

Environmental Monitoring Report
For
Thapyaywa (3) 30 MW Ground Mounted Solar
Power Plant Project
(Operation Phase)
(5th Time)
(18th January 2026 – 18th July 2026)

Proposed by



Natural Solar Power Co., Ltd.

Prepared by



E Guard Environmental Services

July, 2026

Table of Contents

List of Figure.....	ii
List of Table.....	iii
1. Introduction.....	1
2. Environmental Quality Measurement and Results (18 th January 2026 – 18 th July 2026)	6
2.1 Ambient Air Quality (18 th January 2026 – 18 th July 2026).....	6
2.1.1 Methodology for Air Quality	6
2.1.2 Monitoring Location for Air Quality	6
2.1.3 Measurement Results and Comparison for Air Quality.....	7
2.2 Ambient Noise (18 th January 2026 – 18 th July 2026).....	12
2.2.1 Methodology for Noise	12
2.2.2 Monitoring Location for Noise	12
2.2.3 Measurement Results and Comparison for Noise.....	14
2.3 Weather Condition (18 th January 2026 – 18 th July 2026)	18
2.3.1 Wind Speed and Direction	18
2.3.2 Significant natural or manmade disaster (18 th January 2026 – 18 th July 2026)...	19
2.4 Water Quality (18 th January 2026 – 18 th July 2026)	19
2.4.1 Methodology for Water Quality.....	19
2.4.2 Monitoring and Sampling Locations	21
2.4.3 Water quality.....	22
3. ENVIRONMENTAL MONITORING PLAN (18 th January 2026 – 18 th July 2026)	25
3.1 Monitoring Records for Safety Plan (18 th January 2026 – 18 th July 2026).....	25
4. Records for CSR activities (18 th January 2026 – 18 th July 2026).....	30
5. Records for GRM (18 th January 2026 – 18 th July 2026).....	33
6. Records for Waste Disposal (18 th January 2026 – 18 th July 2026).....	34
Appendix 1 (Water Results) (18 th January 2026 – 18 th July 2026).....	37

List of Figure

Figure 2. 1 Air Quality Monitoring Locations of Thapyaywa 3 Solar Power Project.....	7
Figure 2. 2 Air Quality Measuring during Operation Period.....	7
Figure 2. 3 PM Monitoring Results at Thapyaywa 3 Solar Power Project.....	8
Figure 2. 4 Fluctuation of Air Pollutants during Dial Cycle at Thapyaywa 3 Solar Power Project.....	8
Figure 2. 5 Noise Quality Monitoring Locations of Thapyaywa 3 Solar Power Project.....	13
Figure 2. 6 Noise Quality Measuring during Operation Period.....	13
Figure 2. 7 Noise Level at Project Site	15
Figure 2. 8 Noise Level at Staff Housing	16
Figure 2. 9 Wind Speed and Wind Direction (Blowing From) at Project Site	18
Figure 2. 10 Wind Class Frequency Distribution at Project Site.....	18
Figure 2. 11 Equipment for Water Sampling.....	20
Figure 2. 12 Water Quality Sampling Locations of Thapyaywa 3 Solar Power Project	21
Figure 2. 13 Water Quality Measuring during Operation Period	22

List of Table

Table 1. 1 Monitoring Study Team and their Responsibilities	1
Table 2. 1 Ambient Air Quality Measurement	6
Table 2. 2 Equipment used to measure ambient air and noise measurement	6
Table 2. 3 Locations of Environmental Quality sampling points	7
Table 2. 4 Air Monitoring Results (Project Site).....	10
Table 2. 5 Air Emission Levels (Standard).....	11
Table 2. 6 Observed Ambient Air Quality Results from Selected Points.....	11
Table 2. 7 Noise level monitoring.....	12
Table 2. 8 Equipment used to measure ambient noise measurement	12
Table 2. 9 Locations of Environmental Quality sampling points	13
Table 2. 10 Observed Values of Noise Level Measurement at Project Site	14
Table 2. 11 Observed Values of Noise Level Measurement at Staff Housing	15
Table 2. 12 National Environmental Quality (Emission) Guidelines Values for Noise Level	17
Table 2. 13 Observed Ambient Noise Level Results from Selected Points.....	17
Table 2. 14 Environmental Quality Parameters for Water quality	19
Table 2. 15 Locations of Environmental Quality sampling points	21
Table 2. 16 Ground Water Quality of Thapyaywa 3 Solar Power Project	23
Table 2. 17 Surface Water Quality of Thapyaywa 3 Solar Power Project	23
Table 2. 18 Waste Water Quality of Thapyaywa 3 Solar Power Project.....	24



စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်ပြုမှု

မန္တလေးတိုင်းဒေသကြီး၊ မိတ္ထီလာခရိုင်၊ သာစည်မြို့နယ်၊ ဝက်တိုးကျေးရွာအုပ်စု နှင့် ဟံဇားကျေးရွာအုပ်စု၊ ကွင်းအမှတ် (၁၆၈၅၊ ၁၆၈၆၊ ၁၆၈၇)တွင် Natural Solar Power Co., Ltd. မှဆောင်ရွက်လျက်ရှိသည့် ၃၀ မဂ္ဂါဝပ် နေရောင်ခြည်စွမ်းအင်သုံး လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ရေးစီမံကိန်းနှင့်ပတ်သက်၍ လုပ်ငန်း လည်ပတ်သည့်ကာလနှင့် လုပ်ငန်းပိတ်သိမ်းပြီးကာလအထိ စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်များကို ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်တွင်ကတိကဝတ်ပြုဖော်ပြချက်များနှင့်အညီ အကောင်အထည် ဖော်ဆောင်ရွက်မည် ဖြစ်ပါကြောင်း နှင့် အတည်ပြုပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်တွင် ဖော်ပြထားသည့် အစီအစဉ်ခွဲများအား ဆက်လက်လိုက်နာ အကောင်အထည်ဖော်မည်ဖြစ်ပါကြောင်း ကတိကဝတ်ပြု ဖော်ပြအပ်ပါသည်။

လေးစားမှုဖြင့်



(ဇော်ဝင်း)

Managing Director

Natural Solar Power Co., Ltd.

ပတ်ဝန်းကျင်ဆိုင်ရာ အကြံပေးအဖွဲ့၏ ကတိကဝတ်ပြုမှု

မန္တလေးတိုင်းဒေသကြီး၊ မိတ္ထီလာခရိုင်၊ သာစည်မြို့နယ်၊ ဝက်တိုးကျေးရွာအုပ်စု နှင့် ဟံစားကျေးရွာအုပ်စု၊ ကွင်းအမှတ် (၁၆၈၅၊ ၁၆၈၆၊ ၁၆၈၇) တွင် Natural Solar Power Co., Ltd. က ဆောင်ရွက်လျက်ရှိသည့် ၃၀ မဂ္ဂါဝပ် နေရောင်ခြည် စွမ်းအင်သုံး လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ရေးလုပ်ငန်းစီမံကိန်း၏ စတုတ္ထအကြိမ် စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာအား တာဝန်ယူ ရေးသားပြုစုသည့် ပတ်ဝန်းကျင်ဆိုင်ရာ တွဲဖက်အကြံပေး ပုဂ္ဂိုလ်မှ အောက်ပါ တို့ကို ကတိပြုအပ်ပါသည်-

- (က) EMR မှာ အဆိုပြုစီမံကိန်း၏ အတည်ပြု EMP တွင်ဖော်ပြထားသည့် စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ် များ အား တိကျစွာလိုက်နာ၍ရေးသားပြုစုထားပါကြောင်း၊
- (ခ) လိုအပ်သည့်ကိန်းဂဏန်းအချက်အလက်များအား ၂၀၂၆ ခုနှစ် မေလအတွင်း စီမံကိန်း တည်နေရာသို့ ကွင်းဆင်း၍ တိုင်းတာမှတ်တမ်းယူခြင်း၊ နမူနာများရယူ၍ ဓာတ်ခွဲခန်းသို့ ပေးပို့စမ်းသပ်ခြင်း နည်းလမ်းများ ဖြင့် ကောက်ယူထားပါကြောင်း၊
- (ဂ) ကိန်းဂဏန်းအချက်အလက်ကောက်ယူခြင်းအား သင့်တော်သည့်ကိရိယာနှင့် မှန်ကန်သည့် နည်းလမ်း များ အသုံးပြု၍ ဆောင်ရွက်ထားပါကြောင်း၊
- (ဃ) EMR အား ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အပိုဒ် (၁၀၉) တွင် ပြဌာန်းထား ချက်များနှင့်အညီ လိုက်နာဆောင်ရွက်ပြီးလေ့လာပြုစု ထားပါကြောင်း၊
- (င) EMR အတွက်လေ့လာမှုနှင့် အစီရင်ခံစာရေးသားပြုစုမှုအား တတိယအဖွဲ့အစည်း၏ ကျင့်ဝတ်အပေါ် အ ခြေတည်၍ ကောင်းမွန်မှန်ကန်စွာရေးသားပြုစုထားပါကြောင်း။



အောင်မိုးဦး

ပတ်ဝန်းကျင်ဆိုင်ရာ တွဲဖက်အကြံပေးပုဂ္ဂိုလ်

(EIA/AC 010/2023)



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1. Introduction

This environmental monitoring report is prepared for Thapyaywa (3) 30 MW ground mounted solar power plant project connected to Thapyaywa Substation, proposed by Natural Solar Power Co., Ltd., which is formed by Gold Energy Co., Ltd. The project proponent won tender from the Ministry of Electricity and obtained permit for construction and electricity generation from solar energy of the proposed project.

This project is located at Wet Toe Village Tract and Hanza Village Tract, Thazi Township, Meiktila District, Mandalay Region, Myanmar. Its coordinate points are 20° 59' 19.36" N, 96° 0' 57.37" E and the average altitude of the site is 158 m. The total capacity of capacity of AC side of the proposed project is 33 MW and DC side is 40.887 MWp, it will consist of 5 sets of 6.6 MW PV sub-arrays in the project. This project is developed Natural Solar Power Co., Ltd., which is formed by the Gold Energy Co., Ltd (100% full investment). After construction period, proposed project will generate electricity from solar energy and distribute to the Thapyaywa Substation via 33 kV overhead transmission line and proposed operation period is 20 years. As the proposed project is a Build, Own and Operate (BOO) basis project, project proponent will extend operation period at relevant authorities and continue operation activities after 20 years.

Environmental quality monitoring team included U Aung Myint Myat, U Aung Moe Oo, U Ye Chit Zaw and U Wanna Zaw. The environmental quality monitoring report includes air, water and noise. Air quality monitoring was carried out in one location as source (Project Site) and also water quality test was carried out in three places as surface water (SW- Hanza Inn), ground water (GW- project site) and waste water (WW- Outlet of waste water cannel from the project site). Noise are also measured in two locations as source (Project Site) and receptor (staff housing). Most of the environmental monitoring results (air, water and noise) are within the guidelines.

Table 1. 1 Monitoring Study Team and their Responsibilities

Sr.	Name	Position	License No.	Expertise
1	U Aung Myint Myat	Team Member	EIA-C 008/2023	1. Ecology and Biodiversity, 2. Noise and Vibration
2	U Aung Moe Oo	Deputy Team Leader	EIA-AC 010/2023	1. Air Pollution Monitoring, 2. Solid Waste and Hazardous Waste Management
3	U Aung Myint Myat	Supporting Team Member	-	1. Air Pollution Prevention and Control 2. Water Pollution Prevention, Control, Monitoring and Prediction of Impacts

Sr.	Name	Position	License No.	Expertise
4	U Aung Moe Oo	Supporting Team Member	-	1. Air Pollution Prevention and Control 2. Water Pollution Prevention, Control, Monitoring and Prediction of Impacts
5	U Ye Chit Zaw	Supporting Team Member	-	1. Noise and Vibration
6	U Wanna Zaw	Supporting Team Member	-	1. Environmental Quality Surveyor

Environmental Monitoring Plan for EMP Approved Report

C.	Operation Phase					
1.	Air quality	PM ₁₀ , PM _{2.5} , CO, CO ₂ , SO ₂ , NO ₂ , Temperature	Twice a year	In front of power station 20°59'1.72"N, 96°01'0.48"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.

185

Proposed by Natural Solar Power Co., Ltd.

EMP Report for Thapyaywa (3) 30 MW Ground Mounted Solar Power Plant Project; Connected to Thapyaywa Substation						
No.	Environmental Concerns	Parameters	Frequency	Location	Estimated Cost	Responsible Party
2.	Groundwater quality	pH, Color (true), Turbidity, Conductivity, Total Alkalinity, Iron, Chloride, Manganese, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Total Coliform Bacteria, Total Nitrogen, Total Phosphorus, Total Suspended Solids	Twice a year	An outlet from a tube well within the project site 20°59'9.99"N, 96°01'3.34"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.
3.	Surface water quality	pH, EC, TDS, Salinity, DO, Turbidity, Oxidation Reduction Potential (ORP), Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Nitrogen, Total Phosphorus, Potassium, Oil and Grease, Total Suspended Solid (TSS)	Twice a year	Hanza Inn 20°59'13.99"N, 96°01'43.72"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.
4.	Discharged water quality	pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Total Coliform Bacteria, Total Nitrogen, Total Phosphorus, Total Suspended Solids	Twice a year	At final outlet of drainage system 20°58'49.08"N, 96°01'35.41"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.

186

Proposed by Natural Solar Power Co., Ltd.

EMP Report for Thapyaywa (3) 30 MW Ground Mounted Solar Power Plant Project;
Connected to Thapyaywa Substation

No.	Environmental Concerns	Parameters	Frequency	Location	Estimated Cost	Responsible Party
5.	Noise level	Equivalent Noise Level dB (A)	Twice a year	In front of power station 20°59'1.72"N, 96°01'0.48"E and staff quarter 20°59'27.74"N, 96°01'26.50"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.
6.	Waste Quantity	Amount of domestic solid waste and hazardous waste disposal	Quarterly	All operation area 20°59'1.27"N, 96°01'2.25"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.
7.	Environmental auditing	Assess the compliances with this EMP as well as laws, rules, policies and regulations	Once a year	At the project office 20°59'1.27"N, 96°01'2.25"E	Already included in cost estimation for EMP	Natural Solar Power Co., Ltd.

Note: Coordinate Points for monitoring locations may be changed as the project is currently under construction phase.

ECC Letter of Thapyaywa 3 Solar Power Project



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာလိုက်နာဆောင်ရွက်မှု သက်သေခံလက်မှတ်
(Environmental Compliance Certificate - ECC)

သက်သေခံလက်မှတ်အမှတ်။ ECC (၇၂၀) ရက်စွဲ။ ၂၀၂၄ ခုနှစ်၊ ဖေဖော်ဝါရီလ ၁၃ ရက်
၁။ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ပတ်ဝန်းကျင်ထိန်းသိမ်း
ရေးဥပဒေ (ပြည်ထောင်စုလွှတ်တော်ဥပဒေအမှတ် ၉/၂၀၁၂) နှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း
ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (အမိန့်ကြော်ငြာစာအမှတ် ၆၁၆/၂၀၁၅) တို့အရ နောက်ဆက်တွဲ(က)တွင်
ဖော်ပြထားသော အဆိုပြုစီမံကိန်းအား နောက်ဆက်တွဲ(ခ)ပါ စည်းကမ်းချက်များကို လိုက်နာ
ဆောင်ရွက်စေလျက် ဤပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာဆောင်ရွက်မှုသက်သေခံ
လက်မှတ် (Environmental Compliance Certificate - ECC) ကို ထုတ်ပေးလိုက်သည်-

- | | |
|-------------------------------------|--|
| (က) စီမံကိန်းအဆိုပြုသူ | - ဦးဇော်ဝင်း၊ အုပ်ချုပ်မှုဒါရိုက်တာ
Natural Solar Power Co., Ltd. |
| (ခ) ဆက်သွယ်ရန် လိပ်စာ | - အခန်း (၅၀၁)၊ (၅) လွှာ၊ လှည်းတန်းစင်တာ၊
ပြည်လမ်းနှင့် လှည်းတန်းလမ်းထောင့်၊ ကမာရွတ်
မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး |
| (ဂ) စီမံကိန်းအမျိုးအစား | - ၃၀ မဂ္ဂါဝပ် နေရောင်ခြည်စွမ်းအင်သုံး လျှပ်စစ်
ဓာတ်အားထုတ်လုပ်ရေးလုပ်ငန်းစီမံကိန်း |
| (ဃ) စီမံကိန်းကာလ | - အခွင့်အမိန့်ရအဖွဲ့အစည်းက ခွင့်ပြုသည့်ကာလ |
| (င) စီမံကိန်း၏ အရွယ်အစား | - ၃၀ မဂ္ဂါဝပ် နေရောင်ခြည်စွမ်းအင်သုံး လျှပ်စစ်
ဓာတ်အားထုတ်လုပ်ရေးလုပ်ငန်းစီမံကိန်း |
| (စ) စီမံကိန်းတည်နေရာ | - ဝက်တိုးကျေးရွာအုပ်စုနှင့် ဟံဇားကျေးရွာအုပ်စု၊
သာစည်မြို့နယ်၊ မိတ္ထီလာခရိုင်၊ မန္တလေးတိုင်း
ဒေသကြီး |
| (ဆ) ECC သက်တမ်း | - (၅)နှစ်
စတင်ထုတ်ပေးရက် - ၁၈-၁-၂၀၂၄
သက်တမ်းကုန်ဆုံးရက် - ၁၇-၁-၂၀၂၉ |
| (ဇ) အတည်ပြုအစီရင်ခံစာ
အမျိုးအစား | - ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) |
| (ဈ) အတည်ပြုအစီရင်ခံစာ | - လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ရေးလုပ်ငန်း၏
၁၃-၁၁-၂၀၂၃ ရက်စွဲပါ စာအမှတ်၊ ၇၃၁၈/
လစထလ/ပစရအ/စ-၅၆/၂၀၂၃ |

စည်းကမ်းချက်များသတ်မှတ်ခြင်း

၂။ အောက်ဖော်ပြပါ ရည်ရွယ်ချက်များ ရရှိနိုင်ရေးအတွက် ဤသက်သေခံလက်မှတ်၏ နောက်ဆက်တွဲပါ စည်းကမ်းချက်များကို လိုက်နာဆောင်ရွက်ရန် သတ်မှတ်ထားခြင်းဖြစ်ပါသည်။

- (က) ပတ်ဝန်းကျင်နှင့်လူမှုဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို ကြိုတင်ကာကွယ်ရေး၊ အနိမ့်ဆုံးဖြစ်စေရေးနှင့် ထိခိုက်မှုများကို ပြန်လည်ကုစားရေး ဆောင်ရွက်ပေးရန်၊
- (ခ) စီမံကိန်းအဆိုပြုသူ၏ စီမံကိန်းဆိုင်ရာ ကတိကဝတ်များနှင့် လိုက်နာထမ်းဆောင်ရမည့် တာဝန်များကို သတ်မှတ်ရန်၊
- (ဂ) လက်ခံနိုင်သော ပတ်ဝန်းကျင်အရည်အသွေး ဖြစ်စေရေးအတွက် စံချိန်စံညွှန်းများနှင့် အရည်အသွေးတိုင်းတာရေးနည်းလမ်းများ သတ်မှတ်ရန်၊
- (ဃ) စောင့်ကြပ်ကြည့်ရှုခြင်းနှင့် အစီရင်ခံခြင်းတို့ကို ပုံမှန်ဆောင်ရွက်စေရန်၊
- (င) စီမံကိန်းတွင် စဉ်ဆက်မပြတ် ဆောင်ရွက်သွားရမည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲရေး အစီအမံတစ်ရပ်ကို ရေးဆွဲဆောင်ရွက်ရန်။

၃။ အထက်ဖော်ပြပါ စည်းကမ်းချက်များအပြင် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ အခါအား လျော်စွာထုတ်ပြန်သော အမိန့်၊ ညွှန်ကြားချက်များကို လိုက်နာဆောင်ရွက်ရန်။

၄။ ဤပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာဆောင်ရွက်မှုသက်သေခံလက်မှတ်သည် လုပ်ငန်းဆောင်ရွက်ရန် ခွင့်ပြုမိန့်မဟုတ်ကြောင်း၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ စည်းကမ်းချက်များအား လိုက်နာဆောင်ရွက်ရန်ဖြစ်ကြောင်း၊ မြေအသုံးပြုခွင့်နှင့် လုပ်ငန်းဆောင်ရွက်ခွင့်ပြုမိန့်မှာ သက်ဆိုင်ရာဝန်ကြီးဌာန သို့မဟုတ် အခွင့်အမိန့်ရ အဖွဲ့အစည်းများ၏ မူဝါဒ၊ ဥပဒေ၊ နည်းဥပဒေများ၊ လုပ်ထုံးလုပ်နည်း၊ လမ်းညွှန်ချက်များနှင့်အညီ လိုက်နာဆောင်ရွက်ရန်။

၅။ သက်ဆိုင်ရာခွင့်ပြုမိန့်ထုတ်ပေးသည့် ဌာနမှ ခွင့်ပြုမိန့်ပယ်ဖျက်လျှင်သော်လည်းကောင်း၊ သက်တမ်းတိုးပေးခြင်း မရှိလျှင်သော်လည်းကောင်း၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာဆောင်ရွက်မှုသက်သေခံလက်မှတ်သက်တမ်းရှိစေကာမူ ဤသက်သေခံလက်မှတ်၏ သက်တမ်းသည် လည်း အလိုအလျောက်ကုန်ဆုံးသည်ဟု မှတ်ယူရမည်။



၁၁/၁၂/၂၀၁၇

ပြည်ထောင်စုဝန်ကြီး (ကိုယ်စား)

(လှမောင်သိန်း၊ အမြဲတမ်းအတွင်းဝန်)

သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန

2. Environmental Quality Measurement and Results (18th January 2026 – 18th July 2026)

Baseline environmental parameters and sampling locations were defined according to the objectives for environmental impact assessment, and monitoring purposes. Locations for sampling and analysis of water quality, ambient air quality and noise level of the project site were identified by e Guard Environmental Services Co., Ltd.

2.1 Ambient Air Quality (18th January 2026 – 18th July 2026)

2.1.1 Methodology for Air Quality

The emissions of dust particles and gases were measured for 24hrs continuously at the selected sites using the Micro air quality monitoring system (YF-IAQM-V1). The results were compared with National Environmental Quality (Emission) Guidelines NEQEG, American Conference of Governmental Industrial Hygienists (ACGIH) and National Ambient Air Quality Standards (NAAQS). EPAS provides direct readings in real time with data-logging capabilities. Air quality is composed of dust and gas emissions of the ambient air.

Table 2. 1 Ambient Air Quality Measurement

Ambient Air Quality (1 locations)	
Gas Emission	CO, CO ₂ , SO ₂ , NO ₂
Dust Emission	PM ₁₀ , PM _{2.5}

Table 2. 2 Equipment used to measure ambient air measurement

Micro air quality monitoring system (YF-IAQM-V1) CO, CO₂, NO₂, O₃, SO₂, VOC, H₂S, PM₁₀, PM_{2.5}, TSP, Temperature, Humidity, Wind Speed, Wind Direction, Noise	
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2.1.2 Monitoring Location for Air Quality

Sampling locations were confirmed by environmental specialist on site before doing the sampling. Air quality was monitored at the selected one location (Thapyaywa 3 solar power project site (source) that can get results of the existing ambient air quality.

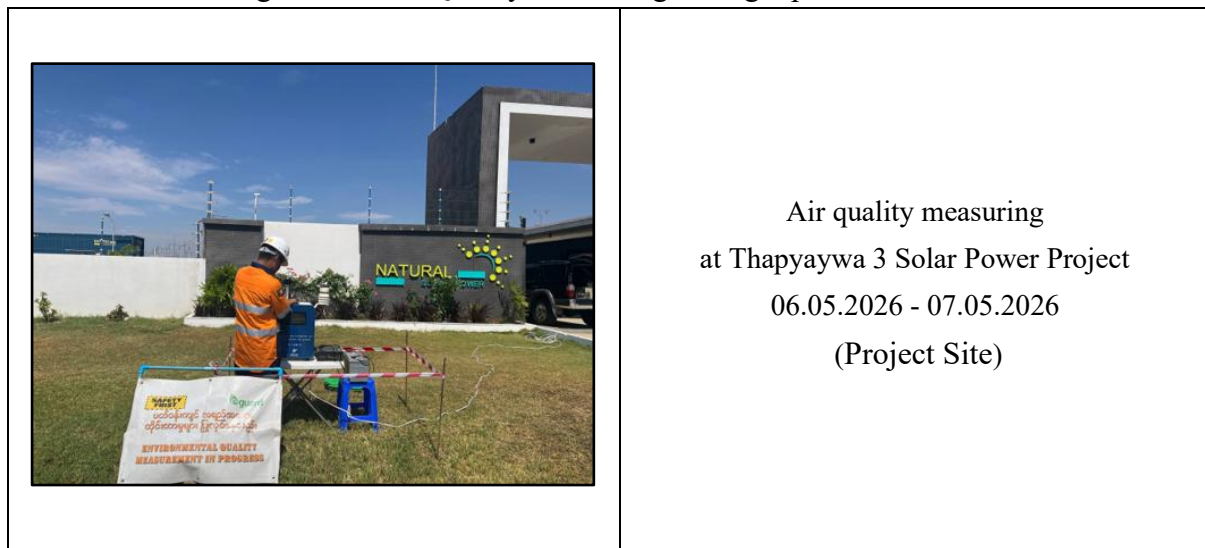


Figure 2. 1 Air Quality Monitoring Locations of Thapyaywa 3 Solar Power Project

Table 2. 3 Locations of Environmental Quality sampling points

Locations No.	Points	Coordinate	Locations
Ambient Air Quality Monitoring Location			
1.	AQ1	Lat - 20°59'1.72"N, Long - 96°01'0.48"E	Project Site

Figure 2. 2 Air Quality Measuring during Operation Period



2.1.3 Measurement Results and Comparison for Air Quality

The air quality monitoring was done at selected locations from 6th to 7th May 2026. During this survey, these parameters were measured with adequate devices named Micro air quality monitoring system (YF-IAQM-V1) viz; Particulate Matters (PM₁₀ and PM_{2.5}) and gases CO₂,

CO, SO₂ and NO₂ via 24-hour basis. The results and guidelines of all emission pollutants are shown in table.

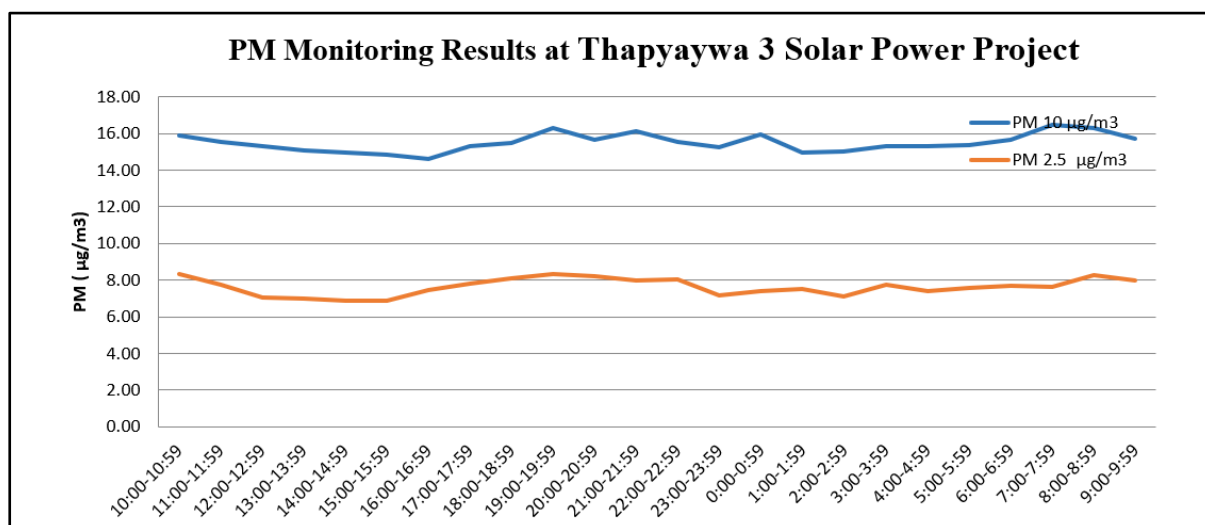


Figure 2. 3 PM Monitoring Results at Thapyaywa 3 Solar Power Project

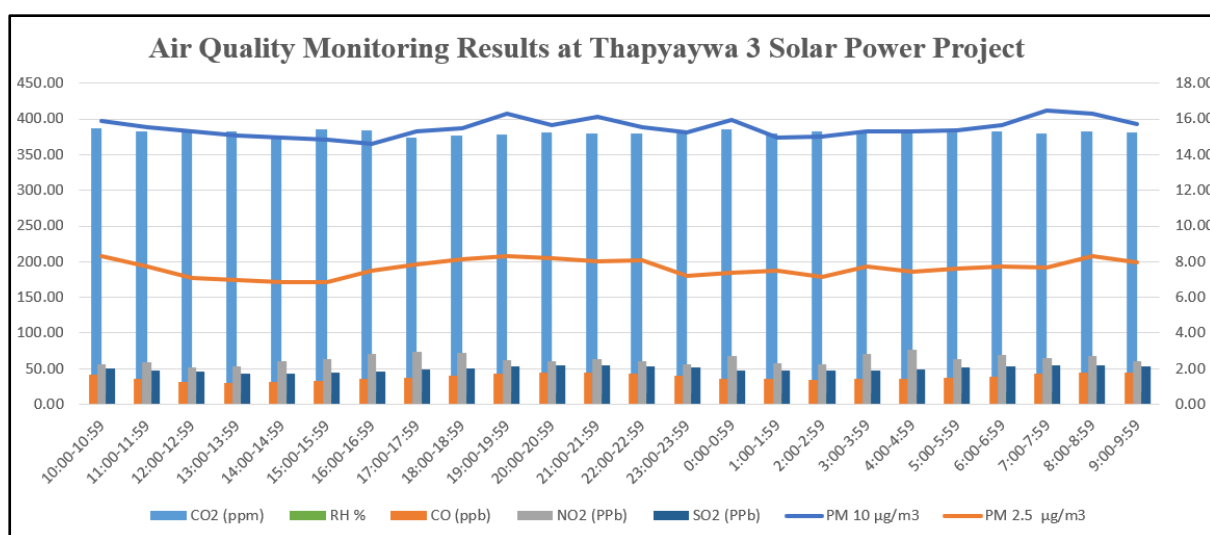


Figure 2. 4 Fluctuation of Air Pollutants during Dial Cycle at Thapyaywa 3 Solar Power Project

Particulate matters (PM₁₀ and PM_{2.5}) results are within guideline values as shown in table. Atmospheric particulate matters such as PM₁₀ and PM_{2.5} have their ability to reach the deepest part of lungs and so affect respiratory process. In this air quality survey of the project site, the surveyed results of these particulate matters gathered from EPAS. The results with one-hour intervals are shown in the following table.

Sulfur Dioxide (SO₂) is generated from combustion of fuels such as oil and coal, and as by-product from some chemical production or wastewater treatment processes. On-road and off-road vehicles are also emission sources of SO₂. SO₂ irritates the respiratory tract, injures lung tissues and reduces visibility and level of sunlight. The emission can be controlled by implementation of manufacturer recommended engine maintenance programs, good driving practices, installing and maintaining emissions control devices, and implementing a regular

vehicle maintenance and repair program.

Nitrogen Oxides (NO_x) in the ambient air consist of nitric oxide (NO), nitrogen dioxide (NO₂) and nitrous oxide (N₂O). NO₂ is formed by chemical reaction of NO and ozone. The main sources of NO₂ are combustion of fuel and on-road and off-road vehicles. NO₂ decreases lung function and resistance to infection. The gas emission can be monitored by combustion modification, flue gas recirculation, water/ steam injection and the same measures for SO₂ reduction.

Likewise, **Carbon Monoxide (CO) and Carbon dioxide (CO₂)** have the same emission sources and mitigation measures for SO₂ and NO₂. They are poisonous gases and cause damage to the respiratory organ. Guidelines 2013 adopted threshold limit values of CO₂ are 5,000 ppm for 8-hour, time-weighted average. Thus, it can be concluded that the existing CO₂ level is acceptable for human health.

Detail results and variation patterns with one-hour interval of pollutants are shown in tables and figures below. Results of average, peak and minimum of a day are calculated in the table.

Table 2. 4 Air Monitoring Results (Project Site)

Date	Time		CO ₂ (ppm)	CO (ppb)	NO ₂ (ppb)	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	RH%	SO ₂ (ppb)
06.05.2026	10:00-10:59	Average	386.74	1.65	2.26	15.87	8.31	16.10	2.03
06.05.2026	11:00-11:59	Average	383.07	1.42	2.36	15.52	7.73	16.22	1.92
06.05.2026	12:00-12:59	Average	383.74	1.23	2.08	15.30	7.08	15.89	1.82
06.05.2026	13:00-13:59	Average	382.74	1.19	2.13	15.10	6.97	15.90	1.70
06.05.2026	14:00-14:59	Average	376.45	1.25	2.42	14.96	6.87	15.95	1.71
06.05.2026	15:00-15:59	Average	385.81	1.34	2.53	14.82	6.88	16.04	1.78
06.05.2026	16:00-16:59	Average	384.86	1.42	2.84	14.61	7.47	16.16	1.87
06.05.2026	17:00-17:59	Average	374.04	1.49	2.93	15.29	7.82	16.20	1.95
06.05.2026	18:00-18:59	Average	376.79	1.59	2.88	15.50	8.13	16.07	2.03
06.05.2026	19:00-19:59	Average	378.17	1.71	2.51	16.31	8.31	16.16	2.14
06.05.2026	20:00-20:59	Average	381.23	1.80	2.44	15.66	8.19	15.83	2.21
06.05.2026	21:00-21:59	Average	379.54	1.79	2.52	16.10	8.00	15.99	2.21
06.05.2026	22:00-22:59	Average	379.30	1.72	2.43	15.57	8.05	15.90	2.15
06.05.2026	23:00-23:59	Average	383.11	1.61	2.24	15.27	7.19	15.89	2.05
07.05.2026	0:00-0:59	Average	385.49	1.41	2.74	15.95	7.40	16.04	1.91
07.05.2026	1:00-1:59	Average	380.19	1.41	2.30	14.94	7.51	16.04	1.89
07.05.2026	2:00-2:59	Average	382.72	1.40	2.25	15.04	7.13	15.97	1.90
07.05.2026	3:00-3:59	Average	382.56	1.42	2.81	15.33	7.74	16.12	1.92
07.05.2026	4:00-4:59	Average	381.20	1.43	3.06	15.31	7.41	16.02	1.95
07.05.2026	5:00-5:59	Average	380.57	1.50	2.52	15.34	7.59	16.01	2.05
07.05.2026	6:00-6:59	Average	382.68	1.58	2.78	15.65	7.71	16.18	2.14
07.05.2026	7:00-7:59	Average	379.32	1.71	2.62	16.49	7.65	16.24	2.19
07.05.2026	8:00-8:59	Average	383.35	1.81	2.71	16.28	8.30	16.18	2.20
07.05.2026	9:00-9:59	Average	381.43	1.79	2.42	15.69	7.98	16.27	2.14
Average			381.46	1.53	2.53	15.50	7.64	16.06	1.99
1 hour Minimum			374.04	1.19	2.08	14.61	6.87	15.83	1.70

1 hour Maximum	386.74	1.81	3.06	16.49	8.31	16.27	2.21
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Table 2. 5 Air Emission Levels (Standard)

No.	Parameter	Unit	Maximum Concentration	
			National	Average Period
1.	Carbon monoxide	mg/m ³	9	8-hour
2.	Carbon dioxide	ppm	5000	8-hour
3.	Sulfur dioxide	µg/m ³	20 500	24-hour 10-minute
4.	Nitrogen dioxide	µg/m ³	40 200	1 year 1 hour
5.	Particulate matter PM ₁₀	µg/m ³	20 50	1-year 24-hour
6.	Particulate matter PM _{2.5}	µg/m ³	10 25	1-year 24-hour

Source: Myanmar National Environmental Quality (Emission) Guidelines, National Ambient Air Quality Standards (NAAQS), American Conference of Governmental Industrial Hygienists (ACGIH).

Detail results with one-hour interval of pollutants are shown in **Table 2. 4**. The average, peak and minimum values of results per day are calculated. All results are under the Myanmar National Environmental Quality (emission) Guidelines.

Table 2. 6 Observed Ambient Air Quality Results from Selected Points

Parameters	5 th Time Monitoring Results	4 th Time Monitoring Results	EMP Baseline Results	NEQG Guidelines Value	ACGIH Guidelines Value	NAAQS Guidelines Value	Unit	Averaging Period
PM ₁₀	15.50	14.35	16.28	50	-	-	µg/m ³	24hrs
PM _{2.5}	7.64	7.22	9.21	25	-	-	µg/m ³	24hrs
CO	0.0016	0.0019	0	-	-	9	ppm	8hrs
CO ₂	382.18	402.35	1542.91	-	5000	-	ppm	8hrs
SO ₂	5.22	5.77	3.96	20	-	-	µg/m ³	24hrs
NO ₂	5.75	6.03	23.11	200	-	-	µg/m ³	1hrs

2.2 Ambient Noise (18th January 2026 – 18th July 2026)

2.2.1 Methodology for Noise

Noise level LAeq (dBA) will be measured at the selected locations that can reflect the exposure of the nearest local community and sensitive locations. Duration and frequency were measured for 24hrs continuously at the selected site using the Sound Pressure Level Meter and Micro air quality monitoring system (YF-IAQM-V1).

The monitoring procedures, data analysis and interpretation were carried out in accordance with the instrument's manufacture and National Environmental Quality (Emission) Guidelines, World Health Organization (WHO) and International Finance Corporation (IFC) guidelines in order to be in line with Environmental Conservation Department, Ministry of Natural Resources and Environment Conservation (MONREC). "National Environmental Quality (Emission) Guidelines" for Myanmar was also presented the value of noise level as LAeq (dBA).

Table 2. 7 Noise level monitoring

Noise monitoring (2 locations)	
Noise Emission	LAeq (dBA) (1hrs, 24 hrs.)

Table 2. 8 Equipment used to measure ambient noise measurement

Digital Sound Level Meter Noise	
Micro air quality monitoring system (YF-IAQM-V1) CO, CO ₂ , NO ₂ , O ₃ , SO ₂ , VOC, H ₂ S, PM ₁₀ , PM _{2.5} , TSP, Temperature, Humidity, Wind Speed, Wind Direction, Noise	

2.2.2 Monitoring Location for Noise

Sampling locations were confirmed by environmental specialist on site before doing the sampling. Noise quality was monitored at the selected four locations as source as NQ 1- Project Site and NQ 2- staff housing that can get results of the existing noise.



Figure 2. 5 Noise Quality Monitoring Locations of Thapyaywa 3 Solar Power Project

Table 2. 9 Locations of Environmental Quality sampling points

Locations No.	Points	Coordinate	Locations
Noise Monitoring Location			
1.	NQ1	Lat - 20°58'59.57"N, Long - 96° 1'5.09"E	Project Site
2.	NQ2	Lat - 20°58'36.57"N, Long - 96° 0'45.49"E	Project Site (Receptor)

Figure 2. 6 Noise Quality Measuring during Operation Period

	Noise quality measuring at Thapyaywa 3 Solar Power Project 06.05.2026 - 07.05.2026 (Project Site)
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	Noise quality measuring at Thapyaywa 3 Solar Power Project 06.05.2026 - 07.05.2026 (Staff Housing)
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2.2.3 Measurement Results and Comparison for Noise

Ambient noise level for the proposed project was measured with Digital Sound Level Meter at the project site. The noise level measurement is conducted at Thapyaywa 3 solar power project points: these points are near the air monitoring points and staff housing on 6th to 7th May 2026. Measuring period is 24 hours continuously. The observed values are described in Table 2. 10 and Table 2. 11 and the following figures are noise level measurement at the proposed project.

Table 2. 10 Observed Values of Noise Level Measurement at Project Site

No.	Date	Time	Observed Mean Value (Source)	Weight	Day/Night	Average
1	07.05.2026	7:00:31-7:59:31	64.52	A	Day	50.35
2	07.05.2026	8:00:31-8:59:31	67.77	A	Day	
3	07.05.2026	9:00:31-9:59:31	68.87	A	Day	
4	06.05.2026	10:00:31-10:59:31	45.14	A	Day	
5	06.05.2026	11:00:31-11:59:31	45.07	A	Day	
6	06.05.2026	12:00:31-12:59:31	45.08	A	Day	
7	06.05.2026	13:00:31-13:59:31	45.06	A	Day	
8	06.05.2026	14:00:31-14:59:31	45.08	A	Day	
9	06.05.2026	15:00:31-15:59:31	45.07	A	Day	
10	06.05.2026	16:00:31-16:59:31	45.10	A	Day	
11	06.05.2026	17:00:31-17:59:31	46.99	A	Day	
12	06.05.2026	18:00:31-18:59:31	48.66	A	Day	
13	06.05.2026	19:00:31-19:59:31	48.39	A	Day	
14	06.05.2026	20:00:31-20:59:31	47.63	A	Day	
15	06.05.2026	21:00:31-21:59:31	46.78	A	Day	
16	06.05.2026	22:00:31-22:59:31	45.70	A	Night	45.39
17	06.05.2026	23:00:31-23:59:31	45.35	A	Night	
18	07.05.2026	0:00:31-0:59:31	45.35	A	Night	

No.	Date	Time	Observed Mean Value (Source)	Weight	Day/Night	Average
19	07.05.2026	1:00:31-1:59:31	45.25	A	Night	
20	07.05.2026	2:00:31-2:59:31	45.26	A	Night	
21	07.05.2026	3:00:31-3:59:31	45.27	A	Night	
22	07.05.2026	4:00:31-4:59:31	45.23	A	Night	
23	07.05.2026	5:00:31-5:59:31	45.26	A	Night	
24	07.05.2026	6:00:31-6:59:31	45.86	A	Night	
Average			48.49			

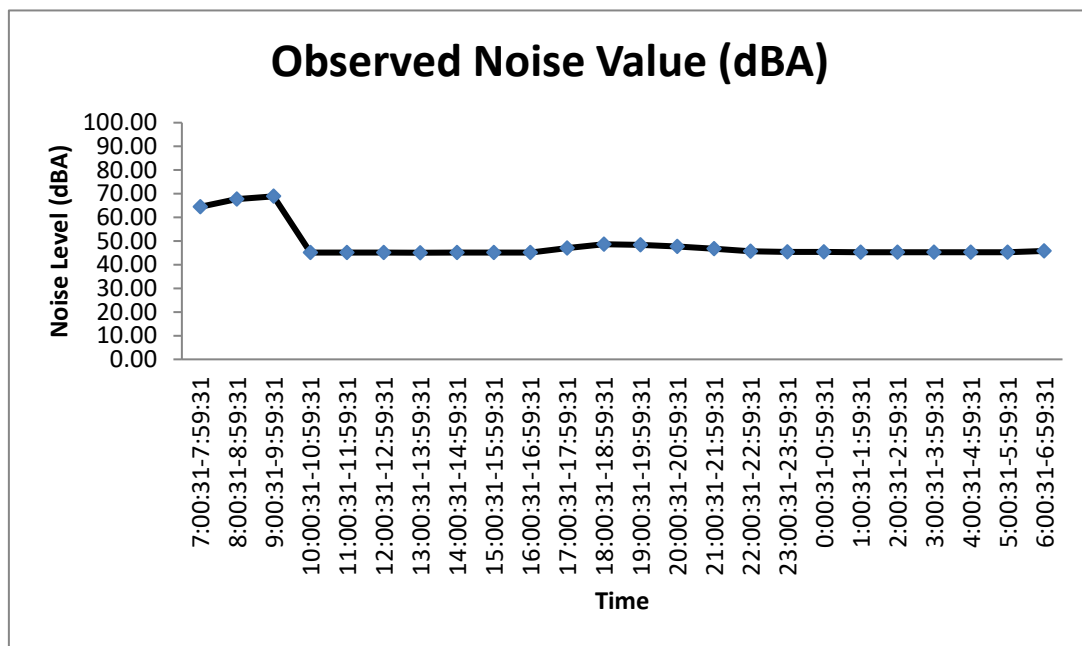


Figure 2. 7 Noise Level at Project Site

Table 2. 11 Observed Values of Noise Level Measurement at Staff Housing

No.	Date	Time	Observed Mean Value (Source)	Weight	Day/Night	Average
1	07.05.2026	7:00:31-7:59:31	59.97	A	Day	56.40
2	07.05.2026	8:00:31-8:59:31	58.98	A	Day	
3	07.05.2026	9:00:31-9:59:31	57.37	A	Day	
4	06.05.2026	10:00:31-10:59:31	64.73	A	Day	
5	06.05.2026	11:00:31-11:59:31	66.33	A	Day	
6	06.05.2026	12:00:31-12:59:31	63.79	A	Day	
7	06.05.2026	13:00:31-13:59:31	58.60	A	Day	
8	06.05.2026	14:00:31-14:59:31	65.18	A	Day	
9	06.05.2026	15:00:31-15:59:31	60.79	A	Day	

No.	Date	Time	Observed Mean Value (Source)	Weight	Day/Night	Average
10	06.05.2026	16:00:31-16:59:31	62.60	A	Day	
11	06.05.2026	17:00:31-17:59:31	48.71	A	Day	
12	06.05.2026	18:00:31-18:59:31	46.33	A	Day	
13	06.05.2026	19:00:31-19:59:31	44.75	A	Day	
14	06.05.2026	20:00:31-20:59:31	39.99	A	Day	
15	06.05.2026	21:00:31-21:59:31	47.83	A	Day	
16	06.05.2026	22:00:31-22:59:31	37.72	A	Night	48.55
17	06.05.2026	23:00:31-23:59:31	43.67	A	Night	
18	07.05.2026	0:00:31-0:59:31	32.37	A	Night	
19	07.05.2026	1:00:31-1:59:31	43.07	A	Night	
20	07.05.2026	2:00:31-2:59:31	45.87	A	Night	
21	07.05.2026	3:00:31-3:59:31	56.99	A	Night	
22	07.05.2026	4:00:31-4:59:31	51.40	A	Night	
23	07.05.2026	5:00:31-5:59:31	57.90	A	Night	
24	07.05.2026	6:00:31-6:59:31	67.98	A	Night	
Average			53.46			

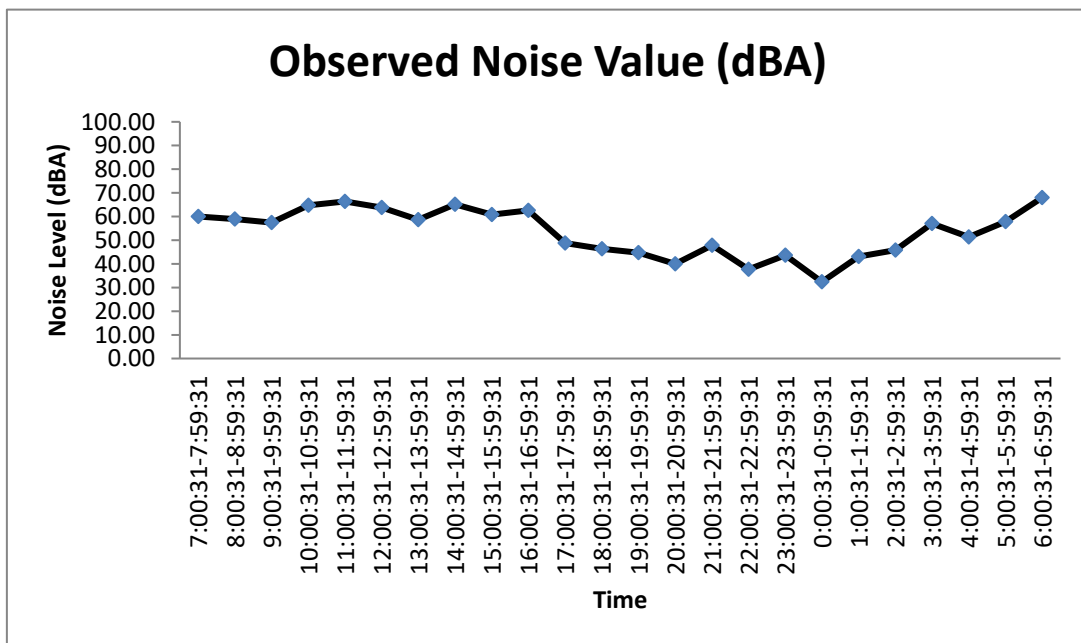


Figure 2. 8 Noise Level at Staff Housing

Table 2. 12 National Environmental Quality (Emission) Guidelines Values for Noise Level

Receptor	One Hour LAeq (dBA)	
	Daytime 07:00 - 22:00 (10:00 - 22:00 for Public Holidays)	Nighttime 22:00 - 07:00 (22:00 - 10:00 for Public Holidays)
Residential, institutional, educational	55	45
Industrial, commercial	70	70

The values observed are compared with the National Environmental Quality (Emission) Guidelines as shown in **Table 2. 13** which indicates the separate level for residential and industrial points.

Table 2. 13 Observed Ambient Noise Level Results from Selected Points

Point	Thapyaywa 3 Solar Power Project	
	Day Time	Nighttime
Project Site (Source)	50.35	45.39
4th Time Monitoring Results (Project Site) (Source)	48.44	47.54
EMP Baseline Results (Point 1)	51.27	50.72
Guideline Values for Industrial	70	70
Staff Housing (Receptor)	56.40	48.55
4th Time Monitoring Results (Staff Housing) (Receptor)	48.40	43.03
EMP Baseline Results (Point 2)	41.20	44.64
Guideline Values for Residential	55	45

The observed values of the proposed project for daytime at Thapyaywa 3 Solar Power Project Site (source) and Staff Housing (Receptor) are 50.35 dB (A) and 56.40 dB (A). The observed values of the proposed project for nighttime at Thapyaywa 3 Solar Power Project Site (source) and Staff Housing (Receptor) are 45.39 dB (A) and 48.55 dB (A). So, the observed daytime value and nighttime value for Thapyaywa 3 Solar Power Project Site are within the guideline

value. But the observed daytime and nighttime value for staff housing (receptor) is higher than the guideline value because monitoring location is near Meikhtila- Hanza Village Road, this road is passing through more motorcycles and car and dog barking and bird chirping and raining at the time of measurement.

2.3 Weather Condition (18th January 2026 – 18th July 2026)

2.3.1 Wind Speed and Direction

The following figures describe the wind speed and wind direction of the proposed project site (Thapyaywa 3 solar power project Site at source) from 6th to 7th May 2026 respectively. According to the data, the wind direction is following Figure 2. 9 and Figure 2. 10.

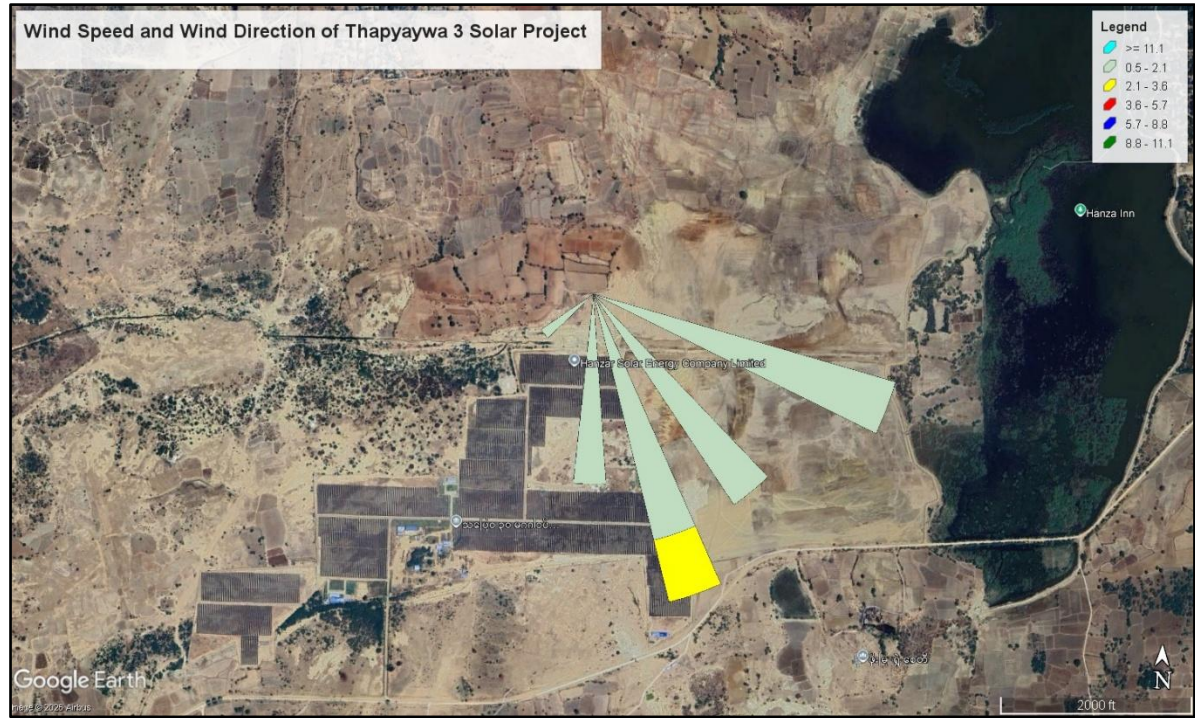


Figure 2. 9 Wind Speed and Wind Direction (Blowing From) at Project Site

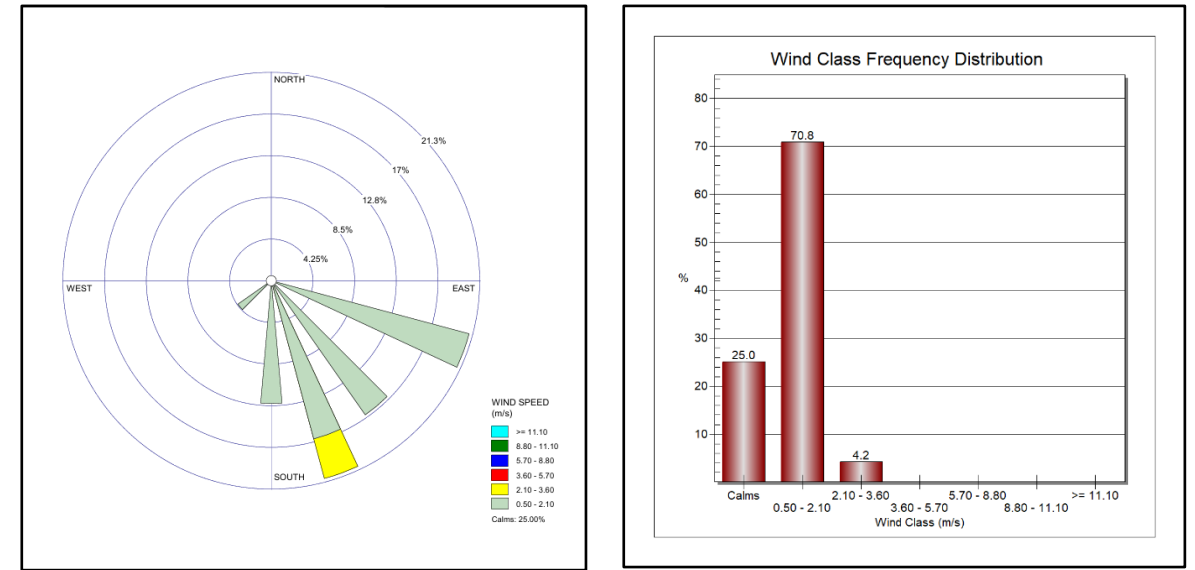


Figure 2. 10 Wind Class Frequency Distribution at Project Site

2.3.2 Significant natural or manmade disaster (18th January 2026 – 18th July 2026)

During the monitoring period from 18th January 2026 to 18th July 2026, no significant natural or manmade disasters were officially reported in Wet Toe Village Tract and Hanza Village Tract, Thazi Township, Meiktila District, Mandalay Region, Myanmar. The area did not experience any major events such as severe flooding, landslides, earthquakes, cyclones, large-scale fires, industrial accidents, hazardous material spills, or other emergencies that caused substantial damage to lives, property, infrastructure, or the environment. Seasonal weather conditions remained generally typical for the dry zone of central Myanmar, although isolated thunderstorms and localized heavy rainfall occurred during the onset of the southwest monsoon. These weather events did not result in significant disruption or disaster within the project area. Therefore, it is concluded that no significant natural or manmade disaster affected Wet Toe Village Tract and Hanza Village Tract during the reporting period. Continuous monitoring and preparedness by local authorities and communities are recommended to ensure effective response to any future emergency events.

2.4 Water Quality (18th January 2026 – 18th July 2026)

2.4.1 Methodology for Water Quality

Water samples were collected on site with appropriate sampling equipment and procedures. The sampling team has pre-arranged the labs in Yangon for analysis and logistic arrangement made to reach the preserved samples with unique IDs to the designated labs within 48hrs.

The sampling and survey team has a list of local laboratories providing analytical services for ground water, wastewater and surface water quality analysis. Up to this date, there is no laboratory having accredited certification for water quality testing (environmental analysis) in Myanmar. PRO Lab (Myanmar), Water Quality Laboratory (Forest Research Institute). Laboratories are used for water quality analysis among the list of laboratories. These laboratories have been recognized as a long-term establishment in Myanmar and employed qualified technical staffs.

The following laboratories were used for analysis of water.

1. PRO Lab, No. (9), Sabae Housing, Pyi Htaung Su Road, (26) Ward, South Dagon Tsp, Yangon, Myanmar. Tel: 09 893 767424
2. Water Quality Laboratory, Forest Research Institute, Yezin, Nay Pyi Taw. Tel: 09 430 19169, 09 420 705131

Water samplings are conducted using the following equipment as shown in figure.

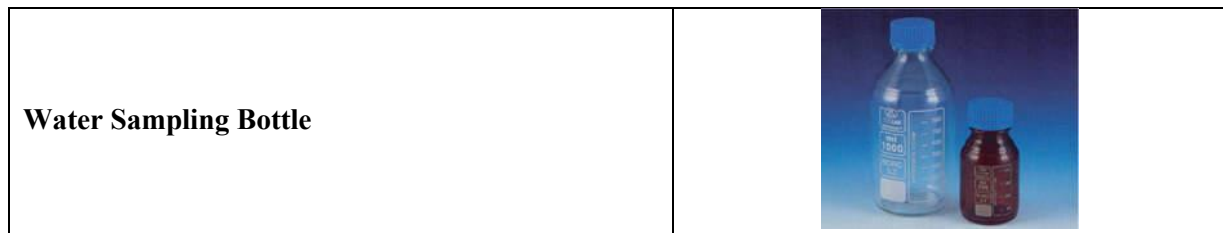
Table 2. 14 Environmental Quality Parameters for Water quality

<i>Wastewater Parameters (1 location)</i>	
Physical Parameter	Total Suspended Solids
Chemical Parameter	BOD, COD, pH
Biological Parameter	Total Coliform Bacteria
Nutrients	Total Nitrogen, Total Phosphorus

Compounds	Oil & grease
Ground Water Parameters (1 location)	
Physical Parameter	Total Suspended Solids, Turbidity, Total Dissolved Solids, Dissolved Oxygen
Chemical Parameter	BOD, COD, pH, EC, Salinity, Oxidation Reduction Potential (ORP)
Biological Parameter	Total Coliform Bacteria
Metal	Potassium
Nutrients	Total Nitrogen, Total Phosphorus
Compounds	Oil & grease
Surface Water Parameters (1 Location)	
Physical Parameter	Total Suspended Solids, Turbidity, Total Dissolved Solids, Dissolved Oxygen
Chemical Parameter	BOD, COD, pH, EC, Salinity, Oxidation Reduction Potential (ORP)
Biological Parameter	Total Coliform Bacteria
Metal	Potassium
Nutrients	Total Nitrogen, Total Phosphorus
Compounds	Oil & grease

Figure 2. 11 Equipment for Water Sampling

HORIBA U-50, Multi parameter Water Quality Meter Multiple sensors allow for the measurement of 11 parameters simultaneously. (pH, pH(mv), ORP, DO, Salinity, TDS, Seawater Specific Gravity, Temperature, Turbidity, Water depth) Patented auto-calibration features provide hassle free calibration of pH, dissolved oxygen, conductivity and turbidity. Ultra-sensitive Turbidity Sensors (Models U-50) Precision has been improved over conventional instruments. Improved stability of the dissolved oxygen sensor has been achieved with a new 3 electrode design for fast response and polarographic sensor for ease of maintenance. pH and ORP electrodes can be replaced individually to reduce replacement costs.	
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2.4.2 Monitoring and Sampling Locations

Sampling locations were confirmed by environmental specialist on site before doing the sampling. Water quality sampling locations consist of one wastewater location (WWQ: outlet of wastewater channel from the project site) and one ground water location (GWQ: Project Site) which is situated near the project site).



Figure 2. 12 Water Quality Sampling Locations of Thapyaywa 3 Solar Power Project

Table 2. 15 Locations of Environmental Quality sampling points

Locations No.	Points	Coordinate	Locations
Waste Water Quality Monitoring Location			
1.	WWQ	Lat - 20°58'49.08"N, Long - 96°01'35.41"E	Outlet of wastewater channel from the project site
Ground Water Quality Monitoring Location			
1.	GWQ	Lat - 20°59'9.99"N, Long - 96°01'3.34"E	Project Site
Surface Water Quality Monitoring Location			
1.	SWQ	Lat - 20°59'13.99"N, Long - 96°01'43.72"E	Hanza Inn

Figure 2. 13 Water Quality Measuring during Operation Period

	Ground Water Quality Sampling at Thapyaywa 3 Solar Power Project 05.05.2026 (Project Site)
	Surface Water Quality Sampling at Thapyaywa 3 Solar Power Project 05.05.2026 (Hanza Inn)
	Waste Water Quality Sampling at Thapyaywa 3 Solar Power Project 05.05.2026 (Outlet of wastewater channel from the project site)

2.4.3 Water quality

The project proponent is responsible for ensuring the drainage or runoff from the project or its related activities do not deteriorate the existing surface water and ground water quality before

the project implementation. Waste water and ground water quality were recorded by laboratory analysis at two selected locations systematically. The field surveys for environmental quality monitoring and sampling were done during 5th May 2026.

Objectives of the sampling and analysis of ground water, surface water and wastewater are to understand the existing water quality at the selected locations and to monitor the impacts during operation period.

Table 2. 16 Ground Water Quality of Thapyaywa 3 Solar Power Project

Item	Unit	Ground Water	Ground Water (4 th Time)	WHO Drinking Water Guideline	NDWQS (2014), MOH, Myanmar.
Biological Oxygen Demand (BOD)	mg/l	0.47	0.62	-	-
Chemical Oxygen Demand (COD)	mg/l	14	2.8	-	-
Dissolved Oxygen (On-site)	mg/l	3.80	13.32	-	-
Electrical Conductivity (On-site)	mS/cm	1.16	1.04	-	-
pH (On-site)	-	7.81	7.73	6.5-8.5	-
Oil & Grease	mg/l	1	2	-	-
Oxidation Reduction Potential (ORP) (On-site)	ORPmV	241	245	-	-
Salinity (On-site)	ppt	0.3	0.5	-	-
Turbidity (On-site)	NTU	12.3	77.1	-	-
Total Dissolved Solids (On-site)	g/l	0.566	0.663	-	-
Total Alkalinity	mg/l	595	-	-	-
Total Nitrogen	mg/l	2.5	2.38	-	-
Total Phosphorus	mg/l	0.02284	0.00929	-	-
Total suspended solid (TSS)	mg/l	10	1.8	-	-
Total coliform bacteria	MPN/ml	<0.3	<0.3	Not detected	3
Potassium	mg/l	4.29	1.26	-	-

Table 2. 17 Surface Water Quality of Thapyaywa 3 Solar Power Project

Item	Unit	Surface Water	Surface Water (4 th Time)	EMP Baseline Results	NDWQS (2014), MOH, Myanmar.
Biological Oxygen Demand (BOD)	mg/l	2.04	0.85	3.48	30
Chemical Oxygen Demand (COD)	mg/l	14	8	8.6	100
Dissolved Oxygen (On-site)	mg/l	1	12.79	5.66	>2
Electrical Conductivity (On-site)	mS/cm	0.238	0.339	-	-
pH (On-site)	-	7.45	7.82	-	-
Oil & Grease	mg/l	1	1	2	-

Oxidation Reduction Potential (ORP) (On-site)	ORPmV	313	374	-	-
Salinity (On-site)	ppt	0.1	0.2	-	-
Turbidity (On-site)	NTU	9.4	10.6	-	-
Total Dissolved Solids (On-site)	g/l	0.18	0.22	-	-
Total Nitrogen	mg/l	2.80	3.78	0.73	-
Total Phosphorus	mg/l	0.05748	0.00929	0.0830	-
Total suspended solid (TSS)	mg/l	46	16.8	23.3	150
Total coliform bacteria	MPN/ml	0.36	0.92	240	-
Potassium	mg/l	3.25	4.15	2.81	-
Chromium	mg/l	-	-	0.004	-
Aluminum	mg/l	-	-	0.01	-

Table 2. 18 Wastewater Quality of Thapyaywa 3 Solar Power Project

Item	Unit	Waste Water	Waste Water (4 th Time)	National Environmental Quality (Emission) Guideline for Electric Power Transmission and Distribution
Biological Oxygen Demand (BOD)	mg/l	0.52	0.71	30
Chemical Oxygen Demand (COD)	mg/l	9.2	4.4	125
pH	-	8.80	8.57	6-9
Total Nitrogen	mg/l	1.26	2.38	10
Total Phosphorus	mg/l	0.04128	0.00929	2
Oil and grease	mg/l	2	3	10
Total suspended solid (TSS)	mg/l	5	1.8	50
Total coliform bacteria	CFU/100ml	4.3	2.3	400

3. ENVIRONMENTAL MONITORING PLAN (18th January 2026 – 18th July 2026)

3.1 Monitoring Records for Safety Plan (18th January 2026 – 18th July 2026)

Monitoring Records for Safety Plan

Monthly Record					
Date	Place	Activity	Organization	Number of Attendees	Remark
February, 2026	PV Field	Hazard and Safety Training	Thapyaywa 3 Solar Power Plant	25	
March, 2026	Working Area	Provide PPE Safety Equipment	Thapyaywa 3 Solar Power Plant	25	
April, 2026	Power Station	Electrical Safety Training with Internship Students	Thapyaywa 3 Solar Power Plant	38	
April, 2026	Briefing Hall	Health Care	Thapyaywa 3 Solar Power Plant	35	
May, 2026	Working Area	Electrical Safety Training with Internship Students	Thapyaywa 3 Solar Power Plant	56	
June, 2026	Briefing Hall	EI Electrical Safety Training	Thapyaywa 3 Solar Power Plant	96	
June, 2026	Briefing Hall	တုတ်ကွေးကာကွယ်ဆေးထိုးနှံပေးခြင်း	Thapyaywa 3 Solar Power Plant	25	
June, 2026	Briefing Hall	Covid ကာကွယ်ဆေးထိုးနှံပေးခြင်း	Thapyaywa 3 Solar Power Plant	84	
July, 2026	Power Station	Fire Safety Training	Thapyaywa 3 Solar Power Plant	35	

Monitoring Record for Occupational Safety Equipment

Date	Place	Type	Quantity	Inspected By	Supervisor	Remark
10-April-2026	Store	Safety Shoe	30	U Kyaw Htun Lin	U Toe Toe	
10-April-2026	Store	Safety Helmet	30	U Kyaw Htun Lin	U Toe Toe	
10-April-2026	Store	Safety Gloves	30	U Kyaw Htun Lin	U Toe Toe	
10-April-2026	Store	Safety Belt	30	U Kyaw Htun Lin	U Toe Toe	

Records Photo of Health and Safety Plan Activities







Fire Extinguisher Check List

	Date	Description	Location	Existing	Unit
1	20.3.2026	Fire Extinguisher (5) kg	Primary	2	nos
2	20.3.2026	Fire Extinguisher (3) kg	Primary	4	nos
3	20.3.2026	Fire Extinguisher (5) kg	Secondary	2	nos
4	20.3.2026	Fire Extinguisher (3) kg	Secondary	4	nos
5	20.3.2026	Fire Extinguisher (5) kg	BESS	12	nos

	Date	Description	Location	Existing	Unit
6	20.3.2026	Fire Extinguisher (3) kg	SVG	3	nos
7	20.3.2026	Fire Extinguisher (5) kg	Control Room	2	nos
8	20.3.2026	Fire Extinguisher (3) kg	Control Room	4	nos
9	20.3.2026	Fire Extinguisher (5 & 3) kg	MV Station- 1	3	nos
10	20.3.2026	Fire Extinguisher (5 & 3) kg	MV Station- 2	3	nos
11	20.3.2026	Fire Extinguisher (5 & 3) kg	MV Station- 3	3	nos
12	20.3.2026	Fire Extinguisher (5 & 3) kg	MV Station- 4	3	nos
13	20.3.2026	Fire Extinguisher (5 & 3) kg	MV Station- 5	3	nos

အရေးပေါ်အခြေအနေတုန့်ပြန်မှုအခြေအနေ			
စီမံကိန်းလုပ်ငန်းအတွင်းမှ အရေးကြီးဆက်သွယ်ရမည့် ဖုန်းနံပါတ်များ			
စဉ်	အမည်	ရာထူး	ဖုန်းနံပါတ်
၁	ဦးစည်သူဖြိုးဆွေ	စက်ရုံမှူး	09-777464755
၂	ဦးဇော်ရဲမောင်	ဒုစက်ရုံမှူး	09-260083285
၃	ဦးတိုးတိုး	ကြီးကြပ်ရေးမှူး	09-978876757
၄	ဦးမြတ်မင်းဖြိုး	အန္တရာယ်ကင်းရှင်းရေးအရာရှိ	09-974863643
၅	ဦးကျော်ထွန်းလင်း	ရှေးဦးသူနာပြု	09-258255775
၆	ဦးစိုးလင်းထိုက်	အရေးပေါ်အခြေအနေထိန်းချုပ်ရေးမှူး	09-975686801

အရေးကြီးဆက်သွယ်ရမည့် ဒေသတွင်းဖုန်းနံပါတ်များ			
စဉ်	အမည်/ဌာ	အကြောင်းအရာ	ဖုန်းနံပါတ်
၁	မြို့နယ်မီးသတ်ဦးစီးဌာန	မီးလောင်ခြင်းအတွက်	09-402665664
၂	တိုက်နယ်ရဲစခန်း	လုံခြုံရေးကိစ္စရပ်များအတွက်	09-450337701
၃	အနီးဆုံးတိုက်နယ်ဆေးရုံ	ထိခိုက်ဒဏ်ရာရရှိသူများအတွက်	09-449872690
၄	မြို့နယ်လျှပ်စစ်ဌာန	လျှပ်စစ်မီးကိစ္စ	09-256592220
၅	မြို့နယ်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာ	အထွေထွေအုပ်ချုပ်ရေးကိစ္စ	

4. Records for CSR activities (18th January 2026 – 18th July 2026)

Records for CSR Activities

Place	Type	Received
ဟံဇား	ဟံဇားဘုန်းကြီးကျောင်းအသံမစဲပဌာန်းပွဲတွင် နေ့ဆွမ်းကပ်လှူခြင်း။	

Place	Type	Received
ဝမ်းသာ	ဝမ်းသာကျေးရွာဘုန်းကြီးကျောင်းတွင်အလှူငွေဆပ်ကပ်လှူဒါန်းခြင်း။	
မြို့ကြီးကုန်းရွာ	မြို့ကြီးကုန်းစာသင်ကျောင်းတွင်ဆန်ပြုတ်အာဟာရကျွေးမွေးခြင်းနှင့်ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း။	
ဝမ်းသာ	ဝမ်းသာကျေးရွာနှင့်ဟံဇားစာသင်ကျောင်းတွင်ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း။	
မြို့ကြီးကုန်းရွာ	မြို့ကြီးကုန်းကျေးရွာ၌ Solar Street Light တပ်ဆင်ပေးခြင်း။	
ဟံဇား	ဟံဇားအင်း၌ဇီဝိတဒါန ငါးလွှတ်ပွဲကျင်းပခြင်း။	
ထန်းကန်	ထန်းကန်ကျေးရွာ၌ Solar Street Light တပ်ဆင်ပေးခြင်း။	
တမာ	တမာကျေးရွာ၌ Solar Street Light တပ်ဆင်ပေးခြင်း။	
ဟံဇား	၂၀၂၆ ခုနှစ်တက္ကသိုလ်ဝင်တန်းအောင် မြန်မာစာဂုဏ်ထူးရှင်များအားဂုဏ်ပေးခြင်း။	
ထန်းကန်	ထန်းကန်ကျေးရွာစာသင်ကျောင်းတွင်ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း။	
တမာ	တမာကျေးရွာစာသင်ကျောင်းတွင်ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း။	
ညောင်ပင်သာ	ညောင်ပင်သာကျေးရွာစာသင်ကျောင်းတွင်ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း။	

Photo Record for CSR Activities



ဟံစားဘုန်းကြီးကျောင်းအသံမစဲပဋ္ဌာန်းပွဲတွင် နေဆွမ်းကပ်လှူခြင်း



ဝမ်းသာကျေးရွာဘုန်းကြီးကျောင်းတွင် အလှူငွေဆပ်ကပ်လှူဒါန်းခြင်း



မြို့ကြီးကုန်းစာသင်ကျောင်းတွင် ဆန်ပြုတ်အာဟာရကျွေးမွေးခြင်းနှင့် ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း



ဝမ်းသာကျေးရွာနှင့်ဟံစားစာသင်ကျောင်းတွင် ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း



ထန်းကန်ကျေးရွာ၊ တမာကျေးရွာနှင့် မြို့ကြီးကုန်းကျေးရွာတို့၌ Solar Street Light တပ်ဆင်ပေးခြင်း



ဟံစားအင်း၌ မိမိတို့အနီးတွင် လွှတ်ပွဲကျင်းပခြင်း



ထန်းကန်ကျောင်းတွင် ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း



တမာကျေးရွာနှင့်ညောင်ပင်သာကျေးရွာစာသင်ကျောင်းတွင် ပညာရေးသင်ထောက်ကူပစ္စည်းများလှူဒါန်းခြင်း

5. Records for GRM (18th January 2026 – 18th July 2026)

Monitoring Records for GRM

Monthly Record					
Date	Place	Issue	Organization Or Individual	Action Plan	Recorded by
February, 2026	Natural Solar Power Plant	-	-	-	U Si Thu Phyo Swe
March, 2026	Natural Solar Power Plant	-	-	-	U Si Thu Phyo Swe
April, 2026	Natural Solar Power Plant	-	-	-	U Si Thu Phyo Swe
May, 2026	Natural Solar Power Plant	-	-	-	U Si Thu Phyo Swe
June, 2026	Natural Solar Power Plant	-	-	-	U Si Thu Phyo Swe
July, 2026	Natural Solar Power Plant	-	-	-	U Si Thu Phyo Swe

GRM Organization of Thapyaywa 3 Solar Project

မကျေလည်မှုများ ဖြေရှင်းပေးရေးကော်မတီ			
စဉ်	အမည်	တာဝန်	ဌာန
၁	ဦးအောင်သူ	ဥက္ကဋ္ဌ	ဟံဇေးကျေးရွာ
၂	ဦးအောင်ကျော်နိုင်	အတွင်းရေးမှူး	NSP Co., Ltd
၃	ဦးအောင်ထွန်း	အဖွဲ့ဝင်(၁)	ဟံဇေးကျေးရွာ
၄	ဦးဝင်းမြင့်	အဖွဲ့ဝင်(၂)	ဟံဇေးကျေးရွာ
၅	ဦးဖိုးမောင်	အဖွဲ့ဝင်(၃)	NSP Co., Ltd

6. Records for Waste Disposal (18th January 2026 – 18th July 2026)

Records for Waste Disposal

Date	Place	Type	Amount	Inspected By
3-January, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	28 Kg	U Toe Toe
28-January, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	30 Kg	U Toe Toe
10-February, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	22 Kg	U Toe Toe
25-February, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	30 Kg	U Toe Toe
12-March, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	31 Kg	U Toe Toe
28-March, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	27 Kg	U Toe Toe
15-April, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	38 Kg	U Toe Toe

Date	Place	Type	Amount	Inspected By
30-April, 2025	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	30 Kg	U Toe Toe
15-May, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	28 Kg	U Toe Toe
31-May, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	30 Kg	U Toe Toe
15-June, 2026	ဝန်ထမ်းလိုင်းများရုံး	အမှိုက်စို/အမှိုက်ခြောက်	33 Kg	U Toe Toe

Records Photo for Waste Disposal





Appendix 1 (Water Results) (18th January 2026 – 18th July 2026)



ANALYTICAL LABORATORY

Myanmar Innovation Group of Co., Ltd
Address : No. (9), Sabae Housing, Pyi Htaung Su Road,
(26) Ward, South Dagon Tsp, Yangon, Myanmar.
Tel : 09-893 767 424
E-mail : info@prolabmyanmar.com

LABORATORY ANALYSIS REPORT

- 1 Client Name : Thapyaywa 3 Solar Power Project
- 2 Location : Thazi Township
- 3 Type of Sample : Ground Water-1
- 4 Sample No. : 00508/2026
- 5 Contact Person : Eguard Enviromental Services
- 6 Phone No. : 09-797005218
- 7 Date Received : 07.05.2026
- 8 Date of Test Performed : 07.05.2026
- 9 Date of Issued : 13.05.2026
- 10 Result :

No.	Parameter	Result	Unit	WHO STD 2018	Method
1	Oil and Grease	2	mg/L	NA	^(a) 5520D, Soxhlet Extraction Method
2	Total Coliform	< 0.3	MPN/ml	ND per 100 mL	FDA-BAM: MPN Method

Remark:

This certificate is issued only for the receipt of the test sample.

^(a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater.

Tested By

Name : PHYO PHYO AUNG
Position : Laboratory Technician
Signature :

Approved By

Name : KYAWT KYAWT YIN
Position : Technical Consultant Manager
Signature :



LAB-FO-024-00



The Government of the Republic of the Union of Myanmar
Ministry of Natural Resources and Environmental Conservation



Department of Forest
Forest Research Institute
Water Quality Laboratory, Yezin

Ref : WQL/0222/2026
Date: 20-5-2026

ANALYTICAL TEST REPORT

Customer Name: **Thapyaywa 3 Solar Power Project**

Customer Address : **E Guard Environmental Service Co.,Ltd**

Assignment number	WQL/2026-83-1	Sampling Location	Thazi Township
Sample number	GW	Sampling Date	-
Sample type	Ground Water	Sample received date	4-5-2026
Comments			

Parameter	Result	Unit	Method reference	Instruments
Biological Oxygen Demand	0.47	mg/L	Manual	YSI ProDO Tester
Chemical Oxygen Demand	14	mg/L	Titrimetric	Titration
Total Phosphorus	22.84	µg /L	NS 4725	SFA(SKALAR SAN plus Analyzer)SA 3000/5000,SA 1100
Total Nitrogen	2.5	mg/L	Kjeldahl	Kjeldahl Digestion & Distillation Unit
Total Suspended Solid	10	mg/L	NS 4733:1983/NS-EU 872:2005	Circulation and Filtration System
Potassium	4.29	mg/l	Spectrophotometric	Atomic Absorption Spectrophotometer, AA 7000, SHIMADZU
Total Alkalinity	595	mg/L	NS-ISO 7888:1993	ManTech Conductivity, Model 4510 Conductivity/TDS meter

*ND - Not Detected

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name: Dr. Thida Cho
Research Officer

Approved by

Signature:

Name: Dr. Thida Swe
Research Officer



ANALYTICAL LABORATORY

Myanmar Innovation Group of Co., Ltd
Address : No. (9), Sabae Housing, Pyl Htaung Su Road,
(26) Ward, South Dagon Tsp, Yangon, Myanmar.
Tel : 09-893 767 424
E-mail : info@prolabmyanmar.com

LABORATORY ANALYSIS REPORT

- 1 Client Name : Thapyaywa 3 Solar Power Project
- 2 Location : Thazi Township
- 3 Type of Sample : Surface Water-1
- 4 Sample No. : 00509/2026
- 5 Contact Person : Eguard Enviromental Services
- 6 Phone No. : 09-797005218
- 7 Date Received : 07.05.2026
- 8 Date of Test Performed : 07.05.2026
- 9 Date of Issued : 13.05.2026
- 10 Result :

No.	Parameter	Result	Unit	WHO STD 2018	Method
1	Oil and Grease	1	mg/L	NA	^(a) 5520D, Soxhlet Extraction Method
2	Total Coliform	0.36	MPN/ml	ND per 100 mL	FDA-BAM: MPN Method

Remark:

This certificate is issued only for the receipt of the test sample.

^(a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater.

Tested By

Name : PHYO PHYO AUNG
Position : Laboratory Technician
Signature :

Approved By

Name : KYAWT KYAWT YIN
Position : Technical Consultant Manager
Signature :



LAB-FO-024-00



The Government of the Republic of the Union of Myanmar
Ministry of Natural Resources and Environmental Conservation



Department of Forest
Forest Research Institute
Water Quality Laboratory, Yezin

Ref : WQL/0224/2026
Date: 20-5-2026

ANALYTICAL TEST REPORT

Customer Name: **Thapyaywa 3 Solar Power Project**

Customer Address : **E Guard Environmental Service Co.,Ltd**

Assignment number	WQL/2026-83-3	Sampling Location	Thazi Township
Sample number	SW	Sampling Date	-
Sample type	Surface Water	Sample received date	4-5-2026
Comments			

Parameter	Result	Unit	Method reference	Instruments
Biological Oxygen Demand	2.04	mg/L	Manual	YSI ProDO Tester
Chemical Oxygen Demand	14	mg/L	Titrimetric	Titration
Total Phosphorus	57.48	µg /L	NS 4725	SFA(SKALAR SAN plus Analyzer)SA 3000/5000,SA 1100
Total Nitrogen	2.80	mg/L	Kjeldahl	Kjeldahl Digestion & Distillation Unit
Total Suspended Solid	46	mg/L	NS 4733:1983/NS-EU 872:2005	Circulation and Filtration System
Potassium	3.25	mg/l	Spectrophotometric	Atomic Absorption Spectrophotometer, AA 7000, SHIMADZU

*ND - Not Detected

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name: Dr. Thida Cho
Research Officer

Approved by

Signature:

Name: Dr. Thida Swe
Research Officer



ANALYTICAL LABORATORY

Myanmar Innovation Group of Co., Ltd

Address : No. (9), Sabae Housing, Pyi Htaung Su Road,
(26) Ward, South Dagon Tsp, Yangon, Myanmar.

Tel : 09-893 767 424

E-mail : info@prolabmyanmar.com

LABORATORY ANALYSIS REPORT

- 1 Client Name : Thapyaywa 3 Solar Power Project
- 2 Location : Thazi Township
- 3 Type of Sample : Waste Water-1
- 4 Sample No. : 00510/2026
- 5 Contact Person : Eguard Enviromental Services
- 6 Phone No. : 09-797005218
- 7 Date Received : 07.05.2026
- 8 Date of Test Performed : 07.05.2026
- 9 Date of Issued : 13.05.2026
- 10 Result :

No.	Parameter	Result	Unit	WHO STD 2018	Method
1	Oil and Grease	2	mg/L	-	^(a) 5520D, Soxhlet Extraction Method
2	Total Coliform	4.3	MPN/ml	-	FDA-BAM: MPN Method

Remark:

This certificate is issued only for the receipt of the test sample.

Dispose treated waste water according to state and local regulations.

^(a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater.

Tested By

Name : PHYO PHYO AUNG

Position : Laboratory Technician

Signature :

Approved By

Name : KYAWT KYAWT YIN

Position : Technical Consultant Manager

Signature :



LAB-FO-024-00



The Government of the Republic of the Union of Myanmar
Ministry of Natural Resources and Environmental Conservation



Department of Forest
Forest Research Institute
Water Quality Laboratory, Yezin

Ref : WQL/0223/2026

Date: 20-5-2026

ANALYTICAL TEST REPORT

Customer Name: **Thapyaywa 3 Solar Power Project**

Customer Address : **E Guard Environmental Service Co.,Ltd**

Assignment number	WQL/2026-83-2	Sampling Location	Thazi Township
Sample number	WW	Sampling Date	-
Sample type	Waste Water	Sample received date	4-5-2026
Comments			

Parameter	Result	Unit	Method reference	Instruments
Biological Oxygen Demand	0.52	mg/L	Manual	YSI ProDO Tester
Chemical Oxygen Demand	9.2	mg/L	Titrimetric	Titration
Total Phosphorus	41.28	µg /L	NS 4725	SFA(SKALAR SAN plus Analyzer)SA 3000/5000,SA 1100
Total Nitrogen	1.26	mg/L	Kjeldahl	Kjeldahl Digestion & Distillation Unit
Total Suspended Solid	5	mg/L	NS 4733:1983/NS-EU 872:2005	Circulation and Filtration System
pH	8.80	-	ISO 10523:2008	ManTech Robot (PC-1300-475E)

*ND - Not Detected

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name: Dr. Thida Cho
Research Officer

Approved by

Signature:

Name: Dr. Thida Swe
Research Officer