0000310	0.0000052	0.0000080	0.0000125	0.0000216
2	Wat Phala School	0.0000053	0.0000451	0.0001089	0.0001754	0.0002686	0.0001516	0.0001599	0.0000437	0.0000412	0.0001055	0.0001113	0.0000006	0.0000050	0.0000117	0.0000189	0.0000289	0.0000171	0.0000164	0.0000049	0.0000042	0.0000119	0.0000114
3	Phala Subdistrict Municipality Child Development Center	0.0000048	0.0000417	0.0000996	0.0001603	0.0002455	0.0001412	0.0001435	0.0000407	0.0000370	0.0000982	0.0001000	0.0000005	0.0000047	0.0000110	0.0000177	0.0000271	0.0000161	0.0000153	0.0000047	0.0000039	0.0000112	0.0000106
4	Ban Khlong Sai School	0.0000060	0.0000576	0.0001331	0.0002142	0.0003280	0.0001995	0.0001810	0.0000575	0.0000467	0.0001388	0.0001261	0.0000005	0.0000049	0.0000112	0.0000180	0.0000275	0.0000174	0.0000146	0.0000050	0.0000038	0.0000121	0.0000102
5	Rayong English Program School	0.0000068	0.0000546	0.0001347	0.0002169	0.0003321	0.0001802	0.0002048	0.0000519	0.0000528	0.0001254	0.0001426	0.0000006	0.0000057	0.0000127	0.0000205	0.0000313	0.0000200	0.0000164	0.0000058	0.0000042	0.0000139	0.0000114
6	Rayong Garden International School	0.0000065	0.0000554	0.0001332	0.0002144	0.0003283	0.0001865	0.0001942	0.0000537	0.0000501	0.0001298	0.0001352	0.0000005	0.0000055	0.0000125	0.0000201	0.0000308	0.0000195	0.0000162	0.0000056	0.0000042	0.0000136	0.0000113
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.0000036	0.0000583	0.0001126	0.0001807	0.0002768	0.0002251	0.0001071	0.0000648	0.0000276	0.0001566	0.0000746	0.0000005	0.0000105	0.0000194	0.0000311	0.0000477	0.0000414	0.0000140	0.0000119	0.0000036	0.0000288	0.0000098
8	Wat Khiri Pawanaram School	0.0000035	0.0000555	0.0001078	0.0001730	0.0002650	0.0002132	0.0001062	0.0000614	0.0000274	0.0001484	0.0000740	0.0000005	0.0000094	0.0000176	0.0000282	0.0000432	0.0000369	0.0000134	0.0000106	0.0000035	0.0000257	0.0000093
9	Ban Khlong Bang Phai School	0.0000110	0.0000773	0.0002007	0.0003234	0.0004954	0.0002448	0.0003292	0.0000705	0.0000849	0.0001704	0.0002292	0.0000009	0.0000047	0.0000141	0.0000228	0.0000349	0.0000131	0.0000273	0.0000038	0.0000071	0.0000091	0.0000190
10	Pattanavechsuksa School	0.0000308	0.0000975	0.0003836	0.0006205	0.0009506	0.0001745	0.0009232	0.0000503	0.0002382	0.0001215	0.0006429	0.0000023	0.0000094	0.0000317	0.0000512	0.0000785	0.0000222	0.0000685	0.0000064	0.0000177	0.0000154	0.0000477
11	Pattanavech College	0.0000257	0.0000793	0.0003168	0.0005125	0.0007852	0.0001686	0.0007700	0.0000486	0.0001987	0.0001173	0.0005362	0.0000020	0.0000083	0.0000274	0.0000443	0.0000679	0.0000200	0.0000585	0.0000058	0.0000151	0.0000139	0.0000407
12	Saeng Song La Child Development Center 3	0.0000194	0.0001462	0.0003113	0.0005005	0.0007665	0.0005337	0.0005822	0.0001537	0.0001502	0.0003714	0.0004054	0.0000033	0.0000144	0.0000470	0.0000759	0.0001163	0.0000358	0.0000986	0.0000103	0.0000254	0.0000249	0.0000687
13	Wat Sa Kaeo School	0.0000221	0.0001498	0.0003146	0.0005057	0.0007744	0.0005515	0.0006634	0.0001588	0.0001711	0.0003838	0.0004619	0.0000037	0.0000154	0.0000520	0.0000841	0.0001288	0.0000365	0.0001123	0.0000105	0.0000290	0.0000254	0.0000782
14	Wat Sombun Naram School (Tem Rat Memorial)	0.0000173	0.0001261	0.0002366	0.0003820	0.0005852	0.0005243	0.0005200	0.0001510	0.0001342	0.0003649	0.0003621	0.0000024	0.0000148	0.0000406	0.0000654	0.0001002	0.0000449	0.0000711	0.0000129	0.0000183	0.0000313	0.0000495
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.0000173	0.0001261	0.0002366	0.0003820	0.0005852	0.0005243	0.0005200	0.0001510	0.0001342	0.0003649	0.0003621	0.0000024	0.0000148	0.0000406	0.0000654	0.0001002	0.0000449	0.0000711	0.0000129	0.0000183	0.0000313	0.0000495
16	Sajjaseuksa School	0.0000032	0.0001197	0.0001859	0.0002974	0.0004552	0.0005086	0.0000964	0.0001465	0.0000249	0.0003539	0.0000671	0.0000005	0.0000153	0.0000268	0.0000429	0.0000657	0.0000617	0.0000148	0.0000178	0.0000038	0.0000429	0.0000103
17	Ban Chang District Center for Non-Formal and Informal Education	0.0000055	0.0001499	0.0002389	0.0003824	0.0005854	0.0006301	0.0001641	0.0001815	0.0000423	0.0004385	0.0001143	0.0000008	0.0000164	0.0000305	0.0000489	0.0000749	0.0000646	0.0000226	0.0000186	0.0000058	0.0000449	0.0000157
18	Wat Suwan Rangsan Community School	0.0000039	0.0000987	0.0001534	0.0002454	0.0003757	0.0004190	0.0001165	0.0001207	0.0000301	0.0002916	0.0000812	0.0000006	0.0000122	0.0000227	0.0000365	0.0000558	0.0000481	0.0000168	0.0000139	0.0000043	0.0000335	0.0000117

Subject to changes and approval by the Government of Thailand

Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.0000035	0.0000722	0.0001130	0.0001807	0.0002767	0.0003058	0.0001034	0.0000881	0.0000267	0.0002128	0.0000720	0.0000005	0.0000102	0.0000192	0.0000308	0.0000471	0.0000397	0.0000151	0.0000114	0.0000039	0.0000276	0.0000105
20	Wat Samnak Kathon School	0.0000045	0.0001031	0.0001622	0.0002595	0.0003973	0.0004357	0.0001360	0.0001255	0.0000351	0.0003032	0.0000947	0.0000007	0.0000134	0.0000256	0.0000411	0.0000629	0.0000521	0.0000210	0.0000150	0.0000054	0.0000363	0.0000146
21	Ban Sam Nak Thon Child Development Center	0.0000044	0.0000994	0.0001563	0.0002501	0.0003829	0.0004204	0.0001321	0.0001211	0.0000341	0.0002925	0.0000920	0.0000007	0.0000133	0.0000253	0.0000406	0.0000622	0.0000518	0.0000206	0.0000149	0.0000053	0.0000360	0.0000143
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.0000035	0.0000591	0.0000919	0.0001469	0.0002250	0.0002508	0.0001040	0.0000722	0.0000268	0.0001745	0.0000724	0.0000005	0.0000081	0.0000159	0.0000256	0.0000392	0.0000306	0.0000149	0.0000088	0.0000039	0.0000213	0.0000104
23	Wat Chak Mak School	0.0000031	0.0000424	0.0000737	0.0001181	0.0001809	0.0001719	0.0000937	0.0000495	0.0000242	0.0001196	0.0000653	0.0000004	0.0000073	0.0000143	0.0000230	0.0000353	0.0000279	0.0000131	0.0000080	0.0000034	0.0000194	0.0000091
24	St. Andrews International School, Green Valley, Rayong,	0.0000008	0.0000083	0.0000143	0.0000229	0.0000351	0.0000337	0.0000229	0.0000097	0.0000059	0.0000234	0.0000159	0.0000001	0.0000010	0.0000022	0.0000036	0.0000055	0.0000036	0.0000028	0.0000010	0.0000007	0.0000025	0.0000020
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.0000042	0.0000392	0.0000912	0.0001467	0.0002247	0.0001350	0.0001256	0.0000389	0.0000324	0.0000940	0.0000874	0.0000004	0.0000036	0.0000087	0.0000140	0.0000214	0.0000122	0.0000127	0.0000035	0.0000033	0.0000085	0.0000088
26	Ban Phayun School	0.0000041	0.0000384	0.0000895	0.0001440	0.0002206	0.0001324	0.0001234	0.0000382	0.0000318	0.0000922	0.0000859	0.0000004	0.0000036	0.0000086	0.0000139	0.0000213	0.0000120	0.0000126	0.0000035	0.0000033	0.0000084	0.0000088
27	Rakpasa Kindergarten	0.0000051	0.0000508	0.0001159	0.0001865	0.0002856	0.0001777	0.0001536	0.0000512	0.0000396	0.0001237	0.0001070	0.0000005	0.0000040	0.0000095	0.0000153	0.0000235	0.0000135	0.0000137	0.0000039	0.0000035	0.0000094	0.0000096
28	Wat Ban Chang School (Boonrawdprachanukul)	0.0000091	0.0000868	0.0002007	0.0003230	0.0004946	0.0003003	0.0002734	0.0000865	0.0000705	0.0002090	0.0001904	0.0000010	0.0000099	0.0000226	0.0000364	0.0000557	0.0000348	0.0000298	0.0000100	0.0000077	0.0000242	0.0000207
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.0000042	0.0000336	0.0000758	0.0001219	0.0001867	0.0001181	0.0001273	0.0000340	0.0000328	0.0000822	0.0000886	0.0000004	0.0000036	0.0000084	0.0000136	0.0000208	0.0000123	0.0000118	0.0000035	0.0000031	0.0000085	0.0000083
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.0000042	0.0000336	0.0000758	0.0001219	0.0001867	0.0001181	0.0001273	0.0000340	0.0000328	0.0000822	0.0000886	0.0000004	0.0000036	0.0000084	0.0000136	0.0000208	0.0000123	0.0000118	0.0000035	0.0000031	0.0000085	0.0000083
31	Wat Prachummit Bamrung School	0.0000083	0.0000512	0.0001411	0.0002275	0.0003485	0.0001538	0.0002497	0.0000443	0.0000644	0.0001070	0.0001739	0.0000004	0.0000044	0.0000097	0.0000156	0.0000239	0.0000157	0.0000121	0.0000045	0.0000031	0.0000109	0.0000084
32	Udom Wittayanukun School	0.0000019	0.0000350	0.0000529	0.0000846	0.0001295	0.0001500	0.0000559	0.0000432	0.0000144	0.0001044	0.0000390	0.0000001	0.0000044	0.0000077	0.0000123	0.0000189	0.0000176	0.0000043	0.0000051	0.0000011	0.0000122	0.0000030
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.0000014	0.0000213	0.0000399	0.0000640	0.0000980	0.0000832	0.0000427	0.0000240	0.0000110	0.0000579	0.0000297	0.0000001	0.0000023	0.0000044	0.0000071	0.0000108	0.0000090	0.0000035	0.0000026	0.0000009	0.0000063	0.0000024
34	Wat Noen Kraprok School	0.0000014	0.0000213	0.0000401	0.0000643	0.0000984	0.0000832	0.0000420	0.0000240	0.0000108	0.0000579	0.0000293	0.0000001	0.0000023	0.0000043	0.0000069	0.0000106	0.0000089	0.0000035	0.0000026	0.0000009	0.0000062	0.0000025
35	Chonnabot Phatthana Kindergarten	0.0000019	0.0000434	0.0000664	0.0001062	0.0001625	0.0001856	0.0000570	0.0000535	0.0000147	0.0001291	0.0000397	0.0000002	0.0000045	0.0000081	0.0000130	0.0000199	0.0000178	0.0000053	0.0000051	0.0000014	0.0000124	0.0000037
36	Aksorn Business Administration Technological College	0.0000072	0.0001036	0.0002115	0.0003399	0.0005205	0.0003877	0.0002169	0.0001117	0.0000560	0.0002698	0.0001510	0.0000008	0.0000102	0.0000213	0.0000342	0.0000524	0.0000376	0.0000233	0.0000108	0.0000060	0.0000262	0.0000162
37	Banchang Karnchanakul Wittaya School	0.0000030	0.0000755	0.0001209	0.0001934	0.0002962	0.0003202	0.0000889	0.0000922	0.0000229	0.0002228	0.0000619	0.0000005	0.0000138	0.0000250	0.0000400	0.0000613	0.0000550	0.0000163	0.0000159	0.0000042	0.0000383	0.0000113

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Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.0000011	0.0000149	0.0000306	0.0000491	0.0000752	0.0000556	0.0000318	0.0000160	0.0000082	0.0000387	0.0000221	0.0000001	0.0000013	0.0000026	0.0000042	0.0000064	0.0000046	0.0000028	0.0000013	0.0000007	0.0000032	0.0000019
39	Ban Phudon - Huai Mahat Child Development Center	0.0000011	0.0000149	0.0000306	0.0000491	0.0000752	0.0000556	0.0000318	0.0000160	0.0000082	0.0000387	0.0000221	0.0000001	0.0000013	0.0000026	0.0000042	0.0000064	0.0000046	0.0000028	0.0000013	0.0000007	0.0000032	0.0000019
40	Ban Map Fakthong School	0.0000041	0.0000334	0.0000726	0.0001167	0.0001787	0.0001207	0.0001237	0.0000348	0.0000319	0.0000840	0.0000861	0.0000003	0.0000015	0.0000041	0.0000066	0.0000101	0.0000043	0.0000074	0.0000013	0.0000019	0.0000030	0.0000051
41	Phuru Yor. Sor. Sor. 80 School	0.0000046	0.0000297	0.0000804	0.0001295	0.0001984	0.0001074	0.0001392	0.0000309	0.0000359	0.0000747	0.0000969	0.0000002	0.0000013	0.0000033	0.0000054	0.0000082	0.0000043	0.0000052	0.0000012	0.0000013	0.0000030	0.0000036
42	Khao Chi Chan School	0.0000042	0.0000427	0.0000890	0.0001431	0.0002191	0.0001579	0.0001270	0.0000455	0.0000328	0.0001099	0.0000884	0.0000003	0.0000024	0.0000057	0.0000092	0.0000141	0.0000084	0.0000080	0.0000024	0.0000021	0.0000058	0.0000056
43	Ban Khalot Child Development Center	0.0000090	0.0000582	0.0001564	0.0002522	0.0003863	0.0001790	0.0002684	0.0000516	0.0000692	0.0001246	0.0001869	0.0000006	0.0000037	0.0000101	0.0000162	0.0000248	0.0000115	0.0000172	0.0000033	0.0000044	0.0000080	0.0000120
44	Ban Khalot School	0.0000093	0.0000607	0.0001628	0.0002623	0.0004018	0.0001871	0.0002783	0.0000539	0.0000718	0.0001302	0.0001938	0.0000006	0.0000036	0.0000098	0.0000158	0.0000241	0.0000111	0.0000168	0.0000032	0.0000043	0.0000077	0.0000117
45	Phlu Ta Luang Wittaya School	0.0000141	0.0000426	0.0001655	0.0002679	0.0004104	0.0001114	0.0004239	0.0000321	0.0001094	0.0000775	0.0002952	0.0000008	0.0000041	0.0000125	0.0000201	0.0000308	0.0000111	0.0000245	0.0000032	0.0000063	0.0000077	0.0000171
46	Athittan Kindergarten School	0.0000072	0.0000275	0.0000968	0.0001564	0.0002396	0.0000843	0.0002157	0.0000243	0.0000557	0.0000587	0.0001502	0.0000006	0.0000030	0.0000090	0.0000145	0.0000222	0.0000084	0.0000174	0.0000024	0.0000045	0.0000058	0.0000121
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.0000112	0.0000477	0.0001449	0.0002339	0.0003583	0.0001438	0.0003371	0.0000414	0.0000870	0.0001001	0.0002348	0.0000008	0.0000042	0.0000125	0.0000201	0.0000308	0.0000115	0.0000241	0.0000033	0.0000062	0.0000080	0.0000168
48	Ban Khao Bai Si School	0.0000076	0.0000477	0.0001234	0.0001990	0.0003048	0.0001909	0.0002284	0.0000550	0.0000589	0.0001329	0.0001590	0.0000006	0.0000041	0.0000108	0.0000175	0.0000268	0.0000128	0.0000182	0.0000037	0.0000047	0.0000089	0.0000127
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.0000019	0.0000431	0.0000649	0.0001038	0.0001589	0.0001854	0.0000554	0.0000534	0.0000143	0.0001290	0.0000386	0.0000001	0.0000024	0.0000047	0.0000076	0.0000116	0.0000092	0.0000043	0.0000026	0.0000011	0.0000064	0.0000030
50	Ban KM. 5 School	0.0000033	0.0000252	0.0000633	0.0001020	0.0001562	0.0000818	0.0001000	0.0000236	0.0000258	0.0000569	0.0000696	0.0000004	0.0000031	0.0000080	0.0000128	0.0000197	0.0000098	0.0000129	0.0000028	0.0000033	0.0000068	0.0000090
51	Royal Thai Fleet Sattahip District School	0.0000027	0.0000236	0.0000557	0.0000897	0.0001374	0.0000803	0.0000823	0.0000231	0.0000212	0.0000559	0.0000573	0.0000003	0.0000027	0.0000067	0.0000107	0.0000164	0.0000090	0.0000101	0.0000026	0.0000026	0.0000062	0.0000070
52	RTN. 8 Nursery	0.0000039	0.0000269	0.0000642	0.0001036	0.0001587	0.0000921	0.0001165	0.0000265	0.0000301	0.0000641	0.0000812	0.0000004	0.0000027	0.0000070	0.0000113	0.0000172	0.0000087	0.0000113	0.0000025	0.0000029	0.0000061	0.0000079
53	Juk Samet School	0.0000039	0.0000266	0.0000642	0.0001035	0.0001586	0.0000909	0.0001164	0.0000262	0.0000300	0.0000632	0.0000810	0.0000004	0.0000027	0.0000070	0.0000112	0.0000172	0.0000087	0.0000113	0.0000025	0.0000029	0.0000060	0.0000079
54	Juk Samet Child Development Center	0.0000039	0.0000258	0.0000647	0.0001043	0.0001598	0.0000885	0.0001176	0.0000255	0.0000303	0.0000616	0.0000819	0.0000004	0.0000027	0.0000070	0.0000112	0.0000172	0.0000086	0.0000113	0.0000025	0.0000029	0.0000060	0.0000079
55	Ban Chong Samaesarn Child Development Center	0.0000028	0.0000272	0.0000564	0.0000906	0.0001387	0.0001008	0.0000848	0.0000290	0.0000219	0.0000701	0.0000590	0.0000002	0.0000021	0.0000047	0.0000075	0.0000115	0.0000073	0.0000061	0.0000021	0.0000016	0.0000051	0.0000043
56	Samaesarn Subdistrict NFE Center	0.0000031	0.0000218	0.0000483	0.0000777	0.0001190	0.0000890	0.0000922	0.0000256	0.0000238	0.0000620	0.0000642	0.0000002	0.0000018	0.0000040	0.0000064	0.0000099	0.0000065	0.0000050	0.0000019	0.0000013	0.0000045	0.0000035
57	Ban Chong Samaesarn School	0.0000031	0.0000211	0.0000480	0.0000772	0.0001182	0.0000845	0.0000939	0.0000244	0.0000242	0.0000588	0.0000654	0.0000002	0.0000018	0.0000039	0.0000063	0.0000097	0.0000064	0.0000049	0.0000019	0.0000013	0.0000045	0.0000034
58	Wat Phala Vipassana Office	0.0000052	0.0000430	0.0001047	0.0001686	0.0002582	0.0001436	0.0001557	0.0000414	0.0000402	0.0001000	0.0001085	0.0000006	0.0000050	0.0000117	0.0000188	0.0000288	0.0000169	0.0000165	0.0000049	0.0000043	0.0000118	0.0000115
59	Wat Phala	0.0000051	0.0000434	0.0001043	0.0001679	0.0002571	0.0001465	0.0001517	0.0000422	0.0000391	0.0001019	0.0001056	0.0000005	0.0000048	0.0000112	0.0000181	0.0000277	0.0000165	0.0000157	0.0000047	0.0000041	0.0000115	0.0000109
60	Chao Li Hu Ong Yea Shrine	0.0000072	0.0000665	0.0001553	0.0002500	0.0003829	0.0002287	0.0002154	0.0000659	0.0000556	0.0001591	0.0001500	0.0000008	0.0000093	0.0000200	0.0000322	0.0000493	0.0000339	0.0000233	0.0000098	0.0000060	0.0000236	0.0000163
61	Wat Khlong Sai	0.0000070	0.0000609	0.0001453	0.0002339	0.0003583	0.0002064	0.0002091	0.0000595	0.0000539	0.0001436	0.0001456	0.0000006	0.0000056	0.0000128	0.0000206	0.0000315	0.0000198	0.0000167	0.0000057	0.0000043	0.0000138	0.0000117
62	Wat Khiri Pawanaram	0.0000032	0.0000452	0.0000927	0.0001489	0.0002280	0.0001686	0.0000963	0.0000486	0.0000249	0.0001173	0.0000671	0.0000003	0.0000059	0.0000115	0.0000184	0.0000282	0.0000225	0.0000103	0.0000065	0.0000027	0.0000157	0.0000072

Subject to changes and approval by the Government of Thailand

Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.0000025	0.0000433	0.0000820	0.0001316	0.0002015	0.0001688	0.0000741	0.0000486	0.0000191	0.0001175	0.0000516	0.0000003	0.0000069	0.0000130	0.0000209	0.0000320	0.0000271	0.0000101	0.0000078	0.0000026	0.0000189	0.0000071
64	Ban Chang Church	0.0000026	0.0000458	0.0000792	0.0001269	0.0001943	0.0001860	0.0000776	0.0000536	0.0000200	0.0001295	0.0000540	0.0000004	0.0000104	0.0000184	0.0000295	0.0000451	0.0000417	0.0000108	0.0000120	0.0000028	0.0000290	0.0000075
65	Wat Ban Khlong Bang Phai	0.0000112	0.0000798	0.0002059	0.0003318	0.0005082	0.0002541	0.0003347	0.0000732	0.0000864	0.0001768	0.0002331	0.0000010	0.0000051	0.0000153	0.0000247	0.0000379	0.0000138	0.0000301	0.0000040	0.0000078	0.0000096	0.0000209
66	Admiral Prince Abhakara Kiartivongse Monument	0.0000122	0.0000813	0.0002046	0.0003296	0.0005048	0.0002645	0.0003656	0.0000762	0.0000943	0.0001841	0.0002546	0.0000012	0.0000059	0.0000179	0.0000288	0.0000442	0.0000159	0.0000352	0.0000046	0.0000091	0.0000111	0.0000245
67	Royal Thai Naval Air Division Naval Aviation Museum	0.0000101	0.0000814	0.0002001	0.0003223	0.0004936	0.0002698	0.0003024	0.0000777	0.0000780	0.0001877	0.0002106	0.0000012	0.0000059	0.0000182	0.0000294	0.0000450	0.0000156	0.0000365	0.0000045	0.0000094	0.0000108	0.0000254
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.0000120	0.0000713	0.0001629	0.0002621	0.0004013	0.0002492	0.0003590	0.0000718	0.0000926	0.0001734	0.0002500	0.0000016	0.0000068	0.0000222	0.0000358	0.0000549	0.0000166	0.0000468	0.0000048	0.0000121	0.0000116	0.0000326
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.0000237	0.0000538	0.0002611	0.0004230	0.0006481	0.0002041	0.0007098	0.0000588	0.0001831	0.0001420	0.0004943	0.0000023	0.0000088	0.0000309	0.0000499	0.0000764	0.0000195	0.0000688	0.0000056	0.0000178	0.0000136	0.0000479
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.0000320	0.0000726	0.0003553	0.0005755	0.0008817	0.0002011	0.0009589	0.0000579	0.0002474	0.0001399	0.0006677	0.0000029	0.0000104	0.0000383	0.0000619	0.0000948	0.0000215	0.0000881	0.0000062	0.0000227	0.0000150	0.0000613
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.0000257	0.0001743	0.0003992	0.0006423	0.0009837	0.0007069	0.0007702	0.0002036	0.0001987	0.0004919	0.0005364	0.0000047	0.0000404	0.0000969	0.0001560	0.0002390	0.0001363	0.0001408	0.0000393	0.0000363	0.0000948	0.0000981
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.0000207	0.0001723	0.0003721	0.0005983	0.0009163	0.0006634	0.0006219	0.0001911	0.0001604	0.0004616	0.0004330	0.0000040	0.0000410	0.0000928	0.0001492	0.0002286	0.0001441	0.0001210	0.0000415	0.0000312	0.0001003	0.0000843
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.0000206	0.0002898	0.0005271	0.0008455	0.0012946	0.0011514	0.0006168	0.0003316	0.0001591	0.0008012	0.0004295	0.0000037	0.0000470	0.0000991	0.0001593	0.0002440	0.0001728	0.0001105	0.0000498	0.0000285	0.0001202	0.0000770
74	Wat Sa Kaeo	0.0000248	0.0001640	0.0003019	0.0004843	0.0007416	0.0006477	0.0007446	0.0001866	0.0001921	0.0004507	0.0005185	0.0000044	0.0000181	0.0000607	0.0000980	0.0001501	0.0000430	0.0001305	0.0000124	0.0000337	0.0000299	0.0000909
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.0000039	0.0000444	0.0000897	0.0001444	0.0002211	0.0001873	0.0001183	0.0000540	0.0000305	0.0001304	0.0000824	0.0000004	0.0000068	0.0000133	0.0000214	0.0000328	0.0000259	0.0000122	0.0000075	0.0000031	0.0000180	0.0000085
76	Wat Sombun Naram	0.0000189	0.0001312	0.0002301	0.0003718	0.0005696	0.0005343	0.0005674	0.0001539	0.0001464	0.0003718	0.0003951	0.0000024	0.0000144	0.0000398	0.0000642	0.0000984	0.0000430	0.0000710	0.0000124	0.0000183	0.0000299	0.0000494
77	Ban Chang Abundant Grace Church	0.0000095	0.0001030	0.0001659	0.0002656	0.0004066	0.0004311	0.0002849	0.0001242	0.0000735	0.0003000	0.0001984	0.0000016	0.0000138	0.0000329	0.0000530	0.0000811	0.0000470	0.0000470	0.0000136	0.0000121	0.0000327	0.0000327
78	Wat Samnak Kathon	0.0000047	0.0001061	0.0001670	0.0002672	0.0004091	0.0004484	0.0001399	0.0001291	0.0000361	0.0003120	0.0000974	0.0000007	0.0000136	0.0000260	0.0000417	0.0000639	0.0000529	0.0000213	0.0000153	0.0000055	0.0000368	0.0000149
79	Wat Suwan Rangsan	0.0000035	0.0000722	0.0001130	0.0001807	0.0002767	0.0003058	0.0001034	0.0000881	0.0000267	0.0002128	0.0000720	0.0000005	0.0000102	0.0000192	0.0000308	0.0000471	0.0000397	0.0000151	0.0000114	0.0000039	0.0000276	0.0000105
80	Wat Nong Bot	0.0000032	0.0000330	0.0000739	0.0001189	0.0001822	0.0001168	0.0000946	0.0000336	0.0000244	0.0000813	0.0000659	0.0000003	0.0000049	0.0000099	0.0000159	0.0000244	0.0000182	0.0000101	0.0000053	0.0000026	0.0000127	0.0000070
81	The Shrine of Luang Tia Chak Mak	0.0000029	0.0000484	0.0000847	0.0001359	0.0002081	0.0001993	0.0000863	0.0000574	0.0000223	0.0001387	0.0000601	0.0000005	0.0000083	0.0000161	0.0000258	0.0000395	0.0000322	0.0000137	0.0000093	0.0000035	0.0000224	0.0000095
82	Wat Chak Mak	0.0000030	0.0000520	0.0000948	0.0001520	0.0002328	0.0002131	0.0000909	0.0000614	0.0000235	0.0001483	0.0000633	0.0000005	0.0000087	0.0000167	0.0000268	0.0000410	0.0000336	0.0000141	0.0000097	0.0000036	0.0000234	0.0000098

Draft Version

Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.0000036	0.0000332	0.0000773	0.0001245	0.0001906	0.0001142	0.0001069	0.0000329	0.0000276	0.0000795	0.0000744	0.0000004	0.0000034	0.0000080	0.0000128	0.0000196	0.0000114	0.0000113	0.0000033	0.0000029	0.0000079	0.0000079
84	The Shrine of King Taksin the Great (Ban Chang)	0.0000036	0.0000333	0.0000775	0.0001248	0.0001911	0.0001148	0.0001069	0.0000331	0.0000276	0.0000799	0.0000744	0.0000004	0.0000034	0.0000080	0.0000129	0.0000197	0.0000115	0.0000113	0.0000033	0.0000029	0.0000080	0.0000079
85	Wat Chonthararam (Phayun)	0.0000042	0.0000391	0.0000913	0.0001470	0.0002251	0.0001346	0.0001265	0.0000388	0.0000326	0.0000936	0.0000881	0.0000004	0.0000036	0.0000086	0.0000139	0.0000213	0.0000120	0.0000126	0.0000035	0.0000033	0.0000084	0.0000088
86	Masjid Dawatul Islam	0.0000060	0.0001189	0.0002247	0.0003606	0.0005522	0.0004637	0.0001784	0.0001335	0.0000460	0.0003226	0.0001242	0.0000008	0.0000131	0.0000258	0.0000414	0.0000633	0.0000501	0.0000236	0.0000144	0.0000061	0.0000348	0.0000164
87	Chinese shrine at the Buddha Dhamma Foundation	0.0000129	0.0001004	0.0002502	0.0004029	0.0006171	0.0003292	0.0003860	0.0000948	0.0000996	0.0002291	0.0002688	0.0000011	0.0000110	0.0000248	0.0000400	0.0000612	0.0000384	0.0000326	0.0000111	0.0000084	0.0000267	0.0000227
88	The Shrine of Luang Tia Ban Chang	0.0000071	0.0000837	0.0001686	0.0002709	0.0004148	0.0003156	0.0002142	0.0000909	0.0000553	0.0002196	0.0001491	0.0000008	0.0000101	0.0000213	0.0000342	0.0000523	0.0000372	0.0000235	0.0000107	0.0000061	0.0000259	0.0000164
89	The Shrine of Laoia Guan Yu Ban Chang	0.0000086	0.0000817	0.0001844	0.0002966	0.0004543	0.0002878	0.0002583	0.0000829	0.0000667	0.0002003	0.0001799	0.0000010	0.0000098	0.0000222	0.0000357	0.0000546	0.0000347	0.0000287	0.0000100	0.0000074	0.0000242	0.0000200
90	Wat Ban Chang	0.0000110	0.0000855	0.0002135	0.0003439	0.0005268	0.0002795	0.0003310	0.0000805	0.0000854	0.0001945	0.0002305	0.0000011	0.0000100	0.0000238	0.0000383	0.0000587	0.0000338	0.0000343	0.0000097	0.0000088	0.0000235	0.0000239
91	Wat Prachummit Bamrung	0.0000086	0.0000500	0.0001416	0.0002284	0.0003498	0.0001466	0.0002584	0.0000422	0.0000667	0.0001020	0.0001799	0.0000004	0.0000044	0.0000098	0.0000158	0.0000242	0.0000157	0.0000124	0.0000045	0.0000032	0.0000109	0.0000086
92	The Shrine of Luang Tia Noen Kraprok 1	0.0000047	0.0000624	0.0001302	0.0002092	0.0003204	0.0002309	0.0001411	0.0000665	0.0000364	0.0001607	0.0000983	0.0000003	0.0000053	0.0000103	0.0000166	0.0000253	0.0000202	0.0000093	0.0000058	0.0000024	0.0000140	0.0000065
93	The Shrine of Luang Tia Noen Kraprok 2	0.0000021	0.0000753	0.0001145	0.0001831	0.0002804	0.0003224	0.0000642	0.0000929	0.0000166	0.0002244	0.0000447	0.0000002	0.0000065	0.0000112	0.0000180	0.0000275	0.0000263	0.0000057	0.0000076	0.0000015	0.0000183	0.0000040
94	Wat Noen Kraprok	0.0000016	0.0000231	0.0000435	0.0000698	0.0001069	0.0000902	0.0000479	0.0000260	0.0000124	0.0000627	0.0000334	0.0000001	0.0000029	0.0000054	0.0000086	0.0000132	0.0000115	0.0000039	0.0000033	0.0000010	0.0000080	0.0000027
95	Wat Phudon Nim Sanoh	0.0000010	0.0000150	0.0000299	0.0000481	0.0000736	0.0000568	0.0000288	0.0000164	0.0000074	0.0000395	0.0000200	0.0000001	0.0000013	0.0000027	0.0000043	0.0000066	0.0000048	0.0000028	0.0000014	0.0000007	0.0000034	0.0000020
96	Church of Christ Ban Chang	0.0000013	0.0000155	0.0000330	0.0000530	0.0000812	0.0000565	0.0000378	0.0000163	0.0000098	0.0000393	0.0000263	0.0000001	0.0000013	0.0000028	0.0000045	0.0000068	0.0000049	0.0000031	0.0000014	0.0000008	0.0000034	0.0000021
97	Anek Kusala Sala (Viharn Sien)	0.0000045	0.0000412	0.0000902	0.0001451	0.0002222	0.0001482	0.0001340	0.0000427	0.0000346	0.0001031	0.0000933	0.0000003	0.0000018	0.0000050	0.0000081	0.0000124	0.0000055	0.0000088	0.0000016	0.0000023	0.0000038	0.0000061
98	Wat Yan Nasangwararam	0.0000047	0.0000333	0.0000818	0.0001317	0.0002018	0.0001170	0.0001413	0.0000337	0.0000365	0.0000814	0.0000984	0.0000003	0.0000021	0.0000057	0.0000092	0.0000141	0.0000062	0.0000102	0.0000018	0.0000026	0.0000043	0.0000071
99	Sirisirirak Monastery	0.0000034	0.0000417	0.0000775	0.0001243	0.0001904	0.0001637	0.0001006	0.0000471	0.0000260	0.0001139	0.0000700	0.0000002	0.0000026	0.0000056	0.0000090	0.0000137	0.0000094	0.0000065	0.0000027	0.0000017	0.0000065	0.0000045
100	Anan Buraparam Meditation Center	0.0000063	0.0000372	0.0000833	0.0001347	0.0002063	0.0001345	0.0001877	0.0000388	0.0000484	0.0000936	0.0001307	0.0000003	0.0000025	0.0000060	0.0000097	0.0000149	0.0000085	0.0000087	0.0000025	0.0000023	0.0000059	0.0000061
101	Wat Map Fakthong	0.0000039	0.0000299	0.0000748	0.0001205	0.0001846	0.0001051	0.0001165	0.0000303	0.0000301	0.0000732	0.0000811	0.0000003	0.0000018	0.0000046	0.0000074	0.0000114	0.0000056	0.0000076	0.0000016	0.0000020	0.0000039	0.0000053
102	Khao Chi Chan Image of Lord Buddha	0.0000009	0.0000100	0.0000216	0.0000348	0.0000532	0.0000364	0.0000254	0.0000105	0.0000066	0.0000254	0.0000177	0.0000001	0.0000006	0.0000014	0.0000022	0.0000034	0.0000021	0.0000019	0.0000006	0.0000005	0.0000015	0.0000013
103	Wat Khao Chi Chan	0.0000009	0.0000193	0.0000319	0.0000512	0.0000783	0.0000816	0.0000269	0.0000235	0.0000069	0.0000568	0.0000187	0.0000001	0.0000014	0.0000026	0.0000042	0.0000065	0.0000054	0.0000021	0.0000016	0.0000005	0.0000038	0.0000015
104	Rat Samakkhi Temple	0.0000093	0.0000605	0.0001626	0.0002621	0.0004014	0.0001861	0.0002789	0.0000536	0.0000720	0.0001295	0.0001942	0.0000006	0.0000038	0.0000102	0.0000164	0.0000251	0.0000115	0.0000176	0.0000033	0.0000045	0.0000080	0.0000122
105	The Shrine of Chao Mae Kuan Im	0.0000095	0.0000615	0.0001654	0.0002666	0.0004083	0.0001893	0.0002836	0.0000545	0.0000732	0.0001317	0.0001975	0.0000006	0.0000036	0.0000096	0.0000154	0.0000236	0.0000109	0.0000165	0.0000031	0.0000043	0.0000076	0.0000115
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.0000104	0.0000685	0.0001830	0.0002950	0.0004519	0.0002116	0.0003118	0.0000610	0.0000804	0.0001473	0.0002171	0.0000006	0.0000040	0.0000108	0.0000173	0.0000266	0.0000120	0.0000187	0.0000035	0.0000048	0.0000084	0.0000130

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Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.0000038	0.0000289	0.0000729	0.0001174	0.0001798	0.0000940	0.0001143	0.0000271	0.0000295	0.0000654	0.0000796	0.0000005	0.0000033	0.0000084	0.0000135	0.0000207	0.0000104	0.0000136	0.0000030	0.0000035	0.0000073	0.0000094
108	KM.8 Meditation Center	0.0000063	0.0000426	0.0001123	0.0001811	0.0002773	0.0001329	0.0001883	0.0000383	0.0000486	0.0000925	0.0001311	0.0000005	0.0000033	0.0000086	0.0000139	0.0000213	0.0000105	0.0000141	0.0000030	0.0000036	0.0000073	0.0000098
109	Wat Rangsee Sunthorn (KM.5)	0.0000033	0.0000252	0.0000629	0.0001014	0.0001552	0.0000824	0.0000976	0.0000237	0.0000252	0.0000573	0.0000679	0.0000004	0.0000032	0.0000081	0.0000131	0.0000201	0.0000100	0.0000133	0.0000029	0.0000034	0.0000070	0.0000092
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.0000012	0.0000137	0.0000297	0.0000478	0.0000732	0.0000496	0.0000354	0.0000143	0.0000091	0.0000345	0.0000247	0.0000001	0.0000006	0.0000012	0.0000020	0.0000030	0.0000021	0.0000014	0.0000006	0.0000004	0.0000015	0.0000010
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.0000014	0.0000151	0.0000334	0.0000537	0.0000823	0.0000565	0.0000416	0.0000163	0.0000107	0.0000393	0.0000290	0.0000001	0.0000008	0.0000016	0.0000026	0.0000040	0.0000029	0.0000017	0.0000008	0.0000005	0.0000020	0.0000012
112	Wat Tung Prong	0.0000011	0.0000134	0.0000269	0.0000432	0.0000662	0.0000513	0.0000329	0.0000148	0.0000085	0.0000357	0.0000229	0.0000001	0.0000006	0.0000013	0.0000020	0.0000031	0.0000022	0.0000014	0.0000006	0.0000004	0.0000016	0.0000010
113	Khao Phlu Ta Luang Meditation Center	0.0000006	0.0000078	0.0000153	0.0000246	0.0000377	0.0000296	0.0000176	0.0000085	0.0000046	0.0000206	0.0000123	0.0000000	0.0000003	0.0000007	0.0000011	0.0000017	0.0000012	0.0000008	0.0000003	0.0000002	0.0000008	0.0000006
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.0000112	0.0000419	0.0001225	0.0001983	0.0003039	0.0001471	0.0003372	0.0000424	0.0000870	0.0001024	0.0002348	0.0000011	0.0000042	0.0000145	0.0000235	0.0000359	0.0000094	0.0000321	0.0000027	0.0000083	0.0000065	0.0000224
115	Wat Khao Bai Si Santitham	0.0000131	0.0000563	0.0001740	0.0002812	0.0004308	0.0001734	0.0003932	0.0000499	0.0001015	0.0001206	0.0002738	0.0000011	0.0000049	0.0000157	0.0000254	0.0000388	0.0000126	0.0000323	0.0000036	0.0000083	0.0000088	0.0000225
116	Welu Amphawan Vipassana Office	0.0000093	0.0000547	0.0001414	0.0002282	0.0003496	0.0001840	0.0002790	0.0000530	0.0000720	0.0001280	0.0001943	0.0000008	0.0000047	0.0000135	0.0000218	0.0000334	0.0000138	0.0000249	0.0000040	0.0000064	0.0000096	0.0000173
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.0000045	0.0000373	0.0000907	0.0001461	0.0002237	0.0001243	0.0001351	0.0000358	0.0000349	0.0000865	0.0000941	0.0000004	0.0000028	0.0000070	0.0000112	0.0000171	0.0000094	0.0000104	0.0000027	0.0000027	0.0000066	0.0000073
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.0000043	0.0000278	0.0000716	0.0001154	0.0001768	0.0000909	0.0001287	0.0000262	0.0000332	0.0000632	0.0000896	0.0000005	0.0000033	0.0000084	0.0000136	0.0000208	0.0000106	0.0000135	0.0000030	0.0000035	0.0000073	0.0000094
119	Samaesarn Pattanakarn Church	0.0000040	0.0000293	0.0000669	0.0001076	0.0001648	0.0001026	0.0001184	0.0000296	0.0000306	0.0000714	0.0000825	0.0000004	0.0000028	0.0000070	0.0000113	0.0000174	0.0000092	0.0000109	0.0000027	0.0000028	0.0000064	0.0000076
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.0000036	0.0000281	0.0000645	0.0001038	0.0001590	0.0000975	0.0001093	0.0000281	0.0000282	0.0000678	0.0000761	0.0000002	0.0000021	0.0000050	0.0000080	0.0000122	0.0000074	0.0000068	0.0000021	0.0000018	0.0000052	0.0000047
121	Wat Chong Samaesarn	0.0000031	0.0000223	0.0000487	0.0000784	0.0001201	0.0000904	0.0000925	0.0000261	0.0000239	0.0000629	0.0000644	0.0000002	0.0000018	0.0000041	0.0000065	0.0000100	0.0000065	0.0000050	0.0000019	0.0000013	0.0000046	0.0000035
122	Viharn Luang Por Dam	0.0000023	0.0000224	0.0000499	0.0000803	0.0001230	0.0000795	0.0000698	0.0000229	0.0000180	0.0000553	0.0000486	0.0000001	0.0000014	0.0000032	0.0000051	0.0000078	0.0000051	0.0000040	0.0000015	0.0000010	0.0000035	0.0000028
123	The Shrine of King Taksin the Great (Samaesarn)	0.0000031	0.0000292	0.0000681	0.0001096	0.0001679	0.0001008	0.0000940	0.0000290	0.0000242	0.0000701	0.0000654	0.0000002	0.0000023	0.0000053	0.0000085	0.0000129	0.0000079	0.0000071	0.0000023	0.0000018	0.0000055	0.0000049
124	Thai Island and Sea Natural History Museum	0.0000029	0.0000286	0.0000653	0.0001051	0.0001610	0.0000996	0.0000872	0.0000287	0.0000225	0.0000693	0.0000607	0.0000002	0.0000022	0.0000051	0.0000082	0.0000125	0.0000078	0.0000067	0.0000023	0.0000017	0.0000054	0.0000047
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.0000034	0.0000273	0.0000672	0.0001082	0.0001658	0.0000904	0.0001017	0.0000260	0.0000263	0.0000629	0.0000708	0.0000002	0.0000024	0.0000054	0.0000087	0.0000133	0.0000082	0.0000073	0.0000024	0.0000019	0.0000057	0.0000051

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Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.0000034	0.0000286	0.0000694	0.0001117	0.0001711	0.0000956	0.0001028	0.0000275	0.0000265	0.0000665	0.0000716	0.0000003	0.0000024	0.0000054	0.0000087	0.0000134	0.0000082	0.0000074	0.0000024	0.0000019	0.0000057	0.0000051
127	Eastern-Nong Muang Community Health Service Center	0.0000302	0.0001089	0.0003518	0.0005695	0.0008725	0.0004190	0.0009060	0.0001207	0.0002337	0.0002916	0.0006309	0.0000032	0.0000258	0.0000634	0.0001021	0.0001564	0.0000857	0.0000957	0.0000247	0.0000247	0.0000596	0.0000666
128	Phala Subdistrict Health Promotion Hospital	0.0000056	0.0000492	0.0001170	0.0001883	0.0002884	0.0001671	0.0001673	0.0000481	0.0000432	0.0001163	0.0001165	0.0000005	0.0000051	0.0000118	0.0000190	0.0000290	0.0000175	0.0000162	0.0000050	0.0000042	0.0000122	0.0000113
129	Ban Chang Hospital	0.0000020	0.0000323	0.0000638	0.0001025	0.0001569	0.0001232	0.0000591	0.0000355	0.0000152	0.0000858	0.0000412	0.0000002	0.0000036	0.0000071	0.0000114	0.0000174	0.0000135	0.0000067	0.0000039	0.0000017	0.0000094	0.0000047
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.0000123	0.0000431	0.0001342	0.0002173	0.0003330	0.0001586	0.0003684	0.0000457	0.0000950	0.0001104	0.0002565	0.0000013	0.0000058	0.0000184	0.0000298	0.0000456	0.0000146	0.0000381	0.0000042	0.0000098	0.0000102	0.0000266
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.0000171	0.0001407	0.0003416	0.0005501	0.0008425	0.0004706	0.0005118	0.0001355	0.0001321	0.0003275	0.0003564	0.0000030	0.0000130	0.0000424	0.0000684	0.0001048	0.0000323	0.0000889	0.0000093	0.0000229	0.0000224	0.0000619
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.0000272	0.0001525	0.0002995	0.0004844	0.0007422	0.0006341	0.0008148	0.0001826	0.0002102	0.0004412	0.0005674	0.0000033	0.0000170	0.0000510	0.0000823	0.0001261	0.0000468	0.0000991	0.0000135	0.0000256	0.0000326	0.0000690
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.0000034	0.0001168	0.0001809	0.0002894	0.0004430	0.0004965	0.0001009	0.0001430	0.0000260	0.0003455	0.0000703	0.0000006	0.0000129	0.0000239	0.0000383	0.0000586	0.0000508	0.0000173	0.0000146	0.0000045	0.0000354	0.0000121
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.0000075	0.0001376	0.0002123	0.0003396	0.0005199	0.0005860	0.0002243	0.0001688	0.0000579	0.0004078	0.0001562	0.0000012	0.0000139	0.0000302	0.0000486	0.0000744	0.0000503	0.0000361	0.0000145	0.0000093	0.0000350	0.0000251
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.0000033	0.0000504	0.0000803	0.0001286	0.0001968	0.0002132	0.0000977	0.0000614	0.0000252	0.0001483	0.0000680	0.0000005	0.0000079	0.0000155	0.0000249	0.0000382	0.0000302	0.0000141	0.0000087	0.0000037	0.0000210	0.0000099
136	Ban Phayun Subdistrict Health Promotion Hospital	0.0000040	0.0000378	0.0000879	0.0001415	0.0002167	0.0001305	0.0001209	0.0000376	0.0000312	0.0000908	0.0000842	0.0000004	0.0000036	0.0000085	0.0000137	0.0000210	0.0000120	0.0000123	0.0000035	0.0000032	0.0000084	0.0000086
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.0000017	0.0000575	0.0000876	0.0001401	0.0002145	0.0002457	0.0000512	0.0000708	0.0000132	0.0001710	0.0000357	0.0000002	0.0000052	0.0000091	0.0000146	0.0000223	0.0000213	0.0000047	0.0000061	0.0000012	0.0000148	0.0000033
138	Phudon Huai Mahat Community Health Service Unit	0.0000011	0.0000158	0.0000326	0.0000523	0.0000801	0.0000591	0.0000340	0.0000170	0.0000088	0.0000411	0.0000237	0.0000001	0.0000014	0.0000029	0.0000046	0.0000070	0.0000051	0.0000030	0.0000015	0.0000008	0.0000035	0.0000021
139	Wat Yan Nasangwararam Hospital	0.0000043	0.0000382	0.0000780	0.0001258	0.0001926	0.0001456	0.0001285	0.0000419	0.0000331	0.0001013	0.0000895	0.0000003	0.0000020	0.0000053	0.0000086	0.0000131	0.0000059	0.0000092	0.0000017	0.0000024	0.0000041	0.0000064
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.0000042	0.0000374	0.0000778	0.0001254	0.0001921	0.0001429	0.0001264	0.0000412	0.0000326	0.0000994	0.0000880	0.0000003	0.0000019	0.0000053	0.0000086	0.0000131	0.0000059	0.0000093	0.0000017	0.0000024	0.0000041	0.0000065
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.0000017	0.0000580	0.0000902	0.0001442	0.0002208	0.0002465	0.0000496	0.0000710	0.0000128	0.0001715	0.0000345	0.0000001	0.0000027	0.0000050	0.0000080	0.0000122	0.0000108	0.0000034	0.0000031	0.0000009	0.0000075	0.0000024

Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.0000099	0.0000670	0.0001772	0.0002855	0.0004373	0.0002090	0.0002976	0.0000602	0.0000768	0.0001455	0.0002072	0.0000006	0.0000040	0.0000107	0.0000172	0.0000263	0.0000121	0.0000184	0.0000035	0.0000048	0.0000084	0.0000128
143	Sattahip Hospital KM.10	0.0000071	0.0000569	0.0001400	0.0002255	0.0003453	0.0001881	0.0002122	0.0000542	0.0000548	0.0001309	0.0001478	0.0000005	0.0000031	0.0000083	0.0000134	0.0000206	0.0000095	0.0000143	0.0000027	0.0000037	0.0000066	0.0000100
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.0000031	0.0000215	0.0000480	0.0000773	0.0001184	0.0000880	0.0000928	0.0000253	0.0000239	0.0000612	0.0000646	0.0000002	0.0000018	0.0000040	0.0000064	0.0000098	0.0000065	0.0000049	0.0000019	0.0000013	0.0000045	0.0000034
145	Village No. 1 Ban Sakulthong	0.0000024	0.0000362	0.0000728	0.0001170	0.0001791	0.0001401	0.0000716	0.0000403	0.0000185	0.0000975	0.0000498	0.0000003	0.0000065	0.0000123	0.0000198	0.0000303	0.0000252	0.0000100	0.0000073	0.0000026	0.0000175	0.0000070
146	Village No. 2, Ban Kilo 16	0.0000093	0.0000643	0.0001682	0.0002711	0.0004152	0.0002027	0.0002784	0.0000584	0.0000718	0.0001410	0.0001938	0.0000008	0.0000087	0.0000193	0.0000310	0.0000475	0.0000307	0.0000245	0.0000088	0.0000063	0.0000213	0.0000171
147	Village No. 4, Ban Tung Prong	0.0000075	0.0000745	0.0001589	0.0002554	0.0003912	0.0002718	0.0002238	0.0000783	0.0000577	0.0001891	0.0001558	0.0000010	0.0000133	0.0000276	0.0000443	0.0000678	0.0000496	0.0000292	0.0000143	0.0000075	0.0000345	0.0000203
148	Village No. 5, Phala Subdistrict	0.0000076	0.0000625	0.0001521	0.0002450	0.0003752	0.0002085	0.0002265	0.0000601	0.0000584	0.0001451	0.0001577	0.0000008	0.0000097	0.0000204	0.0000328	0.0000502	0.0000358	0.0000225	0.0000103	0.0000058	0.0000249	0.0000157
149	Village No. 6, Ban Takat	0.0000055	0.0000500	0.0001173	0.0001888	0.0002892	0.0001714	0.0001641	0.0000494	0.0000423	0.0001193	0.0001142	0.0000005	0.0000049	0.0000114	0.0000183	0.0000280	0.0000171	0.0000154	0.0000049	0.0000040	0.0000119	0.0000107
150	Village No. 7, Ban Khlong Sai	0.0000073	0.0000612	0.0001481	0.0002384	0.0003652	0.0002054	0.0002180	0.0000592	0.0000562	0.0001430	0.0001518	0.0000007	0.0000080	0.0000173	0.0000279	0.0000427	0.0000290	0.0000206	0.0000083	0.0000053	0.0000202	0.0000143
151	Village No. 1 Ban Sam Nak Thon	0.0000201	0.0000888	0.0002608	0.0004217	0.0006460	0.0003738	0.0006015	0.0001077	0.0001552	0.0002601	0.0004188	0.0000021	0.0000162	0.0000403	0.0000648	0.0000993	0.0000533	0.0000618	0.0000154	0.0000159	0.0000371	0.0000430
152	Village No. 2, Ban Chak Mak	0.0000040	0.0000848	0.0001345	0.0002152	0.0003294	0.0003600	0.0001205	0.0001037	0.0000311	0.0002505	0.0000839	0.0000006	0.0000110	0.0000213	0.0000342	0.0000524	0.0000425	0.0000184	0.0000123	0.0000048	0.0000296	0.0000128
153	Village No. 3, Ban Sa Kaeo	0.0001044	0.0002014	0.0011062	0.0017927	0.0027469	0.0008207	0.0031307	0.0002364	0.0008077	0.0005711	0.0021800	0.0000089	0.0000375	0.0001247	0.0002014	0.0003085	0.0000905	0.0002662	0.0000261	0.0000687	0.0000630	0.0001854
154	Sa Kaeo Community 1	0.0000358	0.0001695	0.0003854	0.0006245	0.0009569	0.0006849	0.0010745	0.0001973	0.0002772	0.0004766	0.0007483	0.0000046	0.0000190	0.0000637	0.0001029	0.0001576	0.0000455	0.0001368	0.0000131	0.0000353	0.0000316	0.0000953
155	Sa Kaeo Community 2	0.0000254	0.0001400	0.0004063	0.0006554	0.0010040	0.0003995	0.0007626	0.0001151	0.0001967	0.0002780	0.0005310	0.0000028	0.0000118	0.0000391	0.0000632	0.0000968	0.0000287	0.0000833	0.0000083	0.0000215	0.0000200	0.0000580
156	Village No. 4, Ban Khlong Bang Phai	0.0000282	0.0000711	0.0003239	0.0005243	0.0008033	0.0001627	0.0008455	0.0000469	0.0002181	0.0001132	0.0005888	0.0000022	0.0000085	0.0000293	0.0000473	0.0000725	0.0000192	0.0000645	0.0000055	0.0000167	0.0000134	0.0000449
157	Village No. 5, Ban Yai Ra	0.0000030	0.0000276	0.0000642	0.0001033	0.0001583	0.0000950	0.0000885	0.0000274	0.0000228	0.0000661	0.0000616	0.0000003	0.0000041	0.0000084	0.0000135	0.0000206	0.0000154	0.0000086	0.0000044	0.0000022	0.0000107	0.0000060
158	Village No. 6, Ban Khao Khrok	0.0000548	0.0001332	0.0006219	0.0010070	0.0015428	0.0004480	0.0016430	0.0001290	0.0004239	0.0003117	0.0011441	0.0000043	0.0000229	0.0000675	0.0001089	0.0001668	0.0000645	0.0001285	0.0000186	0.0000331	0.0000449	0.0000895
159	Village no. 7, Ban Nong Takhian	0.0000032	0.0000561	0.0000961	0.0001542	0.0002361	0.0002318	0.0000953	0.0000668	0.0000246	0.0001613	0.0000664	0.0000005	0.0000098	0.0000187	0.0000300	0.0000459	0.0000379	0.0000154	0.0000109	0.0000040	0.0000264	0.0000108
160	Village No. 8, Ban Cherng Khao	0.0000053	0.0003166	0.0004849	0.0007755	0.0011872	0.0013516	0.0001598	0.0003893	0.0000412	0.0009405	0.0001113	0.0000008	0.0000429	0.0000709	0.0001135	0.0001738	0.0001779	0.0000246	0.0000513	0.0000063	0.0001238	0.0000171
161	Eastern-Nong Muang Community	0.0000079	0.0000866	0.0001877	0.0003019	0.0004623	0.0003289	0.0002368	0.0000947	0.0000611	0.0002289	0.0001649	0.0000012	0.0000167	0.0000341	0.0000548	0.0000839	0.0000626	0.0000349	0.0000180	0.0000090	0.0000436	0.0000243
162	Wat Khiri Pawanaram Community	0.0000043	0.0002483	0.0003830	0.0006126	0.0009379	0.0010570	0.0001284	0.0003044	0.0000331	0.0007355	0.0000894	0.0000007	0.0000345	0.0000574	0.0000919	0.0001407	0.0001427	0.0000212	0.0000411	0.0000055	0.0000993	0.0000148
163	Ban Chang-Phala Community	0.0000038	0.0002429	0.0003667	0.0005862	0.0008974	0.0010423	0.0001153	0.0003002	0.0000297	0.0007253	0.0000803	0.0000007	0.0000341	0.0000564	0.0000903	0.0001383	0.0001413	0.0000198	0.0000407	0.0000051	0.0000983	0.0000138
164	Ruam Sompong Community	0.0000041	0.0000498	0.0001021	0.0001641	0.0002512	0.0001881	0.0001227	0.0000542	0.0000317	0.0001309	0.0000854	0.0000007	0.0000072	0.0000165	0.0000266	0.0000407	0.0000249	0.0000223	0.0000072	0.0000058	0.0000173	0.0000156
165	Ming Mongkol Community	0.0000039	0.0001904	0.0002995	0.0004792	0.0007337	0.0008050	0.0001165	0.0002319	0.0000301	0.0005602	0.0000811	0.0000005	0.0000166	0.0000290	0.0000464	0.0000711	0.0000670	0.0000158	0.0000193	0.0000041	0.0000466	0.0000110
166	Jor Koo Community	0.0000041	0.0001910	0.0002991	0.0004785	0.0007325	0.0008089	0.0001228	0.0002330	0.0000317	0.0005628	0.0000855	0.0000005	0.0000171	0.0000298	0.0000478	0.0000732	0.0000694	0.0000158	0.0000200	0.0000041	0.0000483	0.0000110

Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.0000038	0.0002859	0.0004389	0.0007020	0.0010746	0.0012198	0.0001131	0.0003513	0.0000292	0.0008488	0.0000788	0.0000005	0.0000195	0.0000331	0.0000530	0.0000812	0.0000799	0.0000146	0.0000230	0.0000038	0.0000556	0.0000102
168	Thep Chinda Community	0.0000043	0.0001775	0.0002860	0.0004578	0.0007010	0.0007429	0.0001288	0.0002140	0.0000332	0.0005170	0.0000897	0.0000006	0.0000161	0.0000286	0.0000459	0.0000703	0.0000644	0.0000174	0.0000185	0.0000045	0.0000448	0.0000121
169	Health Park Community	0.0000121	0.0000457	0.0001350	0.0002186	0.0003349	0.0001626	0.0003617	0.0000468	0.0000933	0.0001131	0.0002519	0.0000010	0.0000077	0.0000188	0.0000303	0.0000465	0.0000255	0.0000284	0.0000074	0.0000073	0.0000178	0.0000198
170	Wat Ban Chang Community	0.0000109	0.0000895	0.0002185	0.0003519	0.0005389	0.0002981	0.0003267	0.0000858	0.0000843	0.0002074	0.0002275	0.0000011	0.0000101	0.0000237	0.0000382	0.0000584	0.0000348	0.0000329	0.0000100	0.0000085	0.0000242	0.0000229
171	Dong Dang Community	0.0000044	0.0001613	0.0002704	0.0004332	0.0006632	0.0006645	0.0001308	0.0001914	0.0000337	0.0004624	0.0000911	0.0000006	0.0000144	0.0000264	0.0000424	0.0000650	0.0000568	0.0000188	0.0000164	0.0000048	0.0000395	0.0000131
172	Night Market Community	0.0000099	0.0000749	0.0001825	0.0002939	0.0004501	0.0002498	0.0002975	0.0000720	0.0000768	0.0001738	0.0002072	0.0000010	0.0000088	0.0000213	0.0000342	0.0000524	0.0000296	0.0000312	0.0000085	0.0000081	0.0000206	0.0000218
173	Ruam Mitr Community	0.0000142	0.0001012	0.0002614	0.0004212	0.0006451	0.0003222	0.0004252	0.0000928	0.0001097	0.0002242	0.0002961	0.0000011	0.0000110	0.0000252	0.0000405	0.0000620	0.0000381	0.0000338	0.0000110	0.0000087	0.0000265	0.0000236
174	Ban Chang - Noen Kraprok Community	0.0000109	0.0000395	0.0001341	0.0002169	0.0003323	0.0001323	0.0003263	0.0000381	0.0000842	0.0000921	0.0002272	0.0000007	0.0000065	0.0000154	0.0000248	0.0000380	0.0000223	0.0000217	0.0000064	0.0000056	0.0000155	0.0000151
175	Dao Pitak Community	0.0000066	0.0000676	0.0001364	0.0002191	0.0003355	0.0002549	0.0001972	0.0000734	0.0000509	0.0001773	0.0001373	0.0000007	0.0000083	0.0000174	0.0000280	0.0000429	0.0000303	0.0000195	0.0000087	0.0000050	0.0000211	0.0000136
176	Taiwa Community	0.0000022	0.0000919	0.0001397	0.0002233	0.0003419	0.0003933	0.0000665	0.0001133	0.0000172	0.0002737	0.0000463	0.0000002	0.0000071	0.0000123	0.0000198	0.0000302	0.0000288	0.0000064	0.0000083	0.0000016	0.0000201	0.0000044
177	East Ban Noen Kraprok Community, Prachummit	0.0000087	0.0000466	0.0001368	0.0002207	0.0003380	0.0001313	0.0002599	0.0000378	0.0000670	0.0000914	0.0001810	0.0000004	0.0000042	0.0000094	0.0000152	0.0000232	0.0000146	0.0000123	0.0000042	0.0000032	0.0000102	0.0000086
178	Ban Noen Kraprok Community	0.0000019	0.0000430	0.0000651	0.0001041	0.0001594	0.0001844	0.0000581	0.0000531	0.0000150	0.0001283	0.0000405	0.0000002	0.0000048	0.0000085	0.0000136	0.0000208	0.0000194	0.0000047	0.0000056	0.0000012	0.0000135	0.0000033
179	Nong Yai Community	0.0000018	0.0000782	0.0001271	0.0002035	0.0003116	0.0003330	0.0000538	0.0000959	0.0000139	0.0002317	0.0000374	0.0000002	0.0000063	0.0000111	0.0000177	0.0000271	0.0000254	0.0000062	0.0000073	0.0000016	0.0000177	0.0000043
180	Village No. 1, Pan Din Tai	0.0000082	0.0000466	0.0001334	0.0002152	0.0003296	0.0001347	0.0002469	0.0000388	0.0000637	0.0000937	0.0001719	0.0000004	0.0000040	0.0000090	0.0000145	0.0000222	0.0000140	0.0000117	0.0000040	0.0000030	0.0000098	0.0000082
181	Village No. 2, Ban Prachummit	0.0000071	0.0000329	0.0000764	0.0001238	0.0001897	0.0001149	0.0002136	0.0000331	0.0000551	0.0000800	0.0001487	0.0000006	0.0000050	0.0000120	0.0000194	0.0000297	0.0000170	0.0000175	0.0000049	0.0000045	0.0000118	0.0000122
182	Village No. 3, Ban Noen Samre	0.0000020	0.0000383	0.0000717	0.0001151	0.0001762	0.0001499	0.0000609	0.0000432	0.0000157	0.0001043	0.0000424	0.0000004	0.0000082	0.0000151	0.0000243	0.0000371	0.0000326	0.0000106	0.0000094	0.0000027	0.0000227	0.0000074
183	Village No. 4, Ban Phayun	0.0000043	0.0000477	0.0000975	0.0001566	0.0002398	0.0001786	0.0001302	0.0000515	0.0000336	0.0001243	0.0000907	0.0000007	0.0000068	0.0000157	0.0000252	0.0000386	0.0000238	0.0000210	0.0000069	0.0000054	0.0000166	0.0000146
184	Village No. 6, Ban Noen Kraprok	0.0000013	0.0000182	0.0000370	0.0000595	0.0000911	0.0000683	0.0000376	0.0000197	0.0000097	0.0000475	0.0000262	0.0000001	0.0000019	0.0000039	0.0000062	0.0000095	0.0000074	0.0000036	0.0000021	0.0000009	0.0000052	0.0000025
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.0000012	0.0000162	0.0000336	0.0000539	0.0000826	0.0000598	0.0000361	0.0000172	0.0000093	0.0000416	0.0000251	0.0000001	0.0000014	0.0000029	0.0000047	0.0000072	0.0000052	0.0000032	0.0000015	0.0000008	0.0000036	0.0000022
186	Village No. 11, Ban Map Fakthong	0.0000197	0.0000916	0.0002431	0.0003932	0.0006025	0.0003620	0.0005923	0.0001043	0.0001528	0.0002519	0.0004124	0.0000017	0.0000107	0.0000292	0.0000472	0.0000722	0.0000323	0.0000513	0.0000093	0.0000133	0.0000225	0.0000358
187	Village No. 13, Ban Nong Phakkut	0.0000034	0.0000703	0.0001214	0.0001945	0.0002979	0.0002988	0.0001015	0.0000861	0.0000262	0.0002079	0.0000707	0.0000005	0.0000076	0.0000153	0.0000246	0.0000377	0.0000284	0.0000154	0.0000082	0.0000040	0.0000198	0.0000107
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.0000069	0.0000389	0.0001114	0.0001796	0.0002752	0.0001482	0.0002058	0.0000427	0.0000531	0.0001031	0.0001433	0.0000003	0.0000018	0.0000047	0.0000076	0.0000117	0.0000057	0.0000079	0.0000016	0.0000020	0.0000039	0.0000055
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.0000015	0.0000847	0.0001283	0.0002052	0.0003141	0.0003633	0.0000456	0.0001046	0.0000118	0.0002528	0.0000317	0.0000001	0.0000025	0.0000047	0.0000075	0.0000114	0.0000099	0.0000034	0.0000029	0.0000009	0.0000069	0.0000024
190	Village No. 6 (Ban Khao Krating Community)	0.0000017	0.0000352	0.0000536	0.0000856	0.0001311	0.0001505	0.0000499	0.0000433	0.0000129	0.0001047	0.0000348	0.0000001	0.0000024	0.0000043	0.0000068	0.0000105	0.0000097	0.0000025	0.0000028	0.0000006	0.0000067	0.0000017

Table 5.2-61 Forecasted results of Isopropylbenzene or Cumene emissions, operation phase

Area		Concentration value of Isopropylbenzene or Cumene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.0000020	0.0000842	0.0001304	0.0002085	0.0003193	0.0003580	0.0000598	0.0001031	0.0000154	0.0002491	0.0000417	0.0000002	0.0000048	0.0000085	0.0000137	0.0000209	0.0000195	0.0000049	0.0000056	0.0000013	0.0000136	0.0000034
192	Village No. 11 (Ban Khong Wanphen Community)	0.0000109	0.0000411	0.0001397	0.0002259	0.0003461	0.0001257	0.0003274	0.0000362	0.0000845	0.0000875	0.0002280	0.0000006	0.0000034	0.0000094	0.0000151	0.0000232	0.0000101	0.0000167	0.0000029	0.0000043	0.0000071	0.0000116
193	Village No. 1, Ban Phlu Ta Luang	0.0000094	0.0000608	0.0001638	0.0002641	0.0004045	0.0001863	0.0002821	0.0000537	0.0000728	0.0001297	0.0001965	0.0000006	0.0000039	0.0000103	0.0000166	0.0000255	0.0000119	0.0000176	0.0000034	0.0000045	0.0000083	0.0000123
194	Village No. 2, Ban Khalot	0.0000089	0.0000603	0.0001594	0.0002569	0.0003935	0.0001880	0.0002678	0.0000541	0.0000691	0.0001308	0.0001865	0.0000006	0.0000034	0.0000095	0.0000153	0.0000234	0.0000102	0.0000169	0.0000030	0.0000044	0.0000071	0.0000117
195	Village No. 3, Ban Khlong Phai	0.0000059	0.0000409	0.0000947	0.0001524	0.0002335	0.0001413	0.0001761	0.0000407	0.0000454	0.0000983	0.0001226	0.0000006	0.0000036	0.0000103	0.0000166	0.0000254	0.0000102	0.0000192	0.0000029	0.0000050	0.0000071	0.0000134
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.0000085	0.0000365	0.0000941	0.0001524	0.0002335	0.0001280	0.0002538	0.0000369	0.0000655	0.0000891	0.0001767	0.0000006	0.0000030	0.0000091	0.0000147	0.0000226	0.0000083	0.0000178	0.0000024	0.0000046	0.0000058	0.0000124
197	Village No. 5, Ban Khao Bai Si	0.0000092	0.0000375	0.0001039	0.0001682	0.0002578	0.0001228	0.0002758	0.0000354	0.0000712	0.0000854	0.0001921	0.0000008	0.0000042	0.0000126	0.0000203	0.0000311	0.0000116	0.0000244	0.0000034	0.0000063	0.0000081	0.0000170
198	Village No. 6, Ban Khao Tabaek	0.0000062	0.0000419	0.0001108	0.0001786	0.0002735	0.0001307	0.0001862	0.0000376	0.0000480	0.0000909	0.0001296	0.0000005	0.0000032	0.0000082	0.0000132	0.0000203	0.0000101	0.0000134	0.0000029	0.0000035	0.0000070	0.0000093
199	Village No. 7, Ban Nong Ya Noi	0.0000039	0.0000294	0.0000745	0.0001201	0.0001839	0.0000948	0.0001183	0.0000273	0.0000305	0.0000660	0.0000824	0.0000005	0.0000033	0.0000084	0.0000135	0.0000207	0.0000104	0.0000135	0.0000030	0.0000035	0.0000073	0.0000094
200	Village No. 8, Ban Nong Ya	0.0000023	0.0000535	0.0000805	0.0001287	0.0001971	0.0002298	0.0000687	0.0000662	0.0000177	0.0001599	0.0000478	0.0000001	0.0000033	0.0000058	0.0000093	0.0000142	0.0000132	0.0000033	0.0000038	0.0000009	0.0000092	0.0000023
201	Ban Nong Krachong Community	0.0000044	0.0000258	0.0000729	0.0001175	0.0001800	0.0000932	0.0001327	0.0000268	0.0000342	0.0000648	0.0000924	0.0000003	0.0000027	0.0000065	0.0000105	0.0000161	0.0000090	0.0000097	0.0000026	0.0000025	0.0000063	0.0000067
Standard*		-											400*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
* The Isopropylbenzene or Cumene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration) referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

2.6) Ethylbenzene

From the Ethylbenzene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. Most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and all had values within the foreign standard reference ranges of Ethylbenzene concentrations that allow for long-term exposure without affecting health (RfC for Ethylbenzene is equal to 1,000 micrograms per cubic meter)

When comparing the Cmax of Ethylbenzene for 24-hour average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 0.27549 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 0.01071 micrograms per cubic meter. The 1-year average concentration of Ethylbenzene for scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest concentration value, comprising 0.02395 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.00112 micrograms per cubic meter.

In this regard, when considering the Ethylbenzene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-62 and Addendum 5-3, item 11, Ethylbenzene concentration contours (Figure 11-1 to Figure 11-22), were found to have Ethylbenzene concentrations in accordance with standard criteria.

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.01071	0.06867	0.10091	0.15816	0.23829	0.27549	0.20114	0.08495	0.05505	0.19490	0.14200	0.00112	0.00536	0.01009	0.01592	0.02395	0.02067	0.02103	0.00638	0.00576	0.01463	0.01485
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00132	0.00607	0.01507	0.02374	0.03573	0.01666	0.02481	0.00514	0.00679	0.01179	0.01751	0.00010	0.00041	0.00107	0.00168	0.00253	0.00108	0.00186	0.00033	0.00051	0.00076	0.00131
2	Wat Phala School	0.00051	0.00300	0.00678	0.01068	0.01607	0.00908	0.00960	0.00280	0.00263	0.00643	0.00678	0.00005	0.00033	0.00073	0.00115	0.00173	0.00103	0.00098	0.00032	0.00027	0.00073	0.00069
3	Phala Subdistrict Municipality Child Development Center	0.00046	0.00277	0.00620	0.00976	0.01469	0.00846	0.00862	0.00261	0.00236	0.00598	0.00608	0.00005	0.00031	0.00068	0.00108	0.00162	0.00097	0.00092	0.00030	0.00025	0.00068	0.00065
4	Ban Khlong Sai School	0.00058	0.00381	0.00829	0.01304	0.01963	0.01195	0.01087	0.00369	0.00297	0.00846	0.00767	0.00005	0.00033	0.00070	0.00109	0.00165	0.00104	0.00088	0.00032	0.00024	0.00074	0.00062
5	Rayong English Program School	0.00066	0.00364	0.00839	0.01321	0.01988	0.01080	0.01229	0.00333	0.00336	0.00764	0.00868	0.00005	0.00037	0.00079	0.00125	0.00187	0.00120	0.00098	0.00037	0.00027	0.00085	0.00069
6	Rayong Garden International School	0.00062	0.00368	0.00829	0.01306	0.01965	0.01118	0.01166	0.00345	0.00319	0.00791	0.00823	0.00005	0.00037	0.00078	0.00122	0.00184	0.00117	0.00097	0.00036	0.00027	0.00083	0.00068
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00034	0.00380	0.00699	0.01099	0.01654	0.01349	0.00643	0.00416	0.00176	0.00954	0.00454	0.00005	0.00068	0.00120	0.00189	0.00285	0.00248	0.00084	0.00076	0.00023	0.00176	0.00060
8	Wat Khiri Pawanaram School	0.00034	0.00362	0.00669	0.01052	0.01584	0.01278	0.00638	0.00394	0.00175	0.00904	0.00450	0.00004	0.00061	0.00109	0.00172	0.00258	0.00221	0.00080	0.00068	0.00022	0.00156	0.00057
9	Ban Khlong Bang Phai School	0.00105	0.00518	0.01251	0.01971	0.02966	0.01467	0.01976	0.00452	0.00541	0.01038	0.01395	0.00009	0.00032	0.00088	0.00139	0.00209	0.00078	0.00164	0.00024	0.00045	0.00055	0.00116
10	Pattanavechsuksa School	0.00295	0.00692	0.02400	0.03789	0.05699	0.01046	0.05543	0.00323	0.01517	0.00740	0.03913	0.00022	0.00065	0.00198	0.00313	0.00470	0.00133	0.00411	0.00041	0.00113	0.00094	0.00290
11	Pattanavech College	0.00246	0.00564	0.01983	0.03130	0.04707	0.01010	0.04623	0.00311	0.01265	0.00715	0.03264	0.00019	0.00057	0.00171	0.00270	0.00407	0.00120	0.00351	0.00037	0.00096	0.00085	0.00248
12	Saeng Song La Child Development Center 3	0.00186	0.00961	0.01936	0.03045	0.04584	0.03198	0.03495	0.00986	0.00957	0.02263	0.02468	0.00032	0.00099	0.00294	0.00463	0.00697	0.00215	0.00592	0.00066	0.00162	0.00152	0.00418
13	Wat Sa Kaeo School	0.00212	0.00983	0.01956	0.03076	0.04631	0.03305	0.03983	0.01019	0.01090	0.02338	0.02812	0.00036	0.00107	0.00325	0.00513	0.00772	0.00219	0.00675	0.00068	0.00185	0.00155	0.00476
14	Wat Sombun Naram School (Tem Rat Memorial)	0.00166	0.00811	0.01478	0.02331	0.03506	0.03142	0.03122	0.00969	0.00855	0.02223	0.02204	0.00023	0.00100	0.00253	0.00399	0.00600	0.00269	0.00427	0.00083	0.00117	0.00190	0.00301
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.00166	0.00811	0.01478	0.02331	0.03506	0.03142	0.03122	0.00969	0.00855	0.02223	0.02204	0.00023	0.00100	0.00253	0.00399	0.00600	0.00269	0.00427	0.00083	0.00117	0.00190	0.00301
16	Sajjaseuksa School	0.00031	0.00767	0.01151	0.01804	0.02717	0.03048	0.00579	0.00940	0.00158	0.02156	0.00409	0.00005	0.00099	0.00166	0.00260	0.00392	0.00370	0.00089	0.00114	0.00024	0.00261	0.00063
17	Ban Chang District Center for Non-Formal and Informal Education	0.00052	0.00962	0.01479	0.02320	0.03495	0.03776	0.00985	0.01164	0.00270	0.02671	0.00695	0.00007	0.00107	0.00189	0.00297	0.00448	0.00387	0.00135	0.00119	0.00037	0.00274	0.00096
18	Wat Suwan Rangsan Community School	0.00037	0.00632	0.00950	0.01489	0.02243	0.02511	0.00700	0.00774	0.00191	0.01776	0.00494	0.00005	0.00079	0.00141	0.00222	0.00334	0.00288	0.00101	0.00089	0.00028	0.00204	0.00071

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00033	0.00463	0.00699	0.01096	0.01651	0.01833	0.00621	0.00565	0.00170	0.01296	0.00438	0.00005	0.00066	0.00119	0.00187	0.00282	0.00238	0.00091	0.00073	0.00025	0.00168	0.00064
20	Wat Samnak Kathon School	0.00044	0.00661	0.01004	0.01574	0.02371	0.02611	0.00817	0.00805	0.00223	0.01847	0.00576	0.00007	0.00087	0.00159	0.00250	0.00376	0.00312	0.00126	0.00096	0.00034	0.00221	0.00089
21	Ban Sam Nak Thon Child Development Center	0.00042	0.00638	0.00968	0.01517	0.02286	0.02519	0.00793	0.00777	0.00217	0.01782	0.00560	0.00007	0.00087	0.00157	0.00247	0.00372	0.00310	0.00124	0.00096	0.00034	0.00219	0.00087
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00033	0.00378	0.00569	0.00891	0.01343	0.01503	0.00624	0.00463	0.00171	0.01063	0.00441	0.00005	0.00053	0.00099	0.00156	0.00234	0.00184	0.00090	0.00057	0.00025	0.00130	0.00063
23	Wat Chak Mak School	0.00030	0.00274	0.00457	0.00717	0.01080	0.01030	0.00563	0.00318	0.00154	0.00729	0.00397	0.00004	0.00048	0.00089	0.00140	0.00211	0.00167	0.00078	0.00052	0.00021	0.00118	0.00055
24	St. Andrews International School, Green Valley, Rayong,	0.00007	0.00053	0.00089	0.00139	0.00210	0.00202	0.00137	0.00062	0.00038	0.00143	0.00097	0.00001	0.00007	0.00014	0.00022	0.00033	0.00022	0.00017	0.00007	0.00005	0.00015	0.00012
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00040	0.00260	0.00568	0.00893	0.01344	0.00809	0.00754	0.00249	0.00206	0.00572	0.00532	0.00004	0.00024	0.00054	0.00085	0.00128	0.00073	0.00076	0.00022	0.00021	0.00052	0.00054
26	Ban Phayun School	0.00039	0.00255	0.00557	0.00877	0.01320	0.00794	0.00741	0.00245	0.00203	0.00561	0.00523	0.00004	0.00024	0.00054	0.00085	0.00127	0.00072	0.00076	0.00022	0.00021	0.00051	0.00054
27	Rakpasa Kindergarten	0.00049	0.00336	0.00722	0.01135	0.01709	0.01065	0.00922	0.00328	0.00252	0.00753	0.00651	0.00004	0.00026	0.00059	0.00093	0.00140	0.00081	0.00082	0.00025	0.00023	0.00057	0.00058
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00087	0.00575	0.01250	0.01966	0.02959	0.01800	0.01642	0.00555	0.00449	0.01273	0.01159	0.00010	0.00066	0.00141	0.00221	0.00333	0.00209	0.00179	0.00064	0.00049	0.00148	0.00126
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00041	0.00222	0.00472	0.00742	0.01117	0.00708	0.00764	0.00218	0.00209	0.00501	0.00540	0.00004	0.00024	0.00053	0.00083	0.00124	0.00074	0.00071	0.00023	0.00019	0.00052	0.00050
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00041	0.00222	0.00472	0.00742	0.01117	0.00708	0.00764	0.00218	0.00209	0.00501	0.00540	0.00004	0.00024	0.00053	0.00083	0.00124	0.00074	0.00071	0.00023	0.00019	0.00052	0.00050
31	Wat Prachummit Bamrung School	0.00080	0.00346	0.00880	0.01387	0.02087	0.00922	0.01499	0.00284	0.00410	0.00652	0.01059	0.00004	0.00029	0.00060	0.00095	0.00143	0.00094	0.00072	0.00029	0.00020	0.00067	0.00051
32	Udom Wittayanukun School	0.00018	0.00224	0.00327	0.00513	0.00773	0.00899	0.00336	0.00277	0.00092	0.00636	0.00237	0.00001	0.00028	0.00048	0.00075	0.00113	0.00105	0.00026	0.00033	0.00007	0.00075	0.00018
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00014	0.00138	0.00248	0.00389	0.00586	0.00498	0.00256	0.00154	0.00070	0.00353	0.00181	0.00001	0.00015	0.00027	0.00043	0.00065	0.00054	0.00021	0.00017	0.00006	0.00038	0.00015
34	Wat Noen Kraprok School	0.00013	0.00138	0.00249	0.00391	0.00588	0.00498	0.00252	0.00154	0.00069	0.00353	0.00178	0.00001	0.00015	0.00027	0.00042	0.00064	0.00053	0.00021	0.00016	0.00006	0.00038	0.00015
35	Chonnabot Phatthana Kindergarten	0.00018	0.00278	0.00411	0.00644	0.00970	0.01112	0.00342	0.00343	0.00094	0.00787	0.00242	0.00002	0.00029	0.00050	0.00079	0.00119	0.00107	0.00032	0.00033	0.00009	0.00076	0.00023
36	Aksorn Business Administration Technological College	0.00069	0.00678	0.01315	0.02067	0.03112	0.02323	0.01302	0.00716	0.00356	0.01644	0.00919	0.00007	0.00067	0.00132	0.00208	0.00313	0.00225	0.00140	0.00069	0.00038	0.00159	0.00099
37	Banchang Karnchanakul Wittaya School	0.00028	0.00483	0.00748	0.01174	0.01768	0.01919	0.00534	0.00592	0.00146	0.01358	0.00377	0.00005	0.00089	0.00155	0.00243	0.00366	0.00330	0.00098	0.00102	0.00027	0.00233	0.00069

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00010	0.00098	0.00190	0.00299	0.00450	0.00333	0.00191	0.00103	0.00052	0.00236	0.00135	0.00001	0.00008	0.00016	0.00025	0.00038	0.00028	0.00017	0.00009	0.00005	0.00020	0.00012
39	Ban Phudon - Huai Mahat Child Development Center	0.00010	0.00098	0.00190	0.00299	0.00450	0.00333	0.00191	0.00103	0.00052	0.00236	0.00135	0.00001	0.00008	0.00016	0.00025	0.00038	0.00028	0.00017	0.00009	0.00005	0.00020	0.00012
40	Ban Map Fakthong School	0.00040	0.00220	0.00451	0.00710	0.01069	0.00723	0.00743	0.00223	0.00203	0.00512	0.00524	0.00002	0.00010	0.00026	0.00040	0.00061	0.00026	0.00044	0.00008	0.00012	0.00018	0.00031
41	Phuru Yor. Sor. Sor. 80 School	0.00045	0.00200	0.00501	0.00790	0.01188	0.00643	0.00836	0.00198	0.00229	0.00455	0.00590	0.00002	0.00009	0.00021	0.00033	0.00049	0.00026	0.00031	0.00008	0.00009	0.00018	0.00022
42	Khao Chi Chan School	0.00041	0.00280	0.00554	0.00870	0.01310	0.00946	0.00762	0.00292	0.00209	0.00670	0.00538	0.00003	0.00016	0.00036	0.00056	0.00084	0.00050	0.00048	0.00015	0.00013	0.00036	0.00034
43	Ban Khalot Child Development Center	0.00086	0.00392	0.00976	0.01537	0.02313	0.01073	0.01611	0.00331	0.00441	0.00759	0.01138	0.00006	0.00025	0.00063	0.00099	0.00149	0.00069	0.00103	0.00021	0.00028	0.00049	0.00073
44	Ban Khalot School	0.00089	0.00409	0.01015	0.01599	0.02406	0.01121	0.01671	0.00346	0.00457	0.00793	0.01180	0.00005	0.00024	0.00061	0.00096	0.00145	0.00067	0.00101	0.00021	0.00028	0.00047	0.00071
45	Phlu Ta Luang Wittaya School	0.00136	0.00295	0.01036	0.01637	0.02461	0.00667	0.02545	0.00206	0.00697	0.00472	0.01797	0.00008	0.00028	0.00078	0.00123	0.00184	0.00066	0.00147	0.00020	0.00040	0.00047	0.00104
46	Athittan Kindergarten School	0.00069	0.00192	0.00605	0.00955	0.01436	0.00505	0.01295	0.00156	0.00355	0.00357	0.00914	0.00006	0.00021	0.00056	0.00089	0.00133	0.00050	0.00104	0.00015	0.00029	0.00035	0.00074
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00108	0.00326	0.00905	0.01426	0.02146	0.00862	0.02024	0.00266	0.00554	0.00610	0.01429	0.00008	0.00028	0.00078	0.00123	0.00185	0.00069	0.00145	0.00021	0.00040	0.00049	0.00102
48	Ban Khao Bai Si School	0.00073	0.00313	0.00770	0.01213	0.01825	0.01144	0.01371	0.00353	0.00375	0.00809	0.00968	0.00006	0.00028	0.00068	0.00106	0.00160	0.00077	0.00109	0.00024	0.00030	0.00054	0.00077
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00018	0.00276	0.00402	0.00629	0.00948	0.01111	0.00332	0.00343	0.00091	0.00786	0.00235	0.00001	0.00016	0.00029	0.00046	0.00069	0.00055	0.00026	0.00017	0.00007	0.00039	0.00018
50	Ban KM. 5 School	0.00032	0.00168	0.00395	0.00621	0.00935	0.00490	0.00600	0.00151	0.00164	0.00347	0.00424	0.00004	0.00021	0.00050	0.00078	0.00118	0.00059	0.00078	0.00018	0.00021	0.00042	0.00055
51	Royal Thai Fleet Sattahip District School	0.00026	0.00156	0.00347	0.00546	0.00822	0.00481	0.00494	0.00148	0.00135	0.00341	0.00349	0.00003	0.00018	0.00041	0.00065	0.00098	0.00054	0.00061	0.00017	0.00017	0.00038	0.00043
52	RTN. 8 Nursery	0.00037	0.00179	0.00401	0.00632	0.00950	0.00552	0.00700	0.00170	0.00191	0.00390	0.00494	0.00004	0.00018	0.00044	0.00069	0.00103	0.00052	0.00068	0.00016	0.00019	0.00037	0.00048
53	Juk Samet School	0.00037	0.00176	0.00401	0.00631	0.00950	0.00545	0.00699	0.00168	0.00191	0.00385	0.00493	0.00004	0.00018	0.00043	0.00068	0.00103	0.00052	0.00068	0.00016	0.00019	0.00037	0.00048
54	Juk Samet Child Development Center	0.00038	0.00171	0.00404	0.00636	0.00957	0.00530	0.00706	0.00163	0.00193	0.00375	0.00498	0.00004	0.00018	0.00043	0.00068	0.00103	0.00052	0.00068	0.00016	0.00019	0.00037	0.00048
55	Ban Chong Samaesarn Child Development Center	0.00027	0.00178	0.00350	0.00551	0.00829	0.00604	0.00509	0.00186	0.00139	0.00427	0.00359	0.00002	0.00014	0.00029	0.00046	0.00069	0.00044	0.00037	0.00013	0.00010	0.00031	0.00026
56	Samaesarn Subdistrict NFE Center	0.00030	0.00141	0.00301	0.00473	0.00712	0.00533	0.00554	0.00165	0.00152	0.00377	0.00391	0.00002	0.00012	0.00025	0.00039	0.00059	0.00039	0.00030	0.00012	0.00008	0.00027	0.00021
57	Ban Chong Samaesarn School	0.00030	0.00139	0.00299	0.00470	0.00707	0.00507	0.00564	0.00156	0.00154	0.00358	0.00398	0.00002	0.00012	0.00025	0.00039	0.00058	0.00038	0.00029	0.00012	0.00008	0.00027	0.00021
58	Wat Phala Vipassana Office	0.00050	0.00287	0.00652	0.01027	0.01545	0.00861	0.00935	0.00265	0.00256	0.00609	0.00660	0.00005	0.00033	0.00073	0.00114	0.00172	0.00101	0.00099	0.00031	0.00027	0.00072	0.00070
59	Wat Phala	0.00049	0.00289	0.00650	0.01022	0.01539	0.00878	0.00911	0.00271	0.00249	0.00621	0.00643	0.00005	0.00032	0.00070	0.00110	0.00166	0.00099	0.00094	0.00030	0.00026	0.00070	0.00066
60	Chao Li Hu Ong Yea Shrine	0.00069	0.00441	0.00967	0.01522	0.02291	0.01370	0.01293	0.00423	0.00354	0.00970	0.00913	0.00008	0.00061	0.00125	0.00196	0.00295	0.00203	0.00140	0.00063	0.00038	0.00144	0.00099
61	Wat Khlong Sai	0.00067	0.00405	0.00905	0.01425	0.02144	0.01237	0.01255	0.00381	0.00344	0.00875	0.00886	0.00005	0.00037	0.00080	0.00125	0.00188	0.00119	0.00100	0.00037	0.00027	0.00084	0.00071
62	Wat Khiri Pawanaram	0.00031	0.00296	0.00576	0.00906	0.01364	0.01010	0.00578	0.00311	0.00158	0.00715	0.00408	0.00003	0.00038	0.00071	0.00112	0.00169	0.00135	0.00062	0.00042	0.00017	0.00095	0.00044

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00024	0.00282	0.00509	0.00800	0.01204	0.01012	0.00445	0.00312	0.00122	0.00716	0.00314	0.00003	0.00045	0.00081	0.00127	0.00191	0.00162	0.00061	0.00050	0.00017	0.00115	0.00043
64	Ban Chang Church	0.00025	0.00296	0.00491	0.00770	0.01160	0.01115	0.00466	0.00344	0.00128	0.00789	0.00329	0.00004	0.00067	0.00114	0.00179	0.00269	0.00250	0.00065	0.00077	0.00018	0.00177	0.00046
65	Wat Ban Khlong Bang Phai	0.00107	0.00535	0.01284	0.02021	0.03042	0.01523	0.02009	0.00470	0.00550	0.01077	0.01419	0.00010	0.00035	0.00096	0.00151	0.00227	0.00082	0.00180	0.00025	0.00049	0.00058	0.00127
66	Admiral Prince Abhakara Kiartivongse Monument	0.00117	0.00544	0.01275	0.02008	0.03022	0.01585	0.02195	0.00489	0.00601	0.01121	0.01550	0.00011	0.00040	0.00112	0.00176	0.00265	0.00095	0.00211	0.00029	0.00058	0.00067	0.00149
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00097	0.00543	0.01247	0.01963	0.02954	0.01617	0.01816	0.00499	0.00497	0.01144	0.01282	0.00012	0.00040	0.00114	0.00179	0.00270	0.00093	0.00219	0.00029	0.00060	0.00066	0.00155
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00115	0.00472	0.01014	0.01595	0.02401	0.01493	0.02155	0.00461	0.00590	0.01057	0.01522	0.00015	0.00047	0.00139	0.00219	0.00329	0.00100	0.00281	0.00031	0.00077	0.00070	0.00199
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.00227	0.00388	0.01636	0.02585	0.03888	0.01223	0.04262	0.00377	0.01166	0.00865	0.03009	0.00022	0.00061	0.00193	0.00304	0.00458	0.00117	0.00413	0.00036	0.00113	0.00083	0.00292
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.00307	0.00535	0.02226	0.03517	0.05289	0.01205	0.05757	0.00372	0.01576	0.00852	0.04064	0.00028	0.00073	0.00239	0.00378	0.00568	0.00129	0.00529	0.00040	0.00145	0.00091	0.00373
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.00246	0.01154	0.02485	0.03910	0.05885	0.04236	0.04624	0.01306	0.01266	0.02997	0.03265	0.00045	0.00269	0.00604	0.00950	0.01430	0.00817	0.00846	0.00252	0.00231	0.00578	0.00597
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.00199	0.01134	0.02315	0.03641	0.05481	0.03975	0.03734	0.01226	0.01022	0.02812	0.02636	0.00039	0.00271	0.00577	0.00908	0.01367	0.00864	0.00727	0.00266	0.00199	0.00611	0.00513
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.00197	0.01879	0.03271	0.05137	0.07736	0.06900	0.03703	0.02128	0.01014	0.04882	0.02614	0.00035	0.00309	0.00616	0.00969	0.01459	0.01035	0.00664	0.00319	0.00182	0.00732	0.00468
74	Wat Sa Kaeo	0.00238	0.01064	0.01874	0.02943	0.04432	0.03881	0.04471	0.01197	0.01224	0.02746	0.03156	0.00042	0.00125	0.00379	0.00598	0.00899	0.00258	0.00784	0.00079	0.00214	0.00182	0.00553
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00038	0.00285	0.00559	0.00879	0.01323	0.01123	0.00710	0.00346	0.00194	0.00794	0.00501	0.00004	0.00044	0.00083	0.00130	0.00196	0.00155	0.00073	0.00048	0.00020	0.00110	0.00052
76	Wat Sombun Naram	0.00181	0.00847	0.01438	0.02269	0.03413	0.03202	0.03407	0.00987	0.00932	0.02265	0.02405	0.00023	0.00097	0.00249	0.00392	0.00589	0.00258	0.00426	0.00079	0.00117	0.00182	0.00301
77	Ban Chang Abundant Grace Church	0.00091	0.00661	0.01028	0.01612	0.02428	0.02584	0.01710	0.00797	0.00468	0.01828	0.01207	0.00015	0.00092	0.00205	0.00322	0.00485	0.00282	0.00282	0.00087	0.00077	0.00199	0.00199
78	Wat Samnak Kathon	0.00045	0.00680	0.01034	0.01621	0.02442	0.02687	0.00840	0.00829	0.00230	0.01901	0.00593	0.00007	0.00089	0.00161	0.00254	0.00382	0.00317	0.00128	0.00098	0.00035	0.00224	0.00090
79	Wat Suwan Rangsan	0.00033	0.00463	0.00699	0.01096	0.01651	0.01833	0.00621	0.00565	0.00170	0.01296	0.00438	0.00005	0.00066	0.00119	0.00187	0.00282	0.00238	0.00091	0.00073	0.00025	0.00168	0.00064
80	Wat Nong Bot	0.00030	0.00218	0.00460	0.00724	0.01090	0.00700	0.00568	0.00216	0.00155	0.00495	0.00401	0.00003	0.00032	0.00062	0.00097	0.00146	0.00109	0.00060	0.00034	0.00017	0.00077	0.00043
81	The Shrine of Luang Tia Chak Mak	0.00028	0.00311	0.00526	0.00826	0.01243	0.01194	0.00518	0.00368	0.00142	0.00845	0.00366	0.00004	0.00054	0.00100	0.00157	0.00236	0.00193	0.00082	0.00060	0.00022	0.00137	0.00058
82	Wat Chak Mak	0.00029	0.00337	0.00588	0.00924	0.01391	0.01277	0.00546	0.00394	0.00149	0.00903	0.00385	0.00005	0.00057	0.00104	0.00163	0.00245	0.00201	0.00084	0.00062	0.00023	0.00142	0.00060

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00034	0.00220	0.00481	0.00758	0.01140	0.00684	0.00642	0.00211	0.00176	0.00484	0.00453	0.00004	0.00022	0.00050	0.00078	0.00117	0.00068	0.00068	0.00021	0.00019	0.00048	0.00048
84	The Shrine of King Taksin the Great (Ban Chang)	0.00034	0.00221	0.00483	0.00760	0.01144	0.00688	0.00642	0.00212	0.00176	0.00487	0.00453	0.00004	0.00022	0.00050	0.00078	0.00118	0.00069	0.00068	0.00021	0.00019	0.00049	0.00048
85	Wat Chonthararam (Phayun)	0.00040	0.00259	0.00569	0.00895	0.01347	0.00806	0.00759	0.00249	0.00208	0.00570	0.00536	0.00004	0.00024	0.00054	0.00085	0.00127	0.00072	0.00076	0.00022	0.00021	0.00051	0.00054
86	Masjid Dawatul Islam	0.00057	0.00773	0.01395	0.02192	0.03300	0.02779	0.01071	0.00857	0.00293	0.01966	0.00756	0.00008	0.00085	0.00160	0.00251	0.00379	0.00300	0.00141	0.00092	0.00039	0.00212	0.00100
87	Chinese shrine at the Buddha Dhamma Foundation	0.00123	0.00670	0.01559	0.02454	0.03694	0.01973	0.02318	0.00608	0.00634	0.01396	0.01636	0.00010	0.00072	0.00155	0.00243	0.00366	0.00230	0.00196	0.00071	0.00054	0.00163	0.00138
88	The Shrine of Luang Tia Ban Chang	0.00069	0.00547	0.01048	0.01647	0.02480	0.01891	0.01286	0.00583	0.00352	0.01338	0.00908	0.00008	0.00066	0.00132	0.00208	0.00313	0.00223	0.00141	0.00069	0.00039	0.00158	0.00100
89	The Shrine of Laoia Guan Yu Ban Chang	0.00083	0.00540	0.01148	0.01805	0.02718	0.01725	0.01551	0.00532	0.00425	0.01220	0.01095	0.00009	0.00065	0.00138	0.00217	0.00327	0.00208	0.00172	0.00064	0.00047	0.00147	0.00121
90	Wat Ban Chang	0.00106	0.00571	0.01331	0.02095	0.03153	0.01675	0.01987	0.00517	0.00544	0.01185	0.01403	0.00011	0.00066	0.00148	0.00233	0.00351	0.00203	0.00206	0.00062	0.00056	0.00143	0.00145
91	Wat Prachummit Bamrung	0.00083	0.00339	0.00883	0.01392	0.02095	0.00878	0.01551	0.00271	0.00425	0.00621	0.01095	0.00004	0.00029	0.00061	0.00096	0.00144	0.00094	0.00074	0.00029	0.00020	0.00066	0.00052
92	The Shrine of Luang Tia Noen Kraprok 1	0.00045	0.00410	0.00809	0.01273	0.01916	0.01384	0.00847	0.00427	0.00232	0.00979	0.00598	0.00003	0.00034	0.00064	0.00101	0.00151	0.00121	0.00056	0.00037	0.00015	0.00086	0.00039
93	The Shrine of Luang Tia Noen Kraprok 2	0.00021	0.00482	0.00709	0.01111	0.01673	0.01932	0.00386	0.00596	0.00106	0.01367	0.00272	0.00002	0.00042	0.00069	0.00109	0.00164	0.00157	0.00034	0.00049	0.00009	0.00111	0.00024
94	Wat Noen Kraprok	0.00015	0.00150	0.00270	0.00424	0.00639	0.00540	0.00288	0.00167	0.00079	0.00382	0.00203	0.00001	0.00019	0.00033	0.00052	0.00079	0.00069	0.00023	0.00021	0.00006	0.00049	0.00016
95	Wat Phudon Nim Sanoh	0.00009	0.00098	0.00186	0.00292	0.00440	0.00340	0.00173	0.00105	0.00047	0.00241	0.00122	0.00001	0.00008	0.00017	0.00026	0.00039	0.00029	0.00017	0.00009	0.00005	0.00020	0.00012
96	Church of Christ Ban Chang	0.00012	0.00102	0.00205	0.00323	0.00486	0.00338	0.00227	0.00104	0.00062	0.00239	0.00160	0.00001	0.00009	0.00017	0.00027	0.00041	0.00029	0.00018	0.00009	0.00005	0.00021	0.00013
97	Anek Kusala Sala (Viharn Sien)	0.00043	0.00272	0.00561	0.00883	0.01329	0.00888	0.00805	0.00274	0.00220	0.00628	0.00568	0.00003	0.00012	0.00031	0.00049	0.00074	0.00033	0.00053	0.00010	0.00014	0.00023	0.00037
98	Wat Yan Nasangwararam	0.00045	0.00222	0.00510	0.00802	0.01208	0.00701	0.00848	0.00216	0.00232	0.00496	0.00599	0.00003	0.00014	0.00036	0.00056	0.00085	0.00037	0.00061	0.00011	0.00017	0.00026	0.00043
99	Sirisirirak Monastery	0.00032	0.00271	0.00481	0.00755	0.01138	0.00981	0.00604	0.00302	0.00165	0.00694	0.00426	0.00002	0.00017	0.00035	0.00054	0.00082	0.00056	0.00039	0.00017	0.00011	0.00040	0.00028
100	Anan Buraparam Meditation Center	0.00060	0.00245	0.00521	0.00822	0.01237	0.00806	0.01127	0.00249	0.00309	0.00570	0.00796	0.00003	0.00017	0.00038	0.00059	0.00089	0.00051	0.00052	0.00016	0.00014	0.00036	0.00037
101	Wat Map Fakthong	0.00037	0.00199	0.00466	0.00734	0.01105	0.00630	0.00700	0.00194	0.00191	0.00446	0.00494	0.00002	0.00012	0.00029	0.00045	0.00068	0.00033	0.00046	0.00010	0.00013	0.00024	0.00032
102	Khao Chi Chan Image of Lord Buddha	0.00008	0.00066	0.00135	0.00212	0.00318	0.00218	0.00152	0.00067	0.00042	0.00154	0.00108	0.00001	0.00004	0.00009	0.00014	0.00020	0.00013	0.00011	0.00004	0.00003	0.00009	0.00008
103	Wat Khao Chi Chan	0.00009	0.00124	0.00198	0.00311	0.00468	0.00489	0.00161	0.00151	0.00044	0.00346	0.00114	0.00001	0.00009	0.00016	0.00026	0.00039	0.00032	0.00013	0.00010	0.00003	0.00023	0.00009
104	Rat Samakkhi Temple	0.00089	0.00407	0.01014	0.01597	0.02403	0.01115	0.01674	0.00344	0.00458	0.00789	0.01182	0.00006	0.00025	0.00063	0.00100	0.00150	0.00069	0.00105	0.00021	0.00029	0.00049	0.00074
105	The Shrine of Chao Mae Kuan Im	0.00091	0.00414	0.01031	0.01625	0.02444	0.01134	0.01703	0.00350	0.00466	0.00802	0.01202	0.00005	0.00024	0.00060	0.00094	0.00142	0.00065	0.00099	0.00020	0.00027	0.00046	0.00070
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00100	0.00461	0.01141	0.01798	0.02705	0.01268	0.01872	0.00391	0.00512	0.00897	0.01322	0.00006	0.00027	0.00067	0.00106	0.00159	0.00072	0.00112	0.00022	0.00031	0.00051	0.00079

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00037	0.00193	0.00454	0.00715	0.01076	0.00563	0.00686	0.00174	0.00188	0.00399	0.00485	0.00004	0.00022	0.00052	0.00082	0.00124	0.00063	0.00081	0.00019	0.00022	0.00044	0.00057
108	KM.8 Meditation Center	0.00060	0.00286	0.00700	0.01103	0.01660	0.00797	0.01130	0.00246	0.00309	0.00564	0.00798	0.00005	0.00022	0.00054	0.00085	0.00127	0.00063	0.00085	0.00019	0.00023	0.00045	0.00060
109	Wat Rangsee Sunthorn (KM.5)	0.00031	0.00168	0.00392	0.00617	0.00929	0.00494	0.00586	0.00152	0.00160	0.00349	0.00413	0.00004	0.00021	0.00051	0.00080	0.00120	0.00060	0.00080	0.00019	0.00022	0.00042	0.00056
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00011	0.00090	0.00185	0.00291	0.00438	0.00297	0.00212	0.00092	0.00058	0.00210	0.00150	0.00001	0.00004	0.00008	0.00012	0.00018	0.00013	0.00009	0.00004	0.00002	0.00009	0.00006
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00013	0.00100	0.00208	0.00327	0.00492	0.00339	0.00250	0.00104	0.00068	0.00240	0.00176	0.00001	0.00005	0.00010	0.00016	0.00024	0.00017	0.00010	0.00005	0.00003	0.00012	0.00007
112	Wat Tung Prong	0.00011	0.00087	0.00167	0.00263	0.00396	0.00308	0.00198	0.00095	0.00054	0.00218	0.00140	0.00000	0.00004	0.00008	0.00012	0.00019	0.00013	0.00008	0.00004	0.00002	0.00009	0.00006
113	Khao Phlu Ta Luang Meditation Center	0.00006	0.00051	0.00095	0.00150	0.00225	0.00178	0.00106	0.00055	0.00029	0.00126	0.00075	0.00000	0.00002	0.00004	0.00007	0.00010	0.00007	0.00005	0.00002	0.00001	0.00005	0.00004
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00108	0.00277	0.00767	0.01212	0.01823	0.00881	0.02025	0.00272	0.00554	0.00624	0.01429	0.00010	0.00029	0.00091	0.00143	0.00215	0.00056	0.00193	0.00017	0.00053	0.00040	0.00136
115	Wat Khao Bai Si Santitham	0.00126	0.00379	0.01088	0.01717	0.02582	0.01039	0.02361	0.00320	0.00646	0.00735	0.01667	0.00010	0.00034	0.00098	0.00155	0.00233	0.00076	0.00194	0.00023	0.00053	0.00053	0.00137
116	Welu Amphawan Vipassana Office	0.00089	0.00364	0.00883	0.01392	0.02094	0.01102	0.01675	0.00340	0.00459	0.00780	0.01183	0.00008	0.00032	0.00084	0.00133	0.00200	0.00083	0.00149	0.00025	0.00041	0.00058	0.00105
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00043	0.00248	0.00565	0.00890	0.01339	0.00745	0.00811	0.00230	0.00222	0.00527	0.00573	0.00003	0.00019	0.00043	0.00068	0.00103	0.00057	0.00063	0.00017	0.00017	0.00040	0.00044
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00041	0.00185	0.00447	0.00704	0.01059	0.00544	0.00773	0.00168	0.00211	0.00385	0.00545	0.00004	0.00022	0.00052	0.00083	0.00124	0.00063	0.00081	0.00020	0.00022	0.00045	0.00057
119	Samaesarn Pattanakarn Church	0.00038	0.00194	0.00416	0.00655	0.00986	0.00615	0.00711	0.00190	0.00195	0.00435	0.00502	0.00004	0.00019	0.00044	0.00069	0.00104	0.00055	0.00066	0.00017	0.00018	0.00039	0.00046
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00035	0.00186	0.00402	0.00632	0.00951	0.00584	0.00656	0.00180	0.00180	0.00413	0.00463	0.00002	0.00014	0.00031	0.00049	0.00073	0.00044	0.00041	0.00014	0.00011	0.00031	0.00029
121	Wat Chong Samaesarn	0.00030	0.00144	0.00303	0.00478	0.00719	0.00542	0.00555	0.00167	0.00152	0.00383	0.00392	0.00002	0.00012	0.00025	0.00040	0.00060	0.00039	0.00030	0.00012	0.00008	0.00028	0.00021
122	Viharn Luang Por Dam	0.00022	0.00148	0.00311	0.00489	0.00736	0.00476	0.00419	0.00147	0.00115	0.00337	0.00296	0.00001	0.00009	0.00020	0.00031	0.00047	0.00030	0.00024	0.00009	0.00007	0.00022	0.00017
123	The Shrine of King Taksin the Great (Samaesarn)	0.00030	0.00194	0.00424	0.00667	0.01005	0.00604	0.00564	0.00186	0.00154	0.00427	0.00398	0.00002	0.00015	0.00033	0.00051	0.00077	0.00047	0.00043	0.00015	0.00012	0.00034	0.00030
124	Thai Island and Sea Natural History Museum	0.00028	0.00189	0.00407	0.00640	0.00963	0.00597	0.00523	0.00184	0.00143	0.00422	0.00369	0.00002	0.00015	0.00032	0.00050	0.00075	0.00047	0.00040	0.00014	0.00011	0.00033	0.00028
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00033	0.00182	0.00419	0.00659	0.00992	0.00542	0.00611	0.00167	0.00167	0.00383	0.00431	0.00002	0.00016	0.00034	0.00053	0.00080	0.00049	0.00044	0.00015	0.00012	0.00035	0.00031

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00033	0.00190	0.00432	0.00681	0.01024	0.00573	0.00617	0.00177	0.00169	0.00405	0.00436	0.00002	0.00016	0.00034	0.00053	0.00080	0.00049	0.00044	0.00015	0.00012	0.00035	0.00031
127	Eastern-Nong Muang Community Health Service Center	0.00290	0.00710	0.02203	0.03479	0.05232	0.02511	0.05439	0.00774	0.01489	0.01777	0.03840	0.00031	0.00172	0.00395	0.00622	0.00936	0.00514	0.00574	0.00158	0.00157	0.00363	0.00405
128	Phala Subdistrict Health Promotion Hospital	0.00054	0.00327	0.00729	0.01147	0.01726	0.01001	0.01005	0.00309	0.00275	0.00708	0.00709	0.00005	0.00034	0.00073	0.00115	0.00174	0.00105	0.00097	0.00032	0.00027	0.00074	0.00069
129	Ban Chang Hospital	0.00019	0.00211	0.00396	0.00623	0.00938	0.00738	0.00355	0.00228	0.00097	0.00522	0.00250	0.00002	0.00023	0.00044	0.00069	0.00104	0.00081	0.00040	0.00025	0.00011	0.00057	0.00029
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00118	0.00283	0.00841	0.01329	0.01998	0.00950	0.02212	0.00293	0.00605	0.00672	0.01561	0.00012	0.00040	0.00115	0.00182	0.00273	0.00088	0.00229	0.00027	0.00063	0.00062	0.00162
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.00164	0.00937	0.02128	0.03350	0.05042	0.02820	0.03073	0.00870	0.00841	0.01995	0.02169	0.00028	0.00090	0.00265	0.00417	0.00628	0.00193	0.00534	0.00060	0.00146	0.00137	0.00377
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.00260	0.00981	0.01874	0.02958	0.04449	0.03800	0.04892	0.01172	0.01339	0.02688	0.03453	0.00032	0.00116	0.00318	0.00502	0.00755	0.00281	0.00595	0.00087	0.00163	0.00198	0.00420
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00032	0.00748	0.01120	0.01755	0.02644	0.02975	0.00606	0.00917	0.00166	0.02105	0.00428	0.00006	0.00084	0.00148	0.00233	0.00350	0.00305	0.00104	0.00094	0.00028	0.00216	0.00073
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00072	0.00881	0.01314	0.02060	0.03103	0.03512	0.01347	0.01083	0.00369	0.02484	0.00951	0.00012	0.00092	0.00188	0.00296	0.00445	0.00301	0.00216	0.00093	0.00059	0.00213	0.00153
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00031	0.00323	0.00497	0.00780	0.01175	0.01277	0.00587	0.00394	0.00161	0.00904	0.00414	0.00005	0.00052	0.00096	0.00151	0.00228	0.00181	0.00085	0.00056	0.00023	0.00128	0.00060
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00039	0.00251	0.00547	0.00862	0.01297	0.00782	0.00726	0.00241	0.00199	0.00553	0.00512	0.00004	0.00024	0.00053	0.00083	0.00126	0.00072	0.00074	0.00022	0.00020	0.00051	0.00052
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00016	0.00368	0.00542	0.00850	0.01280	0.01473	0.00307	0.00454	0.00084	0.01042	0.00217	0.00002	0.00034	0.00056	0.00089	0.00133	0.00127	0.00028	0.00039	0.00008	0.00090	0.00020
138	Phudon Huai Mahat Community Health Service Unit	0.00011	0.00104	0.00202	0.00318	0.00479	0.00354	0.00204	0.00109	0.00056	0.00250	0.00144	0.00001	0.00009	0.00018	0.00028	0.00042	0.00030	0.00018	0.00009	0.00005	0.00022	0.00013
139	Wat Yan Nasangwararam Hospital	0.00041	0.00249	0.00487	0.00766	0.01153	0.00872	0.00771	0.00269	0.00211	0.00617	0.00544	0.00003	0.00013	0.00033	0.00052	0.00078	0.00035	0.00055	0.00011	0.00015	0.00025	0.00039
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00040	0.00244	0.00485	0.00764	0.01150	0.00856	0.00759	0.00264	0.00208	0.00606	0.00536	0.00003	0.00013	0.00033	0.00052	0.00078	0.00035	0.00056	0.00011	0.00015	0.00025	0.00039
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00016	0.00372	0.00558	0.00875	0.01318	0.01477	0.00298	0.00455	0.00082	0.01045	0.00210	0.00001	0.00018	0.00031	0.00048	0.00073	0.00065	0.00020	0.00020	0.00006	0.00046	0.00014

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00095	0.00450	0.01105	0.01740	0.02618	0.01253	0.01787	0.00386	0.00489	0.00886	0.01261	0.00006	0.00027	0.00067	0.00105	0.00158	0.00072	0.00111	0.00022	0.00030	0.00051	0.00078
143	Sattahip Hospital KM.10	0.00068	0.00379	0.00872	0.01373	0.02067	0.01127	0.01274	0.00348	0.00349	0.00797	0.00900	0.00005	0.00021	0.00052	0.00082	0.00123	0.00057	0.00086	0.00018	0.00024	0.00040	0.00061
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00030	0.00139	0.00299	0.00471	0.00708	0.00527	0.00557	0.00163	0.00152	0.00373	0.00393	0.00002	0.00012	0.00025	0.00039	0.00059	0.00039	0.00030	0.00012	0.00008	0.00027	0.00021
145	Village No. 1 Ban Sakulthong	0.00023	0.00237	0.00452	0.00711	0.01071	0.00839	0.00430	0.00259	0.00118	0.00594	0.00303	0.00003	0.00042	0.00077	0.00120	0.00181	0.00151	0.00060	0.00047	0.00016	0.00107	0.00043
146	Village No. 2, Ban Kilo 16	0.00089	0.00432	0.01049	0.01652	0.02486	0.01215	0.01671	0.00375	0.00457	0.00859	0.01180	0.00008	0.00057	0.00120	0.00189	0.00284	0.00184	0.00147	0.00057	0.00040	0.00130	0.00104
147	Village No. 4, Ban Tung Prong	0.00072	0.00490	0.00988	0.01554	0.02339	0.01629	0.01344	0.00502	0.00368	0.01152	0.00949	0.00009	0.00087	0.00171	0.00269	0.00406	0.00297	0.00175	0.00092	0.00048	0.00210	0.00124
148	Village No. 5, Phala Subdistrict	0.00072	0.00416	0.00948	0.01492	0.02245	0.01249	0.01360	0.00385	0.00372	0.00884	0.00960	0.00007	0.00064	0.00127	0.00199	0.00300	0.00214	0.00135	0.00066	0.00037	0.00152	0.00096
149	Village No. 6, Ban Takat	0.00052	0.00332	0.00731	0.01150	0.01731	0.01027	0.00985	0.00317	0.00270	0.00727	0.00695	0.00005	0.00033	0.00071	0.00111	0.00168	0.00103	0.00092	0.00032	0.00025	0.00073	0.00065
150	Village No. 7, Ban Khlong Sai	0.00070	0.00408	0.00922	0.01452	0.02185	0.01231	0.01309	0.00380	0.00358	0.00871	0.00924	0.00007	0.00053	0.00108	0.00170	0.00255	0.00174	0.00124	0.00054	0.00034	0.00123	0.00087
151	Village No. 1 Ban Sam Nak Thon	0.00192	0.00569	0.01631	0.02574	0.03872	0.02240	0.03611	0.00691	0.00988	0.01585	0.02549	0.00020	0.00108	0.00251	0.00395	0.00594	0.00320	0.00371	0.00099	0.00102	0.00226	0.00262
152	Village No. 2, Ban Chak Mak	0.00039	0.00544	0.00833	0.01306	0.01967	0.02157	0.00724	0.00665	0.00198	0.01526	0.00511	0.00006	0.00072	0.00132	0.00208	0.00313	0.00255	0.00111	0.00079	0.00030	0.00180	0.00078
153	Village No. 3, Ban Sa Kaeo	0.01001	0.01519	0.06935	0.10961	0.16480	0.04918	0.18796	0.01517	0.05145	0.03479	0.13270	0.00085	0.00259	0.00779	0.01229	0.01848	0.00542	0.01598	0.00167	0.00437	0.00384	0.01128
154	Sa Kaeo Community 1	0.00344	0.01096	0.02416	0.03818	0.05741	0.04104	0.06451	0.01266	0.01766	0.02904	0.04555	0.00044	0.00132	0.00398	0.00628	0.00944	0.00272	0.00821	0.00084	0.00225	0.00193	0.00580
155	Sa Kaeo Community 2	0.00244	0.00951	0.02536	0.03997	0.06013	0.02394	0.04578	0.00738	0.01253	0.01694	0.03232	0.00027	0.00082	0.00244	0.00386	0.00580	0.00172	0.00500	0.00053	0.00137	0.00122	0.00353
156	Village No. 4, Ban Khlong Bang Phai	0.00270	0.00517	0.02028	0.03204	0.04818	0.00975	0.05076	0.00301	0.01389	0.00690	0.03584	0.00021	0.00059	0.00183	0.00289	0.00434	0.00115	0.00387	0.00036	0.00106	0.00081	0.00274
157	Village No. 5, Ban Yai Ra	0.00028	0.00183	0.00400	0.00629	0.00947	0.00570	0.00531	0.00176	0.00145	0.00403	0.00375	0.00003	0.00027	0.00052	0.00082	0.00123	0.00092	0.00051	0.00028	0.00014	0.00065	0.00036
158	Village No. 6, Ban Khao Khrok	0.00525	0.00973	0.03895	0.06154	0.09253	0.02685	0.09864	0.00828	0.02700	0.01899	0.06964	0.00041	0.00156	0.00421	0.00664	0.00999	0.00387	0.00771	0.00119	0.00211	0.00274	0.00545
159	Village no. 7, Ban Nong Takhian	0.00031	0.00361	0.00596	0.00937	0.01410	0.01389	0.00572	0.00428	0.00157	0.00983	0.00404	0.00005	0.00064	0.00116	0.00182	0.00274	0.00227	0.00093	0.00070	0.00025	0.00161	0.00065
160	Village No. 8, Ban Cherng Khao	0.00051	0.02026	0.03001	0.04704	0.07086	0.08100	0.00959	0.02498	0.00263	0.05730	0.00677	0.00008	0.00276	0.00439	0.00689	0.01038	0.01066	0.00148	0.00329	0.00040	0.00754	0.00104
161	Eastern-Nong Muang Community	0.00076	0.00570	0.01168	0.01837	0.02765	0.01971	0.01422	0.00608	0.00389	0.01394	0.01004	0.00011	0.00109	0.00212	0.00333	0.00502	0.00375	0.00210	0.00116	0.00057	0.00265	0.00148
162	Wat Khiri Pawanaram Community	0.00041	0.01590	0.02370	0.03716	0.05598	0.06334	0.00771	0.01953	0.00211	0.04481	0.00544	0.00007	0.00222	0.00356	0.00558	0.00840	0.00855	0.00127	0.00264	0.00035	0.00605	0.00090
163	Ban Chang-Phala Community	0.00037	0.01553	0.02268	0.03555	0.05356	0.06246	0.00692	0.01926	0.00189	0.04419	0.00489	0.00006	0.00219	0.00349	0.00548	0.00826	0.00847	0.00119	0.00261	0.00033	0.00599	0.00084
164	Ruam Sompong Community	0.00039	0.00326	0.00635	0.00998	0.01502	0.01127	0.00737	0.00348	0.00202	0.00797	0.00520	0.00007	0.00047	0.00103	0.00162	0.00244	0.00149	0.00134	0.00046	0.00037	0.00106	0.00095
165	Ming Mongkol Community	0.00037	0.01221	0.01854	0.02907	0.04380	0.04824	0.00699	0.01488	0.00191	0.03413	0.00494	0.00005	0.00107	0.00180	0.00282	0.00425	0.00401	0.00095	0.00124	0.00026	0.00284	0.00067
166	Jor Koo Community	0.00039	0.01224	0.01851	0.02903	0.04373	0.04847	0.00737	0.01495	0.00202	0.03429	0.00521	0.00005	0.00111	0.00185	0.00290	0.00437	0.00416	0.00095	0.00128	0.00026	0.00294	0.00067

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00036	0.01830	0.02716	0.04257	0.06414	0.07310	0.00679	0.02254	0.00186	0.05172	0.00480	0.00005	0.00126	0.00205	0.00322	0.00485	0.00479	0.00088	0.00148	0.00024	0.00339	0.00062
168	Thep Chinda Community	0.00041	0.01140	0.01771	0.02778	0.04185	0.04452	0.00773	0.01373	0.00212	0.03150	0.00546	0.00006	0.00104	0.00178	0.00279	0.00420	0.00386	0.00104	0.00119	0.00029	0.00273	0.00074
169	Health Park Community	0.00116	0.00305	0.00846	0.01336	0.02009	0.00974	0.02172	0.00300	0.00594	0.00689	0.01533	0.00009	0.00051	0.00117	0.00185	0.00278	0.00153	0.00170	0.00047	0.00047	0.00108	0.00120
170	Wat Ban Chang Community	0.00104	0.00596	0.01361	0.02143	0.03225	0.01786	0.01961	0.00551	0.00537	0.01264	0.01385	0.00011	0.00067	0.00148	0.00232	0.00350	0.00209	0.00198	0.00064	0.00054	0.00148	0.00140
171	Dong Dang Community	0.00042	0.01039	0.01676	0.02630	0.03961	0.03982	0.00785	0.01228	0.00215	0.02817	0.00554	0.00006	0.00093	0.00164	0.00258	0.00388	0.00340	0.00113	0.00105	0.00031	0.00241	0.00079
172	Night Market Community	0.00095	0.00499	0.01137	0.01790	0.02694	0.01497	0.01786	0.00462	0.00489	0.01059	0.01261	0.00010	0.00059	0.00132	0.00208	0.00314	0.00177	0.00188	0.00055	0.00051	0.00125	0.00132
173	Ruam Mitr Community	0.00136	0.00678	0.01629	0.02566	0.03862	0.01931	0.02553	0.00595	0.00699	0.01366	0.01802	0.00011	0.00072	0.00157	0.00246	0.00371	0.00228	0.00203	0.00070	0.00056	0.00161	0.00143
174	Ban Chang - Noen Kraprok Community	0.00104	0.00266	0.00839	0.01325	0.01992	0.00793	0.01959	0.00245	0.00536	0.00561	0.01383	0.00007	0.00043	0.00096	0.00151	0.00227	0.00134	0.00130	0.00041	0.00036	0.00095	0.00092
175	Dao Pitak Community	0.00063	0.00442	0.00848	0.01332	0.02006	0.01527	0.01184	0.00471	0.00324	0.01080	0.00836	0.00006	0.00054	0.00108	0.00171	0.00257	0.00182	0.00117	0.00056	0.00032	0.00128	0.00083
176	Taiwa Community	0.00021	0.00588	0.00864	0.01354	0.02040	0.02357	0.00399	0.00727	0.00109	0.01668	0.00282	0.00002	0.00046	0.00076	0.00120	0.00181	0.00173	0.00038	0.00053	0.00010	0.00122	0.00027
177	East Ban Noen Kraprok Community, Prachummit	0.00083	0.00317	0.00854	0.01346	0.02024	0.00787	0.01560	0.00243	0.00427	0.00557	0.01101	0.00004	0.00028	0.00059	0.00092	0.00139	0.00088	0.00074	0.00027	0.00020	0.00062	0.00052
178	Ban Noen Kraprok Community	0.00019	0.00275	0.00403	0.00631	0.00951	0.01105	0.00349	0.00341	0.00096	0.00782	0.00246	0.00002	0.00031	0.00052	0.00082	0.00124	0.00116	0.00028	0.00036	0.00008	0.00082	0.00020
179	Nong Yai Community	0.00017	0.00500	0.00787	0.01235	0.01861	0.01996	0.00323	0.00615	0.00088	0.01412	0.00228	0.00002	0.00041	0.00069	0.00108	0.00162	0.00152	0.00037	0.00047	0.00010	0.00108	0.00026
180	Village No. 1, Pan Din Tai	0.00079	0.00316	0.00832	0.01312	0.01974	0.00807	0.01482	0.00249	0.00406	0.00571	0.01046	0.00004	0.00026	0.00056	0.00088	0.00133	0.00084	0.00070	0.00026	0.00019	0.00060	0.00050
181	Village No. 2, Ban Prachummit	0.00068	0.00218	0.00479	0.00757	0.01138	0.00689	0.01282	0.00212	0.00351	0.00487	0.00905	0.00006	0.00033	0.00075	0.00118	0.00178	0.00102	0.00105	0.00031	0.00029	0.00072	0.00074
182	Village No. 3, Ban Noen Samre	0.00020	0.00249	0.00445	0.00699	0.01053	0.00898	0.00365	0.00277	0.00100	0.00636	0.00258	0.00003	0.00053	0.00094	0.00147	0.00222	0.00195	0.00064	0.00060	0.00017	0.00138	0.00045
183	Village No. 4, Ban Phayun	0.00042	0.00312	0.00606	0.00952	0.01434	0.01070	0.00782	0.00330	0.00214	0.00757	0.00552	0.00007	0.00045	0.00098	0.00154	0.00231	0.00143	0.00126	0.00044	0.00034	0.00101	0.00089
184	Village No. 6, Ban Noen Kraprok	0.00012	0.00119	0.00230	0.00362	0.00545	0.00409	0.00226	0.00126	0.00062	0.00289	0.00159	0.00001	0.00013	0.00024	0.00038	0.00057	0.00044	0.00022	0.00014	0.00006	0.00031	0.00015
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00012	0.00106	0.00209	0.00328	0.00494	0.00359	0.00217	0.00111	0.00059	0.00254	0.00153	0.00001	0.00009	0.00018	0.00029	0.00043	0.00031	0.00019	0.00010	0.00005	0.00022	0.00013
186	Village No. 11, Ban Map Fakthong	0.00189	0.00594	0.01521	0.02402	0.03612	0.02169	0.03556	0.00669	0.00973	0.01535	0.02510	0.00016	0.00072	0.00182	0.00287	0.00432	0.00193	0.00308	0.00060	0.00084	0.00137	0.00218
187	Village No. 13, Ban Nong Phakkut	0.00032	0.00452	0.00753	0.01181	0.01779	0.01790	0.00609	0.00552	0.00167	0.01267	0.00430	0.00005	0.00049	0.00095	0.00150	0.00225	0.00170	0.00092	0.00052	0.00025	0.00120	0.00065
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00066	0.00264	0.00695	0.01095	0.01648	0.00888	0.01236	0.00274	0.00338	0.00628	0.00872	0.00003	0.00012	0.00029	0.00046	0.00070	0.00034	0.00047	0.00010	0.00013	0.00024	0.00033
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00015	0.00542	0.00794	0.01244	0.01875	0.02177	0.00274	0.00671	0.00075	0.01540	0.00193	0.00001	0.00016	0.00029	0.00045	0.00068	0.00059	0.00020	0.00018	0.00006	0.00042	0.00014
190	Village No. 6 (Ban Khao Krating Community)	0.00016	0.00225	0.00331	0.00519	0.00782	0.00902	0.00300	0.00278	0.00082	0.00638	0.00212	0.00001	0.00016	0.00026	0.00041	0.00062	0.00058	0.00015	0.00018	0.00004	0.00041	0.00011

Table 5.2-62 Forecasted results of Ethylbenzene emissions, operation phase

Area		The concentration value of Ethylbenzene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00019	0.00539	0.00807	0.01265	0.01906	0.02146	0.00359	0.00662	0.00098	0.01518	0.00254	0.00002	0.00031	0.00053	0.00083	0.00125	0.00117	0.00029	0.00036	0.00008	0.00083	0.00021
192	Village No. 11 (Ban Khong Wanphen Community)	0.00105	0.00277	0.00874	0.01379	0.02075	0.00753	0.01966	0.00232	0.00538	0.00533	0.01388	0.00005	0.00023	0.00058	0.00092	0.00139	0.00061	0.00100	0.00019	0.00027	0.00043	0.00071
193	Village No. 1, Ban Phlu Ta Luang	0.00090	0.00409	0.01022	0.01609	0.02422	0.01117	0.01694	0.00344	0.00464	0.00790	0.01196	0.00006	0.00026	0.00064	0.00101	0.00152	0.00071	0.00106	0.00022	0.00029	0.00050	0.00075
194	Village No. 2, Ban Khalot	0.00086	0.00405	0.00994	0.01565	0.02356	0.01126	0.01608	0.00347	0.00440	0.00797	0.01135	0.00005	0.00023	0.00059	0.00093	0.00140	0.00061	0.00101	0.00019	0.00028	0.00043	0.00071
195	Village No. 3, Ban Khlong Phai	0.00056	0.00271	0.00590	0.00928	0.01397	0.00847	0.01057	0.00261	0.00289	0.00599	0.00746	0.00006	0.00024	0.00064	0.00101	0.00152	0.00061	0.00115	0.00019	0.00031	0.00043	0.00081
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00081	0.00242	0.00590	0.00932	0.01401	0.00767	0.01524	0.00236	0.00417	0.00543	0.01076	0.00006	0.00021	0.00057	0.00090	0.00135	0.00050	0.00107	0.00015	0.00029	0.00035	0.00075
197	Village No. 5, Ban Khao Bai Si	0.00088	0.00250	0.00651	0.01028	0.01546	0.00736	0.01656	0.00227	0.00453	0.00520	0.01169	0.00008	0.00029	0.00079	0.00124	0.00186	0.00070	0.00146	0.00021	0.00040	0.00049	0.00103
198	Village No. 6, Ban Khao Tabaek	0.00060	0.00282	0.00691	0.01088	0.01638	0.00783	0.01118	0.00242	0.00306	0.00554	0.00789	0.00004	0.00021	0.00051	0.00081	0.00121	0.00061	0.00080	0.00019	0.00022	0.00043	0.00057
199	Village No. 7, Ban Nong Ya Noi	0.00038	0.00196	0.00465	0.00731	0.01101	0.00568	0.00710	0.00175	0.00194	0.00402	0.00502	0.00004	0.00022	0.00052	0.00082	0.00124	0.00063	0.00081	0.00019	0.00022	0.00044	0.00057
200	Village No. 8, Ban Nong Ya	0.00022	0.00342	0.00498	0.00781	0.01176	0.01377	0.00412	0.00425	0.00113	0.00974	0.00291	0.00001	0.00021	0.00036	0.00056	0.00085	0.00079	0.00020	0.00024	0.00005	0.00056	0.00014
201	Ban Nong Krachong Community	0.00042	0.00175	0.00455	0.00717	0.01078	0.00558	0.00797	0.00172	0.00218	0.00395	0.00562	0.00003	0.00018	0.00041	0.00064	0.00096	0.00054	0.00058	0.00017	0.00016	0.00038	0.00041
Standard*		-											1,000*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
** Ethylbenzene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

2.7) Formaldehyde

From the Formaldehyde emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all 11 scenarios occurred outside of the project area to the north. It was found that most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest Formaldehyde 24-hour average Cmax value, comprising 18.94812 micrograms per cubic meter. In Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest average 24-hour average Cmax, comprising 0.48554 micrograms per cubic meter. For the 1-year average Cmax, it was found that Scenario 5 (Worst case scenario (peak hour) for peak flight forecast) had the highest value, comprising 1.64728 micrograms per cubic meter and Scenario 1 (aviation situation in 2019 (1 runway)), had the lowest value with the 1-year average comprising 0.05077 micrograms per cubic meter.

In this regard, the Formaldehyde concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places are shown in Table 5.2-63 and Addendum 5-3, item 12, Formaldehyde concentration contours (Figure 12-1 to Figure 12-22[PF3]).

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.48554	4.45570	6.74654	10.78455	16.45253	18.94812	13.83815	5.51432	3.60800	13.24292	9.64892	0.05077	0.34573	0.66950	1.08031	1.64728	1.42194	1.44699	0.41381	0.37727	0.99380	1.00894
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.05988	0.37703	1.00159	1.61292	2.45966	1.14584	1.70669	0.33347	0.44498	0.80083	1.19002	0.00449	0.02551	0.07097	0.11434	0.17437	0.07412	0.12802	0.02157	0.03338	0.05181	0.08927
2	Wat Phala School	0.02317	0.18836	0.45125	0.72590	1.10704	0.62463	0.66035	0.18178	0.17217	0.43656	0.46044	0.00238	0.02085	0.04857	0.07811	0.11912	0.07061	0.06769	0.02055	0.01765	0.04935	0.04720
3	Phala Subdistrict Municipality Child Development Center	0.02080	0.17402	0.41251	0.66351	1.01190	0.58175	0.59291	0.16930	0.15459	0.40659	0.41342	0.00222	0.01960	0.04553	0.07322	0.11167	0.06652	0.06314	0.01936	0.01646	0.04649	0.04402
4	Ban Khlong Sai School	0.02623	0.24018	0.55130	0.88643	1.35189	0.82209	0.74771	0.23925	0.19495	0.57456	0.52136	0.00212	0.02060	0.04630	0.07443	0.11352	0.07155	0.06029	0.02082	0.01572	0.05001	0.04204
5	Rayong English Program School	0.02968	0.22785	0.55787	0.89762	1.36891	0.74282	0.84582	0.21618	0.22053	0.51916	0.58976	0.00238	0.02359	0.05269	0.08469	0.12916	0.08230	0.06772	0.02395	0.01766	0.05752	0.04722
6	Rayong Garden International School	0.02814	0.23116	0.55163	0.88734	1.35325	0.76883	0.80200	0.22374	0.20910	0.53734	0.55921	0.00234	0.02310	0.05169	0.08310	0.12673	0.08045	0.06674	0.02341	0.01740	0.05623	0.04654
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.01553	0.24274	0.46610	0.74779	1.14059	0.92758	0.44255	0.26995	0.11538	0.64829	0.30857	0.00203	0.04367	0.08031	0.12877	0.19642	0.17062	0.05799	0.04965	0.01512	0.11925	0.04043
8	Wat Khiri Pawanaram School	0.01539	0.23079	0.44618	0.71590	1.09194	0.87868	0.43877	0.25571	0.11440	0.61411	0.30594	0.00194	0.03913	0.07281	0.11675	0.17809	0.15198	0.05527	0.04423	0.01441	0.10622	0.03854
9	Ban Khlong Bang Phai School	0.04770	0.32290	0.83171	1.33894	2.04189	1.00902	1.35961	0.29365	0.35449	0.70521	0.94801	0.00396	0.01981	0.05855	0.09438	0.14392	0.05390	0.11286	0.01569	0.02943	0.03767	0.07870
10	Pattanavechsuksa School	0.13380	0.41110	1.59100	2.56991	3.91843	0.71939	3.81352	0.20936	0.99429	0.50279	2.65905	0.00993	0.03943	0.13146	0.21211	0.32344	0.09146	0.28302	0.02662	0.07379	0.06392	0.19734
11	Pattanavech College	0.11160	0.33427	1.31405	2.12277	3.23664	0.69470	3.18062	0.20217	0.82928	0.48553	2.21775	0.00848	0.03470	0.11378	0.18356	0.27990	0.08253	0.24158	0.02402	0.06299	0.05768	0.16844
12	Saeng Song La Child Development Center 3	0.08437	0.60898	1.28937	2.07120	3.15894	2.19955	2.40469	0.64012	0.62697	1.53727	1.67671	0.01429	0.06051	0.19485	0.31431	0.47928	0.14768	0.40737	0.04298	0.10621	0.10322	0.28405
13	Wat Sa Kaeo School	0.09614	0.62398	1.30291	2.09259	3.19159	2.27310	2.74010	0.66152	0.71442	1.58868	1.91059	0.01628	0.06480	0.21577	0.34815	0.53087	0.15061	0.46405	0.04383	0.12099	0.10527	0.32357
14	Wat Sombun Naram School (Tem Rat Memorial)	0.07537	0.52376	0.98084	1.58196	2.41225	2.16112	2.14798	0.62893	0.56004	1.51041	1.49772	0.01030	0.06206	0.16810	0.27076	0.41289	0.18514	0.29363	0.05388	0.07656	0.12939	0.20474
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.07537	0.52376	0.98084	1.58196	2.41225	2.16112	2.14798	0.62893	0.56004	1.51041	1.49772	0.01030	0.06206	0.16810	0.27076	0.41289	0.18514	0.29363	0.05388	0.07656	0.12939	0.20474
16	Sajjaseuksa School	0.01397	0.49703	0.76899	1.22971	1.87596	2.09622	0.39823	0.61005	0.10383	1.46506	0.27767	0.00214	0.06344	0.11071	0.17738	0.27058	0.25419	0.06093	0.07397	0.01589	0.17765	0.04248
17	Ban Chang District Center for Non-Formal and Informal Education	0.02378	0.62227	0.98842	1.58129	2.41225	2.59715	0.67770	0.75583	0.17670	1.81516	0.47254	0.00327	0.06827	0.12620	0.20236	0.30867	0.26606	0.09317	0.07743	0.02429	0.18595	0.06497
18	Wat Suwan Rangsan Community School	0.01689	0.40968	0.63467	1.01494	1.54833	1.72694	0.48134	0.50258	0.12550	1.20697	0.33562	0.00243	0.05090	0.09405	0.15082	0.23004	0.19840	0.06932	0.05774	0.01807	0.13866	0.04834

Draft Version

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.01499	0.29974	0.46725	0.74729	1.14001	1.26041	0.42725	0.36681	0.11140	0.88090	0.29791	0.00219	0.04229	0.07935	0.12727	0.19413	0.16358	0.06230	0.04761	0.01624	0.11433	0.04344
20	Wat Samnak Kathon School	0.01971	0.42798	0.67090	1.07309	1.63701	1.79570	0.56179	0.52259	0.14647	1.25502	0.39172	0.00304	0.05584	0.10590	0.16987	0.25910	0.21477	0.08668	0.06250	0.02260	0.15010	0.06044
21	Ban Sam Nak Thon Child Development Center	0.01915	0.41282	0.64660	1.03420	1.57769	1.73266	0.54571	0.50424	0.14228	1.21096	0.38051	0.00298	0.05539	0.10481	0.16812	0.25644	0.21331	0.08505	0.06208	0.02218	0.14908	0.05930
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.01507	0.24521	0.37999	0.60766	0.92700	1.03353	0.42960	0.30078	0.11201	0.72234	0.29954	0.00216	0.03351	0.06601	0.10594	0.16159	0.12629	0.06163	0.03675	0.01607	0.08827	0.04297
23	Wat Chak Mak School	0.01358	0.17618	0.30502	0.48864	0.74537	0.70856	0.38704	0.20621	0.10091	0.49521	0.26987	0.00189	0.03041	0.05939	0.09530	0.14536	0.11513	0.05394	0.03350	0.01406	0.08046	0.03761
24	St. Andrews International School, Green Valley, Rayong,	0.00332	0.03440	0.05914	0.09472	0.14449	0.13881	0.09453	0.04040	0.02465	0.09701	0.06592	0.00041	0.00423	0.00930	0.01494	0.02279	0.01489	0.01158	0.00433	0.00302	0.01041	0.00808
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.01820	0.16338	0.37759	0.60717	0.92598	0.55648	0.51869	0.16195	0.13524	0.38893	0.36167	0.00184	0.01507	0.03599	0.05790	0.08830	0.05012	0.05237	0.01459	0.01365	0.03503	0.03652
26	Ban Phayun School	0.01788	0.16032	0.37067	0.59604	0.90902	0.54587	0.50960	0.15886	0.13287	0.38151	0.35533	0.00183	0.01494	0.03575	0.05751	0.08771	0.04958	0.05223	0.01443	0.01362	0.03465	0.03642
27	Rakpasa Kindergarten	0.02227	0.21200	0.48013	0.77189	1.17721	0.73252	0.63462	0.21318	0.16546	0.51196	0.44250	0.00199	0.01661	0.03940	0.06337	0.09665	0.05551	0.05669	0.01615	0.01478	0.03879	0.03953
28	Wat Ban Chang School (Boonrawdprachanukul)	0.03962	0.36188	0.83134	1.33672	2.03862	1.23787	1.12934	0.36025	0.29445	0.86515	0.78745	0.00431	0.04145	0.09359	0.15046	0.22947	0.14352	0.12297	0.04177	0.03206	0.10031	0.08574
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.01845	0.13994	0.31381	0.50444	0.76934	0.48683	0.52578	0.14168	0.13709	0.34025	0.36661	0.00172	0.01497	0.03494	0.05620	0.08571	0.05060	0.04891	0.01472	0.01275	0.03536	0.03410
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.01845	0.13994	0.31381	0.50444	0.76934	0.48683	0.52578	0.14168	0.13709	0.34025	0.36661	0.00172	0.01497	0.03494	0.05620	0.08571	0.05060	0.04891	0.01472	0.01275	0.03536	0.03410
31	Wat Prachummit Bamrung School	0.03619	0.21411	0.58472	0.94186	1.43629	0.63380	1.03154	0.18445	0.26895	0.44297	0.71926	0.00175	0.01832	0.04022	0.06464	0.09859	0.06466	0.04987	0.01882	0.01300	0.04519	0.03477
32	Udom Wittayanukun School	0.00811	0.14513	0.21881	0.34975	0.53357	0.61815	0.23102	0.17990	0.06023	0.43203	0.16109	0.00063	0.01813	0.03178	0.05092	0.07767	0.07251	0.01794	0.02110	0.00468	0.05068	0.01251
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00619	0.08842	0.16509	0.26477	0.40385	0.34284	0.17633	0.09977	0.04597	0.23961	0.12295	0.00051	0.00966	0.01818	0.02916	0.04448	0.03728	0.01448	0.01085	0.00378	0.02605	0.01010
34	Wat Noen Kraprok School	0.00609	0.08853	0.16582	0.26595	0.40565	0.34270	0.17352	0.09973	0.04524	0.23952	0.12099	0.00051	0.00947	0.01791	0.02873	0.04383	0.03649	0.01451	0.01062	0.00378	0.02550	0.01011
35	Chonnabot Phatthana Kindergarten	0.00826	0.18027	0.27456	0.43894	0.66962	0.76488	0.23547	0.22260	0.06139	0.53458	0.16419	0.00077	0.01861	0.03355	0.05377	0.08202	0.07344	0.02205	0.02137	0.00575	0.05133	0.01537
36	Aksorn Business Administration Technological College	0.03143	0.43142	0.87597	1.40639	2.14504	1.59806	0.89576	0.46507	0.23355	1.11689	0.62458	0.00337	0.04241	0.08818	0.14161	0.21599	0.15489	0.09615	0.04508	0.02507	0.10826	0.06704
37	Banchang Kamchanakul Wittaya School	0.01288	0.31325	0.49998	0.80001	1.22040	1.31973	0.36717	0.38407	0.09573	0.92236	0.25601	0.00236	0.05742	0.10332	0.16561	0.25261	0.22681	0.06727	0.06601	0.01754	0.15852	0.04691

Subject to changes and approval by the Government of Thailand

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00460	0.06206	0.12660	0.20327	0.31003	0.22925	0.13117	0.06672	0.03420	0.16023	0.09146	0.00040	0.00520	0.01075	0.01726	0.02632	0.01907	0.01152	0.00555	0.00300	0.01333	0.00803
39	Ban Phudon - Huai Mahat Child Development Center	0.00460	0.06206	0.12660	0.20327	0.31003	0.22925	0.13117	0.06672	0.03420	0.16023	0.09146	0.00040	0.00520	0.01075	0.01726	0.02632	0.01907	0.01152	0.00555	0.00300	0.01333	0.00803
40	Ban Map Fakthong School	0.01793	0.13932	0.30053	0.48286	0.73644	0.49733	0.51095	0.14473	0.13322	0.34759	0.35627	0.00107	0.00612	0.01695	0.02731	0.04165	0.01788	0.03041	0.00520	0.00793	0.01249	0.02120
41	Phuru Yor. Sor. Sor. 80 School	0.02018	0.12406	0.33300	0.53630	0.81783	0.44247	0.57503	0.12877	0.14993	0.30924	0.40095	0.00075	0.00553	0.01378	0.02217	0.03382	0.01778	0.02145	0.00518	0.00559	0.01243	0.01496
42	Khao Chi Chan School	0.01840	0.17789	0.36869	0.59210	0.90307	0.65095	0.52445	0.18944	0.13674	0.45495	0.36569	0.00116	0.01019	0.02370	0.03811	0.05812	0.03455	0.03294	0.01005	0.00859	0.02415	0.02297
43	Ban Khalot Child Development Center	0.03890	0.24337	0.64831	1.04404	1.59213	0.73774	1.10865	0.21470	0.28906	0.51561	0.77303	0.00250	0.01564	0.04164	0.06706	0.10227	0.04744	0.07116	0.01381	0.01855	0.03316	0.04962
44	Ban Khalot School	0.04034	0.25379	0.67442	1.08606	1.65621	0.77104	1.14970	0.22439	0.29976	0.53888	0.80165	0.00244	0.01517	0.04051	0.06525	0.09950	0.04587	0.06952	0.01335	0.01812	0.03206	0.04847
45	Phlu Ta Luang Wittaya School	0.06144	0.17877	0.68645	1.10955	1.69171	0.45909	1.75101	0.13361	0.45654	0.32086	1.22093	0.00356	0.01714	0.05160	0.08319	0.12686	0.04562	0.10136	0.01328	0.02643	0.03189	0.07067
46	Athittan Kindergarten School	0.03127	0.11577	0.40134	0.64777	0.98772	0.34750	0.89114	0.10113	0.23234	0.24287	0.62136	0.00252	0.01265	0.03730	0.06013	0.09169	0.03450	0.07175	0.01004	0.01871	0.02411	0.05003
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.04886	0.19985	0.60066	0.96837	1.47666	0.59268	1.39256	0.17248	0.36308	0.41423	0.97099	0.00350	0.01747	0.05168	0.08331	0.12704	0.04750	0.09971	0.01382	0.02600	0.03320	0.06953
48	Ban Khao Bai Si School	0.03310	0.19878	0.51138	0.82389	1.25638	0.78690	0.94324	0.22900	0.24593	0.54996	0.65769	0.00264	0.01712	0.04489	0.07229	0.11024	0.05263	0.07523	0.01532	0.01961	0.03678	0.05246
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00802	0.17905	0.26857	0.42925	0.65485	0.76409	0.22865	0.22237	0.05962	0.53403	0.15943	0.00063	0.00997	0.01952	0.03132	0.04777	0.03770	0.01786	0.01097	0.00466	0.02635	0.01245
50	Ban KM. 5 School	0.01448	0.10507	0.26229	0.42212	0.64375	0.33718	0.41283	0.09813	0.10764	0.23565	0.28786	0.00188	0.01290	0.03300	0.05313	0.08102	0.04054	0.05345	0.01180	0.01394	0.02833	0.03727
51	Royal Thai Fleet Sattahip District School	0.01192	0.09834	0.23089	0.37134	0.56632	0.33108	0.33983	0.09635	0.08860	0.23139	0.23695	0.00146	0.01130	0.02759	0.04440	0.06771	0.03689	0.04168	0.01074	0.01087	0.02578	0.02906
52	RTN. 8 Nursery	0.01689	0.11243	0.26622	0.42890	0.65405	0.37942	0.48134	0.11042	0.12550	0.26518	0.33563	0.00164	0.01136	0.02895	0.04661	0.07108	0.03584	0.04662	0.01043	0.01216	0.02505	0.03251
53	Juk Samet School	0.01686	0.11088	0.26609	0.42869	0.65373	0.37453	0.48064	0.10900	0.12532	0.26176	0.33513	0.00163	0.01134	0.02891	0.04654	0.07097	0.03577	0.04657	0.01041	0.01214	0.02500	0.03247
54	Juk Samet Child Development Center	0.01704	0.10776	0.26808	0.43191	0.65863	0.36464	0.48558	0.10612	0.12660	0.25485	0.33858	0.00164	0.01131	0.02889	0.04650	0.07092	0.03563	0.04665	0.01037	0.01216	0.02490	0.03253
55	Ban Chong Samaesarn Child Development Center	0.01228	0.11318	0.23335	0.37472	0.57152	0.41547	0.35011	0.12091	0.09128	0.29037	0.24412	0.00088	0.00864	0.01939	0.03117	0.04754	0.03003	0.02519	0.00874	0.00657	0.02099	0.01756
56	Samaesarn Subdistrict NFE Center	0.01337	0.09065	0.19994	0.32154	0.49038	0.36693	0.38101	0.10678	0.09934	0.25645	0.26567	0.00072	0.00756	0.01659	0.02665	0.04065	0.02671	0.02051	0.00777	0.00535	0.01867	0.01430
57	Ban Chong Samaesarn School	0.01361	0.08789	0.19873	0.31955	0.48735	0.34844	0.38787	0.10140	0.10113	0.24353	0.27045	0.00070	0.00747	0.01634	0.02626	0.04004	0.02645	0.02007	0.00770	0.00523	0.01848	0.01400
58	Wat Phala Vipassana Office	0.02257	0.17963	0.43380	0.69789	1.06432	0.59202	0.64329	0.17229	0.16772	0.41377	0.44855	0.00239	0.02065	0.04839	0.07783	0.11869	0.06960	0.06819	0.02026	0.01778	0.04865	0.04755
59	Wat Phala	0.02198	0.18130	0.43201	0.69492	1.05979	0.60371	0.62649	0.17569	0.16334	0.42193	0.43683	0.00227	0.02002	0.04658	0.07490	0.11423	0.06785	0.06478	0.01975	0.01689	0.04742	0.04517
60	Chao Li Hu Ong Yea Shrine	0.03122	0.27744	0.64349	1.03478	1.57813	0.94254	0.88979	0.27430	0.23199	0.65874	0.62042	0.00338	0.03885	0.08291	0.13319	0.20313	0.13966	0.09638	0.04064	0.02513	0.09761	0.06720
61	Wat Khlong Sai	0.03030	0.25425	0.60198	0.96825	1.47666	0.85070	0.86349	0.24757	0.22514	0.59456	0.60209	0.00242	0.02350	0.05291	0.08506	0.12972	0.08155	0.06911	0.02373	0.01802	0.05700	0.04819
62	Wat Khiri Pawanaram	0.01396	0.18809	0.38378	0.61620	0.93983	0.69471	0.39788	0.20218	0.10374	0.48554	0.27743	0.00150	0.02443	0.04753	0.07628	0.11634	0.09267	0.04264	0.02697	0.01112	0.06477	0.02973

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.01074	0.18022	0.33935	0.54429	0.83020	0.69578	0.30617	0.20249	0.07983	0.48628	0.21348	0.00147	0.02885	0.05398	0.08657	0.13204	0.11176	0.04189	0.03252	0.01092	0.07811	0.02921
64	Ban Chang Church	0.01125	0.19020	0.32761	0.52478	0.80050	0.76676	0.32053	0.22314	0.08357	0.53589	0.22349	0.00156	0.04309	0.07602	0.12182	0.18582	0.17178	0.04459	0.04999	0.01163	0.12006	0.03109
65	Wat Ban Khlong Bang Phai	0.04851	0.33332	0.85317	1.37341	2.09445	1.04728	1.38244	0.30478	0.36044	0.73195	0.96393	0.00436	0.02119	0.06350	0.10237	0.15611	0.05673	0.12415	0.01651	0.03237	0.03965	0.08656
66	Admiral Prince Abhakara Kiartivongse Monument	0.05299	0.33966	0.84780	1.36441	2.08076	1.09015	1.51012	0.31726	0.39373	0.76191	1.05296	0.00510	0.02461	0.07405	0.11938	0.18203	0.06556	0.14535	0.01908	0.03790	0.04582	0.10135
67	Royal Thai Naval Air Division Naval Aviation Museum	0.04383	0.33999	0.82912	1.33402	2.03444	1.11195	1.24913	0.32360	0.32568	0.77715	0.87098	0.00530	0.02462	0.07550	0.12174	0.18563	0.06412	0.15093	0.01866	0.03935	0.04482	0.10524
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.05203	0.29752	0.67461	1.08455	1.65406	1.02716	1.48282	0.29893	0.38661	0.71789	1.03393	0.00679	0.02834	0.09194	0.14832	0.22616	0.06845	0.19345	0.01992	0.05044	0.04784	0.13489
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.10287	0.22384	1.08339	1.75235	2.67167	0.84135	2.93201	0.24485	0.76446	0.58803	2.04440	0.00997	0.03694	0.12800	0.20660	0.31503	0.08054	0.28412	0.02344	0.07408	0.05629	0.19811
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.13897	0.30801	1.47399	2.38395	3.63464	0.82867	3.96070	0.24116	1.03267	0.57916	2.76167	0.01276	0.04391	0.15879	0.25637	0.39091	0.08868	0.36370	0.02581	0.09483	0.06198	0.25360
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.11163	0.72702	1.65345	2.65829	4.05417	2.91361	3.18154	0.84792	0.82952	2.03633	2.21839	0.02041	0.16861	0.40153	0.64589	0.98502	0.56170	0.58170	0.16347	0.15167	0.39258	0.40560
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.09012	0.71787	1.54121	2.47616	3.77654	2.73409	2.56861	0.79568	0.66971	1.91087	1.79102	0.01754	0.17100	0.38423	0.61765	0.94199	0.59409	0.49996	0.17289	0.13035	0.41521	0.34860
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.08939	1.20518	2.18189	3.49763	5.33508	4.74581	2.54779	1.38113	0.66428	3.31686	1.77650	0.01602	0.19588	0.41044	0.65924	1.00546	0.71203	0.45653	0.20722	0.11903	0.49764	0.31832
74	Wat Sa Kaeo	0.10792	0.68197	1.24967	2.00361	3.05615	2.66955	3.07567	0.77690	0.80192	1.86576	2.14457	0.01892	0.07579	0.25144	0.40569	0.61861	0.17712	0.53915	0.05155	0.14057	0.12379	0.37593
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.01714	0.18427	0.37168	0.59751	0.91127	0.77207	0.48850	0.22469	0.12736	0.53960	0.34061	0.00176	0.02821	0.05514	0.08849	0.13497	0.10676	0.05022	0.03107	0.01309	0.07462	0.03501
76	Wat Sombun Naram	0.08223	0.54503	0.95420	1.53967	2.34772	2.20209	2.34370	0.64086	0.61107	1.53905	1.63419	0.01028	0.06014	0.16510	0.26596	0.40557	0.17712	0.29311	0.05155	0.07642	0.12379	0.20438
77	Ban Chang Abundant Grace Church	0.04129	0.42758	0.68640	1.09831	1.67545	1.77690	1.17669	0.51712	0.30680	1.24189	0.82047	0.00681	0.05777	0.13626	0.21915	0.33422	0.19387	0.19413	0.05642	0.05062	0.13550	0.13536
78	Wat Samnak Kathon	0.02027	0.44055	0.69096	1.10517	1.68596	1.84807	0.57770	0.53783	0.15062	1.29162	0.40281	0.00309	0.05674	0.10761	0.17262	0.26329	0.21822	0.08811	0.06351	0.02297	0.15251	0.06144
79	Wat Suwan Rangsan	0.01499	0.29974	0.46725	0.74729	1.14001	1.26041	0.42725	0.36681	0.11140	0.88090	0.29791	0.00219	0.04229	0.07935	0.12727	0.19413	0.16358	0.06230	0.04761	0.01624	0.11433	0.04344
80	Wat Nong Bot	0.01371	0.13762	0.30624	0.49223	0.75072	0.48129	0.39069	0.14007	0.10186	0.33638	0.27242	0.00146	0.02026	0.04101	0.06584	0.10043	0.07515	0.04161	0.02187	0.01085	0.05253	0.02901
81	The Shrine of Luang Tia Chak Mak	0.01250	0.20087	0.35063	0.56218	0.85751	0.82140	0.35630	0.23904	0.09290	0.57408	0.24844	0.00198	0.03470	0.06645	0.10661	0.16261	0.13279	0.05638	0.03864	0.01470	0.09281	0.03931
82	Wat Chak Mak	0.01317	0.21631	0.39234	0.62896	0.95937	0.87827	0.37538	0.25560	0.09787	0.61383	0.26174	0.00204	0.03612	0.06901	0.11071	0.16886	0.13840	0.05804	0.04028	0.01513	0.09673	0.04047

Draft Version

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.01549	0.13835	0.32032	0.51509	0.78555	0.47059	0.44152	0.13695	0.11512	0.32890	0.30786	0.00164	0.01400	0.03293	0.05297	0.08078	0.04705	0.04673	0.01369	0.01218	0.03288	0.03259
84	The Shrine of King Taksin the Great (Ban Chang)	0.01549	0.13897	0.32122	0.51653	0.78775	0.47328	0.44139	0.13773	0.11508	0.33078	0.30777	0.00164	0.01410	0.03306	0.05317	0.08109	0.04751	0.04664	0.01383	0.01216	0.03320	0.03252
85	Wat Chonthararam (Phayun)	0.01833	0.16317	0.37824	0.60824	0.92762	0.55456	0.52249	0.16139	0.13623	0.38758	0.36432	0.00183	0.01494	0.03574	0.05749	0.08768	0.04962	0.05216	0.01444	0.01360	0.03468	0.03637
86	Masjid Dawatul Islam	0.02585	0.49465	0.93017	1.49189	2.27558	1.91106	0.73674	0.55616	0.19209	1.33565	0.51370	0.00341	0.05452	0.10664	0.17113	0.26101	0.20629	0.09729	0.06003	0.02537	0.14417	0.06784
87	Chinese shrine at the Buddha Dhamma Foundation	0.05595	0.41938	1.03646	1.66786	2.54354	1.35700	1.59457	0.39492	0.41575	0.94841	1.11185	0.00472	0.04566	0.10289	0.16540	0.25226	0.15831	0.13465	0.04607	0.03511	0.11064	0.09389
88	The Shrine of Luang Tia Ban Chang	0.03104	0.34846	0.69825	1.12087	1.70958	1.30060	0.88457	0.37850	0.23063	0.90899	0.61679	0.00341	0.04211	0.08800	0.14133	0.21555	0.15330	0.09723	0.04461	0.02535	0.10714	0.06779
89	The Shrine of Laoia Guan Yu Ban Chang	0.03744	0.34079	0.76367	1.22757	1.87219	1.18612	1.06704	0.34519	0.27821	0.82899	0.74402	0.00415	0.04104	0.09180	0.14757	0.22506	0.14302	0.11838	0.04162	0.03086	0.09996	0.08254
90	Wat Ban Chang	0.04797	0.35692	0.88466	1.42363	2.17108	1.15217	1.36713	0.33531	0.35645	0.80526	0.95326	0.00496	0.04165	0.09862	0.15863	0.24192	0.13935	0.14148	0.04055	0.03689	0.09739	0.09865
91	Wat Prachummit Bamrung	0.03745	0.20942	0.58681	0.94545	1.44174	0.60408	1.06725	0.17580	0.27826	0.42220	0.74416	0.00179	0.01837	0.04061	0.06526	0.09953	0.06455	0.05107	0.01879	0.01332	0.04511	0.03561
92	The Shrine of Luang Tia Noen Kraprok 1	0.02045	0.26009	0.53907	0.86571	1.32037	0.95178	0.58295	0.27699	0.15199	0.66520	0.40647	0.00134	0.02192	0.04267	0.06847	0.10444	0.08314	0.03833	0.02420	0.00999	0.05811	0.02673
93	The Shrine of Luang Tia Noen Kraprok 2	0.00931	0.31260	0.47372	0.75727	1.15526	1.32890	0.26527	0.38674	0.06916	0.92877	0.18496	0.00083	0.02687	0.04636	0.07427	0.11329	0.10824	0.02372	0.03150	0.00618	0.07565	0.01654
94	Wat Noen Kraprok	0.00694	0.09605	0.18009	0.28884	0.44057	0.37163	0.19790	0.10815	0.05160	0.25973	0.13799	0.00056	0.01215	0.02228	0.03573	0.05450	0.04755	0.01589	0.01384	0.00414	0.03323	0.01108
95	Wat Phudon Nim Sanoh	0.00417	0.06240	0.12394	0.19893	0.30342	0.23406	0.11878	0.06812	0.03097	0.16359	0.08282	0.00041	0.00539	0.01106	0.01776	0.02709	0.01987	0.01162	0.00578	0.00303	0.01389	0.00810
96	Church of Christ Ban Chang	0.00548	0.06448	0.13664	0.21950	0.33478	0.23279	0.15625	0.06775	0.04074	0.16270	0.10895	0.00044	0.00551	0.01148	0.01844	0.02812	0.02008	0.01260	0.00584	0.00329	0.01404	0.00879
97	Anek Kusala Sala (Viharn Sien)	0.01942	0.17190	0.37363	0.60038	0.91567	0.61062	0.55361	0.17770	0.14434	0.42677	0.38602	0.00128	0.00764	0.02075	0.03343	0.05098	0.02276	0.03635	0.00662	0.00948	0.01591	0.02535
98	Wat Yan Nasangwararam	0.02048	0.13888	0.33892	0.54531	0.83162	0.48238	0.58363	0.14038	0.15217	0.33714	0.40695	0.00148	0.00863	0.02371	0.03819	0.05824	0.02541	0.04211	0.00740	0.01098	0.01776	0.02936
99	Sirisirirak Monastery	0.01458	0.17323	0.32073	0.51431	0.78449	0.67460	0.41547	0.19632	0.10833	0.47148	0.28970	0.00094	0.01079	0.02306	0.03705	0.05651	0.03875	0.02691	0.01128	0.00702	0.02708	0.01876
100	Anan Buraparam Meditation Center	0.02721	0.15519	0.34553	0.55775	0.85045	0.55453	0.77547	0.16138	0.20219	0.38756	0.54071	0.00126	0.01053	0.02500	0.04021	0.06133	0.03515	0.03605	0.01023	0.00940	0.02456	0.02514
101	Wat Map Fakthong	0.01689	0.12470	0.31001	0.49889	0.76082	0.43329	0.48127	0.12610	0.12548	0.30283	0.33557	0.00110	0.00738	0.01911	0.03076	0.04692	0.02295	0.03147	0.00668	0.00820	0.01604	0.02194
102	Khao Chi Chan Image of Lord Buddha	0.00368	0.04185	0.08955	0.14387	0.21942	0.15014	0.10482	0.04369	0.02733	0.10493	0.07309	0.00027	0.00250	0.00572	0.00920	0.01403	0.00860	0.00770	0.00250	0.00201	0.00601	0.00537
103	Wat Khao Chi Chan	0.00390	0.08017	0.13216	0.21157	0.32273	0.33634	0.11109	0.09788	0.02897	0.23507	0.07746	0.00030	0.00576	0.01086	0.01741	0.02656	0.02222	0.00868	0.00647	0.00226	0.01553	0.00605
104	Rat Samakkhi Temple	0.04042	0.25296	0.67375	1.08501	1.65461	0.76689	1.15196	0.22318	0.30035	0.53598	0.80323	0.00254	0.01575	0.04214	0.06786	0.10349	0.04753	0.07248	0.01383	0.01890	0.03322	0.05054
105	The Shrine of Chao Mae Kuan Im	0.04111	0.25728	0.68524	1.10350	1.68281	0.78001	1.17155	0.22700	0.30546	0.54515	0.81689	0.00239	0.01484	0.03967	0.06389	0.09744	0.04481	0.06818	0.01304	0.01778	0.03132	0.04754
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.04519	0.28628	0.75845	1.22134	1.86252	0.87222	1.28784	0.25384	0.33578	0.60960	0.89797	0.00271	0.01654	0.04455	0.07175	0.10941	0.04964	0.07724	0.01445	0.02014	0.03469	0.05386

Subject to changes and approval by the Government of Thailand

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.01657	0.12083	0.30188	0.48584	0.74092	0.38749	0.47221	0.11277	0.12312	0.27082	0.32926	0.00196	0.01364	0.03476	0.05595	0.08532	0.04300	0.05598	0.01251	0.01460	0.03005	0.03903
108	KM.8 Meditation Center	0.02729	0.17786	0.46550	0.74951	1.14299	0.54795	0.77776	0.15946	0.20278	0.38296	0.54231	0.00204	0.01388	0.03569	0.05746	0.08763	0.04341	0.05824	0.01263	0.01518	0.03034	0.04061
109	Wat Rangsee Sunthorn (KM.5)	0.01414	0.10519	0.26072	0.41957	0.63985	0.33955	0.40293	0.09882	0.10505	0.23731	0.28095	0.00192	0.01316	0.03372	0.05428	0.08277	0.04131	0.05472	0.01202	0.01427	0.02887	0.03815
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00513	0.05719	0.12313	0.19784	0.30173	0.20439	0.14619	0.05948	0.03812	0.14285	0.10194	0.00021	0.00241	0.00511	0.00820	0.01251	0.00868	0.00587	0.00252	0.00153	0.00606	0.00409
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00603	0.06298	0.13836	0.22235	0.33911	0.23296	0.17180	0.06780	0.04479	0.16281	0.11979	0.00025	0.00324	0.00670	0.01075	0.01640	0.01189	0.00717	0.00346	0.00187	0.00831	0.00500
112	Wat Tung Prong	0.00477	0.05556	0.11137	0.17896	0.27294	0.21157	0.13597	0.06157	0.03545	0.14787	0.09481	0.00020	0.00252	0.00526	0.00845	0.01289	0.00919	0.00580	0.00267	0.00151	0.00642	0.00404
113	Khao Phlu Ta Luang Meditation Center	0.00256	0.03234	0.06340	0.10175	0.15520	0.12217	0.07286	0.03555	0.01900	0.08539	0.05080	0.00012	0.00137	0.00293	0.00471	0.00718	0.00489	0.00345	0.00142	0.00090	0.00342	0.00241
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.04888	0.17472	0.50799	0.82164	1.25269	0.60626	1.39300	0.17643	0.36320	0.42372	0.97130	0.00466	0.01752	0.06020	0.09715	0.14814	0.03874	0.13275	0.01127	0.03461	0.02707	0.09256
115	Wat Khao Bai Si Santitham	0.05699	0.23538	0.72147	1.16464	1.77582	0.71451	1.62424	0.20794	0.42349	0.49937	1.13253	0.00468	0.02066	0.06508	0.10497	0.16006	0.05196	0.13344	0.01512	0.03479	0.03631	0.09304
116	Welu Amphawan Vipassana Office	0.04044	0.22833	0.58619	0.94507	1.44112	0.75819	1.15253	0.22065	0.30050	0.52990	0.80362	0.00360	0.01983	0.05597	0.09019	0.13753	0.05679	0.10263	0.01653	0.02676	0.03969	0.07156
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.01958	0.15550	0.37585	0.60467	0.92215	0.51211	0.55818	0.14903	0.14553	0.35792	0.38920	0.00151	0.01186	0.02878	0.04631	0.07062	0.03892	0.04305	0.01133	0.01122	0.02720	0.03001
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.01865	0.11596	0.29661	0.47784	0.72867	0.37446	0.53148	0.10898	0.13857	0.26171	0.37059	0.00196	0.01375	0.03490	0.05617	0.08566	0.04350	0.05588	0.01266	0.01457	0.03040	0.03896
119	Samaesarn Pattanakarn Church	0.01716	0.12239	0.27706	0.44541	0.67930	0.42299	0.48910	0.12310	0.12752	0.29563	0.34103	0.00158	0.01176	0.02917	0.04694	0.07159	0.03795	0.04512	0.01104	0.01176	0.02652	0.03146
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.01585	0.11700	0.26725	0.42968	0.65531	0.40183	0.45164	0.11694	0.11776	0.28084	0.31492	0.00098	0.00894	0.02058	0.03309	0.05046	0.03053	0.02806	0.00888	0.00732	0.02134	0.01957
121	Wat Chong Samaesarn	0.01341	0.09248	0.20180	0.32457	0.49499	0.37277	0.38209	0.10848	0.09962	0.26053	0.26642	0.00073	0.00764	0.01678	0.02697	0.04113	0.02695	0.02083	0.00784	0.00543	0.01884	0.01452
122	Viharn Luang Por Dam	0.01012	0.09338	0.20678	0.33235	0.50687	0.32766	0.28845	0.09536	0.07521	0.22901	0.20113	0.00058	0.00596	0.01319	0.02120	0.03233	0.02093	0.01662	0.00609	0.00433	0.01463	0.01159
123	The Shrine of King Taksin the Great (Samaesarn)	0.01362	0.12200	0.28216	0.45371	0.69196	0.41529	0.38814	0.12086	0.10120	0.29025	0.27064	0.00103	0.00951	0.02175	0.03497	0.05333	0.03266	0.02927	0.00950	0.00763	0.02283	0.02041
124	Thai Island and Sea Natural History Museum	0.01263	0.11912	0.27067	0.43516	0.66367	0.41065	0.36008	0.11951	0.09388	0.28700	0.25107	0.00097	0.00929	0.02098	0.03372	0.05143	0.03216	0.02757	0.00936	0.00719	0.02248	0.01922
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.01474	0.11404	0.27843	0.44798	0.68319	0.37264	0.42023	0.10845	0.10957	0.26044	0.29301	0.00105	0.00981	0.02236	0.03596	0.05484	0.03373	0.02995	0.00982	0.00781	0.02357	0.02088

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.01490	0.11933	0.28749	0.46250	0.70534	0.39400	0.42468	0.11466	0.11073	0.27537	0.29611	0.00107	0.00981	0.02249	0.03617	0.05516	0.03362	0.03043	0.00978	0.00793	0.02349	0.02122
127	Eastern-Nong Muang Community Health Service Center	0.13130	0.45333	1.45934	2.35898	3.59667	1.72709	3.74218	0.50262	0.97569	1.20707	2.60931	0.01386	0.10789	0.26277	0.42278	0.64475	0.35320	0.39508	0.10279	0.10301	0.24685	0.27548
128	Phala Subdistrict Health Promotion Hospital	0.02425	0.20533	0.48458	0.77939	1.18863	0.68870	0.69117	0.20043	0.18021	0.48134	0.48193	0.00234	0.02116	0.04881	0.07849	0.11970	0.07217	0.06681	0.02100	0.01742	0.05044	0.04659
129	Ban Chang Hospital	0.00856	0.13454	0.26415	0.42392	0.64658	0.50791	0.24407	0.14781	0.06364	0.35498	0.17018	0.00098	0.01483	0.02935	0.04711	0.07185	0.05574	0.02782	0.01622	0.00725	0.03896	0.01939
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.05339	0.17965	0.55660	0.90039	1.37275	0.65374	1.52171	0.19025	0.39675	0.45690	1.06104	0.00553	0.02414	0.07645	0.12331	0.18802	0.06029	0.15749	0.01754	0.04106	0.04213	0.10981
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.07418	0.58745	1.41536	2.27697	3.47251	1.93954	2.11418	0.56445	0.55123	1.35555	1.47416	0.01289	0.05451	0.17559	0.28324	0.43190	0.13294	0.36725	0.03869	0.09575	0.09291	0.25607
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.11808	0.63355	1.24214	2.00649	3.05935	2.61341	3.36544	0.76056	0.87747	1.82653	2.34662	0.01436	0.07124	0.21144	0.34084	0.51974	0.19296	0.40929	0.05616	0.10671	0.13486	0.28538
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.01462	0.48477	0.74837	1.19669	1.82560	2.04624	0.41678	0.59550	0.10867	1.43013	0.29061	0.00251	0.05365	0.09875	0.15834	0.24152	0.20951	0.07159	0.06097	0.01866	0.14643	0.04991
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.03251	0.57129	0.87829	1.40433	2.14237	2.41531	0.92648	0.70291	0.24156	1.68807	0.64601	0.00523	0.05803	0.12510	0.20099	0.30655	0.20724	0.14893	0.06031	0.03883	0.14484	0.10384
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.01416	0.20921	0.33233	0.53174	0.81116	0.87858	0.40355	0.25569	0.10522	0.61404	0.28139	0.00205	0.03288	0.06424	0.10308	0.15723	0.12445	0.05842	0.03622	0.01523	0.08698	0.04073
136	Ban Phayun Subdistrict Health Promotion Hospital	0.01752	0.15776	0.36421	0.58565	0.89317	0.53776	0.49932	0.15650	0.13019	0.37584	0.34816	0.00178	0.01485	0.03524	0.05669	0.08645	0.04960	0.05076	0.01443	0.01323	0.03466	0.03539
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00742	0.23848	0.36236	0.57928	0.88373	1.01280	0.21150	0.29475	0.05514	0.70785	0.14747	0.00069	0.02178	0.03767	0.06034	0.09205	0.08765	0.01956	0.02551	0.00510	0.06126	0.01364
138	Phudon Huai Mahat Community Health Service Unit	0.00493	0.06597	0.13483	0.21650	0.33020	0.24341	0.14045	0.07084	0.03662	0.17012	0.09793	0.00044	0.00571	0.01178	0.01892	0.02886	0.02097	0.01257	0.00610	0.00328	0.01466	0.00876
139	Wat Yan Nasangwararam Hospital	0.01862	0.15901	0.32336	0.52057	0.79387	0.59992	0.53063	0.17459	0.13835	0.41929	0.36999	0.00134	0.00814	0.02197	0.03539	0.05396	0.02440	0.03817	0.00710	0.00995	0.01705	0.02662
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.01832	0.15557	0.32250	0.51915	0.79170	0.58888	0.52217	0.17138	0.13614	0.41157	0.36409	0.00135	0.00812	0.02197	0.03539	0.05397	0.02424	0.03835	0.00705	0.01000	0.01694	0.02674
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00719	0.24093	0.37291	0.59634	0.90973	1.01595	0.20487	0.29566	0.05342	0.71005	0.14285	0.00049	0.01131	0.02052	0.03290	0.05018	0.04448	0.01393	0.01294	0.00363	0.03109	0.00972

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.04313	0.28004	0.73411	1.18203	1.80258	0.86150	1.22922	0.25071	0.32049	0.60210	0.85710	0.00267	0.01651	0.04420	0.07119	0.10856	0.04979	0.07610	0.01449	0.01984	0.03480	0.05306
143	Sattahip Hospital KM.10	0.03076	0.23738	0.58003	0.93327	1.42328	0.77516	0.87661	0.22559	0.22856	0.54176	0.61123	0.00208	0.01293	0.03453	0.05561	0.08480	0.03910	0.05924	0.01138	0.01545	0.02733	0.04131
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.01345	0.08929	0.19898	0.31995	0.48795	0.36253	0.38320	0.10550	0.09991	0.25338	0.26720	0.00071	0.00753	0.01649	0.02651	0.04043	0.02660	0.02036	0.00774	0.00531	0.01859	0.01419
145	Village No. 1 Ban Sakulthong	0.01037	0.15063	0.30146	0.48391	0.73808	0.57723	0.29562	0.16799	0.07708	0.40343	0.20613	0.00145	0.02695	0.05101	0.08182	0.12480	0.10377	0.04143	0.03020	0.01080	0.07252	0.02889
146	Village No. 2, Ban Kilo 16	0.04034	0.26887	0.69708	1.12228	1.71147	0.83539	1.14983	0.24312	0.29979	0.58386	0.80174	0.00355	0.03605	0.07993	0.12847	0.19594	0.12639	0.10121	0.03678	0.02639	0.08833	0.07057
147	Village No. 4, Ban Tung Prong	0.03243	0.31039	0.65801	1.05702	1.61213	1.12021	0.92441	0.32601	0.24102	0.78292	0.64456	0.00423	0.05554	0.11414	0.18328	0.27954	0.20427	0.12068	0.05945	0.03146	0.14277	0.08414
148	Village No. 5, Phala Subdistrict	0.03282	0.26084	0.63023	1.01392	1.54628	0.85929	0.93539	0.25007	0.24388	0.60056	0.65222	0.00327	0.04045	0.08445	0.13564	0.20688	0.14735	0.09309	0.04288	0.02427	0.10298	0.06491
149	Village No. 6, Ban Takat	0.02378	0.20861	0.48603	0.78162	1.19204	0.70635	0.67764	0.20556	0.17668	0.49367	0.47250	0.00223	0.02058	0.04708	0.07569	0.11543	0.07060	0.06344	0.02055	0.01654	0.04935	0.04424
150	Village No. 7, Ban Khlong Sai	0.03159	0.25566	0.61351	0.98695	1.50515	0.84673	0.90033	0.24642	0.23474	0.59179	0.62777	0.00298	0.03338	0.07180	0.11535	0.17593	0.11938	0.08504	0.03474	0.02217	0.08343	0.05929
151	Village No. 1 Ban Sam Nak Thon	0.08717	0.36850	1.08162	1.74635	2.66278	1.54077	2.48433	0.44840	0.64774	1.07685	1.73225	0.00895	0.06773	0.16680	0.26840	0.40932	0.21980	0.25520	0.06397	0.06654	0.15362	0.17795
152	Village No. 2, Ban Chak Mak	0.01747	0.35201	0.55631	0.88992	1.35758	1.48365	0.49789	0.43177	0.12981	1.03693	0.34716	0.00267	0.04591	0.08830	0.14166	0.21607	0.17530	0.07606	0.05101	0.01983	0.12251	0.05303
153	Village No. 3, Ban Sa Kaeo	0.45372	0.85713	4.58974	7.42741	11.32372	3.38254	12.93146	0.98439	3.37160	2.36407	9.01671	0.03858	0.15730	0.51686	0.83388	1.27153	0.37289	1.09947	0.10852	0.28666	0.26061	0.76663
154	Sa Kaeo Community 1	0.15573	0.70454	1.59913	2.58734	3.94465	2.82271	4.43849	0.82147	1.15724	1.97281	3.09482	0.01982	0.07982	0.26408	0.42609	0.64971	0.18731	0.56498	0.05451	0.14731	0.13091	0.39394
155	Sa Kaeo Community 2	0.11052	0.58613	1.68395	2.71376	4.13825	1.64650	3.14984	0.47917	0.82125	1.15075	2.19629	0.01206	0.04956	0.16219	0.26166	0.39899	0.11816	0.34386	0.03439	0.08965	0.08259	0.23976
156	Village No. 4, Ban Khlong Bang Phai	0.12254	0.30072	1.34342	2.17193	3.31146	0.67043	3.49249	0.19511	0.91059	0.46857	2.43520	0.00935	0.03551	0.12137	0.19587	0.29866	0.07919	0.26656	0.02305	0.06950	0.05535	0.18586
157	Village No. 5, Ban Yai Ra	0.01283	0.11504	0.26597	0.42768	0.65226	0.39170	0.36564	0.11399	0.09533	0.27376	0.25495	0.00124	0.01710	0.03468	0.05568	0.08492	0.06339	0.03534	0.01845	0.00921	0.04431	0.02464
158	Village No. 6, Ban Khao Khrok	0.23811	0.56388	2.57978	4.17134	6.35983	1.84639	6.78643	0.53734	1.76942	1.29045	4.73197	0.01862	0.09608	0.27969	0.45079	0.68742	0.26602	0.53064	0.07742	0.13835	0.18592	0.37000
159	Village no. 7, Ban Nong Takhian	0.01381	0.23284	0.39786	0.63775	0.97279	0.95524	0.39360	0.27800	0.10262	0.66762	0.27444	0.00224	0.04065	0.07726	0.12393	0.18903	0.15618	0.06374	0.04545	0.01662	0.10916	0.04445
160	Village No. 8, Ban Cherng Khao	0.02316	1.31405	2.00588	3.20690	4.89230	5.57082	0.65997	1.62123	0.17207	3.89347	0.46018	0.00356	0.17830	0.29338	0.46962	0.71638	0.73335	0.10156	0.21342	0.02648	0.51254	0.07081
161	Eastern-Nong Muang Community	0.03432	0.36082	0.77747	1.24917	1.90517	1.35556	0.97828	0.39450	0.25507	0.94740	0.68212	0.00506	0.06961	0.14124	0.22677	0.34587	0.25796	0.14415	0.07507	0.03759	0.18029	0.10051
162	Wat Khiri Pawanaram Community	0.01860	1.03049	1.58434	2.53328	3.86463	4.35668	0.53021	1.26789	0.13824	3.04490	0.36970	0.00308	0.14336	0.23744	0.38011	0.57983	0.58801	0.08771	0.17112	0.02287	0.41096	0.06116
163	Ban Chang-Phala Community	0.01670	1.00786	1.51651	2.42392	3.69787	4.29608	0.47608	1.25025	0.12413	3.00255	0.33196	0.00287	0.14165	0.23337	0.37357	0.56986	0.58228	0.08185	0.16946	0.02134	0.40696	0.05707
164	Ruam Sompong Community	0.01778	0.20743	0.42278	0.67882	1.03534	0.77525	0.50681	0.22562	0.13214	0.54183	0.35338	0.00324	0.02992	0.06845	0.11006	0.16786	0.10262	0.09230	0.02986	0.02406	0.07172	0.06436
165	Ming Mongkol Community	0.01688	0.79068	1.23906	1.98183	3.02332	3.31792	0.48105	0.96559	0.12542	2.31891	0.33542	0.00228	0.06882	0.11985	0.19202	0.29290	0.27602	0.06509	0.08033	0.01697	0.19291	0.04539
166	Jor Koo Community	0.01780	0.79305	1.23718	1.97868	3.01852	3.33382	0.50736	0.97022	0.13228	2.33002	0.35377	0.00229	0.07113	0.12338	0.19765	0.30150	0.28585	0.06530	0.08319	0.01703	0.19978	0.04553

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.01640	1.18689	1.81556	2.90274	4.42827	5.02775	0.46729	1.46318	0.12184	3.51391	0.32583	0.00212	0.08100	0.13692	0.21926	0.33447	0.32932	0.06036	0.09584	0.01574	0.23016	0.04208
168	Thep Chinda Community	0.01867	0.73693	1.18336	1.89350	2.88850	3.06207	0.53208	0.89113	0.13873	2.14010	0.37100	0.00252	0.06675	0.11848	0.18987	0.28963	0.26534	0.07189	0.07722	0.01874	0.18545	0.05013
169	Health Park Community	0.05242	0.19081	0.55990	0.90547	1.38052	0.66998	1.49409	0.19498	0.38955	0.46825	1.04178	0.00411	0.03209	0.07806	0.12560	0.19155	0.10517	0.11713	0.03061	0.03054	0.07350	0.08167
170	Wat Ban Chang Community	0.04735	0.37367	0.90528	1.45645	2.22116	1.22846	1.34947	0.35751	0.35184	0.85858	0.94094	0.00477	0.04229	0.09819	0.15790	0.24081	0.14356	0.13604	0.04178	0.03547	0.10033	0.09486
171	Dong Dang Community	0.01895	0.67011	1.11900	1.79162	2.73300	2.73885	0.54008	0.79707	0.14081	1.91420	0.37658	0.00272	0.05978	0.10946	0.17550	0.26769	0.23410	0.07747	0.06813	0.02020	0.16361	0.05402
172	Night Market Community	0.04312	0.31270	0.75609	1.21641	1.85509	1.02957	1.22897	0.29963	0.32043	0.71957	0.85693	0.00453	0.03674	0.08808	0.14169	0.21608	0.12179	0.12902	0.03544	0.03364	0.08512	0.08996
173	Ruam Mitr Community	0.06163	0.42290	1.08310	1.74356	2.65893	1.32807	1.75648	0.38650	0.45796	0.92819	1.22474	0.00490	0.04567	0.10422	0.16756	0.25555	0.15697	0.13978	0.04568	0.03644	0.10971	0.09746
174	Ban Chang - Noen Kraprok Community	0.04729	0.16502	0.55616	0.89846	1.36990	0.54535	1.34786	0.15871	0.35143	0.38115	0.93982	0.00314	0.02726	0.06377	0.10256	0.15641	0.09204	0.08955	0.02679	0.02335	0.06433	0.06244
175	Dao Pitak Community	0.02858	0.28156	0.56467	0.90644	1.38253	1.05039	0.81443	0.30569	0.21235	0.73412	0.56788	0.00283	0.03440	0.07223	0.11601	0.17694	0.12491	0.08073	0.03635	0.02105	0.08730	0.05629
176	Taiwa Community	0.00964	0.38131	0.57771	0.92349	1.40885	1.62118	0.27461	0.47180	0.07160	1.13305	0.19147	0.00092	0.02952	0.05099	0.08169	0.12461	0.11882	0.02631	0.03458	0.00686	0.08304	0.01835
177	East Ban Noen Kraprok Community, Prachummit	0.03766	0.19508	0.56686	0.91361	1.39317	0.54120	1.07339	0.15750	0.27986	0.37824	0.74844	0.00178	0.01737	0.03903	0.06274	0.09568	0.06035	0.05078	0.01756	0.01324	0.04218	0.03541
178	Ban Noen Kraprok Community	0.00842	0.17847	0.26939	0.43060	0.65691	0.75983	0.24012	0.22113	0.06261	0.53105	0.16743	0.00068	0.02001	0.03500	0.05607	0.08553	0.08012	0.01949	0.02332	0.00508	0.05599	0.01359
179	Nong Yai Community	0.00779	0.32447	0.52575	0.84164	1.28388	1.37263	0.22205	0.39947	0.05789	0.95934	0.15483	0.00090	0.02614	0.04573	0.07327	0.11177	0.10461	0.02555	0.03044	0.00666	0.07311	0.01782
180	Village No. 1, Pan Din Tai	0.03578	0.19489	0.55287	0.89088	1.35852	0.55496	1.01975	0.16151	0.26588	0.38787	0.71104	0.00170	0.01664	0.03730	0.05996	0.09144	0.05788	0.04832	0.01684	0.01260	0.04045	0.03369
181	Village No. 2, Ban Prachummit	0.03095	0.13739	0.31702	0.51295	0.78204	0.47358	0.88222	0.13782	0.23002	0.33099	0.61515	0.00253	0.02097	0.04987	0.08022	0.12234	0.06991	0.07210	0.02035	0.01880	0.04886	0.05027
182	Village No. 3, Ban Noen Samre	0.00882	0.15924	0.29688	0.47611	0.72622	0.61796	0.25136	0.17984	0.06554	0.43190	0.17526	0.00153	0.03427	0.06257	0.10032	0.15302	0.13438	0.04373	0.03911	0.01140	0.09392	0.03049
183	Village No. 4, Ban Phayun	0.01887	0.19876	0.40355	0.64791	0.98820	0.73623	0.53773	0.21426	0.14020	0.51456	0.37495	0.00304	0.02853	0.06492	0.10437	0.15918	0.09823	0.08661	0.02859	0.02258	0.06866	0.06039
184	Village No. 6, Ban Noen Kraprok	0.00545	0.07580	0.15337	0.24623	0.37555	0.28135	0.15528	0.08188	0.04049	0.19664	0.10827	0.00052	0.00809	0.01592	0.02555	0.03897	0.03053	0.01479	0.00888	0.00386	0.02134	0.01031
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00523	0.06728	0.13899	0.22321	0.34043	0.24665	0.14906	0.07178	0.03886	0.17239	0.10394	0.00046	0.00587	0.01212	0.01946	0.02968	0.02150	0.01300	0.00626	0.00339	0.01503	0.00907
186	Village No. 11, Ban Map Fakthong	0.08584	0.38096	1.00822	1.62877	2.48343	1.49197	2.44644	0.43419	0.63786	1.04274	1.70583	0.00744	0.04467	0.12119	0.19520	0.29767	0.13308	0.21208	0.03873	0.05530	0.09301	0.14788
187	Village No. 13, Ban Nong Phakkut	0.01471	0.29197	0.50232	0.80466	1.22742	1.23140	0.41924	0.35837	0.10931	0.86063	0.29232	0.00223	0.03146	0.06342	0.10181	0.15528	0.11700	0.06355	0.03405	0.01657	0.08177	0.04431
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.02983	0.16291	0.46159	0.74377	1.13420	0.61062	0.85018	0.17770	0.22167	0.42677	0.59280	0.00114	0.00753	0.01958	0.03153	0.04808	0.02333	0.03244	0.00679	0.00846	0.01631	0.02262
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00660	0.35170	0.53085	0.84853	1.29449	1.49741	0.18824	0.43578	0.04908	1.04655	0.13126	0.00049	0.01047	0.01928	0.03092	0.04716	0.04090	0.01399	0.01190	0.00365	0.02858	0.00975
190	Village No. 6 (Ban Khao Krating Community)	0.00723	0.14596	0.22148	0.35406	0.54014	0.62020	0.20619	0.18049	0.05376	0.43346	0.14377	0.00036	0.01000	0.01762	0.02824	0.04307	0.03989	0.01026	0.01161	0.00268	0.02788	0.00716

Table 5.2-63Formaldehyde emission forecast, operation phase

Area		The concentration value of Formaldehyde (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00867	0.34953	0.53931	0.86238	1.31560	1.47571	0.24719	0.42946	0.06445	1.03138	0.17236	0.00070	0.02008	0.03523	0.05645	0.08610	0.08024	0.02003	0.02335	0.00522	0.05608	0.01396
192	Village No. 11 (Ban Khong Wanphen Community)	0.04745	0.17198	0.57940	0.93563	1.42660	0.51798	1.35250	0.15074	0.35264	0.36202	0.94306	0.00242	0.01417	0.03884	0.06257	0.09541	0.04177	0.06885	0.01216	0.01795	0.02920	0.04801
193	Village No. 1, Ban Phlu Ta Luang	0.04089	0.25406	0.67884	1.09324	1.66716	0.76794	1.16542	0.22349	0.30386	0.53671	0.81261	0.00255	0.01609	0.04272	0.06879	0.10490	0.04892	0.07274	0.01424	0.01896	0.03419	0.05072
194	Village No. 2, Ban Khalot	0.03881	0.25188	0.66044	1.06341	1.62169	0.77469	1.10621	0.22545	0.28842	0.54144	0.77133	0.00244	0.01431	0.03925	0.06323	0.09642	0.04215	0.06964	0.01227	0.01816	0.02946	0.04856
195	Village No. 3, Ban Khlong Phai	0.02552	0.17048	0.39238	0.63093	0.96222	0.58237	0.72725	0.16948	0.18962	0.40702	0.50709	0.00278	0.01490	0.04258	0.06861	0.10463	0.04209	0.07918	0.01225	0.02064	0.02942	0.05521
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.03678	0.15241	0.39039	0.63139	0.96264	0.52744	1.04838	0.15350	0.27334	0.36863	0.73100	0.00257	0.01273	0.03784	0.06099	0.09301	0.03439	0.07338	0.01001	0.01913	0.02403	0.05117
197	Village No. 5, Ban Khao Bai Si	0.03997	0.15659	0.43100	0.69694	1.06258	0.50595	1.13931	0.14724	0.29705	0.35361	0.79440	0.00353	0.01762	0.05216	0.08408	0.12821	0.04789	0.10067	0.01394	0.02625	0.03347	0.07020
198	Village No. 6, Ban Khao Tabaek	0.02698	0.17512	0.45914	0.73929	1.12741	0.53867	0.76895	0.15676	0.20049	0.37648	0.53617	0.00194	0.01326	0.03399	0.05472	0.08345	0.04162	0.05518	0.01211	0.01439	0.02909	0.03848
199	Village No. 7, Ban Nong Ya Noi	0.01715	0.12263	0.30881	0.49703	0.75798	0.39070	0.48873	0.11370	0.12743	0.27306	0.34078	0.00195	0.01362	0.03467	0.05580	0.08510	0.04301	0.05572	0.01252	0.01453	0.03006	0.03885
200	Village No. 8, Ban Nong Ya	0.00995	0.22195	0.33303	0.53227	0.81202	0.94709	0.28370	0.27562	0.07397	0.66193	0.19781	0.00048	0.01359	0.02392	0.03833	0.05846	0.05427	0.01381	0.01579	0.00360	0.03793	0.00963
201	Ban Nong Krachong Community	0.01923	0.10799	0.30202	0.48660	0.74203	0.38393	0.54807	0.11173	0.14290	0.26833	0.38216	0.00140	0.01125	0.02709	0.04358	0.06646	0.03714	0.04000	0.01081	0.01043	0.02596	0.02789
Standard		-											-									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)

2.8) Naphthalene

From the Naphthalene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. Most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and all had 1-year average Cmax values within the foreign standard reference criteria for Naphthalene concentrations that allow for long-term exposure without affecting health (RfC for Naphthalene is equal to 3 micrograms per cubic meter)

When comparing the Cmax of Naphthalene for 24-hour average and 1-year average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest 24-hour average Cmax value, comprising 0.82836 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 0.02020 micrograms per cubic meter. The 1-year average Cmax found scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest concentration value, comprising 0.07205 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.00211 micrograms per cubic meter.

In this regard, when considering the Naphthalene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table Table 5.2-64 and Addendum 5-3, item 13, Naphthalene concentration contours (Figure 13-1 to Figure 13-22), were all found to have Naphthalene concentrations in accordance with standard criteria.

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Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.02020	0.19287	0.29360	0.47102	0.72039	0.82836	0.60502	0.23858	0.15649	0.57757	0.42088	0.00211	0.01495	0.02908	0.04713	0.07205	0.06216	0.06326	0.01790	0.01636	0.04334	0.04401
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00249	0.01621	0.04352	0.07038	0.10761	0.05009	0.07462	0.01443	0.01930	0.03493	0.05191	0.00019	0.00110	0.00308	0.00499	0.00763	0.00324	0.00560	0.00093	0.00145	0.00226	0.00389
2	Wat Phala School	0.00096	0.00811	0.01961	0.03168	0.04844	0.02731	0.02887	0.00786	0.00747	0.01904	0.02008	0.00010	0.00090	0.00211	0.00341	0.00521	0.00309	0.00296	0.00089	0.00077	0.00215	0.00206
3	Phala Subdistrict Municipality Child Development Center	0.00087	0.00749	0.01793	0.02896	0.04428	0.02543	0.02592	0.00732	0.00671	0.01773	0.01803	0.00009	0.00084	0.00198	0.00320	0.00489	0.00291	0.00276	0.00084	0.00071	0.00203	0.00192
4	Ban Khlong Sai School	0.00109	0.01035	0.02396	0.03869	0.05916	0.03594	0.03269	0.01035	0.00846	0.02506	0.02274	0.00009	0.00089	0.00201	0.00325	0.00497	0.00313	0.00264	0.00090	0.00068	0.00218	0.00183
5	Rayong English Program School	0.00123	0.00981	0.02425	0.03917	0.05990	0.03247	0.03698	0.00935	0.00957	0.02264	0.02573	0.00010	0.00102	0.00229	0.00370	0.00565	0.00360	0.00296	0.00104	0.00077	0.00251	0.00206
6	Rayong Garden International School	0.00117	0.00995	0.02398	0.03872	0.05921	0.03361	0.03506	0.00968	0.00907	0.02344	0.02439	0.00010	0.00100	0.00225	0.00363	0.00555	0.00352	0.00292	0.00101	0.00075	0.00245	0.00203
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00065	0.01048	0.02027	0.03265	0.04992	0.04055	0.01935	0.01168	0.00500	0.02827	0.01346	0.00008	0.00189	0.00349	0.00562	0.00860	0.00746	0.00254	0.00215	0.00066	0.00520	0.00176
8	Wat Khiri Pawanaram School	0.00064	0.00996	0.01940	0.03125	0.04779	0.03841	0.01918	0.01106	0.00496	0.02678	0.01334	0.00008	0.00169	0.00317	0.00510	0.00779	0.00664	0.00242	0.00191	0.00062	0.00463	0.00168
9	Ban Khlong Bang Phai School	0.00198	0.01389	0.03614	0.05843	0.08934	0.04411	0.05944	0.01270	0.01538	0.03076	0.04135	0.00016	0.00085	0.00254	0.00412	0.00630	0.00236	0.00493	0.00068	0.00128	0.00164	0.00343
10	Pattanavechsuksa School	0.00557	0.01754	0.06909	0.11210	0.17137	0.03145	0.16673	0.00906	0.04313	0.02193	0.11599	0.00041	0.00169	0.00571	0.00925	0.01415	0.00400	0.01237	0.00115	0.00320	0.00279	0.00861
11	Pattanavech College	0.00464	0.01426	0.05706	0.09259	0.14155	0.03037	0.13906	0.00875	0.03597	0.02118	0.09674	0.00035	0.00149	0.00494	0.00801	0.01224	0.00361	0.01056	0.00104	0.00273	0.00252	0.00735
12	Saeng Song La Child Development Center 3	0.00351	0.02626	0.05606	0.09041	0.13824	0.09616	0.10514	0.02769	0.02719	0.06705	0.07314	0.00059	0.00259	0.00846	0.01371	0.02096	0.00646	0.01781	0.00186	0.00461	0.00450	0.01239
13	Wat Sa Kaeo School	0.00400	0.02692	0.05665	0.09134	0.13967	0.09937	0.11980	0.02862	0.03099	0.06929	0.08334	0.00068	0.00277	0.00937	0.01519	0.02322	0.00658	0.02029	0.00190	0.00525	0.00459	0.01411
14	Wat Sombun Naram School (Tem Rat Memorial)	0.00314	0.02266	0.04261	0.06902	0.10552	0.09448	0.09391	0.02721	0.02429	0.06587	0.06533	0.00043	0.00267	0.00730	0.01181	0.01806	0.00809	0.01284	0.00233	0.00332	0.00564	0.00893
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.00314	0.02266	0.04261	0.06902	0.10552	0.09448	0.09391	0.02721	0.02429	0.06587	0.06533	0.00043	0.00267	0.00730	0.01181	0.01806	0.00809	0.01284	0.00233	0.00332	0.00564	0.00893
16	Sajjaseuksa School	0.00058	0.02151	0.03346	0.05371	0.08214	0.09164	0.01741	0.02639	0.00450	0.06390	0.01211	0.00009	0.00274	0.00482	0.00775	0.01184	0.01111	0.00266	0.00320	0.00069	0.00775	0.00185
17	Ban Chang District Center for Non-Formal and Informal Education	0.00099	0.02692	0.04301	0.06906	0.10561	0.11354	0.02963	0.03270	0.00766	0.07917	0.02061	0.00014	0.00295	0.00549	0.00883	0.01351	0.01163	0.00407	0.00335	0.00105	0.00811	0.00283
18	Wat Suwan Rangsan Community School	0.00070	0.01773	0.02762	0.04433	0.06779	0.07550	0.02104	0.02174	0.00544	0.05264	0.01464	0.00010	0.00220	0.00409	0.00658	0.01007	0.00867	0.00303	0.00250	0.00078	0.00605	0.00211

Subject to changes and approval by the Government of Thailand

Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00062	0.01297	0.02033	0.03264	0.04991	0.05510	0.01868	0.01587	0.00483	0.03842	0.01299	0.00009	0.00183	0.00345	0.00556	0.00850	0.00715	0.00272	0.00206	0.00070	0.00499	0.00189
20	Wat Samnak Kathon School	0.00082	0.01852	0.02919	0.04686	0.07167	0.07850	0.02456	0.02261	0.00635	0.05474	0.01709	0.00013	0.00241	0.00461	0.00742	0.01134	0.00939	0.00379	0.00270	0.00098	0.00655	0.00264
21	Ban Sam Nak Thon Child Development Center	0.00080	0.01786	0.02814	0.04517	0.06908	0.07575	0.02386	0.02182	0.00617	0.05281	0.01660	0.00012	0.00239	0.00456	0.00734	0.01122	0.00933	0.00372	0.00269	0.00096	0.00650	0.00259
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00063	0.01061	0.01654	0.02654	0.04059	0.04518	0.01878	0.01301	0.00486	0.03150	0.01307	0.00009	0.00145	0.00287	0.00462	0.00707	0.00552	0.00269	0.00159	0.00070	0.00385	0.00187
23	Wat Chak Mak School	0.00056	0.00762	0.01327	0.02134	0.03263	0.03098	0.01692	0.00892	0.00438	0.02160	0.01177	0.00008	0.00131	0.00258	0.00416	0.00636	0.00503	0.00236	0.00145	0.00061	0.00351	0.00164
24	St. Andrews International School, Green Valley, Rayong,	0.00014	0.00149	0.00257	0.00414	0.00633	0.00607	0.00413	0.00175	0.00107	0.00423	0.00288	0.00002	0.00018	0.00040	0.00065	0.00100	0.00065	0.00051	0.00019	0.00013	0.00045	0.00035
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00076	0.00704	0.01641	0.02650	0.04052	0.02433	0.02268	0.00701	0.00587	0.01696	0.01578	0.00008	0.00065	0.00156	0.00253	0.00386	0.00219	0.00229	0.00063	0.00059	0.00153	0.00159
26	Ban Phayun School	0.00074	0.00691	0.01611	0.02601	0.03978	0.02386	0.02228	0.00687	0.00576	0.01664	0.01550	0.00008	0.00064	0.00155	0.00251	0.00384	0.00217	0.00228	0.00062	0.00059	0.00151	0.00159
27	Rakpasa Kindergarten	0.00093	0.00913	0.02087	0.03369	0.05151	0.03202	0.02775	0.00922	0.00718	0.02233	0.01930	0.00008	0.00072	0.00171	0.00277	0.00423	0.00243	0.00248	0.00070	0.00064	0.00169	0.00172
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00165	0.01559	0.03614	0.05834	0.08920	0.05412	0.04938	0.01559	0.01277	0.03773	0.03435	0.00018	0.00179	0.00407	0.00657	0.01004	0.00627	0.00538	0.00181	0.00139	0.00437	0.00374
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00077	0.00603	0.01364	0.02202	0.03367	0.02128	0.02299	0.00613	0.00595	0.01484	0.01599	0.00007	0.00064	0.00152	0.00245	0.00375	0.00221	0.00214	0.00064	0.00055	0.00154	0.00149
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00077	0.00603	0.01364	0.02202	0.03367	0.02128	0.02299	0.00613	0.00595	0.01484	0.01599	0.00007	0.00064	0.00152	0.00245	0.00375	0.00221	0.00214	0.00064	0.00055	0.00154	0.00149
31	Wat Prachummit Bamrung School	0.00151	0.00920	0.02541	0.04110	0.06284	0.02771	0.04510	0.00798	0.01167	0.01932	0.03137	0.00007	0.00079	0.00175	0.00282	0.00431	0.00283	0.00218	0.00081	0.00056	0.00197	0.00152
32	Udom Wittayanukun School	0.00034	0.00628	0.00952	0.01528	0.02336	0.02702	0.01010	0.00778	0.00261	0.01884	0.00703	0.00003	0.00078	0.00138	0.00222	0.00340	0.00317	0.00078	0.00091	0.00020	0.00221	0.00055
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00026	0.00382	0.00718	0.01156	0.01768	0.01499	0.00771	0.00432	0.00199	0.01045	0.00536	0.00002	0.00042	0.00079	0.00127	0.00195	0.00163	0.00063	0.00047	0.00016	0.00114	0.00044
34	Wat Noen Kraprok School	0.00025	0.00382	0.00721	0.01161	0.01776	0.01498	0.00759	0.00432	0.00196	0.01045	0.00528	0.00002	0.00041	0.00078	0.00125	0.00192	0.00160	0.00063	0.00046	0.00016	0.00111	0.00044
35	Chonnabot Phatthana Kindergarten	0.00034	0.00780	0.01195	0.01917	0.02932	0.03344	0.01030	0.00963	0.00266	0.02331	0.00716	0.00003	0.00080	0.00146	0.00235	0.00359	0.00321	0.00096	0.00092	0.00025	0.00224	0.00067
36	Aksorn Business Administration Technological College	0.00131	0.01862	0.03809	0.06139	0.09388	0.06986	0.03916	0.02012	0.01013	0.04871	0.02724	0.00014	0.00183	0.00383	0.00618	0.00945	0.00677	0.00420	0.00195	0.00109	0.00472	0.00292
37	Banchang Karnchanakul Wittaya School	0.00054	0.01356	0.02175	0.03494	0.05343	0.05769	0.01605	0.01662	0.00415	0.04023	0.01117	0.00010	0.00248	0.00449	0.00723	0.01106	0.00992	0.00294	0.00286	0.00076	0.00691	0.00205

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Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00019	0.00268	0.00550	0.00887	0.01357	0.01002	0.00573	0.00289	0.00148	0.00699	0.00399	0.00002	0.00022	0.00047	0.00075	0.00115	0.00083	0.00050	0.00024	0.00013	0.00058	0.00035
39	Ban Phudon - Huai Mahat Child Development Center	0.00019	0.00268	0.00550	0.00887	0.01357	0.01002	0.00573	0.00289	0.00148	0.00699	0.00399	0.00002	0.00022	0.00047	0.00075	0.00115	0.00083	0.00050	0.00024	0.00013	0.00058	0.00035
40	Ban Map Fakthong School	0.00075	0.00601	0.01307	0.02108	0.03223	0.02174	0.02234	0.00626	0.00578	0.01516	0.01554	0.00004	0.00026	0.00074	0.00119	0.00182	0.00078	0.00133	0.00023	0.00034	0.00054	0.00092
41	Phuru Yor. Sor. Sor. 80 School	0.00084	0.00533	0.01447	0.02340	0.03578	0.01934	0.02514	0.00557	0.00650	0.01349	0.01749	0.00003	0.00024	0.00060	0.00097	0.00148	0.00078	0.00094	0.00022	0.00024	0.00054	0.00065
42	Khao Chi Chan School	0.00077	0.00767	0.01603	0.02585	0.03952	0.02846	0.02293	0.00820	0.00593	0.01984	0.01595	0.00005	0.00044	0.00103	0.00166	0.00254	0.00151	0.00144	0.00043	0.00037	0.00105	0.00100
43	Ban Khalot Child Development Center	0.00162	0.01046	0.02817	0.04556	0.06966	0.03225	0.04847	0.00929	0.01254	0.02249	0.03372	0.00010	0.00067	0.00181	0.00293	0.00447	0.00207	0.00311	0.00060	0.00080	0.00145	0.00216
44	Ban Khalot School	0.00168	0.01091	0.02931	0.04739	0.07246	0.03371	0.05027	0.00971	0.01300	0.02350	0.03497	0.00010	0.00065	0.00176	0.00285	0.00435	0.00201	0.00304	0.00058	0.00079	0.00140	0.00211
45	Phlu Ta Luang Wittaya School	0.00256	0.00765	0.02981	0.04839	0.07398	0.02007	0.07656	0.00578	0.01980	0.01399	0.05326	0.00015	0.00074	0.00224	0.00363	0.00555	0.00199	0.00443	0.00057	0.00115	0.00139	0.00308
46	Athittan Kindergarten School	0.00130	0.00495	0.01743	0.02826	0.04320	0.01519	0.03896	0.00438	0.01008	0.01059	0.02710	0.00010	0.00054	0.00162	0.00262	0.00401	0.00151	0.00314	0.00043	0.00081	0.00105	0.00218
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00203	0.00857	0.02610	0.04225	0.06460	0.02591	0.06088	0.00746	0.01575	0.01807	0.04235	0.00015	0.00075	0.00225	0.00363	0.00556	0.00208	0.00436	0.00060	0.00113	0.00145	0.00303
48	Ban Khao Bai Si School	0.00138	0.00857	0.02222	0.03595	0.05496	0.03440	0.04124	0.00991	0.01067	0.02399	0.02869	0.00011	0.00074	0.00195	0.00315	0.00482	0.00230	0.00329	0.00066	0.00085	0.00160	0.00229
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00033	0.00775	0.01169	0.01875	0.02867	0.03340	0.01000	0.00962	0.00259	0.02329	0.00695	0.00003	0.00043	0.00085	0.00137	0.00209	0.00165	0.00078	0.00047	0.00020	0.00115	0.00054
50	Ban KM. 5 School	0.00060	0.00452	0.01140	0.01842	0.02817	0.01474	0.01805	0.00425	0.00467	0.01028	0.01256	0.00008	0.00055	0.00143	0.00232	0.00354	0.00177	0.00234	0.00051	0.00060	0.00124	0.00163
51	Royal Thai Fleet Sattahip District School	0.00050	0.00424	0.01004	0.01621	0.02478	0.01447	0.01486	0.00417	0.00384	0.01009	0.01034	0.00006	0.00049	0.00120	0.00194	0.00296	0.00161	0.00182	0.00046	0.00047	0.00112	0.00127
52	RTN. 8 Nursery	0.00070	0.00484	0.01157	0.01871	0.02861	0.01659	0.02104	0.00478	0.00544	0.01157	0.01464	0.00007	0.00049	0.00126	0.00203	0.00311	0.00157	0.00204	0.00045	0.00053	0.00109	0.00142
53	Juk Samet School	0.00070	0.00478	0.01156	0.01871	0.02860	0.01637	0.02101	0.00472	0.00544	0.01142	0.01462	0.00007	0.00049	0.00126	0.00203	0.00311	0.00156	0.00204	0.00045	0.00053	0.00109	0.00142
54	Juk Samet Child Development Center	0.00071	0.00464	0.01165	0.01885	0.02881	0.01594	0.02123	0.00459	0.00549	0.01111	0.01477	0.00007	0.00049	0.00126	0.00203	0.00310	0.00156	0.00204	0.00045	0.00053	0.00109	0.00142
55	Ban Chong Samaesarn Child Development Center	0.00051	0.00488	0.01015	0.01636	0.02501	0.01816	0.01531	0.00523	0.00396	0.01266	0.01065	0.00004	0.00037	0.00084	0.00136	0.00208	0.00131	0.00110	0.00038	0.00028	0.00092	0.00077
56	Samaesarn Subdistrict NFE Center	0.00056	0.00392	0.00869	0.01403	0.02146	0.01604	0.01666	0.00462	0.00431	0.01118	0.01159	0.00003	0.00033	0.00072	0.00116	0.00178	0.00117	0.00090	0.00034	0.00023	0.00081	0.00062
57	Ban Chong Samaesarn School	0.00057	0.00379	0.00864	0.01395	0.02132	0.01523	0.01696	0.00439	0.00439	0.01062	0.01180	0.00003	0.00032	0.00071	0.00115	0.00175	0.00116	0.00088	0.00033	0.00023	0.00081	0.00061
58	Wat Phala Vipassana Office	0.00094	0.00773	0.01885	0.03046	0.04657	0.02588	0.02813	0.00745	0.00727	0.01805	0.01957	0.00010	0.00089	0.00210	0.00340	0.00519	0.00304	0.00298	0.00088	0.00077	0.00212	0.00207
59	Wat Phala	0.00091	0.00781	0.01878	0.03033	0.04637	0.02639	0.02739	0.00760	0.00708	0.01840	0.01905	0.00009	0.00086	0.00202	0.00327	0.00500	0.00297	0.00283	0.00085	0.00073	0.00207	0.00197
60	Chao Li Hu Ong Yea Shrine	0.00130	0.01195	0.02797	0.04516	0.06905	0.04120	0.03890	0.01187	0.01006	0.02873	0.02706	0.00014	0.00168	0.00360	0.00581	0.00889	0.00611	0.00421	0.00176	0.00109	0.00426	0.00293
61	Wat Khlong Sai	0.00126	0.01095	0.02616	0.04226	0.06461	0.03719	0.03775	0.01071	0.00977	0.02593	0.02626	0.00010	0.00101	0.00230	0.00371	0.00568	0.00357	0.00302	0.00103	0.00078	0.00249	0.00210
62	Wat Khiri Pawanaram	0.00058	0.00812	0.01669	0.02690	0.04113	0.03037	0.01740	0.00875	0.00450	0.02118	0.01210	0.00006	0.00105	0.00207	0.00333	0.00509	0.00405	0.00186	0.00117	0.00048	0.00282	0.00130

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Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00045	0.00778	0.01476	0.02376	0.03634	0.03042	0.01339	0.00876	0.00346	0.02121	0.00931	0.00006	0.00125	0.00235	0.00378	0.00578	0.00489	0.00183	0.00141	0.00047	0.00341	0.00127
64	Ban Chang Church	0.00047	0.00822	0.01425	0.02291	0.03504	0.03352	0.01401	0.00965	0.00362	0.02337	0.00975	0.00007	0.00186	0.00331	0.00532	0.00813	0.00751	0.00195	0.00216	0.00050	0.00524	0.00136
65	Wat Ban Khlong Bang Phai	0.00202	0.01434	0.03708	0.05993	0.09164	0.04578	0.06044	0.01319	0.01563	0.03192	0.04205	0.00018	0.00091	0.00276	0.00447	0.00683	0.00248	0.00543	0.00071	0.00140	0.00173	0.00378
66	Admiral Prince Abhakara Kiartivongse Monument	0.00220	0.01461	0.03685	0.05954	0.09104	0.04766	0.06602	0.01373	0.01708	0.03323	0.04593	0.00021	0.00106	0.00322	0.00521	0.00796	0.00287	0.00635	0.00083	0.00164	0.00200	0.00442
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00182	0.01463	0.03604	0.05822	0.08902	0.04861	0.05461	0.01400	0.01413	0.03389	0.03799	0.00022	0.00106	0.00328	0.00531	0.00812	0.00280	0.00660	0.00081	0.00171	0.00195	0.00459
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00216	0.01282	0.02932	0.04733	0.07238	0.04490	0.06483	0.01293	0.01677	0.03131	0.04510	0.00028	0.00121	0.00399	0.00647	0.00989	0.00299	0.00846	0.00086	0.00219	0.00209	0.00588
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.00428	0.00966	0.04704	0.07642	0.11683	0.03678	0.12819	0.01059	0.03316	0.02565	0.08918	0.00041	0.00158	0.00556	0.00901	0.01378	0.00352	0.01242	0.00101	0.00321	0.00245	0.00864
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.00578	0.01307	0.06400	0.10397	0.15894	0.03623	0.17317	0.01043	0.04479	0.02526	0.12046	0.00053	0.00188	0.00690	0.01118	0.01710	0.00388	0.01590	0.00112	0.00411	0.00270	0.01106
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.00464	0.03132	0.07187	0.11602	0.17740	0.12737	0.13910	0.03669	0.03598	0.08881	0.09676	0.00085	0.00726	0.01745	0.02819	0.04310	0.02456	0.02543	0.00707	0.00658	0.01712	0.01769
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.00375	0.03095	0.06700	0.10808	0.16527	0.11953	0.11230	0.03443	0.02905	0.08334	0.07812	0.00073	0.00737	0.01670	0.02696	0.04122	0.02597	0.02186	0.00748	0.00565	0.01811	0.01521
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.00372	0.05207	0.09490	0.15271	0.23353	0.20747	0.11139	0.05976	0.02881	0.14466	0.07749	0.00067	0.00845	0.01784	0.02878	0.04400	0.03113	0.01996	0.00897	0.00516	0.02170	0.01389
74	Wat Sa Kaeo	0.00449	0.02946	0.05435	0.08748	0.13377	0.11670	0.13447	0.03361	0.03478	0.08137	0.09355	0.00079	0.00324	0.01092	0.01770	0.02706	0.00774	0.02357	0.00223	0.00610	0.00540	0.01640
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00071	0.00797	0.01616	0.02608	0.03988	0.03375	0.02136	0.00972	0.00552	0.02353	0.01486	0.00007	0.00122	0.00240	0.00386	0.00591	0.00467	0.00220	0.00134	0.00057	0.00325	0.00153
76	Wat Sombun Naram	0.00342	0.02356	0.04145	0.06717	0.10269	0.09627	0.10247	0.02773	0.02650	0.06712	0.07128	0.00043	0.00258	0.00717	0.01160	0.01774	0.00774	0.01281	0.00223	0.00331	0.00540	0.00891
77	Ban Chang Abundant Grace Church	0.00172	0.01850	0.02987	0.04796	0.07335	0.07768	0.05145	0.02237	0.01331	0.05416	0.03579	0.00028	0.00249	0.00592	0.00956	0.01462	0.00848	0.00849	0.00244	0.00220	0.00591	0.00590
78	Wat Samnak Kathon	0.00084	0.01906	0.03007	0.04827	0.07382	0.08079	0.02526	0.02327	0.00653	0.05633	0.01757	0.00013	0.00245	0.00468	0.00754	0.01152	0.00954	0.00385	0.00275	0.00100	0.00665	0.00268
79	Wat Suwan Rangsan	0.00062	0.01297	0.02033	0.03264	0.04991	0.05510	0.01868	0.01587	0.00483	0.03842	0.01299	0.00009	0.00183	0.00345	0.00556	0.00850	0.00715	0.00272	0.00206	0.00070	0.00499	0.00189
80	Wat Nong Bot	0.00057	0.00593	0.01331	0.02148	0.03285	0.02104	0.01708	0.00606	0.00442	0.01467	0.01188	0.00006	0.00087	0.00178	0.00287	0.00440	0.00329	0.00182	0.00095	0.00047	0.00229	0.00127
81	The Shrine of Luang Tia Chak Mak	0.00052	0.00869	0.01525	0.02454	0.03753	0.03591	0.01558	0.01034	0.00403	0.02504	0.01084	0.00008	0.00150	0.00289	0.00465	0.00712	0.00581	0.00247	0.00167	0.00064	0.00405	0.00171
82	Wat Chak Mak	0.00055	0.00935	0.01706	0.02746	0.04199	0.03840	0.01641	0.01106	0.00425	0.02677	0.01142	0.00008	0.00156	0.00300	0.00483	0.00739	0.00605	0.00254	0.00174	0.00066	0.00422	0.00177

Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00064	0.00596	0.01392	0.02248	0.03437	0.02057	0.01930	0.00593	0.00499	0.01434	0.01343	0.00007	0.00060	0.00143	0.00231	0.00353	0.00206	0.00204	0.00059	0.00053	0.00143	0.00142
84	The Shrine of King Taksin the Great (Ban Chang)	0.00064	0.00599	0.01396	0.02254	0.03447	0.02069	0.01930	0.00596	0.00499	0.01443	0.01342	0.00007	0.00061	0.00144	0.00232	0.00355	0.00208	0.00204	0.00060	0.00053	0.00145	0.00142
85	Wat Chonthararam (Phayun)	0.00076	0.00703	0.01644	0.02655	0.04059	0.02424	0.02284	0.00698	0.00591	0.01690	0.01589	0.00008	0.00064	0.00155	0.00251	0.00384	0.00217	0.00228	0.00062	0.00059	0.00151	0.00159
86	Masjid Dawatul Islam	0.00108	0.02136	0.04045	0.06513	0.09960	0.08355	0.03221	0.02406	0.00833	0.05825	0.02241	0.00014	0.00235	0.00464	0.00747	0.01142	0.00902	0.00425	0.00260	0.00110	0.00629	0.00296
87	Chinese shrine at the Buddha Dhamma Foundation	0.00233	0.01805	0.04505	0.07278	0.11129	0.05932	0.06972	0.01709	0.01803	0.04136	0.04850	0.00020	0.00197	0.00447	0.00722	0.01104	0.00692	0.00589	0.00199	0.00152	0.00483	0.00410
88	The Shrine of Luang Tia Ban Chang	0.00129	0.01504	0.03036	0.04893	0.07482	0.05686	0.03867	0.01638	0.01000	0.03964	0.02690	0.00014	0.00182	0.00383	0.00617	0.00943	0.00670	0.00425	0.00193	0.00110	0.00467	0.00296
89	The Shrine of Laoia Guan Yu Ban Chang	0.00156	0.01469	0.03320	0.05358	0.08192	0.05185	0.04665	0.01493	0.01207	0.03616	0.03245	0.00017	0.00177	0.00399	0.00644	0.00985	0.00625	0.00518	0.00180	0.00134	0.00436	0.00360
90	Wat Ban Chang	0.00200	0.01536	0.03845	0.06213	0.09499	0.05037	0.05977	0.01451	0.01546	0.03512	0.04158	0.00021	0.00179	0.00429	0.00692	0.01059	0.00609	0.00619	0.00175	0.00160	0.00425	0.00430
91	Wat Prachummit Bamrung	0.00156	0.00899	0.02550	0.04125	0.06307	0.02641	0.04666	0.00761	0.01207	0.01841	0.03246	0.00007	0.00079	0.00177	0.00285	0.00436	0.00282	0.00223	0.00081	0.00058	0.00197	0.00155
92	The Shrine of Luang Tia Noen Kraprok 1	0.00085	0.01122	0.02344	0.03779	0.05778	0.04161	0.02549	0.01198	0.00659	0.02901	0.01773	0.00006	0.00095	0.00186	0.00299	0.00457	0.00363	0.00168	0.00105	0.00043	0.00253	0.00117
93	The Shrine of Luang Tia Noen Kraprok 2	0.00039	0.01353	0.02062	0.03307	0.05058	0.05810	0.01160	0.01673	0.00300	0.04051	0.00807	0.00003	0.00116	0.00202	0.00324	0.00496	0.00473	0.00104	0.00136	0.00027	0.00330	0.00072
94	Wat Noen Kraprok	0.00029	0.00415	0.00783	0.01261	0.01928	0.01625	0.00865	0.00468	0.00224	0.01133	0.00602	0.00002	0.00052	0.00097	0.00156	0.00239	0.00208	0.00069	0.00060	0.00018	0.00145	0.00048
95	Wat Phudon Nim Sanoh	0.00017	0.00269	0.00539	0.00868	0.01328	0.01023	0.00519	0.00295	0.00134	0.00713	0.00361	0.00002	0.00023	0.00048	0.00078	0.00119	0.00087	0.00051	0.00025	0.00013	0.00061	0.00035
96	Church of Christ Ban Chang	0.00023	0.00278	0.00594	0.00958	0.01465	0.01018	0.00683	0.00293	0.00177	0.00710	0.00475	0.00002	0.00024	0.00050	0.00080	0.00123	0.00088	0.00055	0.00025	0.00014	0.00061	0.00038
97	Anek Kusala Sala (Viharn Sien)	0.00081	0.00741	0.01624	0.02620	0.04007	0.02669	0.02420	0.00769	0.00626	0.01861	0.01684	0.00005	0.00033	0.00090	0.00146	0.00223	0.00100	0.00159	0.00029	0.00041	0.00069	0.00111
98	Wat Yan Nasangwararam	0.00085	0.00598	0.01473	0.02380	0.03639	0.02109	0.02552	0.00607	0.00660	0.01470	0.01775	0.00006	0.00037	0.00103	0.00167	0.00255	0.00111	0.00184	0.00032	0.00048	0.00077	0.00128
99	Sirisirirak Monastery	0.00061	0.00748	0.01395	0.02245	0.03434	0.02949	0.01816	0.00849	0.00470	0.02056	0.01264	0.00004	0.00047	0.00100	0.00162	0.00247	0.00169	0.00118	0.00049	0.00030	0.00118	0.00082
100	Anan Buraparam Meditation Center	0.00113	0.00669	0.01501	0.02433	0.03720	0.02424	0.03390	0.00698	0.00877	0.01690	0.02359	0.00005	0.00045	0.00109	0.00176	0.00268	0.00154	0.00158	0.00044	0.00041	0.00107	0.00110
101	Wat Map Fakthong	0.00070	0.00537	0.01347	0.02177	0.03329	0.01894	0.02104	0.00546	0.00544	0.01321	0.01464	0.00005	0.00032	0.00083	0.00134	0.00205	0.00100	0.00138	0.00029	0.00036	0.00070	0.00096
102	Khao Chi Chan Image of Lord Buddha	0.00015	0.00180	0.00389	0.00628	0.00960	0.00656	0.00458	0.00189	0.00119	0.00458	0.00319	0.00001	0.00011	0.00025	0.00040	0.00061	0.00038	0.00034	0.00011	0.00009	0.00026	0.00023
103	Wat Khao Chi Chan	0.00016	0.00347	0.00575	0.00924	0.01413	0.01470	0.00486	0.00423	0.00126	0.01025	0.00338	0.00001	0.00025	0.00047	0.00076	0.00116	0.00097	0.00038	0.00028	0.00010	0.00068	0.00026
104	Rat Samakkhi Temple	0.00168	0.01087	0.02928	0.04734	0.07239	0.03353	0.05036	0.00966	0.01303	0.02338	0.03504	0.00011	0.00068	0.00183	0.00296	0.00453	0.00208	0.00317	0.00060	0.00082	0.00145	0.00220
105	The Shrine of Chao Mae Kuan Im	0.00171	0.01106	0.02978	0.04815	0.07362	0.03410	0.05122	0.00982	0.01325	0.02378	0.03563	0.00010	0.00064	0.00172	0.00279	0.00426	0.00196	0.00298	0.00056	0.00077	0.00137	0.00207
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00188	0.01231	0.03296	0.05329	0.08149	0.03813	0.05631	0.01098	0.01456	0.02659	0.03917	0.00011	0.00071	0.00194	0.00313	0.00479	0.00217	0.00338	0.00062	0.00087	0.00151	0.00235

Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00069	0.00520	0.01312	0.02120	0.03242	0.01694	0.02065	0.00488	0.00534	0.01181	0.01436	0.00008	0.00059	0.00151	0.00244	0.00373	0.00188	0.00245	0.00054	0.00063	0.00131	0.00170
108	KM.8 Meditation Center	0.00114	0.00765	0.02023	0.03271	0.05001	0.02395	0.03400	0.00690	0.00880	0.01670	0.02366	0.00009	0.00060	0.00155	0.00251	0.00383	0.00190	0.00255	0.00055	0.00066	0.00132	0.00177
109	Wat Rangsee Sunthorn (KM.5)	0.00059	0.00453	0.01133	0.01831	0.02800	0.01484	0.01762	0.00428	0.00456	0.01035	0.01225	0.00008	0.00057	0.00147	0.00237	0.00362	0.00181	0.00239	0.00052	0.00062	0.00126	0.00166
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00021	0.00247	0.00535	0.00864	0.01320	0.00894	0.00639	0.00257	0.00165	0.00623	0.00445	0.00001	0.00010	0.00022	0.00036	0.00055	0.00038	0.00026	0.00011	0.00007	0.00026	0.00018
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00025	0.00271	0.00601	0.00970	0.01484	0.01018	0.00751	0.00293	0.00194	0.00710	0.00523	0.00001	0.00014	0.00029	0.00047	0.00072	0.00052	0.00031	0.00015	0.00008	0.00036	0.00022
112	Wat Tung Prong	0.00020	0.00240	0.00484	0.00781	0.01194	0.00925	0.00594	0.00266	0.00154	0.00645	0.00414	0.00001	0.00011	0.00023	0.00037	0.00056	0.00040	0.00025	0.00012	0.00007	0.00028	0.00018
113	Khao Phlu Ta Luang Meditation Center	0.00011	0.00140	0.00276	0.00444	0.00679	0.00534	0.00319	0.00154	0.00082	0.00372	0.00222	0.00001	0.00006	0.00013	0.00021	0.00031	0.00021	0.00015	0.00006	0.00004	0.00015	0.00010
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00203	0.00753	0.02205	0.03583	0.05478	0.02650	0.06090	0.00763	0.01575	0.01848	0.04237	0.00019	0.00075	0.00261	0.00424	0.00648	0.00169	0.00580	0.00049	0.00150	0.00118	0.00404
115	Wat Khao Bai Si Santitham	0.00237	0.01012	0.03134	0.05080	0.07767	0.03124	0.07101	0.00900	0.01837	0.02178	0.04940	0.00019	0.00089	0.00283	0.00458	0.00700	0.00227	0.00583	0.00065	0.00151	0.00158	0.00406
116	Welu Amphawan Vipassana Office	0.00168	0.00983	0.02547	0.04123	0.06304	0.03315	0.05039	0.00955	0.01303	0.02311	0.03505	0.00015	0.00085	0.00243	0.00394	0.00602	0.00248	0.00449	0.00072	0.00116	0.00173	0.00312
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00081	0.00669	0.01634	0.02639	0.04035	0.02239	0.02440	0.00645	0.00631	0.01561	0.01698	0.00006	0.00051	0.00125	0.00202	0.00309	0.00170	0.00188	0.00049	0.00049	0.00119	0.00131
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00078	0.00499	0.01289	0.02085	0.03188	0.01637	0.02324	0.00471	0.00601	0.01141	0.01616	0.00008	0.00059	0.00152	0.00245	0.00375	0.00190	0.00244	0.00055	0.00063	0.00133	0.00170
119	Samaesarn Pattanakarn Church	0.00071	0.00527	0.01204	0.01944	0.02972	0.01849	0.02138	0.00533	0.00553	0.01289	0.01488	0.00007	0.00051	0.00127	0.00205	0.00313	0.00166	0.00197	0.00048	0.00051	0.00116	0.00137
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00066	0.00504	0.01162	0.01875	0.02867	0.01757	0.01975	0.00506	0.00511	0.01225	0.01374	0.00004	0.00039	0.00089	0.00144	0.00221	0.00133	0.00123	0.00038	0.00032	0.00093	0.00085
121	Wat Chong Samaesarn	0.00056	0.00400	0.00877	0.01416	0.02166	0.01630	0.01671	0.00469	0.00432	0.01136	0.01162	0.00003	0.00033	0.00073	0.00118	0.00180	0.00118	0.00091	0.00034	0.00024	0.00082	0.00063
122	Viharn Luang Por Dam	0.00042	0.00403	0.00899	0.01451	0.02218	0.01432	0.01261	0.00413	0.00326	0.00999	0.00877	0.00002	0.00026	0.00057	0.00093	0.00141	0.00092	0.00073	0.00026	0.00019	0.00064	0.00051
123	The Shrine of King Taksin the Great (Samaesarn)	0.00057	0.00526	0.01226	0.01980	0.03028	0.01816	0.01697	0.00523	0.00439	0.01266	0.01181	0.00004	0.00041	0.00095	0.00153	0.00233	0.00143	0.00128	0.00041	0.00033	0.00100	0.00089
124	Thai Island and Sea Natural History Museum	0.00053	0.00513	0.01177	0.01899	0.02904	0.01795	0.01574	0.00517	0.00407	0.01252	0.01095	0.00004	0.00040	0.00091	0.00147	0.00225	0.00141	0.00121	0.00040	0.00031	0.00098	0.00084
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00061	0.00491	0.01210	0.01955	0.02989	0.01629	0.01837	0.00469	0.00475	0.01136	0.01278	0.00004	0.00042	0.00097	0.00157	0.00240	0.00147	0.00131	0.00042	0.00034	0.00103	0.00091

Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00062	0.00514	0.01250	0.02018	0.03086	0.01722	0.01857	0.00496	0.00480	0.01201	0.01292	0.00004	0.00042	0.00098	0.00158	0.00241	0.00147	0.00133	0.00042	0.00034	0.00102	0.00093
127	Eastern-Nong Muang Community Health Service Center	0.00546	0.01957	0.06337	0.10289	0.15729	0.07550	0.16361	0.02175	0.04232	0.05265	0.11382	0.00058	0.00464	0.01142	0.01845	0.02821	0.01544	0.01727	0.00445	0.00447	0.01077	0.01202
128	Phala Subdistrict Health Promotion Hospital	0.00101	0.00884	0.02106	0.03401	0.05201	0.03011	0.03022	0.00867	0.00782	0.02099	0.02102	0.00010	0.00091	0.00212	0.00343	0.00524	0.00316	0.00292	0.00091	0.00076	0.00220	0.00203
129	Ban Chang Hospital	0.00036	0.00581	0.01149	0.01851	0.02830	0.02220	0.01067	0.00640	0.00276	0.01548	0.00742	0.00004	0.00064	0.00128	0.00206	0.00314	0.00244	0.00122	0.00070	0.00031	0.00170	0.00085
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00222	0.00775	0.02416	0.03927	0.06003	0.02858	0.06653	0.00823	0.01721	0.01993	0.04628	0.00023	0.00103	0.00332	0.00538	0.00822	0.00264	0.00689	0.00076	0.00178	0.00184	0.00479
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.00309	0.02529	0.06152	0.09937	0.15194	0.08479	0.09243	0.02442	0.02391	0.05912	0.06430	0.00054	0.00233	0.00763	0.01236	0.01889	0.00581	0.01606	0.00167	0.00415	0.00405	0.01117
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.00491	0.02740	0.05394	0.08752	0.13380	0.11425	0.14714	0.03291	0.03806	0.07966	0.10236	0.00060	0.00306	0.00919	0.01487	0.02274	0.00844	0.01789	0.00243	0.00463	0.00588	0.01245
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00061	0.02098	0.03257	0.05226	0.07993	0.08946	0.01822	0.02576	0.00471	0.06237	0.01268	0.00010	0.00232	0.00429	0.00691	0.01057	0.00916	0.00313	0.00264	0.00081	0.00639	0.00218
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00135	0.02473	0.03822	0.06133	0.09380	0.10559	0.04051	0.03041	0.01048	0.07362	0.02818	0.00022	0.00250	0.00544	0.00877	0.01341	0.00906	0.00651	0.00261	0.00168	0.00632	0.00453
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00059	0.00905	0.01446	0.02322	0.03551	0.03841	0.01764	0.01106	0.00456	0.02678	0.01227	0.00009	0.00142	0.00279	0.00450	0.00688	0.00544	0.00255	0.00157	0.00066	0.00379	0.00178
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00073	0.00680	0.01583	0.02556	0.03908	0.02351	0.02183	0.00677	0.00565	0.01639	0.01519	0.00007	0.00064	0.00153	0.00247	0.00378	0.00217	0.00222	0.00062	0.00057	0.00151	0.00154
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00031	0.01032	0.01577	0.02530	0.03869	0.04428	0.00925	0.01275	0.00239	0.03087	0.00643	0.00003	0.00094	0.00164	0.00263	0.00403	0.00383	0.00086	0.00110	0.00022	0.00267	0.00060
138	Phudon Huai Mahat Community Health Service Unit	0.00021	0.00285	0.00586	0.00945	0.01445	0.01064	0.00614	0.00306	0.00159	0.00742	0.00427	0.00002	0.00025	0.00051	0.00083	0.00126	0.00092	0.00055	0.00026	0.00014	0.00064	0.00038
139	Wat Yan Nasangwararam Hospital	0.00077	0.00686	0.01405	0.02272	0.03473	0.02623	0.02320	0.00755	0.00600	0.01829	0.01614	0.00006	0.00035	0.00095	0.00154	0.00236	0.00107	0.00167	0.00031	0.00043	0.00074	0.00116
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00076	0.00672	0.01402	0.02265	0.03464	0.02574	0.02283	0.00741	0.00591	0.01795	0.01588	0.00006	0.00035	0.00095	0.00154	0.00236	0.00106	0.00168	0.00031	0.00043	0.00074	0.00117
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00030	0.01043	0.01623	0.02604	0.03983	0.04441	0.00896	0.01279	0.00232	0.03097	0.00623	0.00002	0.00049	0.00089	0.00144	0.00220	0.00194	0.00061	0.00056	0.00016	0.00136	0.00042

Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00179	0.01204	0.03190	0.05158	0.07886	0.03766	0.05374	0.01085	0.01390	0.02626	0.03739	0.00011	0.00071	0.00192	0.00311	0.00475	0.00218	0.00333	0.00063	0.00086	0.00152	0.00231
143	Sattahip Hospital KM.10	0.00128	0.01022	0.02521	0.04073	0.06227	0.03389	0.03833	0.00976	0.00991	0.02363	0.02666	0.00009	0.00056	0.00150	0.00243	0.00371	0.00171	0.00259	0.00049	0.00067	0.00119	0.00180
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00056	0.00386	0.00865	0.01396	0.02135	0.01585	0.01675	0.00456	0.00433	0.01105	0.01166	0.00003	0.00032	0.00072	0.00116	0.00177	0.00116	0.00089	0.00033	0.00023	0.00081	0.00062
145	Village No. 1 Ban Sakulthong	0.00043	0.00650	0.01311	0.02112	0.03230	0.02523	0.01292	0.00727	0.00334	0.01759	0.00899	0.00006	0.00116	0.00222	0.00357	0.00546	0.00454	0.00181	0.00131	0.00047	0.00316	0.00126
146	Village No. 2, Ban Kilo 16	0.00168	0.01156	0.03029	0.04897	0.07488	0.03652	0.05027	0.01052	0.01300	0.02546	0.03497	0.00015	0.00155	0.00347	0.00561	0.00857	0.00553	0.00442	0.00159	0.00114	0.00385	0.00308
147	Village No. 4, Ban Tung Prong	0.00135	0.01339	0.02861	0.04614	0.07055	0.04897	0.04042	0.01410	0.01045	0.03415	0.02812	0.00018	0.00240	0.00496	0.00800	0.01223	0.00893	0.00528	0.00257	0.00136	0.00623	0.00367
148	Village No. 5, Phala Subdistrict	0.00137	0.01123	0.02739	0.04425	0.06766	0.03757	0.04090	0.01082	0.01058	0.02619	0.02845	0.00014	0.00174	0.00367	0.00592	0.00905	0.00644	0.00407	0.00186	0.00105	0.00449	0.00283
149	Village No. 6, Ban Takat	0.00099	0.00899	0.02113	0.03411	0.05216	0.03088	0.02963	0.00889	0.00766	0.02153	0.02061	0.00009	0.00089	0.00205	0.00330	0.00505	0.00309	0.00277	0.00089	0.00072	0.00215	0.00193
150	Village No. 7, Ban Khlong Sai	0.00131	0.01101	0.02667	0.04307	0.06586	0.03702	0.03936	0.01066	0.01018	0.02581	0.02738	0.00012	0.00144	0.00312	0.00503	0.00770	0.00522	0.00372	0.00150	0.00096	0.00364	0.00259
151	Village No. 1 Ban Sam Nak Thon	0.00363	0.01594	0.04698	0.07618	0.11646	0.06736	0.10862	0.01940	0.02809	0.04697	0.07556	0.00037	0.00292	0.00725	0.01171	0.01791	0.00961	0.01116	0.00277	0.00289	0.00670	0.00776
152	Village No. 2, Ban Chak Mak	0.00073	0.01523	0.02421	0.03886	0.05944	0.06486	0.02177	0.01868	0.00563	0.04522	0.01514	0.00011	0.00198	0.00384	0.00618	0.00946	0.00766	0.00333	0.00221	0.00086	0.00534	0.00231
153	Village No. 3, Ban Sa Kaeo	0.01888	0.03624	0.19925	0.32390	0.49514	0.14787	0.56538	0.04259	0.14624	0.10311	0.39330	0.00160	0.00674	0.02245	0.03638	0.05562	0.01630	0.04807	0.00470	0.01243	0.01137	0.03344
154	Sa Kaeo Community 1	0.00648	0.03045	0.06942	0.11283	0.17249	0.12340	0.19406	0.03554	0.05019	0.08604	0.13499	0.00082	0.00342	0.01147	0.01859	0.02842	0.00819	0.02470	0.00236	0.00639	0.00571	0.01718
155	Sa Kaeo Community 2	0.00460	0.02516	0.07316	0.11840	0.18103	0.07198	0.13771	0.02073	0.03562	0.05019	0.09580	0.00050	0.00212	0.00705	0.01141	0.01745	0.00517	0.01503	0.00149	0.00389	0.00360	0.01046
156	Village No. 4, Ban Khlong Bang Phai	0.00510	0.01278	0.05833	0.09473	0.14481	0.02931	0.15269	0.00844	0.03950	0.02044	0.10622	0.00039	0.00152	0.00527	0.00854	0.01306	0.00346	0.01165	0.00100	0.00301	0.00241	0.00811
157	Village No. 5, Ban Yai Ra	0.00053	0.00496	0.01156	0.01867	0.02854	0.01712	0.01599	0.00493	0.00414	0.01194	0.01112	0.00005	0.00074	0.00151	0.00243	0.00372	0.00277	0.00155	0.00080	0.00040	0.00193	0.00107
158	Village No. 6, Ban Khao Khrok	0.00991	0.02395	0.11201	0.18192	0.27812	0.08072	0.29671	0.02325	0.07675	0.05628	0.20641	0.00077	0.00412	0.01215	0.01967	0.03007	0.01163	0.02320	0.00335	0.00600	0.00811	0.01614
159	Village no. 7, Ban Nong Takhian	0.00057	0.01007	0.01730	0.02784	0.04258	0.04176	0.01721	0.01203	0.00445	0.02912	0.01197	0.00009	0.00176	0.00336	0.00541	0.00827	0.00683	0.00279	0.00197	0.00072	0.00476	0.00194
160	Village No. 8, Ban Cherng Khao	0.00096	0.05688	0.08729	0.14006	0.21421	0.24354	0.02885	0.07014	0.00746	0.16981	0.02007	0.00015	0.00771	0.01276	0.02051	0.03136	0.03206	0.00444	0.00923	0.00115	0.02235	0.00309
161	Eastern-Nong Muang Community	0.00143	0.01556	0.03380	0.05452	0.08337	0.05926	0.04277	0.01707	0.01106	0.04132	0.02975	0.00021	0.00300	0.00614	0.00990	0.01514	0.01128	0.00630	0.00325	0.00163	0.00786	0.00438
162	Wat Khiri Pawanaram Community	0.00077	0.04460	0.06894	0.11064	0.16921	0.19046	0.02318	0.05486	0.00600	0.13280	0.01613	0.00013	0.00620	0.01033	0.01660	0.02538	0.02571	0.00383	0.00740	0.00099	0.01792	0.00267
163	Ban Chang-Phala Community	0.00069	0.04363	0.06600	0.10587	0.16192	0.18781	0.02081	0.05409	0.00538	0.13095	0.01448	0.00012	0.00613	0.01015	0.01631	0.02495	0.02546	0.00358	0.00733	0.00093	0.01775	0.00249
164	Ruam Sompong Community	0.00074	0.00895	0.01838	0.02963	0.04531	0.03389	0.02216	0.00976	0.00573	0.02363	0.01541	0.00013	0.00129	0.00298	0.00480	0.00735	0.00449	0.00404	0.00129	0.00104	0.00313	0.00281
165	Ming Mongkol Community	0.00070	0.03421	0.05392	0.08655	0.13237	0.14505	0.02103	0.04178	0.00544	0.10114	0.01463	0.00010	0.00297	0.00521	0.00838	0.01282	0.01207	0.00285	0.00348	0.00074	0.00841	0.00198
166	Jor Koo Community	0.00074	0.03432	0.05383	0.08641	0.13216	0.14574	0.02218	0.04198	0.00574	0.10162	0.01543	0.00010	0.00307	0.00537	0.00863	0.01320	0.01250	0.00285	0.00360	0.00074	0.00871	0.00199

Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00068	0.05137	0.07901	0.12678	0.19389	0.21980	0.02043	0.06330	0.00528	0.15326	0.01421	0.00009	0.00350	0.00596	0.00957	0.01464	0.01440	0.00264	0.00415	0.00068	0.01004	0.00184
168	Thep Chinda Community	0.00078	0.03188	0.05149	0.08269	0.12646	0.13386	0.02326	0.03855	0.00602	0.09334	0.01618	0.00010	0.00288	0.00515	0.00829	0.01268	0.01160	0.00314	0.00334	0.00081	0.00809	0.00219
169	Health Park Community	0.00218	0.00821	0.02431	0.03949	0.06037	0.02929	0.06532	0.00844	0.01690	0.02042	0.04544	0.00017	0.00138	0.00339	0.00548	0.00838	0.00460	0.00512	0.00132	0.00132	0.00321	0.00356
170	Wat Ban Chang Community	0.00197	0.01609	0.03935	0.06356	0.09719	0.05370	0.05900	0.01547	0.01526	0.03745	0.04104	0.00020	0.00182	0.00427	0.00689	0.01054	0.00628	0.00595	0.00181	0.00154	0.00438	0.00414
171	Dong Dang Community	0.00079	0.02898	0.04868	0.07823	0.11965	0.11973	0.02361	0.03449	0.00611	0.08349	0.01643	0.00011	0.00258	0.00476	0.00766	0.01172	0.01023	0.00339	0.00295	0.00088	0.00714	0.00236
172	Night Market Community	0.00179	0.01346	0.03286	0.05308	0.08117	0.04501	0.05373	0.01296	0.01390	0.03138	0.03738	0.00019	0.00158	0.00383	0.00618	0.00945	0.00532	0.00564	0.00153	0.00146	0.00371	0.00392
173	Ruam Mitr Community	0.00256	0.01819	0.04707	0.07608	0.11633	0.05806	0.07680	0.01672	0.01986	0.04048	0.05342	0.00020	0.00197	0.00453	0.00731	0.01118	0.00686	0.00611	0.00198	0.00158	0.00478	0.00425
174	Ban Chang - Noen Kraprok Community	0.00197	0.00709	0.02415	0.03919	0.05991	0.02384	0.05893	0.00687	0.01524	0.01662	0.04099	0.00013	0.00117	0.00277	0.00448	0.00684	0.00402	0.00392	0.00116	0.00101	0.00281	0.00272
175	Dao Pitak Community	0.00119	0.01215	0.02455	0.03957	0.06051	0.04592	0.03561	0.01323	0.00921	0.03202	0.02477	0.00012	0.00148	0.00314	0.00506	0.00774	0.00546	0.00353	0.00157	0.00091	0.00381	0.00246
176	Taiwa Community	0.00040	0.01651	0.02514	0.04033	0.06169	0.07087	0.01201	0.02041	0.00311	0.04942	0.00835	0.00004	0.00128	0.00222	0.00357	0.00545	0.00519	0.00115	0.00150	0.00030	0.00362	0.00080
177	East Ban Noen Kraprok Community, Prachummit	0.00157	0.00837	0.02463	0.03986	0.06095	0.02366	0.04693	0.00681	0.01214	0.01650	0.03265	0.00007	0.00075	0.00170	0.00274	0.00419	0.00264	0.00222	0.00076	0.00057	0.00184	0.00154
178	Ban Noen Kraprok Community	0.00035	0.00773	0.01172	0.01881	0.02876	0.03322	0.01050	0.00957	0.00272	0.02316	0.00730	0.00003	0.00087	0.00152	0.00245	0.00374	0.00350	0.00085	0.00101	0.00022	0.00244	0.00059
179	Nong Yai Community	0.00032	0.01404	0.02287	0.03675	0.05621	0.06001	0.00971	0.01728	0.00251	0.04184	0.00675	0.00004	0.00113	0.00199	0.00320	0.00489	0.00457	0.00112	0.00132	0.00029	0.00319	0.00078
180	Village No. 1, Pan Din Tai	0.00149	0.00837	0.02402	0.03887	0.05943	0.02426	0.04458	0.00699	0.01153	0.01692	0.03102	0.00007	0.00072	0.00162	0.00262	0.00400	0.00253	0.00211	0.00073	0.00055	0.00176	0.00147
181	Village No. 2, Ban Prachummit	0.00129	0.00592	0.01376	0.02237	0.03420	0.02070	0.03857	0.00596	0.00998	0.01444	0.02683	0.00011	0.00090	0.00217	0.00350	0.00535	0.00306	0.00315	0.00088	0.00082	0.00213	0.00219
182	Village No. 3, Ban Noen Samre	0.00037	0.00688	0.01291	0.02079	0.03179	0.02702	0.01099	0.00778	0.00284	0.01884	0.00764	0.00006	0.00148	0.00272	0.00438	0.00670	0.00587	0.00191	0.00169	0.00049	0.00410	0.00133
183	Village No. 4, Ban Phayun	0.00078	0.00858	0.01755	0.02828	0.04325	0.03219	0.02351	0.00927	0.00608	0.02244	0.01635	0.00013	0.00123	0.00282	0.00456	0.00697	0.00429	0.00379	0.00124	0.00098	0.00299	0.00263
184	Village No. 6, Ban Noen Kraprok	0.00023	0.00327	0.00667	0.01075	0.01644	0.01230	0.00679	0.00354	0.00176	0.00858	0.00472	0.00002	0.00035	0.00069	0.00112	0.00171	0.00133	0.00065	0.00038	0.00017	0.00093	0.00045
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00022	0.00290	0.00604	0.00974	0.01490	0.01078	0.00652	0.00311	0.00169	0.00752	0.00453	0.00002	0.00025	0.00053	0.00085	0.00130	0.00094	0.00057	0.00027	0.00015	0.00066	0.00040
186	Village No. 11, Ban Map Fakthong	0.00357	0.01646	0.04378	0.07104	0.10861	0.06522	0.10696	0.01879	0.02767	0.04548	0.07441	0.00031	0.00192	0.00527	0.00852	0.01302	0.00582	0.00927	0.00168	0.00240	0.00406	0.00645
187	Village No. 13, Ban Nong Phakkut	0.00061	0.01264	0.02185	0.03513	0.05373	0.05383	0.01833	0.01550	0.00474	0.03754	0.01275	0.00009	0.00136	0.00276	0.00444	0.00680	0.00511	0.00278	0.00147	0.00072	0.00357	0.00193
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00124	0.00700	0.02006	0.03245	0.04962	0.02669	0.03717	0.00769	0.00961	0.01861	0.02586	0.00005	0.00032	0.00085	0.00138	0.00210	0.00102	0.00142	0.00029	0.00037	0.00071	0.00099
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00027	0.01522	0.02310	0.03706	0.05668	0.06546	0.00823	0.01885	0.00213	0.04564	0.00573	0.00002	0.00045	0.00084	0.00135	0.00206	0.00179	0.00061	0.00051	0.00016	0.00125	0.00043
190	Village No. 6 (Ban Khao Krating Community)	0.00030	0.00632	0.00964	0.01546	0.02365	0.02711	0.00901	0.00781	0.00233	0.01890	0.00627	0.00001	0.00043	0.00077	0.00123	0.00189	0.00174	0.00045	0.00050	0.00012	0.00122	0.00031

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Table 5.2-64 Forecasted results of Naphthalene emission, operation phase

Area		Concentration value of Naphthalene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00036	0.01513	0.02347	0.03766	0.05760	0.06451	0.01081	0.01858	0.00280	0.04498	0.00752	0.00003	0.00087	0.00153	0.00246	0.00377	0.00351	0.00088	0.00101	0.00023	0.00245	0.00061
192	Village No. 11 (Ban Khong Wanphen Community)	0.00197	0.00739	0.02516	0.04081	0.06239	0.02264	0.05913	0.00652	0.01530	0.01579	0.04114	0.00010	0.00061	0.00169	0.00273	0.00417	0.00183	0.00301	0.00053	0.00078	0.00127	0.00209
193	Village No. 1, Ban Phlu Ta Luang	0.00170	0.01092	0.02950	0.04770	0.07294	0.03357	0.05095	0.00967	0.01318	0.02341	0.03545	0.00011	0.00069	0.00186	0.00300	0.00459	0.00214	0.00318	0.00062	0.00082	0.00149	0.00221
194	Village No. 2, Ban Khalot	0.00161	0.01083	0.02870	0.04640	0.07095	0.03387	0.04836	0.00975	0.01251	0.02361	0.03365	0.00010	0.00061	0.00171	0.00276	0.00422	0.00184	0.00304	0.00053	0.00079	0.00128	0.00212
195	Village No. 3, Ban Khlong Phai	0.00106	0.00734	0.01706	0.02754	0.04210	0.02546	0.03180	0.00733	0.00822	0.01775	0.02212	0.00012	0.00064	0.00185	0.00299	0.00458	0.00184	0.00346	0.00053	0.00090	0.00128	0.00241
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00153	0.00657	0.01695	0.02754	0.04210	0.02306	0.04584	0.00664	0.01186	0.01608	0.03189	0.00011	0.00055	0.00164	0.00266	0.00407	0.00150	0.00321	0.00043	0.00083	0.00105	0.00223
197	Village No. 5, Ban Khao Bai Si	0.00166	0.00674	0.01871	0.03040	0.04647	0.02212	0.04981	0.00637	0.01288	0.01542	0.03465	0.00015	0.00076	0.00227	0.00367	0.00561	0.00209	0.00440	0.00060	0.00114	0.00146	0.00306
198	Village No. 6, Ban Khao Tabaek	0.00112	0.00753	0.01995	0.03226	0.04932	0.02355	0.03362	0.00678	0.00870	0.01642	0.02339	0.00008	0.00057	0.00148	0.00239	0.00365	0.00182	0.00241	0.00052	0.00062	0.00127	0.00168
199	Village No. 7, Ban Nong Ya Noi	0.00071	0.00528	0.01342	0.02169	0.03316	0.01708	0.02137	0.00492	0.00553	0.01191	0.01486	0.00008	0.00059	0.00151	0.00244	0.00372	0.00188	0.00244	0.00054	0.00063	0.00131	0.00169
200	Village No. 8, Ban Nong Ya	0.00041	0.00961	0.01449	0.02325	0.03556	0.04140	0.01240	0.01192	0.00321	0.02887	0.00863	0.00002	0.00059	0.00104	0.00167	0.00256	0.00237	0.00060	0.00068	0.00016	0.00165	0.00042
201	Ban Nong Krachong Community	0.00080	0.00464	0.01312	0.02123	0.03246	0.01678	0.02396	0.00483	0.00620	0.01170	0.01667	0.00006	0.00048	0.00118	0.00190	0.00291	0.00162	0.00175	0.00047	0.00045	0.00113	0.00122
Standard*		-											3*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
** Naphthalene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

Subject to changes and approval by the Government of Thailand

2.9) Styrene

From the Styrene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. Most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and all had 1-year average Cmax values within the foreign standard reference criteria for Styrene concentrations that allow for long-term exposure without affecting health (RfC for Styrene is equal to 1,000 micrograms per cubic meter)

When comparing the Cmax of Styrene 24-hour average and 1-year average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest 24-hour average Cmax value, comprising 0.47313 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 0.01155 micrograms per cubic meter, respectively. The 1-year average Cmax found scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest concentration value, comprising 0.04115 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.00121 micrograms per cubic meter.

In this regard, when considering the Styrene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-65 and Addendum 5-3, item 14, Styrene concentration contours (Figure 14-1 to Figure 14-22), it was found that all Styrene concentrations were in accordance with standard criteria.

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.01155	0.11016	0.16769	0.26903	0.41146	0.47313	0.34556	0.13626	0.08938	0.32990	0.24039	0.00121	0.00854	0.01661	0.02692	0.04115	0.03551	0.03613	0.01023	0.00935	0.02476	0.02514
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00142	0.00926	0.02486	0.04020	0.06146	0.02861	0.04262	0.00824	0.01102	0.01995	0.02965	0.00011	0.00063	0.00176	0.00285	0.00436	0.00185	0.00320	0.00053	0.00083	0.00129	0.00222
2	Wat Phala School	0.00055	0.00463	0.01120	0.01809	0.02767	0.01560	0.01649	0.00449	0.00427	0.01088	0.01147	0.00006	0.00051	0.00121	0.00195	0.00298	0.00176	0.00169	0.00051	0.00044	0.00123	0.00118
3	Phala Subdistrict Municipality Child Development Center	0.00050	0.00428	0.01024	0.01654	0.02529	0.01453	0.01481	0.00418	0.00383	0.01013	0.01030	0.00005	0.00048	0.00113	0.00183	0.00279	0.00166	0.00158	0.00048	0.00041	0.00116	0.00110
4	Ban Khlong Sai School	0.00062	0.00591	0.01369	0.02210	0.03379	0.02053	0.01867	0.00591	0.00483	0.01431	0.01299	0.00005	0.00051	0.00115	0.00186	0.00284	0.00179	0.00151	0.00051	0.00039	0.00125	0.00105
5	Rayong English Program School	0.00071	0.00560	0.01385	0.02237	0.03421	0.01855	0.02112	0.00534	0.00546	0.01293	0.01469	0.00006	0.00058	0.00131	0.00211	0.00323	0.00206	0.00169	0.00059	0.00044	0.00143	0.00118
6	Rayong Garden International School	0.00067	0.00568	0.01369	0.02212	0.03382	0.01920	0.02003	0.00553	0.00518	0.01339	0.01393	0.00006	0.00057	0.00128	0.00207	0.00317	0.00201	0.00167	0.00058	0.00043	0.00140	0.00116
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00037	0.00599	0.01158	0.01865	0.02851	0.02316	0.01105	0.00667	0.00286	0.01615	0.00769	0.00005	0.00108	0.00200	0.00321	0.00491	0.00426	0.00145	0.00123	0.00037	0.00297	0.00101
8	Wat Khiri Pawanaram School	0.00037	0.00569	0.01108	0.01785	0.02730	0.02194	0.01096	0.00632	0.00283	0.01530	0.00762	0.00005	0.00097	0.00181	0.00291	0.00445	0.00379	0.00138	0.00109	0.00036	0.00265	0.00096
9	Ban Khlong Bang Phai School	0.00114	0.00793	0.02064	0.03337	0.05103	0.02519	0.03395	0.00726	0.00878	0.01757	0.02362	0.00009	0.00049	0.00145	0.00235	0.00360	0.00135	0.00282	0.00039	0.00073	0.00094	0.00196
10	Pattanavechsuksa School	0.00318	0.01002	0.03946	0.06402	0.09788	0.01796	0.09523	0.00517	0.02463	0.01253	0.06625	0.00024	0.00096	0.00326	0.00529	0.00808	0.00228	0.00707	0.00066	0.00183	0.00159	0.00492
11	Pattanavech College	0.00266	0.00814	0.03259	0.05288	0.08085	0.01735	0.07943	0.00500	0.02054	0.01210	0.05525	0.00020	0.00085	0.00282	0.00457	0.00699	0.00206	0.00603	0.00059	0.00156	0.00144	0.00420
12	Saeng Song La Child Development Center 3	0.00201	0.01500	0.03202	0.05164	0.07896	0.05492	0.06005	0.01582	0.01553	0.03830	0.04177	0.00034	0.00148	0.00483	0.00783	0.01197	0.00369	0.01017	0.00106	0.00263	0.00257	0.00708
13	Wat Sa Kaeo School	0.00229	0.01537	0.03235	0.05217	0.07978	0.05676	0.06843	0.01635	0.01770	0.03958	0.04760	0.00039	0.00158	0.00535	0.00867	0.01326	0.00376	0.01159	0.00108	0.00300	0.00262	0.00806
14	Wat Sombun Naram School (Tem Rat Memorial)	0.00179	0.01294	0.02434	0.03942	0.06027	0.05396	0.05364	0.01554	0.01387	0.03763	0.03731	0.00025	0.00152	0.00417	0.00675	0.01032	0.00462	0.00733	0.00133	0.00190	0.00322	0.00510
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.00179	0.01294	0.02434	0.03942	0.06027	0.05396	0.05364	0.01554	0.01387	0.03763	0.03731	0.00025	0.00152	0.00417	0.00675	0.01032	0.00462	0.00733	0.00133	0.00190	0.00322	0.00510
16	Sajjaseuksa School	0.00033	0.01229	0.01911	0.03067	0.04691	0.05234	0.00994	0.01507	0.00257	0.03650	0.00692	0.00005	0.00157	0.00275	0.00442	0.00677	0.00635	0.00152	0.00183	0.00039	0.00443	0.00106
17	Ban Chang District Center for Non-Formal and Informal Education	0.00057	0.01538	0.02456	0.03944	0.06032	0.06485	0.01692	0.01868	0.00438	0.04522	0.01177	0.00008	0.00168	0.00313	0.00505	0.00772	0.00664	0.00233	0.00191	0.00060	0.00463	0.00162
18	Wat Suwan Rangsan Community School	0.00040	0.01013	0.01577	0.02532	0.03872	0.04312	0.01202	0.01242	0.00311	0.03007	0.00836	0.00006	0.00126	0.00234	0.00376	0.00575	0.00495	0.00173	0.00143	0.00045	0.00345	0.00120

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00036	0.00741	0.01161	0.01864	0.02851	0.03147	0.01067	0.00906	0.00276	0.02194	0.00742	0.00005	0.00104	0.00197	0.00317	0.00485	0.00408	0.00156	0.00118	0.00040	0.00285	0.00108
20	Wat Samnak Kathon School	0.00047	0.01058	0.01667	0.02677	0.04094	0.04484	0.01403	0.01291	0.00363	0.03126	0.00976	0.00007	0.00138	0.00263	0.00424	0.00648	0.00536	0.00216	0.00154	0.00056	0.00374	0.00151
21	Ban Sam Nak Thon Child Development Center	0.00046	0.01020	0.01607	0.02580	0.03945	0.04326	0.01363	0.01246	0.00352	0.03017	0.00948	0.00007	0.00137	0.00260	0.00419	0.00641	0.00533	0.00212	0.00153	0.00055	0.00371	0.00148
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00036	0.00606	0.00944	0.01516	0.02318	0.02581	0.01073	0.00743	0.00277	0.01799	0.00746	0.00005	0.00083	0.00164	0.00264	0.00404	0.00315	0.00154	0.00091	0.00040	0.00220	0.00107
23	Wat Chak Mak School	0.00032	0.00435	0.00758	0.01219	0.01864	0.01769	0.00967	0.00510	0.00250	0.01234	0.00672	0.00005	0.00075	0.00148	0.00238	0.00363	0.00287	0.00135	0.00083	0.00035	0.00200	0.00094
24	St. Andrews International School, Green Valley, Rayong,	0.00008	0.00085	0.00147	0.00236	0.00361	0.00347	0.00236	0.00100	0.00061	0.00242	0.00164	0.00001	0.00010	0.00023	0.00037	0.00057	0.00037	0.00029	0.00011	0.00007	0.00026	0.00020
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00043	0.00402	0.00937	0.01513	0.02314	0.01390	0.01295	0.00400	0.00335	0.00969	0.00901	0.00004	0.00037	0.00089	0.00144	0.00221	0.00125	0.00131	0.00036	0.00034	0.00087	0.00091
26	Ban Phayun School	0.00043	0.00394	0.00920	0.01486	0.02272	0.01363	0.01273	0.00393	0.00329	0.00950	0.00885	0.00004	0.00037	0.00089	0.00143	0.00219	0.00124	0.00130	0.00036	0.00034	0.00086	0.00091
27	Rakpasa Kindergarten	0.00053	0.00522	0.01192	0.01924	0.02942	0.01829	0.01585	0.00527	0.00410	0.01275	0.01102	0.00005	0.00041	0.00098	0.00158	0.00242	0.00139	0.00142	0.00040	0.00037	0.00097	0.00098
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00094	0.00890	0.02064	0.03332	0.05095	0.03091	0.02820	0.00890	0.00729	0.02155	0.01962	0.00010	0.00102	0.00232	0.00375	0.00574	0.00358	0.00307	0.00103	0.00079	0.00250	0.00214
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00044	0.00344	0.00779	0.01257	0.01923	0.01216	0.01313	0.00350	0.00340	0.00848	0.00913	0.00004	0.00037	0.00087	0.00140	0.00214	0.00126	0.00122	0.00036	0.00032	0.00088	0.00085
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00044	0.00344	0.00779	0.01257	0.01923	0.01216	0.01313	0.00350	0.00340	0.00848	0.00913	0.00004	0.00037	0.00087	0.00140	0.00214	0.00126	0.00122	0.00036	0.00032	0.00088	0.00085
31	Wat Prachummit Bamrung School	0.00086	0.00525	0.01451	0.02347	0.03589	0.01583	0.02576	0.00456	0.00666	0.01103	0.01792	0.00004	0.00045	0.00100	0.00161	0.00246	0.00161	0.00125	0.00046	0.00032	0.00113	0.00087
32	Udom Wittayanukun School	0.00019	0.00359	0.00544	0.00872	0.01334	0.01544	0.00577	0.00445	0.00149	0.01076	0.00401	0.00002	0.00045	0.00079	0.00127	0.00194	0.00181	0.00045	0.00052	0.00012	0.00126	0.00031
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00015	0.00218	0.00410	0.00660	0.01010	0.00856	0.00440	0.00247	0.00114	0.00597	0.00306	0.00001	0.00024	0.00045	0.00073	0.00111	0.00093	0.00036	0.00027	0.00009	0.00065	0.00025
34	Wat Noen Kraprok School	0.00015	0.00218	0.00412	0.00663	0.01014	0.00856	0.00433	0.00246	0.00112	0.00597	0.00301	0.00001	0.00023	0.00044	0.00072	0.00110	0.00091	0.00036	0.00026	0.00009	0.00064	0.00025
35	Chonnabot Phatthana Kindergarten	0.00020	0.00446	0.00682	0.01095	0.01675	0.01910	0.00588	0.00550	0.00152	0.01332	0.00409	0.00002	0.00046	0.00083	0.00134	0.00205	0.00183	0.00055	0.00053	0.00014	0.00128	0.00038
36	Aksorn Business Administration Technological College	0.00075	0.01063	0.02175	0.03506	0.05362	0.03990	0.02237	0.01149	0.00579	0.02782	0.01556	0.00008	0.00104	0.00219	0.00353	0.00540	0.00387	0.00240	0.00111	0.00062	0.00270	0.00167
37	Banchang Karnchanakul Wittaya School	0.00031	0.00774	0.01243	0.01995	0.03052	0.03295	0.00917	0.00949	0.00237	0.02298	0.00638	0.00006	0.00142	0.00257	0.00413	0.00632	0.00566	0.00168	0.00163	0.00043	0.00395	0.00117

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00011	0.00153	0.00314	0.00507	0.00775	0.00572	0.00328	0.00165	0.00085	0.00399	0.00228	0.00001	0.00013	0.00027	0.00043	0.00066	0.00048	0.00029	0.00014	0.00007	0.00033	0.00020
39	Ban Phudon - Huai Mahat Child Development Center	0.00011	0.00153	0.00314	0.00507	0.00775	0.00572	0.00328	0.00165	0.00085	0.00399	0.00228	0.00001	0.00013	0.00027	0.00043	0.00066	0.00048	0.00029	0.00014	0.00007	0.00033	0.00020
40	Ban Map Fakthong School	0.00043	0.00343	0.00746	0.01204	0.01841	0.01242	0.01276	0.00358	0.00330	0.00866	0.00888	0.00003	0.00015	0.00042	0.00068	0.00104	0.00045	0.00076	0.00013	0.00020	0.00031	0.00053
41	Phuru Yor. Sor. Sor. 80 School	0.00048	0.00305	0.00826	0.01337	0.02044	0.01105	0.01436	0.00318	0.00371	0.00770	0.00999	0.00002	0.00014	0.00034	0.00055	0.00085	0.00044	0.00054	0.00013	0.00014	0.00031	0.00037
42	Khao Chi Chan School	0.00044	0.00438	0.00916	0.01476	0.02257	0.01625	0.01310	0.00468	0.00339	0.01133	0.00911	0.00003	0.00025	0.00059	0.00095	0.00145	0.00086	0.00082	0.00025	0.00021	0.00060	0.00057
43	Ban Khalot Child Development Center	0.00093	0.00598	0.01609	0.02602	0.03978	0.01842	0.02769	0.00531	0.00716	0.01284	0.01926	0.00006	0.00038	0.00103	0.00167	0.00256	0.00118	0.00178	0.00034	0.00046	0.00083	0.00124
44	Ban Khalot School	0.00096	0.00623	0.01674	0.02707	0.04139	0.01925	0.02871	0.00554	0.00743	0.01342	0.01997	0.00006	0.00037	0.00101	0.00163	0.00249	0.00115	0.00174	0.00033	0.00045	0.00080	0.00121
45	Phlu Ta Luang Wittaya School	0.00146	0.00437	0.01702	0.02764	0.04226	0.01146	0.04373	0.00330	0.01131	0.00799	0.03042	0.00009	0.00042	0.00128	0.00207	0.00317	0.00114	0.00253	0.00033	0.00065	0.00079	0.00176
46	Athittan Kindergarten School	0.00074	0.00283	0.00996	0.01614	0.02468	0.00868	0.02225	0.00250	0.00576	0.00605	0.01548	0.00006	0.00031	0.00093	0.00150	0.00229	0.00086	0.00179	0.00025	0.00046	0.00060	0.00125
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00116	0.00490	0.01490	0.02413	0.03689	0.01480	0.03477	0.00426	0.00899	0.01032	0.02419	0.00008	0.00043	0.00128	0.00208	0.00317	0.00119	0.00249	0.00034	0.00064	0.00083	0.00173
48	Ban Khao Bai Si School	0.00079	0.00490	0.01269	0.02053	0.03139	0.01965	0.02355	0.00566	0.00609	0.01370	0.01639	0.00006	0.00042	0.00111	0.00180	0.00275	0.00131	0.00188	0.00038	0.00049	0.00092	0.00131
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00019	0.00443	0.00668	0.01071	0.01638	0.01908	0.00571	0.00549	0.00148	0.01330	0.00397	0.00002	0.00025	0.00048	0.00078	0.00119	0.00094	0.00045	0.00027	0.00012	0.00066	0.00031
50	Ban KM. 5 School	0.00035	0.00258	0.00651	0.01052	0.01609	0.00842	0.01031	0.00242	0.00267	0.00587	0.00717	0.00005	0.00032	0.00082	0.00132	0.00202	0.00101	0.00133	0.00029	0.00035	0.00071	0.00093
51	Royal Thai Fleet Sattahip District School	0.00028	0.00242	0.00573	0.00926	0.01415	0.00827	0.00849	0.00238	0.00220	0.00576	0.00590	0.00004	0.00028	0.00068	0.00111	0.00169	0.00092	0.00104	0.00027	0.00027	0.00064	0.00072
52	RTN. 8 Nursery	0.00040	0.00277	0.00661	0.01069	0.01634	0.00947	0.01202	0.00273	0.00311	0.00661	0.00836	0.00004	0.00028	0.00072	0.00116	0.00178	0.00089	0.00116	0.00026	0.00030	0.00062	0.00081
53	Juk Samet School	0.00040	0.00273	0.00660	0.01068	0.01634	0.00935	0.01200	0.00269	0.00310	0.00652	0.00835	0.00004	0.00028	0.00072	0.00116	0.00177	0.00089	0.00116	0.00026	0.00030	0.00062	0.00081
54	Juk Samet Child Development Center	0.00041	0.00265	0.00665	0.01076	0.01646	0.00911	0.01213	0.00262	0.00314	0.00635	0.00844	0.00004	0.00028	0.00072	0.00116	0.00177	0.00089	0.00116	0.00026	0.00030	0.00062	0.00081
55	Ban Chong Samaesarn Child Development Center	0.00029	0.00279	0.00579	0.00934	0.01429	0.01037	0.00874	0.00299	0.00226	0.00723	0.00608	0.00002	0.00021	0.00048	0.00078	0.00119	0.00075	0.00063	0.00022	0.00016	0.00052	0.00044
56	Samaesarn Subdistrict NFE Center	0.00032	0.00224	0.00496	0.00802	0.01226	0.00916	0.00951	0.00264	0.00246	0.00639	0.00662	0.00002	0.00019	0.00041	0.00066	0.00102	0.00067	0.00051	0.00019	0.00013	0.00047	0.00036
57	Ban Chong Samaesarn School	0.00032	0.00216	0.00493	0.00797	0.01218	0.00870	0.00969	0.00251	0.00251	0.00607	0.00674	0.00002	0.00018	0.00041	0.00065	0.00100	0.00066	0.00050	0.00019	0.00013	0.00046	0.00035
58	Wat Phala Vipassana Office	0.00054	0.00442	0.01077	0.01740	0.02660	0.01478	0.01606	0.00426	0.00416	0.01031	0.01118	0.00006	0.00051	0.00120	0.00194	0.00297	0.00174	0.00170	0.00050	0.00044	0.00121	0.00118
59	Wat Phala	0.00052	0.00446	0.01072	0.01732	0.02649	0.01507	0.01564	0.00434	0.00405	0.01051	0.01088	0.00005	0.00049	0.00116	0.00187	0.00285	0.00169	0.00162	0.00049	0.00042	0.00118	0.00113
60	Chao Li Hu Ong Yea Shrine	0.00074	0.00683	0.01598	0.02579	0.03944	0.02353	0.02222	0.00678	0.00575	0.01641	0.01546	0.00008	0.00096	0.00206	0.00332	0.00508	0.00349	0.00241	0.00100	0.00062	0.00243	0.00167
61	Wat Khlong Sai	0.00072	0.00625	0.01494	0.02414	0.03690	0.02124	0.02156	0.00612	0.00558	0.01481	0.01500	0.00006	0.00058	0.00131	0.00212	0.00324	0.00204	0.00173	0.00059	0.00045	0.00142	0.00120
62	Wat Khiri Pawanaram	0.00033	0.00464	0.00953	0.01536	0.02349	0.01735	0.00994	0.00500	0.00257	0.01210	0.00691	0.00004	0.00060	0.00118	0.00190	0.00291	0.00231	0.00106	0.00067	0.00028	0.00161	0.00074

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00026	0.00445	0.00843	0.01357	0.02075	0.01737	0.00765	0.00500	0.00198	0.01211	0.00532	0.00004	0.00071	0.00134	0.00216	0.00330	0.00279	0.00105	0.00080	0.00027	0.00195	0.00073
64	Ban Chang Church	0.00027	0.00470	0.00814	0.01309	0.02002	0.01915	0.00800	0.00551	0.00207	0.01335	0.00557	0.00004	0.00106	0.00189	0.00304	0.00465	0.00429	0.00111	0.00124	0.00029	0.00299	0.00077
65	Wat Ban Khlong Bang Phai	0.00115	0.00819	0.02118	0.03423	0.05234	0.02615	0.03452	0.00753	0.00893	0.01823	0.02402	0.00010	0.00052	0.00158	0.00255	0.00390	0.00142	0.00310	0.00041	0.00080	0.00099	0.00216
66	Admiral Prince Abhakara Kiartivongse Monument	0.00126	0.00835	0.02104	0.03401	0.05200	0.02722	0.03771	0.00784	0.00975	0.01898	0.02623	0.00012	0.00060	0.00184	0.00297	0.00455	0.00164	0.00363	0.00047	0.00094	0.00114	0.00252
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00104	0.00836	0.02058	0.03325	0.05084	0.02777	0.03119	0.00800	0.00807	0.01936	0.02170	0.00013	0.00060	0.00187	0.00303	0.00464	0.00160	0.00377	0.00046	0.00097	0.00112	0.00262
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00124	0.00732	0.01675	0.02704	0.04134	0.02565	0.03703	0.00739	0.00958	0.01788	0.02576	0.00016	0.00069	0.00228	0.00370	0.00565	0.00171	0.00483	0.00049	0.00125	0.00119	0.00336
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.00245	0.00552	0.02687	0.04365	0.06673	0.02101	0.07322	0.00605	0.01894	0.01465	0.05093	0.00024	0.00090	0.00318	0.00515	0.00787	0.00201	0.00710	0.00058	0.00184	0.00140	0.00494
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.00331	0.00746	0.03655	0.05938	0.09078	0.02069	0.09891	0.00596	0.02558	0.01443	0.06880	0.00030	0.00107	0.00394	0.00639	0.00977	0.00221	0.00908	0.00064	0.00235	0.00154	0.00632
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.00266	0.01789	0.04105	0.06627	0.10133	0.07275	0.07945	0.02095	0.02055	0.05073	0.05527	0.00049	0.00415	0.00997	0.01610	0.02462	0.01403	0.01453	0.00404	0.00376	0.00978	0.01011
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.00214	0.01768	0.03827	0.06173	0.09439	0.06827	0.06414	0.01966	0.01659	0.04760	0.04462	0.00042	0.00421	0.00954	0.01540	0.02354	0.01483	0.01248	0.00427	0.00323	0.01034	0.00869
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.00213	0.02974	0.05420	0.08722	0.13338	0.11850	0.06362	0.03413	0.01646	0.08263	0.04426	0.00038	0.00483	0.01019	0.01644	0.02513	0.01778	0.01140	0.00512	0.00295	0.01240	0.00793
74	Wat Sa Kaeo	0.00257	0.01683	0.03104	0.04996	0.07641	0.06666	0.07681	0.01920	0.01987	0.04648	0.05343	0.00045	0.00185	0.00624	0.01011	0.01545	0.00442	0.01346	0.00127	0.00348	0.00308	0.00937
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00041	0.00455	0.00923	0.01489	0.02278	0.01928	0.01220	0.00555	0.00316	0.01344	0.00849	0.00004	0.00070	0.00137	0.00221	0.00337	0.00267	0.00125	0.00077	0.00032	0.00186	0.00087
76	Wat Sombun Naram	0.00196	0.01346	0.02367	0.03836	0.05865	0.05499	0.05853	0.01584	0.01514	0.03834	0.04071	0.00025	0.00148	0.00410	0.00663	0.01013	0.00442	0.00732	0.00127	0.00189	0.00308	0.00509
77	Ban Chang Abundant Grace Church	0.00098	0.01057	0.01706	0.02739	0.04190	0.04437	0.02938	0.01278	0.00760	0.03094	0.02044	0.00016	0.00142	0.00338	0.00546	0.00835	0.00484	0.00485	0.00139	0.00125	0.00338	0.00337
78	Wat Samnak Kathon	0.00048	0.01089	0.01717	0.02757	0.04216	0.04615	0.01443	0.01329	0.00373	0.03218	0.01004	0.00007	0.00140	0.00267	0.00430	0.00658	0.00545	0.00220	0.00157	0.00057	0.00380	0.00153
79	Wat Suwan Rangsan	0.00036	0.00741	0.01161	0.01864	0.02851	0.03147	0.01067	0.00906	0.00276	0.02194	0.00742	0.00005	0.00104	0.00197	0.00317	0.00485	0.00408	0.00156	0.00118	0.00040	0.00285	0.00108
80	Wat Nong Bot	0.00033	0.00339	0.00760	0.01227	0.01876	0.01202	0.00976	0.00346	0.00252	0.00838	0.00679	0.00004	0.00050	0.00102	0.00164	0.00251	0.00188	0.00104	0.00054	0.00027	0.00131	0.00072
81	The Shrine of Luang Tia Chak Mak	0.00030	0.00496	0.00871	0.01402	0.02144	0.02051	0.00890	0.00591	0.00230	0.01430	0.00619	0.00005	0.00086	0.00165	0.00266	0.00407	0.00332	0.00141	0.00095	0.00036	0.00231	0.00098
82	Wat Chak Mak	0.00031	0.00534	0.00975	0.01568	0.02399	0.02193	0.00937	0.00632	0.00242	0.01529	0.00652	0.00005	0.00089	0.00171	0.00276	0.00422	0.00346	0.00145	0.00100	0.00037	0.00241	0.00101

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Area		The concentration value of Styrene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00037	0.00340	0.00795	0.01284	0.01963	0.01175	0.01103	0.00338	0.00285	0.00819	0.00767	0.00004	0.00034	0.00082	0.00132	0.00202	0.00117	0.00117	0.00034	0.00030	0.00082	0.00081
84	The Shrine of King Taksin the Great (Ban Chang)	0.00037	0.00342	0.00797	0.01288	0.01969	0.01182	0.01102	0.00340	0.00285	0.00824	0.00767	0.00004	0.00035	0.00082	0.00133	0.00203	0.00119	0.00116	0.00034	0.00030	0.00083	0.00081
85	Wat Chonthararam (Phayun)	0.00044	0.00401	0.00939	0.01516	0.02318	0.01385	0.01305	0.00399	0.00337	0.00966	0.00908	0.00004	0.00037	0.00089	0.00143	0.00219	0.00124	0.00130	0.00036	0.00034	0.00086	0.00091
86	Masjid Dawatul Islam	0.00062	0.01220	0.02311	0.03720	0.05689	0.04772	0.01840	0.01374	0.00476	0.03327	0.01280	0.00008	0.00134	0.00265	0.00427	0.00652	0.00515	0.00243	0.00148	0.00063	0.00359	0.00169
87	Chinese shrine at the Buddha Dhamma Foundation	0.00133	0.01031	0.02573	0.04157	0.06356	0.03388	0.03982	0.00976	0.01030	0.02363	0.02770	0.00011	0.00112	0.00255	0.00412	0.00630	0.00395	0.00336	0.00114	0.00087	0.00276	0.00234
88	The Shrine of Luang Tia Ban Chang	0.00074	0.00859	0.01734	0.02795	0.04274	0.03248	0.02209	0.00935	0.00571	0.02264	0.01537	0.00008	0.00104	0.00219	0.00352	0.00539	0.00383	0.00243	0.00110	0.00063	0.00267	0.00169
89	The Shrine of Laoia Guan Yu Ban Chang	0.00089	0.00839	0.01896	0.03060	0.04679	0.02962	0.02665	0.00853	0.00689	0.02065	0.01854	0.00010	0.00101	0.00228	0.00368	0.00563	0.00357	0.00296	0.00103	0.00076	0.00249	0.00206
90	Wat Ban Chang	0.00114	0.00877	0.02196	0.03548	0.05426	0.02877	0.03414	0.00829	0.00883	0.02006	0.02375	0.00012	0.00102	0.00245	0.00395	0.00605	0.00348	0.00353	0.00100	0.00091	0.00243	0.00246
91	Wat Prachummit Bamrung	0.00089	0.00514	0.01456	0.02356	0.03603	0.01508	0.02665	0.00434	0.00689	0.01052	0.01854	0.00004	0.00045	0.00101	0.00163	0.00249	0.00161	0.00128	0.00046	0.00033	0.00112	0.00089
92	The Shrine of Luang Tia Noen Kraprok 1	0.00049	0.00641	0.01339	0.02158	0.03300	0.02377	0.01456	0.00684	0.00377	0.01657	0.01013	0.00003	0.00054	0.00106	0.00171	0.00261	0.00208	0.00096	0.00060	0.00025	0.00145	0.00067
93	The Shrine of Luang Tia Noen Kraprok 2	0.00022	0.00773	0.01177	0.01889	0.02889	0.03318	0.00662	0.00956	0.00171	0.02314	0.00461	0.00002	0.00066	0.00115	0.00185	0.00283	0.00270	0.00059	0.00078	0.00015	0.00188	0.00041
94	Wat Noen Kraprok	0.00017	0.00237	0.00447	0.00720	0.01101	0.00928	0.00494	0.00267	0.00128	0.00647	0.00344	0.00001	0.00030	0.00055	0.00089	0.00136	0.00119	0.00040	0.00034	0.00010	0.00083	0.00028
95	Wat Phudon Nim Sanoh	0.00010	0.00154	0.00308	0.00496	0.00758	0.00584	0.00297	0.00168	0.00077	0.00408	0.00206	0.00001	0.00013	0.00027	0.00044	0.00068	0.00050	0.00029	0.00014	0.00008	0.00035	0.00020
96	Church of Christ Ban Chang	0.00013	0.00159	0.00339	0.00547	0.00837	0.00581	0.00390	0.00167	0.00101	0.00405	0.00271	0.00001	0.00014	0.00029	0.00046	0.00070	0.00050	0.00031	0.00014	0.00008	0.00035	0.00022
97	Anek Kusala Sala (Viharn Sien)	0.00046	0.00423	0.00928	0.01497	0.02289	0.01525	0.01382	0.00439	0.00358	0.01063	0.00962	0.00003	0.00019	0.00052	0.00083	0.00127	0.00057	0.00091	0.00016	0.00023	0.00040	0.00063
98	Wat Yan Nasangwararam	0.00049	0.00341	0.00841	0.01359	0.02078	0.01204	0.01457	0.00347	0.00377	0.00840	0.01014	0.00004	0.00021	0.00059	0.00095	0.00146	0.00063	0.00105	0.00018	0.00027	0.00044	0.00073
99	Sirisirirak Monastery	0.00035	0.00427	0.00797	0.01282	0.01961	0.01684	0.01038	0.00485	0.00268	0.01175	0.00722	0.00002	0.00027	0.00057	0.00092	0.00141	0.00097	0.00067	0.00028	0.00017	0.00067	0.00047
100	Anan Buraparam Meditation Center	0.00065	0.00382	0.00857	0.01390	0.02125	0.01385	0.01936	0.00399	0.00501	0.00965	0.01347	0.00003	0.00026	0.00062	0.00100	0.00153	0.00088	0.00090	0.00025	0.00023	0.00061	0.00063
101	Wat Map Fakthong	0.00040	0.00306	0.00770	0.01243	0.01901	0.01082	0.01202	0.00312	0.00311	0.00754	0.00836	0.00003	0.00018	0.00047	0.00077	0.00117	0.00057	0.00079	0.00017	0.00020	0.00040	0.00055
102	Khao Chi Chan Image of Lord Buddha	0.00009	0.00103	0.00222	0.00359	0.00548	0.00375	0.00262	0.00108	0.00068	0.00261	0.00182	0.00001	0.00006	0.00014	0.00023	0.00035	0.00021	0.00019	0.00006	0.00005	0.00015	0.00013
103	Wat Khao Chi Chan	0.00009	0.00198	0.00328	0.00528	0.00807	0.00840	0.00277	0.00242	0.00072	0.00586	0.00193	0.00001	0.00014	0.00027	0.00043	0.00066	0.00055	0.00022	0.00016	0.00006	0.00039	0.00015
104	Rat Samakkhi Temple	0.00096	0.00621	0.01672	0.02704	0.04135	0.01915	0.02877	0.00552	0.00744	0.01335	0.02001	0.00006	0.00039	0.00105	0.00169	0.00259	0.00119	0.00181	0.00034	0.00047	0.00083	0.00126
105	The Shrine of Chao Mae Kuan Im	0.00098	0.00632	0.01701	0.02750	0.04205	0.01948	0.02926	0.00561	0.00757	0.01358	0.02035	0.00006	0.00036	0.00098	0.00159	0.00243	0.00112	0.00170	0.00032	0.00044	0.00078	0.00118
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00108	0.00703	0.01882	0.03044	0.04654	0.02178	0.03216	0.00627	0.00832	0.01519	0.02237	0.00006	0.00041	0.00111	0.00179	0.00273	0.00124	0.00193	0.00036	0.00050	0.00086	0.00134

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00039	0.00297	0.00749	0.01211	0.01852	0.00968	0.01179	0.00279	0.00305	0.00675	0.00820	0.00005	0.00034	0.00086	0.00139	0.00213	0.00107	0.00140	0.00031	0.00036	0.00075	0.00097
108	KM.8 Meditation Center	0.00065	0.00437	0.01155	0.01868	0.02856	0.01368	0.01942	0.00394	0.00502	0.00954	0.01351	0.00005	0.00034	0.00089	0.00143	0.00219	0.00108	0.00145	0.00031	0.00038	0.00076	0.00101
109	Wat Rangsee Sunthorn (KM.5)	0.00034	0.00259	0.00647	0.01046	0.01599	0.00848	0.01006	0.00244	0.00260	0.00591	0.00700	0.00005	0.00032	0.00084	0.00135	0.00207	0.00103	0.00137	0.00030	0.00035	0.00072	0.00095
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00012	0.00141	0.00306	0.00493	0.00754	0.00510	0.00365	0.00147	0.00094	0.00356	0.00254	0.00001	0.00006	0.00013	0.00020	0.00031	0.00022	0.00015	0.00006	0.00004	0.00015	0.00010
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00014	0.00155	0.00344	0.00554	0.00848	0.00582	0.00429	0.00168	0.00111	0.00406	0.00298	0.00001	0.00008	0.00017	0.00027	0.00041	0.00030	0.00018	0.00009	0.00005	0.00021	0.00012
112	Wat Tung Prong	0.00011	0.00137	0.00277	0.00446	0.00682	0.00528	0.00340	0.00152	0.00088	0.00368	0.00236	0.00001	0.00006	0.00013	0.00021	0.00032	0.00023	0.00014	0.00007	0.00004	0.00016	0.00010
113	Khao Phlu Ta Luang Meditation Center	0.00006	0.00080	0.00157	0.00254	0.00388	0.00305	0.00182	0.00088	0.00047	0.00213	0.00127	0.00000	0.00003	0.00007	0.00012	0.00018	0.00012	0.00009	0.00004	0.00002	0.00009	0.00006
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00116	0.00430	0.01260	0.02047	0.03129	0.01514	0.03479	0.00436	0.00900	0.01056	0.02420	0.00011	0.00043	0.00149	0.00242	0.00370	0.00097	0.00332	0.00028	0.00086	0.00067	0.00231
115	Wat Khao Bai Si Santitham	0.00136	0.00578	0.01790	0.02902	0.04436	0.01784	0.04056	0.00514	0.01049	0.01244	0.02822	0.00011	0.00051	0.00161	0.00262	0.00400	0.00130	0.00333	0.00037	0.00086	0.00090	0.00232
116	Welu Amphawan Vipassana Office	0.00096	0.00562	0.01455	0.02355	0.03601	0.01893	0.02878	0.00545	0.00744	0.01320	0.02002	0.00009	0.00049	0.00139	0.00225	0.00344	0.00142	0.00256	0.00041	0.00066	0.00099	0.00178
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00047	0.00382	0.00933	0.01507	0.02305	0.01279	0.01394	0.00368	0.00361	0.00892	0.00970	0.00004	0.00029	0.00071	0.00115	0.00176	0.00097	0.00107	0.00028	0.00028	0.00068	0.00075
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00044	0.00285	0.00736	0.01191	0.01821	0.00935	0.01327	0.00269	0.00343	0.00652	0.00923	0.00005	0.00034	0.00087	0.00140	0.00214	0.00109	0.00140	0.00031	0.00036	0.00076	0.00097
119	Samaesarn Pattanakarn Church	0.00041	0.00301	0.00688	0.01110	0.01698	0.01056	0.01221	0.00304	0.00316	0.00736	0.00850	0.00004	0.00029	0.00072	0.00117	0.00179	0.00095	0.00113	0.00027	0.00029	0.00066	0.00078
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00038	0.00288	0.00664	0.01071	0.01638	0.01003	0.01128	0.00289	0.00292	0.00700	0.00785	0.00002	0.00022	0.00051	0.00082	0.00126	0.00076	0.00070	0.00022	0.00018	0.00053	0.00049
121	Wat Chong Samaesarn	0.00032	0.00228	0.00501	0.00809	0.01237	0.00931	0.00954	0.00268	0.00247	0.00649	0.00664	0.00002	0.00019	0.00042	0.00067	0.00103	0.00067	0.00052	0.00019	0.00013	0.00047	0.00036
122	Viharn Luang Por Dam	0.00024	0.00230	0.00513	0.00829	0.01267	0.00818	0.00720	0.00236	0.00186	0.00570	0.00501	0.00001	0.00015	0.00033	0.00053	0.00081	0.00052	0.00042	0.00015	0.00011	0.00036	0.00029
123	The Shrine of King Taksin the Great (Samaesarn)	0.00032	0.00300	0.00701	0.01131	0.01729	0.01037	0.00969	0.00299	0.00251	0.00723	0.00674	0.00002	0.00023	0.00054	0.00087	0.00133	0.00082	0.00073	0.00023	0.00019	0.00057	0.00051
124	Thai Island and Sea Natural History Museum	0.00030	0.00293	0.00672	0.01085	0.01659	0.01025	0.00899	0.00295	0.00233	0.00715	0.00626	0.00002	0.00023	0.00052	0.00084	0.00129	0.00080	0.00069	0.00023	0.00018	0.00056	0.00048
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00035	0.00280	0.00691	0.01117	0.01707	0.00930	0.01049	0.00268	0.00271	0.00649	0.00730	0.00003	0.00024	0.00056	0.00090	0.00137	0.00084	0.00075	0.00024	0.00019	0.00059	0.00052

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00035	0.00293	0.00714	0.01153	0.01763	0.00984	0.01060	0.00283	0.00274	0.00686	0.00738	0.00003	0.00024	0.00056	0.00090	0.00138	0.00084	0.00076	0.00024	0.00020	0.00059	0.00053
127	Eastern-Nong Muang Community Health Service Center	0.00312	0.01118	0.03619	0.05876	0.08984	0.04313	0.09345	0.01242	0.02417	0.03007	0.06501	0.00033	0.00265	0.00652	0.01054	0.01611	0.00882	0.00987	0.00254	0.00255	0.00615	0.00686
128	Phala Subdistrict Health Promotion Hospital	0.00058	0.00505	0.01203	0.01943	0.02971	0.01720	0.01726	0.00495	0.00446	0.01199	0.01201	0.00006	0.00052	0.00121	0.00196	0.00299	0.00180	0.00167	0.00052	0.00043	0.00126	0.00116
129	Ban Chang Hospital	0.00020	0.00332	0.00656	0.01057	0.01616	0.01268	0.00609	0.00365	0.00158	0.00884	0.00424	0.00002	0.00037	0.00073	0.00117	0.00180	0.00139	0.00069	0.00040	0.00018	0.00097	0.00048
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00127	0.00443	0.01380	0.02243	0.03429	0.01632	0.03800	0.00470	0.00983	0.01138	0.02643	0.00013	0.00059	0.00190	0.00307	0.00470	0.00151	0.00393	0.00043	0.00102	0.00105	0.00274
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.00177	0.01445	0.03514	0.05676	0.08678	0.04843	0.05280	0.01395	0.01366	0.03377	0.03673	0.00031	0.00133	0.00436	0.00706	0.01079	0.00332	0.00917	0.00096	0.00237	0.00231	0.00638
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.00281	0.01565	0.03081	0.04999	0.07642	0.06526	0.08404	0.01879	0.02174	0.04550	0.05846	0.00034	0.00175	0.00525	0.00849	0.01299	0.00482	0.01022	0.00139	0.00264	0.00336	0.00711
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00035	0.01198	0.01860	0.02985	0.04565	0.05109	0.01041	0.01472	0.00269	0.03563	0.00724	0.00006	0.00132	0.00245	0.00395	0.00604	0.00523	0.00179	0.00151	0.00046	0.00365	0.00124
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00077	0.01412	0.02183	0.03503	0.05358	0.06031	0.02314	0.01737	0.00598	0.04205	0.01609	0.00012	0.00143	0.00311	0.00501	0.00766	0.00517	0.00372	0.00149	0.00096	0.00361	0.00259
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00034	0.00517	0.00826	0.01326	0.02028	0.02194	0.01008	0.00632	0.00261	0.01530	0.00701	0.00005	0.00081	0.00160	0.00257	0.00393	0.00311	0.00146	0.00089	0.00038	0.00217	0.00101
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00042	0.00388	0.00904	0.01460	0.02232	0.01343	0.01247	0.00387	0.00323	0.00936	0.00867	0.00004	0.00037	0.00087	0.00141	0.00216	0.00124	0.00127	0.00036	0.00033	0.00086	0.00088
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00018	0.00590	0.00901	0.01445	0.02210	0.02529	0.00528	0.00728	0.00137	0.01763	0.00367	0.00002	0.00054	0.00094	0.00150	0.00230	0.00219	0.00049	0.00063	0.00013	0.00153	0.00034
138	Phudon Huai Mahat Community Health Service Unit	0.00012	0.00163	0.00335	0.00540	0.00825	0.00608	0.00351	0.00175	0.00091	0.00424	0.00244	0.00001	0.00014	0.00029	0.00047	0.00072	0.00052	0.00031	0.00015	0.00008	0.00037	0.00022
139	Wat Yan Nasangwararam Hospital	0.00044	0.00392	0.00803	0.01297	0.01984	0.01498	0.01325	0.00431	0.00343	0.01045	0.00922	0.00003	0.00020	0.00055	0.00088	0.00135	0.00061	0.00095	0.00018	0.00025	0.00042	0.00066
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00044	0.00384	0.00800	0.01294	0.01978	0.01470	0.01304	0.00423	0.00337	0.01025	0.00907	0.00003	0.00020	0.00055	0.00088	0.00135	0.00061	0.00096	0.00017	0.00025	0.00042	0.00067
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00017	0.00596	0.00927	0.01488	0.02275	0.02537	0.00512	0.00731	0.00132	0.01769	0.00356	0.00001	0.00028	0.00051	0.00082	0.00125	0.00111	0.00035	0.00032	0.00009	0.00077	0.00024

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Area		The concentration value of Styrene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00103	0.00688	0.01822	0.02946	0.04504	0.02151	0.03070	0.00620	0.00794	0.01500	0.02135	0.00006	0.00041	0.00110	0.00177	0.00271	0.00124	0.00190	0.00036	0.00049	0.00087	0.00132
143	Sattahip Hospital KM.10	0.00073	0.00584	0.01440	0.02326	0.03557	0.01936	0.02189	0.00557	0.00566	0.01350	0.01523	0.00005	0.00032	0.00086	0.00139	0.00212	0.00098	0.00148	0.00028	0.00038	0.00068	0.00103
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00032	0.00221	0.00494	0.00798	0.01220	0.00905	0.00957	0.00261	0.00248	0.00631	0.00666	0.00002	0.00019	0.00041	0.00066	0.00101	0.00066	0.00051	0.00019	0.00013	0.00046	0.00035
145	Village No. 1 Ban Sakulthong	0.00025	0.00371	0.00749	0.01207	0.01845	0.01441	0.00738	0.00415	0.00191	0.01005	0.00514	0.00004	0.00066	0.00127	0.00204	0.00312	0.00259	0.00103	0.00075	0.00027	0.00181	0.00072
146	Village No. 2, Ban Kilo 16	0.00096	0.00660	0.01730	0.02797	0.04277	0.02086	0.02871	0.00601	0.00743	0.01454	0.01997	0.00008	0.00089	0.00198	0.00320	0.00490	0.00316	0.00253	0.00091	0.00065	0.00220	0.00176
147	Village No. 4, Ban Tung Prong	0.00077	0.00765	0.01634	0.02635	0.04030	0.02797	0.02308	0.00806	0.00597	0.01950	0.01606	0.00010	0.00137	0.00283	0.00457	0.00699	0.00510	0.00301	0.00147	0.00078	0.00356	0.00210
148	Village No. 5, Phala Subdistrict	0.00078	0.00641	0.01565	0.02527	0.03864	0.02146	0.02336	0.00618	0.00604	0.01496	0.01625	0.00008	0.00100	0.00210	0.00338	0.00517	0.00368	0.00232	0.00106	0.00060	0.00257	0.00162
149	Village No. 6, Ban Takat	0.00057	0.00513	0.01207	0.01948	0.02979	0.01764	0.01692	0.00508	0.00438	0.01230	0.01177	0.00005	0.00051	0.00117	0.00189	0.00289	0.00176	0.00158	0.00051	0.00041	0.00123	0.00110
150	Village No. 7, Ban Khlong Sai	0.00075	0.00629	0.01523	0.02460	0.03762	0.02114	0.02248	0.00609	0.00582	0.01474	0.01564	0.00007	0.00082	0.00178	0.00288	0.00440	0.00298	0.00212	0.00086	0.00055	0.00208	0.00148
151	Village No. 1 Ban Sam Nak Thon	0.00207	0.00911	0.02683	0.04351	0.06652	0.03847	0.06204	0.01108	0.01605	0.02683	0.04316	0.00021	0.00166	0.00414	0.00669	0.01023	0.00549	0.00637	0.00158	0.00165	0.00383	0.00443
152	Village No. 2, Ban Chak Mak	0.00042	0.00870	0.01383	0.02220	0.03395	0.03705	0.01243	0.01067	0.00322	0.02583	0.00865	0.00006	0.00113	0.00219	0.00353	0.00540	0.00438	0.00190	0.00126	0.00049	0.00305	0.00132
153	Village No. 3, Ban Sa Kaeo	0.01079	0.02070	0.11381	0.18500	0.28281	0.08446	0.32292	0.02433	0.08353	0.05889	0.22464	0.00092	0.00385	0.01282	0.02078	0.03177	0.00931	0.02746	0.00268	0.00710	0.00649	0.01910
154	Sa Kaeo Community 1	0.00370	0.01739	0.03965	0.06445	0.09852	0.07048	0.11084	0.02030	0.02867	0.04914	0.07710	0.00047	0.00195	0.00655	0.01062	0.01623	0.00468	0.01411	0.00135	0.00365	0.00326	0.00981
155	Sa Kaeo Community 2	0.00263	0.01437	0.04179	0.06763	0.10340	0.04111	0.07866	0.01184	0.02035	0.02867	0.05472	0.00029	0.00121	0.00402	0.00652	0.00997	0.00295	0.00859	0.00085	0.00222	0.00206	0.00597
156	Village No. 4, Ban Khlong Bang Phai	0.00292	0.00730	0.03332	0.05410	0.08271	0.01674	0.08721	0.00482	0.02256	0.01167	0.06067	0.00022	0.00087	0.00301	0.00488	0.00746	0.00198	0.00666	0.00057	0.00172	0.00138	0.00463
157	Village No. 5, Ban Yai Ra	0.00031	0.00283	0.00660	0.01066	0.01630	0.00978	0.00913	0.00282	0.00236	0.00682	0.00635	0.00003	0.00042	0.00086	0.00139	0.00212	0.00158	0.00088	0.00046	0.00023	0.00110	0.00061
158	Village No. 6, Ban Khao Khrok	0.00566	0.01368	0.06398	0.10391	0.15885	0.04610	0.16947	0.01328	0.04383	0.03215	0.11789	0.00044	0.00236	0.00694	0.01123	0.01718	0.00664	0.01325	0.00191	0.00343	0.00463	0.00922
159	Village no. 7, Ban Nong Takhian	0.00033	0.00575	0.00988	0.01590	0.02432	0.02385	0.00983	0.00687	0.00254	0.01663	0.00684	0.00005	0.00100	0.00192	0.00309	0.00473	0.00390	0.00159	0.00112	0.00041	0.00272	0.00111
160	Village No. 8, Ban Cherng Khao	0.00055	0.03249	0.04986	0.08000	0.12235	0.13910	0.01648	0.04006	0.00426	0.09699	0.01146	0.00009	0.00440	0.00729	0.01171	0.01791	0.01831	0.00254	0.00527	0.00066	0.01277	0.00176
161	Eastern-Nong Muang Community	0.00082	0.00889	0.01931	0.03114	0.04762	0.03385	0.02443	0.00975	0.00632	0.02360	0.01699	0.00012	0.00172	0.00351	0.00565	0.00865	0.00644	0.00360	0.00186	0.00093	0.00449	0.00250
162	Wat Khiri Pawanaram Community	0.00044	0.02547	0.03938	0.06319	0.09665	0.10879	0.01324	0.03133	0.00342	0.07585	0.00921	0.00007	0.00354	0.00590	0.00948	0.01450	0.01468	0.00219	0.00423	0.00057	0.01024	0.00152
163	Ban Chang-Phala Community	0.00040	0.02492	0.03770	0.06047	0.09248	0.10727	0.01189	0.03089	0.00308	0.07480	0.00827	0.00007	0.00350	0.00580	0.00932	0.01425	0.01454	0.00204	0.00419	0.00053	0.01014	0.00142
164	Ruam Sompong Community	0.00042	0.00511	0.01050	0.01692	0.02588	0.01936	0.01266	0.00558	0.00327	0.01350	0.00880	0.00008	0.00074	0.00170	0.00274	0.00420	0.00256	0.00230	0.00074	0.00060	0.00179	0.00160
165	Ming Mongkol Community	0.00040	0.01954	0.03079	0.04943	0.07561	0.08285	0.01201	0.02386	0.00311	0.05777	0.00836	0.00005	0.00170	0.00298	0.00479	0.00732	0.00689	0.00163	0.00199	0.00042	0.00481	0.00113
166	Jor Koo Community	0.00042	0.01960	0.03075	0.04936	0.07549	0.08324	0.01267	0.02397	0.00328	0.05804	0.00881	0.00006	0.00176	0.00307	0.00493	0.00754	0.00714	0.00163	0.00206	0.00042	0.00498	0.00113

Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00039	0.02934	0.04513	0.07241	0.11074	0.12554	0.01167	0.03616	0.00302	0.08754	0.00812	0.00005	0.00200	0.00340	0.00547	0.00836	0.00822	0.00151	0.00237	0.00039	0.00573	0.00105
168	Thep Chinda Community	0.00044	0.01821	0.02941	0.04723	0.07223	0.07646	0.01329	0.02202	0.00344	0.05331	0.00924	0.00006	0.00165	0.00294	0.00474	0.00724	0.00663	0.00180	0.00191	0.00046	0.00462	0.00125
169	Health Park Community	0.00125	0.00469	0.01388	0.02255	0.03448	0.01673	0.03731	0.00482	0.00965	0.01166	0.02595	0.00010	0.00079	0.00194	0.00313	0.00479	0.00263	0.00293	0.00076	0.00076	0.00183	0.00203
170	Wat Ban Chang Community	0.00113	0.00919	0.02247	0.03630	0.05551	0.03067	0.03370	0.00883	0.00872	0.02139	0.02344	0.00011	0.00104	0.00244	0.00394	0.00602	0.00358	0.00340	0.00103	0.00088	0.00250	0.00236
171	Dong Dang Community	0.00045	0.01655	0.02781	0.04468	0.06834	0.06839	0.01349	0.01970	0.00349	0.04768	0.00938	0.00007	0.00148	0.00272	0.00438	0.00669	0.00585	0.00193	0.00168	0.00050	0.00408	0.00135
172	Night Market Community	0.00103	0.00769	0.01877	0.03032	0.04636	0.02571	0.03069	0.00740	0.00794	0.01793	0.02135	0.00011	0.00090	0.00219	0.00353	0.00540	0.00304	0.00322	0.00088	0.00083	0.00212	0.00224
173	Ruam Mitr Community	0.00147	0.01039	0.02688	0.04346	0.06645	0.03316	0.04386	0.00955	0.01135	0.02312	0.03051	0.00012	0.00112	0.00259	0.00418	0.00639	0.00392	0.00349	0.00113	0.00090	0.00273	0.00243
174	Ban Chang - Noen Kraprok Community	0.00113	0.00405	0.01380	0.02238	0.03422	0.01362	0.03366	0.00392	0.00871	0.00949	0.02341	0.00008	0.00067	0.00158	0.00256	0.00391	0.00230	0.00224	0.00066	0.00058	0.00160	0.00156
175	Dao Pitak Community	0.00068	0.00694	0.01402	0.02260	0.03456	0.02623	0.02034	0.00755	0.00526	0.01829	0.01415	0.00007	0.00085	0.00179	0.00289	0.00442	0.00312	0.00202	0.00090	0.00052	0.00217	0.00140
176	Taiwa Community	0.00023	0.00943	0.01436	0.02304	0.03523	0.04048	0.00686	0.01166	0.00177	0.02823	0.00477	0.00002	0.00073	0.00127	0.00204	0.00312	0.00297	0.00066	0.00085	0.00017	0.00207	0.00046
177	East Ban Noen Kraprok Community, Prachummit	0.00090	0.00478	0.01407	0.02277	0.03481	0.01351	0.02680	0.00389	0.00693	0.00942	0.01865	0.00004	0.00043	0.00097	0.00156	0.00239	0.00151	0.00127	0.00043	0.00033	0.00105	0.00088
178	Ban Noen Kraprok Community	0.00020	0.00441	0.00670	0.01074	0.01643	0.01897	0.00600	0.00546	0.00155	0.01323	0.00417	0.00002	0.00049	0.00087	0.00140	0.00214	0.00200	0.00049	0.00058	0.00013	0.00139	0.00034
179	Nong Yai Community	0.00019	0.00802	0.01306	0.02099	0.03210	0.03427	0.00554	0.00987	0.00143	0.02390	0.00386	0.00002	0.00065	0.00114	0.00183	0.00279	0.00261	0.00064	0.00075	0.00017	0.00182	0.00044
180	Village No. 1, Pan Din Tai	0.00085	0.00478	0.01372	0.02220	0.03395	0.01386	0.02546	0.00399	0.00659	0.00966	0.01771	0.00004	0.00041	0.00093	0.00149	0.00229	0.00145	0.00121	0.00042	0.00031	0.00101	0.00084
181	Village No. 2, Ban Prachummit	0.00074	0.00338	0.00786	0.01278	0.01953	0.01183	0.02203	0.00341	0.00570	0.00825	0.01533	0.00006	0.00052	0.00124	0.00200	0.00306	0.00175	0.00180	0.00050	0.00047	0.00122	0.00125
182	Village No. 3, Ban Noen Samre	0.00021	0.00393	0.00737	0.01187	0.01816	0.01543	0.00628	0.00444	0.00162	0.01076	0.00437	0.00004	0.00085	0.00155	0.00250	0.00383	0.00336	0.00109	0.00097	0.00028	0.00234	0.00076
183	Village No. 4, Ban Phayun	0.00045	0.00490	0.01002	0.01615	0.02470	0.01838	0.01343	0.00529	0.00347	0.01282	0.00934	0.00007	0.00070	0.00161	0.00260	0.00398	0.00245	0.00216	0.00071	0.00056	0.00171	0.00150
184	Village No. 6, Ban Noen Kraprok	0.00013	0.00187	0.00381	0.00614	0.00939	0.00703	0.00388	0.00202	0.00100	0.00490	0.00270	0.00001	0.00020	0.00040	0.00064	0.00097	0.00076	0.00037	0.00022	0.00010	0.00053	0.00026
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00012	0.00166	0.00345	0.00556	0.00851	0.00616	0.00372	0.00177	0.00096	0.00429	0.00259	0.00001	0.00014	0.00030	0.00049	0.00074	0.00054	0.00032	0.00015	0.00008	0.00037	0.00023
186	Village No. 11, Ban Map Fakthong	0.00204	0.00940	0.02501	0.04058	0.06204	0.03725	0.06109	0.01073	0.01580	0.02598	0.04250	0.00018	0.00110	0.00301	0.00486	0.00744	0.00332	0.00530	0.00096	0.00137	0.00232	0.00368
187	Village No. 13, Ban Nong Phakkut	0.00035	0.00722	0.01248	0.02007	0.03069	0.03075	0.01047	0.00886	0.00271	0.02144	0.00728	0.00005	0.00078	0.00158	0.00254	0.00388	0.00292	0.00159	0.00084	0.00041	0.00204	0.00110
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00071	0.00400	0.01146	0.01854	0.02834	0.01525	0.02123	0.00439	0.00549	0.01063	0.01477	0.00003	0.00018	0.00049	0.00079	0.00120	0.00058	0.00081	0.00017	0.00021	0.00041	0.00056
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00016	0.00870	0.01319	0.02117	0.03237	0.03739	0.00470	0.01077	0.00122	0.02607	0.00327	0.00001	0.00026	0.00048	0.00077	0.00118	0.00102	0.00035	0.00029	0.00009	0.00071	0.00024
190	Village No. 6 (Ban Khao Krating Community)	0.00017	0.00361	0.00551	0.00883	0.01351	0.01549	0.00515	0.00446	0.00133	0.01080	0.00358	0.00001	0.00025	0.00044	0.00070	0.00108	0.00100	0.00026	0.00029	0.00007	0.00069	0.00018

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Table 5.2-65 Forecasted results of Styrene emission, operation phase

Area		The concentration value of Styrene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00021	0.00864	0.01340	0.02151	0.03290	0.03685	0.00617	0.01061	0.00160	0.02569	0.00429	0.00002	0.00050	0.00088	0.00141	0.00215	0.00200	0.00050	0.00058	0.00013	0.00140	0.00035
192	Village No. 11 (Ban Khong Wanphen Community)	0.00113	0.00422	0.01437	0.02331	0.03564	0.01293	0.03377	0.00373	0.00874	0.00902	0.02350	0.00006	0.00035	0.00096	0.00156	0.00238	0.00104	0.00172	0.00030	0.00044	0.00073	0.00120
193	Village No. 1, Ban Phlu Ta Luang	0.00097	0.00624	0.01685	0.02725	0.04166	0.01918	0.02910	0.00552	0.00753	0.01337	0.02025	0.00006	0.00040	0.00106	0.00171	0.00262	0.00122	0.00182	0.00035	0.00047	0.00085	0.00126
194	Village No. 2, Ban Khalot	0.00092	0.00619	0.01639	0.02650	0.04052	0.01934	0.02762	0.00557	0.00715	0.01349	0.01922	0.00006	0.00035	0.00097	0.00158	0.00241	0.00105	0.00174	0.00030	0.00045	0.00073	0.00121
195	Village No. 3, Ban Khlong Phai	0.00061	0.00419	0.00974	0.01573	0.02405	0.01454	0.01816	0.00419	0.00470	0.01014	0.01263	0.00007	0.00037	0.00106	0.00171	0.00261	0.00105	0.00198	0.00030	0.00051	0.00073	0.00138
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00088	0.00375	0.00968	0.01573	0.02404	0.01317	0.02618	0.00379	0.00677	0.00918	0.01821	0.00006	0.00031	0.00094	0.00152	0.00232	0.00086	0.00183	0.00025	0.00047	0.00060	0.00127
197	Village No. 5, Ban Khao Bai Si	0.00095	0.00385	0.01069	0.01736	0.02654	0.01263	0.02845	0.00364	0.00736	0.00881	0.01979	0.00008	0.00043	0.00129	0.00210	0.00320	0.00120	0.00251	0.00034	0.00065	0.00083	0.00175
198	Village No. 6, Ban Khao Tabaek	0.00064	0.00430	0.01140	0.01843	0.02817	0.01345	0.01920	0.00387	0.00497	0.00938	0.01336	0.00005	0.00033	0.00084	0.00136	0.00209	0.00104	0.00138	0.00030	0.00036	0.00072	0.00096
199	Village No. 7, Ban Nong Ya Noi	0.00041	0.00301	0.00767	0.01239	0.01894	0.00976	0.01220	0.00281	0.00316	0.00680	0.00849	0.00005	0.00033	0.00086	0.00139	0.00213	0.00107	0.00139	0.00031	0.00036	0.00075	0.00097
200	Village No. 8, Ban Nong Ya	0.00024	0.00549	0.00828	0.01328	0.02031	0.02365	0.00708	0.00681	0.00183	0.01649	0.00493	0.00001	0.00034	0.00059	0.00096	0.00146	0.00136	0.00034	0.00039	0.00009	0.00094	0.00024
201	Ban Nong Krachong Community	0.00046	0.00265	0.00750	0.01213	0.01854	0.00959	0.01369	0.00276	0.00354	0.00668	0.00952	0.00003	0.00028	0.00067	0.00109	0.00166	0.00093	0.00100	0.00027	0.00026	0.00065	0.00069
Standard*		-											1,000*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
** Styrene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

Subject to changes and approval by the Government of Thailand

2.10) Toluene

From the Toluene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. Most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and all had 1-year average Cmax values within the foreign standard reference criteria for Toluene concentrations that allow for long-term exposure without affecting health (RfC for Toluene is equal to 5,000 micrograms per cubic meter)

When comparing the Cmax of Toluene for 24-hour average and 1-year average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 1.02336 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 0.04274 micrograms per cubic meter. The 1-year average concentration of Toluene found scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest concentration value, comprising 0.08886 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.00447 micrograms per cubic meter.

In this regard, when considering the Toluene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-66 and Addendum 5-3, item 15, Toluene concentration contours (Figure 15-1 to Figure 15-22), it was found that all Toluene concentrations were in accordance with standard criteria.

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Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.04274	0.25842	0.37726	0.58863	0.88280	1.02336	0.74710	0.31945	0.20670	0.72643	0.52898	0.00447	0.02018	0.03780	0.05932	0.08886	0.07680	0.07812	0.02397	0.02161	0.05451	0.05531
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00527	0.02304	0.05643	0.08845	0.13254	0.06188	0.09214	0.01932	0.02549	0.04393	0.06524	0.00040	0.00157	0.00400	0.00627	0.00940	0.00400	0.00691	0.00125	0.00191	0.00284	0.00489
2	Wat Phala School	0.00204	0.01138	0.02540	0.03978	0.05962	0.03374	0.03565	0.01053	0.00986	0.02395	0.02524	0.00021	0.00126	0.00273	0.00428	0.00641	0.00381	0.00365	0.00119	0.00101	0.00271	0.00259
3	Phala Subdistrict Municipality Child Development Center	0.00183	0.01050	0.02321	0.03636	0.05449	0.03142	0.03201	0.00981	0.00886	0.02230	0.02266	0.00019	0.00118	0.00256	0.00401	0.00601	0.00359	0.00341	0.00112	0.00094	0.00255	0.00241
4	Ban Khlong Sai School	0.00231	0.01444	0.03101	0.04856	0.07278	0.04440	0.04037	0.01386	0.01117	0.03152	0.02858	0.00019	0.00124	0.00260	0.00408	0.00611	0.00386	0.00326	0.00121	0.00090	0.00274	0.00230
5	Rayong English Program School	0.00261	0.01380	0.03140	0.04920	0.07373	0.04012	0.04566	0.01252	0.01263	0.02848	0.03233	0.00021	0.00141	0.00296	0.00464	0.00695	0.00444	0.00366	0.00139	0.00101	0.00316	0.00259
6	Rayong Garden International School	0.00248	0.01396	0.03104	0.04863	0.07287	0.04152	0.04330	0.01296	0.01198	0.02948	0.03066	0.00021	0.00139	0.00291	0.00455	0.00682	0.00435	0.00360	0.00136	0.00100	0.00308	0.00255
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00137	0.01435	0.02616	0.04091	0.06133	0.05010	0.02389	0.01564	0.00661	0.03556	0.01692	0.00018	0.00257	0.00450	0.00704	0.01056	0.00921	0.00313	0.00288	0.00087	0.00654	0.00222
8	Wat Khiri Pawanaram School	0.00136	0.01365	0.02504	0.03917	0.05872	0.04746	0.02369	0.01481	0.00655	0.03369	0.01677	0.00017	0.00231	0.00408	0.00639	0.00957	0.00821	0.00298	0.00256	0.00083	0.00583	0.00211
9	Ban Khlong Bang Phai School	0.00420	0.01966	0.04684	0.07341	0.11001	0.05450	0.07340	0.01701	0.02031	0.03868	0.05197	0.00035	0.00123	0.00330	0.00518	0.00776	0.00291	0.00609	0.00091	0.00169	0.00207	0.00431
10	Pattanavechsuksa School	0.01178	0.02649	0.08992	0.14121	0.21151	0.03885	0.20589	0.01213	0.05696	0.02758	0.14578	0.00087	0.00248	0.00742	0.01165	0.01745	0.00494	0.01528	0.00154	0.00423	0.00351	0.01082
11	Pattanavech College	0.00982	0.02160	0.07427	0.11665	0.17472	0.03752	0.17172	0.01171	0.04751	0.02663	0.12158	0.00075	0.00218	0.00642	0.01008	0.01510	0.00446	0.01304	0.00139	0.00361	0.00316	0.00923
12	Saeng Song La Child Development Center 3	0.00743	0.03632	0.07246	0.11340	0.16998	0.11879	0.12983	0.03708	0.03592	0.08433	0.09192	0.00126	0.00379	0.01100	0.01726	0.02585	0.00798	0.02199	0.00249	0.00608	0.00566	0.01557
13	Wat Sa Kaeo School	0.00846	0.03717	0.07321	0.11456	0.17172	0.12277	0.14793	0.03832	0.04093	0.08715	0.10474	0.00143	0.00408	0.01218	0.01912	0.02864	0.00813	0.02505	0.00254	0.00693	0.00577	0.01774
14	Wat Sombun Naram School (Tem Rat Memorial)	0.00663	0.03055	0.05535	0.08684	0.13010	0.11672	0.11597	0.03644	0.03208	0.08285	0.08211	0.00091	0.00380	0.00947	0.01485	0.02225	0.01000	0.01585	0.00312	0.00439	0.00710	0.01122
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.00663	0.03055	0.05535	0.08684	0.13010	0.11672	0.11597	0.03644	0.03208	0.08285	0.08211	0.00091	0.00380	0.00947	0.01485	0.02225	0.01000	0.01585	0.00312	0.00439	0.00710	0.01122
16	Sajjaseuksa School	0.00123	0.02887	0.04302	0.06713	0.10068	0.11321	0.02150	0.03534	0.00595	0.08036	0.01522	0.00019	0.00372	0.00621	0.00970	0.01454	0.01373	0.00329	0.00429	0.00091	0.00975	0.00233
17	Ban Chang District Center for Non-Formal and Informal Education	0.00209	0.03622	0.05532	0.08635	0.12950	0.14027	0.03659	0.04379	0.01012	0.09957	0.02591	0.00029	0.00402	0.00708	0.01107	0.01659	0.01437	0.00503	0.00449	0.00139	0.01020	0.00356
18	Wat Suwan Rangsan Community School	0.00149	0.02380	0.03550	0.05541	0.08310	0.09327	0.02599	0.02912	0.00719	0.06621	0.01840	0.00021	0.00300	0.00528	0.00825	0.01237	0.01072	0.00374	0.00334	0.00104	0.00761	0.00265

Subject to changes and approval by the Government of Thailand

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00132	0.01742	0.02614	0.04080	0.06119	0.06807	0.02307	0.02125	0.00638	0.04832	0.01633	0.00019	0.00249	0.00445	0.00696	0.01044	0.00883	0.00336	0.00276	0.00093	0.00627	0.00238
20	Wat Samnak Kathon School	0.00174	0.02488	0.03754	0.05859	0.08787	0.09698	0.03033	0.03027	0.00839	0.06884	0.02147	0.00027	0.00330	0.00594	0.00929	0.01393	0.01160	0.00468	0.00362	0.00129	0.00823	0.00331
21	Ban Sam Nak Thon Child Development Center	0.00169	0.02400	0.03618	0.05647	0.08468	0.09358	0.02946	0.02921	0.00815	0.06643	0.02086	0.00026	0.00327	0.00588	0.00920	0.01379	0.01152	0.00459	0.00360	0.00127	0.00818	0.00325
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00133	0.01425	0.02126	0.03317	0.04975	0.05582	0.02319	0.01742	0.00642	0.03962	0.01642	0.00019	0.00199	0.00371	0.00580	0.00869	0.00682	0.00333	0.00213	0.00092	0.00484	0.00236
23	Wat Chak Mak School	0.00120	0.01032	0.01709	0.02671	0.04004	0.03827	0.02090	0.01195	0.00578	0.02716	0.01480	0.00017	0.00180	0.00333	0.00521	0.00782	0.00622	0.00291	0.00194	0.00081	0.00441	0.00206
24	St. Andrews International School, Green Valley, Rayong,	0.00029	0.00201	0.00331	0.00519	0.00778	0.00750	0.00510	0.00234	0.00141	0.00532	0.00361	0.00004	0.00025	0.00052	0.00082	0.00123	0.00080	0.00063	0.00025	0.00017	0.00057	0.00044
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00160	0.00983	0.02124	0.03327	0.04985	0.03005	0.02800	0.00938	0.00775	0.02133	0.01983	0.00016	0.00091	0.00203	0.00317	0.00475	0.00271	0.00283	0.00085	0.00078	0.00192	0.00200
26	Ban Phayun School	0.00157	0.00965	0.02085	0.03266	0.04894	0.02948	0.02751	0.00920	0.00761	0.02093	0.01948	0.00016	0.00090	0.00201	0.00315	0.00472	0.00268	0.00282	0.00084	0.00078	0.00190	0.00200
27	Rakpasa Kindergarten	0.00196	0.01273	0.02700	0.04228	0.06337	0.03956	0.03426	0.01235	0.00948	0.02808	0.02426	0.00018	0.00100	0.00222	0.00347	0.00520	0.00300	0.00306	0.00094	0.00085	0.00213	0.00217
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00349	0.02176	0.04677	0.07323	0.10976	0.06686	0.06097	0.02087	0.01687	0.04746	0.04317	0.00038	0.00249	0.00526	0.00824	0.01235	0.00775	0.00664	0.00242	0.00184	0.00550	0.00470
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00162	0.00839	0.01765	0.02763	0.04141	0.02629	0.02839	0.00821	0.00785	0.01866	0.02010	0.00015	0.00090	0.00197	0.00308	0.00461	0.00273	0.00264	0.00085	0.00073	0.00194	0.00187
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00162	0.00839	0.01765	0.02763	0.04141	0.02629	0.02839	0.00821	0.00785	0.01866	0.02010	0.00015	0.00090	0.00197	0.00308	0.00461	0.00273	0.00264	0.00085	0.00073	0.00194	0.00187
31	Wat Prachummit Bamrung School	0.00319	0.01313	0.03295	0.05166	0.07741	0.03423	0.05569	0.01069	0.01541	0.02430	0.03943	0.00015	0.00110	0.00226	0.00354	0.00531	0.00349	0.00269	0.00109	0.00074	0.00248	0.00191
32	Udom Wittayanukun School	0.00071	0.00841	0.01223	0.01909	0.02863	0.03339	0.01247	0.01042	0.00345	0.02370	0.00883	0.00006	0.00106	0.00178	0.00278	0.00417	0.00392	0.00097	0.00122	0.00027	0.00278	0.00069
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00054	0.00521	0.00926	0.01448	0.02171	0.01852	0.00952	0.00578	0.00263	0.01314	0.00674	0.00004	0.00057	0.00102	0.00160	0.00239	0.00201	0.00078	0.00063	0.00022	0.00143	0.00055
34	Wat Noen Kraprok School	0.00054	0.00522	0.00930	0.01455	0.02181	0.01851	0.00937	0.00578	0.00259	0.01314	0.00663	0.00004	0.00056	0.00101	0.00157	0.00236	0.00197	0.00078	0.00062	0.00022	0.00140	0.00055
35	Chonnabot Phatthana Kindergarten	0.00073	0.01046	0.01535	0.02396	0.03593	0.04131	0.01271	0.01290	0.00352	0.02932	0.00900	0.00007	0.00109	0.00188	0.00294	0.00441	0.00397	0.00119	0.00124	0.00033	0.00282	0.00084
36	Aksorn Business Administration Technological College	0.00277	0.02563	0.04920	0.07698	0.11539	0.08631	0.04836	0.02694	0.01338	0.06127	0.03424	0.00030	0.00253	0.00495	0.00775	0.01162	0.00837	0.00519	0.00261	0.00144	0.00594	0.00368
37	Banchang Karnchanakul Wittaya School	0.00113	0.01820	0.02799	0.04369	0.06552	0.07128	0.01982	0.02225	0.00548	0.05060	0.01404	0.00021	0.00338	0.00579	0.00905	0.01358	0.01225	0.00363	0.00382	0.00100	0.00870	0.00257

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Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00041	0.00369	0.00711	0.01113	0.01668	0.01238	0.00708	0.00387	0.00196	0.00879	0.00501	0.00004	0.00031	0.00060	0.00094	0.00142	0.00103	0.00062	0.00032	0.00017	0.00073	0.00044
39	Ban Phudon - Huai Mahat Child Development Center	0.00041	0.00369	0.00711	0.01113	0.01668	0.01238	0.00708	0.00387	0.00196	0.00879	0.00501	0.00004	0.00031	0.00060	0.00094	0.00142	0.00103	0.00062	0.00032	0.00017	0.00073	0.00044
40	Ban Map Fakthong School	0.00158	0.00833	0.01689	0.02644	0.03963	0.02686	0.02759	0.00838	0.00763	0.01907	0.01953	0.00009	0.00038	0.00096	0.00150	0.00224	0.00097	0.00164	0.00030	0.00045	0.00069	0.00116
41	Phuru Yor. Sor. Sor. 80 School	0.00178	0.00759	0.01876	0.02941	0.04407	0.02390	0.03104	0.00746	0.00859	0.01696	0.02198	0.00007	0.00034	0.00078	0.00122	0.00182	0.00096	0.00116	0.00030	0.00032	0.00068	0.00082
42	Khao Chi Chan School	0.00162	0.01059	0.02071	0.03241	0.04859	0.03516	0.02831	0.01097	0.00783	0.02496	0.02005	0.00010	0.00061	0.00133	0.00209	0.00313	0.00187	0.00178	0.00058	0.00049	0.00132	0.00126
43	Ban Khalot Child Development Center	0.00342	0.01488	0.03653	0.05726	0.08579	0.03984	0.05985	0.01244	0.01656	0.02828	0.04238	0.00022	0.00096	0.00235	0.00368	0.00551	0.00256	0.00384	0.00080	0.00106	0.00182	0.00272
44	Ban Khalot School	0.00355	0.01551	0.03800	0.05956	0.08924	0.04164	0.06207	0.01300	0.01717	0.02956	0.04395	0.00021	0.00093	0.00228	0.00358	0.00536	0.00248	0.00375	0.00077	0.00104	0.00176	0.00266
45	Phlu Ta Luang Wittaya School	0.00541	0.01125	0.03882	0.06099	0.09135	0.02479	0.09453	0.00774	0.02615	0.01760	0.06693	0.00031	0.00106	0.00291	0.00457	0.00684	0.00246	0.00547	0.00077	0.00151	0.00175	0.00387
46	Athittan Kindergarten School	0.00275	0.00733	0.02266	0.03558	0.05329	0.01877	0.04811	0.00586	0.01331	0.01332	0.03406	0.00022	0.00078	0.00210	0.00330	0.00494	0.00186	0.00387	0.00058	0.00107	0.00132	0.00274
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00430	0.01241	0.03388	0.05314	0.07962	0.03201	0.07518	0.00999	0.02080	0.02272	0.05323	0.00031	0.00108	0.00291	0.00457	0.00685	0.00257	0.00538	0.00080	0.00149	0.00182	0.00381
48	Ban Khao Bai Si School	0.00291	0.01184	0.02883	0.04520	0.06772	0.04250	0.05092	0.01327	0.01409	0.03017	0.03606	0.00023	0.00104	0.00253	0.00396	0.00594	0.00284	0.00406	0.00089	0.00112	0.00202	0.00288
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00071	0.01038	0.01502	0.02343	0.03513	0.04127	0.01234	0.01288	0.00342	0.02929	0.00874	0.00006	0.00059	0.00110	0.00171	0.00257	0.00204	0.00096	0.00064	0.00027	0.00145	0.00068
50	Ban KM. 5 School	0.00128	0.00638	0.01477	0.02314	0.03468	0.01821	0.02229	0.00568	0.00617	0.01293	0.01578	0.00017	0.00078	0.00186	0.00291	0.00436	0.00219	0.00289	0.00068	0.00080	0.00155	0.00204
51	Royal Thai Fleet Sattahip District School	0.00105	0.00593	0.01299	0.02035	0.03049	0.01788	0.01835	0.00558	0.00508	0.01269	0.01299	0.00013	0.00068	0.00155	0.00243	0.00365	0.00199	0.00225	0.00062	0.00062	0.00141	0.00159
52	RTN. 8 Nursery	0.00149	0.00677	0.01501	0.02353	0.03525	0.02049	0.02599	0.00640	0.00719	0.01455	0.01840	0.00014	0.00069	0.00163	0.00256	0.00383	0.00194	0.00252	0.00060	0.00070	0.00137	0.00178
53	Juk Samet School	0.00148	0.00668	0.01500	0.02352	0.03524	0.02023	0.02595	0.00631	0.00718	0.01436	0.01837	0.00014	0.00069	0.00163	0.00255	0.00382	0.00193	0.00251	0.00060	0.00070	0.00137	0.00178
54	Juk Samet Child Development Center	0.00150	0.00649	0.01511	0.02369	0.03550	0.01969	0.02622	0.00615	0.00725	0.01398	0.01856	0.00014	0.00069	0.00163	0.00255	0.00382	0.00192	0.00252	0.00060	0.00070	0.00137	0.00178
55	Ban Chong Samaesarn Child Development Center	0.00108	0.00673	0.01311	0.02051	0.03075	0.02244	0.01890	0.00700	0.00523	0.01593	0.01338	0.00008	0.00052	0.00109	0.00171	0.00256	0.00162	0.00136	0.00051	0.00038	0.00115	0.00096
56	Samaesarn Subdistrict NFE Center	0.00118	0.00531	0.01125	0.01762	0.02640	0.01982	0.02057	0.00619	0.00569	0.01407	0.01456	0.00006	0.00045	0.00093	0.00146	0.00219	0.00144	0.00111	0.00045	0.00031	0.00102	0.00078
57	Ban Chong Samaesarn School	0.00120	0.00527	0.01118	0.01751	0.02624	0.01882	0.02094	0.00587	0.00579	0.01336	0.01483	0.00006	0.00045	0.00092	0.00144	0.00216	0.00143	0.00108	0.00045	0.00030	0.00101	0.00077
58	Wat Phala Vipassana Office	0.00199	0.01086	0.02442	0.03825	0.05732	0.03197	0.03473	0.00998	0.00961	0.02270	0.02459	0.00021	0.00124	0.00272	0.00426	0.00639	0.00376	0.00368	0.00117	0.00102	0.00267	0.00261
59	Wat Phala	0.00193	0.01095	0.02431	0.03808	0.05707	0.03261	0.03382	0.01018	0.00936	0.02314	0.02395	0.00020	0.00121	0.00262	0.00410	0.00615	0.00366	0.00350	0.00114	0.00097	0.00260	0.00248
60	Chao Li Hu Ong Yea Shrine	0.00275	0.01670	0.03620	0.05670	0.08497	0.05090	0.04804	0.01589	0.01329	0.03613	0.03401	0.00030	0.00232	0.00466	0.00729	0.01093	0.00754	0.00520	0.00235	0.00144	0.00535	0.00368
61	Wat Khlong Sai	0.00267	0.01534	0.03387	0.05306	0.07952	0.04594	0.04662	0.01434	0.01290	0.03261	0.03301	0.00021	0.00141	0.00298	0.00466	0.00698	0.00440	0.00373	0.00137	0.00103	0.00313	0.00264
62	Wat Khiri Pawanaram	0.00123	0.01118	0.02156	0.03373	0.05056	0.03752	0.02148	0.01171	0.00594	0.02663	0.01521	0.00013	0.00145	0.00267	0.00417	0.00626	0.00501	0.00230	0.00156	0.00064	0.00355	0.00163

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Area		Concentration value of Toluene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00095	0.01063	0.01904	0.02977	0.04463	0.03758	0.01653	0.01173	0.00457	0.02667	0.01170	0.00013	0.00170	0.00303	0.00473	0.00710	0.00604	0.00226	0.00188	0.00063	0.00428	0.00160
64	Ban Chang Church	0.00099	0.01114	0.01836	0.02868	0.04300	0.04141	0.01730	0.01293	0.00479	0.02940	0.01225	0.00014	0.00253	0.00426	0.00666	0.00998	0.00928	0.00241	0.00290	0.00067	0.00659	0.00170
65	Wat Ban Khlong Bang Phai	0.00427	0.02028	0.04805	0.07530	0.11284	0.05656	0.07464	0.01766	0.02065	0.04015	0.05285	0.00038	0.00131	0.00358	0.00562	0.00842	0.00306	0.00670	0.00096	0.00185	0.00217	0.00475
66	Admiral Prince Abhakara Kiartivongse Monument	0.00466	0.02061	0.04774	0.07479	0.11208	0.05888	0.08153	0.01838	0.02256	0.04179	0.05773	0.00045	0.00153	0.00418	0.00655	0.00982	0.00354	0.00785	0.00111	0.00217	0.00251	0.00556
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00386	0.02058	0.04667	0.07312	0.10957	0.06005	0.06744	0.01875	0.01866	0.04263	0.04775	0.00047	0.00153	0.00426	0.00668	0.01001	0.00346	0.00815	0.00108	0.00225	0.00246	0.00577
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00458	0.01787	0.03794	0.05941	0.08904	0.05548	0.08006	0.01732	0.02215	0.03938	0.05668	0.00060	0.00178	0.00519	0.00814	0.01220	0.00370	0.01044	0.00115	0.00289	0.00262	0.00740
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.00906	0.01496	0.06131	0.09637	0.14432	0.04544	0.15829	0.01418	0.04380	0.03226	0.11208	0.00088	0.00234	0.00723	0.01135	0.01700	0.00435	0.01534	0.00136	0.00424	0.00309	0.01086
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.01223	0.02062	0.08341	0.13109	0.19633	0.04476	0.21383	0.01397	0.05916	0.03177	0.15140	0.00112	0.00280	0.00897	0.01408	0.02109	0.00479	0.01964	0.00150	0.00543	0.00340	0.01390
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.00983	0.04368	0.09300	0.14563	0.21825	0.15736	0.17177	0.04912	0.04752	0.11170	0.12162	0.00180	0.01018	0.02260	0.03539	0.05304	0.03034	0.03141	0.00947	0.00869	0.02153	0.02224
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.00793	0.04288	0.08663	0.13559	0.20323	0.14766	0.13868	0.04610	0.03837	0.10482	0.09819	0.00154	0.01026	0.02161	0.03383	0.05071	0.03209	0.02699	0.01002	0.00747	0.02278	0.01911
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.00787	0.07087	0.12236	0.19125	0.28673	0.25631	0.13755	0.08001	0.03806	0.18194	0.09739	0.00141	0.01167	0.02306	0.03609	0.05410	0.03846	0.02465	0.01200	0.00682	0.02730	0.01745
74	Wat Sa Kaeo	0.00950	0.04015	0.07009	0.10957	0.16427	0.14418	0.16605	0.04501	0.04594	0.10235	0.11757	0.00167	0.00477	0.01419	0.02228	0.03337	0.00957	0.02911	0.00299	0.00805	0.00679	0.02061
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00151	0.01072	0.02090	0.03273	0.04906	0.04170	0.02637	0.01302	0.00730	0.02960	0.01867	0.00016	0.00167	0.00310	0.00484	0.00726	0.00577	0.00271	0.00180	0.00075	0.00409	0.00192
76	Wat Sombun Naram	0.00724	0.03191	0.05387	0.08454	0.12665	0.11893	0.12653	0.03713	0.03501	0.08442	0.08959	0.00091	0.00369	0.00930	0.01459	0.02186	0.00957	0.01582	0.00299	0.00438	0.00679	0.01120
77	Ban Chang Abundant Grace Church	0.00363	0.02490	0.03842	0.05998	0.08995	0.09597	0.06353	0.02996	0.01758	0.06812	0.04498	0.00060	0.00348	0.00767	0.01201	0.01800	0.01047	0.01048	0.00327	0.00290	0.00743	0.00742
78	Wat Samnak Kathon	0.00178	0.02562	0.03866	0.06034	0.09050	0.09981	0.03119	0.03116	0.00863	0.07085	0.02208	0.00027	0.00335	0.00604	0.00944	0.01416	0.01179	0.00476	0.00368	0.00132	0.00837	0.00337
79	Wat Suwan Rangsan	0.00132	0.01742	0.02614	0.04080	0.06119	0.06807	0.02307	0.02125	0.00638	0.04832	0.01633	0.00019	0.00249	0.00445	0.00696	0.01044	0.00883	0.00336	0.00276	0.00093	0.00627	0.00238
80	Wat Nong Bot	0.00121	0.00825	0.01722	0.02696	0.04041	0.02599	0.02109	0.00811	0.00584	0.01845	0.01493	0.00013	0.00120	0.00230	0.00360	0.00540	0.00406	0.00225	0.00127	0.00062	0.00288	0.00159
81	The Shrine of Luang Tia Chak Mak	0.00110	0.01173	0.01967	0.03074	0.04609	0.04436	0.01924	0.01385	0.00532	0.03149	0.01362	0.00017	0.00205	0.00373	0.00583	0.00874	0.00717	0.00304	0.00224	0.00084	0.00509	0.00216
82	Wat Chak Mak	0.00116	0.01272	0.02200	0.03439	0.05156	0.04743	0.02027	0.01481	0.00561	0.03367	0.01435	0.00018	0.00213	0.00387	0.00606	0.00908	0.00747	0.00313	0.00233	0.00087	0.00531	0.00222

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00136	0.00833	0.01802	0.02822	0.04229	0.02542	0.02384	0.00793	0.00659	0.01804	0.01688	0.00014	0.00084	0.00185	0.00290	0.00435	0.00254	0.00252	0.00079	0.00070	0.00180	0.00179
84	The Shrine of King Taksin the Great (Ban Chang)	0.00136	0.00836	0.01807	0.02830	0.04241	0.02556	0.02383	0.00798	0.00659	0.01814	0.01687	0.00014	0.00085	0.00186	0.00291	0.00437	0.00257	0.00252	0.00080	0.00070	0.00182	0.00178
85	Wat Chonthararam (Phayun)	0.00161	0.00982	0.02128	0.03333	0.04994	0.02995	0.02821	0.00935	0.00780	0.02126	0.01997	0.00016	0.00090	0.00201	0.00315	0.00472	0.00268	0.00282	0.00084	0.00078	0.00190	0.00199
86	Masjid Dawatul Islam	0.00228	0.02918	0.05219	0.08160	0.12234	0.10321	0.03978	0.03222	0.01100	0.07327	0.02816	0.00030	0.00323	0.00599	0.00936	0.01404	0.01114	0.00525	0.00348	0.00145	0.00791	0.00372
87	Chinese shrine at the Buddha Dhamma Foundation	0.00492	0.02542	0.05835	0.09142	0.13700	0.07329	0.08609	0.02288	0.02382	0.05202	0.06095	0.00042	0.00274	0.00579	0.00906	0.01358	0.00855	0.00727	0.00267	0.00201	0.00607	0.00515
88	The Shrine of Luang Tia Ban Chang	0.00273	0.02068	0.03921	0.06134	0.09195	0.07024	0.04776	0.02193	0.01321	0.04986	0.03381	0.00030	0.00251	0.00494	0.00774	0.01160	0.00828	0.00525	0.00258	0.00145	0.00588	0.00372
89	The Shrine of Laoia Guan Yu Ban Chang	0.00330	0.02044	0.04295	0.06724	0.10078	0.06406	0.05761	0.02000	0.01594	0.04547	0.04079	0.00037	0.00246	0.00516	0.00808	0.01211	0.00772	0.00639	0.00241	0.00177	0.00548	0.00453
90	Wat Ban Chang	0.00422	0.02164	0.04981	0.07804	0.11694	0.06223	0.07381	0.01942	0.02042	0.04417	0.05226	0.00044	0.00251	0.00555	0.00869	0.01303	0.00753	0.00764	0.00235	0.00211	0.00534	0.00541
91	Wat Prachummit Bamrung	0.00330	0.01288	0.03308	0.05186	0.07771	0.03263	0.05762	0.01018	0.01594	0.02316	0.04080	0.00016	0.00110	0.00228	0.00357	0.00536	0.00349	0.00276	0.00109	0.00076	0.00247	0.00195
92	The Shrine of Luang Tia Noen Kraprok 1	0.00180	0.01548	0.03029	0.04739	0.07104	0.05140	0.03147	0.01605	0.00871	0.03649	0.02228	0.00012	0.00130	0.00240	0.00375	0.00562	0.00449	0.00207	0.00140	0.00057	0.00319	0.00147
93	The Shrine of Luang Tia Noen Kraprok 2	0.00082	0.01813	0.02649	0.04133	0.06199	0.07177	0.01432	0.02240	0.00396	0.05095	0.01014	0.00007	0.00157	0.00260	0.00406	0.00609	0.00585	0.00128	0.00182	0.00035	0.00415	0.00091
94	Wat Noen Kraprok	0.00061	0.00567	0.01010	0.01580	0.02368	0.02007	0.01068	0.00627	0.00296	0.01425	0.00757	0.00005	0.00072	0.00125	0.00195	0.00293	0.00257	0.00086	0.00080	0.00024	0.00182	0.00061
95	Wat Phudon Nim Sanoh	0.00037	0.00370	0.00696	0.01089	0.01632	0.01264	0.00641	0.00395	0.00177	0.00897	0.00454	0.00004	0.00032	0.00062	0.00097	0.00146	0.00107	0.00063	0.00033	0.00017	0.00076	0.00044
96	Church of Christ Ban Chang	0.00048	0.00385	0.00768	0.01202	0.01801	0.01257	0.00844	0.00392	0.00233	0.00892	0.00597	0.00004	0.00033	0.00065	0.00101	0.00151	0.00108	0.00068	0.00034	0.00019	0.00077	0.00048
97	Anek Kusala Sala (Viharn Sien)	0.00171	0.01028	0.02100	0.03288	0.04928	0.03298	0.02989	0.01029	0.00827	0.02341	0.02116	0.00011	0.00047	0.00117	0.00183	0.00275	0.00123	0.00196	0.00038	0.00054	0.00087	0.00139
98	Wat Yan Nasangwararam	0.00180	0.00841	0.01908	0.02989	0.04479	0.02605	0.03151	0.00813	0.00872	0.01849	0.02231	0.00013	0.00053	0.00134	0.00209	0.00314	0.00137	0.00227	0.00043	0.00063	0.00097	0.00161
99	Sirisirirak Monastery	0.00128	0.01021	0.01799	0.02813	0.04217	0.03643	0.02243	0.01137	0.00621	0.02586	0.01588	0.00008	0.00064	0.00130	0.00203	0.00304	0.00209	0.00145	0.00065	0.00040	0.00149	0.00103
100	Anan Buraparam Meditation Center	0.00240	0.00927	0.01951	0.03063	0.04589	0.02995	0.04187	0.00935	0.01158	0.02126	0.02964	0.00011	0.00064	0.00141	0.00220	0.00330	0.00190	0.00195	0.00059	0.00054	0.00135	0.00138
101	Wat Map Fakthong	0.00149	0.00756	0.01745	0.02735	0.04098	0.02340	0.02598	0.00730	0.00719	0.01661	0.01840	0.00010	0.00045	0.00108	0.00169	0.00253	0.00124	0.00170	0.00039	0.00047	0.00088	0.00120
102	Khao Chi Chan Image of Lord Buddha	0.00032	0.00250	0.00503	0.00788	0.01181	0.00811	0.00566	0.00253	0.00157	0.00576	0.00401	0.00002	0.00015	0.00032	0.00050	0.00076	0.00046	0.00042	0.00014	0.00011	0.00033	0.00029
103	Wat Khao Chi Chan	0.00034	0.00468	0.00740	0.01156	0.01733	0.01816	0.00600	0.00567	0.00166	0.01289	0.00425	0.00003	0.00034	0.00061	0.00095	0.00143	0.00120	0.00047	0.00037	0.00013	0.00085	0.00033
104	Rat Samakkhi Temple	0.00356	0.01547	0.03796	0.05950	0.08916	0.04142	0.06219	0.01293	0.01721	0.02940	0.04404	0.00022	0.00096	0.00237	0.00372	0.00558	0.00257	0.00391	0.00080	0.00108	0.00182	0.00277
105	The Shrine of Chao Mae Kuan Im	0.00362	0.01573	0.03861	0.06052	0.09068	0.04213	0.06325	0.01315	0.01750	0.02990	0.04478	0.00021	0.00091	0.00224	0.00350	0.00525	0.00242	0.00368	0.00076	0.00102	0.00172	0.00261
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00398	0.01749	0.04273	0.06698	0.10036	0.04711	0.06953	0.01471	0.01924	0.03344	0.04923	0.00024	0.00101	0.00251	0.00393	0.00590	0.00268	0.00417	0.00084	0.00115	0.00190	0.00295

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00146	0.00733	0.01700	0.02663	0.03991	0.02093	0.02549	0.00653	0.00705	0.01486	0.01805	0.00017	0.00083	0.00196	0.00307	0.00460	0.00232	0.00302	0.00072	0.00084	0.00165	0.00214
108	KM.8 Meditation Center	0.00240	0.01085	0.02622	0.04110	0.06158	0.02959	0.04199	0.00924	0.01162	0.02101	0.02973	0.00018	0.00084	0.00201	0.00315	0.00472	0.00234	0.00314	0.00073	0.00087	0.00166	0.00223
109	Wat Rangsee Sunthorn (KM.5)	0.00124	0.00638	0.01468	0.02300	0.03446	0.01834	0.02175	0.00572	0.00602	0.01302	0.01540	0.00017	0.00080	0.00190	0.00298	0.00446	0.00223	0.00295	0.00070	0.00082	0.00158	0.00209
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00045	0.00342	0.00692	0.01083	0.01624	0.01104	0.00789	0.00345	0.00218	0.00784	0.00559	0.00002	0.00014	0.00029	0.00045	0.00067	0.00047	0.00032	0.00015	0.00009	0.00033	0.00022
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00053	0.00377	0.00778	0.01218	0.01825	0.01258	0.00928	0.00393	0.00257	0.00893	0.00657	0.00002	0.00019	0.00038	0.00059	0.00088	0.00064	0.00039	0.00020	0.00011	0.00046	0.00027
112	Wat Tung Prong	0.00042	0.00329	0.00626	0.00980	0.01469	0.01143	0.00734	0.00357	0.00203	0.00811	0.00520	0.00002	0.00015	0.00030	0.00046	0.00069	0.00050	0.00031	0.00015	0.00009	0.00035	0.00022
113	Khao Phlu Ta Luang Meditation Center	0.00023	0.00191	0.00356	0.00557	0.00835	0.00660	0.00393	0.00206	0.00109	0.00468	0.00279	0.00001	0.00008	0.00016	0.00026	0.00039	0.00026	0.00019	0.00008	0.00005	0.00019	0.00013
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00430	0.01049	0.02875	0.04518	0.06767	0.03274	0.07521	0.01022	0.02081	0.02324	0.05325	0.00041	0.00111	0.00340	0.00534	0.00799	0.00209	0.00717	0.00065	0.00198	0.00149	0.00507
115	Wat Khao Bai Si Santitham	0.00502	0.01439	0.04075	0.06397	0.09582	0.03859	0.08769	0.01205	0.02426	0.02739	0.06209	0.00041	0.00129	0.00367	0.00576	0.00863	0.00281	0.00720	0.00088	0.00199	0.00199	0.00510
116	Welu Amphawan Vipassana Office	0.00356	0.01379	0.03307	0.05187	0.07771	0.04095	0.06222	0.01278	0.01722	0.02907	0.04406	0.00032	0.00122	0.00316	0.00495	0.00741	0.00307	0.00554	0.00096	0.00153	0.00218	0.00392
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00172	0.00940	0.02115	0.03314	0.04966	0.02766	0.03014	0.00863	0.00834	0.01963	0.02134	0.00013	0.00072	0.00162	0.00254	0.00380	0.00210	0.00232	0.00066	0.00064	0.00149	0.00165
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00164	0.00703	0.01672	0.02621	0.03927	0.02022	0.02869	0.00631	0.00794	0.01436	0.02032	0.00017	0.00084	0.00197	0.00308	0.00461	0.00235	0.00302	0.00073	0.00083	0.00167	0.00214
119	Samaesarn Pattanakarn Church	0.00151	0.00735	0.01558	0.02440	0.03657	0.02285	0.02641	0.00713	0.00731	0.01622	0.01870	0.00014	0.00071	0.00164	0.00257	0.00386	0.00205	0.00244	0.00064	0.00067	0.00145	0.00172
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00139	0.00703	0.01503	0.02354	0.03528	0.02170	0.02438	0.00677	0.00675	0.01541	0.01726	0.00009	0.00054	0.00116	0.00181	0.00272	0.00165	0.00152	0.00051	0.00042	0.00117	0.00107
121	Wat Chong Samaesarn	0.00118	0.00542	0.01136	0.01779	0.02665	0.02013	0.02063	0.00628	0.00571	0.01429	0.01461	0.00006	0.00046	0.00094	0.00148	0.00221	0.00146	0.00112	0.00045	0.00031	0.00103	0.00080
122	Viharn Luang Por Dam	0.00089	0.00559	0.01163	0.01820	0.02728	0.01770	0.01557	0.00552	0.00431	0.01256	0.01103	0.00005	0.00036	0.00074	0.00116	0.00174	0.00113	0.00090	0.00035	0.00025	0.00080	0.00064
123	The Shrine of King Taksin the Great (Samaesarn)	0.00120	0.00734	0.01587	0.02486	0.03726	0.02243	0.02096	0.00700	0.00580	0.01592	0.01484	0.00009	0.00057	0.00122	0.00192	0.00287	0.00176	0.00158	0.00055	0.00044	0.00125	0.00112
124	Thai Island and Sea Natural History Museum	0.00111	0.00716	0.01522	0.02384	0.03573	0.02218	0.01944	0.00692	0.00538	0.01574	0.01376	0.00009	0.00056	0.00118	0.00185	0.00277	0.00174	0.00149	0.00054	0.00041	0.00123	0.00105
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00130	0.00690	0.01567	0.02455	0.03680	0.02013	0.02269	0.00628	0.00628	0.01429	0.01606	0.00009	0.00059	0.00126	0.00197	0.00295	0.00182	0.00162	0.00057	0.00045	0.00129	0.00114

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00131	0.00721	0.01618	0.02535	0.03799	0.02128	0.02293	0.00664	0.00634	0.01511	0.01623	0.00009	0.00059	0.00127	0.00198	0.00297	0.00182	0.00164	0.00057	0.00045	0.00129	0.00116
127	Eastern-Nong Muang Community Health Service Center	0.01156	0.02681	0.08254	0.12968	0.19422	0.09328	0.20203	0.02912	0.05590	0.06621	0.14305	0.00122	0.00653	0.01479	0.02317	0.03472	0.01908	0.02133	0.00595	0.00590	0.01354	0.01510
128	Phala Subdistrict Health Promotion Hospital	0.00213	0.01238	0.02727	0.04271	0.06400	0.03720	0.03732	0.01161	0.01032	0.02640	0.02642	0.00021	0.00127	0.00275	0.00430	0.00644	0.00390	0.00361	0.00122	0.00100	0.00277	0.00255
129	Ban Chang Hospital	0.00075	0.00797	0.01483	0.02320	0.03477	0.02743	0.01318	0.00856	0.00365	0.01947	0.00933	0.00009	0.00088	0.00165	0.00258	0.00386	0.00301	0.00150	0.00094	0.00042	0.00214	0.00106
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00470	0.01070	0.03150	0.04952	0.07416	0.03531	0.08216	0.01102	0.02273	0.02506	0.05817	0.00049	0.00151	0.00431	0.00677	0.01014	0.00326	0.00850	0.00102	0.00235	0.00231	0.00602
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.00653	0.03551	0.07966	0.12479	0.18701	0.10475	0.11414	0.03270	0.03158	0.07436	0.08082	0.00113	0.00342	0.00991	0.01555	0.02330	0.00718	0.01983	0.00224	0.00549	0.00510	0.01404
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.01039	0.03695	0.07020	0.11025	0.16514	0.14115	0.18169	0.04406	0.05027	0.10019	0.12865	0.00126	0.00442	0.01192	0.01870	0.02802	0.01042	0.02210	0.00325	0.00611	0.00740	0.01565
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00129	0.02815	0.04186	0.06533	0.09798	0.11051	0.02250	0.03450	0.00623	0.07845	0.01593	0.00022	0.00316	0.00554	0.00866	0.01298	0.01132	0.00386	0.00353	0.00107	0.00803	0.00274
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00286	0.03317	0.04913	0.07666	0.11497	0.13045	0.05002	0.04072	0.01384	0.09260	0.03542	0.00046	0.00347	0.00703	0.01101	0.01650	0.01119	0.00804	0.00349	0.00222	0.00795	0.00569
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00125	0.01216	0.01860	0.02904	0.04355	0.04745	0.02179	0.01481	0.00603	0.03368	0.01543	0.00018	0.00195	0.00361	0.00564	0.00846	0.00672	0.00315	0.00210	0.00087	0.00477	0.00223
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00154	0.00949	0.02049	0.03209	0.04809	0.02904	0.02696	0.00907	0.00746	0.02062	0.01909	0.00016	0.00090	0.00198	0.00311	0.00466	0.00268	0.00274	0.00084	0.00076	0.00190	0.00194
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00065	0.01383	0.02026	0.03162	0.04742	0.05470	0.01142	0.01708	0.00316	0.03883	0.00808	0.00006	0.00128	0.00211	0.00330	0.00495	0.00473	0.00106	0.00148	0.00029	0.00336	0.00075
138	Phudon Huai Mahat Community Health Service Unit	0.00043	0.00392	0.00757	0.01185	0.01776	0.01315	0.00758	0.00410	0.00210	0.00933	0.00537	0.00004	0.00034	0.00066	0.00104	0.00155	0.00113	0.00068	0.00035	0.00019	0.00080	0.00048
139	Wat Yan Nasangwararam Hospital	0.00164	0.00942	0.01821	0.02854	0.04277	0.03240	0.02865	0.01011	0.00793	0.02300	0.02028	0.00012	0.00050	0.00124	0.00194	0.00291	0.00132	0.00206	0.00041	0.00057	0.00094	0.00146
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00161	0.00921	0.01816	0.02846	0.04265	0.03180	0.02819	0.00993	0.00780	0.02258	0.01996	0.00012	0.00050	0.00124	0.00194	0.00291	0.00131	0.00207	0.00041	0.00057	0.00093	0.00147
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00063	0.01400	0.02086	0.03256	0.04882	0.05487	0.01106	0.01713	0.00306	0.03895	0.00783	0.00004	0.00067	0.00115	0.00180	0.00270	0.00240	0.00075	0.00075	0.00021	0.00171	0.00053

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00380	0.01709	0.04135	0.06482	0.09712	0.04653	0.06636	0.01452	0.01836	0.03303	0.04699	0.00024	0.00101	0.00249	0.00390	0.00585	0.00269	0.00411	0.00084	0.00114	0.00191	0.00291
143	Sattahip Hospital KM.10	0.00271	0.01437	0.03265	0.05115	0.07666	0.04186	0.04733	0.01307	0.01309	0.02972	0.03351	0.00018	0.00079	0.00195	0.00305	0.00457	0.00211	0.00320	0.00066	0.00088	0.00150	0.00226
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00118	0.00522	0.01119	0.01753	0.02627	0.01958	0.02069	0.00611	0.00572	0.01390	0.01465	0.00006	0.00045	0.00093	0.00145	0.00218	0.00144	0.00110	0.00045	0.00030	0.00102	0.00078
145	Village No. 1 Ban Sakulthong	0.00091	0.00894	0.01693	0.02648	0.03970	0.03117	0.01596	0.00973	0.00442	0.02213	0.01130	0.00013	0.00159	0.00286	0.00448	0.00671	0.00560	0.00224	0.00175	0.00062	0.00398	0.00158
146	Village No. 2, Ban Kilo 16	0.00355	0.01639	0.03926	0.06154	0.09221	0.04512	0.06208	0.01408	0.01717	0.03203	0.04395	0.00031	0.00216	0.00449	0.00704	0.01055	0.00683	0.00546	0.00213	0.00151	0.00485	0.00387
147	Village No. 4, Ban Tung Prong	0.00286	0.01852	0.03698	0.05788	0.08675	0.06050	0.04991	0.01889	0.01381	0.04295	0.03534	0.00037	0.00330	0.00641	0.01003	0.01504	0.01103	0.00652	0.00344	0.00180	0.00783	0.00461
148	Village No. 5, Phala Subdistrict	0.00289	0.01577	0.03547	0.05557	0.08327	0.04641	0.05050	0.01449	0.01397	0.03294	0.03576	0.00029	0.00241	0.00475	0.00743	0.01113	0.00796	0.00503	0.00248	0.00139	0.00565	0.00356
149	Village No. 6, Ban Takat	0.00209	0.01256	0.02735	0.04283	0.06418	0.03815	0.03658	0.01191	0.01012	0.02708	0.02590	0.00020	0.00124	0.00265	0.00415	0.00621	0.00381	0.00343	0.00119	0.00095	0.00271	0.00243
150	Village No. 7, Ban Khlong Sai	0.00278	0.01545	0.03453	0.05409	0.08106	0.04573	0.04861	0.01428	0.01345	0.03246	0.03442	0.00026	0.00199	0.00404	0.00632	0.00947	0.00645	0.00459	0.00201	0.00127	0.00458	0.00325
151	Village No. 1 Ban Sam Nak Thon	0.00767	0.02144	0.06110	0.09593	0.14370	0.08321	0.13413	0.02598	0.03711	0.05907	0.09497	0.00079	0.00410	0.00939	0.01471	0.02205	0.01187	0.01378	0.00371	0.00381	0.00843	0.00976
152	Village No. 2, Ban Chak Mak	0.00154	0.02048	0.03113	0.04860	0.07287	0.08013	0.02688	0.02501	0.00744	0.05688	0.01903	0.00023	0.00271	0.00496	0.00775	0.01162	0.00947	0.00411	0.00296	0.00114	0.00672	0.00291
153	Village No. 3, Ban Sa Kaeo	0.03994	0.05871	0.25988	0.40858	0.61187	0.18269	0.69815	0.05703	0.19316	0.12968	0.49432	0.00340	0.00989	0.02918	0.04578	0.06859	0.02014	0.05936	0.00629	0.01642	0.01430	0.04203
154	Sa Kaeo Community 1	0.01371	0.04131	0.09053	0.14231	0.21313	0.15245	0.23963	0.04759	0.06630	0.10822	0.16967	0.00174	0.00502	0.01491	0.02339	0.03505	0.01012	0.03050	0.00316	0.00844	0.00718	0.02160
155	Sa Kaeo Community 2	0.00973	0.03617	0.09495	0.14889	0.22308	0.08892	0.17005	0.02776	0.04705	0.06312	0.12041	0.00106	0.00311	0.00915	0.01437	0.02152	0.00638	0.01856	0.00199	0.00514	0.00453	0.01314
156	Village No. 4, Ban Khlong Bang Phai	0.01079	0.01987	0.07599	0.11941	0.17884	0.03621	0.18855	0.01130	0.05217	0.02570	0.13350	0.00082	0.00224	0.00685	0.01076	0.01611	0.00428	0.01439	0.00134	0.00398	0.00304	0.01019
157	Village No. 5, Ban Yai Ra	0.00113	0.00692	0.01496	0.02343	0.03512	0.02115	0.01974	0.00660	0.00546	0.01502	0.01398	0.00011	0.00102	0.00195	0.00305	0.00457	0.00342	0.00191	0.00107	0.00053	0.00243	0.00135
158	Village No. 6, Ban Khao Khrok	0.02096	0.03742	0.14595	0.22935	0.34349	0.09972	0.36639	0.03113	0.10137	0.07079	0.25942	0.00164	0.00594	0.01577	0.02473	0.03706	0.01437	0.02865	0.00448	0.00793	0.01020	0.02028
159	Village no. 7, Ban Nong Takhian	0.00122	0.01359	0.02231	0.03487	0.05228	0.05159	0.02125	0.01610	0.00588	0.03662	0.01505	0.00020	0.00240	0.00434	0.00678	0.01016	0.00844	0.00344	0.00263	0.00095	0.00599	0.00244
160	Village No. 8, Ban Cherng Khao	0.00204	0.07625	0.11218	0.17505	0.26253	0.30087	0.03563	0.09392	0.00986	0.21357	0.02523	0.00031	0.01040	0.01643	0.02565	0.03847	0.03961	0.00548	0.01236	0.00152	0.02812	0.00388
161	Eastern-Nong Muang Community	0.00302	0.02156	0.04370	0.06840	0.10253	0.07321	0.05282	0.02285	0.01461	0.05197	0.03740	0.00045	0.00414	0.00793	0.01241	0.01861	0.01393	0.00778	0.00435	0.00215	0.00989	0.00551
162	Wat Khiri Pawanaram Community	0.00164	0.05983	0.08862	0.13829	0.20740	0.23530	0.02863	0.07345	0.00792	0.16703	0.02027	0.00027	0.00837	0.01330	0.02077	0.03114	0.03176	0.00474	0.00991	0.00131	0.02254	0.00335
163	Ban Chang-Phala Community	0.00147	0.05843	0.08479	0.13229	0.19841	0.23202	0.02570	0.07243	0.00711	0.16470	0.01820	0.00025	0.00827	0.01307	0.02041	0.03060	0.03145	0.00442	0.00982	0.00122	0.02232	0.00313
164	Ruam Sompong Community	0.00157	0.01233	0.02375	0.03716	0.05569	0.04187	0.02736	0.01307	0.00757	0.02972	0.01937	0.00029	0.00180	0.00385	0.00603	0.00904	0.00554	0.00498	0.00173	0.00138	0.00393	0.00353
165	Ming Mongkol Community	0.00149	0.04597	0.06933	0.10821	0.16228	0.17920	0.02597	0.05594	0.00719	0.12720	0.01839	0.00020	0.00403	0.00672	0.01050	0.01574	0.01491	0.00351	0.00465	0.00097	0.01058	0.00249
166	Jor Koo Community	0.00157	0.04609	0.06922	0.10803	0.16201	0.18005	0.02739	0.05621	0.00758	0.12781	0.01939	0.00020	0.00417	0.00691	0.01080	0.01620	0.01544	0.00353	0.00482	0.00098	0.01096	0.00250

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00144	0.06889	0.10154	0.15845	0.23763	0.27154	0.02523	0.08476	0.00698	0.19275	0.01786	0.00019	0.00474	0.00767	0.01198	0.01797	0.01779	0.00326	0.00555	0.00090	0.01263	0.00231
168	Thep Chinda Community	0.00164	0.04292	0.06624	0.10341	0.15508	0.16538	0.02873	0.05162	0.00795	0.11739	0.02034	0.00022	0.00392	0.00664	0.01038	0.01556	0.01433	0.00388	0.00447	0.00107	0.01017	0.00275
169	Health Park Community	0.00461	0.01155	0.03168	0.04979	0.07457	0.03618	0.08066	0.01130	0.02232	0.02569	0.05711	0.00036	0.00194	0.00439	0.00688	0.01032	0.00568	0.00632	0.00177	0.00175	0.00403	0.00448
170	Wat Ban Chang Community	0.00417	0.02260	0.05095	0.07982	0.11962	0.06635	0.07286	0.02071	0.02016	0.04710	0.05159	0.00042	0.00255	0.00552	0.00865	0.01297	0.00775	0.00734	0.00242	0.00203	0.00550	0.00520
171	Dong Dang Community	0.00167	0.03915	0.06268	0.09789	0.14678	0.14792	0.02916	0.04618	0.00807	0.10500	0.02065	0.00024	0.00352	0.00614	0.00960	0.01439	0.01264	0.00418	0.00395	0.00116	0.00897	0.00296
172	Night Market Community	0.00380	0.01891	0.04256	0.06667	0.09991	0.05561	0.06635	0.01736	0.01836	0.03947	0.04698	0.00040	0.00222	0.00496	0.00776	0.01164	0.00658	0.00697	0.00205	0.00193	0.00467	0.00493
173	Ruam Mitr Community	0.00542	0.02574	0.06100	0.09559	0.14325	0.07173	0.09483	0.02239	0.02624	0.05092	0.06714	0.00043	0.00274	0.00586	0.00918	0.01376	0.00848	0.00755	0.00265	0.00209	0.00602	0.00534
174	Ban Chang - Noen Kraprok Community	0.00416	0.01010	0.03144	0.04937	0.07395	0.02945	0.07277	0.00919	0.02013	0.02091	0.05152	0.00028	0.00164	0.00359	0.00562	0.00842	0.00497	0.00483	0.00155	0.00134	0.00353	0.00342
175	Dao Pitak Community	0.00252	0.01671	0.03171	0.04961	0.07436	0.05673	0.04397	0.01771	0.01217	0.04027	0.03113	0.00025	0.00205	0.00406	0.00635	0.00952	0.00675	0.00436	0.00211	0.00121	0.00479	0.00309
176	Taiwa Community	0.00085	0.02212	0.03230	0.05041	0.07560	0.08756	0.01483	0.02733	0.00410	0.06215	0.01050	0.00008	0.00173	0.00286	0.00446	0.00669	0.00642	0.00142	0.00200	0.00039	0.00456	0.00101
177	East Ban Noen Kraprok Community, Prachummit	0.00332	0.01206	0.03196	0.05013	0.07511	0.02923	0.05795	0.00912	0.01603	0.02075	0.04103	0.00016	0.00104	0.00219	0.00344	0.00515	0.00326	0.00274	0.00102	0.00076	0.00231	0.00194
178	Ban Noen Kraprok Community	0.00074	0.01035	0.01506	0.02350	0.03525	0.04104	0.01296	0.01281	0.00359	0.02913	0.00918	0.00006	0.00117	0.00196	0.00306	0.00460	0.00433	0.00105	0.00135	0.00029	0.00307	0.00075
179	Nong Yai Community	0.00069	0.01884	0.02944	0.04598	0.06895	0.07413	0.01199	0.02314	0.00332	0.05262	0.00849	0.00008	0.00153	0.00256	0.00401	0.00601	0.00565	0.00138	0.00176	0.00038	0.00401	0.00098
180	Village No. 1, Pan Din Tai	0.00315	0.01201	0.03117	0.04887	0.07323	0.02997	0.05505	0.00936	0.01523	0.02128	0.03898	0.00015	0.00100	0.00210	0.00328	0.00492	0.00313	0.00261	0.00098	0.00072	0.00222	0.00185
181	Village No. 2, Ban Prachummit	0.00272	0.00825	0.01795	0.02821	0.04225	0.02558	0.04763	0.00798	0.01318	0.01816	0.03372	0.00022	0.00127	0.00281	0.00440	0.00659	0.00378	0.00389	0.00118	0.00108	0.00268	0.00276
182	Village No. 3, Ban Noen Samre	0.00078	0.00939	0.01666	0.02604	0.03904	0.03338	0.01357	0.01042	0.00375	0.02369	0.00961	0.00014	0.00202	0.00351	0.00549	0.00822	0.00726	0.00236	0.00227	0.00065	0.00515	0.00167
183	Village No. 4, Ban Phayun	0.00166	0.01181	0.02267	0.03546	0.05316	0.03976	0.02903	0.01241	0.00803	0.02823	0.02056	0.00027	0.00171	0.00365	0.00572	0.00857	0.00531	0.00468	0.00166	0.00129	0.00377	0.00331
184	Village No. 6, Ban Noen Kraprok	0.00048	0.00450	0.00861	0.01348	0.02020	0.01520	0.00838	0.00474	0.00232	0.01079	0.00594	0.00005	0.00048	0.00089	0.00140	0.00210	0.00165	0.00080	0.00051	0.00022	0.00117	0.00057
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00046	0.00400	0.00781	0.01222	0.01831	0.01332	0.00805	0.00416	0.00223	0.00946	0.00570	0.00004	0.00035	0.00068	0.00107	0.00160	0.00116	0.00070	0.00036	0.00019	0.00082	0.00050
186	Village No. 11, Ban Map Fakthong	0.00756	0.02242	0.05699	0.08950	0.13406	0.08058	0.13208	0.02515	0.03654	0.05720	0.09352	0.00066	0.00274	0.00683	0.01071	0.01604	0.00719	0.01145	0.00224	0.00317	0.00510	0.00811
187	Village No. 13, Ban Nong Phakkut	0.00129	0.01705	0.02815	0.04398	0.06594	0.06651	0.02263	0.02076	0.00626	0.04721	0.01603	0.00020	0.00187	0.00356	0.00557	0.00835	0.00632	0.00343	0.00197	0.00095	0.00449	0.00243
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00263	0.01004	0.02602	0.04080	0.06114	0.03298	0.04590	0.01029	0.01270	0.02341	0.03250	0.00010	0.00046	0.00110	0.00173	0.00259	0.00126	0.00175	0.00039	0.00048	0.00089	0.00124
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00058	0.02039	0.02968	0.04631	0.06946	0.08087	0.01016	0.02525	0.00281	0.05741	0.00720	0.00004	0.00062	0.00108	0.00169	0.00253	0.00221	0.00076	0.00069	0.00021	0.00157	0.00053
190	Village No. 6 (Ban Khao Krating Community)	0.00064	0.00847	0.01239	0.01933	0.02898	0.03350	0.01113	0.01046	0.00308	0.02378	0.00788	0.00003	0.00059	0.00099	0.00154	0.00231	0.00215	0.00055	0.00067	0.00015	0.00153	0.00039

Table 5.2-66 Forecasted results of Toluene emission, operation phase

Area		Concentration value of Toluene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00076	0.02030	0.03017	0.04708	0.07060	0.07970	0.01335	0.02488	0.00369	0.05658	0.00945	0.00006	0.00118	0.00197	0.00309	0.00463	0.00433	0.00108	0.00135	0.00030	0.00308	0.00077
192	Village No. 11 (Ban Khong Wanphen Community)	0.00418	0.01052	0.03274	0.05140	0.07699	0.02798	0.07302	0.00873	0.02020	0.01986	0.05170	0.00021	0.00087	0.00219	0.00343	0.00514	0.00226	0.00372	0.00070	0.00103	0.00160	0.00263
193	Village No. 1, Ban Phlu Ta Luang	0.00360	0.01554	0.03825	0.05995	0.08984	0.04147	0.06292	0.01295	0.01741	0.02944	0.04455	0.00022	0.00098	0.00241	0.00377	0.00565	0.00264	0.00393	0.00082	0.00109	0.00188	0.00278
194	Village No. 2, Ban Khalot	0.00342	0.01537	0.03720	0.05831	0.08738	0.04184	0.05972	0.01306	0.01652	0.02970	0.04229	0.00022	0.00088	0.00221	0.00347	0.00520	0.00228	0.00376	0.00071	0.00104	0.00162	0.00266
195	Village No. 3, Ban Khlong Phai	0.00225	0.01025	0.02207	0.03457	0.05180	0.03145	0.03926	0.00982	0.01086	0.02233	0.02780	0.00024	0.00092	0.00240	0.00376	0.00564	0.00227	0.00427	0.00071	0.00118	0.00161	0.00303
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00324	0.00915	0.02209	0.03472	0.05200	0.02849	0.05660	0.00889	0.01566	0.02022	0.04008	0.00023	0.00079	0.00213	0.00335	0.00501	0.00186	0.00396	0.00058	0.00110	0.00132	0.00281
197	Village No. 5, Ban Khao Bai Si	0.00352	0.00949	0.02439	0.03832	0.05739	0.02733	0.06151	0.00853	0.01702	0.01940	0.04355	0.00031	0.00109	0.00294	0.00461	0.00691	0.00259	0.00544	0.00081	0.00150	0.00184	0.00385
198	Village No. 6, Ban Khao Tabaek	0.00237	0.01069	0.02586	0.04054	0.06075	0.02909	0.04151	0.00908	0.01149	0.02065	0.02939	0.00017	0.00081	0.00191	0.00300	0.00450	0.00225	0.00298	0.00070	0.00082	0.00160	0.00211
199	Village No. 7, Ban Nong Ya Noi	0.00151	0.00745	0.01739	0.02725	0.04083	0.02110	0.02639	0.00659	0.00730	0.01498	0.01868	0.00017	0.00083	0.00195	0.00306	0.00458	0.00232	0.00301	0.00073	0.00083	0.00165	0.00213
200	Village No. 8, Ban Nong Ya	0.00088	0.01286	0.01862	0.02905	0.04357	0.05115	0.01532	0.01597	0.00424	0.03631	0.01084	0.00004	0.00080	0.00134	0.00210	0.00314	0.00293	0.00075	0.00091	0.00021	0.00208	0.00053
201	Ban Nong Krachong Community	0.00169	0.00664	0.01702	0.02669	0.04000	0.02074	0.02959	0.00647	0.00819	0.01472	0.02095	0.00012	0.00068	0.00152	0.00239	0.00358	0.00201	0.00216	0.00063	0.00060	0.00142	0.00153
Standard*		-											5,000*										

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
** Toluene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

Subject to changes and approval by the Government of Thailand

2.11) Xylene

From the Xylene emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all scenarios occurred outside of the project area to the north. Most average 1 year Cmax values occurred within the project area (within the U-Tapao International Airport area) and all had values within the foreign standard reference criteria for Xylene concentrations that allow for long-term exposure without affecting health (RfC for Styrene is equal to 100 micrograms per cubic meter)

When comparing the Cmax of Xylene for 24-hour average in all 11 scenarios, it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest value, comprising 0.72347 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value comprising 0.03418 micrograms per cubic meter. The 1-year average concentration found scenario 5 (Worst Cast Scenario (Peak Hour) Peak flight forecast) had the highest value, comprising 0.06279 micrograms per cubic meter. Scenario 1 (2019 aviation situation scenario (1 runway)), had the lowest value, comprising 0.00357 micrograms per cubic meter.

In this regard, when considering the Xylene concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places as shown in Table 5.2-67 and Addendum 5-3, item 16, Xylene concentration contours (Figure 16-1 to Figure 16-22), it was found that all 1-year average Xylene concentrations were in accordance with standard criteria.

Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		0.03418	0.18717	0.26942	0.41764	0.62251	0.72347	0.52809	0.23166	0.14911	0.51642	0.37598	0.00357	0.01464	0.02709	0.04218	0.06279	0.05429	0.05522	0.01738	0.01559	0.03875	0.03931
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.00422	0.01696	0.04042	0.06287	0.09361	0.04375	0.06513	0.01401	0.01839	0.03123	0.04637	0.00032	0.00116	0.00287	0.00446	0.00664	0.00283	0.00489	0.00091	0.00138	0.00202	0.00348
2	Wat Phala School	0.00163	0.00835	0.01818	0.02827	0.04210	0.02385	0.02520	0.00764	0.00712	0.01702	0.01794	0.00017	0.00092	0.00196	0.00304	0.00453	0.00270	0.00258	0.00086	0.00073	0.00192	0.00184
3	Phala Subdistrict Municipality Child Development Center	0.00146	0.00770	0.01662	0.02584	0.03848	0.02221	0.02263	0.00711	0.00639	0.01586	0.01611	0.00016	0.00086	0.00183	0.00285	0.00425	0.00254	0.00241	0.00081	0.00068	0.00181	0.00172
4	Ban Khlong Sai School	0.00185	0.01058	0.02220	0.03450	0.05139	0.03139	0.02853	0.01005	0.00806	0.02241	0.02031	0.00015	0.00090	0.00186	0.00290	0.00431	0.00273	0.00230	0.00087	0.00065	0.00195	0.00164
5	Rayong English Program School	0.00209	0.01013	0.02248	0.03496	0.05206	0.02836	0.03228	0.00908	0.00911	0.02025	0.02298	0.00017	0.00104	0.00212	0.00330	0.00491	0.00314	0.00258	0.00101	0.00073	0.00224	0.00184
6	Rayong Garden International School	0.00198	0.01024	0.02222	0.03455	0.05146	0.02935	0.03061	0.00940	0.00864	0.02095	0.02179	0.00016	0.00101	0.00208	0.00323	0.00482	0.00307	0.00255	0.00098	0.00072	0.00219	0.00181
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.00109	0.01045	0.01871	0.02905	0.04328	0.03542	0.01689	0.01134	0.00477	0.02528	0.01202	0.00014	0.00187	0.00322	0.00500	0.00745	0.00651	0.00221	0.00209	0.00062	0.00465	0.00158
8	Wat Khiri Pawanaram School	0.00108	0.00995	0.01791	0.02781	0.04144	0.03355	0.01674	0.01074	0.00473	0.02395	0.01192	0.00014	0.00168	0.00292	0.00453	0.00676	0.00580	0.00211	0.00186	0.00060	0.00414	0.00150
9	Ban Khlong Bang Phai School	0.00336	0.01446	0.03355	0.05217	0.07769	0.03853	0.05189	0.01234	0.01465	0.02750	0.03694	0.00028	0.00091	0.00237	0.00368	0.00548	0.00206	0.00431	0.00066	0.00122	0.00147	0.00307
10	Pattanavechsuksa School	0.00942	0.01980	0.06448	0.10043	0.14948	0.02747	0.14553	0.00880	0.04109	0.01961	0.10361	0.00070	0.00184	0.00532	0.00828	0.01233	0.00349	0.01080	0.00112	0.00305	0.00249	0.00769
11	Pattanavech College	0.00786	0.01615	0.05326	0.08297	0.12348	0.02652	0.12138	0.00849	0.03427	0.01893	0.08642	0.00060	0.00162	0.00460	0.00717	0.01067	0.00315	0.00922	0.00101	0.00260	0.00225	0.00656
12	Saeng Song La Child Development Center 3	0.00594	0.02654	0.05185	0.08055	0.11999	0.08398	0.09177	0.02689	0.02591	0.05995	0.06533	0.00101	0.00281	0.00788	0.01227	0.01826	0.00564	0.01555	0.00181	0.00439	0.00403	0.01107
13	Wat Sa Kaeo School	0.00677	0.02715	0.05238	0.08137	0.12121	0.08679	0.10457	0.02779	0.02952	0.06195	0.07445	0.00115	0.00303	0.00873	0.01359	0.02023	0.00575	0.01771	0.00184	0.00500	0.00410	0.01261
14	Wat Sombun Naram School (Tem Rat Memorial)	0.00530	0.02216	0.03967	0.06174	0.09192	0.08251	0.08197	0.02642	0.02314	0.05890	0.05836	0.00073	0.00280	0.00679	0.01055	0.01572	0.00707	0.01121	0.00226	0.00316	0.00505	0.00798
15	Sam Nak Thon Subdistrict Municipality Child Development Center in Wat Sombun Naram School	0.00530	0.02216	0.03967	0.06174	0.09192	0.08251	0.08197	0.02642	0.02314	0.05890	0.05836	0.00073	0.00280	0.00679	0.01055	0.01572	0.00707	0.01121	0.00226	0.00316	0.00505	0.00798
16	Sajjaseuksa School	0.00098	0.02092	0.03072	0.04764	0.07100	0.08004	0.01520	0.02563	0.00429	0.05713	0.01082	0.00015	0.00270	0.00444	0.00688	0.01026	0.00971	0.00233	0.00311	0.00066	0.00693	0.00166
17	Ban Chang District Center for Non-Formal and Informal Education	0.00167	0.02626	0.03952	0.06128	0.09133	0.09916	0.02586	0.03175	0.00730	0.07078	0.01841	0.00023	0.00293	0.00506	0.00786	0.01171	0.01016	0.00356	0.00325	0.00100	0.00725	0.00253
18	Wat Suwan Rangsan Community School	0.00119	0.01725	0.02536	0.03932	0.05860	0.06594	0.01837	0.02111	0.00519	0.04707	0.01308	0.00017	0.00218	0.00377	0.00586	0.00873	0.00758	0.00265	0.00243	0.00075	0.00541	0.00188

Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.00106	0.01263	0.01867	0.02895	0.04315	0.04812	0.01630	0.01541	0.00460	0.03435	0.01161	0.00015	0.00182	0.00318	0.00494	0.00736	0.00625	0.00238	0.00200	0.00067	0.00446	0.00169
20	Wat Samnak Kathon School	0.00139	0.01804	0.02681	0.04158	0.06197	0.06856	0.02144	0.02195	0.00605	0.04894	0.01526	0.00021	0.00240	0.00425	0.00660	0.00983	0.00820	0.00331	0.00263	0.00093	0.00585	0.00236
21	Ban Sam Nak Thon Child Development Center	0.00135	0.01740	0.02584	0.04007	0.05972	0.06616	0.02083	0.02118	0.00588	0.04722	0.01483	0.00021	0.00238	0.00421	0.00653	0.00973	0.00814	0.00325	0.00261	0.00092	0.00581	0.00231
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.00106	0.01032	0.01518	0.02354	0.03509	0.03946	0.01639	0.01264	0.00463	0.02817	0.01167	0.00015	0.00145	0.00265	0.00412	0.00613	0.00482	0.00235	0.00154	0.00066	0.00344	0.00167
23	Wat Chak Mak School	0.00096	0.00750	0.01222	0.01896	0.02825	0.02705	0.01477	0.00866	0.00417	0.01931	0.01052	0.00013	0.00131	0.00238	0.00370	0.00552	0.00440	0.00206	0.00141	0.00058	0.00314	0.00147
24	St. Andrews International School, Green Valley, Rayong,	0.00023	0.00146	0.00237	0.00369	0.00549	0.00530	0.00361	0.00170	0.00102	0.00378	0.00257	0.00003	0.00019	0.00037	0.00058	0.00087	0.00057	0.00044	0.00018	0.00012	0.00041	0.00031
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.00128	0.00720	0.01521	0.02364	0.03520	0.02125	0.01979	0.00680	0.00559	0.01517	0.01409	0.00013	0.00067	0.00145	0.00225	0.00336	0.00191	0.00200	0.00061	0.00056	0.00137	0.00142
26	Ban Phayun School	0.00126	0.00707	0.01493	0.02320	0.03456	0.02084	0.01945	0.00667	0.00549	0.01488	0.01385	0.00013	0.00066	0.00144	0.00224	0.00334	0.00189	0.00199	0.00061	0.00056	0.00135	0.00142
27	Rakpasa Kindergarten	0.00157	0.00932	0.01933	0.03004	0.04474	0.02797	0.02422	0.00896	0.00684	0.01996	0.01724	0.00014	0.00074	0.00159	0.00247	0.00367	0.00212	0.00216	0.00068	0.00061	0.00151	0.00154
28	Wat Ban Chang School (Boonrawdprachanukul)	0.00279	0.01594	0.03347	0.05203	0.07749	0.04726	0.04310	0.01513	0.01217	0.03374	0.03068	0.00030	0.00182	0.00377	0.00586	0.00872	0.00548	0.00469	0.00175	0.00133	0.00391	0.00334
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.00130	0.00615	0.01263	0.01963	0.02924	0.01859	0.02007	0.00595	0.00567	0.01327	0.01429	0.00012	0.00066	0.00141	0.00219	0.00326	0.00193	0.00187	0.00062	0.00053	0.00138	0.00133
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.00130	0.00615	0.01263	0.01963	0.02924	0.01859	0.02007	0.00595	0.00567	0.01327	0.01429	0.00012	0.00066	0.00141	0.00219	0.00326	0.00193	0.00187	0.00062	0.00053	0.00138	0.00133
31	Wat Prachummit Bamrung School	0.00255	0.00968	0.02360	0.03672	0.05467	0.02420	0.03937	0.00775	0.01111	0.01727	0.02803	0.00012	0.00080	0.00162	0.00251	0.00375	0.00247	0.00190	0.00079	0.00054	0.00176	0.00135
32	Udom Wittayanukun School	0.00057	0.00609	0.00874	0.01354	0.02019	0.02360	0.00882	0.00756	0.00249	0.01685	0.00628	0.00004	0.00077	0.00127	0.00198	0.00294	0.00277	0.00068	0.00089	0.00019	0.00198	0.00049
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.00044	0.00380	0.00662	0.01028	0.01532	0.01309	0.00673	0.00419	0.00190	0.00934	0.00479	0.00004	0.00041	0.00073	0.00113	0.00169	0.00142	0.00055	0.00046	0.00016	0.00102	0.00039
34	Wat Noen Kraprok School	0.00043	0.00380	0.00665	0.01033	0.01539	0.01308	0.00662	0.00419	0.00187	0.00934	0.00471	0.00004	0.00041	0.00072	0.00112	0.00166	0.00139	0.00055	0.00045	0.00016	0.00099	0.00039
35	Chonnabot Phatthana Kindergarten	0.00058	0.00758	0.01097	0.01700	0.02534	0.02920	0.00899	0.00935	0.00254	0.02085	0.00640	0.00005	0.00080	0.00134	0.00209	0.00311	0.00280	0.00084	0.00090	0.00024	0.00200	0.00060
36	Aksorn Business Administration Technological College	0.00221	0.01871	0.03520	0.05467	0.08144	0.06102	0.03418	0.01954	0.00965	0.04355	0.02434	0.00024	0.00184	0.00354	0.00551	0.00820	0.00591	0.00367	0.00189	0.00104	0.00422	0.00261
37	Banchang Karnchanakul Wittaya School	0.00091	0.01319	0.01999	0.03101	0.04621	0.05039	0.01401	0.01614	0.00396	0.03597	0.00998	0.00017	0.00246	0.00414	0.00643	0.00958	0.00866	0.00257	0.00277	0.00072	0.00618	0.00183

Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.00032	0.00269	0.00509	0.00790	0.01177	0.00875	0.00501	0.00280	0.00141	0.00625	0.00356	0.00003	0.00023	0.00043	0.00067	0.00100	0.00073	0.00044	0.00023	0.00012	0.00052	0.00031
39	Ban Phudon - Huai Mahat Child Development Center	0.00032	0.00269	0.00509	0.00790	0.01177	0.00875	0.00501	0.00280	0.00141	0.00625	0.00356	0.00003	0.00023	0.00043	0.00067	0.00100	0.00073	0.00044	0.00023	0.00012	0.00052	0.00031
40	Ban Map Fakthong School	0.00126	0.00609	0.01209	0.01878	0.02798	0.01899	0.01950	0.00608	0.00551	0.01355	0.01388	0.00008	0.00028	0.00068	0.00106	0.00159	0.00068	0.00116	0.00022	0.00033	0.00049	0.00083
41	Phuru Yor. Sor. Sor. 80 School	0.00142	0.00559	0.01344	0.02091	0.03113	0.01689	0.02194	0.00541	0.00620	0.01206	0.01562	0.00005	0.00025	0.00056	0.00086	0.00129	0.00068	0.00082	0.00022	0.00023	0.00048	0.00058
42	Khao Chi Chan School	0.00130	0.00773	0.01482	0.02302	0.03429	0.02485	0.02001	0.00796	0.00565	0.01774	0.01425	0.00008	0.00045	0.00095	0.00148	0.00221	0.00132	0.00126	0.00042	0.00035	0.00094	0.00089
43	Ban Khalot Child Development Center	0.00274	0.01096	0.02616	0.04069	0.06059	0.02817	0.04231	0.00902	0.01195	0.02011	0.03012	0.00018	0.00070	0.00168	0.00261	0.00389	0.00181	0.00272	0.00058	0.00077	0.00129	0.00193
44	Ban Khalot School	0.00284	0.01142	0.02721	0.04233	0.06303	0.02944	0.04388	0.00943	0.01239	0.02101	0.03124	0.00017	0.00068	0.00163	0.00254	0.00379	0.00175	0.00265	0.00056	0.00075	0.00125	0.00189
45	Phlu Ta Luang Wittaya School	0.00432	0.00835	0.02785	0.04339	0.06457	0.01753	0.06682	0.00561	0.01887	0.01251	0.04757	0.00025	0.00079	0.00209	0.00325	0.00483	0.00174	0.00387	0.00056	0.00109	0.00124	0.00275
46	Athittan Kindergarten School	0.00220	0.00545	0.01625	0.02530	0.03766	0.01327	0.03401	0.00425	0.00960	0.00947	0.02421	0.00018	0.00058	0.00151	0.00235	0.00349	0.00132	0.00274	0.00042	0.00077	0.00094	0.00195
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.00344	0.00917	0.02428	0.03778	0.05625	0.02263	0.05314	0.00725	0.01500	0.01615	0.03784	0.00025	0.00080	0.00209	0.00325	0.00484	0.00181	0.00381	0.00058	0.00107	0.00129	0.00271
48	Ban Khao Bai Si School	0.00233	0.00865	0.02065	0.03213	0.04783	0.03004	0.03600	0.00962	0.01016	0.02145	0.02563	0.00019	0.00077	0.00181	0.00282	0.00419	0.00201	0.00287	0.00064	0.00081	0.00143	0.00204
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.00056	0.00751	0.01072	0.01662	0.02477	0.02917	0.00873	0.00934	0.00246	0.02083	0.00621	0.00004	0.00043	0.00078	0.00122	0.00181	0.00144	0.00068	0.00046	0.00019	0.00103	0.00049
50	Ban KM. 5 School	0.00102	0.00468	0.01057	0.01644	0.02449	0.01287	0.01575	0.00412	0.00445	0.00919	0.01122	0.00013	0.00058	0.00133	0.00207	0.00308	0.00155	0.00204	0.00050	0.00058	0.00110	0.00145
51	Royal Thai Fleet Sattahip District School	0.00084	0.00435	0.00930	0.01446	0.02153	0.01264	0.01297	0.00405	0.00366	0.00902	0.00923	0.00010	0.00050	0.00111	0.00173	0.00257	0.00141	0.00159	0.00045	0.00045	0.00101	0.00113
52	RTN. 8 Nursery	0.00119	0.00497	0.01075	0.01672	0.02490	0.01449	0.01837	0.00464	0.00519	0.01034	0.01308	0.00012	0.00051	0.00117	0.00182	0.00270	0.00137	0.00178	0.00044	0.00050	0.00098	0.00127
53	Juk Samet School	0.00119	0.00490	0.01074	0.01672	0.02489	0.01430	0.01834	0.00458	0.00518	0.01021	0.01306	0.00012	0.00051	0.00117	0.00181	0.00270	0.00137	0.00178	0.00044	0.00050	0.00097	0.00127
54	Juk Samet Child Development Center	0.00120	0.00476	0.01082	0.01684	0.02508	0.01392	0.01853	0.00446	0.00523	0.00994	0.01319	0.00012	0.00051	0.00117	0.00181	0.00270	0.00136	0.00178	0.00044	0.00050	0.00097	0.00127
55	Ban Chong Samaesarn Child Development Center	0.00086	0.00492	0.00938	0.01457	0.02170	0.01586	0.01336	0.00508	0.00377	0.01132	0.00951	0.00006	0.00038	0.00078	0.00121	0.00181	0.00115	0.00096	0.00037	0.00027	0.00082	0.00068
56	Samaesarn Subdistrict NFE Center	0.00094	0.00385	0.00805	0.01252	0.01864	0.01401	0.01454	0.00449	0.00411	0.01000	0.01035	0.00005	0.00033	0.00067	0.00104	0.00154	0.00102	0.00078	0.00033	0.00022	0.00073	0.00056
57	Ban Chong Samaesarn School	0.00096	0.00386	0.00800	0.01244	0.01853	0.01330	0.01480	0.00426	0.00418	0.00950	0.01054	0.00005	0.00033	0.00066	0.00102	0.00152	0.00101	0.00077	0.00032	0.00022	0.00072	0.00055
58	Wat Phala Vipassana Office	0.00159	0.00797	0.01748	0.02718	0.04047	0.02260	0.02455	0.00724	0.00693	0.01614	0.01748	0.00017	0.00091	0.00195	0.00303	0.00451	0.00266	0.00260	0.00085	0.00073	0.00190	0.00185
59	Wat Phala	0.00155	0.00803	0.01741	0.02706	0.04030	0.02305	0.02391	0.00738	0.00675	0.01645	0.01702	0.00016	0.00088	0.00188	0.00292	0.00434	0.00259	0.00247	0.00083	0.00070	0.00185	0.00176
60	Chao Li Hu Ong Yea Shrine	0.00220	0.01224	0.02591	0.04028	0.05999	0.03599	0.03396	0.01152	0.00959	0.02569	0.02418	0.00024	0.00170	0.00333	0.00518	0.00772	0.00533	0.00368	0.00171	0.00104	0.00381	0.00262
61	Wat Khlong Sai	0.00213	0.01125	0.02425	0.03770	0.05615	0.03248	0.03295	0.01040	0.00930	0.02319	0.02346	0.00017	0.00103	0.00213	0.00331	0.00493	0.00311	0.00264	0.00100	0.00074	0.00222	0.00188
62	Wat Khiri Pawanaram	0.00098	0.00816	0.01542	0.02396	0.03569	0.02653	0.01518	0.00849	0.00429	0.01893	0.01081	0.00011	0.00105	0.00191	0.00296	0.00442	0.00354	0.00163	0.00113	0.00046	0.00253	0.00116

Table 5.2-67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.00076	0.00774	0.01362	0.02114	0.03150	0.02657	0.01168	0.00851	0.00330	0.01896	0.00832	0.00010	0.00124	0.00217	0.00336	0.00501	0.00427	0.00160	0.00137	0.00045	0.00305	0.00114
64	Ban Chang Church	0.00079	0.00809	0.01312	0.02036	0.03034	0.02928	0.01223	0.00937	0.00345	0.02090	0.00871	0.00011	0.00184	0.00305	0.00473	0.00704	0.00656	0.00170	0.00210	0.00048	0.00468	0.00121
65	Wat Ban Khlong Bang Phai	0.00341	0.01491	0.03441	0.05351	0.07969	0.03999	0.05276	0.01280	0.01490	0.02854	0.03756	0.00031	0.00097	0.00257	0.00399	0.00595	0.00217	0.00474	0.00069	0.00134	0.00155	0.00337
66	Admiral Prince Abhakara Kiartivongse Monument	0.00373	0.01514	0.03418	0.05315	0.07915	0.04162	0.05763	0.01333	0.01627	0.02971	0.04103	0.00036	0.00113	0.00299	0.00466	0.00693	0.00250	0.00555	0.00080	0.00157	0.00179	0.00395
67	Royal Thai Naval Air Division Naval Aviation Museum	0.00308	0.01510	0.03342	0.05196	0.07737	0.04246	0.04767	0.01359	0.01346	0.03031	0.03394	0.00037	0.00113	0.00305	0.00475	0.00707	0.00245	0.00576	0.00078	0.00163	0.00175	0.00410
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.00366	0.01308	0.02716	0.04221	0.06287	0.03922	0.05659	0.01256	0.01598	0.02799	0.04029	0.00048	0.00132	0.00372	0.00579	0.00862	0.00261	0.00738	0.00084	0.00208	0.00187	0.00526
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.00724	0.01131	0.04399	0.06856	0.10203	0.03212	0.11189	0.01029	0.03159	0.02293	0.07966	0.00070	0.00174	0.00518	0.00807	0.01201	0.00308	0.01084	0.00098	0.00306	0.00220	0.00772
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	0.00978	0.01557	0.05984	0.09327	0.13880	0.03164	0.15115	0.01013	0.04268	0.02259	0.10761	0.00090	0.00209	0.00643	0.01001	0.01491	0.00339	0.01388	0.00108	0.00392	0.00242	0.00988
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	0.00786	0.03199	0.06657	0.10346	0.15409	0.11125	0.12141	0.03562	0.03428	0.07941	0.08644	0.00144	0.00747	0.01618	0.02515	0.03745	0.02145	0.02220	0.00687	0.00627	0.01531	0.01580
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.00634	0.03134	0.06199	0.09632	0.14347	0.10439	0.09802	0.03343	0.02768	0.07452	0.06979	0.00123	0.00751	0.01547	0.02404	0.03580	0.02268	0.01908	0.00726	0.00539	0.01619	0.01358
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.00629	0.05156	0.08748	0.13578	0.20231	0.18120	0.09723	0.05802	0.02745	0.12934	0.06922	0.00113	0.00853	0.01650	0.02564	0.03819	0.02719	0.01742	0.00871	0.00492	0.01941	0.01240
74	Wat Sa Kaeo	0.00760	0.02922	0.05012	0.07780	0.11591	0.10193	0.11737	0.03264	0.03314	0.07276	0.08356	0.00133	0.00354	0.01017	0.01584	0.02358	0.00676	0.02058	0.00217	0.00581	0.00483	0.01465
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.00121	0.00777	0.01496	0.02325	0.03463	0.02948	0.01864	0.00944	0.00526	0.02104	0.01327	0.00012	0.00122	0.00221	0.00344	0.00512	0.00408	0.00192	0.00131	0.00054	0.00291	0.00136
76	Wat Sombun Naram	0.00579	0.02318	0.03861	0.06012	0.08949	0.08408	0.08944	0.02692	0.02525	0.06002	0.06368	0.00072	0.00272	0.00667	0.01037	0.01544	0.00676	0.01119	0.00217	0.00316	0.00483	0.00796
77	Ban Chang Abundant Grace Church	0.00291	0.01806	0.02745	0.04257	0.06344	0.06784	0.04491	0.02172	0.01268	0.04843	0.03197	0.00048	0.00255	0.00549	0.00853	0.01271	0.00740	0.00741	0.00237	0.00209	0.00528	0.00527
78	Wat Samnak Kathon	0.00143	0.01857	0.02762	0.04282	0.06382	0.07056	0.02205	0.02259	0.00622	0.05037	0.01570	0.00022	0.00244	0.00432	0.00671	0.00999	0.00833	0.00336	0.00267	0.00095	0.00595	0.00239
79	Wat Suwan Rangsan	0.00106	0.01263	0.01867	0.02895	0.04315	0.04812	0.01630	0.01541	0.00460	0.03435	0.01161	0.00015	0.00182	0.00318	0.00494	0.00736	0.00625	0.00238	0.00200	0.00067	0.00446	0.00169
80	Wat Nong Bot	0.00096	0.00604	0.01232	0.01915	0.02853	0.01838	0.01491	0.00588	0.00421	0.01312	0.01061	0.00010	0.00088	0.00165	0.00256	0.00381	0.00287	0.00159	0.00092	0.00045	0.00205	0.00113
81	The Shrine of Luang Tia Chak Mak	0.00088	0.00852	0.01406	0.02183	0.03252	0.03136	0.01360	0.01004	0.00384	0.02239	0.00968	0.00014	0.00149	0.00267	0.00414	0.00617	0.00507	0.00215	0.00162	0.00061	0.00362	0.00153
82	Wat Chak Mak	0.00093	0.00926	0.01573	0.02442	0.03638	0.03353	0.01433	0.01074	0.00404	0.02394	0.01020	0.00014	0.00155	0.00277	0.00430	0.00641	0.00528	0.00222	0.00169	0.00063	0.00377	0.00158

Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.00109	0.00610	0.01290	0.02005	0.02986	0.01797	0.01685	0.00575	0.00476	0.01283	0.01200	0.00012	0.00062	0.00133	0.00206	0.00307	0.00180	0.00178	0.00058	0.00050	0.00128	0.00127
84	The Shrine of King Taksin the Great (Ban Chang)	0.00109	0.00613	0.01294	0.02011	0.02995	0.01807	0.01684	0.00579	0.00476	0.01290	0.01199	0.00012	0.00062	0.00133	0.00207	0.00308	0.00181	0.00178	0.00058	0.00050	0.00129	0.00127
85	Wat Chonthararam (Phayun)	0.00129	0.00720	0.01523	0.02368	0.03526	0.02117	0.01994	0.00678	0.00563	0.01511	0.01420	0.00013	0.00066	0.00144	0.00224	0.00333	0.00189	0.00199	0.00061	0.00056	0.00135	0.00142
86	Masjid Dawatul Islam	0.00182	0.02125	0.03732	0.05795	0.08633	0.07297	0.02812	0.02336	0.00794	0.05209	0.02002	0.00024	0.00235	0.00428	0.00665	0.00991	0.00788	0.00371	0.00252	0.00105	0.00562	0.00264
87	Chinese shrine at the Buddha Dhamma Foundation	0.00394	0.01867	0.04178	0.06497	0.09675	0.05181	0.06085	0.01659	0.01718	0.03698	0.04332	0.00033	0.00201	0.00414	0.00644	0.00959	0.00604	0.00514	0.00194	0.00145	0.00431	0.00366
88	The Shrine of Luang Tia Ban Chang	0.00218	0.01508	0.02805	0.04357	0.06490	0.04966	0.03376	0.01590	0.00953	0.03545	0.02403	0.00024	0.00183	0.00354	0.00550	0.00819	0.00585	0.00371	0.00187	0.00105	0.00418	0.00264
89	The Shrine of Laoia Guan Yu Ban Chang	0.00264	0.01496	0.03074	0.04777	0.07115	0.04529	0.04072	0.01450	0.01150	0.03233	0.02899	0.00029	0.00180	0.00369	0.00574	0.00855	0.00546	0.00452	0.00175	0.00128	0.00390	0.00322
90	Wat Ban Chang	0.00338	0.01589	0.03566	0.05545	0.08258	0.04399	0.05217	0.01409	0.01473	0.03140	0.03714	0.00035	0.00184	0.00397	0.00618	0.00920	0.00532	0.00540	0.00170	0.00152	0.00380	0.00384
91	Wat Prachummit Bamrung	0.00264	0.00950	0.02370	0.03687	0.05489	0.02306	0.04073	0.00739	0.01150	0.01646	0.02900	0.00013	0.00081	0.00163	0.00254	0.00378	0.00246	0.00195	0.00079	0.00055	0.00176	0.00139
92	The Shrine of Luang Tia Noen Kraprok 1	0.00144	0.01131	0.02167	0.03366	0.05014	0.03634	0.02225	0.01164	0.00628	0.02594	0.01584	0.00009	0.00095	0.00171	0.00266	0.00396	0.00317	0.00146	0.00102	0.00041	0.00227	0.00104
93	The Shrine of Luang Tia Noen Kraprok 2	0.00066	0.01313	0.01892	0.02933	0.04371	0.05074	0.01012	0.01625	0.00286	0.03622	0.00721	0.00006	0.00114	0.00186	0.00288	0.00429	0.00413	0.00091	0.00132	0.00026	0.00295	0.00064
94	Wat Noen Kraprok	0.00049	0.00413	0.00723	0.01122	0.01671	0.01419	0.00755	0.00454	0.00213	0.01013	0.00538	0.00004	0.00052	0.00089	0.00139	0.00207	0.00182	0.00061	0.00058	0.00017	0.00130	0.00043
95	Wat Phudon Nim Sanoh	0.00029	0.00270	0.00498	0.00773	0.01152	0.00894	0.00453	0.00286	0.00128	0.00638	0.00323	0.00003	0.00023	0.00044	0.00069	0.00103	0.00076	0.00044	0.00024	0.00013	0.00054	0.00032
96	Church of Christ Ban Chang	0.00039	0.00281	0.00549	0.00854	0.01272	0.00889	0.00596	0.00285	0.00168	0.00634	0.00425	0.00003	0.00024	0.00046	0.00072	0.00107	0.00077	0.00048	0.00025	0.00014	0.00055	0.00034
97	Anek Kusala Sala (Viharn Sien)	0.00137	0.00752	0.01503	0.02336	0.03479	0.02331	0.02113	0.00747	0.00597	0.01664	0.01504	0.00009	0.00035	0.00084	0.00130	0.00194	0.00087	0.00139	0.00028	0.00039	0.00062	0.00099
98	Wat Yan Nasangwararam	0.00144	0.00617	0.01366	0.02124	0.03163	0.01842	0.02227	0.00590	0.00629	0.01315	0.01586	0.00010	0.00039	0.00096	0.00149	0.00222	0.00097	0.00161	0.00031	0.00045	0.00069	0.00114
99	Sirisirirak Monastery	0.00103	0.00743	0.01287	0.01997	0.02976	0.02576	0.01586	0.00825	0.00448	0.01839	0.01129	0.00007	0.00047	0.00093	0.00144	0.00215	0.00148	0.00103	0.00047	0.00029	0.00106	0.00073
100	Anan Buraparam Meditation Center	0.00192	0.00678	0.01399	0.02178	0.03243	0.02117	0.02959	0.00678	0.00836	0.01511	0.02107	0.00009	0.00047	0.00101	0.00157	0.00233	0.00134	0.00138	0.00043	0.00039	0.00096	0.00098
101	Wat Map Fakthong	0.00119	0.00556	0.01250	0.01943	0.02894	0.01654	0.01837	0.00530	0.00519	0.01181	0.01308	0.00008	0.00033	0.00077	0.00120	0.00179	0.00088	0.00120	0.00028	0.00034	0.00063	0.00085
102	Khao Chi Chan Image of Lord Buddha	0.00026	0.00183	0.00360	0.00560	0.00834	0.00573	0.00400	0.00184	0.00113	0.00409	0.00285	0.00002	0.00011	0.00023	0.00036	0.00053	0.00033	0.00029	0.00011	0.00008	0.00023	0.00021
103	Wat Khao Chi Chan	0.00027	0.00340	0.00529	0.00820	0.01222	0.01284	0.00424	0.00411	0.00120	0.00917	0.00302	0.00002	0.00025	0.00044	0.00068	0.00101	0.00085	0.00033	0.00027	0.00009	0.00061	0.00024
104	Rat Samakkhi Temple	0.00285	0.01139	0.02719	0.04229	0.06297	0.02928	0.04396	0.00938	0.01241	0.02090	0.03130	0.00018	0.00071	0.00170	0.00265	0.00394	0.00181	0.00277	0.00058	0.00078	0.00130	0.00197
105	The Shrine of Chao Mae Kuan Im	0.00289	0.01158	0.02765	0.04301	0.06405	0.02978	0.04471	0.00954	0.01262	0.02126	0.03183	0.00017	0.00067	0.00160	0.00249	0.00371	0.00171	0.00260	0.00055	0.00073	0.00122	0.00185
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.00318	0.01288	0.03060	0.04760	0.07088	0.03330	0.04915	0.01066	0.01388	0.02377	0.03499	0.00019	0.00075	0.00180	0.00280	0.00416	0.00190	0.00295	0.00061	0.00083	0.00135	0.00210

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Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.00117	0.00539	0.01217	0.01893	0.02818	0.01479	0.01802	0.00474	0.00509	0.01056	0.01283	0.00014	0.00061	0.00140	0.00218	0.00325	0.00164	0.00214	0.00053	0.00060	0.00117	0.00152
108	KM.8 Meditation Center	0.00192	0.00798	0.01878	0.02921	0.04349	0.02092	0.02968	0.00670	0.00838	0.01493	0.02113	0.00014	0.00062	0.00144	0.00224	0.00333	0.00166	0.00222	0.00053	0.00063	0.00118	0.00158
109	Wat Rangsee Sunthorn (KM.5)	0.00100	0.00468	0.01051	0.01634	0.02434	0.01296	0.01538	0.00415	0.00434	0.00925	0.01095	0.00014	0.00059	0.00136	0.00211	0.00315	0.00158	0.00209	0.00051	0.00059	0.00113	0.00149
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.00036	0.00250	0.00495	0.00770	0.01146	0.00780	0.00558	0.00250	0.00158	0.00557	0.00397	0.00001	0.00010	0.00021	0.00032	0.00048	0.00033	0.00022	0.00011	0.00006	0.00024	0.00016
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.00042	0.00276	0.00557	0.00865	0.01289	0.00889	0.00656	0.00285	0.00185	0.00635	0.00467	0.00002	0.00014	0.00027	0.00042	0.00062	0.00045	0.00027	0.00015	0.00008	0.00032	0.00019
112	Wat Tung Prong	0.00034	0.00239	0.00448	0.00696	0.01037	0.00808	0.00519	0.00259	0.00147	0.00577	0.00369	0.00001	0.00011	0.00021	0.00033	0.00049	0.00035	0.00022	0.00011	0.00006	0.00025	0.00016
113	Khao Phlu Ta Luang Meditation Center	0.00018	0.00140	0.00255	0.00395	0.00589	0.00466	0.00278	0.00149	0.00079	0.00333	0.00198	0.00001	0.00006	0.00012	0.00018	0.00027	0.00019	0.00013	0.00006	0.00004	0.00013	0.00009
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.00344	0.00768	0.02063	0.03215	0.04784	0.02315	0.05316	0.00741	0.01501	0.01652	0.03785	0.00033	0.00082	0.00244	0.00379	0.00565	0.00148	0.00507	0.00047	0.00143	0.00106	0.00361
115	Wat Khao Bai Si Santitham	0.00401	0.01059	0.02921	0.04549	0.06771	0.02728	0.06198	0.00874	0.01750	0.01947	0.04413	0.00033	0.00096	0.00263	0.00410	0.00610	0.00198	0.00509	0.00064	0.00144	0.00142	0.00363
116	Welu Amphawan Vipassana Office	0.00285	0.01012	0.02369	0.03687	0.05490	0.02895	0.04398	0.00927	0.01242	0.02066	0.03131	0.00025	0.00090	0.00226	0.00352	0.00524	0.00217	0.00392	0.00069	0.00111	0.00155	0.00279
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.00138	0.00690	0.01515	0.02355	0.03507	0.01955	0.02130	0.00626	0.00601	0.01396	0.01517	0.00011	0.00053	0.00116	0.00180	0.00269	0.00149	0.00164	0.00048	0.00046	0.00106	0.00117
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.00131	0.00516	0.01198	0.01863	0.02774	0.01430	0.02028	0.00458	0.00573	0.01021	0.01444	0.00014	0.00061	0.00141	0.00219	0.00326	0.00166	0.00213	0.00053	0.00060	0.00119	0.00152
119	Samaesarn Pattanakarn Church	0.00121	0.00538	0.01115	0.01734	0.02582	0.01615	0.01867	0.00517	0.00527	0.01153	0.01329	0.00011	0.00052	0.00118	0.00183	0.00272	0.00145	0.00172	0.00046	0.00049	0.00103	0.00123
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.00112	0.00515	0.01076	0.01672	0.02491	0.01534	0.01724	0.00491	0.00487	0.01095	0.01227	0.00007	0.00039	0.00083	0.00129	0.00192	0.00117	0.00107	0.00037	0.00030	0.00083	0.00076
121	Wat Chong Samaesarn	0.00094	0.00394	0.00813	0.01264	0.01882	0.01423	0.01458	0.00456	0.00412	0.01016	0.01038	0.00005	0.00033	0.00068	0.00105	0.00156	0.00103	0.00079	0.00033	0.00022	0.00073	0.00057
122	Viharn Luang Por Dam	0.00071	0.00409	0.00832	0.01293	0.01926	0.01251	0.01101	0.00401	0.00311	0.00893	0.00784	0.00004	0.00026	0.00053	0.00082	0.00123	0.00080	0.00063	0.00026	0.00018	0.00057	0.00045
123	The Shrine of King Taksin the Great (Samaesarn)	0.00096	0.00538	0.01136	0.01766	0.02630	0.01586	0.01481	0.00508	0.00418	0.01132	0.01055	0.00007	0.00042	0.00088	0.00136	0.00203	0.00125	0.00112	0.00040	0.00032	0.00089	0.00080
124	Thai Island and Sea Natural History Museum	0.00089	0.00524	0.01090	0.01694	0.02523	0.01568	0.01374	0.00502	0.00388	0.01119	0.00978	0.00007	0.00041	0.00084	0.00131	0.00195	0.00123	0.00105	0.00039	0.00030	0.00088	0.00075
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.00104	0.00507	0.01122	0.01745	0.02598	0.01423	0.01604	0.00456	0.00453	0.01016	0.01142	0.00007	0.00043	0.00090	0.00140	0.00208	0.00129	0.00114	0.00041	0.00032	0.00092	0.00081

Subject to changes and approval by the Government of Thailand

Table 5.2-67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.00105	0.00529	0.01158	0.01801	0.02682	0.01504	0.01621	0.00482	0.00458	0.01074	0.01154	0.00008	0.00043	0.00091	0.00141	0.00210	0.00128	0.00116	0.00041	0.00033	0.00092	0.00083
127	Eastern-Nong Muang Community Health Service Center	0.00924	0.01954	0.05920	0.09225	0.13729	0.06594	0.14281	0.02112	0.04032	0.04707	0.10167	0.00098	0.00479	0.01059	0.01647	0.02452	0.01349	0.01508	0.00432	0.00426	0.00963	0.01073
128	Phala Subdistrict Health Promotion Hospital	0.00171	0.00908	0.01952	0.03035	0.04519	0.02630	0.02638	0.00842	0.00745	0.01877	0.01878	0.00017	0.00093	0.00197	0.00306	0.00455	0.00276	0.00255	0.00088	0.00072	0.00197	0.00182
129	Ban Chang Hospital	0.00060	0.00581	0.01061	0.01647	0.02454	0.01939	0.00931	0.00621	0.00263	0.01384	0.00663	0.00007	0.00064	0.00118	0.00183	0.00273	0.00213	0.00106	0.00068	0.00030	0.00152	0.00076
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.00376	0.00782	0.02260	0.03523	0.05243	0.02496	0.05807	0.00799	0.01640	0.01782	0.04134	0.00039	0.00112	0.00309	0.00481	0.00716	0.00230	0.00601	0.00074	0.00170	0.00164	0.00428
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.00522	0.02605	0.05703	0.08867	0.13205	0.07405	0.08068	0.02371	0.02278	0.05286	0.05744	0.00091	0.00253	0.00710	0.01106	0.01646	0.00508	0.01401	0.00163	0.00396	0.00362	0.00998
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	0.00831	0.02681	0.05034	0.07842	0.11671	0.09978	0.12843	0.03195	0.03626	0.07123	0.09144	0.00101	0.00326	0.00854	0.01330	0.01980	0.00737	0.01562	0.00236	0.00441	0.00526	0.01112
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.00103	0.02040	0.02990	0.04636	0.06909	0.07813	0.01591	0.02502	0.00449	0.05577	0.01132	0.00018	0.00230	0.00396	0.00615	0.00916	0.00800	0.00273	0.00256	0.00077	0.00571	0.00194
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.00229	0.02403	0.03509	0.05440	0.08108	0.09222	0.03536	0.02953	0.00998	0.06583	0.02517	0.00037	0.00254	0.00503	0.00782	0.01165	0.00791	0.00568	0.00253	0.00160	0.00565	0.00405
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.00100	0.00882	0.01329	0.02061	0.03071	0.03355	0.01540	0.01074	0.00435	0.02395	0.01096	0.00014	0.00142	0.00258	0.00401	0.00597	0.00475	0.00223	0.00152	0.00063	0.00339	0.00159
136	Ban Phayun Subdistrict Health Promotion Hospital	0.00123	0.00696	0.01467	0.02280	0.03395	0.02053	0.01906	0.00657	0.00538	0.01466	0.01357	0.00013	0.00066	0.00142	0.00221	0.00329	0.00189	0.00194	0.00061	0.00055	0.00135	0.00138
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.00052	0.01002	0.01447	0.02243	0.03344	0.03867	0.00807	0.01238	0.00228	0.02760	0.00575	0.00005	0.00093	0.00151	0.00234	0.00349	0.00335	0.00075	0.00107	0.00021	0.00239	0.00053
138	Phudon Huai Mahat Community Health Service Unit	0.00035	0.00286	0.00542	0.00842	0.01254	0.00929	0.00536	0.00298	0.00151	0.00663	0.00382	0.00003	0.00025	0.00047	0.00074	0.00110	0.00080	0.00048	0.00026	0.00014	0.00057	0.00034
139	Wat Yan Nasangwararam Hospital	0.00131	0.00687	0.01304	0.02029	0.03021	0.02291	0.02025	0.00733	0.00572	0.01635	0.01442	0.00009	0.00037	0.00089	0.00138	0.00205	0.00093	0.00146	0.00030	0.00041	0.00066	0.00104
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.00129	0.00671	0.01301	0.02023	0.03012	0.02248	0.01993	0.00720	0.00563	0.01605	0.01419	0.00009	0.00037	0.00089	0.00138	0.00205	0.00093	0.00146	0.00030	0.00041	0.00066	0.00104
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.00051	0.01014	0.01490	0.02310	0.03443	0.03879	0.00782	0.01242	0.00221	0.02769	0.00557	0.00003	0.00048	0.00082	0.00128	0.00190	0.00170	0.00053	0.00054	0.00015	0.00121	0.00038

Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.00304	0.01257	0.02962	0.04607	0.06860	0.03289	0.04691	0.01053	0.01324	0.02348	0.03340	0.00019	0.00074	0.00178	0.00277	0.00413	0.00190	0.00290	0.00061	0.00082	0.00136	0.00207
143	Sattahip Hospital KM.10	0.00216	0.01055	0.02338	0.03635	0.05413	0.02960	0.03345	0.00948	0.00945	0.02113	0.02382	0.00015	0.00058	0.00139	0.00217	0.00323	0.00149	0.00226	0.00048	0.00064	0.00107	0.00161
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.00095	0.00381	0.00801	0.01245	0.01855	0.01384	0.01462	0.00443	0.00413	0.00988	0.01041	0.00005	0.00033	0.00066	0.00103	0.00154	0.00102	0.00078	0.00033	0.00022	0.00073	0.00055
145	Village No. 1 Ban Sakulthong	0.00073	0.00652	0.01211	0.01881	0.02802	0.02204	0.01128	0.00706	0.00319	0.01573	0.00803	0.00010	0.00116	0.00205	0.00318	0.00473	0.00396	0.00158	0.00127	0.00045	0.00283	0.00113
146	Village No. 2, Ban Kilo 16	0.00284	0.01205	0.02812	0.04373	0.06512	0.03190	0.04388	0.01021	0.01239	0.02277	0.03124	0.00025	0.00158	0.00322	0.00500	0.00745	0.00483	0.00386	0.00155	0.00109	0.00344	0.00275
147	Village No. 4, Ban Tung Prong	0.00228	0.01353	0.02646	0.04111	0.06124	0.04277	0.03528	0.01370	0.00996	0.03053	0.02512	0.00030	0.00241	0.00459	0.00713	0.01061	0.00780	0.00461	0.00250	0.00130	0.00557	0.00328
148	Village No. 5, Phala Subdistrict	0.00231	0.01157	0.02540	0.03949	0.05880	0.03281	0.03570	0.01051	0.01008	0.02342	0.02541	0.00023	0.00176	0.00340	0.00527	0.00786	0.00563	0.00355	0.00180	0.00100	0.00402	0.00253
149	Village No. 6, Ban Takat	0.00167	0.00921	0.01957	0.03043	0.04532	0.02697	0.02586	0.00864	0.00730	0.01925	0.01841	0.00016	0.00091	0.00190	0.00295	0.00439	0.00270	0.00242	0.00086	0.00068	0.00192	0.00172
150	Village No. 7, Ban Khlong Sai	0.00222	0.01133	0.02472	0.03843	0.05724	0.03233	0.03436	0.01035	0.00970	0.02308	0.02446	0.00021	0.00146	0.00289	0.00449	0.00668	0.00456	0.00325	0.00146	0.00092	0.00325	0.00231
151	Village No. 1 Ban Sam Nak Thon	0.00614	0.01554	0.04381	0.06822	0.10155	0.05883	0.09481	0.01884	0.02677	0.04199	0.06750	0.00063	0.00301	0.00672	0.01045	0.01557	0.00839	0.00974	0.00269	0.00275	0.00599	0.00693
152	Village No. 2, Ban Chak Mak	0.00123	0.01485	0.02224	0.03448	0.05140	0.05665	0.01900	0.01814	0.00536	0.04044	0.01353	0.00019	0.00198	0.00354	0.00550	0.00820	0.00669	0.00290	0.00214	0.00082	0.00478	0.00207
153	Village No. 3, Ban Sa Kaeo	0.03194	0.04461	0.18649	0.29073	0.43261	0.12915	0.49349	0.04136	0.13934	0.09219	0.35134	0.00272	0.00734	0.02091	0.03255	0.04846	0.01424	0.04196	0.00456	0.01185	0.01016	0.02987
154	Sa Kaeo Community 1	0.01096	0.03002	0.06496	0.10126	0.15068	0.10778	0.16938	0.03451	0.04782	0.07693	0.12059	0.00140	0.00373	0.01069	0.01664	0.02476	0.00715	0.02156	0.00229	0.00609	0.00511	0.01535
155	Sa Kaeo Community 2	0.00778	0.02670	0.06802	0.10584	0.15758	0.06287	0.12020	0.02013	0.03394	0.04487	0.08558	0.00085	0.00231	0.00656	0.01021	0.01521	0.00451	0.01312	0.00144	0.00371	0.00322	0.00934
156	Village No. 4, Ban Khlong Bang Phai	0.00863	0.01495	0.05451	0.08495	0.12642	0.02560	0.13328	0.00820	0.03763	0.01827	0.09489	0.00066	0.00167	0.00491	0.00765	0.01139	0.00302	0.01017	0.00097	0.00287	0.00216	0.00724
157	Village No. 5, Ban Yai Ra	0.00090	0.00507	0.01071	0.01665	0.02480	0.01496	0.01395	0.00479	0.00394	0.01068	0.00993	0.00009	0.00074	0.00139	0.00216	0.00322	0.00242	0.00135	0.00078	0.00038	0.00173	0.00096
158	Village No. 6, Ban Khao Khrok	0.01676	0.02820	0.10470	0.16316	0.24282	0.07050	0.25898	0.02257	0.07312	0.05032	0.18438	0.00131	0.00439	0.01130	0.01758	0.02618	0.01016	0.02025	0.00325	0.00572	0.00725	0.01442
159	Village no. 7, Ban Nong Takhian	0.00097	0.00987	0.01595	0.02476	0.03689	0.03647	0.01502	0.01168	0.00424	0.02603	0.01069	0.00016	0.00175	0.00310	0.00481	0.00717	0.00596	0.00243	0.00191	0.00069	0.00426	0.00173
160	Village No. 8, Ban Cherng Khao	0.00163	0.05524	0.08012	0.12420	0.18513	0.21270	0.02519	0.06811	0.00711	0.15183	0.01793	0.00025	0.00755	0.01174	0.01821	0.02713	0.02800	0.00388	0.00897	0.00109	0.01999	0.00276
161	Eastern-Nong Muang Community	0.00242	0.01576	0.03127	0.04859	0.07238	0.05176	0.03733	0.01657	0.01054	0.03695	0.02658	0.00036	0.00302	0.00568	0.00882	0.01313	0.00985	0.00550	0.00315	0.00155	0.00703	0.00392
162	Wat Khiri Pawanaram Community	0.00131	0.04335	0.06329	0.09813	0.14625	0.16634	0.02023	0.05327	0.00571	0.11874	0.01441	0.00022	0.00608	0.00950	0.01474	0.02196	0.02245	0.00335	0.00719	0.00095	0.01603	0.00238
163	Ban Chang-Phala Community	0.00118	0.04231	0.06055	0.09386	0.13990	0.16403	0.01817	0.05252	0.00513	0.11709	0.01293	0.00020	0.00600	0.00934	0.01448	0.02159	0.02223	0.00312	0.00712	0.00088	0.01587	0.00222
164	Ruam Sompong Community	0.00125	0.00900	0.01699	0.02639	0.03931	0.02960	0.01934	0.00948	0.00546	0.02113	0.01377	0.00023	0.00132	0.00276	0.00428	0.00638	0.00392	0.00352	0.00125	0.00099	0.00280	0.00251
165	Ming Mongkol Community	0.00119	0.03332	0.04952	0.07679	0.11444	0.12668	0.01836	0.04057	0.00518	0.09043	0.01307	0.00016	0.00293	0.00480	0.00745	0.01110	0.01054	0.00248	0.00337	0.00070	0.00752	0.00177
166	Jor Koo Community	0.00125	0.03341	0.04944	0.07666	0.11426	0.12729	0.01936	0.04076	0.00547	0.09086	0.01378	0.00016	0.00303	0.00494	0.00767	0.01143	0.01091	0.00249	0.00349	0.00070	0.00779	0.00177

Table 5.2-67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.00115	0.04991	0.07252	0.11243	0.16757	0.19197	0.01783	0.06147	0.00504	0.13703	0.01270	0.00015	0.00344	0.00548	0.00850	0.01267	0.01257	0.00230	0.00403	0.00065	0.00898	0.00164
168	Thep Chinda Community	0.00131	0.03113	0.04732	0.07339	0.10938	0.11691	0.02031	0.03744	0.00573	0.08346	0.01446	0.00018	0.00285	0.00475	0.00737	0.01098	0.01013	0.00274	0.00324	0.00077	0.00723	0.00195
169	Health Park Community	0.00369	0.00848	0.02273	0.03542	0.05271	0.02558	0.05702	0.00819	0.01610	0.01826	0.04059	0.00029	0.00143	0.00315	0.00489	0.00728	0.00402	0.00447	0.00129	0.00126	0.00287	0.00318
170	Wat Ban Chang Community	0.00333	0.01658	0.03648	0.05672	0.08447	0.04690	0.05150	0.01502	0.01454	0.03348	0.03666	0.00034	0.00187	0.00395	0.00615	0.00915	0.00548	0.00519	0.00176	0.00147	0.00391	0.00370
171	Dong Dang Community	0.00133	0.02842	0.04479	0.06948	0.10354	0.10457	0.02061	0.03349	0.00582	0.07465	0.01467	0.00019	0.00256	0.00439	0.00681	0.01015	0.00894	0.00296	0.00286	0.00083	0.00638	0.00210
172	Night Market Community	0.00304	0.01387	0.03047	0.04737	0.07055	0.03931	0.04690	0.01259	0.01324	0.02806	0.03339	0.00032	0.00163	0.00355	0.00552	0.00822	0.00465	0.00492	0.00149	0.00139	0.00332	0.00351
173	Ruam Mitr Community	0.00434	0.01892	0.04368	0.06794	0.10116	0.05071	0.06703	0.01624	0.01893	0.03620	0.04772	0.00035	0.00201	0.00420	0.00652	0.00971	0.00599	0.00533	0.00192	0.00151	0.00428	0.00380
174	Ban Chang - Noen Kraprok Community	0.00333	0.00744	0.02254	0.03512	0.05226	0.02082	0.05144	0.00667	0.01452	0.01486	0.03662	0.00022	0.00120	0.00257	0.00399	0.00595	0.00351	0.00342	0.00113	0.00096	0.00251	0.00243
175	Dao Pitak Community	0.00201	0.01219	0.02268	0.03523	0.05249	0.04011	0.03108	0.01284	0.00878	0.02863	0.02213	0.00020	0.00150	0.00290	0.00451	0.00672	0.00477	0.00308	0.00153	0.00087	0.00340	0.00219
176	Taiwa Community	0.00068	0.01602	0.02307	0.03576	0.05331	0.06190	0.01048	0.01982	0.00296	0.04418	0.00746	0.00006	0.00126	0.00204	0.00317	0.00472	0.00454	0.00100	0.00145	0.00028	0.00324	0.00071
177	East Ban Noen Kraprok Community, Prachummit	0.00265	0.00890	0.02290	0.03564	0.05306	0.02066	0.04096	0.00662	0.01157	0.01475	0.02916	0.00013	0.00076	0.00157	0.00244	0.00364	0.00230	0.00194	0.00074	0.00055	0.00164	0.00138
178	Ban Noen Kraprok Community	0.00059	0.00749	0.01076	0.01667	0.02485	0.02901	0.00916	0.00929	0.00259	0.02071	0.00652	0.00005	0.00085	0.00140	0.00218	0.00324	0.00306	0.00074	0.00098	0.00021	0.00218	0.00053
179	Nong Yai Community	0.00055	0.01365	0.02104	0.03263	0.04863	0.05241	0.00847	0.01678	0.00239	0.03741	0.00603	0.00006	0.00111	0.00183	0.00284	0.00424	0.00399	0.00098	0.00128	0.00028	0.00285	0.00069
180	Village No. 1, Pan Din Tai	0.00252	0.00886	0.02233	0.03474	0.05173	0.02119	0.03892	0.00679	0.01099	0.01513	0.02771	0.00012	0.00073	0.00150	0.00233	0.00348	0.00221	0.00184	0.00071	0.00052	0.00158	0.00131
181	Village No. 2, Ban Prachummit	0.00218	0.00604	0.01288	0.02008	0.02987	0.01808	0.03367	0.00579	0.00951	0.01291	0.02397	0.00018	0.00093	0.00201	0.00312	0.00465	0.00267	0.00275	0.00085	0.00078	0.00191	0.00196
182	Village No. 3, Ban Noen Samre	0.00062	0.00684	0.01191	0.01849	0.02755	0.02359	0.00959	0.00756	0.00271	0.01684	0.00683	0.00011	0.00147	0.00251	0.00389	0.00580	0.00513	0.00167	0.00164	0.00047	0.00366	0.00119
183	Village No. 4, Ban Phayun	0.00133	0.00862	0.01622	0.02519	0.03752	0.02811	0.02052	0.00900	0.00579	0.02007	0.01461	0.00021	0.00126	0.00261	0.00406	0.00605	0.00375	0.00331	0.00120	0.00093	0.00268	0.00235
184	Village No. 6, Ban Noen Kraprok	0.00038	0.00329	0.00616	0.00957	0.01426	0.01074	0.00593	0.00344	0.00167	0.00767	0.00422	0.00004	0.00035	0.00064	0.00099	0.00148	0.00117	0.00056	0.00037	0.00016	0.00083	0.00040
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.00037	0.00292	0.00559	0.00868	0.01293	0.00942	0.00569	0.00302	0.00161	0.00672	0.00405	0.00003	0.00025	0.00049	0.00076	0.00113	0.00082	0.00050	0.00026	0.00014	0.00059	0.00035
186	Village No. 11, Ban Map Fakthong	0.00604	0.01632	0.04087	0.06366	0.09475	0.05697	0.09336	0.01824	0.02636	0.04066	0.06647	0.00052	0.00202	0.00489	0.00761	0.01133	0.00508	0.00809	0.00163	0.00229	0.00363	0.00576
187	Village No. 13, Ban Nong Phakkut	0.00104	0.01239	0.02012	0.03122	0.04652	0.04702	0.01600	0.01506	0.00452	0.03356	0.01139	0.00016	0.00136	0.00255	0.00396	0.00590	0.00447	0.00243	0.00143	0.00068	0.00319	0.00173
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.00210	0.00741	0.01864	0.02901	0.04319	0.02331	0.03244	0.00747	0.00916	0.01664	0.02310	0.00008	0.00034	0.00079	0.00123	0.00183	0.00089	0.00124	0.00029	0.00035	0.00064	0.00088
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.00046	0.01477	0.02120	0.03286	0.04898	0.05717	0.00718	0.01831	0.00203	0.04081	0.00511	0.00003	0.00045	0.00077	0.00120	0.00179	0.00156	0.00053	0.00050	0.00015	0.00111	0.00038
190	Village No. 6 (Ban Khao Krating Community)	0.00051	0.00613	0.00885	0.01371	0.02044	0.02368	0.00787	0.00758	0.00222	0.01690	0.00560	0.00003	0.00043	0.00071	0.00110	0.00163	0.00152	0.00039	0.00049	0.00011	0.00109	0.00028

Table 5.2□67 Xylene emission forecast, operation phase

Area		Concentration value of Xylene (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
191	Village No. 7 (Ban Nong Hin Community)	0.00061	0.01471	0.02155	0.03341	0.04979	0.05634	0.00943	0.01804	0.00266	0.04022	0.00672	0.00005	0.00086	0.00141	0.00219	0.00326	0.00306	0.00076	0.00098	0.00022	0.00219	0.00054
192	Village No. 11 (Ban Khong Wanphen Community)	0.00334	0.00775	0.02347	0.03656	0.05441	0.01978	0.05161	0.00633	0.01457	0.01412	0.03675	0.00017	0.00064	0.00157	0.00244	0.00363	0.00160	0.00263	0.00051	0.00074	0.00114	0.00187
193	Village No. 1, Ban Phlu Ta Luang	0.00288	0.01144	0.02739	0.04261	0.06345	0.02932	0.04447	0.00939	0.01256	0.02093	0.03166	0.00018	0.00072	0.00172	0.00268	0.00399	0.00187	0.00278	0.00060	0.00078	0.00133	0.00198
194	Village No. 2, Ban Khalot	0.00273	0.01131	0.02665	0.04144	0.06171	0.02958	0.04222	0.00947	0.01192	0.02111	0.03006	0.00017	0.00065	0.00158	0.00247	0.00367	0.00161	0.00266	0.00052	0.00075	0.00115	0.00189
195	Village No. 3, Ban Khlong Phai	0.00180	0.00751	0.01580	0.02456	0.03658	0.02224	0.02775	0.00712	0.00784	0.01587	0.01976	0.00020	0.00068	0.00172	0.00268	0.00398	0.00161	0.00302	0.00051	0.00085	0.00115	0.00215
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.00259	0.00670	0.01585	0.02470	0.03676	0.02014	0.04001	0.00645	0.01130	0.01438	0.02848	0.00018	0.00058	0.00153	0.00238	0.00354	0.00131	0.00280	0.00042	0.00079	0.00094	0.00199
197	Village No. 5, Ban Khao Bai Si	0.00281	0.00697	0.01749	0.02726	0.04057	0.01932	0.04348	0.00619	0.01228	0.01379	0.03095	0.00025	0.00081	0.00211	0.00328	0.00488	0.00183	0.00384	0.00059	0.00108	0.00131	0.00274
198	Village No. 6, Ban Khao Tabaek	0.00190	0.00786	0.01852	0.02881	0.04290	0.02057	0.02934	0.00659	0.00829	0.01468	0.02089	0.00014	0.00059	0.00137	0.00213	0.00317	0.00159	0.00211	0.00051	0.00059	0.00113	0.00150
199	Village No. 7, Ban Nong Ya Noi	0.00121	0.00547	0.01245	0.01936	0.02883	0.01492	0.01865	0.00478	0.00527	0.01065	0.01328	0.00014	0.00061	0.00140	0.00217	0.00324	0.00164	0.00213	0.00053	0.00060	0.00117	0.00151
200	Village No. 8, Ban Nong Ya	0.00070	0.00932	0.01330	0.02061	0.03072	0.03616	0.01083	0.01158	0.00306	0.02581	0.00771	0.00003	0.00058	0.00096	0.00149	0.00222	0.00207	0.00053	0.00066	0.00015	0.00148	0.00038
201	Ban Nong Krachong Community	0.00135	0.00490	0.01220	0.01897	0.02825	0.01466	0.02092	0.00469	0.00591	0.01046	0.01489	0.00010	0.00050	0.00109	0.00170	0.00253	0.00142	0.00153	0.00045	0.00043	0.00101	0.00109
Standard*		-											100									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)
** Xylene concentrations that allow for long-term exposure without affecting health (RfC: Reference Concentration), referenced from IRIS: USEPA Integrated Risk Information System, as of May 25, 2011 (www.epa.gov/iris)

Subject to changes and approval by the Government of Thailand

2.12) Volatile Organic Compounds (VOC)

From the VOC emission forecast projected by the AERMOD model based on 24-hour average and 1-year average maximum concentration values (Cmax), it was found that the 24-hour average Cmax values in all 11 scenarios occurred outside of the project area to the north. It was found that most average 1-year average Cmax values occurred within the project area (within the U-Tapao International Airport area) and it was found that Scenario 6 (Runway 1 Closure Scenario (2048)) had the highest VOC 24-hour average value, comprising 202.25485 micrograms per cubic meter and Scenario 5 (Worst case scenario (peak hour) for peak flight forecast) had the highest 1-year average value, comprising 17.60141 micrograms per cubic meter, while Scenario 1 (aviation situation in 2019 (1 runway)), had the lowest value with the 24-hour average and 1-year average comprising 4.63301 and 0.48445 micrograms per cubic meter.

In this regard, when considering the VOC concentration values of all 11 scenarios at observation points in sensitive areas surrounding U-Tapao International Airport, comprising all 201 places are shown in Table 5.2-68 and Addendum 5-3, item 17, VOC concentration contours (Figure 17-1 to Figure 17-22).

Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Maximum concentration value (Cmax)		4.63301	46.57055	71.51952	114.18123	175.25274	202.25485	145.94159	58.02861	40.17822	143.09282	103.26910	0.48445	3.60298	7.17620	11.46836	17.60141	15.17793	15.26042	4.35468	4.20125	10.73820	10.79836
Location of Cmax value		718692.23	719692.23	719692.23	719692.23	719692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23	718692.23	719692.23	718692.23	718692.23	718692.23	719692.23	718692.23	719692.23	718692.23	719692.23	718692.23
		1406801.29	1405801.29	1405801.29	1405801.29	1405801.29	1405801.29	1406801.29	1405801.29	1406801.29	1405801.29	1406801.29	1404801.29	1405801.29	1404801.29	1404801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29	1405801.29	1404801.29
		Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Outside of project area	Within project area	Outside of project area	Within project area	Within project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area	Outside of project area	Within project area
1	Early Childhood Daycare, RTN 6, Royal Thai Naval Air Division	0.57140	3.84067	10.71034	17.11263	26.26444	12.23088	17.99929	3.50914	4.95527	8.65320	12.73640	0.04286	0.25912	0.75934	1.21331	1.86218	0.79121	1.35015	0.22700	0.37170	0.55977	0.95538
2	Wat Phala School	0.22109	1.93014	4.81931	7.69927	11.81690	6.66739	6.96427	1.91293	1.91729	4.71710	4.92796	0.02266	0.21398	0.51854	0.82839	1.27142	0.75370	0.71393	0.21624	0.19655	0.53323	0.50518
3	Phala Subdistrict Municipality Child Development Center	0.19851	1.78426	4.40503	7.03734	10.80097	6.20970	6.25304	1.78162	1.72148	4.39329	4.42468	0.02114	0.20119	0.48609	0.77654	1.19184	0.71001	0.66585	0.20371	0.18331	0.50232	0.47116
4	Ban Khlong Sai School	0.25033	2.46679	5.88460	9.40068	14.42827	8.77508	7.88560	2.51764	2.17093	6.20826	5.57990	0.02019	0.21180	0.49410	0.78931	1.21145	0.76375	0.63585	0.21913	0.17505	0.54034	0.44993
5	Rayong English Program School	0.28318	2.33202	5.95966	9.52131	14.61336	7.92901	8.92029	2.27490	2.45579	5.60968	6.31205	0.02267	0.24264	0.56219	0.89808	1.37839	0.87849	0.71421	0.25205	0.19663	0.62152	0.50538
6	Rayong Garden International School	0.26851	2.36918	5.89109	9.41149	14.44483	8.20655	8.45810	2.35453	2.32854	5.80603	5.98500	0.02234	0.23751	0.55161	0.88117	1.35243	0.85877	0.70387	0.24639	0.19378	0.60757	0.49806
7	Ban Chang Municipality School 1 (Wat Khiri Pawanaram)	0.14816	2.51422	4.96232	7.92546	12.16425	9.90109	4.66724	2.84070	1.28491	7.00490	3.30257	0.01941	0.45311	0.85444	1.36456	2.09437	1.82122	0.61154	0.52252	0.16836	1.28849	0.43273
8	Wat Khiri Pawanaram School	0.14690	2.38970	4.75076	7.58764	11.64575	9.37912	4.62737	2.69095	1.27393	6.63561	3.27436	0.01850	0.40579	0.77472	1.23727	1.89901	1.62222	0.58285	0.46543	0.16046	1.14770	0.41243
9	Ban Khlong Bang Phai School	0.45520	3.29529	8.89056	14.20459	21.80122	10.77040	14.33883	3.09012	3.94753	7.61992	10.14624	0.03779	0.20040	0.62681	1.00160	1.53724	0.57537	1.19030	0.16508	0.32769	0.40707	0.84226
10	Pattanavechsuksa School	1.27677	4.07177	17.07427	27.28957	41.88324	7.67891	40.21864	2.20314	11.07233	5.43274	28.45894	0.09476	0.39546	1.40900	2.25174	3.45592	0.97630	2.98486	0.28011	0.82174	0.69072	2.11210
11	Pattanavech College	1.06487	3.30605	14.10377	22.54212	34.59696	7.41534	33.54379	2.12752	9.23472	5.24626	23.73578	0.08088	0.34849	1.21929	1.94853	2.99056	0.88097	2.54774	0.25276	0.70140	0.62327	1.80280
12	Saeng Song La Child Development Center 3	0.80509	6.27964	13.74746	21.95942	33.70377	23.47830	25.36058	6.73612	6.98185	16.61061	17.94529	0.13639	0.60849	2.08777	3.33638	5.12061	1.57638	4.29624	0.45228	1.18277	1.11527	3.04004
13	Wat Sa Kaeo School	0.91738	6.43858	13.88899	22.18508	34.05015	24.26337	28.89795	6.96136	7.95571	17.16604	20.44836	0.15536	0.65000	2.31265	3.69585	5.67232	1.60769	4.89403	0.46126	1.34734	1.13742	3.46304
14	Wat Sombun Naram School (Tem Rat Memorial)	0.71914	5.45978	10.50762	16.79152	25.77136	23.06805	22.65325	6.61842	6.23652	16.32037	16.02957	0.09831	0.63138	1.79797	2.87280	4.40917	1.97619	3.09671	0.56699	0.85253	1.39813	2.19125
15	Child Development Center, Sam Nak Thon Subdistrict Municipality, in Wat Sombun Naram School	0.71914	5.45978	10.50762	16.79152	25.77136	23.06805	22.65325	6.61842	6.23652	16.32037	16.02957	0.09831	0.63138	1.79797	2.87280	4.40917	1.97619	3.09671	0.56699	0.85253	1.39813	2.19125
16	Sajjaseuksa School	0.13333	5.19112	8.15553	13.02085	19.98521	22.37533	4.19985	6.41967	1.15623	15.83027	2.97184	0.02040	0.65962	1.17683	1.87927	2.88439	2.71325	0.64255	0.77845	0.17690	1.91959	0.45467
17	Ban Chang District Center for Non-Formal and Informal Education	0.22689	6.49318	10.48806	16.74568	25.70223	27.72237	7.14727	7.95378	1.96767	19.61324	5.05745	0.03119	0.70822	1.34274	2.14441	3.29132	2.83992	0.98261	0.81480	0.27052	2.00921	0.69530
18	Wat Suwan Rangsan Community School	0.16115	4.27862	6.73121	10.74686	16.49493	18.43365	5.07636	5.28877	1.39754	13.04158	3.59206	0.02321	0.52804	1.00071	1.59818	2.45294	2.11777	0.73109	0.60761	0.20127	1.49830	0.51732

Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
19	Ban Yai Ra Child Development Center	0.14304	3.12971	4.95621	7.91303	12.14540	13.45374	4.50595	3.85999	1.24050	9.51836	3.18843	0.02086	0.43848	0.84451	1.34875	2.07011	1.74607	0.65709	0.50096	0.18090	1.23533	0.46496
20	Wat Samnak Kathon School	0.18809	4.46788	7.11708	11.36317	17.44087	19.16753	5.92477	5.49932	1.63111	13.56079	4.19240	0.02902	0.57865	1.12721	1.80026	2.76310	2.29250	0.91416	0.65774	0.25167	1.62191	0.64686
21	Ban Sam Nak Thon Child Development Center	0.18270	4.30974	6.85916	10.95135	16.80879	18.49464	5.75524	5.30627	1.58444	13.08473	4.07244	0.02848	0.57408	1.11562	1.78175	2.73470	2.27690	0.89700	0.65326	0.24695	1.61088	0.63472
22	Burapatit Child Development Center, Sam Nak Thon SAO	0.14383	2.56089	4.03006	6.43428	9.87573	11.03200	4.53066	3.16517	1.24731	7.80501	3.20592	0.02063	0.34672	0.70306	1.12291	1.72348	1.34805	0.64994	0.38677	0.17893	0.95373	0.45990
23	Wat Chak Mak School	0.12958	1.83250	3.24175	5.17666	7.94538	7.56326	4.08188	2.16996	1.12376	5.35091	2.88836	0.01806	0.31471	0.63246	1.01015	1.55041	1.22887	0.56892	0.35257	0.15663	0.86941	0.40257
24	St. Andrews International School, Green Valley, Rayong,	0.03165	0.35792	0.62881	1.00464	1.54193	1.48163	0.99698	0.42509	0.27447	1.04824	0.70547	0.00388	0.04349	0.09918	0.15843	0.24316	0.15891	0.12216	0.04559	0.03363	0.11243	0.08644
25	Ban Chang Subdistrict Municipality Child Development Center (Phayun Center)	0.17366	1.67740	4.03076	6.43921	9.88297	5.93995	5.47031	1.70422	1.50599	4.20244	3.87082	0.01753	0.15450	0.38438	0.61408	0.94250	0.53500	0.55233	0.15350	0.15206	0.37850	0.39083
26	Ban Phayun School	0.17061	1.64591	3.95690	6.32123	9.70189	5.82672	5.37436	1.67173	1.47958	4.12233	3.80293	0.01749	0.15310	0.38184	0.61002	0.93627	0.52926	0.55082	0.15185	0.15164	0.37445	0.38976
27	Rakpasa Kindergarten	0.21247	2.17887	5.12406	8.18558	12.56333	7.81898	6.69288	2.24333	1.84257	5.53183	4.73592	0.01898	0.17031	0.42074	0.67215	1.03163	0.59250	0.59783	0.16999	0.16458	0.41919	0.42303
28	Wat Ban Chang School (Boonrawdprachanukul)	0.37810	3.71649	8.87387	14.17608	21.75761	13.21316	11.91038	3.79097	3.27897	9.34815	8.42785	0.04117	0.42608	0.99879	1.59555	2.44887	1.53198	1.29691	0.43954	0.35704	1.08385	0.91770
29	Ban Chang Subdistrict Municipality Child Development Center 3 (Ban Prachummit - Lor Kwien)	0.17603	1.43895	3.34861	5.34927	8.21013	5.19648	5.54508	1.49091	1.52658	3.67644	3.92373	0.01637	0.15357	0.37309	0.59602	0.91478	0.54008	0.51581	0.15495	0.14200	0.38210	0.36499
30	Ban Chang Municipality Kindergarten (Ban Prachummit - Lor Kwien)	0.17603	1.43895	3.34861	5.34927	8.21013	5.19648	5.54508	1.49091	1.52658	3.67644	3.92373	0.01637	0.15357	0.37309	0.59602	0.91478	0.54008	0.51581	0.15495	0.14200	0.38210	0.36499
31	Wat Prachummit Bamrung School	0.34536	2.17739	6.25456	9.99362	15.33816	6.76529	10.87893	1.94102	2.99501	4.78636	7.69799	0.01670	0.18860	0.42908	0.68542	1.05199	0.69016	0.52592	0.19801	0.14479	0.48828	0.37214
32	Udom Wittayanukun School	0.07735	1.51707	2.31940	3.70291	5.68347	6.59821	2.43645	1.89308	0.67076	4.66816	1.72404	0.00600	0.18850	0.33781	0.53944	0.82796	0.77400	0.18915	0.22207	0.05207	0.54759	0.13385
33	Mueang Ban Chang Municipality Child Development Center (Wat Noen Kraprok)	0.05903	0.91688	1.75685	2.80580	4.30644	3.65953	1.85960	1.04995	0.51195	2.58907	1.31586	0.00485	0.10009	0.19352	0.30906	0.47436	0.39788	0.15274	0.11416	0.04205	0.28150	0.10808
34	Wat Noen Kraprok School	0.05810	0.91789	1.76472	2.81838	4.32575	3.65806	1.83003	1.04953	0.50381	2.58803	1.29494	0.00486	0.09817	0.19066	0.30451	0.46737	0.38946	0.15298	0.11174	0.04212	0.27554	0.10825
35	Chonnabot Phatthana Kindergarten	0.07884	1.88375	2.91093	4.64736	7.13306	8.16441	2.48339	2.34244	0.68369	5.77622	1.75726	0.00738	0.19326	0.35677	0.56975	0.87447	0.78388	0.23250	0.22490	0.06401	0.55458	0.16452
36	Aksorn Business Administration Technological College	0.29990	4.45746	9.33391	14.90863	22.88214	17.05792	9.44693	4.89406	2.60077	12.06827	6.68470	0.03219	0.43769	0.93990	1.50131	2.30424	1.65335	1.01401	0.47436	0.27916	1.16973	0.71752
37	Banchang Karnchanakul Wittaya School	0.12293	3.27135	5.30631	8.47243	13.00396	14.08695	3.87224	4.04166	1.06604	9.96634	2.74002	0.02252	0.59638	1.09878	1.75472	2.69322	2.42098	0.70946	0.69460	0.19532	1.71281	0.50202

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Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
38	Ban Khao Huai Mahat School	0.04391	0.64107	1.34908	2.15484	3.30730	2.44710	1.38333	0.70209	0.38084	1.73129	0.97885	0.00386	0.05370	0.11453	0.18294	0.28078	0.20356	0.12151	0.05840	0.03345	0.14402	0.08598
39	Ban Phudon - Huai Mahat Child Development Center	0.04391	0.64107	1.34908	2.15484	3.30730	2.44710	1.38333	0.70209	0.38084	1.73129	0.97885	0.00386	0.05370	0.11453	0.18294	0.28078	0.20356	0.12151	0.05840	0.03345	0.14402	0.08598
40	Ban Map Fakthong School	0.17107	1.43538	3.20510	5.11977	7.85792	5.30859	5.38865	1.52308	1.48351	3.75576	3.81304	0.01018	0.06221	0.18136	0.28979	0.44477	0.19080	0.32070	0.05474	0.08829	0.13499	0.22693
41	Phuru Yor. Sor. Sor. 80 School	0.19252	1.26290	3.56126	5.69012	8.73318	4.72296	6.06440	1.35506	1.66955	3.34143	4.29120	0.00718	0.05656	0.14722	0.23521	0.36100	0.18983	0.22625	0.05446	0.06229	0.13430	0.16010
42	Khao Chi Chan School	0.17559	1.83618	3.92985	6.27714	9.63430	6.94828	5.53106	1.99352	1.52272	4.91582	3.91381	0.01103	0.10458	0.25302	0.40421	0.62038	0.36877	0.34737	0.10580	0.09563	0.26090	0.24580
43	Ban Khalot Child Development Center	0.37118	2.47872	6.93279	11.07702	17.00099	7.87471	11.69220	2.25932	3.21890	5.57126	8.27347	0.02382	0.15931	0.44531	0.71151	1.09202	0.50639	0.75047	0.14529	0.20661	0.35826	0.53104
44	Ban Khalot School	0.38492	2.58516	7.21179	11.52277	17.68513	8.23020	12.12511	2.36131	3.33808	5.82277	8.57979	0.02327	0.15447	0.43326	0.69225	1.06247	0.48963	0.73313	0.14048	0.20183	0.34641	0.51877
45	Phlu Ta Luang Wittaya School	0.58624	1.79343	7.37265	11.78445	18.08637	4.90044	18.46672	1.40598	5.08395	3.46700	13.06716	0.03394	0.17315	0.55253	0.88293	1.35511	0.48698	1.06897	0.13972	0.29429	0.34453	0.75641
46	Athittan Kindergarten School	0.29835	1.15752	4.30317	6.87712	10.55486	3.70922	9.39822	1.06421	2.58736	2.62423	6.65023	0.02402	0.12796	0.39933	0.63810	0.97935	0.36821	0.75671	0.10564	0.20833	0.26050	0.53545
47	Phlu Ta Luang SAO Child Development Center 2, Ban Khao Bai Si	0.46623	2.01953	6.43160	10.27744	15.77369	6.32634	14.68640	1.81508	4.04322	4.47581	10.39218	0.03338	0.17675	0.55331	0.88415	1.35699	0.50702	1.05159	0.14547	0.28951	0.35871	0.74411
48	Ban Khao Bai Si School	0.31580	2.05113	5.47137	8.74240	13.41779	8.39943	9.94773	2.40987	2.73864	5.94249	7.03907	0.02519	0.17448	0.48000	0.76691	1.17706	0.56173	0.79341	0.16116	0.21843	0.39742	0.56142
49	Chaleo-Pavana Memorial School (Chonburi Special Education)	0.07655	1.87196	2.84653	4.54441	6.97507	8.15602	2.41142	2.34003	0.66387	5.77029	1.70634	0.00598	0.10318	0.20785	0.33198	0.50953	0.40243	0.18836	0.11546	0.05185	0.28471	0.13328
50	Ban KM. 5 School	0.13822	1.07418	2.80273	4.47781	6.87256	3.59906	4.35387	1.03260	1.19863	2.54629	3.08082	0.01790	0.13168	0.35276	0.56360	0.86502	0.43270	0.56371	0.12415	0.15519	0.30613	0.39888
51	Royal Thai Fleet Sattahip District School	0.11377	1.00874	2.46527	3.93839	6.04468	3.53395	3.58395	1.01392	0.98667	2.50023	2.53602	0.01396	0.11562	0.29476	0.47091	0.72276	0.39377	0.43961	0.11298	0.12103	0.27859	0.31107
52	RTN. 8 Nursery	0.16115	1.15352	2.84827	4.55109	6.98499	4.04998	5.07639	1.16197	1.39755	2.86531	3.59209	0.01561	0.11603	0.30947	0.49443	0.75886	0.38253	0.49167	0.10975	0.13536	0.27063	0.34791
53	Juk Samet School	0.16092	1.13767	2.84690	4.54891	6.98164	3.99780	5.06894	1.14700	1.39550	2.82839	3.58681	0.01559	0.11583	0.30902	0.49372	0.75776	0.38180	0.49113	0.10954	0.13521	0.27012	0.34752
54	Juk Samet Child Development Center	0.16257	1.10584	2.86827	4.58305	7.03404	3.89222	5.12105	1.11671	1.40984	2.75370	3.62369	0.01562	0.11553	0.30878	0.49335	0.75719	0.38028	0.49197	0.10910	0.13544	0.26904	0.34812
55	Ban Chong Samaesarn Child Development Center	0.11722	1.16854	2.48703	3.97250	6.09709	4.43473	3.69242	1.27236	1.01654	3.13752	2.61278	0.00843	0.08882	0.20693	0.33056	0.50735	0.32052	0.26564	0.09196	0.07313	0.22677	0.18796
56	Samaesarn Subdistrict NFE Center	0.12756	0.94345	2.13462	3.41012	5.23389	3.91666	4.01825	1.12372	1.10624	2.77099	2.84334	0.00687	0.07786	0.17692	0.28262	0.43377	0.28512	0.21632	0.08180	0.05955	0.20172	0.15307
57	Ban Chong Samaesarn School	0.12986	0.90406	2.12137	3.38891	5.20134	3.71933	4.09063	1.06711	1.12616	2.63138	2.89455	0.00672	0.07695	0.17429	0.27841	0.42730	0.28231	0.21169	0.08100	0.05828	0.19973	0.14979
58	Wat Phala Vipassana Office	0.21537	1.83993	4.63345	7.40241	11.36127	6.31933	6.78434	1.81307	1.86775	4.47085	4.80064	0.02283	0.21181	0.51667	0.82541	1.26684	0.74296	0.71917	0.21316	0.19799	0.52564	0.50889
59	Wat Phala	0.20975	1.85838	4.61356	7.37052	11.31233	6.44404	6.60717	1.84885	1.81898	4.55908	4.67527	0.02169	0.20545	0.49725	0.79437	1.21921	0.72424	0.68316	0.20779	0.18808	0.51239	0.48341
60	Chao Li Hu Ong Yea Shrine	0.29790	2.84791	6.86955	10.97429	16.84346	10.06076	9.38400	2.88652	2.58345	7.11787	6.64017	0.03227	0.40052	0.88404	1.41214	2.16737	1.49076	1.01648	0.42771	0.27984	1.05470	0.71927
61	Wat Khlong Sai	0.28910	2.60699	6.42819	10.26945	15.76165	9.08045	9.10667	2.60526	2.50710	6.42431	6.44393	0.02314	0.24164	0.56463	0.90197	1.38436	0.87049	0.72881	0.24975	0.20064	0.61586	0.51571
62	Wat Khiri Pawanaram	0.13321	1.94289	4.08964	6.53224	10.02585	7.41546	4.19615	2.12756	1.15521	5.24635	2.96922	0.01428	0.25286	0.50617	0.80844	1.24082	0.98922	0.44972	0.28382	0.12381	0.69986	0.31823

Subject to changes and approval by the Government of Thailand

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Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
63	Ban Chang Christ Church	0.10250	1.86819	3.61170	5.76818	8.85319	7.42687	3.22892	2.13083	0.88893	5.25442	2.28480	0.01402	0.29916	0.57441	0.91738	1.40802	1.19295	0.44174	0.34227	0.12161	0.84400	0.31258
64	Ban Chang Church	0.10731	1.97876	3.48145	5.55940	8.53282	8.18446	3.38040	2.34819	0.93064	5.79040	2.39199	0.01493	0.44785	0.80822	1.29066	1.98097	1.83363	0.47031	0.52608	0.12948	1.29727	0.33280
65	Wat Ban Khlong Bang Phai	0.46284	3.40286	9.11929	14.56994	22.36196	11.17885	14.57965	3.20731	4.01383	7.90890	10.31664	0.04156	0.21416	0.67992	1.08649	1.66753	0.60556	1.30928	0.17374	0.36045	0.42842	0.92645
66	Admiral Prince Abhakara Kiartivongse Monument	0.50559	3.47262	9.05916	14.47346	22.21393	11.63646	15.92617	3.33860	4.38453	8.23265	11.26945	0.04866	0.24864	0.79286	1.26696	1.94451	0.69983	1.53290	0.20079	0.42201	0.49512	1.08469
67	Royal Thai Naval Air Division Naval Aviation Museum	0.41821	3.48055	8.85699	14.15009	21.71764	11.86912	13.17371	3.40535	3.62677	8.39725	9.32179	0.05053	0.24849	0.80855	1.29206	1.98304	0.68447	1.59173	0.19638	0.43821	0.48425	1.12632
68	The Royal Monument of King Taksin the Great (Air Defense Regiment 1)	0.49645	3.05762	7.19968	11.50136	17.65243	10.96408	15.63832	3.14569	4.30528	7.75695	11.06577	0.06477	0.28485	0.98520	1.57442	2.41639	0.73068	2.04023	0.20964	0.56168	0.51695	1.44368
69	Somdej Phra Pathom (Air Defense Regiment 1)	0.98164	2.31539	11.64523	18.61510	28.56968	8.98074	30.92194	2.57665	8.51292	6.35376	21.88054	0.09512	0.36936	1.37246	2.19340	3.36638	0.85968	2.99645	0.24665	0.82493	0.60821	2.12031
70	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Regiment 1)	1.32604	2.98528	15.84226	25.32390	38.86609	8.84534	41.77080	2.53780	11.49964	6.25797	29.55725	0.12177	0.43750	1.70316	2.72201	4.17767	0.94658	3.83572	0.27158	1.05599	0.66970	2.71418
71	Admiral Prince Abhakara Kiartivongse Monument (Air Defense Artillery Battalion)	1.06518	7.47034	17.64683	28.19060	43.26730	31.10023	33.55350	8.92292	9.23739	22.00303	23.74265	0.19475	1.72836	4.28805	6.85049	10.51418	5.99570	6.13484	1.72022	1.68894	4.24189	4.34105
72	Phra Phuttha Nawikapiban Hall (Air Defense Artillery Battalion)	0.85997	7.39760	16.43584	26.25417	40.29539	29.18411	27.08941	8.37317	7.45781	20.64740	19.16862	0.16739	1.75820	4.10014	6.54982	10.05276	6.34142	5.27270	1.81941	1.45159	4.48648	3.73100
73	Phra Siam Devadhiraj Shrine (Air Defense Artillery Battalion)	0.85300	12.51350	23.20673	37.06087	56.88247	50.65740	26.86985	14.53403	7.39736	35.83949	19.01326	0.15285	2.02083	4.37553	6.98913	10.72707	7.60032	4.81468	2.18059	1.32550	5.37713	3.40690
74	Wat Sa Kaeo	1.02974	7.07750	13.29430	21.23123	32.58649	28.49518	32.43703	8.17551	8.93003	20.15999	22.95263	0.18051	0.76042	2.69485	4.30663	6.60974	1.89065	5.68601	0.54244	1.56538	1.33761	4.02345
75	The Shrine of King Taksin the Great (at the foot of Khao Khrok Tabak)	0.16355	1.92340	3.96649	6.33636	9.72513	8.24116	5.15184	2.36446	1.41832	5.83052	3.64547	0.01681	0.29197	0.58725	0.93793	1.43957	1.13962	0.52960	0.32697	0.14580	0.80627	0.37475
76	Wat Sombun Naram	0.78467	5.67132	10.22754	16.34472	25.08555	23.50537	24.71737	6.74389	6.80478	16.62976	17.49015	0.09813	0.61142	1.76615	2.82199	4.33117	1.89062	3.09122	0.54244	0.85102	1.33759	2.18736
77	Ban Chang Abundant Grace Church	0.39396	4.45999	7.28487	11.63155	17.85276	18.96691	12.40977	5.44177	3.41645	13.41886	8.78123	0.06500	0.59251	1.45493	2.32434	3.56742	2.06938	2.04738	0.59372	0.56365	1.46406	1.44874
78	Wat Samnak Kathon	0.19341	4.59902	7.32989	11.70296	17.96239	19.72655	6.09264	5.65971	1.67732	13.95629	4.31118	0.02950	0.58796	1.14546	1.82941	2.80783	2.32928	0.92928	0.66829	0.25583	1.64794	0.65756
79	Wat Suwan Rangsan	0.14304	3.12971	4.95621	7.91303	12.14540	13.45374	4.50595	3.85999	1.24050	9.51836	3.18843	0.02086	0.43848	0.84451	1.34875	2.07011	1.74607	0.65709	0.50096	0.18090	1.23533	0.46496
80	Wat Nong Bot	0.13080	1.41568	3.26751	5.21967	8.01123	5.13736	4.12035	1.47395	1.13435	3.63462	2.91558	0.01393	0.20931	0.43700	0.69799	1.07129	0.80220	0.43879	0.23016	0.12080	0.56755	0.31049
81	The Shrine of Luang Tia Chak Mak	0.11929	2.09230	3.73018	5.95717	9.14328	8.76769	3.75767	2.51553	1.03450	6.20304	2.65895	0.01888	0.35945	0.70746	1.12990	1.73421	1.41740	0.59463	0.40666	0.16370	1.00279	0.42077
82	Wat Chak Mak	0.12568	2.24582	4.17314	6.66447	10.22889	9.37476	3.95891	2.68970	1.08990	6.63253	2.80134	0.01943	0.37422	0.73465	1.17332	1.80084	1.47734	0.61215	0.42386	0.16853	1.04520	0.43316

Subject to changes and approval by the Government of Thailand

Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
83	The Shrine of Luang Tia Ban Phayun	0.14782	1.42024	3.41949	5.46271	8.38423	5.02312	4.65636	1.44118	1.28191	3.55380	3.29487	0.01565	0.14356	0.35165	0.56178	0.86223	0.50218	0.49287	0.14408	0.13569	0.35529	0.34876
84	The Shrine of King Taksin the Great (Ban Chang)	0.14778	1.42676	3.42904	5.47796	8.40764	5.05184	4.65505	1.44942	1.28155	3.57412	3.29394	0.01561	0.14462	0.35299	0.56392	0.86551	0.50708	0.49184	0.14548	0.13541	0.35875	0.34803
85	Wat Chonthararam (Phayun)	0.17493	1.67500	4.03793	6.45069	9.90059	5.91946	5.51033	1.69834	1.51701	4.18794	3.89914	0.01746	0.15314	0.38170	0.60979	0.93591	0.52962	0.55006	0.15195	0.15143	0.37470	0.38923
86	Masjid Dawatul Islam	0.24666	5.12798	9.89961	15.81047	24.26646	20.39896	7.76985	5.85263	2.13907	14.43202	5.49799	0.03257	0.56429	1.13565	1.81382	2.78391	2.20193	1.02604	0.63175	0.28247	1.55784	0.72603
87	Chinese shrine at the Buddha Dhamma Foundation	0.53386	4.29009	11.07372	17.69186	27.15354	14.48483	16.81688	4.15582	4.62975	10.24784	11.89972	0.04508	0.46938	1.09798	1.75399	2.69205	1.68985	1.42011	0.48483	0.39096	1.19554	1.00487
88	The Shrine of Luang Tia Ban Chang	0.29616	3.60244	7.43878	11.88140	18.23589	13.88274	9.32900	3.98307	2.56831	9.82187	6.60126	0.03255	0.43445	0.93804	1.49835	2.29970	1.63638	1.02537	0.46949	0.28229	1.15772	0.72556
89	The Shrine of Laoia Guan Yu Ban Chang	0.35725	3.50433	8.14886	13.01748	19.97941	12.66082	11.25336	3.63250	3.09809	8.95737	7.96294	0.03963	0.42207	0.97958	1.56484	2.40174	1.52663	1.24845	0.43800	0.34370	1.08007	0.88341
90	Wat Ban Chang	0.45771	3.65055	9.45220	15.10130	23.17754	12.29844	14.41816	3.52852	3.96937	8.70099	10.20237	0.04737	0.42706	1.05311	1.68241	2.58218	1.48741	1.49212	0.42675	0.41079	1.05233	1.05584
91	Wat Prachummit Bamrung	0.35731	2.12621	6.27865	10.03236	15.39760	6.44806	11.25554	1.85000	3.09869	4.56193	7.96448	0.01710	0.18906	0.43321	0.69203	1.06214	0.68900	0.53860	0.19768	0.14828	0.48746	0.38112
92	The Shrine of Luang Tia Noen Kraprok 1	0.19517	2.68475	5.74581	9.17777	14.08625	10.15945	6.14800	2.91483	1.69256	7.18769	4.35036	0.01283	0.22689	0.45439	0.72573	1.11387	0.88745	0.40426	0.25462	0.11129	0.62786	0.28606
93	The Shrine of Luang Tia Noen Kraprok 2	0.08881	3.26712	5.02197	8.01760	12.30594	14.18482	2.79761	4.06974	0.77019	10.03558	1.97960	0.00794	0.27953	0.49271	0.78679	1.20760	1.15533	0.25014	0.33147	0.06886	0.81738	0.17700
94	Wat Noen Kraprok	0.06626	0.99583	1.91662	3.06098	4.69810	3.96679	2.08714	1.13811	0.57460	2.80646	1.47687	0.00532	0.12610	0.23707	0.37860	0.58109	0.50750	0.16753	0.14561	0.04612	0.35905	0.11855
95	Wat Phudon Nim Sanoh	0.03977	0.64534	1.32020	2.10864	3.23640	2.49839	1.25264	0.71681	0.34486	1.76758	0.88638	0.00389	0.05571	0.11788	0.18828	0.28898	0.21207	0.12257	0.06084	0.03374	0.15004	0.08673
96	Church of Christ Ban Chang	0.05231	0.66492	1.45693	2.32722	3.57186	2.48483	1.64787	0.71292	0.45366	1.75799	1.16604	0.00422	0.05683	0.12237	0.19547	0.30001	0.21437	0.13289	0.06150	0.03659	0.15166	0.09404
97	Anek Kusala Sala (Viharn Sien)	0.18535	1.77038	3.98520	6.36595	9.77057	6.51787	5.83857	1.87003	1.60738	4.61131	4.13141	0.01217	0.07777	0.22199	0.35470	0.54439	0.24294	0.38337	0.06970	0.10554	0.17188	0.27128
98	Wat Yan Nasangwararam	0.19540	1.42166	3.62049	5.78417	8.87758	5.14899	6.15516	1.47729	1.69454	3.64284	4.35543	0.01410	0.08776	0.25360	0.40520	0.62191	0.27127	0.44406	0.07783	0.12225	0.19192	0.31422
99	Sirisirirak Monastery	0.13910	1.79703	3.41264	5.45013	8.36506	7.20080	4.38172	2.06597	1.20630	5.09448	3.10053	0.00901	0.11122	0.24592	0.39282	0.60291	0.41361	0.28382	0.11867	0.07814	0.29262	0.20083
100	Anan Buraparam Meditation Center	0.25963	1.59901	3.70520	5.92156	9.08827	5.91909	8.17831	1.69824	2.25152	4.18768	5.78702	0.01207	0.10793	0.26698	0.42653	0.65463	0.37515	0.38018	0.10763	0.10466	0.26541	0.26901
101	Wat Map Fakthong	0.16113	1.27519	3.31239	5.29205	8.12227	4.62496	5.07562	1.32694	1.39734	3.27210	3.59154	0.01053	0.07529	0.20428	0.32638	0.50093	0.24502	0.33185	0.07030	0.09136	0.17335	0.23482
102	Khao Chi Chan Image of Lord Buddha	0.03509	0.43130	0.95493	1.52538	2.34118	1.60263	1.10547	0.45981	0.30434	1.13384	0.78224	0.00258	0.02573	0.06108	0.09758	0.14977	0.09180	0.08116	0.02634	0.02234	0.06495	0.05743
103	Wat Khao Chi Chan	0.03719	0.83548	1.40338	2.24085	3.43937	3.59010	1.17163	1.03003	0.32255	2.53995	0.82905	0.00291	0.05970	0.11555	0.18455	0.28325	0.23722	0.09156	0.06806	0.02521	0.16783	0.06479
104	Rat Samakkhi Temple	0.38568	2.57637	7.20487	11.51174	17.66819	8.18592	12.14894	2.34861	3.34464	5.79144	8.59666	0.02427	0.16033	0.45063	0.72000	1.10505	0.50734	0.76438	0.14556	0.21044	0.35894	0.54088
105	The Shrine of Chao Mae Kuan Im	0.39223	2.62037	7.32767	11.70795	17.96934	8.32595	12.35553	2.38878	3.40152	5.89051	8.74284	0.02283	0.15108	0.42428	0.67791	1.04045	0.47836	0.71903	0.13724	0.19795	0.33843	0.50879
106	The Monument of Somdej Phra Mahitalathibet Adulyadej Vikrom Boromrajchanok and Somdej Phra Srinakarindra Boromarajonani	0.43117	2.91670	8.11011	12.95803	19.88796	9.31022	13.58194	2.67118	3.73916	6.58687	9.61066	0.02586	0.16837	0.47645	0.76126	1.16838	0.52982	0.81460	0.15201	0.22426	0.37484	0.57642

Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
107	Prakai Dhamma Meditation Center	0.15810	1.23525	3.22580	5.15374	7.90998	4.13613	4.98005	1.18669	1.37103	2.92626	3.52391	0.01874	0.13925	0.37148	0.59352	0.91093	0.45901	0.59038	0.13169	0.16253	0.32475	0.41775
108	KM.8 Meditation Center	0.26039	1.81338	4.97685	7.95172	12.20430	5.84887	8.20252	1.67809	2.25818	4.13800	5.80415	0.01950	0.14162	0.38154	0.60959	0.93560	0.46339	0.61421	0.13295	0.16909	0.32784	0.43462
109	Wat Rangsee Sunthorn (KM.5)	0.13490	1.07585	2.78572	4.45061	6.83081	3.62442	4.24941	1.03988	1.16988	2.56423	3.00691	0.01832	0.13433	0.36040	0.57581	0.88376	0.44090	0.57706	0.12650	0.15887	0.31193	0.40833
110	Bodhipiya Monastery (Dhammayut), Bodhi Samphan Branch	0.04895	0.58925	1.31317	2.09763	3.21948	2.18165	1.54182	0.62593	0.42447	1.54349	1.09100	0.00196	0.02480	0.05446	0.08698	0.13350	0.09260	0.06186	0.02657	0.01703	0.06551	0.04377
111	Sattahip Meditation Center (Khao Bandai Kaew)	0.05752	0.64824	1.47594	2.35769	3.61863	2.48661	1.81187	0.71343	0.49881	1.75924	1.28209	0.00240	0.03347	0.07136	0.11399	0.17495	0.12690	0.07566	0.03641	0.02083	0.08978	0.05354
112	Wat Tung Prong	0.04552	0.57528	1.18789	1.89755	2.91239	2.25830	1.43402	0.64793	0.39479	1.59772	1.01472	0.00194	0.02602	0.05610	0.08961	0.13753	0.09807	0.06112	0.02814	0.01683	0.06938	0.04325
113	Khao Phlu Ta Luang Meditation Center	0.02439	0.33463	0.67525	1.07850	1.65531	1.30408	0.76837	0.37415	0.21153	0.92262	0.54370	0.00115	0.01407	0.03124	0.04990	0.07659	0.05221	0.03638	0.01498	0.01001	0.03694	0.02574
114	His Majesty's Admiral Prince Abhakara Kiartivongse's Court	0.46638	1.79629	5.46017	8.72815	13.39561	6.47126	14.69106	1.85666	4.04450	4.57834	10.39548	0.04444	0.17529	0.64538	1.03141	1.58298	0.41349	1.40003	0.11863	0.38543	0.29254	0.99067
115	Wat Khao Bai Si Santitham	0.54379	2.39757	7.73686	12.36488	18.97733	7.62677	17.12973	2.18819	4.71587	5.39585	12.12110	0.04468	0.20809	0.69721	1.11417	1.71000	0.55458	1.40729	0.15911	0.38743	0.39236	0.99580
116	Welu Amphawan Vipassana Office	0.38587	2.33994	6.27688	10.03022	15.39427	8.09305	12.15494	2.32196	3.34630	5.72573	8.60091	0.03436	0.20129	0.59894	0.95703	1.46884	0.60623	1.08236	0.17393	0.29798	0.42890	0.76588
117	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Nang Klao Chao Yu Hua, Rama 3	0.18688	1.59261	4.01452	6.41361	9.84365	5.46632	5.88675	1.56833	1.62064	3.86736	4.16550	0.01441	0.12140	0.30744	0.49117	0.75386	0.41539	0.45398	0.11918	0.12498	0.29388	0.32124
118	The Royal Monument of His Majesty King Bhumibol Adulyadej Phra Mongkut Klao Chao Yu Hua, Rama 6	0.17794	1.18608	3.17322	5.07027	7.78183	3.99708	5.60516	1.14680	1.54312	2.82788	3.96624	0.01871	0.14041	0.37297	0.59590	0.91459	0.46434	0.58935	0.13322	0.16225	0.32852	0.41702
119	Samaesarn Pattanakarn Church	0.16375	1.25785	2.95679	4.72341	7.24956	4.51508	5.15818	1.29542	1.42006	3.19437	3.64996	0.01511	0.12029	0.31166	0.49792	0.76422	0.40506	0.47583	0.11622	0.13100	0.28658	0.33670
120	His Majesty Admiral Prince Abhakara Kiartivongse's Court (Samaesarn)	0.15121	1.20191	2.85243	4.55675	6.99376	4.28918	4.76315	1.23060	1.31131	3.03454	3.37043	0.00940	0.09178	0.21964	0.35088	0.53853	0.32584	0.29597	0.09349	0.08148	0.23053	0.20943
121	Wat Chong Samaesarn	0.12792	0.96214	2.15478	3.44239	5.28340	3.97897	4.02966	1.14160	1.10938	2.81508	2.85141	0.00697	0.07865	0.17902	0.28597	0.43892	0.28771	0.21966	0.08255	0.06047	0.20355	0.15543
122	Viharn Luang Por Dam	0.09657	0.96085	2.20614	3.52417	5.40895	3.49753	3.04214	1.00347	0.83751	2.47446	2.15263	0.00557	0.06135	0.14072	0.22479	0.34501	0.22345	0.17531	0.06411	0.04826	0.15809	0.12405
123	The Shrine of King Taksin the Great (Samaesarn)	0.12995	1.25245	3.01205	4.81181	7.38521	4.43286	4.09349	1.27183	1.12695	3.13620	2.89658	0.00980	0.09773	0.23213	0.37083	0.56915	0.34860	0.30868	0.10002	0.08498	0.24663	0.21842
124	Thai Island and Sea Natural History Museum	0.12055	1.22407	2.88880	4.61482	7.08288	4.38329	3.79747	1.25760	1.04546	3.10113	2.68711	0.00923	0.09548	0.22386	0.35762	0.54888	0.34327	0.29078	0.09849	0.08005	0.24286	0.20576
125	Phra Phutthasinghanatara Navy Hall (Naval Special Warfare Command)	0.14069	1.16740	2.97430	4.75180	7.29309	3.97765	4.43187	1.14122	1.22011	2.81414	3.13602	0.01003	0.10077	0.23869	0.38131	0.58524	0.36004	0.31586	0.10330	0.08696	0.25472	0.22350

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Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
126	The Royal Monument of King Taksin the Great (Naval Special Warfare Command)	0.14218	1.22241	3.07063	4.90563	7.52920	4.20559	4.47878	1.20662	1.23302	2.97540	3.16921	0.01019	0.10078	0.24009	0.38355	0.58867	0.35882	0.32096	0.10295	0.08836	0.25386	0.22711
127	Eastern-Nong Muang Community Health Service Center	1.25288	4.69423	15.67485	25.05486	38.45330	18.43524	39.46621	5.28922	10.86518	13.04270	27.92652	0.13227	1.10454	2.80693	4.48440	6.88269	3.77011	4.16661	1.08168	1.14708	2.66731	2.94831
128	Phala Subdistrict Health Promotion Hospital	0.23141	2.10577	5.17432	8.26628	12.68716	7.35128	7.28934	2.10914	2.00678	5.20094	5.15798	0.02237	0.21728	0.52104	0.83238	1.27754	0.77041	0.70463	0.22104	0.19399	0.54505	0.49860
129	Ban Chang Hospital	0.08171	1.39212	2.81326	4.49328	6.89641	5.42155	2.57405	1.55549	0.70864	3.83568	1.82141	0.00931	0.15340	0.31263	0.49933	0.76638	0.59499	0.29335	0.17071	0.08076	0.42094	0.20757
130	Ban Khlong Bang Phai Subdistrict Health Promotion Hospital	0.50947	1.85358	5.98365	9.56510	14.68010	6.97807	16.04848	2.00207	4.41820	4.93690	11.35600	0.05273	0.24306	0.81902	1.30882	2.00876	0.64350	1.66092	0.18463	0.45726	0.45527	1.17528
131	Ban Sa Kaeo Subdistrict Health Promotion Hospital	0.70783	6.01779	15.11720	24.15119	37.06742	20.70289	22.29686	5.93983	6.13840	14.64704	15.77738	0.12295	0.54807	1.88139	3.00657	4.61444	1.41898	3.87308	0.40712	1.06627	1.00391	2.74062
132	Ban Khao Khrok Subdistrict Health Promotion Hospital	1.12675	6.60415	13.33103	21.30691	32.70121	27.89593	35.49298	8.00358	9.77134	19.73603	25.11503	0.13703	0.72059	2.26369	3.61724	5.55170	2.05973	4.31647	0.59095	1.18834	1.45723	3.05436
133	Ban Yai Ra Subdistrict Health Promotion Hospital	0.13954	5.06341	7.93654	12.67118	19.44851	21.84185	4.39552	6.26661	1.21010	15.45284	3.11030	0.02397	0.55663	1.05064	1.67791	2.57532	2.23637	0.75497	0.64163	0.20784	1.58220	0.53422
134	Sam Nak Thon Subdistrict Health Promotion Hospital	0.31019	5.96793	9.31348	14.86943	22.82254	25.78139	9.77095	7.39690	2.68998	18.24002	6.91398	0.04986	0.59790	1.33414	2.13112	3.27089	2.21215	1.57066	0.63468	0.43241	1.56507	1.11141
135	Ban Chak Mak Subdistrict Health Promotion Hospital	0.13511	2.18426	3.52692	5.63131	8.64325	9.37810	4.25600	2.69066	1.17169	6.63489	3.01157	0.01956	0.34025	0.68408	1.09258	1.67693	1.32837	0.61611	0.38112	0.16962	0.93980	0.43596
136	Ban Phayun Subdistrict Health Promotion Hospital	0.16717	1.61981	3.88792	6.21101	9.53273	5.74014	5.26603	1.64690	1.44976	4.06108	3.72627	0.01699	0.15224	0.37634	0.60122	0.92276	0.52940	0.53531	0.15189	0.14737	0.37454	0.37879
137	Public Health Service Center 2 Ban Chang Municipality (Tassanee Center)	0.07081	2.49228	3.84164	6.13324	9.41369	10.81081	2.23053	3.10171	0.61407	7.64851	1.57833	0.00655	0.22657	0.40034	0.63929	0.98121	0.93556	0.20634	0.26842	0.05681	0.66190	0.14601
138	Phudon Huai Mahat Community Health Service Unit	0.04702	0.68138	1.43687	2.29507	3.52252	2.59821	1.48128	0.74545	0.40780	1.83820	1.04816	0.00421	0.05899	0.12557	0.20056	0.30783	0.22386	0.13256	0.06423	0.03649	0.15838	0.09380
139	Wat Yan Nasangwararam Hospital	0.17765	1.64531	3.45662	5.52271	8.47626	6.40367	5.59616	1.83727	1.54064	4.53052	3.95987	0.01278	0.08289	0.23498	0.37545	0.57623	0.26044	0.40259	0.07472	0.11083	0.18426	0.28488
140	Somdej Phra Sangkharat Yanasangwon Hospital for the Elderly, Chonburi	0.17482	1.61014	3.44709	5.50743	8.45282	6.28580	5.50699	1.80345	1.51609	4.44713	3.89678	0.01284	0.08260	0.23503	0.37553	0.57636	0.25870	0.40443	0.07422	0.11134	0.18303	0.28618
141	Ban Khong Wanphen Subdistrict Health Promotion Hospital	0.06859	2.51628	3.95498	6.31439	9.69172	10.84434	2.16067	3.11133	0.59484	7.67224	1.52890	0.00466	0.11740	0.21828	0.34859	0.53502	0.47477	0.14694	0.13622	0.04045	0.33590	0.10398

Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
142	Queen Sirikit Naval Hospital, Royal Thai Navy Medical Department	0.41154	2.85493	7.84891	12.54056	19.24724	9.19574	12.96378	2.63834	3.56897	6.50588	9.17324	0.02548	0.16806	0.47270	0.75527	1.15919	0.53147	0.80254	0.15248	0.22094	0.37601	0.56788
143	Sattahip Hospital KM.10	0.29349	2.42987	6.19630	9.89935	15.19358	8.27412	9.24497	2.37392	2.54517	5.85384	6.54179	0.01984	0.13167	0.36928	0.59002	0.90557	0.41737	0.62482	0.11975	0.17201	0.29529	0.44212
144	Ban Chong Samaesarn Subdistrict Health Promotion Hospital	0.12830	0.92948	2.12402	3.39315	5.20784	3.86972	4.04140	1.11025	1.11261	2.73778	2.85972	0.00682	0.07751	0.17595	0.28106	0.43137	0.28398	0.21470	0.08148	0.05911	0.20091	0.15192
145	Village No. 1 Ban Sakulthong	0.09897	1.55732	3.21154	5.12955	7.87297	6.16138	3.11768	1.76775	0.85831	4.35910	2.20609	0.01387	0.27931	0.54292	0.86710	1.33085	1.10763	0.43695	0.31779	0.12029	0.78363	0.30919
146	Village No. 2, Ban Kilo 16	0.38496	2.74290	7.45199	11.90625	18.27372	8.91712	12.12646	2.55840	3.33846	6.30875	8.58075	0.03388	0.37092	0.85281	1.36232	2.09091	1.34908	1.06737	0.38706	0.29385	0.95446	0.75528
147	Village No. 4, Ban Tung Prong	0.30949	3.20049	7.01590	11.20682	17.20046	11.95733	9.74910	3.43066	2.68396	8.45966	6.89852	0.04040	0.57351	1.21642	1.94296	2.98210	2.18041	1.27271	0.62558	0.35038	1.54261	0.90057
148	Village No. 5, Phala Subdistrict	0.31317	2.67158	6.73160	10.75442	16.50596	9.17218	9.86497	2.63157	2.71586	6.48920	6.98051	0.03117	0.41736	0.90027	1.43801	2.20709	1.57284	0.98178	0.45126	0.27029	1.11277	0.69472
149	Village No. 6, Ban Takat	0.22687	2.14080	5.18897	8.28956	12.72291	7.53963	7.14664	2.16318	1.96749	5.33419	5.05700	0.02124	0.21139	0.50247	0.80269	1.23198	0.75363	0.66908	0.21622	0.18420	0.53318	0.47345
150	Village No. 7, Ban Khlong Sai	0.30143	2.61959	6.55246	10.46814	16.06659	9.03816	9.49512	2.59312	2.61404	6.39439	6.71880	0.02847	0.34395	0.76567	1.22306	1.87718	1.27425	0.89684	0.36559	0.24690	0.90152	0.63461
151	Village No. 1 Ban Sam Nak Thon	0.83175	3.84576	11.60170	18.54197	28.45775	16.44634	26.20054	4.71859	7.21310	11.63559	18.53965	0.08544	0.69301	1.78204	2.84705	4.36967	2.34614	2.69147	0.67313	0.74097	1.65987	1.90450
152	Village No. 2, Ban Chak Mak	0.16669	3.67373	5.90240	9.42394	14.46442	15.83666	5.25092	4.54367	1.44560	11.20424	3.71558	0.02546	0.47551	0.94006	1.50141	2.30441	1.87113	0.80213	0.53684	0.22083	1.32380	0.56759
153	Village No. 3, Ban Sa Kaeo	4.32945	8.50896	49.36302	78.91170	121.11008	36.10574	136.37928	10.35904	37.54569	25.54437	96.50276	0.36810	1.57934	5.53909	8.85194	13.58580	3.98029	11.59541	1.14198	3.19226	2.81600	8.20498
154	Sa Kaeo Community 1	1.48601	7.32584	17.19505	27.48746	42.18654	30.13003	46.80972	8.64456	12.88688	21.31662	33.12283	0.18916	0.80103	2.83032	4.52311	6.94198	1.99942	5.95845	0.57365	1.64038	1.41456	4.21623
155	Sa Kaeo Community 2	1.05457	5.94115	18.02261	28.79820	44.19923	17.57501	33.21919	5.04242	9.14536	12.43410	23.50609	0.11512	0.49771	1.73807	2.77758	4.26298	1.26129	3.62641	0.36188	0.99836	0.89235	2.56607
156	Village No. 4, Ban Khlong Bang Phai	1.16928	2.93681	14.43237	23.06924	35.40582	7.15625	36.83288	2.05319	10.14022	5.06296	26.06315	0.08924	0.35543	1.30114	2.07940	3.19142	0.84532	2.81119	0.24253	0.77393	0.59805	1.98922
157	Village No. 5, Ban Yai Ra	0.12242	1.18103	2.83923	4.53573	6.96149	4.18104	3.85619	1.19957	1.06162	2.95803	2.72866	0.01183	0.17671	0.36953	0.59023	0.90591	0.67668	0.37269	0.19415	0.10260	0.47874	0.26371
158	Village No. 6, Ban Khao Khrok	2.27210	5.49273	27.71899	44.30771	68.00178	19.70862	71.57185	5.65457	19.70398	13.94360	50.64465	0.17766	0.97304	2.99386	4.78393	7.34233	2.83950	5.59627	0.81468	1.54067	2.00891	3.95996
159	Village no. 7, Ban Nong Takhian	0.13178	2.42602	4.23142	6.75750	10.37167	10.19636	4.15099	2.92542	1.14278	7.21380	2.93726	0.02134	0.42122	0.82238	1.31342	2.01588	1.66710	0.67225	0.47830	0.18507	1.17945	0.47569
160	Village No. 8, Ban Cherng Khao	0.22096	13.73052	21.26763	33.95438	52.11534	59.46366	6.96027	17.06062	1.91619	42.06981	4.92512	0.03400	1.85811	3.11510	4.97400	7.63436	7.82793	1.07108	2.24590	0.29487	5.53816	0.75790
161	Eastern-Nong Muang Community	0.32753	3.71753	8.29156	13.24477	20.32832	14.46940	10.31724	4.15139	2.84037	10.23692	7.30054	0.04826	0.71926	1.50502	2.40390	3.68957	2.75349	1.52030	0.79000	0.41854	1.94806	1.07577
162	Wat Khiri Pawanaram Community	0.17751	10.76499	16.80065	26.82307	41.16972	46.50379	5.59175	13.34233	1.53943	32.90086	3.95675	0.02936	1.49365	2.52141	4.02608	6.17943	6.27651	0.92499	1.80078	0.25465	4.44055	0.65453
163	Ban Chang-Phala Community	0.15939	10.53623	16.07432	25.66242	39.38837	45.85697	5.02091	13.15675	1.38227	32.44325	3.55283	0.02740	1.47607	2.47797	3.95669	6.07293	6.21536	0.86326	1.78324	0.23766	4.39729	0.61085
164	Ruam Sompong Community	0.16968	2.14281	4.50521	7.19600	11.04460	8.27516	5.34497	2.37421	1.47149	5.85457	3.78213	0.03090	0.30730	0.73065	1.16721	1.79145	1.09539	0.97340	0.31428	0.26798	0.77497	0.68878
165	Ming Mongkol Community	0.16106	8.25435	13.14420	20.98608	32.21069	35.41595	5.07334	10.16113	1.39671	25.05635	3.58992	0.02179	0.71564	1.27389	2.03427	3.12228	2.94632	0.68649	0.84532	0.18899	2.08449	0.48576
166	Jor Koo Community	0.16987	8.28042	13.12310	20.95223	32.15874	35.58568	5.35082	10.20983	1.47310	25.17643	3.78627	0.02186	0.73984	1.31129	2.09397	3.21392	3.05124	0.68868	0.87543	0.18960	2.15871	0.48731

Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																					
		24-hour average											1-year average										
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
167	Wirat Phatthana Department Store Community	0.15645	12.40102	19.25056	30.73419	47.17277	53.66688	4.92823	15.39748	1.35676	37.96866	3.48724	0.02021	0.84334	1.45454	2.32263	3.56489	3.51522	0.63653	1.00854	0.17524	2.48697	0.45041
168	Thep Chinda Community	0.17814	7.68661	12.55923	20.05299	30.77844	32.68501	5.61148	9.37760	1.54486	23.12425	3.97071	0.02407	0.69357	1.25975	2.01174	3.08771	2.83225	0.75820	0.81260	0.20873	2.00378	0.53650
169	Health Park Community	0.50022	1.95323	6.01713	9.61832	14.76181	7.15148	15.75711	2.05182	4.33799	5.05958	11.14982	0.03922	0.32858	0.83389	1.33224	2.04473	1.12259	1.23534	0.32208	0.34009	0.79422	0.87413
170	Wat Ban Chang Community	0.45180	3.82675	9.66972	15.44842	23.71034	13.11277	14.23190	3.76216	3.91809	9.27713	10.07057	0.04555	0.43407	1.04824	1.67459	2.57018	1.53234	1.43471	0.43964	0.39498	1.08411	1.01521
171	Dong Dang Community	0.18082	6.97973	11.88481	18.97743	29.12751	29.23492	5.69584	8.38774	1.56808	20.68334	4.03041	0.02594	0.62043	1.16444	1.85963	2.85423	2.49883	0.81701	0.71693	0.22492	1.76789	0.57812
172	Night Market Community	0.41146	3.20268	8.07603	12.90230	19.80254	10.98981	12.96115	3.15307	3.56825	7.77516	9.17138	0.04320	0.37649	0.94066	1.50279	2.30650	1.29997	1.36070	0.37297	0.37461	0.91971	0.96284
173	Ruam Mitr Community	0.58807	4.31725	11.57707	18.49676	28.38885	14.17597	18.52442	4.06720	5.09984	10.02933	13.10798	0.04680	0.46921	1.11234	1.77695	2.72729	1.67554	1.47417	0.48073	0.40585	1.18542	1.04313
174	Ban Chang - Noen Kraprok Community	0.45126	1.67967	5.96940	9.54093	14.64314	5.82114	14.21497	1.67013	3.91343	4.11839	10.05860	0.02998	0.27971	0.68085	1.08769	1.66940	0.98243	0.94440	0.28187	0.26000	0.69506	0.66826
175	Dao Pitak Community	0.27267	2.91069	6.01572	9.60848	14.74735	11.21200	8.58924	3.21682	2.36465	7.93235	6.07779	0.02703	0.35490	0.77000	1.22995	1.88775	1.33330	0.85138	0.38254	0.23439	0.94329	0.60244
176	Taiwa Community	0.09194	3.98536	6.12432	9.77751	15.00715	17.30474	2.89607	4.96487	0.79730	12.24289	2.04928	0.00881	0.30703	0.54193	0.86539	1.32824	1.26832	0.27750	0.36389	0.07640	0.89732	0.19636
177	East Ban Noen Kraprok Community, Prachummit	0.35937	1.97586	6.06756	9.69541	14.88043	5.77680	11.32027	1.65741	3.11651	4.08702	8.01029	0.01700	0.17860	0.41648	0.66531	1.02113	0.64420	0.53552	0.18483	0.14743	0.45577	0.37894
178	Ban Noen Kraprok Community	0.08039	1.86552	2.85557	4.55890	6.99730	8.11054	2.53236	2.32698	0.69717	5.73811	1.79191	0.00653	0.20808	0.37200	0.59405	0.91177	0.85517	0.20555	0.24536	0.05659	0.60502	0.14545
179	Nong Yai Community	0.07434	3.38973	5.58290	8.91449	13.68243	14.65165	2.34180	4.20368	0.64471	10.36586	1.65707	0.00855	0.27175	0.48611	0.77627	1.19145	1.11659	0.26947	0.32036	0.07419	0.78998	0.19068
180	Village No. 1, Pan Din Tai	0.34141	1.97711	5.91638	9.45363	14.50935	5.92375	10.75459	1.69957	2.96078	4.19098	7.61001	0.01618	0.17106	0.39800	0.63579	0.97582	0.61783	0.50961	0.17726	0.14030	0.43710	0.36061
181	Village No. 2, Ban Prachummit	0.29537	1.41174	3.40902	5.44956	8.36375	5.05503	9.30418	1.45033	2.56147	3.57637	6.58369	0.02414	0.21494	0.53257	0.85082	1.30584	0.74627	0.76036	0.21411	0.20933	0.52798	0.53803
182	Village No. 3, Ban Noen Samre	0.08415	1.65146	3.15922	5.04547	7.74396	6.59621	2.65090	1.89251	0.72980	4.66674	1.87579	0.01464	0.35569	0.66562	1.06300	1.63154	1.43437	0.46119	0.41153	0.12697	1.01480	0.32634
183	Village No. 4, Ban Phayun	0.18003	2.05355	4.30003	6.86823	10.54154	7.85867	5.67112	2.25472	1.56128	5.55991	4.01292	0.02900	0.29311	0.69285	1.10682	1.69877	1.04856	0.91346	0.30084	0.25148	0.74184	0.64637
184	Village No. 6, Ban Noen Kraprok	0.05199	0.78329	1.63414	2.61012	4.00608	3.00315	1.63761	0.86163	0.45084	2.12469	1.15878	0.00495	0.08375	0.16956	0.27082	0.41567	0.32588	0.15601	0.09350	0.04295	0.23056	0.11040
185	Village No. 7, Ban Khao Phudon Huai Mahat	0.04991	0.69453	1.48143	2.36628	3.63182	2.63280	1.57206	0.75537	0.43279	1.86267	1.11240	0.00435	0.06055	0.12917	0.20633	0.31667	0.22952	0.13712	0.06585	0.03775	0.16238	0.09703
186	Village No. 11, Ban Map Fakthong	0.81907	3.95373	10.82168	17.29638	26.54596	15.92545	25.80095	4.56915	7.10309	11.26706	18.25690	0.07100	0.45446	1.29625	2.07115	3.17880	1.42055	2.23665	0.40757	0.61576	1.00502	1.58267
187	Village No. 13, Ban Nong Phakkut	0.14036	3.04945	5.33823	8.52444	13.08370	13.14416	4.42146	3.77117	1.21724	9.29933	3.12865	0.02128	0.32512	0.67569	1.07923	1.65644	1.24888	0.67017	0.35831	0.18450	0.88357	0.47422
188	Village No. 6, Khao Chi Chan Subdistrict Municipality	0.28464	1.65872	4.93942	7.89256	12.11344	6.51787	8.96626	1.87003	2.46844	4.61131	6.34457	0.01086	0.07680	0.20934	0.33448	0.51335	0.24904	0.34209	0.07145	0.09418	0.17619	0.24206
189	Village No. 7, Khao Chi Chan Subdistrict Municipality	0.06302	3.67634	5.62709	8.98363	13.78866	15.98358	1.98527	4.58582	0.54655	11.30819	1.40479	0.00468	0.10867	0.20515	0.32764	0.50287	0.43656	0.14754	0.12525	0.04062	0.30886	0.10440
190	Village No. 6 (Ban Khao Krating Community)	0.06903	1.52545	2.34800	3.74861	5.75360	6.62009	2.17450	1.89936	0.59865	4.68363	1.53869	0.00344	0.10394	0.18733	0.29915	0.45914	0.42577	0.10825	0.12216	0.02980	0.30123	0.07660
191	Village No. 7 (Ban Nong Hin Community)	0.08276	3.65094	5.71935	9.13129	14.01527	15.75190	2.60698	4.51935	0.71771	11.14428	1.84471	0.00670	0.20871	0.37449	0.59803	0.91788	0.85651	0.21120	0.24574	0.05815	0.60597	0.14945

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Table 5.2-68 Forecasted results of VOC emission, operation phase

Area		The concentration value of VOC (micrograms per cubic meter)																				
		24-hour average											1-year average									
		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
192	Village No. 11 (Ban Khong Wanphen Community)	0.45282	1.75081	6.21592	9.93453	15.24725	5.52900	14.26390	1.58632	3.92690	3.91170	10.09322	0.02305	0.14403	0.41549	0.66387	1.01891	0.44591	0.72610	0.12793	0.19990	0.31548	0.51379
193	Village No. 1, Ban Phlu Ta Luang	0.39018	2.58708	7.25956	11.59916	17.80237	8.19706	12.29089	2.35180	3.38372	5.79932	8.69710	0.02435	0.16389	0.45677	0.72981	1.12012	0.52215	0.76711	0.14981	0.21119	0.36942	0.54281
194	Village No. 2, Ban Khalot	0.37036	2.56778	7.06126	11.28210	17.31576	8.26920	11.66649	2.37250	3.21183	5.85036	8.25528	0.02331	0.14544	0.41988	0.67089	1.02967	0.44996	0.73441	0.12910	0.20219	0.31834	0.51968
195	Village No. 3, Ban Khlong Phai	0.24348	1.75065	4.18844	6.69109	10.26956	6.21628	7.66983	1.78350	2.11153	4.39794	5.42722	0.02651	0.15107	0.45567	0.72810	1.11749	0.44932	0.83504	0.12891	0.22989	0.31789	0.59088
196	Village No. 4, Ban Khlong Phlu Ta Luang	0.35100	1.56662	4.19586	6.70709	10.29377	5.63001	11.05656	1.61530	3.04391	3.98316	7.82368	0.02457	0.12869	0.40510	0.64733	0.99351	0.36708	0.77394	0.10532	0.21307	0.25970	0.54764
197	Village No. 5, Ban Khao Bai Si	0.38144	1.60173	4.63128	7.40296	11.36177	5.40059	12.01551	1.54948	3.30791	3.82085	8.50224	0.03371	0.17829	0.55839	0.89228	1.36946	0.51120	1.06172	0.14667	0.29230	0.36167	0.75128
198	Village No. 6, Ban Khao Tabaek	0.25745	1.78531	4.90903	7.84338	12.03802	5.74980	8.10964	1.64966	2.23261	4.06791	5.73843	0.01847	0.13538	0.36333	0.58050	0.89095	0.44428	0.58197	0.12747	0.16022	0.31432	0.41180
199	Village No. 7, Ban Nong Ya Noi	0.16363	1.25312	3.30014	5.27255	8.09233	4.17038	5.15435	1.19652	1.41901	2.95049	3.64725	0.01865	0.13912	0.37053	0.59200	0.90860	0.45912	0.58762	0.13173	0.16177	0.32482	0.41580
200	Village No. 8, Ban Nong Ya	0.09498	2.32053	3.52974	5.63516	8.64921	10.10937	2.99196	2.90046	0.82370	7.15225	2.11713	0.00462	0.14132	0.25428	0.40607	0.62325	0.57929	0.14563	0.16620	0.04009	0.40984	0.10305
201	Ban Nong Krachong Community	0.18350	1.09657	3.23144	5.16336	7.92469	4.09812	5.78016	1.17578	1.59130	2.89937	4.09007	0.01339	0.11521	0.28931	0.46221	0.70940	0.39644	0.42181	0.11374	0.11613	0.28047	0.29847
Standard		-											-									

Notes: Scenario 1 : 2019 aviation situation scenario (1 runway) Scenario 2 : Peak flight forecast scenario for 2028 (2 runways) Scenario 3 : Peak flight forecast scenario for 2038 (2 runways) Scenario 4 : Peak flight forecast scenario for 2048 (2 runways)
Scenario 5 : Worst case scenario (peak hour) for peak flight forecast Scenario 6 : Runway 1 closure scenario (2048) Scenario 7 : Runway 2 closure scenario (2048) Scenario 8 : Runway 1 closure scenario (2028)
Scenario 9 : Runway 2 closure scenario (2028) Scenario 10 : Runway 1 closure scenario (2038) Scenario 11 : Runway 2 closure scenario (2038)

Subject to changes and approval by the Government of Thailand

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