SHWE TAUNG MINING COMPANY LIMITED

Mudstone Quarry
Biannual Environmental Monitoring Report
(May 2024 to October 2024)

This page is a record of all revisions of this document. All previous issues are hereby superseded and are to be destroyed.

Rev	Date	Description	Prepared by	Checked by	Approved by
0	November 2024	Bi-annual reporting to ECD	 Hein Latt Environmental Manager	- Head of HSE	 Kyaw Naing Soe Deputy Managing Director

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၁ စီမံကိန်း မိတ်ဆက်

၁.၁ အကျဉ်းချုပ်အစီရင်ခံစာ

ရွှေတောင်ဘိလပ်မြေကုမ္ပဏီလီမိတက်သည် မြန်မာနိုင်ငံ၌ကဏ္ဍမျိုးစုံတွင် စီးပွားရေးလုပ်ငန်းအမျိုးမျိုးတို့ကို ပိုင်ဆိုင်လုပ်ကိုင်လည်ပတ်နေသော Shwe Taung Group (STG) ၏ အစိတ်အပိုင်းတစ်ရပ်အနေဖြင့် မြန်မာနိုင်ငံ၊ မန္တလေးတိုင်းဒေသကြီး၊ သာစည်မြို့နယ်၊ ပြည်ညောင်ကျေးရွာတွင် ၎င်း၏ တည်ရှိနေပြီးသော ရွှံ့ကျောက်ထုတ်လုပ်မှုကို တိုးချဲ့ဆောင်ရွက်လျက်ရှိပါသည်။ စီမံကိန်းသည် ရွှံ့ကျောက်ထုတ်လုပ်မှုကို တစ်နှစ်လျှင် တန် ၉၇,၀၀၀ မှ တန် ၂၉၀,၀၀၀ ထိ တိုးချဲ့ ထုတ်ယူရန် လျာထားပါသည်။ စီမံကိန်းတည်နေရာကို ပုံ ၁ တွင် ဖော်ပြထားပါသည်။

STC သည် ရွှံ့ကျောက်တူးဖော်ထုတ်လုပ်မှုစီမံကိန်းအတွက် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ကို Environmental Resources Management (ERM)- Hong Kong Limited ဖြင့် ဆောင်ရွက်ခဲ့ပါသည်။

ရွှံ့ကျောက်လုပ်ကွက် သည် STC ဘိလပ်မြေစက်ရုံ၏ အနောက်ဘက်တွင် တည်ရှိပါသည်။ ရွှံ့ကျောက်လုပ်ကွက်နှင့် STC ဘိလပ်မြေစက်ရုံ အရှေ့ဘက်ရှိ ထုံးကျောက်လုပ်ကွက် နှင့် စစ်ကိုင်းတိုင်းဒေသကြီး၊ ကလေးဝမြို့နယ်ရှိ ကျောက်မီးသွေးသတ္တုလုပ်ကွက်တို့သည် ကုန်ကြမ်းများကို ထောက်ပံ့ပေးလျက် STC ဘိလပ်မြေစက်ရုံထုတ်လုပ်မှုကို အထောက်အပံ့ပြုဆောင်ရွက်လျက်ရှိပါသည်။

ရွှေတောင် သတ္တုတူးဖော်ထုတ်လုပ်ရေး ကုမ္ပဏီလီမိတက် (STM) သည် ရွှံ့ကျောက်ထုတ်လုပ်မှုလုပ်ငန်းအတွက် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း အစီရင်ခံစာကို ၂၀၂၂ ခုနှစ် နိုဝင်ဘာလ ၁၈ ရက်နေ့တွင် သယံဇာတနှင့်သဘာဝ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC)၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန (ECD) ထံမှ အတည်ပြုချက်ရယူခဲ့သည်။ ရွှံ့ကျောက်ထုတ်ယူခွင့်လိုင်စင်သည် ၂၀၂၂ ခုနှစ် နိုဝင်ဘာ ၁၅ ရက်တွင် သက်တမ်းကုန်ဆုံးခဲ့ပြီး ၂၀၂၃ ခုနှစ် ဇွန် ၂၈ ရက်တွင် MONREC မှ လိုင်စင်သက်တမ်းတိုးခြင်းကို လက်ခံရရှိခဲ့ပါသည်။ ထို့ကြောင့် ရွှေတောင်သတ္တုတူးဖော်ရေးကုမ္ပဏီလီမိတက်သည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ လုပ်ငန်းစဉ်များ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေနှင့် နည်းဥပဒေများ၊ ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်များကို လိုက်နာဆောင်ရွက်လျက်ရှိပြီး ၂၀၂၄ ခုနှစ်၊ မေလမှ ၂၀၂၄ ခုနှစ်၊ အောက်တိုဘာလအတွက် ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုစစ်ဆေးခြင်း အစီရင်ခံစာကို တင်ပြခြင်း ဖြစ်ပါသည်

1. Introduction

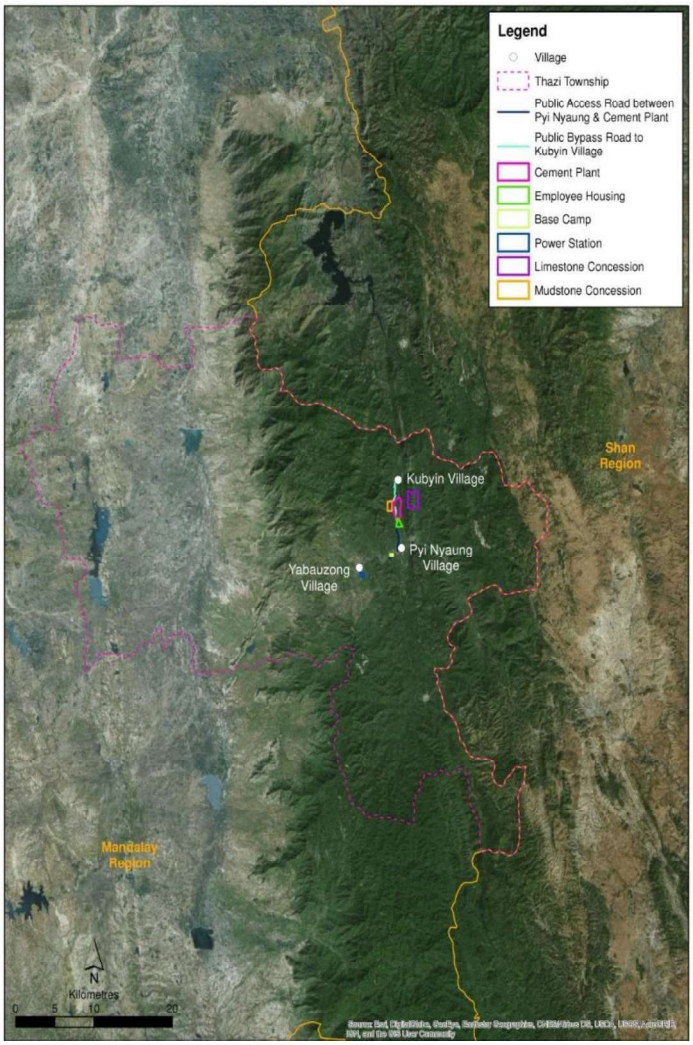
1.1 Executive Summary

Shwe Taung Cement Company Ltd. (STC), is planning an expansion of the mudstone production at its existing mudstone quarry in Pyi Nyaung Village, Thazi Township in the Mandalay region of Myanmar (the Project). The Project expanded extraction of mudstone from 97,500 tonnes to 290,000 tonnes per year. The location of the Project is shown in Figure 1. STC has commissioned Environmental Resources Management (ERM)-Hong Kong, Limited to undertake the Environmental Impact Assessment (EIA) for the mudstone quarry Project.

The mudstone quarry is located to the west of the STC cement plant (Figure 1). The limestone and mudstone quarries as well as a coal mine in Kalaywa township of Sagaing region are operated by Shwe Taung Mining (STM), subsidiary of Shwe Taung Cement (STC) which supply raw materials exclusively to the STC cement plant. The limestone quarry, mudstone quarry and coal mine of STM are thus considered as associated facilities of the STC cement plant.

Shwe Taung Mining (STM) Co., Ltd. received the approval letter from Environmental Conservation Department (ECD), Ministry of Natural Resources and Environmental Conservation (MONREC) for the project of the Mudstone Quarry EIA report on 18th November 2022. However, the Mudstone Extraction License was expired on 15th November 2022 and received the license renewal from MONREC on 28th June 2023. STM conducted environmental monitoring program in line with Environmental Management Plan and comply Environmental Conservation Law and Rules, the Procedure of ECD and submit this biannual environmental monitoring report for May 2024 to October 2024.

Figure-1: Location of the Mudstone Quarry (Township Level)



1.2 Purpose of Environmental Monitoring

Monitoring is a means of verifying the effectiveness of the management and mitigation measures contained within the management plans listed in STC EIA for Cement Plant.

1) The Environmental Engineers from HSE department of Cement Plant shall do the following:
   - Monitor and implement the this ESMP at site;
   - Conduct Environmental monthly inspection checklist audit;
   - Monitor laboratory personnel while conducting their water sampling and testing method;
   - Assist and monitor the implementation of Waste Management; and
   - Monitor and review the air emission test result for compliance recommendation.
2) All inspection checklist audit finding that needs rectification shall be recorded in Environmental and Social tracker and will be assigned by Environmental Manager to concerned department head for rectification.
3) All water, effluent and air emission test results will be compiled for review and analyses by Environmental Manager and approved by Head of HSE Department.
4) All generated waste according to their classification and final disposal will be entered to waste management matrix for monthly report.
5) The Environmental Executive will be implementing and monitoring within the project area, new infestation and according to BAP.

1.3 Health, Social and Environment (HSE) Department

Shwe Taung Cement Co., Ltd. established HSE Department and responsibility of HSE Department are as follows.

1) Implementation of Environmental Management Plans of approved EIA report of STM Cement Plant, Comply Rules and Regulations of Environmental Conservation, report Environmental Monitoring
2) Supervise third party stakeholders, contractors and other organizations for environmental monitoring program
3) Monitoring environmental impact and report the relevant documents
4) Promote the ability of employees by conducting knowledge sharing training and awareness on environmental conservation.

2. Environmental Performance Indicators and Monitoring Schedule

Physical, biological and social environmental management components of particular significance have been identified as performance indicators. A comprehensive monitoring plan for each performance indicator has been prepared for all phases of the Project, presented in Table 1.

This includes the parameters to be measured, methods to be utilized, sampling locations, frequency of measurements, detection limits and responsibilities for implementation and supervision.

Impact monitoring will be undertaken during the life of the Project to verify the predicted levels of residual impacts from the Project and the effectiveness of the various management plans and mitigation measures.

Shwe Taung Mining Co., Ltd. will prepare an environmental monitoring report and submit to the Ministry of Natural Resources and Environmental Conservation, MONREC in every six months as per the EIA Procedure requirements.

Table-1: Environmental Monitoring Program

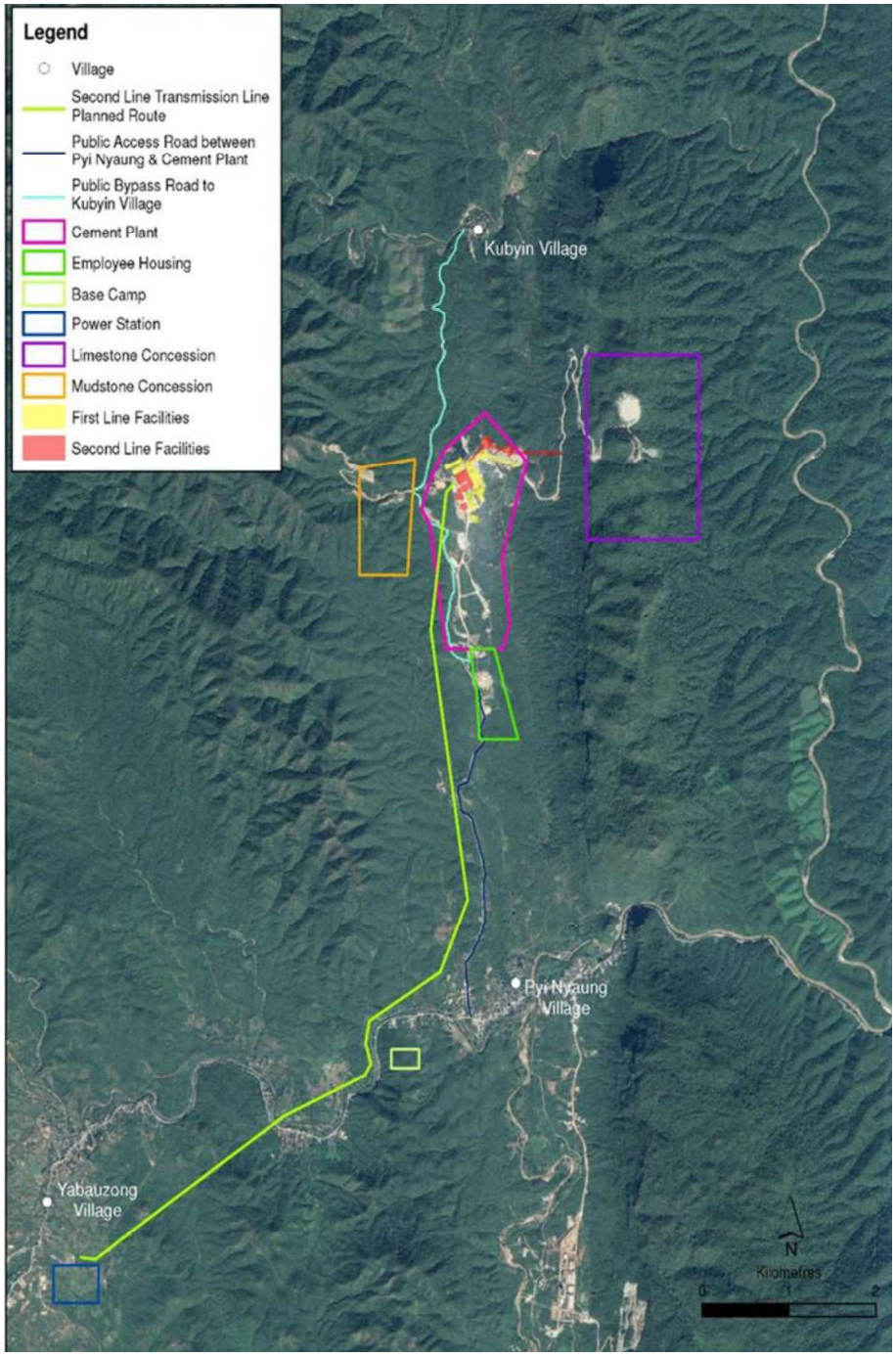
Project Stage/ Component	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
Operation / Mudstone Quarry	Inspection of mitigation compliance	General compliance with mitigation measures presented in the ESMP.	Project activity areas	Visual inspection of all active work areas and inspection of records	Weekly	HSE Team of Appointed Contractor and STM HSSE Department Head and Environmental Manager
Operation / Mudstone Quarry	Dust Impacts	Dust deposition	Cement Plant, Ku Pyin and Pyi Nyaung Villages	Dust deposition gauge	Monthly	STM HSSE Department Head and Environmental Manager
Operation / Mudstone Quarry	Discharge of treated wastewater and runoff.	Check compliance with Myanmar National Environmental Quality (Emissions) Guidelines for site runoff and wastewater discharges (for BOD, COD, TSS, oil and grease, pH, total coliform bacteria, total nitrogen, total phosphorus)	Sampling at: 1. Ku Pyin River, 2. Reservoir, and 3. Pyi Nyaung Village 4. Ye Shin Chaung creek 5. Mudstone runoff area	Standard analytical methods	Monthly	STM HSSE Department Head and Environmental Manager
Operation / Mudstone Quarry	Noise and vibration	Check compliance with noise levels specified in Myanmar National Environmental Quality (Emission) Guidelines (2015) for noise.	Ku Pyin Village and Pyi Nyaung Village	Standard analytical methods	Twice per year	STM HSSE Department Head and Environmental Manager
Operation / Mudstone Quarry	Soil and sediment	As per parameters in Section 5.5	At mudstone quarry run off area	Standard analytical methods	Twice per year	STM HSSE Department Head and Environmental Manager

3. Project Information

3.1 Project Location

The 165-acre mudstone quarry is located west of the STC cement plant (Figure 2). The concession to operate the mudstone quarry is renewed annually with the Forest Department since the concession was initially granted on 31 October 2013. An operating agreement for small-scale production of mineral was signed on 13 December 2017 with No. (1) Mining Enterprise of the Ministry of Natural Resources and Environmental Conservation (MONREC) for a five (5) year term. New medium-scale production of mineral was signed on 28 June 2023 with No. (1) Mining Enterprise of the Ministry of Natural Resources and Environmental Conservation (MONREC).

Figure -2: Location of STM Mudstone Quarry



3.2 Project Description

Mudstone extraction is currently undertaken by open excavation approximately 500 m above sea level to provide raw material for the existing cement plant. The extracted mudstone is transported by truck to the cement plant, which requires 97,500 tonnes of mudstone per annum to meet the current production capacity. Expansion of the STC Cement Plant with a second kiln will require an additional 262,260 tonnes of mudstone per year bringing the total to 359,760 tonnes of required mudstone per year. The life of the mudstone quarry is estimated at around 55 years based on annual mining volumes of approximately 290,000 tonnes.

All land leased to date by the company is state-owned forest land. With the exception of a small amount of land to accommodate the new transmission line, no new land is required to accommodate the expanded facilities.

4. Environmental Monitoring Program

4.1 Dust Monitoring

Cement industry is a potential anthropogenic source of air pollution. Cement manufacturing is a highly energy intensive process, in other word intensive fuel consumption for clinker making and resulting in emissions. The cement dust produced by cement manufacturing units i.e. calcining, crushing, grinding, packing, loading/unloading are considered one of the most pollutants such as PM10, PM2.5, SO2 and NO2 which affect the surrounding environment.

Stack Emission monitoring from Kiln System is measured with Testo PG-350 Portable Combustion and Emission Analyzer. Ambient Air Quality monitoring is measured with portable HAZ-SCANNER™ EPAS device.

Dust deposition gauges have been installed in Kubyin and Pyi Nyaung Villages and STM monitored dust deposition with 15points at cement plant and limestone quarry, cement plant housing/ accommodation area, Ku Pyin and Pyi Nyaung village.

4.1.1 Monitoring Result for Dust Deposition Monitoring

STM monitored dust deposition with 6 points at cement plant, housing/ accommodation area, Ku Pyin and Pyi Nyaung village. Water suppression was also undertaken on the roads by using the water from sedimentation ponds to mitigate dust emission on surrounding area in plant site, quarries and plant accommodation area. Please refer the Table 3 for dust deposition monitoring results from May 2024 to October 2024.

Table-2: Monitoring Location

No	Monitoring Location	Latitude	Longitude
1	STM Accommodation (Ingyin Hostel)	20°51'23.1"N	96°23'34.7"E
2	STM Accommodation (55acres)	20°50'54.5"N	96°23'34.8"E
3	Ku Pyin (Behind Library)	20°53'26.9"N	96°23'24.8"E
4	Ku Pyin (Primary School)	20°53'25.7"N	96°23'33.6"E
5	Pyi Nyaung (Near Main Road)	20°49'09.5"N	96°23'50.9"E
6	Pyi Nyaung (Information Center)	20°49'03.9"N	96°23'40.6"E

Figure-3: Dust Deposition Monitoring

Table-3: Dust Deposition Monitoring results at Workers Accommodation, Ku Pyin and Pyi Nyaung villages from May 2024 to October 2024

Samplers: Nay Hlaing Oo	**Dust Deposition Monitoring**						
	Test Result						
Parameter	**Australia & New Zealand Guideline (g/m2/Day)**	**May 2024**	**Jun 2024**	**Jul 2024**	**Aug 2024**	**Sep 2024**	**Oct 2024**
STM Accommodation (Ingyin Hostel)	1.191 (g/m2/Day)	1.35	0.36	0.42	0.35	0.35	0.32
STM Accommodation (55acres)		0.63	0.26	0.34	0.21	0.15	0.21
Ku Pyin (Behind Library)		1.21	0.35	0.50	0.24	0.36	0.12
Ku Pyin (Primary School)		0.80	0.36	Damage	Damage	0.40	0.22
Pyi Nyaung (Near Main Road)		0.89	0.36	0.42	0.40	Damage	Damage
Pyi Nyaung (Information Center)		0.58	0.31	0.39	0.28	0.28	0.44

4.2 Ambient Air Monitoring

4.2.1 Monitoring Location

4.2.1.1 Location Map for Ambient Air Monitoring

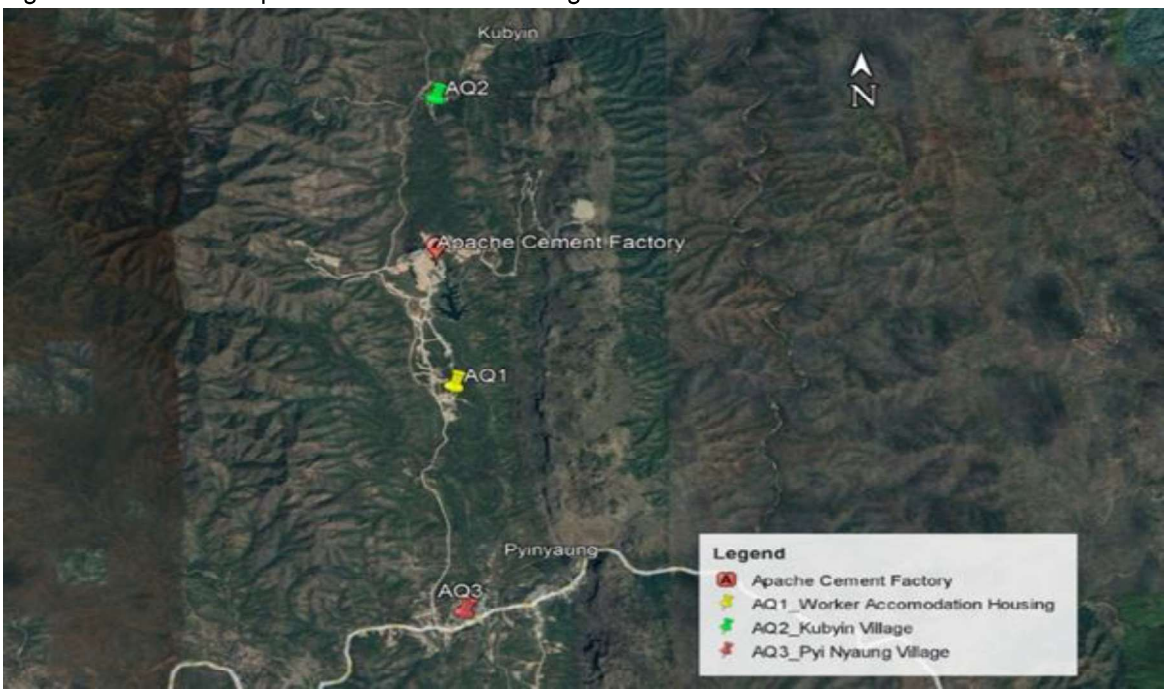
Ambient air quality monitoring location had been selected by identifying potentially affected with consideration given to the prevailing wind conditions through Operation and Construction activities.

Table-4: Monitoring Location

No	Monitoring Location	Latitude	Longitude
1	AQ1_Worker Accommodation	20°50'56.15"N	96°23'35.97"E
2	AQ2_Ku Pyin Village	20°53'20.47"N	96°23'27.58"E
3	AQ3_Pyi Nyaung Village	20°49'4.58"N	96°23'40.42"E

Figure-4: Ambient Air Quality Monitoring

Figure-5: Location Map of Ambient Air Monitoring at STM Mudstone



4.2.2 Monitoring Method

The portable HAZ-SCANNER™ EPAS wireless environmental perimeter air station is easily deployed as an ambient air quality monitor to measure and document critical U.S. EPA criteria pollutants including nitrogen dioxide, sulfur dioxide, ozone, carbon dioxide, particulates, VOCs, and more. The EPAS provides direct readings in real time with data logging capabilities.

Web link: https://www.skcinc.com/catalog/pdf/instructions/EPAS%20manual%20v.3.1.pdf

4.2.3 Monitoring Result for Ambient Air Quality Monitoring

Table-5: Summary of Ambient Air Quality Monitoring at Worker Accommodation

Ambient Air Monitoring by Haz-scanner								
Machine Name: Haz-scanner (EPAS)			Operator: Nay Hlaing Oo					
			Location: Worker Accommodation					
	ECD/ WHO / IFC Guideline		Test Result					
Parameter	Averaging Period	Guideline Value in µg/m3	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
Nitrogen dioxide	24 hours	200	82.09	34.32	43.48	75.87	71.98	40.89
Ozone		100	61.42	23.77	26.26	45.04	47.88	24.97
PM10		50	28.69	13.86	14.49	8.08	12.04	17.21
PM2.5		25	7.07	6.56	5.18	3.2	5.72	7.06
Sulphur dioxide		20	51.77	9.74	9.95	0.28	5.7	4.34
Carbon dioxide		-	0	0.006	20.79	0	0	0.07
Carbon monoxide		10 ppm	0.18	0.07	0.79	0.07	0.09	0.07

Table-6: Summary of Ambient Air Quality Monitoring at Pyi Nyaung village

Ambient Air Monitoring by Haz-scanner								
Machine Name: Haz-scanner (EPAS)			Operator: Nay Hlaing Oo					
			Location: Pyi Nyaung Village					
	ECD/ WHO / IFC Guideline		Test Result					
Parameter	Averaging Period	Guideline Value in µg/m3	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
Nitrogen dioxide	24 hours	200	85.08	38.87	61.21	32.93	30.16	66.96
Ozone		100	25.97	25.18	34.53	20.93	24.44	40.98
PM10		50	40.61	7.85	17.89	19.10	20.58	28.78
PM2.5		25	9.58	2.74	6.37	6.3	7.95	9.21
Sulphur dioxide		20	82.32	27.30	9.35	11	19.59	31.96
Carbon dioxide		ppm	0	0	32.35	0.01	0.60	10.14
Carbon monoxide		10 ppm	0.24	0.11	0.10	0.13	0.30	0.14

Table-7: Summary of Ambient Air Quality Monitoring at Ku Pyin village

Ambient Air Monitoring by Haz-scanner								
Machine Name: Haz-scanner (EPAS)			Operator: Nay Hlaing Oo					
			Location: Ku Pyin Village					
	ECD/ WHO / IFC Guideline		Test Result					
Parameter	Averaging Period	Guideline Value in µg/m3	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
Nitrogen dioxide	24 hours	200	64.46	165.21	37.44	65.27	71.60	41.79
Ozone		100	50.07	71.30	24.24	34.98	40.65	28.28
PM10		50	25.62	55.69	8.17	11.43	18.44	12.63
PM2.5		25	10.97	7.27	3.52	5.97	9.93	4.80
Sulphur dioxide		20	82.32	17.81	2.98	5.44	13.15	4.97
Carbon dioxide		ppm	0	0	30.41	0	0	0.00
Carbon monoxide		10 ppm	0.18	0.10	0.07	0.05	0.07	0.07

Note: This data submitted to ECD on a monthly basis
Ambient air quality results are attached in Appendix-C.

4.2.4 Air Quality Index

The HAZ-SCANNER™, ambient air quality monitoring system, provides a comprehensive data of current air contaminants in a project location. Then, air monitoring data of pollutants is processed into a dimensionless unit called the "Air Quality Index" (AQI); it serves as an information medium for the people to know the air quality health of their location and takes preventative steps accordingly (public participation). As instructed from Meiktila ECD to HSE Department in September 2023, STM has updated this bi-annual monitoring report and verified with Meiktila ECD on the reporting format during last quarter of 2023. Meiktila ECD accepted the updated report during January 2023. Therefore, STM has updated the AQI results in all bi-annual monitoring reports.

The AQI is divided into six categories. Each category corresponds to a different level of health concern. Each category also has a specific color. Thus, the AQI is a beneficial tool for the company, public, stakeholders, and regulators to understand the current state of air quality. The color makes it easy for people to quickly determine whether air quality is reaching unhealthy levels in their communities.

Figure-6: AQI Basics for Ozone and Particle Pollution

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Table-8: Summary of AQI at Plant Site from May 2024 to October 2024

Air Quality Index (AQI)									
Machine Name: Haz-scanner (EPAS)			Operator: Nay Hlaing Oo						
			Location: Worker Accommodation						
			AQI Results						
Parameter	Averaging Period	Unit	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Sensitive Group
PM_{10}	24 hour	ug/m3	26	12	13	7	11	16	People with respiratory disease are the group most at risk.
$PM_{2.5}$	24 hour	ug/m3	39	36	28	18	32	39	People with respiratory or heart disease, the elderly and children are the groups most at risk.
Carbon monoxide	8 hour	ppm	1	0	0	0	0	0	People with heart disease are the group most at risk.
Ozone	8 hour	ppb	28	11	16	21	22	11	Children and people with asthma are the groups most at risk.
Nitrogen dioxide	1 hour	ppb	41	17	22	38	36	20	People with asthma or other respiratory diseases, the elderly, and children are the groups most at risk.
Sulphur dioxide	1 hour	ppb	10	4	1	0	3	1	People with asthma are the group most at risk.

Table-9: Summary of AQI at Pyi Nyaung Village May 2024 to October 2024

Air Quality Index (AQI)									
Machine Name: Haz-scanner (EPAS)			Operator: Nay Hlaing Oo						
			Location: Pyi Nyaung Village						
			AQI Results						
Parameter	Averaging Period	Unit	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Sensitive Group
PM_{10}	24 hour	ug/m3	37	6	16	18	19	26	People with respiratory disease are the group most at risk.
$PM_{2.5}$	24 hour	ug/m3	52	15	35	35	44	51	People with respiratory or heart disease, the elderly and children are the groups most at risk.
Carbon monoxide	8 hour	ppm	2	1	0	1	3	1	People with heart disease are the group most at risk.
Ozone	8 hour	ppb	12	12	15	9	11	19	Children and people with asthma are the groups most at risk.
Nitrogen dioxide	1 hour	ppb	42	19	30	16	15	33	People with asthma or other respiratory diseases, the elderly, and children are the groups most at risk.
Sulphur dioxide	1 hour	ppb	44	14	4	6	10	17	People with asthma are the group most at risk.

Table-10: Summary of AQI at Ku Pyin Village May 2024 to October 2024

Air Quality Index (AQI)									
Machine Name: Haz-scanner (EPAS)			Operator: Nay Hlaing Oo						
			Location: Ku Pyin Village						
			AQI Results						
Parameter	Averaging Period	Unit	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Sensitive Group
PM_{10}	24 hour	ug/m3	23	51	7	10	17	11	People with respiratory disease are the group most at risk.
$PM_{2.5}$	24 hour	ug/m3	54	40	19	33	52	27	People with respiratory or heart disease, the elderly and children are the groups most at risk.
Carbon monoxide	8 hour	ppm	1	1	0	0	0	0	People with heart disease are the group most at risk.
Ozone	8 hour	ppb	27	33	10	16	19	13	Children and people with asthma are the groups most at risk.
Nitrogen dioxide	1 hour	ppb	32	86	18	32	36	21	People with asthma or other respiratory diseases, the elderly, and children are the groups most at risk.
Sulphur dioxide	1 hour	ppb	40	9	1	3	7	1	People with asthma are the group most at risk.

4.2.5 Evaluation

Ambient Air monitoring was monthly tested at location of Sensitive Air Respecters such as Cement Plant Accommodation area and nearby villages which are Pyi Nyaung and Ku Pyin. All results are within Myanmar National Environmental Quality (Emission) Guidelines (2015), except higher results of Sulphur Dioxide results. STM has noted that there was a lot of forest bush fires set up by some villagers to clean the bushes, nearly every day.

Figure-7: Human activities affected the Ambient Air Quality around STM Mudstone Quarry

STM has investigated the reason of SO_2 result more than Myanmar National Environmental Quality (Emission) Guidelines (2015) as STC uses the low Sulphur content in coal that used as fuel for cement production as stated in STC Cement Plant EIA report. STM has analyzed the monitoring results from the portable HAZ-SCANNER™ EPAS device and found out that SO_2 results were a lot higher during day time and less value at night time. This indicate that the plant is operating 24hours and it couldn't be less during night time.

AQI across the globe considers the number of pollutants (most of the developed countries and some developing countries considers PM 2.5 to measure the overall status of air quality being monitored), averaging time for which pollutants are measured, calculation method to compute air quality indices for each pollutant, calculation mode to aggregate the overall index, scale of an index, categories, color coding

scheme, and related descriptive terms of the pollutants. There are many air quality index models to represent air quality level in the world. STM selected to assess ambient air quality results in Pyi Nyaung area based on AirNow, which is a partnership with the U.S. Environmental Protection Agency (EPA), color-coded index standards.

By analyzing all the AQI results, it is noted that PM 2.5 values are majorly impacted by human activities (forest firing & open burning, etc.) from surrounding environment. STM will raise the public awareness among Mudstone Quarry community and also disclosed these air quality monitoring results and AQI results at Pyi Nyaung Information Center and Ku Pyin library according to STM Stakeholder Engagement Plan.

STM engaged 3rd party Environmental consultant as auditor and the auditor advised that this was the case as forest fires in the hills surrounding the plant were numerous at the time of the audit and consistent haze was present over the general area. The Auditor considered that the forest fires are contributing to elevated particulate readings being recorded by STM and elevated readings cannot be solely apportioned to emissions from Mudstone Quarry and associated facilities.

Therefore, STM was looking other factors that can be impacting on SO_2 results and found out that it was related to emission of mobile vehicles that were higher SO_2 than Kiln emission by using Testo PG-350 Portable Combustion and Emission Analyzer at STC Apache cement plant. There were a lot of heavy machineries and trailer trucks movement during day time and only trailer trucks movement during night time. So STM has raised awareness among the vehicle drivers to stop when they are parking or waiting, with sticker campaign “Turn Off Your Engine While Waiting or Parked” at Apache Cement plant.

These were a notable deterioration in regional air quality was found at Pyi Nyaung area. Moreover, cold air during the cold season can’t hold as much moisture, and so the air is usually drier during winter. These habits were also noted on contributing factors of higher results of PM_{10} and $PM_{2.5}$.

Moreover, there were regular device servicing and maintenance with NANOVA, authorized supplier of Myanmar of EPAS device, in January and March 2020. STM noted the Haz-scanner EPAS SO2 sensor has some issue as the ambient air quality monitoring result of SO2 was complied with Myanmar National Environmental Quality (Emission) Guidelines (2015) after NANOVA, the local authorized support of Myanmar.

Carried out sensor checking, testing using zeroing filter and internal tube cleaning by supplier 3 times due to sensor error reading of Haz-scanner devices.

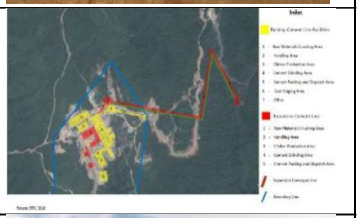
Water suppression are also undertaken on the roads to mitigate dust emission on surrounding area in plant site and accommodation area. (See in Appendix A).

Moreover, to safeguard occupational health, STM collaborates with the Social Security Board to conduct health check-ups using a mobile medical unit and arranges necessary medical care for employees as needed.

Figure-8: Occupational Health Care Records by Social Security Board

4.2.6 Air Quality Mitigation Measures

Table-11: Air Quality Management

Affected Aspect	Mitigation Measures	Action Taken	Photos
Air Quality	• Water suppression should be used on unpaved roads and work areas in dry and windy conditions;	Water suppression are undertaken on the roads to mitigate dust emission on surrounding area in plant site and accommodation area. (See in Appendix A).	
	• Drop heights during loading and transfer of materials should be minimized to no more than 0.5 m and shielded against the wind	Completed and installed for line 1 and line 2 design	
	• Storage of dusty materials (i.e. stockpiles) should be enclosed or operated with efficient dust suppression measures;	Implemented	
	• Stockpile heights should be kept to a minimum of no more than 3 m	Implemented	
	• Regular cleaning of conveyor belt systems;	Included in PME scope (Regular Maintenance of bag filter and electrostatic precipitator, see in Appendix)	
	• Crushed and blended raw materials should be stored in covered or closed bays;	Additional silo constructed in line 2	
	• Pulverized coal should be stored in silos or closed storage;	Implemented	
	• Clinker should be stored in covered or closed bays or silos with dust extractions;	Implemented	

	• Routine plant maintenance to keep air leaks and spills to a minimum;	Included in PME and PRD scope (Regular Maintenance of bag filter and electrostatic precipitator, see in Appendix)	
	• Material handling processes including crushing operations, raw milling and clinker grinding should be undertaken in enclosed systems maintained under negative pressure by exhaust fans. Dust should be removed using cyclones and bag filters; and	Equipped with cyclones and bag filters (Regular Maintenance of bag filter and electrostatic precipitator, see in Appendix)	
	• Implementation of automatic bag filling and handling systems;	Implemented both line 1 and line 2	
	• Use of electrostatic precipitators (ESPs) or fabric filter systems to collect and control fine suspended particulate emissions in the kiln gases;	Installed (Regular Maintenance of bag filter and electrostatic precipitator, see in Appendix)	
	• Use of cyclones to separate larger particulates of cooler gases followed by fabric filters and finally	Equipped with cyclones and bag filters line 1 and line 2 (Regular Maintenance of bag filter and electrostatic precipitator, see in Appendix)	
	• Mild dust should be captured and recycled using fabric filters within the mill.	Equipped with bag filters (Regular Maintenance of bag filter and electrostatic precipitator, see in Appendix)	

4.3 Water Quality Monitoring

Monitoring of water quality regularly is quite necessary for the assessment of water quality for beneficial purposes. Operation is dry process and do not generate wastewater. Sanitary wastewater from office and household are discharged to bio tank and treated wastewater are monitored in compliance with the NEQEG on BOD, COD, pH, SS, oil & grease, TN & TP and as per WHO Drinking water guidelines.

4.3.1 Monitoring Location

Figure 8, 9, 10 and 11 shows the location of Water Quality sampling point monthly on WHO Drinking Water Guidelines and IFC Effluent Water Guidelines for Water Quality Monitoring (e.g. pH, Color, Turbidity, Iron, BOD, COD etc.) are the parameters for measurement.

Table-12: Sampling location

No	Sampling Location	Latitude	Longitude
1	Ku Pyin Stream	20°53'22.92"N	96°23'23.92"E
2	Pyi Nyaung Stream	20°49'23.18"N	96°23'46.25"E
3	Ye Shin Stream	20°50'24.08"N	96°23'26.81"E
4	Supply Water	20°51'35.3"N	96°23'37.7"E
5	Sedimentation Pond 5	20°52'10.60"N	96°23'16.67"E
6	Sedimentation Pond 6	20°51'47.52"N	96°23'25.02"E

4.3.1.1 Location Map of Water Quality Sampling Points

Figure-9: Overview Map of sampling point for Stream Water and Supply Water Quality

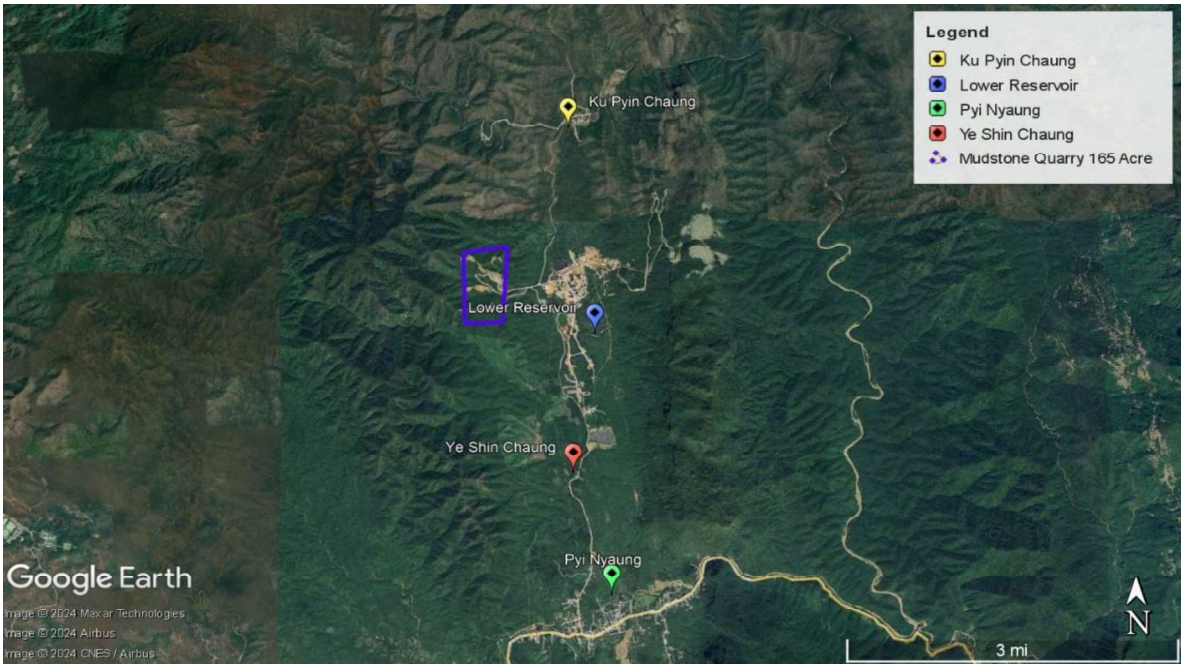


Figure-10: Overview Map of sampling point for Sedimentation Pond Water Quality

Figure-11: Water Quality Sampling Record

4.3.2 Monitoring Result for Water Quality

Table-13: Ku Pyin Stream Water Quality Monitoring Result

Ku Pyin Stream Water Supply Water Analysis									
ITEM	WHO Drinking Water Guideline	EQEG Guideline	Baseline Results	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
pH	6.5 – 8.5	6 - 9	6.3	No Water	7.9	8.3	8.5	8.5	8.6
Color	15 PCU	-	-		0	65	35	15	10
Turbidity	5 NTU	-	-		0.71	21.6	15.3	3.89	0.44
Calcium hardness	500 mg/l	-	-		270	225	180	246	200
Chloride (Cl)	250 mg/l	-	-		4	6	2	2	1
Sulphate (SO4)	200 mg/l	-	-		20	20	10	10	10
TSS	50 mg/l	50 mg/l	23		3	67	41	13	3
Nitrate	50 mg/l	-	-		4	-	7	5.9	16

Table-14: Pyi Nyaung Stream Water Quality Monitoring Result

Pyi Nyaung Stream Water Supply Water Analysis (Near Pyi Nyaung)							
ITEM	WHO Drinking Water Guideline	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
pH	6.5 – 8.5	No Water	7.8	7.9	8.2	Cannot collect water sample because of the flooding issues	8.3
Color	15 PCU		20	25	5		10
Turbidity	5 NTU		1.11	1.36	4.36		7.21
Calcium hardness	500 mg/l		207	195	150		168
Chloride (Cl)	250 mg/l		4	6	5		2
Sulphate (SO4)	200 mg/l		20	20	10		10
TSS	50 mg/l		10	8	17		22
Nitrate	50 mg/l		9.1	-	5.2		8.4

Table-15: Ye Shin Stream Water Quality Monitoring Result

Ye Shin Stream Supply Water Analysis							
ITEM	WHO Drinking Water Guideline	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
pH	6.5 – 8.5	No water	No Water	8.3	8.4	8.4	8.3
Color	15 PCU			65	10	40	25
Turbidity	5 NTU			12.9	3.73	18.2	5.31
Calcium hardness	500 mg/l			147	78	90	129
Chloride (Cl)	250 mg/l			3	2	2	1
Sulphate (SO4)	200 mg/l			20	10	10	10
TSS	50 mg/l			36	11	46	13
Nitrate	50 mg/l			-	10.4	-	7.8

Table-16: Lower Reservoir Water Quality Monitoring Result

Lower Reservoir Supply Water Analysis									
ITEM	WHO Drinking Water Guideline	EQEG Guide line	Baseline Results	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024
pH	6.5 – 8.5	6 - 9	7.6	8.3	8.6	8.5	8.8	8.4	8.5
Color	15 PCU	-	-	60	100	40	15	20	25
Turbidity	5 NTU	-	-	9.83	10.2	7.74	7.93	16.9	5.49
Calcium hardness	500 mg/l	-	-	90	135	120	129	99	126
Chloride (Cl)	250 mg/l	-	-	5	5	5	3	3	3
Sulphate (SO4)	200 mg/l	-	-	20	20	20	20	10	10
TSS	50 mg/l	50 mg/l	11	40	37	37	34	41	22
Nitrate	50 mg/l	-	-	4.8	26	-	7.6	6	7

Lower reservoir supply water test results from external laboratories are attached in Appendix-(B-5).

Table-17: Sedimentation Pond-5 Surface Water Test Result

Sedimentation Pond 5 Surface Water Test Result									
Parameters	IFC Waste Water Guideline	EQEG Guide line	Baseline Results	May 2024	Dec 2023	Jan 2024	Feb 2024	Mar 2024	Apr 2024
pH	6 ~ 9	6 ~ 9	7.6	7.7	8	8.3	8.1	8.1	8.2
Chemical Oxygen Demand (COD)	0~125 mg/l	125 mg/l	41.5	68	96	93	60	55	12
Biological Oxygen Demand (BOD)	0~30 mg/l	30 mg/l	6.5	43	13	26	-	-	-
Total Suspended Solid (TSS)	Max 50 mg/l	50 mg/l	215.5	130	99	87	48	28	18
Total Nitrogen	10 mg/l	10 mg/l	1.7	ND	1.65	-	2.05	2.75	1.78
Total Nitrate	44.29 mg/l	-	-	ND	7.3	-	0.3	12.2	7.9
Total Phosphorous	2 mg/l	2	0.06	0.2	0.2	0.2	0.3	0.3	0.1
Oil and grease	10 mg/l	10 mg/l	DL	ND	ND	ND	ND	ND	ND
Total Coliform Bacteria	-	100 ml	45.50	-	-	-	-	-	-

Table-18: Sedimentation Pond 6 Surface Water Test Result

Sedimentation Pond 6 Surface Water Test Result									
Parameters	**IFC Waste Water Guideline**	**EQEG Guide line**	**Baseline Results**	**May 2024**	**Jun 2024**	**Jul 2024**	**Aug 2024**	**Sep 2024**	**Oct 2024**
pH	6 ~ 9	6 ~ 9	5.6	8.7	8.4	8.5	9.5	10.1	10
Chemical Oxygen Demand (COD)	0~125 mg/l	125 mg/l	2.5	119	37	36	55	45	5
Biological Oxygen Demand (BOD)	0~30 mg/l	30 mg/l	1	78	16	15	-	-	-
Total Suspended Solid (TSS)	Max 50 mg/l	50 mg/l	9	72	38	39	43	255	139
Total Nitrogen	10 mg/l	10 mg/l	0.3	0	0.69	-	1.31	9.6	2.37
Total Nitrate	44.29 mg/l	-	-	0	3.1	-	5.8	2.37	10.5
Total Phosphorous	2 mg/l	2	0.01	0.2	0.2	0.3	0.3	0.2	0.0
Oil and grease	10 mg/l	10 mg/l	DL	ND	ND	ND	-	-	-
Total Coliform Bacteria	-	100 ml	ND	-	-	-	-	-	-

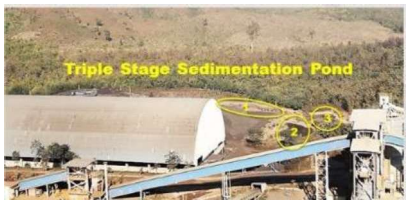
** Not for drinking water. No effect for Health & Environment.*
** Total suspended solid (TSS) values are above the guidelines due to lower water flow rates in the winter and summer seasons.*
** STM has tested the surface water quality from the sedimentation ponds for using water with water truck to suppress dust around the cement plant and quarry sites.*

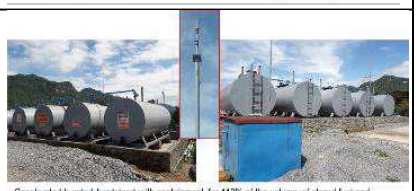
Laboratory results for water quality are attached in Appendix-B.

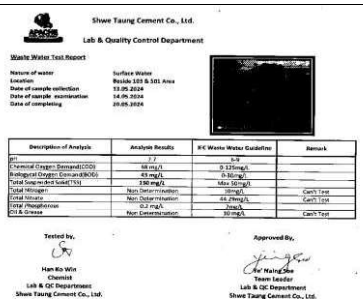
4.3.3 Water Quality Mitigation Measures

Table-19: Water Quality Management

Affected Aspect	Mitigation Measures	Action Taken	Photos
Surface Water Quality	• Implementing storm water management practices to manage the flow of storm-water, prevent uncontrolled migration and minimize erosion and sediment transport from project facilities and disturbed areas. • Construction of a dedicated drainage network to intercept and diversion runoff;	Constructed stormwater drains around the cement plant channel to sedimentation ponds	  Figure (2) Drainage for catchment area
	• Divert runoff from the mudstone quarry to an appropriately sized and maintained sedimentation pond to allow adequate retention time for suspended solids to settle;	Constructed sedimentation pond dual stage.	Sedimentation pond from storm water runoff to allow adequate retention time for suspended solids to settle before entering wetlands area.  
	• Divert runoff from the limestone quarry to the wetland created by STM via a weir to remove suspended solids before entering the wetland;	Constructed sedimentation pond dual stage.	
	• Baffles or other measures to reduce the velocity of runoff downhill slopes should be installed to minimize scouring;	Visual monitoring by MNE	 Figure (1) Zoning for slope protection measures

	• Exposed areas and overburden dumps should be revegetated as quickly as possible.	Tree planting during monsoon season	
	• STM will prepare and implement a Storm water Management Plan considering the mitigation committed above.	Plan have been developed and construction on progress for Line 2 area. Line 1 area was constructed since 2014.	 Figure 3.2 Storm water flow, cement plant and limestone mine area
	• All areas used to store and/or handle coal, laterite and limestone should be paved and surrounded by perimeter drains. For the coal storage area, it should be covered;	Implemented and covered during monsoon season	
	• Runoff from the laterite and limestone staging areas shall be diverted to retention ponds and may be used for greening, dust suppression or discharged to the onsite reservoir.	Constructed sedimentation pond dual stage and reuse for gardening and dust control.	 Coal Staging Stockpile: Double Stage Sedimentation Pond 
	• For the coal storage area, STM has agreed to cover this area. Water from the roof will be diverted via storm water drains to retention ponds and may be used for greening, dust suppression or discharged to the onsite reservoir. Runoff collected by the interceptor drains (small volume) within the covered coal storage area will be diverted for treatment at the wastewater treatment plant.	Constructed sedimentation pond triple stage.	

	• Discharges into the reservoir and any runoff discharged to surface streams should be monitored monthly for compliance with Myanmar National Environmental Quality (Emissions) Guidelines for site runoff and wastewater discharges (for TSS, oil and grease, pH).	Conducted and monitored by LQC result documented (See in 4.3.2 water result)	 Shwe Taung Cement Co., Ltd. Lab & Quality Control Department Water Quality Test Report Nature of water: Lower Reservoir/Non Potable Water Location: Infront of Pump Station. Date of sample collection: 15.05.2024 Date of sample examination: 16.05.2024 Date of completing: 22.05.2024 Description of Analysis / Analysis Results / WHO Drinking water Guideline: pH 8.1 / 6.5 - 8.5; Colour(True) 60 PCU / 15 PCU; Turbidity 9.83 NTU / 5 NTU; Calcium Hardness 90 mg/l / 500 mg/l as CaCO3; Chloride(as Cl) 5 mg/l / 250mg/l; Sulphate(as SO4) 20 mg/l / 200mg/l; Total Suspended Solid(TSS) 40 mg/l / 50mg/l; Nitrate 4.8 mg/l / 50mg/l. Tested by: Han Ko Win, Chemist, Lab & QC Department, Shwe Taung Cement Co., Ltd. Approved By: Ye Naing Soe, Team Leader, Lab & QC Department, Shwe Taung Cement Co., Ltd.
	• Lightning protection should be installed at all areas used to store bulk fuel and other flammables;	Installed at fuel depot.	 Constructed bunded hardstand with containment for 110% of the volume of stored fuel and equipped with oil-water separator. Installed lightning protection post.
	• The fuel storage facility should be constructed on bunded hardstand with containment sufficient for 110% of the volume of the single largest tank;	Equipped.	 Constructed bunded hardstand with containment for 110% of the volume of stored fuel and equipped with oil-water separator. Installed lightning protection post.
	• Discharges from this bunded area should pass through an oil-water separator;	Installed	 Constructed bunded hardstand with containment for 110% of the volume of stored fuel and equipped with oil-water separator. Installed lightning protection post.
	• Spill Response Plan should be developed and implemented; (conducted awareness training and deliver pamphlet to relevant employees in the plant)	Approved and implemented	 Develop training materials for spill control response.  Conducted training and drill for Spill Response Procedure  
	• Discharges from the coal staging area should be monitored monthly for compliance with Myanmar National Environmental Quality (Emissions) Guidelines for site runoff and wastewater discharges (for TSS, oil and grease, pH).	Conducted and monitored by LQC result documented (See in Section 4.3.2 for water test result)	

			
	• Sanitary wastewater (includes toilet, sink, shower) should be discharged to the wastewater treatment plant and not be directly discharged to any water bodies. Kitchen flows should be discharged for treatment at dedicated grease trap / water purification unit and not be directly discharged to any water bodies.	Constructed Bio Tank for treatment of sanitary wastewater.	
	• Treated wastewater will be monitored monthly at the centralized treated wastewater tank to check compliance with the NEQEG on BOD, COD, pH, SS, oil and grease, TN, TP and residual chlorine and monitored annually for compliance with the full list of parameters on the NEQEQ for Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (General Application). Sludge generated from the wastewater treatment units will be dewatered to meet with the Myanmar NEQEG for Bio solids and Sludge Disposal before disposal to the non-hazardous solid waste management facility. Sludge samples from each modular tank will be checked yearly for compliance with the NEQEG for Bio solids and Sludge Disposal.	Conducted and monitored by LQC result documented (See Section 3.2.2 for water result)	

*Data from Environment shared google drive

Notice: Presently all the discharge from bund wall areas directly channel to sedimentation pond.

4.3.4 Evaluation

The establishment of sewage and sanitary waste management and storm water management is executing in plant site. Since the dry process is used for the cement production and the second line is also adopted a similar dry process as the first line, do not generate wastewater from first line and second line production. Discharge sanitary wastewater from plant office and household accommodation are diverted for treatment at the wastewater treatment plant. Ku Pyin Stream water and reservoir water are monitored monthly in compliance with WHO drinking water guideline and NEQEG guideline (General Application guideline). Moreover, surface water from sedimentation ponds are monitored monthly in compliance with the NEQEG guideline and compared with baseline results. Sometimes, total suspended solid (TSS) values are above the guidelines due to lower water flow rates in the winter and summer seasons.

4.4 Noise Monitoring

The nearest representative noise sensitive receptors (NSRs) that may potentially affect by the noise impact due to the Project are identified as Pyi Nyaung and Ku Pyin villages. STM operate noise monitoring twice a year in accordance with Mudstone Environmental Monitoring Plan and results are shown in Table 20 below:

4.4.1 Location Map of Noise Quality Monitoring Points

Figure-12: Noise Quality Sampling Points

Table-20: Noise Monitoring Results in Pyi Nyaung and Ku Pyin villages

Noise Monitoring Results								
Machine Name: KIMO LDB 23						Operator: Nay Hlaing Oo		
Location	ECD/ WHO / IFC Guideline					Test Result		Remark
	NEQEG and IFC Noise Level Guideline, dB(A)		Baseline Noise Levels, dB(A)		Receptor	Day (07:00 – 22:00 hrs), dB (A)	Night (22:00 – 07:00 hrs) dB (A)	
	Day	Night	Day	Night				
Pyi Nyaung Village	55	45	-	-	Residential	80.2	63.4	
Ku Pyin Village	55	45	-	-	Residential	53.9	52.5	

4.4.2 Evaluation

The noise level assessment for Pyi Nyaung Village reveals significant exceedance of NEQEG and IFC guidelines, with measured daytime levels at 80.2 dB(A) and nighttime levels at 63.4 dB(A). The primary cause of this excess noise is not related to Shwe Taung's cement plant or quarry operations but rather due to the village's proximity to the Meikhtila-Taunggyi Highway Road, which experiences heavy vehicular traffic, particularly during nighttime hours. This high traffic volume poses a serious concern for community health and well-being, given its continuous nature.

4.5 Soil Quality Monitoring

Soil quality monitoring was undertaken in April 2023 in Ku Pyin village. The locations for soil sampling are provided in Figure 12. Two soil samples were taken at each sampling location These samples were sent to the laboratory analyzed by Department of Agriculture (Land Use), Ministry of Agriculture, Livestock and Irrigation (MOALI). Parameters measured included Moisture, pH, Electrical Conductivity, Organic Carbon, Humus, Total Nitrogen, Ca^{2+}, Mg^{2+}, K^{+}, P, K_2O, Water Soluble SO_4^{2-}. Soil quality monitoring results for laboratory analyzed parameters are shown in Table 5.

4.5.1 Location Map of Soil Quality Monitoring Points

Figure-13: Soil Quality Sampling Points

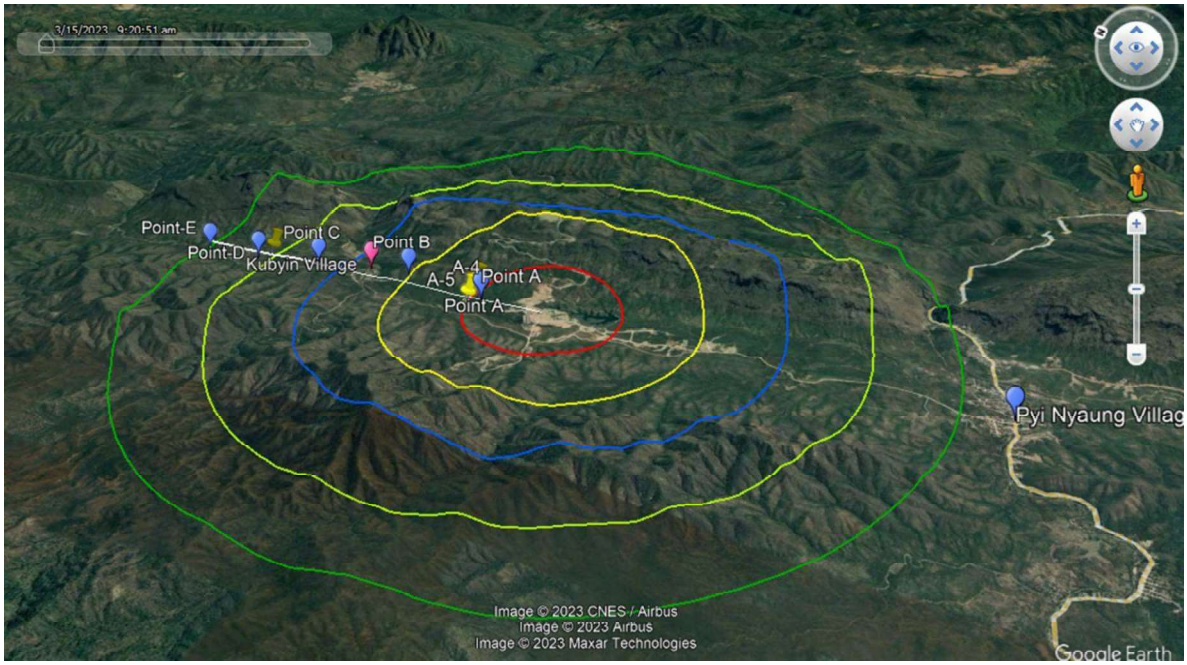


Table-21: Soil Monitoring Results in Ku Pyin village

Parameter	Unit	Baseline	Sample A	Sample B	Sample C	Sample D	Sample E	Remark
Moisture %	%	14.6	3.13	2.23	2.64	4.99	2.65	
pH	pH	6.6	7.12	6.90	7.28	7.99	6.66	
Electrical Conductivity	dm/s	0.77	0.08	0.06	0.09	0.15	0.06	
Organic Carbon%	%	1.62	1.37	1.04	1.89	1.98	1.25	
Humus	%	-	2.36	1.79	3.25	3.41	2.15	
Total N%	%	-	0.108	0.107	0.107	0.165	0.107	
Ca^{2+}	Meq/100gm	-	14.43	9.53	13.68	22.43	15.06	
Mg^{2+}	Meq/100gm	-	2.75	0.68	1.37	1.40	2.74	
K^{+}	Meq/100gm	-	0.54	0.41	0.43	0.47	0.41	
P	ppm	-	0.41	0.41	0.41	0.42	0.41	
K_2O	mg/100gm	-	25.39	19.02	20.33	22.11	19.12	
Water Soluble SO_4^{2-}		-	0.04	0.08	0.08	ND	0.04	

4.5.2 Evaluation

Agronomist stated that the current outcomes are satisfactory and that it would be beneficial for STM to implement small-scale plantations in the Ku Pyin area if STM can demonstrate the success of planting as a model plantation. He then responded that all test results have been reliable for at least a year.

4.6 Waste Management Monitoring

4.6.1 Generation of Non- Hazardous Waste

In Shwe Taung Cement Factory, collect non-hazardous waste generated from plant site and accommodation area every day and dispose them to Temporary Non-hazardous Storage Area. For kitchen wastes, compost or use as animal feed in nearby villages. On the other hand, dispose laboratory and clinical wastes to Meikhtila Incinerator, Meikhtila District, Mandalay Region, approved by Meikhtila City Development Committee and have plan to dispose hazardous wastes to Golden Dowa Eco-system Myanmar Co., Ltd., Accredited Waste Management Company. Figure 12 and 13 shows location map of waste disposal area and waste collection points.

Figure-14: Location Map of Collection Points of All Generated Wastes from Plant Site and Accommodation Area

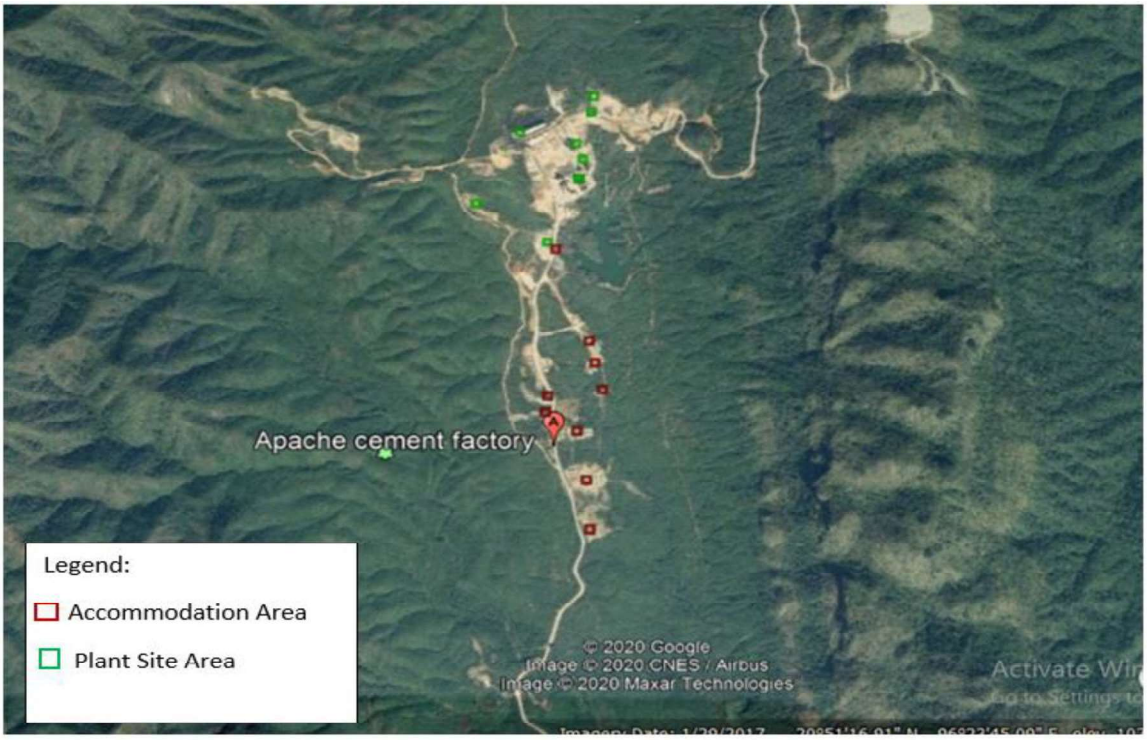


Figure-15: Location Map of Disposal Sites for Waste from Plant and Accommodation Area

Figure-16: Location Map of Site Waste Dumping Area (Scrap Yard)

Table-22: Generated Non-Hazardous Waste

STM Non-hazardous Waste Generated from May 2024 to October 2024		
Month	**Weight (kg)**	**Remark**
May 2024	18920	Disposed to Temporary Non-hazardous Solid Waste Storage Area
June 2024	17180	
July 2024	18660	
August 2024	21260	
September 2024	17280	
October 2024	17120	

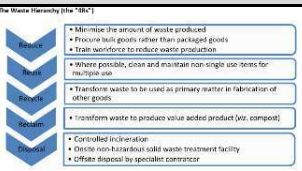
4.6.2 Generation of Hazardous Waste

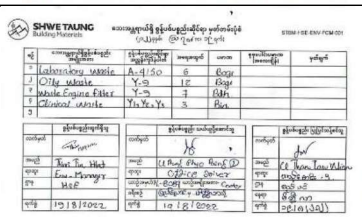
Table-23: Generated Hazardous Waste

STM Generated Hazardous Waste						
Sr.	**Date**	**Type of Waste**	**Quantity**	**Amount (kg)**	**Treatment Facility**	**Remarks**
1	7 August 2023	Clinical, Laboratory and Contaminated Oil rags	-	1740 kg	Meikhtila Municipal Incinerator	Disposal

4.6.3 Waste Management Mitigation Measures

Table-24: Waste Management Mitigation Measures

Affected Aspect	Mitigation Measures	Action Taken	Photos
Waste Management	A waste management plan (WMP) for the project has been developed that include the following as a minimum:	Approved waste management plan	

	• A waste inventory should be created to establish the types of wastes;	Established (dispose Non-hazardous waste to Temporary N-H Solid Waste Storage area whereas Hazardoous waste will be disposed to DOWA, accredited waste management company. Clinical and Laboratory waste are disposed to Meikhtila Incinerator, approved for disposal by Meikhtila City Development Committee)	  
	• Identify disposal routes (including transport options and disposal sites) for all wastes generated;	Identified waste streams (See Figure-11 & 12 for waste collection point and disposal site)	
	• Segregate wastes and recycle wherever possible;	Segregated scrap materials for resale and reuse (See Figure-13 for Scrap Yard Area)	 
	• Hazardous wastes should be segregated and disposed separately from non-hazardous wastes using a license contractor;	Hazardous waste treatment by DOWA and non-hazardous waste, municipal waste disposed at Temporary Non-hazardous solid waste storage area. Medical and laboratory waste dispose to Meikthila Incinerator, approved by Meikhtila City Development Committee)	
	• Hazardous wastes shall be labelled and stored in sealed containers that are stored on bunded hardstand. Hazardous wastes that are unsuitable for disposal in the cement kiln (such as waste oil drums) shall be returned to the manufacturer or trucked to Mandalay for appropriate disposal at a hazardous waste facility;	Hazardous waste are collected and deposed to dispose to Meikthila Incinerator, approved by Meikhtila City Development Committee.	 

	• Waste oil should be used for kiln start-up;	Resale by ADM	 
	• Organic waste for composting or use as animal feed in nearby villages;	Organic waste (vegetables waste) are collected and composed to use as a fertilizer. Organic waste (food waste) are collected by locals for as animal feed	  
	• Waste suitable for use as fuel in the Mudstone Quarry should be considered; and	Used waste oil resale to local merchant	
	• The existing landfill is not lined and should be only used for inert (non-reactive) and non-hazardous waste only.	Implemented (Constructed Old Temporary Non-hazardous solid storage area for disposing Non-hazardous waste and operated it from 2012 to June 2019. Replantation in old place after closure. After inspection of New Temporary Non-hazardous solid storage area from ECD and governmental organizations in 5 July 2019, operate that one until now.)	  Former landfill was backfilled with top soil and conducted re-plantation. Constructed Temporary Solid Non-hazardous wastes storage equipped with clay liner.  Temporary Solid Non-hazardous wastes storage inspected by ECD and other government entities for the approval of EIA.

4.6.4 Evaluation

Implementing principles of the waste hierarchy in the most responsible manner (reduce, reuse, recycle, reclaim, dispose) in the plant site by conducting tool box talk, delivering pamphlet, offering waste bin in each plant site department and accommodation area, undertaking simultaneous mass housekeeping 9 campaigns occasionally, using waste manifest form, daily conducting housekeeping in the site and surrounding area to get awareness on waste reduction, segregation, collection and disposal practices that avoid impacts on the physical, biophysical and social environments.

5. Biodiversity Action Plan Implementation

STM is continuous implementing Biodiversity Action Plan (BAP) with regular Transect Survey, Invasive Survey, Wildlife Market Survey, maintaining the Ecosystem Restoration Plantations and 3 nurseries, and raising biodiversity conservation activities around the Mudstone Quarry operation.

Table-25: Biodiversity Action Plan Implementation

Biodiversity Action Plan Implementation				
No.	**Type of Survey**	**Implementation Month**	**Process**	**Remark**
1	Invasive Species Survey	December 2023	Done	
2	Transact Survey	January 2024	Done	
3	Transact Survey	February 2024	Done	

Invasive Species Survey

These dominant species mostly found cement plant and should control in time. Mimosa pudica (Htikayone) should collect and burned to control distribution. Leucaena leucocephala, (Bawsakaing) should cut the tree before fruiting season and dig the root to stop coppicing. Chromolaena odorata (Bizat) should cut the bushes and burn before flowering season. They can reproduce especially in wind dispersal methods and sometime by animals and trucks. Detail survey will make in quarterly to monitor the distribution of invasive species. We should also use herbicide to control some invasive species.

Figure-17: Invasive Species Survey

Chromolaena odorata

Mimosa pudica

Chromolaena odorata

Leucaena leucocephala

Table-26: Ecosystem Restoration Plantation List by years

No.	Year	Acre	No. of trees	Remark
1	2016	33	17820	
2	2017	15	5950	
3	2018	50	60500	
4	2019	115	50100	
5	2020	150	81100	
6	2021	150	81100	
7	2023	65	35100	
	2024 (Total)	**578**	**331670**	

STM has successfully implemented an ecosystem restoration initiative by establishing plantations for land leased agreement with the government since 2016. The maintenance of these plantations is diligently carried out through routine operations, including weeding, patching, and fire protection across all areas.

Table-27: Third Weeding Progress of Ecosystem Restoration Plantations

Location	Particular	Patched Area in 2023	Patched Area in June 2024	July	August	September	October
				1st Weeding	Patching	2nd Weeding	2nd Weeding
Near Apache	ERP 33 Ac	7 Ac	-	7 Ac (100%)	2100 Nos	7 Ac (100%)	-
Near Apache	ERP 65 Ac	33 Ac	-	33 Ac (100%)	700 Nos	33 Ac (50%)	33 Ac (100%)
South Pyi Nyaung	ERP 100 Ac	16 Ac	-	16 Ac (100%)	1000 Nos	0%	16 Ac (100%)
		–	9 Ac (4860 Nos.)	9 Ac (100 %)	-	9 Ac (100%)	-
Grand Total				**65 Ac (100%)**	**3800 Nos.**	**65 Ac (100%)**	

Between May and October 2024, Shwe Taung Mining (STM) carried out comprehensive ecosystem restoration activities within the Pyi Nyaung and Ku Pyin Reserved Forests. The activities commenced in late May with patching operations across 100 acres of the Pyi Nyaung Reserved Forest, successfully restoring 4,860 plants by mid-June using zero-burning techniques. In July, a first round of weeding was completed in this area, with a status check conducted on July 9 confirming its success. In August, STM initiated patching activities in both the Ku Pyin and Pyi Nyaung Reserved Forests, planting a total of 3,800 plants, with the process wrapping up by mid-month. Fertilization activities were subsequently completed by the end of August. A second round of weeding commenced in September, achieving 65% completion by the end of the month, and was fully finalized in mid-October, as confirmed by HSE for the status checks.

Figure-18: Patching Process at Ecosystem Restoration Plantation



STM took zero burning practice in all plantation to protect carbon emission from our activities. It may lead to develop slow growth of some species such as Kyun and Myanmar Kokko. The grow rate of Sein Pan is the best growth rate that average is about 7 ft in South Pyi Nyaung plantation. Mazili grow rate is the best in plantation 65 acre near cement plant. Padauk was damage due to domestic buffalo from near village. STM will mitigate to get better growth rate plantation in next year by changing of planting pattern, selection of species, preparation of soil before planting.

STM will operated fire protection for all patched area in plantation to protect wild fire and its damages before dry seasons.

6. Corporate Social Responsibility

STM Mudstone Quarry implements Corporate Social Responsibility (CSR) to communities and release newsletter in quarterly, see in Appendix-D.

7. Occupational Health and Safety

Workers are at risk of occupational health and safety incidents. Such incidents may be linked to the physical environment in which they operate, the procedures they have to abide by or the on-site health and safety culture.

Shwe Taung has existing occupational health and safety policies and procedures in place at the mudstone quarry and these are applicable for the expansion project. These procedures include requirements in terms of operational safety (blasting, excavator, ladder, crane and forklift management, working at height, personal protective equipment use, lifting operation, emergency management, etc.). With the support of the IFC, STC has retained international consultants to assist with the review, update and implementation of its occupational health and safety procedures.

Generally, there is one to two daytime blasting occurred at mudstone quarry within two to three months. Blasting is thus infrequent and will be managed under the Standard Operating Procedure (SOP) for blasting and excavation to ensure safety of staff and community.

7.1 Fire Safety Measures

In compliance with the directives of the Myanmar Fire Services Department, STM has implemented a series of fire safety measures to mitigate fire hazards in the workplace. These measures include conducting regular fire drills and maintaining firefighting equipment.

The main objective of regular fire drills is to ensure all staff are familiar with fire safety protocols and the use of firefighting equipment. Training were conducted to familiarize staff with the operation of a fire truck in case of an emergency. Moreover, all employees were trained on the correct procedures to follow upon hearing the fire alarm. This includes how to safely evacuate to the nearest assembly area within a short timeframe. Staff were also trained to identify and use firefighting facilities such as fire hydrants, fire extinguishers, and other related equipment. Activities during the drill were meticulously documented, and photographs were taken to provide a visual record of the procedures and participation.

Figure – 19: Fire Drill Records

7.2 Occupational Hazard Prevention and First Aid Training

Ensuring the safety and well-being of our employees is paramount. STM conducts comprehensive training programs focused on occupational hazard prevention and first aid. These programs are meticulously documented with detailed procedures and photographic evidence to uphold high standards of health and safety compliance.

OHS training at STC encompasses a broad spectrum of critical safety topics. Employees receive training on energy isolation to prevent accidental startups, and on confined space and rescue equipment to ensure safe operations in restricted areas. Office safety training covers best practices for maintaining a safe work environment, while working at height training emphasizes the use of proper safety measures and equipment. Training for riggers and signalmen ensures safe rigging practices and effective communication during lifting operations. Hot work training covers procedures and precautions for tasks involving open flames or heat, and safety inductions provide new employees with essential safety knowledge.

Additional training includes belt conveyor guarding and machine cover to enhance machinery safety, first aid for immediate response to injuries, and scaffolding safety for the proper erection and use of scaffolds. Programs such as "Take 2 Minutes" encourage employees to assess risks before starting tasks, and safety interaction and observation promote proactive safety discussions. Electrical safety training addresses procedures for working with electrical systems, while manual handling training teaches proper techniques to prevent injuries. Risk management training focuses on identifying, assessing, and mitigating workplace risks.

Internally, STM conduct annual employee safety inductions to refresh safety protocols, permit to work training to ensure understanding of the permit system for hazardous tasks, and safe work procedure training. Risk assessment training is provided to develop techniques for evaluating and mitigating risks. Lototo (Lock Out, Tag Out, Try Out) training ensures the safe de-energization of equipment, and specific electrical training addresses managing electrical hazards. Regular office safety training and fire drills are also conducted to reinforce these practices.

A key component of STM's training is first aid. First aid training program equips employees with the skills necessary to provide immediate assistance in the event of an injury or health emergency. This includes basic first aid techniques, CPR, and the use of first aid equipment. Employees learn how to respond to a variety of medical situations, ensuring that they are prepared to act swiftly and effectively. This training is crucial in minimizing the impact of workplace injuries and can be life-saving in critical situations. Moreover, to safeguard occupational health, STM collaborates with the Social Security Board to conduct health check-ups using a mobile medical unit and arranges necessary medical care for employees as needed.

Figure –20: OHS, First Aid Trainings Records and Medical check-ups from Social Security Board using Mobile Medical Unit




8. Conclusion and Recommendation

STM Mudstone Quarry demonstrates the implementation of Environment Monitoring Plan in which they are operating and has properly assessed the key potential environmental and social impacts associated with the Mudstone Quarry operation. It is ensuring that the Myanmar environmental legislative compliance and IFC standards of good practice during the Mudstone Quarry expansion project and operations in Thazi Township, Mandalay Region.

Mitigation measures are properly implemented as per stated in EMP, it is expected that the environmental and social impacts are managed by STM with robust environmental management system that is implemented by a well-resourced, integrated and competent HSE staffs as per compliance of STM Mudstone Quarry EIA report.

The Environment Management Plan concludes that no major direct impacts are anticipated from this Project and all environmental impacts have been properly and progressively mitigated. These monitoring results will be properly communicated to stakeholders, especially local community, as per Stakeholders Engagement Plan. Moreover, biannual environmental monitoring reports are disclosed to community at Information Centers in Pyi Nyaung and Ku Pyin villages and has uploaded in Apache Cement Website https://www.apachecement.com/. The “Status of Mudstone Biannual Environmental Monitoring Reports Submission to ECD” can be seen in the Appendix-A.

9. Appendix

APPENDIX-A

Figure: Water Suppression Map to mitigate dust emission in plant site

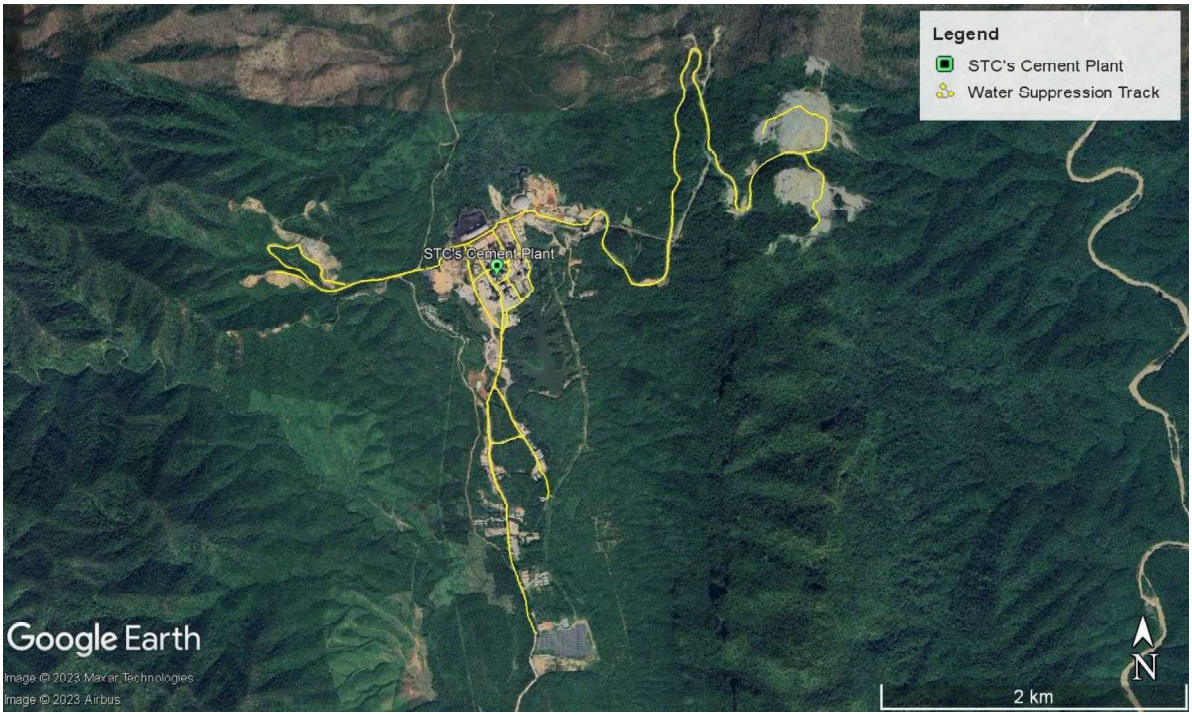


Table: Water Suppression Record from May to October 2024 to mitigate dust suppression in plant site.

Water Suppression Record 2024										
Month	Truck 1 (Capacity: 2200 gal)		Truck 2 (Capacity: 4000 gal)		Truck 3 (Capacity: 4000 gal)		Truck 4 (Capacity: 4500 gal)		Truck 5 (Capacity: 800 gal)	
	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption
May 2024	-	-	72	288000	-	-	34	153000	-	-
June 2024	-	-	21	84000	-	-	18	81000	78	62400
July 2024	-	-	27	108000	-	-	83	373500	141	112800
August 2024	-	-	19	76000	-	-	61	274500	159	127200
September 2024	-	-	-	-	-	-	81	364500	212	169600
October 2024	-	-	-	-	-	-	96	432000	220	17600

Note: Source of water supply from Sedimentation Ponds

Table: Status of Mudstone Biannual Environmental Monitoring Reports Submission to ECD

ဝန်ကြီးရုံး အတည်ပြုချက် ရရှိသည့် ရက်စွဲ	(၆) လပတ် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ တင်ပြသည့် ရက်စွဲ	(၆) လပတ် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ တင်ပြသည့် အကြိမ်အရေအတွက်	စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာ တင်ပြသည့် အချိန်ကာလ အပိုင်းအခြား	မှတ်ချက်
၁.၁၁.၂၀၂၂	၂၉.၂.၂၀၂၄	ပထမအကြိမ်	၂၀၂၂ ခုနှစ် ဒီဇင်ဘာလမှ ၂၀၂၃ ခုနှစ် မေလအထိ	
		ဒုတိယအကြိမ်	၂၀၂၃ ခုနှစ် ဇွန်လမှ ၂၀၂၃ ခုနှစ် နိုဝင်ဘာလအထိ	
	၂၈.၆.၂၀၂၄	တတိယအကြိမ်	၂၀၂၃ ခုနှစ် နိုဝင်ဘာလမှ ၂၀၂၄ ခုနှစ် ဧပြီလအထိ	မန္တလေးတိုင်းရုံး၏ ညွှန်ကြားချက်အရ အစီရင်ခံစာ တင်ပြသည့် ကာလ အပိုင်းအခြားအား ဝန်ကြီးရုံးအတည်ပြုသည့် ရက်စွဲအရ ပြန်လည်ညှိနှိုင်း ပြင်ဆင်တင်ပြခဲ့ပါသည်။
	၂၀၂၄ ခုနှစ် နိုဝင်ဘာလ	**စတုတ္ထအကြိမ်**	**၂၀၂၄ ခုနှစ် မေလမှ ၂၀၂၄ ခုနှစ် အောက်တိုဘာလအထိ**	

APPENDIX-B

APPENDIX - (B-1)

(Ku Pyin Stream Water Quality Results)

APACHE
PORTLAND CEMENT
THE STRENGTH TO BUILD

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Ku Pyin Village**
Date of sample collection	**18.07.2024**
Date of sample examination	**19.07.2024**
Date of completing	**25.07.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.3	6.5 ~ 8.5
Colour(True)	65 PCU	15 PCU
Turbidity	**21.6 NTU**	5 NTU
Calcium Hardness	225 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	6 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	**67 mg/l**	50mg/l

Tested by

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Ku Pyin Village**
Date of sample collection	**20.08.2024**
Date of sample examination	**20.08.2024**
Date of completing	**22.08.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
p^H	8.5	6.5 ~ 8.5
Colour(True)	**35 PCU**	15 PCU
Turbidity	**15.3 NTU**	5 NTU
Calcium Hardness	180 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	2 mg/l	250mg/l
Nitrate	7 mg/l	50mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	41 mg/l	50mg/l
E-Coli	**2700(CFU/100)ml**	0(CFU/100)ml
Coliform	**19488(CFU/100)ml**	0(CFU/100)ml

Tested by

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	Stream Water
Location	Ku Pyin Village
Date of sample collection	19.06.2024
Date of sample examination	20.06.2024
Date of completing	22.06.2024

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	7.9	6.5 - 8.5
Colour(True)	0 PCU	15 PCU
Turbidity	0.71 NTU	5 NTU
Calcium Hardness	270 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	4 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	3 mg/l	50mg/l
Nitrate	4 mg/l	50mg/l

Tested by

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Ku Pyin Village**
Date of sample collection	**20.09.2024**
Date of sample examination	**21.09.2024**
Date of completing	**25.09.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.5	6.5 ~ 8.5
Colour(True)	15 PCU	15 PCU
Turbidity	3.89 NTU	5 NTU
Calcium Hardness	246 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	2 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	13 mg/l	50mg/l
Nitrate	5.9 mg/l	50mg/l

Tested by

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By For SMTV

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Ku Pyin Village**
Date of sample collection	**23.10.2024**
Date of sample examination	**23.10.2024**
Date of completing	**25.10.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	**8.6**	6.5 ~ 8.5
Colour(True)	10 PCU	15 PCU
Turbidity	0.44 NTU	5 NTU
Calcium Hardness	200 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	1 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	3 mg/l	50mg/l
Nitrate	16 mg/l	50mg/l

Tested by

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-2)

(Pyi Nyaung Stream Water Quality Results)

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**19.06.2024**
Date of sample examination	**20.06.2024**
Date of completing	**22.06.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	7.8	6.5 ~ 8.5
Colour(True)	**20 PCU**	15 PCU
Turbidity	1.11 NTU	5 NTU
Calcium Hardness	207 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	4 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	10 mg/l	50mg/l
Nitrate	9.1 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water Stream Water
Location Near Pyin Nyaung Village
Date of sample collection 18.07.2024
Date of sample examination 19.07.2024
Date of completing 25.07.2024

Description of Analysis	Analysis Results	WHO Drinking water Guideline
p^H	7.9	6.5 ~ 8.5
Colour(True)	**25 PCU**	15 PCU
Turbidity	1.36 NTU	5 NTU
Calcium Hardness	195 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	6 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	8 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**21.08.2024**
Date of sample examination	**21.08.2024**
Date of completing	**23.08.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.2	6.5 ~ 8.5
Colour(True)	5 PCU	15 PCU
Turbidity	4.36 NTU	5 NTU
Calcium Hardness	150 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	5 mg/l	250mg/l
Nitrate	5.2mg/l	50mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	17 mg/l	50mg/l
E-Coli	**129 (CFU/100)ml**	0(CFU/100)ml
Coliform	**2394 (CFU/100)ml**	0(CFU/100)ml

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**23.10.2024**
Date of sample examination	**23.10.2024**
Date of completing	**25.10.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.3	6.5 ~ 8.5
Colour(True)	10 PCU	15 PCU
Turbidity	7.21 NTU	5 NTU
Calcium Hardness	168 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	2 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	22 mg/l	50mg/l
Nitrate	8.4 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-3)

(Ye Shin Stream Water Results)

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water(Ye Chin)**
Location	**Near 6 Unit(Family Housing)**
Date of sample collection	**18.07.2024**
Date of sample examination	**19.07.2024**
Date of completing	**25.07.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.3	6.5 - 8.5
Colour(True)	**65 PCU**	15 PCU
Turbidity	**12.9 NTU**	5 NTU
Calcium Hardness	147 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	3 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	36 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water(Ye Chin)**
Location	**Near 6 Unit(Family Housing)**
Date of sample collection	**21.08.2024**
Date of sample examination	**21.08.2024**
Date of completing	**23.08.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.4	6.5 ~ 8.5
Colour(True)	10 PCU	15 PCU
Turbidity	3.73 NTU	5 NTU
Calcium Hardness	78 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	2 mg/l	250mg/l
Nitrate	10.4 mg/l	50mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	11 mg/l	50mg/l
E-Coli	**604 (CFU/100)ml**	0(CFU/100)ml
Coliform	**5114 (CFU/100)ml**	0(CFU/100)ml

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water(Ye Chin)**
Location	**Near 6 Unit(Family Housing)**
Date of sample collection	**20.09.2024**
Date of sample examination	**21.09.2024**
Date of completing	**25.09.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.4	6.5 ~ 8.5
Colour(True)	**40 PCU**	15 PCU
Turbidity	**18.2 NTU**	5 NTU
Calcium Hardness	90 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	2 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	46 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water — **Stream Water(Ye Chin)**
Location — **Near 6 Unit(Family Housing)**
Date of sample collection — **23.10.2024**
Date of sample examination — **23.10.2024**
Date of completing — **25.10.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.3	6.5 ~ 8.5
Colour(True)	**25 PCU**	15 PCU
Turbidity	**5.31 NTU**	5 NTU
Calcium Hardness	129 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	1 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	13 mg/l	50mg/l
Nitrate	7.8 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-4)

(Supply Water (Lower Reservoir))

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Lower Reservoir/Non Potable Water**
Location	**Infront of Pump Station.**
Date of sample collection	**15.05.2024**
Date of sample examination	**16.05.2024**
Date of completing	**22.05.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
p^H	8.3	6.5 ~ 8.5
Colour(True)	**60 PCU**	15 PCU
Turbidity	**9.83 NTU**	5 NTU
Calcium Hardness	90 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	5 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	40 mg/l	50mg/l
Nitrate	4.8 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Lower Reservoir/Non Potable Water**
Location	**Infront of Pump Station.**
Date of sample collection	**19.06.2024**
Date of sample examination	**20.06.2024**
Date of completing	**22.06.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	**8.6**	6.5 ~ 8.5
Colour(True)	**100 PCU**	15 PCU
Turbidity	**10.2 NTU**	5 NTU
Calcium Hardness	135 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	5 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	37 mg/l	50mg/l
Nitrate	26 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Lower Reservoir/Non Potable Water**
Location	**Infront of Pump Station.**
Date of sample collection	**10.07.2024**
Date of sample examination	**11.07.2024**
Date of completing	**17.07.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
p^H	8.5	6.5 ~ 8.5
Colour(True)	**40 PCU**	15 PCU
Turbidity	**7.74 NTU**	5 NTU
Calcium Hardness	120 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	5 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Total Suspended Solid(TSS)	37 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE
PORTLAND CEMENT

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Lower Reservoir/Non Potable Water**
Location	**Infront of Pump Station.**
Date of sample collection	**12.08.2024**
Date of sample examination	**12.08.2024**
Date of completing	**13.08.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.8	6.5 ~ 8.5
Colour(True)	15 PCU	15 PCU
Turbidity	**7.93 NTU**	5 NTU
Calcium Hardness	129 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	3 mg/l	250mg/l
Sulphate(as SO_4)	20 mg/l	200mg/l
Nitrate	7.6 mg/l	50mg/l
Total Suspended Solid(TSS)	34 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Lower Reservoir/Non Potable Water**
Location	**Infront of Pump Station.**
Date of sample collection	**17.09.2024**
Date of sample examination	**17.09.2024**
Date of completing	**21.09.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.4	6.5 - 8.5
Colour(True)	20 PCU	15 PCU
Turbidity	16.9 NTU	5 NTU
Calcium Hardness	99 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	3 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	41 mg/l	50mg/l
Nitrate	6 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Lower Reservoir/Non Potable Water**
Location	**Infront of Pump Station.**
Date of sample collection	**18.10.2024**
Date of sample examination	**19.10.2024**
Date of completing	**23.10.2024**

Description of Analysis	Analysis Results	WHO Drinking water Guideline
P^H	8.5	6.5 ~ 8.5
Colour(True)	25 PCU	15 PCU
Turbidity	5.49 NTU	5 NTU
Calcium Hardness	126 mg/l	500 mg/l as $CaCO_3$
Chloride(as Cl)	3 mg/l	250mg/l
Sulphate(as SO_4)	10 mg/l	200mg/l
Total Suspended Solid(TSS)	22 mg/l	50mg/l
Nitrate	7 mg/l	50mg/l

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-5)

(Supply Water (Lower Reservoir))

Tested by External Laboratories

GOLDEN DOWA ECO-SYSTEM MYANMAR CO., LTD.
Lot No E1. Thilawa SEZ Zone A, Yangon Region, Myanmar.
Phone No Fax No: (+95) 1 2309051

motivate our planet

Report No. : GEM-LAB-202408095
Revision No. : 1
Report Date : 22 August, 2024
Application No. : 0235-C001

Test Report

Client Name : Shwe Taung Cement Co.,Ltd
Address : No.108, Corner of Min Ye Kyaw Swar Road & Hnin Si Gone Street, Saw Yan Paing (East) Ward, Alone
Project Name : Shwe Taung Cement Water Quality Test
Sample Description
Sample Name : Supply Water
Sample No. : W-2408079
Waste Profile No. : -

Sampling Date : 7 August, 2024
Sampling By : Withdraw GEM
Sample Received Date : 7 August, 2024
Analytical Date : 7-22/08/2024

No.	Parameter	Method	Unit	Result	LOQ
1	Temperature	Instrument Analysis Method	°C	26.8	0.0
2	pH	APHA 4500 H+ B (Electrometric Method)	_	8.31	0.00
3	SS	APHA 2540D (Dry at 103-105'C Method)	mg/l	12	_
4	BOD (5)	HACH Method 10099 (Respirometric Method)	mg/l	10.35	0.00
5	COD (Cr)	APHA 5220D (Close Reflux Colorimetric Method)	mg/l	30.7	0.7
6	Oil and Grease	APHA 5520B (Partition-Gravimetric Method)	mg/l	<3.1	3.1
7	Total Phosphorous	APHA 4500-P E (Ascorbic Acid Method)	mg/l	<0.05	0.05
8	Ammonia	HACH Method 10205 (Silicylate TNT Plus Method)	mg/l	<0.02	0.02
9	Mercury	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
10	Zinc	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
11	Arsenic	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.010	0.010
12	Chromium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
13	Cadmium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
14	Selenium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.010	0.010
15	Lead	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
16	Copper	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
17	Nickel	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
18	Silver	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
19	Iron	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	0.274	0.002
20	Cyanide	HACH 8027 (Pyridine -Pyrazalone Method)	mg/l	<0.002	0.002
21	Total Cyanide	Distillation Process: APHA 4500-CN- C. Total Cyanide after Distillation, Determine Cyanide Concentration Process: HACH 8027 (Pyridine -Pyrazalone Method)	mg/l	<0.002	0.002
22	Hexavalent Chromium (Cr6+)	ISO 11083: 1994 (Determination of chromium(VI) Spectrometric method using 1, 5-diphenylcarbazide)	mg/l	<0.05	0.05

GOLDEN DOWA ECO-SYSTEM MYANMAR CO., LTD.
Lot No E1. Thilawa SEZ Zone A, Yangon Region, Myanmar.
Phone No Fax No: (+95) 1 2309051

motivate our planet

Report No. : GEM-LAB-202408095
Revision No. : 1
Report Date : 22 August, 2024
Application No. : 0235-C001

Test Report

Client Name : Shwe Taung Cement Co.,Ltd
Address : No.108, Corner of Min Ye Kyaw Swar Road & Hnin Si Gone Street, Saw Yan Paing (East) Ward, Alone
Project Name : Shwe Taung Cement Water Quality Test
Sample Description
Sample Name : Supply Water
Sample No. : W-2408079
Waste Profile No. : -

Sampling Date : 7 August, 2024
Sampling By : Withdraw GEM
Sample Received Date : 7 August, 2024
Analytical Date : 7-22/08/2024

No.	Parameter	Method	Unit	Result	LOQ
23	Fluoride	USEPA SPANDS 2 Method	mg/l	0.227	0.014
24	Total Chlorine	APHA 4500 CL G (DPD Colorimetric Method)	mg/l	0.1	0.1
25	Sulphide	HACH 8131 (USEPA Methylene Blue Method)	mg/l	0.019	0.005
26	Phenols	USEPA Method 420.1 (Phenolics (Spectrophotometric, Manual 4AAP With Distillation))	mg/l	0.006	0.002
27	Total Coliform	APHA 9221B (Standard Total Coliform Fermentation Technique)	mg/l	54000.0	1.8

Remark : LOQ - Limit of Quantitation
APHA - American Public Health Association (APHA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 22nd edition

Analysed By :

Cherry Myint Thein
Assistant Manager

LAB
Aug 22, 2024
GEM

Approved By :

Ni Ni Aye Lwin Aug 22, 2024
Manager

*** End Of Document ***

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

ISO 9001:2015 Cert. No.688283

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 2

W0824 167

WATER QUALITY TEST RESULTS FORM

Client: Shwe Taung Cement
Nature of Water: ဆည်ရေ
Location: ပြည်ညောင်ကျေးရွာ၊ သာစည်မြို့နယ်။
Date and Time of collection: 6.8.2024 (10:30 AM)
Date and Time of arrival at Laboratory: 7.8.2024
Date and Time of commencing examination: 8.8.2024
Date and Time of completing: 9.8.2024

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH			6.5 - 8.5
Colour (True)		TCU	15 TCU
Turbidity		NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron	0.88	mg/l	0.3 mg/l
Chloride (as CL)		mg/l	250 mg/l
Sodium Chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	500 mg/l
Total Solids		mg/l	1500 mg/l
Total Suspended Solids		mg/l	
Total Dissolved Solids		mg/l	1000 mg/l
Manganese		mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

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

Tested by
Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

ISO 9001:2015 Cert. No.688283

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 2 of 2

W0824 167

WATER QUALITY TEST RESULTS FORM

Client	Shwe Taung Cement
Nature of Water	ဆည်ရေ
Location	ပြည်ညောင်ကျေးရွာ၊ သာစည်မြို့နယ်။
Date and Time of collection	6.8.2024 (10:30 AM)
Date and Time of arrival at Laboratory	7.8.2024
Date and Time of commencing examination	8.8.2024
Date and Time of completing	9.8.2024

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
Temperature (°C)		°C	
Fluoride (F)	0.4	mg/l	1.5 mg/l
Lead (as Pb)		mg/l	0.01 mg/l
Arsenic (As)	0.005	mg/l	0.01 mg/l
Nitrate ($N.NO_3$)		mg/l	50 mg/l
Chlorine (Residual)	Nil	mg/l	
Ammonia Nitrogen (NH_3)	0.15	mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)		mg/l	
Chemical Oxygen Demand (COD)		mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)		mg/l	
Cyanide (CN)	0.011	mg/l	0.07 mg/l
Zinc (Zn)		mg/l	3 mg/l
Copper (Cu)	Nil	mg/l	2 mg/l
Silica (SiO_2)		mg/l	

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

Tested by

Signature:

Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature:

Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

APPENDIX - (B-6)

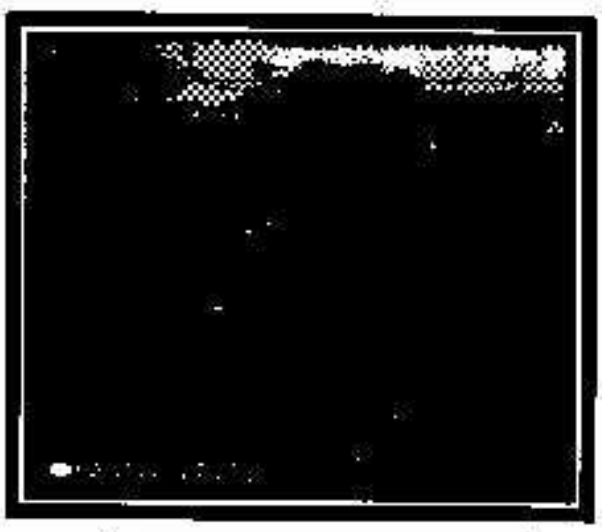
(Sedimentation Pond 5 Water Results)

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Beside 103 & 501 Area**
Date of sample collection	**13.05.2024**
Date of sample examination	**14.05.2024**
Date of completing	**20.05.2024**



Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	7.7	6-9	
Chemical Oxygen Demand(COD)	68 mg/L	0-125mg/L	
Biologycal Oxygen Demand(BOD)	43 mg/L	0-30mg/L	
Total Suspended Solid(TSS)	130 mg/L	Max 50mg/L	
Total Nitrogen	Non Determination	10mg/L	Can't Test
Total Nitrate	Non Determination	44.29mg/L	Can't Test
Total Phosphorous	0.2 mg/L	2mg/L	
Oil & Grease	Non Determination	10 mg/L	Can't Test

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Beside 103 & 501 Area**
Date of sample collection	**14.06.2024**
Date of sample examination	**14.06.2024**
Date of completing	**22.06.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8	6-9	
Chemical Oxygen Demand(COD)	96 mg/L	0-125mg/L	
Biologycal Oxygen Demand(BOD)	13 mg/L	0-30mg/L	
Total Suspended Solid(TSS)	**99 mg/L**	Max 50mg/L	
Total Nitrogen	1.65mg/L	10mg/L	
Total Nitrate	7.3 mg/L	44.29mg/L	
Total Phosphorous	0.2 mg/L	2mg/L	
Oil & Grease	Non Determination	10 mg/L	Can't Test

Tested by,

Han Ko Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

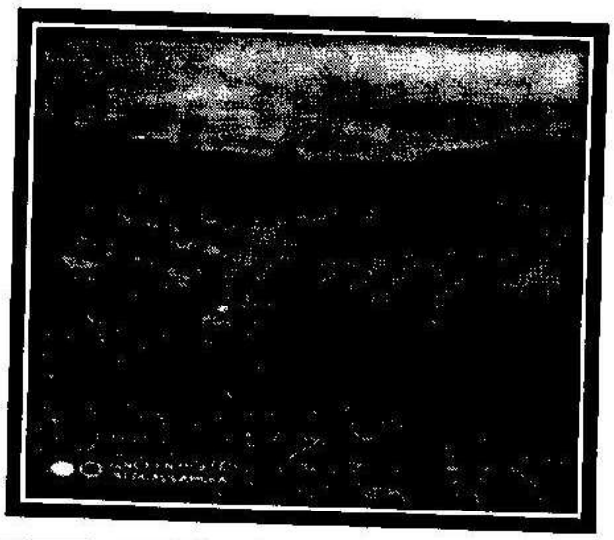
Ye' Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	Surface Water
Location	Beside 103 & 501 Area
Date of sample collection	15.07.2024
Date of sample examination	16.07.2024
Date of completing	24.07.2024



Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.3	6-9	
Chemical Oxygen Demand(COD)	93 mg/L	0-125mg/L	
Biologycal Oxygen Demand(BOD)	26 mg/L	0-30mg/L	
Total Suspended Solid(TSS)	**87 mg/L**	Max 50mg/L	
Total Phosphorous	0.2 mg/L	2mg/L	
Oil & Grease	Non Determination	10 mg/L	Can't Test

Tested by,

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Approved By,

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Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Beside 103 & 501 Area**
Date of sample collection	**07.08.2024**
Date of sample examination	**08.08.2024**
Date of completing	**10.08.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline
pH	8.1	6-9
Chemical Oxygen Demand(COD)	60 mg/L	0-125mg/L
Total Suspended Solid(TSS)	48 mg/L	Max 50mg/L
Total Phosphorous	0.3 mg/L	2mg/L
Total Nitrogen	2.05 mg/L	10mg/L
Total Nitrate	9.1 mg/L	44.29mg/L

Tested by,

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Approved By,

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Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Beside 103 & 501 Area**
Date of sample collection	**16.09.2024**
Date of sample examination	**16.09.2024**
Date of completing	**20.09.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline
pH	8.1	6-9
Chemical Oxygen Demand(COD)	55 mg/L	0-125mg/L
Total Suspended Solid(TSS)	28 mg/L	Max 50mg/L
Total Phosphorous	0.3 mg/L	2 mg/L
Total Nitrogen	2.75mg/L	10mg/L
Total Nitrate	12.2 mg/L	44.29mg/L

Tested by,

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Approved By,

Ye' Naing Soe
Team Leader
Lab & QC Department
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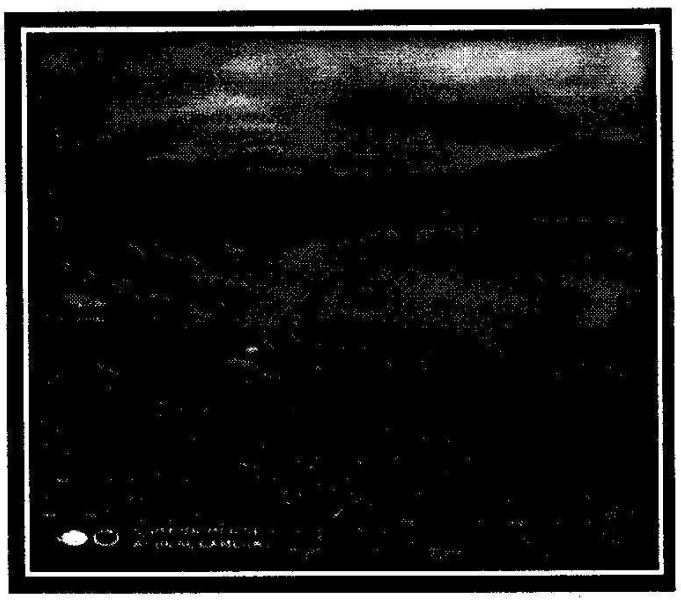
Lab & Quality Control Department



Waste Water Test Report

Nature of water	**Surface Water**
Location	**Beside 103 & 501 Area**
Date of sample collection	**24.10.2024**
Date of sample examination	**25.10.2024**
Date of completing	**26.10.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline
pH	8.2	6-9
Chemical Oxygen Demand(COD)	12 mg/L	0-125mg/L
Total Suspended Solid(TSS)	18 mg/L	Max 50mg/L
Total Phosphorous	0.1 mg/L	2 mg/L
Total Nitrogen	1.78 mg/L	10mg/L
Total Nitrate	7.9 mg/L	44.29mg/L

Tested by,

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Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-7)

(Sedimentation Pond 6 Water Results)

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Infront of Main Office**
Date of sample collection	**13.05.2024**
Date of sample examination	**14.05.2024**
Date of completing	**20.05.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.7	6-9	
Chemical Oxygen Demand(COD)	119 mg/L	0-125mg/L	
Biologycal Oxygen Demand(BOD)	**78 mg/L**	0-30mg/L	
Total Suspended Solid(TSS)	**72 mg/L**	Max 50mg/L	
Total Nitrogen	0 mg/L	10mg/L	
Total Nitrate	0 mg/L	44.29mg/L	
Total Phosphorous	0.2 mg/L	2mg/L	
Oil & Grease	Non Determination	10 mg/L	Can't Test

Tested by,

Han Ko Win
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Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Team Leader
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Infront of Main Office**
Date of sample collection	**14.06.2024**
Date of sample examination	**14.06.2024**
Date of completing	**22.06.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.4	6-9	
Chemical Oxygen Demand(COD)	37 mg/L	0-125mg/L	
Biologycal Oxygen Demand(BOD)	16 mg/L	0-30mg/L	
Total Suspended Solid(TSS)	38 mg/L	Max 50mg/L	
Total Nitrogen	0.69 mg/L	10mg/L	
Total Nitrate	3.1 mg/L	44.29mg/L	
Total Phosphorous	0.2 mg/L	2mg/L	
Oil & Grease	Non Determination	10 mg/L	Can't Test

Tested by,

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Approved By,

Ye' Naing Soe
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Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	Surface Water
Location	Infront of Main Office
Date of sample collection	15.07.2024
Date of sample examination	16.07.2024
Date of completing	24.07.2024

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.5	6-9	
Chemical Oxygen Demand(COD)	36 mg/L	0-125mg/L	
Biologycal Oxygen Demand(BOD)	15 mg/L	0-30mg/L	
Total Suspended Solid(TSS)	39 mg/L	Max 50mg/L	
Total Phosphorous	0.3 mg/L	2mg/L	
Oil & Grease	Non Determination	10 mg/L	Can't Test

Tested by,

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Approved By,

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Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Infront of Main Office**
Date of sample collection	**05.08.2024**
Date of sample examination	**05.08.2024**
Date of completing	**08.08.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline
pH	8.7	6-9
Chemical Oxygen Demand(COD)	14 mg/L	0-125mg/L
Total Suspended Solid(TSS)	37 mg/L	Max 50mg/L
Total Phosphorous	0.3 mg/L	2mg/L
Total Nitrogen	1.6 mg/L	10mg/L
Total Nitrate	7.5 mg/L	44.29mg/L
E-Coli	180 (CFU/100)ml	0(CFU/100)ml
Coliform	154646 (CFU/100)ml	0(CFU/100)ml

Tested by,

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Approved By,

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Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Infront of Main Office**
Date of sample collection	**16.09.2024**
Date of sample examination	**16.09.2024**
Date of completing	**20.09.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline
pH	10.1	6-9
Chemical Oxygen Demand(COD)	45 mg/L	0-125mg/L
Total Suspended Solid(TSS)	255 mg/L	Max 50mg/L
Total Phosphorous	0.2 mg/L	2 mg/L
Total Nitrogen	9.6 mg/L	10mg/L
Total Nitrate	2.17 mg/L	44.29mg/L

Tested by,

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Shwe Taung Cement Co., Ltd.

Lab & Quality Control Department

Waste Water Test Report

Nature of water	**Surface Water**
Location	**Infront of Main Office**
Date of sample collection	**24.10.2024**
Date of sample examination	**25.10.2024**
Date of completing	**26.10.2024**

Description of Analysis	Analysis Results	IFC Waste Water Guideline
pH	10	6-9
Chemical Oxygen Demand(COD)	5 mg/L	0-125mg/L
Total Suspended Solid(TSS)	139 mg/L	Max 50mg/L
Total Phosphorous	0.0 mg/L	2 mg/L
Total Nitrogen	2.37 mg/L	10mg/L
Total Nitrate	10.5 mg/L	44.29mg/L

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APPENDIX- C

Ambient Air Quality Results

APPENDIX - (C-1)

Ambient Air Quality Results of Worker Accommodation

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 07-05-2024 10:39:00 AM

End Date 08-05-2024 10:38:00 AM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**28.6951**	**7.07361**	**0**	**.185847**	**43.6729**	**31.3437**	**7.97638**	**0**	**54.1347**	**27.4**	**206.736**	**1.29131**	**10.1875**	**0**	**0**	**0**	**0**
Max	83	65	0	.42	113	66	46	0	100	34	359	6.3	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	26	21	0	0	9.7	0	0	0	0
EPAS 919217	**28.6951**	**7.07361**	**0**	**.185847**	**43.6729**	**31.3437**	**7.97638**	**0**	**54.1347**	**27.4**	**206.736**	**1.29131**	**10.1875**	**0**	**0**	**0**	**0**
	83	65	0	.42	113	66	46	0	100	34	359	6.3	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	26	21	0	0	9.7	0	0	0	0
Daily Fri, Jul 5, 2024	**28.5655**	**10.5867**	**0**	**.186754**	**28.5593**	**27.4382**	**13.7091**	**0**	**39.5093**	**29.9787**	**208.375**	**2.07103**	**10.2340**	**0**	**0**	**0**	**0**
	83	65	0	.42	111	66	46	0	69	34	359	6.3	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	26	24	1	0	9.9	0	0	0	0
Ave Period 24 05-07-2024 11:59 PM	**28.5655**	**10.5867**	**0**	**.186754**	**28.5593**	**27.4382**	**13.7091**	**0**	**39.5093**	**29.9787**	**208.375**	**2.07103**	**10.2340**	**0**	**0**	**0**	**0**
	83	65	0	.42	111	66	46	0	69	34	359	6.3	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	26	24	1	0	9.9	0	0	0	0
Daily Mon, Aug 5, 2024	**28.8575**	**2.66979**	**0**	**.184710**	**62.6181**	**36.2394**	**.790297**	**0**	**72.4679**	**24.1674**	**204.682**	**.313928**	**10.1292**	**0**	**0**	**0**	**0**
	56	11	0	.38	113	60	11	0	100	32	357	4.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	31	21	0	0	9.7	0	0	0	0
Ave Period 24 05-08-2024 10:38 AM	**28.8575**	**2.66979**	**0**	**.184710**	**62.6181**	**36.2394**	**.790297**	**0**	**72.4679**	**24.1674**	**204.682**	**.313928**	**10.1292**	**0**	**0**	**0**	**0**
	56	11	0	.38	113	60	11	0	100	32	357	4.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	31	21	0	0	9.7	0	0	0	0

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 19-06-2024 3:05:00 PM

End Date 20-06-2024 3:04:01 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**13.8638**	**6.56388**	**.006944**	**.077576**	**18.2666**	**12.1326**	**3.72013**	**0**	**79.825**	**26.925**	**155.627**	**.692847**	**10.3130**	**0**	**0**	**0**	**0**
Max	104	105	3	.52	60	33	38	0	100	33	335	7.5	10.6	0	0	0	0
Min	2	1	0	0	2	1	0	0	47	24	5	0	9.7	0	0	0	0
EPAS 919217	**13.8638**	**6.56388**	**.006944**	**.077576**	**18.2666**	**12.1326**	**3.72013**	**0**	**79.825**	**26.925**	**155.627**	**.692847**	**10.3130**	**0**	**0**	**0**	**0**
	104	105	3	.52	60	33	38	0	100	33	335	7.5	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	47	24	5	0	9.7	0	0	0	0
Daily Wed, Jun 19, 2024	**25.0635**	**14.4579**	**0**	**.090728**	**12.3289**	**10.1757**	**9.13457**	**0**	**77**	**27.2635**	**155.743**	**.860747**	**10.4078**	**0**	**0**	**0**	**0**
	104	105	0	.52	55	32	38	0	100	33	262	6.1	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	50	24	72	0	9.9	0	0	0	0
Ave Period 24 19-06-2024 11:59 PM	**25.0635**	**14.4579**	**0**	**.090728**	**12.3289**	**10.1757**	**9.13457**	**0**	**77**	**27.2635**	**155.743**	**.860747**	**10.4078**	**0**	**0**	**0**	**0**
	104	105	0	.52	55	32	38	0	100	33	262	6.1	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	50	24	72	0	9.9	0	0	0	0
Daily Thu, Jun 20, 2024	**7.24309**	**1.89723**	**.011049**	**.069801**	**21.7767**	**13.2895**	**.519337**	**0**	**81.4950**	**26.7248**	**155.559**	**.593591**	**10.2570**	**0**	**0**	**0**	**0**
	41	15	3	.31	60	33	12	0	100	32	335	7.5	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	47	24	5	0	9.7	0	0	0	0
Ave Period 24 20-06-2024 [illegible]	**7.24309**	**1.89723**	**.011049**	**.069801**	**21.7767**	**13.2895**	**.519337**	**0**	**81.4950**	**26.7248**	**155.559**	**.593591**	**10.2570**	**0**	**0**	**0**	**0**
	41	15	3	.31	60	33	12	0	100	32	335	7.5	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	47	24	5	0	9.7	0	0	0	0

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 04-07-2024 4:29:00 PM

End Date 05-07-2024 4:28:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**14.4958**	**5.18263**	**20.7930**	**.072729**	**23.1347**	**13.4055**	**1.19444**	**.000347**	**83.7319**	**26.1659**	**153.636**	**.652569**	**10.1354**	**0**	**0**	**0**	**0**
Max	79	59	83	.37	62	33	16	.13	100	32	359	7.6	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	46	23	5	0	9.6	0	0	0	0
EPAS 919217	**14.4958**	**5.18263**	**20.7930**	**.072729**	**23.1347**	**13.4055**	**1.19444**	**.000347**	**83.7319**	**26.1659**	**153.636**	**.652569**	**10.1354**	**0**	**0**	**0**	**0**
	79	59	83	.37	62	33	16	.13	100	32	359	7.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	46	23	5	0	9.6	0	0	0	0
Daily Sun, Apr 7, 2024	**26.2727**	**10.9157**	**17.1596**	**.100776**	**26.1130**	**16.3569**	**2.88248**	**.001108**	**89.8957**	**25.1596**	**190.337**	**1.38603**	**10.2203**	**0**	**0**	**0**	**0**
	79	59	69	.37	62	33	16	.13	100	30	325	7.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	57	23	27	0	9.7	0	0	0	0
Ave Period 24 07-04-2024 11:59 PM	**26.2727**	**10.9157**	**17.1596**	**.100776**	**26.1130**	**16.3569**	**2.88248**	**.001108**	**89.8957**	**25.1596**	**190.337**	**1.38603**	**10.2203**	**0**	**0**	**0**	**0**
	79	59	69	.37	62	33	16	.13	100	30	325	7.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	57	23	27	0	9.7	0	0	0	0
Daily Tue, May 7, 2024	**9.12537**	**2.56825**	**22.4499**	**.059939**	**21.7765**	**12.0596**	**.424671**	**0**	**80.9211**	**26.6248**	**136.900**	**.318099**	**10.0967**	**0**	**0**	**0**	**0**
	42	14	83	.29	57	31	15	0	100	32	359	3.6	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	46	23	5	0	9.6	0	0	0	0
Ave Period 24 07-05-2024 04:28 PM	**9.12537**	**2.56825**	**22.4499**	**.059939**	**21.7765**	**12.0596**	**.424671**	**0**	**80.9211**	**26.6248**	**136.900**	**.318099**	**10.0967**	**0**	**0**	**0**	**0**
	42	14	83	.29	57	31	15	0	100	32	359	3.6	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	46	23	5	0	9.6	0	0	0	0

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 13-08-2024 4:48:00 PM

End Date 14-08-2024 4:47:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**8.0875**	**3.28402**	**0**	**.076375**	**40.3673**	**22.9826**	**.118055**	**.005236**	**100**	**23.5083**	**163.75**	**.008611**	**10.2427**	**0**	**0**	**0**	**0**
Max	26	14	0	.42	141	51	14	.19	100	25	256	.8	10.5	0	0	0	0
Min	2	1	0	0	2	5	0	0	100	23	82	0	9.7	0	0	0	0
EPAS 919217	**8.0875**	**3.28402**	**0**	**.076375**	**40.3673**	**22.9826**	**.118055**	**.005236**	**100**	**23.5083**	**163.75**	**.008611**	**10.2427**	**0**	**0**	**0**	**0**
	26	14	0	.42	141	51	14	.19	100	25	256	.8	10.5	0	0	0	0
	2	1	0	0	2	5	0	0	100	23	82	0	9.7	0	0	0	0
Daily Tue, Aug 13, 2024	**10.4027**	**4.57638**	**0**	**.083148**	**55.9467**	**29.9884**	**.393518**	**.005231**	**100**	**23.4143**	**230.344**	**.000462**	**10.3402**	**0**	**0**	**0**	**0**
	26	14	0	.42	69	36	14	.19	100	24	256	.1	10.5	0	0	0	0
	2	1	0	0	44	23	0	0	100	23	172	0	9.9	0	0	0	0
Ave Period 24 13-08-2024 11:59 PM	**10.4027**	**4.57638**	**0**	**.083148**	**55.9467**	**29.9884**	**.393518**	**.005231**	**100**	**23.4143**	**230.344**	**.000462**	**10.3402**	**0**	**0**	**0**	**0**
	26	14	0	.42	69	36	14	.19	100	24	256	.1	10.5	0	0	0	0
	2	1	0	0	44	23	0	0	100	23	172	0	9.9	0	0	0	0
Daily Wed, Aug 14, 2024	**7.09523**	**2.73015**	**0**	**.073472**	**33.6904**	**19.9801**	**0**	**.005238**	**100**	**23.5486**	**135.209**	**.012103**	**10.2009**	**0**	**0**	**0**	**0**
	17	11	0	.22	141	51	0	.13	100	25	220	.8	10.5	0	0	0	0
	2	1	0	0	2	5	0	0	100	23	82	0	9.7	0	0	0	0
Ave Period 24 14-08-2024 04:47 PM	**7.09523**	**2.73015**	**0**	**.073472**	**33.6904**	**19.9801**	**0**	**.005238**	**100**	**23.5486**	**135.209**	**.012103**	**10.2009**	**0**	**0**	**0**	**0**
	17	11	0	.22	141	51	0	.13	100	25	220	.8	10.5	0	0	0	0
	2	1	0	0	2	5	0	0	100	23	82	0	9.7	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 24-09-2024 8:27:00 AM

End Date 25-09-2024 8:26:00 AM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**12.0486**	**5.72430**	**0**	**.092034**	**38.2958**	**24.4354**	**2.19513**	**.010708**	**93.9104**	**24.4395**	**180.243**	**.273680**	**10.3313**	**0**	**0**	**0**	**0**
Max	87	53	0	.34	403	140	60	.48	100	30	360	8.6	10.7	0	0	0	0
Min	2	1	0	0	2	1	0	0	56	23	0	0	9.6	0	0	0	0
EPAS 919217	**12.0486**	**5.72430**	**0**	**.092034**	**38.2958**	**24.4354**	**2.19513**	**.010708**	**93.9104**	**24.4395**	**180.243**	**.273680**	**10.3313**	**0**	**0**	**0**	**0**
	87	53	0	.34	403	140	60	.48	100	30	360	8.6	10.7	0	0	0	0
	2	1	0	0	2	1	0	0	56	23	0	0	9.6	0	0	0	0
Daily Tue, Sep 24, 2024	**15.0428**	**7.64415**	**0**	**.091693**	**35.6259**	**24.6966**	**3.38799**	**.014651**	**90.6066**	**25.1339**	**162.297**	**.421972**	**10.4133**	**0**	**0**	**0**	**0**
	87	53	0	.34	403	140	60	.48	100	30	359	8.6	10.7	0	0	0	0
	2	1	0	0	2	1	0	0	56	23	0	0	9.9	0	0	0	0
Ave Period 24 24-09-2024 11:59 PM	**15.0428**	**7.64415**	**0**	**.091693**	**35.6259**	**24.6966**	**3.38799**	**.014651**	**90.6066**	**25.1339**	**162.297**	**.421972**	**10.4133**	**0**	**0**	**0**	**0**
	87	53	0	.34	403	140	60	.48	100	30	359	8.6	10.7	0	0	0	0
	2	1	0	0	2	1	0	0	56	23	0	0	9.9	0	0	0	0
Daily Wed, Sep 25,	**6.53846**	**2.19132**	**0**	**.092662**	**43.2090**	**23.9546**	**0**	**.003451**	**99.9901**	**23.1617**	**213.268**	**.000788**	**10.1804**	**0**	**0**	**0**	**0**
	26	10	0	.17	128	52	0	.14	100	26	360	.1	10.3	0	0	0	0
	2	1	0	.05	15	9	0	0	95	23	3	0	9.6	0	0	0	0
Ave Period 24 25-09-2024 08:26 AM	**6.53846**	**2.19132**	**0**	**.092662**	**43.2090**	**23.9546**	**0**	**.003451**	**99.9901**	**23.1617**	**213.268**	**.000788**	**10.1804**	**0**	**0**	**0**	**0**
	26	10	0	.17	128	52	0	.14	100	26	360	.1	10.3	0	0	0	0
	2	1	0	.05	15	9	0	0	95	23	3	0	9.6	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 07-10-2024 2:44:00 PM

End Date 08-10-2024 2:43:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**17.2104**	**7.06180**	**.072916**	**.070375**	**21.75**	**12.7437**	**1.66944**	**0**	**88.5583**	**24.7625**	**230.987**	**.476527**	**10.1920**	**0**	**0**	**0**	**0**
Max	119	72	11	.68	190	84	74	0	100	31	360	6.9	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	56	22	0	0	9.7	0	0	0	0
EPAS 919217	**17.2104**	**7.06180**	**.072916**	**.070375**	**21.75**	**12.7437**	**1.66944**	**0**	**88.5583**	**24.7625**	**230.987**	**.476527**	**10.1920**	**0**	**0**	**0**	**0**
	119	72	11	.68	190	84	74	0	100	31	360	6.9	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.7	0	0	0	0
Daily Wed, Jul 10, 2024	**18.6618**	**7.11690**	**0**	**.079172**	**27.3758**	**15.7913**	**4.19604**	**0**	**90.3561**	**25.0197**	**263.334**	**.454316**	**10.2458**	**0**	**0**	**0**	**0**
	72	36	0	.68	190	84	74	0	100	31	360	4.4	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	61	23	0	0	9.9	0	0	0	0
Ave Period 24 10-07-2024 11:59 PM	**18.6618**	**7.11690**	**0**	**.079172**	**27.3758**	**15.7913**	**4.19604**	**0**	**90.3561**	**25.0197**	**263.334**	**.454316**	**10.2458**	**0**	**0**	**0**	**0**
	72	36	0	.68	190	84	74	0	100	31	360	4.4	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	61	23	0	0	9.9	0	0	0	0
Daily Sat, Aug 10, 2024	**16.2975**	**7.02714**	**.118778**	**.064841**	**18.2115**	**10.8269**	**.080316**	**0**	**87.4276**	**24.6006**	**210.642**	**.490497**	**10.1581**	**0**	**0**	**0**	**0**
	119	72	11	.36	45	24	4	0	100	31	358	6.9	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	1	0	9.7	0	0	0	0
Ave Period 24 10-08-2024 02:43 PM	**16.2975**	**7.02714**	**.118778**	**.064841**	**18.2115**	**10.8269**	**.080316**	**0**	**87.4276**	**24.6006**	**210.642**	**.490497**	**10.1581**	**0**	**0**	**0**	**0**
	119	72	11	.36	45	24	4	0	100	31	358	6.9	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	1	0	9.7	0	0	0	0

APPENDIX - (C-2)

Ambient Air Quality Results of Pyi Nyaung Village

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Environmental Report

Record Cnt 1440

Start Date 13-05-2024 2:58:00 PM

End Date 14-05-2024 2:57:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**40.6138**	**9.58125**	**0**	**.242243**	**45.2638**	**13.2576**	**31.4291**	**0**	**0**	**0**	**172.690**	**.214236**	**10.3421**	**0**	**0**	**0**	**0**
Max	104	73	0	1.5	115	35	89	0	0	0	360	2.8	10.6	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	0	0	0	9.9	0	0	0	0
EPAS 919217	**40.6138**	**9.58125**	**0**	**.242243**	**45.2638**	**13.2576**	**31.4291**	**0**	**0**	**0**	**172.690**	**.214236**	**10.3421**	**0**	**0**	**0**	**0**
	104	73	0	1.5	115	35	89	0	0	0	360	2.8	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	0	0	0	0	9.9	0	0	0	0
Daily Mon, May 13,	**55.2195**	**16.4483**	**0**	**.297804**	**33.5571**	**10.2767**	**42.1457**	**0**	**0**	**0**	**185.241**	**.087084**	**10.4640**	**0**	**0**	**0**	**0**
	104	73	0	1.5	106	34	81	0	0	0	356	2.6	10.6	0	0	0	0
	12	1	0	0	2	1	12	0	0	0	1	0	10	0	0	0	0
Ave Period 24 13-05-2024 11:59 PM	**55.2195**	**16.4483**	**0**	**.297804**	**33.5571**	**10.2767**	**42.1457**	**0**	**0**	**0**	**185.241**	**.087084**	**10.4640**	**0**	**0**	**0**	**0**
	104	73	0	1.5	106	34	81	0	0	0	356	2.6	10.6	0	0	0	0
	12	1	0	0	2	1	12	0	0	0	1	0	10	0	0	0	0
Daily Tue, May 14, 2024	**31.7984**	**5.43652**	**0**	**.208708**	**52.3296**	**15.0567**	**24.9610**	**0**	**0**	**0**	**165.115**	**.290979**	**10.2685**	**0**	**0**	**0**	**0**
	84	73	0	.98	115	35	89	0	0	0	360	2.8	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	0	0	0	9.9	0	0	0	0
Ave Period 24 14-05-2024 02:57 PM	**31.7984**	**5.43652**	**0**	**.208708**	**52.3296**	**15.0567**	**24.9610**	**0**	**0**	**0**	**165.115**	**.290979**	**10.2685**	**0**	**0**	**0**	**0**
	84	73	0	.98	115	35	89	0	0	0	360	2.8	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	0	0	0	9.9	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 13-06-2024 11:28:00 AM

End Date 14-06-2024 11:27:00 AM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**7.83055**	**2.74305**	**0**	**.111361**	**20.6805**	**12.8548**	**10.4256**	**.001930**	**98.1868**	**24.9833**	**193.668**	**.024930**	**10.3345**	**0**	**0**	**0**	**0**
Max	41	20	0	.45	43	23	30	.22	100	27	359	1.6	10.6	0	0	0	0
Min	2	1	0	0	2	1	0	0	79	24	2	0	9.9	0	0	0	0
EPAS 919217	**7.83055**	**2.74305**	**0**	**.111361**	**20.6805**	**12.8548**	**10.4256**	**.001930**	**98.1868**	**24.9833**	**193.668**	**.024930**	**10.3345**	**0**	**0**	**0**	**0**
	41	20	0	.45	43	23	30	.22	100	27	359	1.6	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	79	24	2	0	9.9	0	0	0	0
Daily Thu, Jun 13, 2024	**9.73936**	**3.68484**	**0**	**.116861**	**16.7353**	**10.9242**	**16.0598**	**.003031**	**97.6768**	**25.4308**	**223.779**	**.039627**	**10.4118**	**0**	**0**	**0**	**0**
	41	20	0	.45	43	23	30	.22	100	27	352	1.6	10.6	0	0	0	0
	2	1	0	0	2	1	2	0	79	24	2	0	9.9	0	0	0	0
Ave Period 24 13-06-2024 11:59 PM	**9.73936**	**3.68484**	**0**	**.116861**	**16.7353**	**10.9242**	**16.0598**	**.003031**	**97.6768**	**25.4308**	**223.779**	**.039627**	**10.4118**	**0**	**0**	**0**	**0**
	41	20	0	.45	43	23	30	.22	100	27	352	1.6	10.6	0	0	0	0
	2	1	0	0	2	1	2	0	79	24	2	0	9.9	0	0	0	0
Daily Fri, Jun 14, 2024	**5.74418**	**1.71366**	**0**	**.105348**	**24.9927**	**14.9651**	**4.26744**	**.000726**	**98.7441**	**24.4941**	**160.755**	**.008866**	**10.25**	**0**	**0**	**0**	**0**
	16	8	0	.39	40	23	18	.13	100	27	359	.8	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	79	24	6	0	9.9	0	0	0	0
Ave Period 24 14-06-2024 11:27 AM	**5.74418**	**1.71366**	**0**	**.105348**	**24.9927**	**14.9651**	**4.26744**	**.000726**	**98.7441**	**24.4941**	**160.755**	**.008866**	**10.25**	**0**	**0**	**0**	**0**
	16	8	0	.39	40	23	18	.13	100	27	359	.8	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	79	24	6	0	9.9	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 15-07-2024 4:42:00 PM

End Date 16-07-2024 4:41:01 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**17.8958**	**6.37083**	**32.3569**	**.106111**	**32.5611**	**17.6243**	**3.57013**	**0**	**85.5902**	**26.4236**	**183.415**	**.068541**	**10.2185**	**0**	**0**	**0**	**0**
Max	84	57	93	1.36	81	41	56	0	100	33	358	2.8	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	47	23	0	0	9.7	0	0	0	0
EPAS 919217	**17.8958**	**6.37083**	**32.3569**	**.106111**	**32.5611**	**17.6243**	**3.57013**	**0**	**85.5902**	**26.4236**	**183.415**	**.068541**	**10.2185**	**0**	**0**	**0**	**0**
	84	57	93	1.36	81	41	56	0	100	33	358	2.8	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	47	23	0	0	9.7	0	0	0	0
Daily Mon, Jul 15, 2024	**22.9863**	**5.64840**	**25.6643**	**.139885**	**55.3105**	**29.6324**	**5.02283**	**0**	**98.7899**	**25.1986**	**215.625**	**.005022**	**10.2712**	**0**	**0**	**0**	**0**
	84	18	71	.77	81	41	49	0	100	27	357	.3	10.5	0	0	0	0
	3	1	0	0	16	19	0	0	80	25	0	0	9.9	0	0	0	0
Ave Period 24 15-07-2024 11:59 PM	**22.9863**	**5.64840**	**25.6643**	**.139885**	**55.3105**	**29.6324**	**5.02283**	**0**	**98.7899**	**25.1986**	**215.625**	**.005022**	**10.2712**	**0**	**0**	**0**	**0**
	84	18	71	.77	81	41	49	0	100	27	357	.3	10.5	0	0	0	0
	3	1	0	0	16	19	0	0	80	25	0	0	9.9	0	0	0	0
Daily Tue, Jul 16, 2024	**15.6706**	**6.68662**	**35.2824**	**.091347**	**22.6167**	**12.3752**	**2.93512**	**0**	**79.8203**	**26.9590**	**169.336**	**.096307**	**10.1955**	**0**	**0**	**0**	**0**
	84	57	93	1.36	58	30	56	0	100	33	358	2.8	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	47	23	0	0	9.7	0	0	0	0
Ave Period 24 16-07-2024 [illegible]	**15.6706**	**6.68662**	**35.2824**	**.091347**	**22.6167**	**12.3752**	**2.93512**	**0**	**79.8203**	**26.9590**	**169.336**	**.096307**	**10.1955**	**0**	**0**	**0**	**0**
	84	57	93	1.36	58	30	56	0	100	33	358	2.8	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	47	23	0	0	9.7	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 20-08-2024 2:55:00 PM

End Date 21-08-2024 2:54:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**19.1069**	**6.32847**	**.010416**	**.134868**	**17.5208**	**10.6847**	**4.20208**	**0**	**86.2312**	**26.5187**	**219.522**	**.072013**	**9.97868**	**0**	**0**	**0**	**0**
Max	260	78	6	1.61	48	26	56	0	100	31	358	1.7	10.3	0	0	0	0
Min	2	1	0	0	2	1	0	0	56	24	0	0	9.1	0	0	0	0
EPAS 919217	**19.1069**	**6.32847**	**.010416**	**.134868**	**17.5208**	**10.6847**	**4.20208**	**0**	**86.2312**	**26.5187**	**219.522**	**.072013**	**9.97868**	**0**	**0**	**0**	**0**
	260	78	6	1.61	48	26	56	0	100	31	358	1.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	56	24	0	0	9.1	0	0	0	0
Daily Tue, Aug 20, 2024	**33.0715**	**7.91926**	**0**	**.200238**	**17.7229**	**11.5889**	**10.8532**	**0**	**86.8733**	**26.8972**	**215.310**	**.032293**	**10.1383**	**0**	**0**	**0**	**0**
	260	40	0	1.61	48	26	56	0	100	30	257	.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	61	24	79	0	9.6	0	0	0	0
Ave Period 24 20-08-2024 11:59 PM	**33.0715**	**7.91926**	**0**	**.200238**	**17.7229**	**11.5889**	**10.8532**	**0**	**86.8733**	**26.8972**	**215.310**	**.032293**	**10.1383**	**0**	**0**	**0**	**0**
	260	40	0	1.61	48	26	56	0	100	30	257	.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	61	24	79	0	9.6	0	0	0	0
Daily Wed, Aug 21, 2024	**10.6033**	**5.35977**	**.016759**	**.095061**	**17.3977**	**10.1340**	**.151955**	**0**	**85.8402**	**26.2882**	**222.088**	**.096201**	**9.88145**	**0**	**0**	**0**	**0**
	103	78	6	.58	44	25	9	0	100	31	358	1.7	10.2	0	0	0	0
	2	1	0	0	2	1	0	0	56	24	0	0	9.1	0	0	0	0
Ave Period 24 21-08-2024 02:54 PM	**10.6033**	**5.35977**	**.016759**	**.095061**	**17.3977**	**10.1340**	**.151955**	**0**	**85.8402**	**26.2882**	**222.088**	**.096201**	**9.88145**	**0**	**0**	**0**	**0**
	103	78	6	.58	44	25	9	0	100	31	358	1.7	10.2	0	0	0	0
	2	1	0	0	2	1	0	0	56	24	0	0	9.1	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 16-09-2024 1:50:00 PM

End Date 17-09-2024 1:49:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**20.5881**	**7.95486**	**.600694**	**.305631**	**16.0395**	**12.4736**	**7.48333**	**.000701**	**87.7048**	**26.1229**	**150.584**	**.031180**	**9.80569**	**0**	**0**	**0**	**0**
Max	317	87	20	2.24	46	29	95	.14	100	33	240	1.6	10	0	0	0	0
Min	2	1	0	0	2	1	0	0	45	23	7	0	9.1	0	0	0	0
EPAS 919217	**20.5881**	**7.95486**	**.600694**	**.305631**	**16.0395**	**12.4736**	**7.48333**	**.000701**	**87.7048**	**26.1229**	**150.584**	**.031180**	**9.80569**	**0**	**0**	**0**	**0**
	317	87	20	2.24	46	29	95	.14	100	33	240	1.6	10	0	0	0	0
	2	1	0	0	2	1	0	0	45	23	7	0	9.1	0	0	0	0
Daily Mon, Sep 16, 2024	**31.2950**	**11.8852**	**.034426**	**.360557**	**13.6032**	**10.8524**	**14.2983**	**0**	**85.9491**	**26.8245**	**143.080**	**.042131**	**9.89721**	**0**	**0**	**0**	**0**
	317	53	2	2.24	46	29	95	0	100	33	240	.8	10	0	0	0	0
	2	1	0	0	2	1	0	0	45	24	7	0	9.3	0	0	0	0
Ave Period 24 16-09-2024 11:59 PM	**31.2950**	**11.8852**	**.034426**	**.360557**	**13.6032**	**10.8524**	**14.2983**	**0**	**85.9491**	**26.8245**	**143.080**	**.042131**	**9.89721**	**0**	**0**	**0**	**0**
	317	53	2	2.24	46	29	95	0	100	33	240	.8	10	0	0	0	0
	2	1	0	0	2	1	0	0	45	24	7	0	9.3	0	0	0	0
Daily Tue, Sep 17, 2024	**12.7192**	**5.06626**	**1.01686**	**.265265**	**17.8301**	**13.6650**	**2.47469**	**.001216**	**88.9951**	**25.6072**	**156.1**	**.023132**	**9.73843**	**0**	**0**	**0**	**0**
	129	87	20	1.3	43	28	51	.14	100	32	229	1.6	10	0	0	0	0
	2	1	0	0	2	1	0	0	57	23	57	0	9.1	0	0	0	0
Ave Period 24 17-09-2024 01:49 PM	**12.7192**	**5.06626**	**1.01686**	**.265265**	**17.8301**	**13.6650**	**2.47469**	**.001216**	**88.9951**	**25.6072**	**156.1**	**.023132**	**9.73843**	**0**	**0**	**0**	**0**
	129	87	20	1.3	43	28	51	.14	100	32	229	1.6	10	0	0	0	0
	2	1	0	0	2	1	0	0	57	23	57	0	9.1	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 29-10-2024 2:04:00 PM

End Date 30-10-2024 2:03:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**28.7861**	**9.21319**	**10.1423**	**.149784**	**35.6284**	**20.9173**	**12.2**	**0**	**82.8770**	**25.4902**	**255.794**	**.058611**	**10.3369**	**0**	**0**	**0**	**0**
Max	145	108	66	1.5	85	45	104	0	100	34	356	1.6	10.9	0	0	0	0
Min	2	1	0	0	2	1	0	0	44	21	1	0	9.7	0	0	0	0
EPAS 919217	**28.7861**	**9.21319**	**10.1423**	**.149784**	**35.6284**	**20.9173**	**12.2**	**0**	**82.8770**	**25.4902**	**255.794**	**.058611**	**10.3369**	**0**	**0**	**0**	**0**
	145	108	66	1.5	85	45	104	0	100	34	356	1.6	10.9	0	0	0	0
	2	1	0	0	2	1	0	0	44	21	1	0	9.7	0	0	0	0
Daily Tue, Oct 29, 2024	**43.4546**	**17.0318**	**.835570**	**.200721**	**41.5**	**24.8187**	**25.1023**	**0**	**84.1258**	**25.8825**	**259.954**	**.061577**	**10.5129**	**0**	**0**	**0**	**0**
	132	84	25	1.5	85	45	88	0	100	33	313	1.5	10.9	0	0	0	0
	2	1	0	0	2	1	0	0	47	22	245	0	9.9	0	0	0	0
Ave Period 24 29-10-2024 11:59 PM	**43.4546**	**17.0318**	**.835570**	**.200721**	**41.5**	**24.8187**	**25.1023**	**0**	**84.1258**	**25.8825**	**259.954**	**.061577**	**10.5129**	**0**	**0**	**0**	**0**
	132	84	25	1.5	85	45	88	0	100	33	313	1.5	10.9	0	0	0	0
	2	1	0	0	2	1	0	0	47	22	245	0	9.9	0	0	0	0
Daily Wed, Oct 30, 2024	**18.4277**	**3.69194**	**16.7144**	**.113815**	**31.4822**	**18.1623**	**3.08886**	**0**	**81.9952**	**25.2132**	**252.856**	**.056516**	**10.2126**	**0**	**0**	**0**	**0**
	145	108	66	1.16	67	35	104	0	100	34	356	1.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	44	21	1	0	9.7	0	0	0	0
Ave Period 24 30-10-2024 02:03 PM	**18.4277**	**3.69194**	**16.7144**	**.113815**	**31.4822**	**18.1623**	**3.08886**	**0**	**81.9952**	**25.2132**	**252.856**	**.056516**	**10.2126**	**0**	**0**	**0**	**0**
	145	108	66	1.16	67	35	104	0	100	34	356	1.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	44	21	1	0	9.7	0	0	0	0

APPENDIX - (C-3)

Ambient Air Quality Results of Ku Pyin Village

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Environmental Report

Record Cnt 1440

Start Date 15-05-2024 4:08:00 PM

End Date 16-05-2024 4:07:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**25.6277**	**10.9784**	**0**	**.185854**	**34.2902**	**25.5513**	**28.9777**	**0**	**44.7861**	**31.2645**	**185.965**	**.715069**	**10.22**	**0**	**0**	**0**	**0**
Max	136	64	0	.56	93	51	93	0	80	38	359	8.6	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	20	25	0	0	9.7	0	0	0	0
EPAS 919217	**25.6277**	**10.9784**	**0**	**.185854**	**34.2902**	**25.5513**	**28.9777**	**0**	**44.7861**	**31.2645**	**185.965**	**.715069**	**10.22**	**0**	**0**	**0**	**0**
	136	64	0	.56	93	51	93	0	80	38	359	8.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	20	25	0	0	9.7	0	0	0	0
Daily Wed, May 15,	**45.1588**	**20.8813**	**0**	**.259343**	**33.7944**	**31.6843**	**46.7627**	**0**	**40.4385**	**31.2584**	**208.207**	**.962076**	**10.2947**	**0**	**0**	**0**	**0**
	136	64	0	.56	92	51	84	0	56	38	359	8.6	10.5	0	0	0	0
	2	1	0	.06	2	1	12	0	20	28	16	0	9.9	0	0	0	0
Ave Period 24 15-05-2024 11:59 PM	**45.1588**	**20.8813**	**0**	**.259343**	**33.7944**	**31.6843**	**46.7627**	**0**	**40.4385**	**31.2584**	**208.207**	**.962076**	**10.2947**	**0**	**0**	**0**	**0**
	136	64	0	.56	92	51	84	0	56	38	359	8.6	10.5	0	0	0	0
	2	1	0	.06	2	1	12	0	20	28	16	0	9.9	0	0	0	0
Daily Thu, May 16, 2024	**16.1043**	**6.14979**	**0**	**.150020**	**34.5320**	**22.5609**	**20.3057**	**0**	**46.9059**	**31.2675**	**175.119**	**.594628**	**10.1835**	**0**	**0**	**0**	**0**
	71	47	0	.38	93	49	93	0	80	38	345	5.8	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	22	25	0	0	9.7	0	0	0	0
Ave Period 24 16-05-2024 04:07 PM	**16.1043**	**6.14979**	**0**	**.150020**	**34.5320**	**22.5609**	**20.3057**	**0**	**46.9059**	**31.2675**	**175.119**	**.594628**	**10.1835**	**0**	**0**	**0**	**0**
	71	47	0	.38	93	49	93	0	80	38	345	5.8	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	22	25	0	0	9.7	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 06-06-2024 3:20:00 PM

End Date 07-06-2024 3:19:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**55.6958**	**7.27430**	**0**	**.105395**	**87.8868**	**36.3854**	**6.84027**	**.040833**	**96.0180**	**19.8437**	**153.784**	**.14625**	**10.2432**	**0**	**0**	**0**	**0**
Max	3152	97	0	.34	357	136	91	.76	100	26	344	3.9	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	60	4	1	0	9.7	0	0	0	0
EPAS 919217	**55.6958**	**7.27430**	**0**	**.105395**	**87.8868**	**36.3854**	**6.84027**	**.040833**	**96.0180**	**19.8437**	**153.784**	**.14625**	**10.2432**	**0**	**0**	**0**	**0**
	3152	97	0	.34	357	136	91	.76	100	26	344	3.9	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	60	4	1	0	9.7	0	0	0	0
Daily Thu, Jun 6, 2024	**116.419**	**7.625**	**0**	**.122134**	**106.413**	**40.025**	**9.37307**	**.091192**	**100**	**23.9769**	**104.907**	**.01**	**10.2944**	**0**	**0**	**0**	**0**
	3152	74	0	.34	351	136	91	.76	100	26	306	.5	10.5	0	0	0	0
	2	1	0	.04	34	20	0	0	100	23	48	0	9.9	0	0	0	0
Ave Period 24 06-06-2024 11:59 PM	**116.419**	**7.625**	**0**	**.122134**	**106.413**	**40.025**	**9.37307**	**.091192**	**100**	**23.9769**	**104.907**	**.01**	**10.2944**	**0**	**0**	**0**	**0**
	3152	74	0	.34	351	136	91	.76	100	26	306	.5	10.5	0	0	0	0
	2	1	0	.04	34	20	0	0	100	23	48	0	9.9	0	0	0	0
Daily Fri, Jun 7, 2024	**21.3739**	**7.07608**	**0**	**.095934**	**77.4152**	**34.3282**	**5.40869**	**.012369**	**93.7673**	**17.5076**	**181.409**	**.223260**	**10.2143**	**0**	**0**	**0**	**0**
	1379	97	0	.33	357	129	54	.56	100	25	344	3.9	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	60	4	1	0	9.7	0	0	0	0
Ave Period 24 07-06-2024 03:19 PM	**21.3739**	**7.07608**	**0**	**.095934**	**77.4152**	**34.3282**	**5.40869**	**.012369**	**93.7673**	**17.5076**	**181.409**	**.223260**	**10.2143**	**0**	**0**	**0**	**0**
	1379	97	0	.33	357	129	54	.56	100	25	344	3.9	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	60	4	1	0	9.7	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 22-07-2024 2:06:00 PM

End Date 23-07-2024 2:05:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**8.17361**	**3.52152**	**30.4138**	**.075291**	**19.9229**	**12.3701**	**1.14861**	**.001041**	**89.4854**	**25.2861**	**200.05**	**.142291**	**10.1427**	**0**	**0**	**0**	**0**
Max	81	50	93	.52	65	35	30	.14	100	31	359	3.7	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	55	23	0	0	9.1	0	0	0	0
EPAS 919217	**8.17361**	**3.52152**	**30.4138**	**.075291**	**19.9229**	**12.3701**	**1.14861**	**.001041**	**89.4854**	**25.2861**	**200.05**	**.142291**	**10.1427**	**0**	**0**	**0**	**0**
	81	50	93	.52	65	35	30	.14	100	31	359	3.7	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	55	23	0	0	9.1	0	0	0	0
Daily Mon, Jul 22, 2024	**12.9191**	**6.73063**	**20.1498**	**.081666**	**29.9747**	**17.4983**	**2.66161**	**.002525**	**92.7676**	**24.9730**	**200.491**	**.077609**	**10.3055**	**0**	**0**	**0**	**0**
	81	50	73	.52	65	35	30	.14	100	29	355	2.4	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	63	23	0	0	9.6	0	0	0	0
Ave Period 24 22-07-2024 11:59 PM	**12.9191**	**6.73063**	**20.1498**	**.081666**	**29.9747**	**17.4983**	**2.66161**	**.002525**	**92.7676**	**24.9730**	**200.491**	**.077609**	**10.3055**	**0**	**0**	**0**	**0**
	81	50	73	.52	65	35	30	.14	100	29	355	2.4	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	63	23	0	0	9.6	0	0	0	0
Daily Tue, Jul 23, 2024	**4.84160**	**1.26832**	**37.6205**	**.070815**	**12.8652**	**8.76950**	**.086288**	**0**	**87.1808**	**25.5059**	**199.739**	**.187706**	**10.0283**	**0**	**0**	**0**	**0**
	18	7	93	.34	41	23	7	0	100	31	359	3.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	55	23	0	0	9.1	0	0	0	0
Ave Period 24 23-07-2024 02:05 PM	**4.84160**	**1.26832**	**37.6205**	**.070815**	**12.8652**	**8.76950**	**.086288**	**0**	**87.1808**	**25.5059**	**199.739**	**.187706**	**10.0283**	**0**	**0**	**0**	**0**
	18	7	93	.34	41	23	7	0	100	31	359	3.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	55	23	0	0	9.1	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 16-08-2024 1:35:00 PM

End Date 17-08-2024 1:34:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**11.4361**	**5.97777**	**0**	**.057493**	**34.7201**	**17.8590**	**2.0875**	**.004569**	**91.7083**	**25.0298**	**214.579**	**.16375**	**10.2438**	**0**	**0**	**0**	**0**
Max	70	61	0	1.06	375	136	68	.63	100	30	358	4.2	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	58	23	14	0	9.7	0	0	0	0
EPAS 919217	**11.4361**	**5.97777**	**0**	**.057493**	**34.7201**	**17.8590**	**2.0875**	**.004569**	**91.7083**	**25.0298**	**214.579**	**.16375**	**10.2438**	**0**	**0**	**0**	**0**
	70	61	0	1.06	375	136	68	.63	100	30	358	4.2	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	58	23	14	0	9.7	0	0	0	0
Daily Fri, Aug 16, 2024	**14.8176**	**8.6672**	**0**	**.067392**	**50.336**	**23.9088**	**4.72**	**.010128**	**91.2128**	**25.2208**	**196.212**	**.21536**	**10.3352**	**0**	**0**	**0**	**0**
	66	61	0	.29	375	136	68	.63	100	30	358	4.2	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	61	23	14	0	9.9	0	0	0	0
Ave Period 24 16-08-2024 11:59 PM	**14.8176**	**8.6672**	**0**	**.067392**	**50.336**	**23.9088**	**4.72**	**.010128**	**91.2128**	**25.2208**	**196.212**	**.21536**	**10.3352**	**0**	**0**	**0**	**0**
	66	61	0	.29	375	136	68	.63	100	30	358	4.2	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	61	23	14	0	9.9	0	0	0	0
Daily Sat, Aug 17, 2024	**8.84294**	**3.91533**	**0**	**.049901**	**22.7447**	**13.2196**	**.068711**	**.000306**	**92.0883**	**24.8834**	**228.665**	**.124171**	**10.1737**	**0**	**0**	**0**	**0**
	70	51	0	1.06	51	28	8	.13	100	30	354	4	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	58	23	30	0	9.7	0	0	0	0
Ave Period 24 17-08-2024 01:34 PM	**8.84294**	**3.91533**	**0**	**.049901**	**22.7447**	**13.2196**	**.068711**	**.000306**	**92.0883**	**24.8834**	**228.665**	**.124171**	**10.1737**	**0**	**0**	**0**	**0**
	70	51	0	1.06	51	28	8	.13	100	30	354	4	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	58	23	30	0	9.7	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 19-09-2024 3:12:00 PM

End Date 20-09-2024 3:11:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**18.4451**	**9.93472**	**0**	**.072451**	**38.0930**	**20.7465**	**5.02152**	**.005097**	**89.3520**	**26.1270**	**253.053**	**.255763**	**10.3373**	**0**	**0**	**0**	**0**
Max	108	68	0	.5	246	95	83	.65	100	32	359	4.6	10.6	0	0	0	0
Min	2	1	0	0	2	1	0	0	56	22	0	0	9.9	0	0	0	0
EPAS 919217	**18.4451**	**9.93472**	**0**	**.072451**	**38.0930**	**20.7465**	**5.02152**	**.005097**	**89.3520**	**26.1270**	**253.053**	**.255763**	**10.3373**	**0**	**0**	**0**	**0**
	108	68	0	.5	246	95	83	.65	100	32	359	4.6	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.9	0	0	0	0
Daily Thu, Sep 19, 2024	**24.9696**	**11.6041**	**0**	**.092443**	**34.7935**	**22.0776**	**7.26704**	**0**	**94.1893**	**25.6363**	**282.924**	**.232765**	**10.4821**	**0**	**0**	**0**	**0**
	104	56	0	.18	71	37	36	0	100	30	358	3.7	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	69	24	4	0	10	0	0	0	0
Ave Period 24 19-09-2024 11:59 PM	**24.9696**	**11.6041**	**0**	**.092443**	**34.7935**	**22.0776**	**7.26704**	**0**	**94.1893**	**25.6363**	**282.924**	**.232765**	**10.4821**	**0**	**0**	**0**	**0**
	104	56	0	.18	71	37	36	0	100	30	358	3.7	10.6	0	0	0	0
	2	1	0	0	2	1	0	0	69	24	4	0	10	0	0	0	0
Daily Fri, Sep 20, 2024	**14.6677**	**8.96820**	**0**	**.060877**	**40.0032**	**19.9758**	**3.72149**	**.008048**	**86.5515**	**26.4111**	**235.759**	**.269078**	**10.2535**	**0**	**0**	**0**	**0**
	108	68	0	.5	246	95	83	.65	100	32	359	4.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.9	0	0	0	0
Ave Period 24 20-09-2024 03:11 PM	**14.6677**	**8.96820**	**0**	**.060877**	**40.0032**	**19.9758**	**3.72149**	**.008048**	**86.5515**	**26.4111**	**235.759**	**.269078**	**10.2535**	**0**	**0**	**0**	**0**
	108	68	0	.5	246	95	83	.65	100	32	359	4.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.9	0	0	0	0

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 23-10-2024 3:47:00 PM

End Date 24-10-2024 3:46:00 PM

	PMA ug/m3		CO2 ppm	CO ppm	NO2 ppb	O3 ppb	SO2 ppb	PrpM mm	RH %	TmpC Deg. C	WDir Deg.	WSpd mph	Pwr V				
Ave	**12.6361**	**4.80416**	**.000694**	**.074243**	**22.2333**	**14.4375**	**1.90625**	**0**	**88.4180**	**24.9652**	**169.236**	**.179513**	**9.93527**	**0**	**0**	**0**	**0**
Max	89	56	1	.71	59	34	23	0	100	31	358	5.2	10.2	0	0	0	0
Min	2	1	0	0	2	1	0	0	56	22	0	0	9.3	0	0	0	0
EPAS 919217	**12.6361**	**4.80416**	**.000694**	**.074243**	**22.2333**	**14.4375**	**1.90625**	**0**	**88.4180**	**24.9652**	**169.236**	**.179513**	**9.93527**	**0**	**0**	**0**	**0**
	89	56	1	.71	59	34	23	0	100	31	358	5.2	10.2	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.3	0	0	0	0
Daily Wed, Oct 23, 2024	**19.8620**	**7.35091**	**.002028**	**.091805**	**34.2068**	**21.6572**	**2.33874**	**0**	**97.7991**	**24.1277**	**143.931**	**.078701**	**10.0137**	**0**	**0**	**0**	**0**
	58	41	1	.34	59	34	15	0	100	27	188	3.6	10.2	0	0	0	0
	2	1	0	0	2	1	0	0	78	23	14	0	9.6	0	0	0	0
Ave Period 24 23-10-2024 11:59 PM	**19.8620**	**7.35091**	**.002028**	**.091805**	**34.2068**	**21.6572**	**2.33874**	**0**	**97.7991**	**24.1277**	**143.931**	**.078701**	**10.0137**	**0**	**0**	**0**	**0**
	58	41	1	.34	59	34	15	0	100	27	188	3.6	10.2	0	0	0	0
	2	1	0	0	2	1	0	0	78	23	14	0	9.6	0	0	0	0
Daily Thu, Oct 24, 2024	**8.87434**	**3.47835**	**0**	**.065100**	**16**	**10.6789**	**1.68109**	**0**	**83.5343**	**25.4012**	**182.410**	**.231995**	**9.89440**	**0**	**0**	**0**	**0**
	89	56	0	.71	48	27	23	0	100	31	358	5.2	10	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.3	0	0	0	0
Ave Period 24 24-10-2024 03:46 PM	**8.87434**	**3.47835**	**0**	**.065100**	**16**	**10.6789**	**1.68109**	**0**	**83.5343**	**25.4012**	**182.410**	**.231995**	**9.89440**	**0**	**0**	**0**	**0**
	89	56	0	.71	48	27	23	0	100	31	358	5.2	10	0	0	0	0
	2	1	0	0	2	1	0	0	56	22	0	0	9.3	0	0	0	0

APPENDIX-D

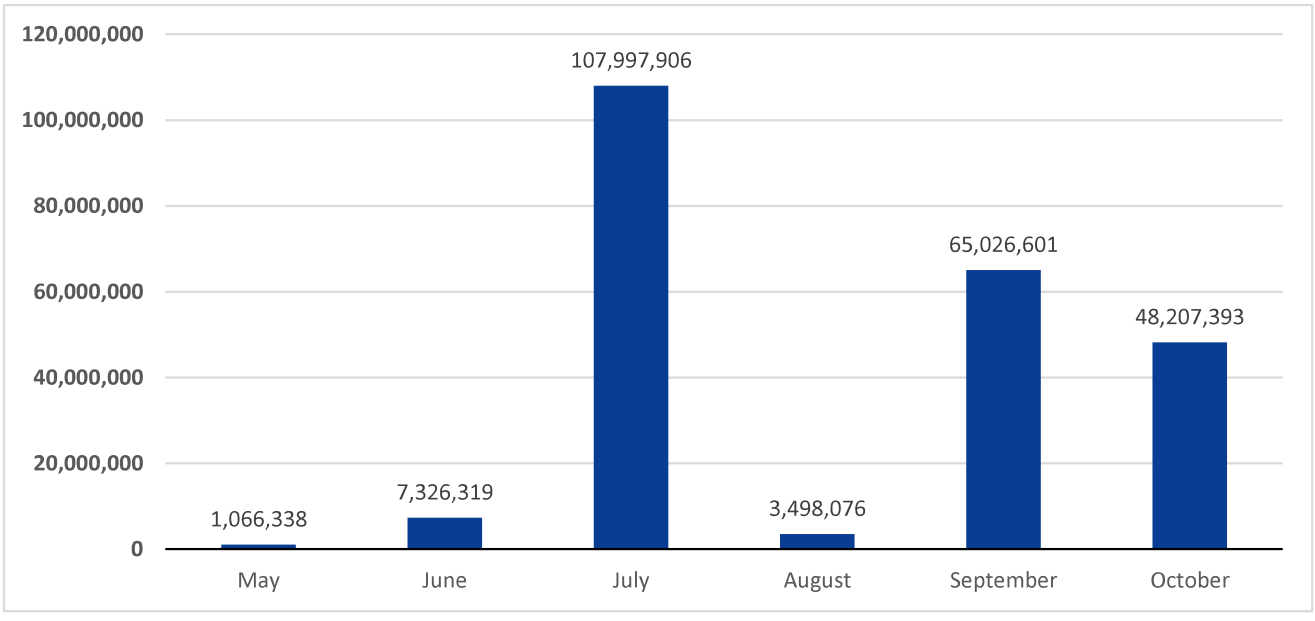
Corporate Social Responsibility

Corporate Social Responsibility (CSR)

ရွှေတောင်ဘိလပ်မြေကုမ္ပဏီလီမိတက် (အပါချီဘိလပ်မြေစက်ရုံ) ၊ ရွှေတောင်သတ္ထုတူးဖော်ထုတ်လုပ်ရေးကုမ္ပဏီလီမိတက်
(ထုံးကျောက်နှင့်ရွှံ့ကျောက်လုပ်ကွက်များနှင့်ပတ်သက်၍ ဒေသဖွံ့ဖြိုးရေးဆောင်ရွက်ထားရှိမှုစာရင်း)

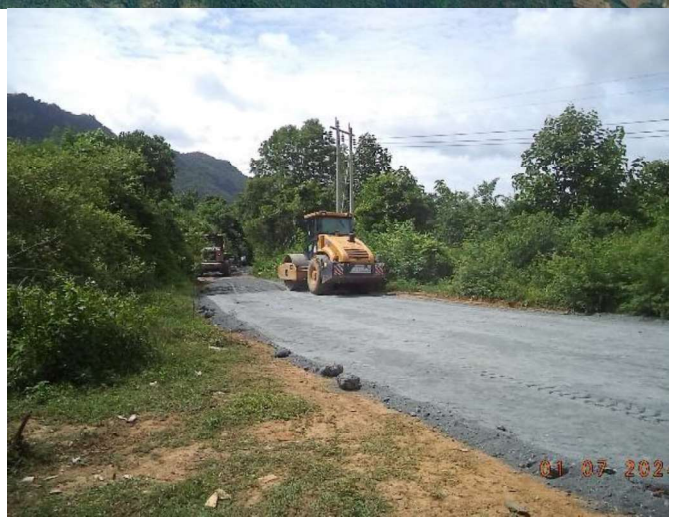
စဉ်	အကြောင်းအရာ	May - 2024	Jun - 2024	Jul - 2024	Aug - 2024	Sep - 2024	Oct - 2024	Total (kyats)
၁	လမ်းပန်းဆက်သွယ်ရေး တိုးတက်ကောင်းမွန်အောင် ဆောင်ရွက်ပေးနိုင်မှု			104,983,900	438,180	1,217,500		106,639,580
၂	ပြည်သူများ ရေရရှိမှု အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု						882,000	882,000
၃	လျှပ်စစ်မီးရရှိရေး အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု							0
၄	ပညာရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု	350,000	1,003,000	2,394,940	1,267,800	1,720,000	2,206,730	8,942,470
၅	ကျန်းမာရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု	295,078	267,609	162,146	426,336	277,851	383,663	1,812,683
၆	လူမှုရေးနှင့် ကယ်ဆယ်ရေး အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု	421,260	6,055,710	34,000	1,365,760	718,750	325,000	8,920,480
၇	ဘာသာသာသနာရေး အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု			422,920			3,500,000	3,922,920
၈	သဘာဝဘေးအန္တရာယ်ကျရောက် ပျက်စီးမှုများ အထောက်အကူပြု ဆောင်ရွက်ပေးနိုင်မှု					61,092,500	40,910,000	102,002,500
စုစုပေါင်း		1,066,338	7,326,319	107,997,906	3,498,076	65,026,601	48,207,393	233,122,633

ရွှေတောင်ဘိလပ်မြေကုမ္ပဏီလီမိတက် (အပါချီဘိလပ်မြေစက်ရုံ) ၊ ရွှေတောင်သတ္ထုတူးဖော်ထုတ်လုပ်ရေးကုမ္ပဏီလီမိတက်
(ထုံးကျောက်နှင့်ရွှံ့ကျောက်လုပ်ကွက်များနှင့်ပတ်သက်၍ ဒေသဖွံ့ဖြိုးရေးဆောင်ရွက်ထားရှိမှုစာရင်း)



Corporate Social Responsibility (CSR)

လမ်းပန်းဆက်သွယ်ရေး ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီဆောင်ရွက်ပေးခြင်း



ပုံ - ၂၀၂၄ခုနှစ်၊ ဇူလိုင်လအတွင်း ကူပြင်ကျေးရွာသို့ သွားသည့် လမ်းအရှည် (၁.၂၆) မိုင် ကျေးလက်လမ်းအား လိုအပ်သည့်မြေနှင့် ကျောက်များ ဖြည့်၍ လမ်းမြေညှိပေးခြင်း။

ပုံ - ၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလအတွင်း ပြည်ညောင်ကျေးရွာအတွင်းရှိ အမှတ်(၂)ရပ်ကွက် လမ်းအား ကွန်ကရစ်လမ်းခင်းနေစဉ်။

Corporate Social Responsibility (CSR)

ပညာရေးဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြုပံ့ပိုးကူညီဆောင်ရွက်ပေးခြင်း

ပုံ- ၂၀၂၄ခုနှစ်၊ ဇွန်လမှ အောက်တိုဘာလအထိ ပြည်ညောင် ကျေးရွာ အခြေခံပညာ အထက်တန်းကျောင်းမှ ကျောင်းသား၊ ကျောင်းသူ(၇)ဦးအား ပညာသင် ထောက်ပံ့ကြေး ပေးအပ်နေစဉ်။

ပုံ - ၂၀၂၄ခုနှစ်၊ ဇွန်လမှ အောက်တိုဘာလအထိ ပြည်ညောင်ကျေးရွာ အခြေခံပညာအထက်ကျောင်းမှ ဆရာမအား လစာငွေ ပေးအပ်နေစဉ်။

ပုံ- ၂၀၂၄ခုနှစ်၊ ဇွန်လအတွင်း ပြည်ညောင်ကျေးရွာ စာကြည့်တိုက်တွင် "ဒို့ရွာရေကန်" ခေါင်းစဉ်ဖြင့် စာဖတ်ပွဲ ကျင်းပနေစဉ်။

ပုံ- ၂၀၂၄ခုနှစ်၊ ဇူလိုင်လအတွင်း ကူပြင်ကျေးရွာစာသင် ကျောင်းတွင် "ဒို့ရွာရေကန်" ခေါင်းစဉ်ဖြင့် စာဖတ်ပွဲ ကျင်းပ နေစဉ်။

ပုံ- ၂၀၂၄ခုနှစ်၊ အောက်တိုဘာလ ကျင်းပပြုလုပ်သော သာစည်မြို့နယ်အဆင့် အင်္ဂလိပ်စာနှင့် သချိာစွမ်းရည်ပြိုင်ပွဲအား ပြည်ညောင်ကျေးရွာ၊ အခြေခံပညာ အထက်တန်းကျောင်းရှိ ကျောင်းသား၊ ကျောင်းသူများမှ သွားရောက်ယှဉ်ပြိုင်ဖြေဆိုရန် အတွက်ကားဖြင့်အကြိုအပို့ ပြုလုပ် ပေးခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ အောက်တိုဘာလအတွင်း ကူပြင် ကျေးရွာ အခြေခံပညာ အလယ်တန်းကျောင်းတွင် ပျက်စီးနေသော မျက်နှာကြက်များအား ပြုပြင်ပေးခြင်း။

Corporate Social Responsibility (CSR)

ပြည်ညောင်ကျေးရွာရှိ အထက်တန်းကျောင်းအတွက် သုံးရေကူညီပံ့ပိုးပေးခြင်း။

ပြည်ညောင်ကျေးရွာ၊ အခြေခံပညာအထက်တန်းကျောင်းတွင် သောက်ရေသန့်စက်အတွက် ရေသိုလှောင်ကန်အသစ် တည်ဆောက်ခြင်းအတွက် ရန်ပုံငွေထည့်ဝင်ကူညီပံ့ပိုးပေးခြင်း။

ရွှေတောင်ဘိလပ်မြေကုမ္ပဏီလီမိတက် (အပါချီဘိလပ်မြေစက်ရုံ) ပြည်ညောင်နှင့်ကူပြင်ကျေးရွာ အခြေခံပညာကျောင်းများမှ
ကျောင်းသား/ကျောင်းသူ ပညာသင်ထောက်ပံ့ကြေးပေးအပ်ခြင်း

ကျန်းမာရေး ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီဆောင်ရွက်ပေးခြင်း

ပုံ - ပြည်ညောင်နှင့်ကူပြင်ကျေးရွာရှိ ဒေသနေပြည်သူများအား လစဉ်အခမဲ့ ကျန်းမာရေးစောင့်ရှောက်ပေးနေစဉ်။

Corporate Social Responsibility (CSR)

ပုံ - ၂၀၂၄ခုနှစ် ၊ မေလအတွင်း ကူပြင်ကျေးရွာရှိ ဒေသနေပြည်သူများအား သားအိမ်ခေါင်းကင်ဆာနှင့်ပတ်သက်၍ ကျန်းမာရေးဟောပြောပွဲ ကျင်းပပြုလုပ်နေစဉ်။

ပုံ- ၂၀၂၄ခုနှစ် ၊ ဩဂုတ်လအတွင်း ပြည်ညောင်ကျေးရွာ အုပ်စုအတွင်းရှိ ပြည်ညောင်ကျေးလက်ဆေးပေးခန်းတွင် ဆေးအင်္ဂေ့ရှူး(ချဲ့ပျော်စက်)အား လှူဒါန်းနေစဉ်။

လူမှုရေးနှင့်ကယ်ဆယ်ရေး ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီဆောင်ရွက်ပေးခြင်း

ပုံ -၂၀၂၄ခုနှစ်၊ အောက်တိုဘာလမှ စတင်၍ ကူပြင်ကျေးရွာရှိ အသက်အရွယ်ကြီးရင့်သော အဖိုးအဖွားများအား ကူညီထောက်ပံ့ ပေးခြင်း။

ပုံ - ပြည်ညောင်နှင့်ကူပြင်ကျေးရွာရှိ စာကြည့်တိုက်တွင် ဒေသနေ ကလေးငယ်များ ကာယညာဏ ဖွံ့ဖြိုးစေရန် လေ့ကျင့် ကစားစရာများနှင့် သင်ထောက်ကူပစ္စည်းများထောက်ပံ့ ပေးထားခြင်း။

ပုံ - ပြည်ညောင်နှင့် ကူပြင်ကျေးရွာရှိ ထာဝရအလင်းတန်း စာကြည့်တိုက်တွင် ဒေသနေပြည်သူများ စာပေဖတ်ရှုသုတ၊ ပြင်ပအထွေထွေဖတ်ရှုသုတ၊ သတင်းအချက်အလက်နှင့် နည်းပညာများ လေ့လာနိုင်စေရန်အတွက် လစဉ် စာအုပ်အသစ်များထားရှိပေးခြင်းနှင့် Internet Wi-Fi အခမဲ့ တပ်ဆင်ပေးထားခြင်း။

Corporate Social Responsibility (CSR)

ဘာသာသာသနာရေး ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီဆောင်ရွက်ပေးခြင်း

ပုံ - ၂၀၂၄ခုနှစ်၊ အောက်တိုဘာလအတွင်း ကူပြင်ကျေးရွာ၊ စုပေါင်းမဟာဘုံကထိန်ပွဲအတွက် အလှူငွေထည့်ဝင်လှူဒါန်းခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ အောက်တိုဘာလအတွင်း ပြည်ညောင်ကျေးရွာ၊ စုပေါင်းမဟာဘုံကထိန်ပွဲအတွက် အလှူငွေထည့်ဝင်လှူဒါန်း ခြင်း။

သဘာဝဘေးအန္တရာယ်ကျရောက်ပျက်စီးမှုများအတွက် အထောက်အကူပြု ပံ့ပိုးကူညီဆောင်ရွက်ပေးခြင်း

၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလ နှင့် အောက်တိုဘာလတွင် စက်ရုံးအနီးနားရှိကျေးရွာများနှင့် အခြားဒေသများတွင် ယာဂီမုန်တိုင်းကြောင့် ရေဘေးသင့်ပြည်သူများအား ကူညီ ထောက်ပံ့ပေးခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလအတွင်း ပြည်ညောင်ကျေးရွာရှိ ရေဘေးသင့်ပြည်သူများအား ကူညီထောက်ပံ့ပေးခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလအတွင်း အုတ်ကျင်းကျေးရွာရှိ ရေဘေးသင့်ပြည်သူများအား ကူညီထောက်ပံ့ပေးခြင်း။

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ပုံ- ၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလအတွင်း တောင်ပြည်ညောင်ကျေးရွာရှိ ရေဘေးသင့်ပြည်သူများအား ကူညီ ထောက်ပံ့ပေးခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလအတွင်း - ကူပြင်ကျေးရွာရှိ ရေဘေးသင့်ပြည်သူများအား ကူညီ ထောက်ပံ့ပေးခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ စက်တင်ဘာလအတွင်း မုံပင်ကျေးရွာရှိ ရေဘေးသင့်ပြည်သူများအား ကူညီထောက်ပံ့ပေးခြင်း။

ပုံ- ၂၀၂၄ခုနှစ်၊ အောက်တိုဘာလအတွင်း ကလောမြို့ရှိ ရေဘေးသင့်ပြည်သူများအား ကူညီထောက်ပံ့ပေးခြင်း။