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APPENDIX

METEOROLOGICAL CONSIDERATIONS

1. Climate

The Mae Moh Basin is located in the typical monsoon zone which is mainly influenced by two monsoons, namely the southwest and the northeast monsoon and by cyclonic storm and intertropical fronts. During May to October, the air mass moves from Indian Ocean and brings moisture creating the rainy season over the basin area. The dry season occurs during the mid-October to mid February, when the cool air mass from the polar region moves southward across Siberia and the main land of China to the region creating the cool dry weather and normally no rain occurs. During mid-February to mid-May, the polar air mass is modified by tropical heat and moves in to the area creating a hot and dry weather over the region.

2. Rainfall

In general, the rainfall occured over the Mae Moh Basin is of three types, namely oragraphic, convective and cyclonic. During the rainy season, the oragraphic and cyclonic rains are prevailed while the local convective rains of high intensity occur during the hot season.

In 1983, the average monthly rainfall ranges from 0.01 to 9.59 mm. The minimum rainfall occured during January-March as result of dry-cool air mass moves in the region from the polar. The maximum rainfall usually occurs in May-September due to the southwest monsoon from the Indian Ocean. The average monthly rainfall at Mae Moh Mine Office is shown in Table 27.

Table 27 Monthly average of some meteorological data in Mae Moh Basin, 1983

Month	Temperature (°C)(a)			Relative Humidity (%)(a)			Barometric Pressure (mb)(a)			Rainfall(b) (mm)
	Average Minimum	Average Macimum	Mean	Average Minimum	Average Maximum	Mean	Average Minimum	Average Maximum	Mean	
January	11.6	28.3	19.3	29.0	89.6	61.7	1006.4	1012.6	1009.7	0.01
February	14.8	33.7	24.2	23.4	86.4	53.5	1003.0	1009.5	1006.5	-
March	19.0	36.6	28.2	26.6	82.9	52.1	1000.3	1007.4	1004.1	-
April	23.8	40.0	32.0	25.0	72.5	47.6	997.5	1004.3	1001.2	0.24
May	25.9	36.0	30.4	36.6	77.4	58.0	994.9	1001.3	998.3	9.59
June	24.3	32.5	27.6	44.4	80.7	64.6	996.5	1001.4	999.4	2.07
July	24.7	33.0	28.3	42.0	80.0	63.1	996.0	1000.0	999.0	4.65
August	23.8	31.8	27.1	50.3	80.9	71.5	996.2	1001.0	999.0	3.70
September	23.6	31.0	26.7	52.6	85.3	73.9	999.5	1004.6	1002.5	5.50
October	22.4	30.5	25.9	58.4	97.1	82.8	997.4	1002.4	1000.2	4.97
November	16.2	26.5	20.6	53.1	98.7	82.1	1003.4	1008.4	1006.3	2.38
December	11.7	27.5	18.7	39.4	97.2	75.9	1002.7	1008.6	1006.1	0.16

(a): at Mae Moh Meteorological Main Station
(b): at Mae Moh Mine Office

Table 28 Monthly wind speed and direction at the level of 100 m. at Mae Moh Meteorological Main station in 1983

Month	Wind Speed (m/s)		Prevailing Direction
	Average	Maximum	
May	2.9	12.1	S
June	3.1	12.0	S
July	2.6	10.0	S
August	2.0	24.0	S
September	1.8	18.0	S
October	2.5	14.8	NW
November	1.0	9.0	NNW
December	1.0	6.1	NW

S - South
NW - Northwest
NNW - North-Northwest

3. Temperature

The temperature of the Basin exhibits high variation. In 1983, the average maximum temperature of 40 °C was recorded in April. The average minimum temperature of 11.6 °C occured in January. The mean monthly temperature rather high with a relative small variation from the extreme one (see Table 27).

4. Humidity

The relative humidity of the Basin also exhibits high variation. In 1983, the average maximum relative humidity of 98.7% was recorded in November, the average minimum relative humidity of 23.4% occured in February. The mean monthly relative humidity is shown in Table 27.

5. Wind speed and direction

Wind speed and direction in the level of 100 m. were recorded at Mae Moh Meteorological Main stat n (see Figure 29). Wind roses in August, October and December 1983 were illustrated in Figure 30 to 32. Prevailing wind direction at 100 m. level conformed with the general pattern of seasonal meteorology of Thailand. In August, the wind prevailed in the S, SSW and SSE direction. In December, the prevailing direction were NW and NNW. The period of transition of the wind direction from the SW monsoon to the cold wind from the north was found to be in October. Generally, the monthly average wind speed was reported to be 2.0 m/s, 2.5 m/s and 1.0 m/s in August, October and December, respectively.

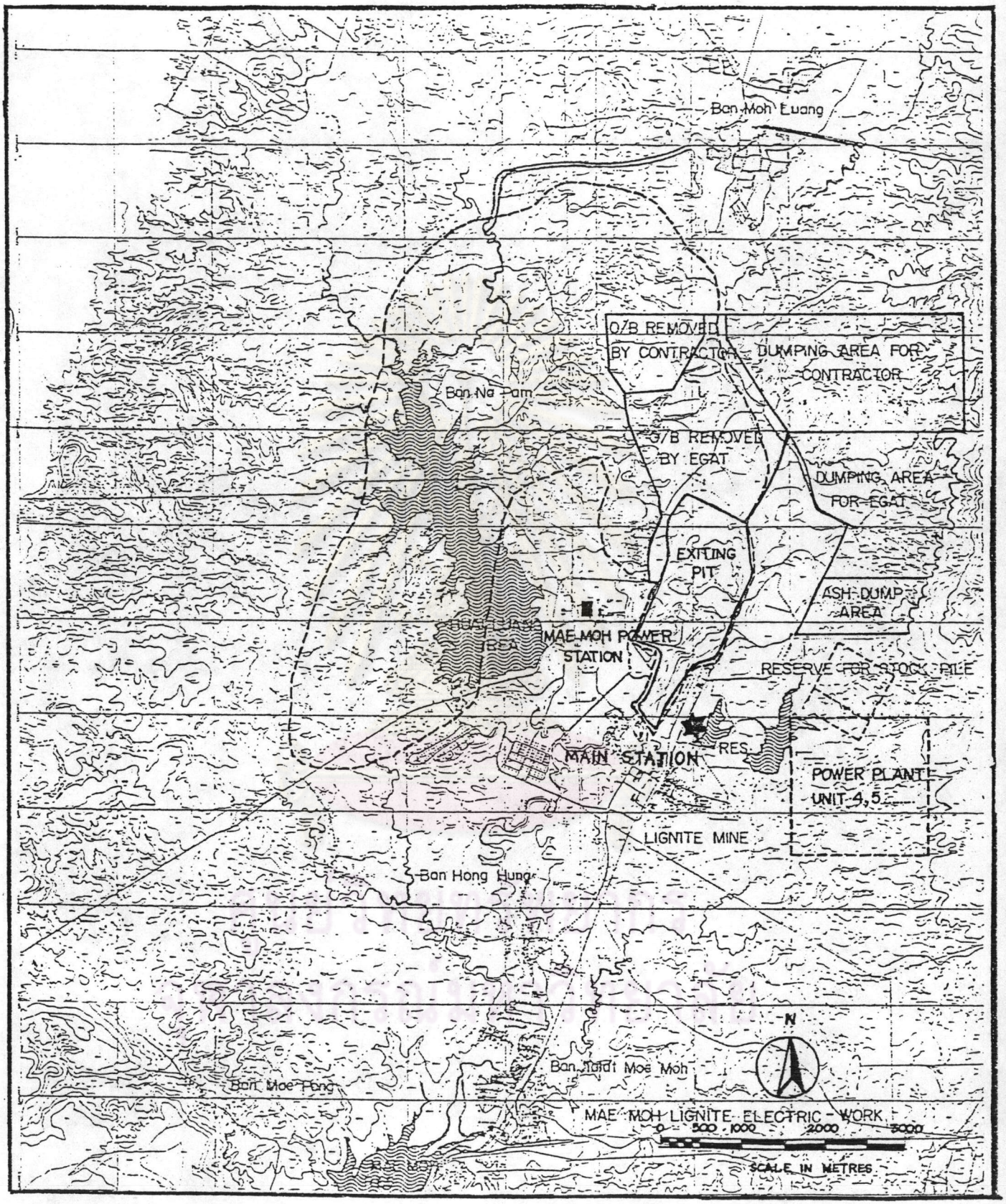

Figure 29 Mae Moh Meteorological Mainstation location

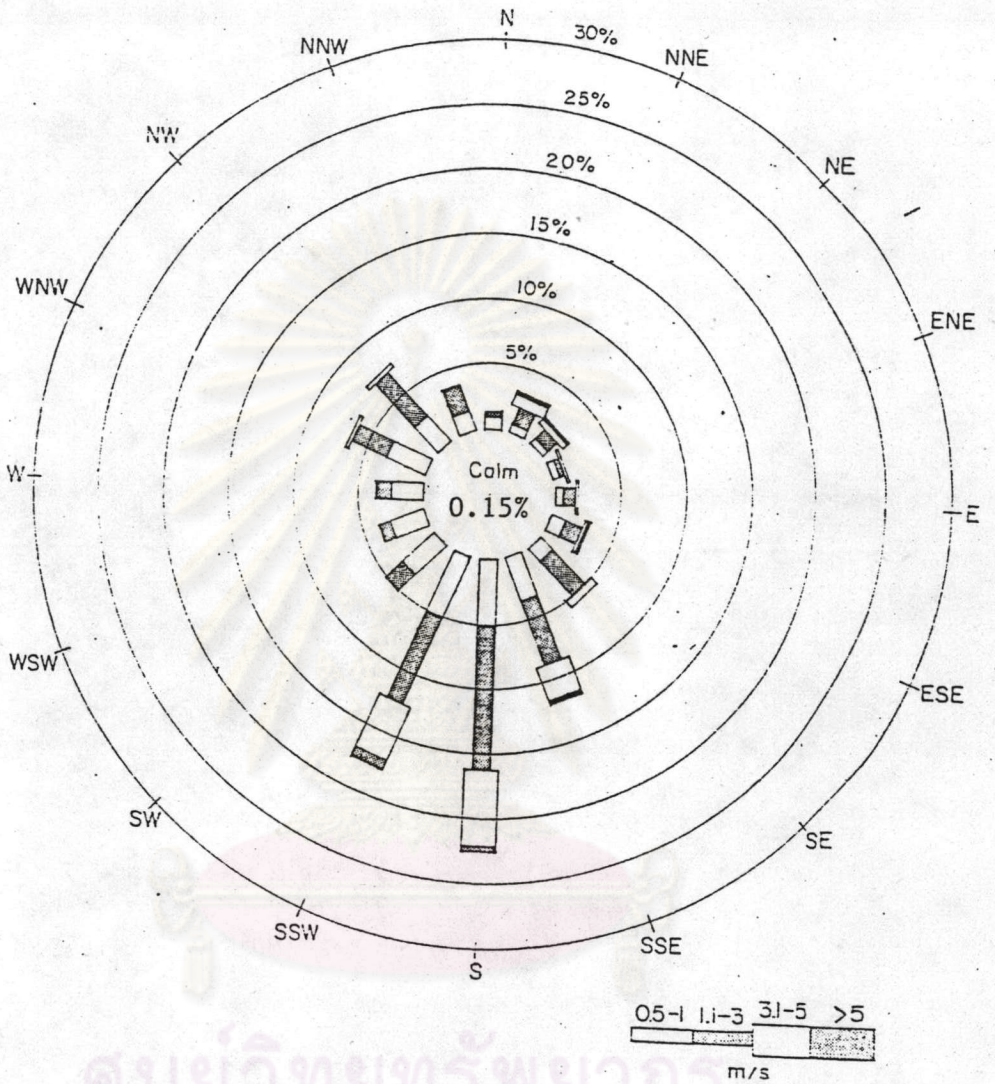

Figure 30 Wind rose at Mae Moh Meteorological Mainstation at the level of 100 m. in August, 1983

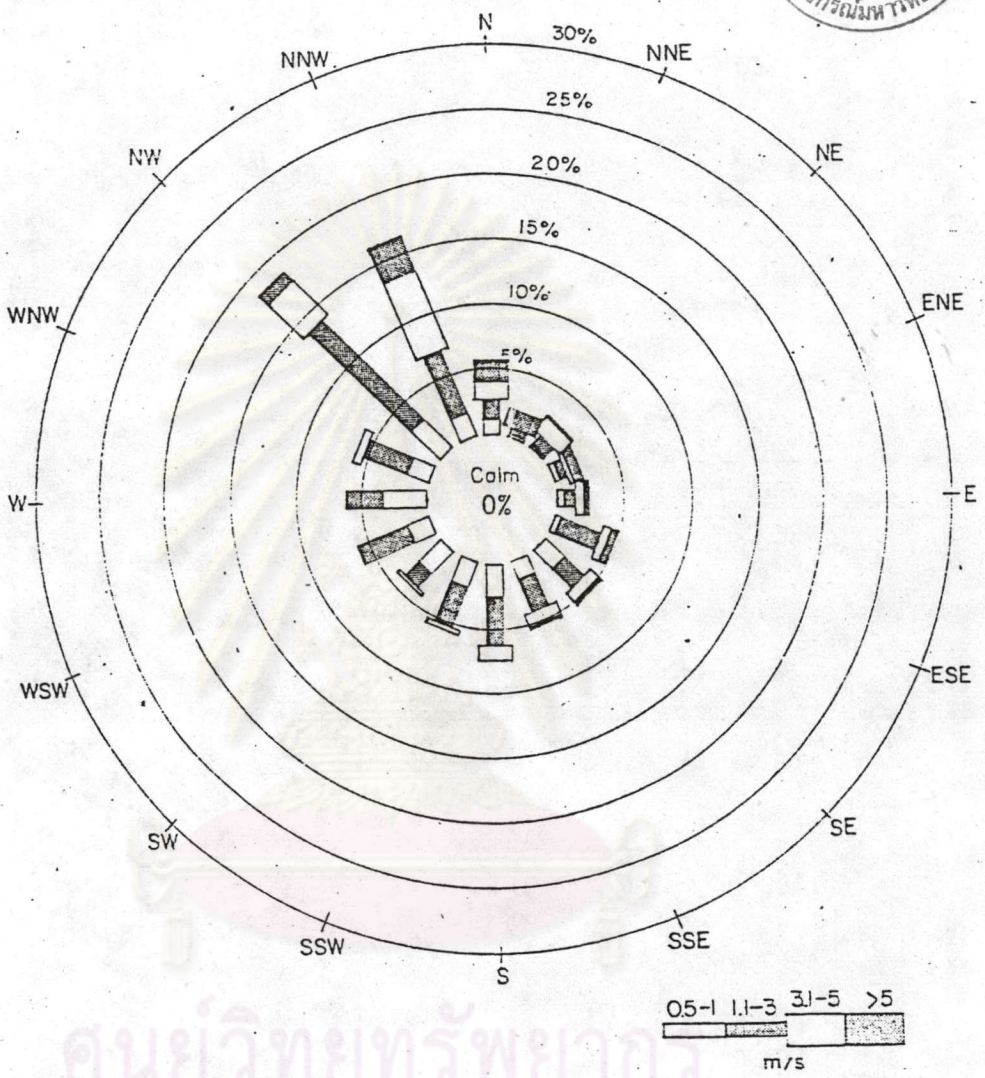

Figure 31 Wind rose at Mae Moh Meteorological Mainstation at the level of 100 m. in October, 1983

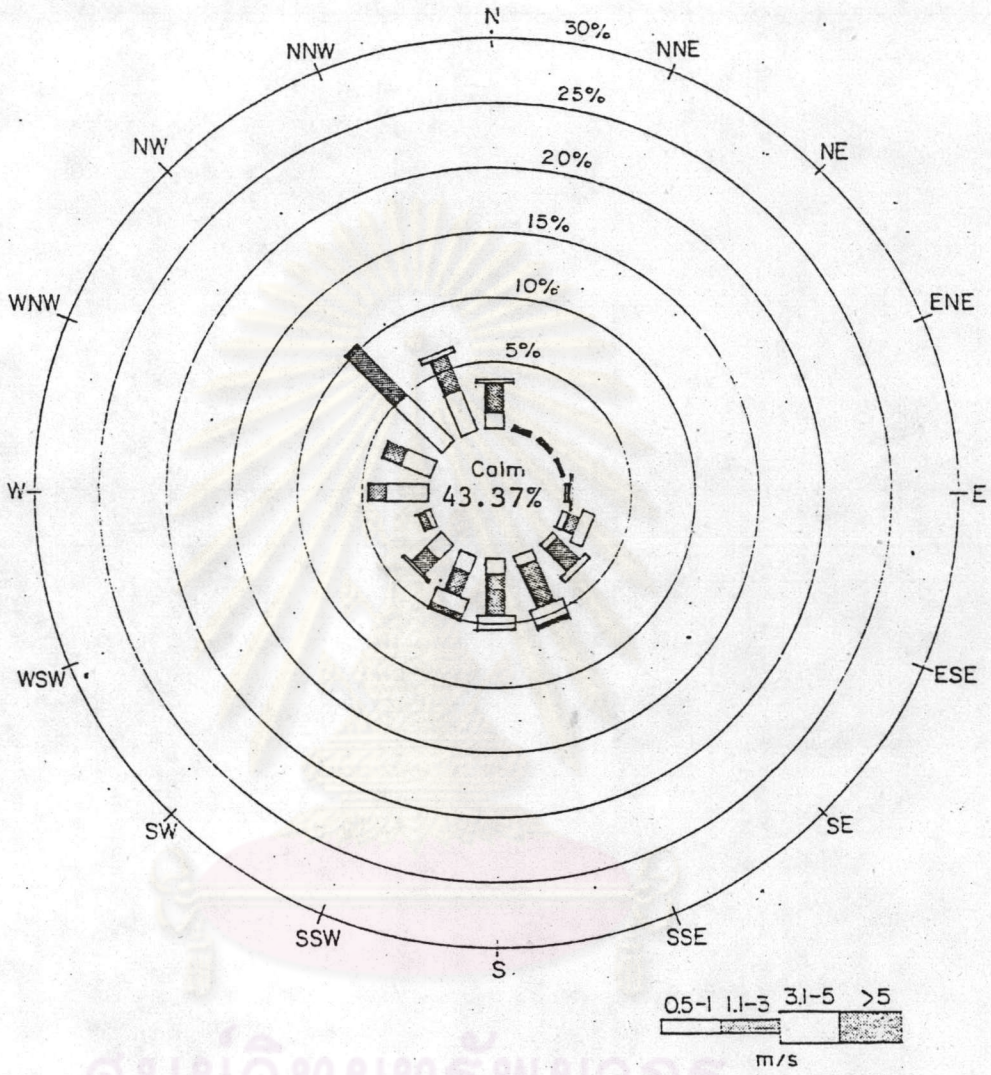

Figure 32 Wind rose at Mae Moh Meteorological Main station at the level of 100 m. in December, 1983

BIOGRAPHY

Mr. Tawachai Laprungsirat was born on August 18, 1958 in Nakornrachasima. He graduated in Bachelor of Science from Faculty of Science, Chulalongkorn University in 1980 and continued his study towards the Master's degree of Science at Chulalongkorn University. At the present, he works as an environmental scientist in the Division of Ecology and Evironment, Public Communications Department, Electricity Generating Authority of Thailand.