SHWE TAUNG MINING COMPANY LIMITED

Mudstone Quarry
Biannual Environmental Monitoring Report
(May 2025 to October 2025)

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 All previous issues are hereby superseded and are to be destroyed.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 2025	Bi-annual reporting to ECD	 Hein Latt Environmental Manager	- - Head of HSE	 Kyaw Naing Soe Deputy MD of STM

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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 အထောက်အပံ့ပြု ဆောင်ရွက်လျက်ရှိပါသည်။

ရွှေတောင် သတ္တုတူးဖော်ထုတ်လုပ်ရေး ကုမ္ပဏီလီမိတက် (STM) သည် ရွှံ့ကျောက်ထုတ်လုပ်မှုလုပ်ငန်းအတွက် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း အစီရင်ခံစာကို ၂၀၂၂ ခုနှစ် နိုဝင်ဘာလ ၁၈ ရက်နေ့တွင် သယံဇာတနှင့်သဘာဝ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC)၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန (ECD) ထံမှ အတည်ပြုချက် ရယူခဲ့ပြီး ECC ရရှိနိုင်ရေးအတွက် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ ညွှန်ကြားချက်နှင့်အညီ ဆက်လက်ဆောင်ရွက်လျက်ရှိပါသည်။ ရွှံ့ကျောက်ထုတ်ယူခွင့်လိုင်စင်သည် ၂၀၂၂ ခုနှစ် နိုဝင်ဘာ ၁၅ ရက်တွင် သက်တမ်းကုန်ဆုံးခဲ့ပြီး ၂၀၂၃ ခုနှစ် ဇွန် ၂၈ ရက်တွင် MONREC မှ လိုင်စင်သက်တမ်းတိုးခြင်းကို လက်ခံရရှိခဲ့ပါသည်။ ထို့ကြောင့် ရွှေတောင်သတ္တုတူးဖော်ရေး ကုမ္ပဏီလီမိတက်သည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ လုပ်ငန်းစဉ်များ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေနှင့် နည်းဥပဒေများ၊ ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်များကို လိုက်နာဆောင်ရွက်လျက်ရှိပြီး ၂၀၂၅ ခုနှစ် မေလမှ ၂၀၂၅ ခုနှစ် အောက်တိုဘာလအတွက် ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုစစ်ဆေးခြင်း အစီရင်ခံစာကို တင်ပြခြင်းဖြစ်ပါသည်။

1. Introduction

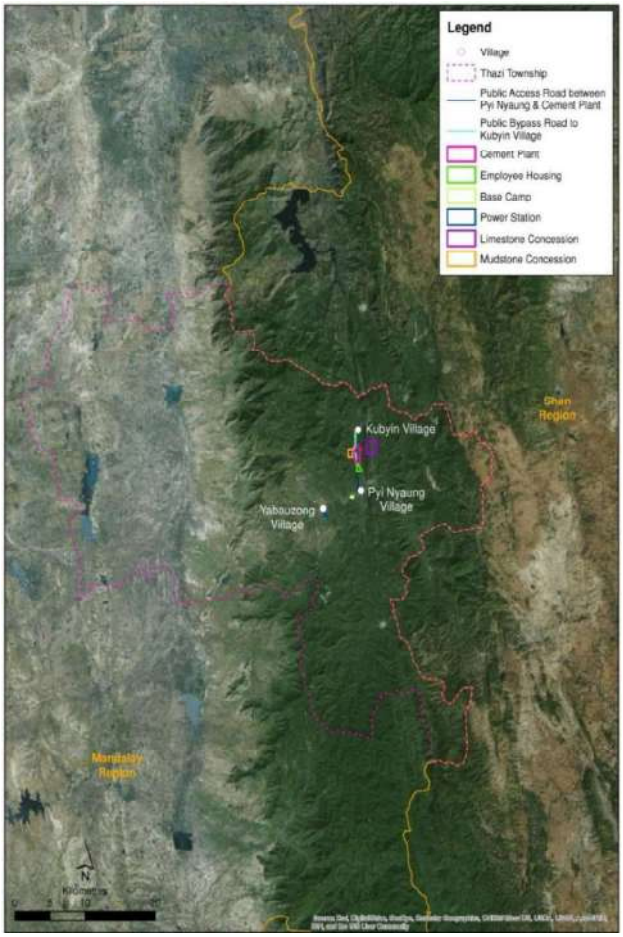
1.1 Executive Summary

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 and now processing to get ECC in line with the instruction of ECD. 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 2025 to October 2025.

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

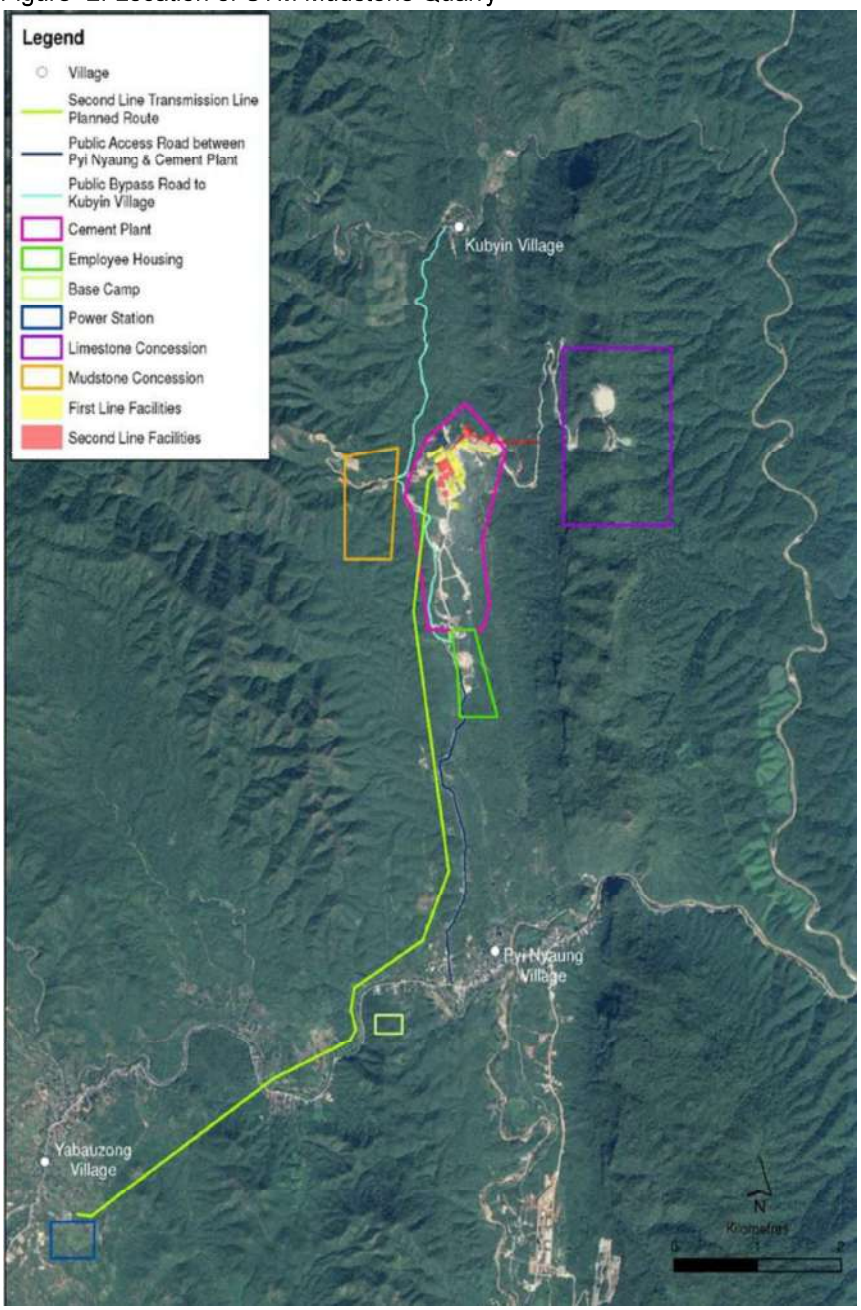
Project Stage/ Component	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
Operation / Mudstone Quarry	Inspection of mitigation compliance	General compliance with mitigation measures presented in the ESMP.	Project activity areas	Visual inspection of all active 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

Potential impacts to air quality in the vicinity of the mudstone quarry may arise from clearing and excavating of surface materials, bulldozing surface materials, drilling, blasting, loading and unloading haul trucks with mudstone and waste rock, vehicle movements over unpaved surfaces, wind erosion from mudstone and waste rock stockpiles. Major pollutants will be Dust, PM10 and PM2.5 which can affect the surrounding environment.

Dust deposition gauges have been installed in plant area, Kubyin and Pyi Nyaung Villages and STM monitored dust deposition with 6 points on surrounding area in plant site, quarries and plant 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 2025 to October 2025.

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 2025 to October 2025

Samplers: Nay Hlaing Oo	**Dust Deposition Monitoring**						
	Test Result						
Parameter	**Australia & New Zealand Guideline (g/m2/Day)**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
STM Accommodation (Ingyin Hostel)	1.191 (g/m2/Day)	1.71	0.54	0.46	0.09	0.60	0.57
STM Accommodation (55acres)		1.1	0.28	0.26	0.05	0.34	0.50
Ku Pyin (Behind Library)		0.53	0.44	0.68	0.10	0.53	0.51
Ku Pyin (Primary School)		0.38	0.41	0.51	0.06	0.36	0.36
Pyi Nyaung (Near Main Road)		0.94	0.38	0.44	0.16	0.64	0.43
Pyi Nyaung (Information Center)		0.92	0.18	0.21	0.07	0.24	0.46
Remark: Dust exceedance in Ingyin hostel was attributed to road maintenance activities in May 2025.							

4.2 Ambient Air Monitoring

4.2.1 Monitoring Location

Ambient Air Quality monitoring is measured with portable HAZ-SCANNER™ EPAS device. 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	**Average Period**	**Guideline Value in µg/m3**	**Baseline**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
Nitrogen dioxide	24 hours	200	3.63	74.87	Sensor Error	Sent to Nanova Co., Ltd for Service	94.21	4.29	29.39
Ozone		100	-	45.26			44.73	4.16	22.53
PM10		50	-	4.30			34.99	5.38	2.02
PM2.5		25	-	13.66			10.98	16.85	3.79
Sulphur dioxide		20	<DL	**25.38**			0.27	1.23	0.33
Carbon dioxide		ppm	-	60.99			1.70	2.70	0.00
Carbon monoxide		10 ppm	-	0.15			0.00	0.06	0.05
Remark: The high SO_2 concentration in May could be influenced by hot and dry weather conditions with limited air dispersion. Reduced wind speed and low atmospheric mixing height may have caused temporary accumulation of pollutants near the ground level.									

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	**Average Period**	**Guideline Value in µg/m3**	**Baseline**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
Nitrogen dioxide	24 hours	200	10.1	78.09	Sensor Error	Sent to Nanova Co., Ltd for Service	108.26	3.76	25.33
Ozone		100	-	57.45			52.15	4.10	28.74
PM10		50	76.3	5.85			11.92	4.41	3.22
PM2.5		25	37.4	3.33			11.43	3.08	2.87
Sulphur dioxide		20	<DL	**29.37**			0.00	0.00	0.01
Carbon dioxide		ppm	-	15.25			0.10	0.00	0.00
Carbon monoxide		10 ppm	-	0.20			0.00	0.02	0.10
Remark: The high SO_2 concentration in May could be influenced by hot and dry weather conditions with limited air dispersion. Reduced wind speed and low atmospheric mixing height may have caused temporary accumulation of pollutants near the ground level.									

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	**Average Period**	**Guideline Value in µg/m3**	**Baseline**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
Nitrogen dioxide	24 hours	200	10.3	186.11	Sensor Error	Sent to Nanova Co., Ltd for Service	Didn't Monitor	12.60	Did not monitor
Ozone		100	-	88.62				10.23	
PM10		50	32.2	4.36				14.12	
PM2.5		25	19.9	2.71				18.08	
Sulphur dioxide		20	<DL	**20.37**				1.29	
Carbon dioxide		ppm	-	29.02				0.21	
Carbon monoxide		10 ppm	-	0.15				0.00	
Remark: The high SO_2 concentration in May could be influenced by hot and dry weather conditions with limited air dispersion. Reduced wind speed and low atmospheric mixing height may have caused temporary accumulation of pollutants near the ground level.									

**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 2025 to October 2025

Air Quality Index (AQI)									
Machine Name: Haz-scanner (EPAS)			**Operator:** Nay Hlaing Oo						
			Location: Worker Accommodation						
			AQI Results						
Parameter	**Averaging Period**	**Unit**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**	**Sensitive Group**
PM_{10}	24 hour	ug/ m3	4	Sensor Error	Sent to Nanova Co., Ltd for Service	31	5	2	People with respiratory disease are the group most at risk.
$PM_{2.5}$	24 hour	ug/ m3	59			54	65	21	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	People with heart disease are the group most at risk.
Ozone	8 hour	ppb	21			20	2	10	Children and people with asthma are the groups most at risk.
Nitrogen dioxide	1 hour	ppb	37			47	2	14	People with asthma or other respiratory diseases, the elderly, and children are the groups most at risk.
Sulphur dioxide	1 hour	ppb	13			0	0	0	People with asthma are the group most at risk.

Table-9: Summary of AQI at Pyi Nyaung Village May 2025 to October 2025

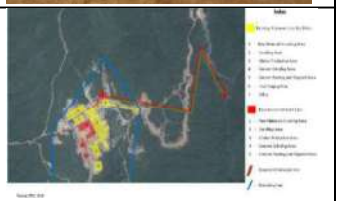
Air Quality Index (AQI)									
Machine Name: Haz-scanner (EPAS)			**Operator:** Nay Hlaing Oo						
			Location: Pyi Nyaung Village						
			AQI Results						
Parameter	**Averaging Period**	**Unit**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**	**Sensitive Group**
PM_{10}	24 hour	ug/ m3	5	Sensor Error	Sent to Nanova Co., Ltd for Service	10	4	3	People with respiratory disease are the group most at risk.
$PM_{2.5}$	24 hour	ug/ m3	18			55	17	16	People with respiratory or heart disease, the elderly and children are the groups most at risk.
Carbon monoxide	8 hour	ppm	2			0	0	1	People with heart disease are the group most at risk.
Ozone	8 hour	ppb	27			24	2	13	Children and people with asthma are the groups most at risk.
Nitrogen dioxide	1 hour	ppb	39			54	2	12	People with asthma or other respiratory diseases, the elderly, and children are the groups most at risk.
Sulphur dioxide	1 hour	ppb	16			0	0	0	People with asthma are the group most at risk.

Table-10: Summary of AQI at Ku Pyin Village May 2025 to October 2025

Air Quality Index (AQI)									
Machine Name: Haz-scanner (EPAS)			**Operator:** Nay Hlaing Oo						
			Location: Ku Pyin Village						
			AQI Results						
Parameter	**Averaging Period**	**Unit**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**	**Sensitive Group**
PM_{10}	24 hour	ug/ m3	4	Sensor Error	Sent to Nanova Co., Ltd for Service	Didn't Monitor	13	Did not monitor	People with respiratory disease are the group most at risk.
$PM_{2.5}$	24 hour	ug/ m3	15				68		People with respiratory or heart disease, the elderly and children are the groups most at risk.
Carbon monoxide	8 hour	ppm	1				0		People with heart disease are the group most at risk.
Ozone	8 hour	ppb	42				5		Children and people with asthma are the groups most at risk.
Nitrogen dioxide	1 hour	ppb	98				6		People with asthma or other respiratory diseases, the elderly, and children are the groups most at risk.
Sulphur dioxide	1 hour	ppb	10				0		People with asthma are the group most at risk.

4.2.5 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)	

4.2.6 Evaluation

Ambient Air monitoring was monthly tested at location of Sensitive Air Respecters such as Cement Plant Accommodation, and nearby villages which are Pyi Nyaung and Ku Pyin as in Cement Plant EIA report. All results are within Myanmar National Environmental Quality (Emission) Guidelines (2015), except higher results of PM2.5 and SO_2 in some months. These increases are likely attributable to frequent forest fires initiated by some local villagers for land clearing, as well as slash-and-burn practices conducted by Forest Department for teak plantation management near the STC area.

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 in October 2025. The campaign involved the distribution and installation of "No Idling: Turn Off Your Engine" stickers at the main entrance, vehicle parking areas, and security gates. Furthermore, toolbox meetings and awareness sessions were conducted to educate drivers, contractors, and staff about the environmental and health impacts of vehicle idling and the benefits of adopting this practice.

Figure – 8: Photo Records of "No Idling: Turn Off Your Engine Sticker Campaign"

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 SO_2 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 – 9: Occupational Health Care Records by Social Security Board in August 2025

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

As per monitoring program, STM monthly monitor Ku Pyin and Pyi Nyaung Stream, Ye Shin Stream, Reservoir, Sedimentation Pond 5 and 6 for mudstone runoff area. Figure 10 and 11 show the location of Water Quality sampling points. The monitoring parameters are based on WHO Drinking Water Guidelines and IFC Effluent Discharge Standards, and include pH, color, turbidity, iron, BOD, COD, and other relevant indicators.

In accordance with the commitment outlined in approval letter, STM requires to monitor parameters including Arsenic, Cadmium, Chromium (VI), Copper, Cyanide (total, free, and weak acid dissociable), Iron (total), Lead, Mercury, Nickel, and Zinc in Mudstone Runoff Discharge (Ku Pyin Stream) and Ye Shin Stream on biannual basis. Therefore, STM has collected water samples from these locations and samples were submitted to an accredited external laboratory for analysis of the full range of required parameters. The test results can be seen in Appendix B-7.

Table-12: Sampling locations

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-10: Overview Map of sampling point for Stream Water and Supply Water Quality

Figure-11: Overview Map of sampling point for Sedimentation Pond Water Quality

Figure-12: 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 Analysis									
ITEM	**WHO Drinking Water Guideline**	**EQEG Guideline**	**Baseline Results**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
pH	6.5 – 8.5	6 - 9	6.3	7.5	7.7	7.7	7.7	7.3	7.7
Color	15 PCU	-	-	10	15	110	5	10	35
Turbidity	5 NTU	-	-	1.46	1.6	50.0	1.7	5.8	10.4
Calcium hardness	500 mg/l	-	-	*	*	*	*	*	*
Chloride (Cl)	250 mg/l	-	-	*	*	*	*	*	*
Sulphate (SO4)	200 mg/l	-	-	*	*	*	*	*	*
TSS	50 mg/l	50 mg/l	23	10	7.0	266.0	4.0	16	28.0
Nitrate	50 mg/l	-	-	11	*	*	*	*	*
Remark: The symbol "*" express as **unavailability of chemical reagents** in Myanmar. During the rainy season, heavy rainfall increases surface runoff, carrying soil and sediments into the stream. This causes higher turbidity, color, and TSS levels.									

Table-14: Pyi Nyaung Stream Water Quality Monitoring Result

Ye Shin Stream Water (Near Pyi Nyaung) Analysis								
ITEM	**WHO Drinking Water Guideline**	**EQEG Guideline**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
pH	6.5 – 8.5	6 - 9	7.3	7.6	7.6	7.6	7.7	7.2
Color	15 PCU	-	15	15	25	15	40	55
Turbidity	5 NTU	-	1.99	5.68	9.46	10.8	13.8	29.2
Calcium hardness	500 mg/l	-	*	*	*	*	*	*
Chloride (Cl)	250 mg/l	-	*	*	*	*	*	*
Sulphate (SO4)	200 mg/l	-	*	*	*	*	*	*
TSS	50 mg/l	50 mg/l	6	33	30	30	37	76
Nitrate	50 mg/l	-	8.5	*	*	*	*	*
Remark: The symbol "*" express as **unavailability of chemical reagents** in Myanmar. During the rainy season, heavy rainfall increases surface runoff, carrying soil and sediments into the stream. This causes higher turbidity, color, and TSS levels.								

Table-15: Ye Shin Stream Water Quality Monitoring Result

Ye Shin Stream Water (Near 6 Unit) Analysis								
ITEM	WHO Drinking Water Guideline	EQEG Guideline	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025
pH	6.5 – 8.5	6 - 9	7.4	7.6	7.8	7.7	7.3	7.1
Color	15 PCU	-	40	0	10	20	35	45
Turbidity	5 NTU	-	10	0.97	3.85	3.9	9.79	25.3
Calcium hardness	500 mg/l	-	*	*	*	*	*	*
Chloride (Cl)	250 mg/l	-	*	*	*	*	*	*
Sulphate (SO4)	200 mg/l	-	*	*	*	*	*	*
TSS	50 mg/l	50 mg/l	38	2	9	14	15	65
Nitrate	50 mg/l	-	12.1	*	*	*	*	*

Remark: The symbol "*" express as **unavailability of chemical reagents** in Myanmar. During the rainy season, heavy rainfall increases surface runoff, carrying soil and sediments into the stream. This causes higher color and turbidity levels.

Table-16: Lower Reservoir Water Quality Monitoring Result

Lower Reservoir Supply Water Analysis									
ITEM	WHO Drinking Water Guideline	EQEG Guide line	Baseline Results	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025
pH	6.5 – 8.5	6 - 9	7.6	7.5	7.6	7.7	7.8	7.6	7.3
Color	15 PCU	-	-	55	45	25	15	15	25
Turbidity	5 NTU	-	-	11.9	6.17	5.38	1.48	5.22	10.1
Calcium hardness	500 mg/l	-	-	*	*	*	*	*	*
Chloride (Cl)	250 mg/l	-	-	*	*	*	*	*	*
Sulphate (SO4)	200 mg/l	-	-	*	*	*	*	*	*
TSS	50 mg/l	50 mg/l	11	35	19	17	15	16	26
Nitrate	50 mg/l	-	-	15.1	3.3	*	*	*	*

Remark: The symbol "*" express as **unavailability of chemical reagents** in Myanmar. During the rainy season, heavy rainfall increases surface runoff, carrying soil and sediments into the stream. This causes higher turbidity, and color levels.

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 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025
pH	6 ~ 9	6 ~ 9	7.6	7.3	8.1	10.2	7.8	7.8	8.2
Chemical Oxygen Demand (COD)	0~125 mg/l	125 mg/l	41.5	*	*	*	*	*	*
Biological Oxygen Demand (BOD)	0~30 mg/l	30 mg/l	6.5	*	*	*	*	*	*
Total Suspended Solid (TSS)	Max 50 mg/l	50 mg/l	215.5	83	108	57	46	83	122
Total Nitrogen	10 mg/l	10 mg/l	1.7	0.81	*	*	*	*	*
Total Nitrate	44.29 mg/l	-	-	3.6	10.4	*	*	*	*
Total Phosphorous	2 mg/l	2	0.06	*	*	*	*	*	*
Oil and grease	10 mg/l	10 mg/l	DL	*	*	*	*	*	*
Total Coliform Bacteria	-	100 ml	45.50	*	*	*	*	*	*

Remark: The symbol "*" express as **unavailability of chemical reagents** in Myanmar. During the rainy season, heavy rainfall increases surface runoff, carrying soil and sediments into the stream. This causes higher TSS level.

Table-18: Sedimentation Pond 6 Surface Water Test Result

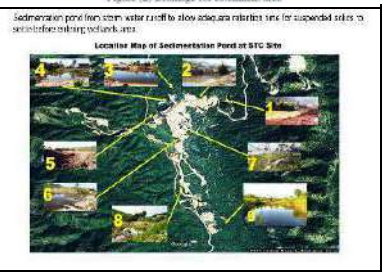
Sedimentation Pond 6 Surface Water Test Result									
Parameters	**IFC Waste Water Guideline**	**EQEG Guide line**	**Baseline Results**	**May 2025**	**Jun 2025**	**Jul 2025**	**Aug 2025**	**Sep 2025**	**Oct 2025**
pH	6 ~ 9	6 ~ 9	5.6	7.9	9.0	8.6	7.9	8.1	8.6
Chemical Oxygen Demand (COD)	0~125 mg/l	125 mg/l	2.5	*	*	*	*	*	*
Biological Oxygen Demand (BOD)	0~30 mg/l	30 mg/l	1	*	*	*	*	*	*
Total Suspended Solid (TSS)	Max 50 mg/l	50 mg/l	9	153	191	110	74	299	397
Total Nitrogen	10 mg/l	10 mg/l	0.3	2.09	*	*	*	*	*
Total Nitrate	44.29 mg/l	-	-	9.3	*	*	*	*	*
Total Phosphorous	2 mg/l	2	0.01	*	*	*	*	*	*
Oil and grease	10 mg/l	10 mg/l	DL	*	*	*	*	*	*
Total Coliform Bacteria	-	100 ml	ND	*	*	*	*	*	*
Remark: The symbol "*" express as **unavailability of chemical reagents** in Myanmar. During the rainy season, heavy rainfall increases surface runoff, carrying soil and sediments into the stream. This causes higher TSS level.									

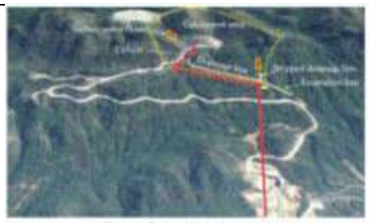
** Not for drinking water. No effect for Health & Environment.*

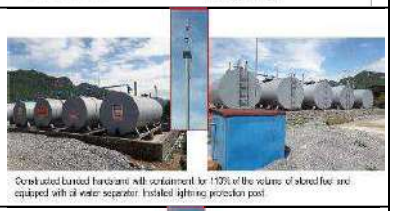
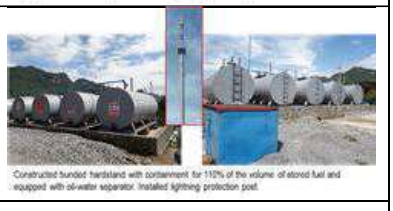
** STM has tested the surface water quality from the sedimentation ponds for using water with water truck to suppress dust around the cement plant and quarry sites. Laboratory results for water quality are attached in Appendix-B.*

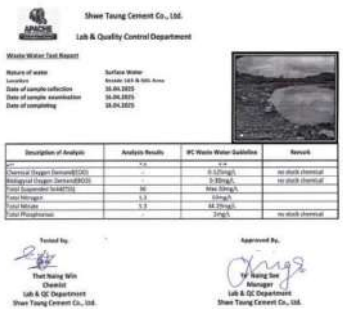
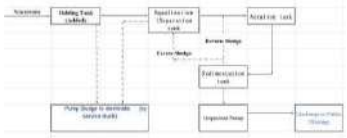
4.3.3 Water Quality Mitigation Measures

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	 
	• 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.	

			
	• 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	
	• 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.	
	• 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.	
	• 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.	Upgraded sedimentation pond near coal storage area.	
	• 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)	
	• Lightning protection should be installed at all areas used to store bulk fuel and other flammables;	Installed at fuel depot.	
	• The fuel storage facility should be constructed on bunded hardstand with containment sufficient for 110% of the volume of the single largest tank;	Equipped.	
	• Discharges from this bunded area should pass through an oil-water separator;	Installed	
	• Spill Response Plan should be developed and implemented; (conducted awareness training and deliver pamphlet to relevant employees in the plant)	Approved and implemented	

			
	• 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)	(See Section 4.3.2 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

At mudstone quarry site, stormwater management practices are in place to control surface runoff, prevent uncontrolled discharge, and reduce erosion and sediment transport from project facilities and disturbed areas. A dedicated drainage network has been constructed to intercept and divert runoff, including diversion of runoff from the mudstone quarry to a properly sized and maintained sedimentation pond, ensuring sufficient retention time for suspended solids to settle before discharge.

Sanitary wastewater generated from the plant office and staff accommodations is directed to bio-tanks for treatment prior to discharge. Monthly water quality monitoring is conducted at Ku Pyin, Pyi Nyaung, Ye Shin Stream and the plant's reservoir to ensure compliance with the World Health Organization (WHO)

drinking water guidelines and the Myanmar National Environmental Quality (Emission) Guidelines (NEQEG) – General Application. In addition, surface water samples from sedimentation ponds are also monitored monthly in accordance with NEQEG standards and compared with baseline data. During the rainy season, heavy rainfall can cause increased surface runoff from surrounding areas. This runoff carries soil particles, sediments, and organic materials into the stream, leading to elevated turbidity, color, and TSS values.

4.4 Noise Monitoring

The nearest representative noise sensitive receptors 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-13: Noise Quality Sampling Points

Table – 20: Noise Monitoring Locations

No	Noise Monitoring Location	Latitude	Longitude
1	Ku Pyin Village	20°53'20.47"N	96°23'27.58"E
2	Pyi Nyaung Village	20°49'4.58"N	96°23'40.42"E

Table-21: 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	77.09	59.21	
Ku Pyin Village	55	45	-	-	Residential	57.85	49.06	

4.4.2 Evaluation

Noise levels were measured using a KIMO LDB 23 meter at Pyi Nyaung Village and Ku Pyin Village. According to NEQEG and IFC guidelines, the limit for residential areas is 55 dB(A) in the day and 45 dB(A) at night. At Pyi Nyaung Village, noise levels reached 77.09 dB(A) during the day and 59.21 dB(A) at night, exceeding the limits. This is mainly due to continuous vehicle traffic from the nearby Meikhtila–Taunggyi Highway. At Ku Pyin Village, readings were 57.85 dB(A) in the day and 49.06 dB(A) at night, slightly above the guideline values. The increase may be linked to heavy rainfall in monitoring period. In summary, both locations showed higher noise levels mainly from road traffic, not from plant or quarry operations.

4.5 Soil Quality Monitoring

In accordance with the commitments outlined in the Approval Letter, STM is required to conduct biannual monitoring of soil quality parameters, including pH, Moisture Content (dried at 103°C), Electrical Conductivity, Cadmium, Copper, Lead, Zinc, and Iron at the mudstone runoff area. Accordingly, STM collected soil samples from the mudstone runoff area and Ku Pyin Village, which were subsequently submitted to the Department of Agriculture (Land Use) Laboratory for analysis of all required parameters. The sampling locations are presented in Figure 14, and the laboratory-analyzed soil quality monitoring results are provided in Table 22.

4.5.1 Location Map of Soil Quality Monitoring Points

Figure-14: Soil Quality Sampling Points

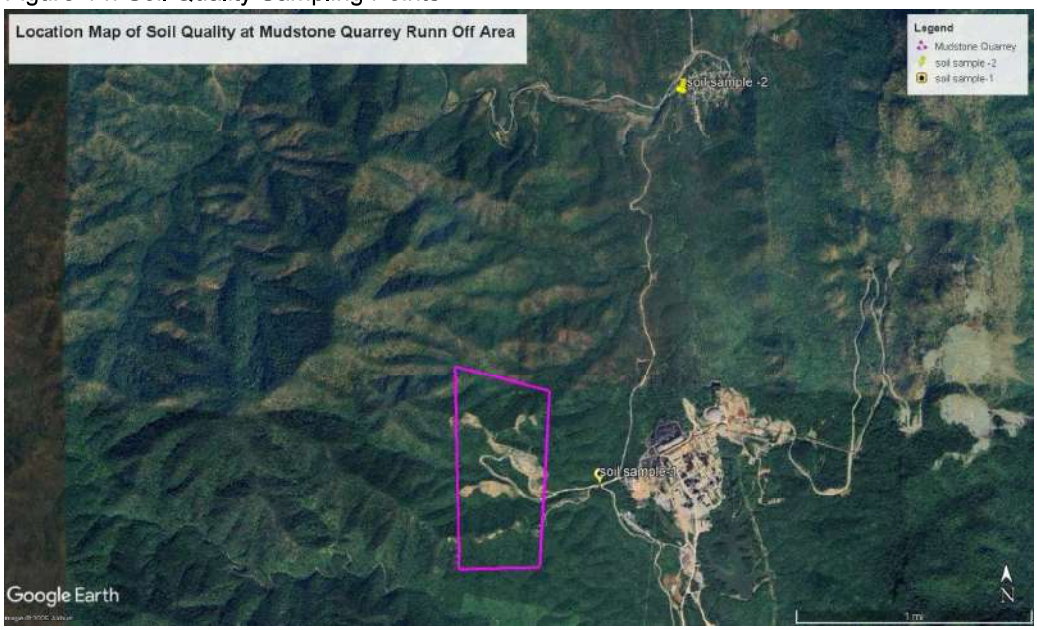


Table – 22: Soil Monitoring Results in Ku Pyin village

Parameter	Unit	Baseline (Ku Pyin S3a)	Ku Pyin Soil	Mudstone Runoff	Remark
Moisture %	%	14.6	2.37	2.72	Current soil conditions are environmentally stable and suitable for agricultural or reclamation purposes
pH	pH	6.6	7.39	6.47	
Electrical Conductivity	mS/cm	0.77	0.118	0.063	
Zinc (Zn)	ppm	20.9	1.063	0.76	
Copper (Cu)	ppm	5.92	0.704	0.94	
Iron (Fe)	ppm	14,351	15.846	6.972	
Lead (Pb)	ppm	13.3	1.66	1.18	
Cadmium (Cd)	ppm	Below Detection Limit	0.03	0.02	

4.5.2 Evaluation

The soil quality monitoring results indicate that the measured parameters at both Ku Pyin Village and the mudstone runoff area are within acceptable environmental standards and show no evidence of contamination from project activities. The pH levels at both locations fall within the slightly alkaline to slightly acidic range, which is suitable for natural soil conditions. Moisture content was found to be lower than the baseline value, suggesting dry surface conditions during the sampling period. Electrical conductivity values were also low, indicating minimal soluble salt presence. Concentrations of heavy metals— copper (Cu), lead (Pb), and zinc (Zn)—were substantially lower in the test results than in baseline levels. According to international standards, such as those provided by the Food and Agriculture Organization (FAO) Soil Bulletin 65 & Dutch Standard, these concentrations are well within the Maximum Permissible Limits (MPL) for agricultural soils, indicating no immediate risk of heavy metal contamination. These findings suggest that the current soil conditions are environmentally stable and suitable for agricultural or reclamation purposes.

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 15, 16 and 1 show location map of waste disposal area and waste collection points.

Figure-15: Location Map of Collection Points of All Generated Wastes from Plant Site

Figure-16: Location Map of Collection Points of All Generated Wastes from Accommodation Area

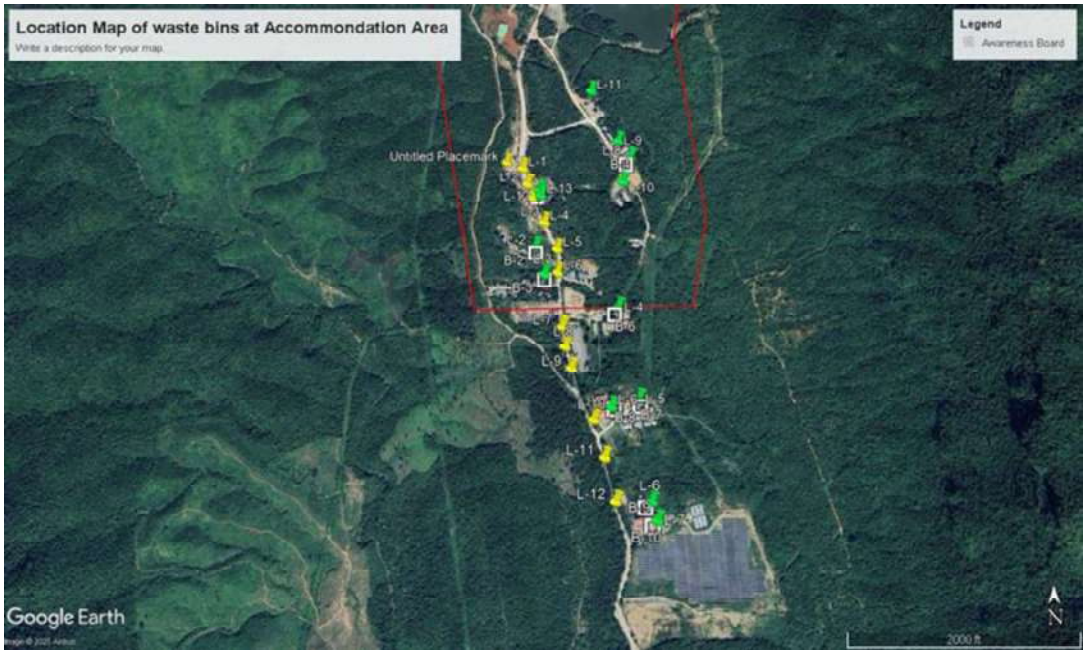


Figure-17: Location Map of Disposal Sites for Waste from Plant and Accommodation Area

Figure-18: Location Map of Site Waste Dumping Area (Scrap Yard)

Table-23: Generated Non-Hazardous Waste

STC Non-hazardous Waste Generated from May 2025 to October 2025				
Month	**Generated Waste (kg)**	**Reduction waste (kg)**	**Landfill Waste (kg)**	**Remark**
May 2025	15,520	3,705	11,815	Disposed to Temporary Non-hazardous Solid Waste Storage Area
June 2025	20,780	3,179	17,601	
July 2025	23,840	3,062	20,778	
August 2025	25,100	3,864	21,236	
September 2025	16,000	4,747	11,254	
October 2025	22,060	2,746	19,314	

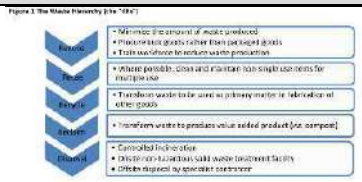
4.6.2 Generation of Hazardous Waste

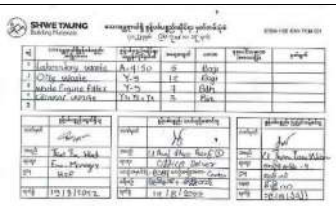
Table-24: Generated Hazardous Waste

STM Generated Hazardous Waste						
Sr.	**Date**	**Type of Waste**	**Quantity**	**Amount (kg)**	**Treatment Facility**	**Remarks**
1	26 June 2025	Clinical, Laboratory and Contaminated Oil rags	-	1480 kg	Meikhtila Municipal Incinerator	Disposal

4.6.3 Waste Management Mitigation Measures

Table-25: 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.)	 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

STC 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 Limestone and Mudstone Quarry operation.

5.1 Market Survey & Invasive Species Survey

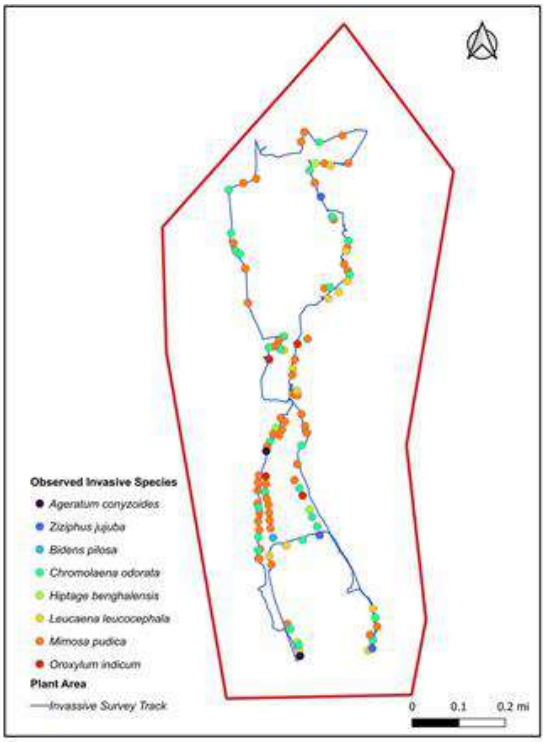
A market survey was conducted at Pyi Nyaung Village Market on 18 July 2025 from 08:00 to 09:00 AM by HSE Department. The objective of the survey was to collect data on illegal wildlife trade, with a particular focus on the sale of protected species such as the Bengal Slow Loris, Chinese Pangolin, Shan State Langur, Phayre's Langur, Western Hoolock Gibbon, and Eastern Hoolock Gibbon. Based on field observations, no evidence of wildlife trade was found in the Pyi Nyaung Village Market. All meat vendors were found to be trading only domestic animal products, including pork, chicken, beef, mutton, fish, and prawn. HSE Team also conducted interviews with the village leader and local residents to assess the presence of poaching or illegal wildlife trading activities within the village and market areas. According to the interviews, no incidents of poaching were reported. This is attributed to the low occurrence of wild species in the vicinity and the increasing awareness of local communities regarding wildlife protection and the prohibition of illegal trade.

Figure – 19: Photo Records from Market Survey in July 2025

An invasive flora species survey was conducted within the plant boundary on 26 July 2025. The survey was carried out by walking along established transect lines and recording the occurrence and abundance of invasive plant species. As part of ongoing management measures, clearing and eradication activities were implemented throughout the plant area to prevent the spread of invasive species. During the survey, photographic records were taken for documentation and verification purposes. A total of eight invasive flora species were identified within the surveyed area, namely *Khwe-thay-pan*, *Hmwe-sok*, *Bi-zet*, *Bein-new*, *Baw-za-gaing*, *Hti-ka-yone*, *Kyaung-sha*, and *Zi*.

Figure – 20: Photo Records from Invasive Species Survey in July 2025

Figure – 21: Map of Invasive Species Survey within STC Cement Plant



5.2 Ecosystem Restoration Plantations

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: 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**	

Table-28: Maintenance of Ecosystem Restoration Plantations (ERP)

Location	Particular	Patched Area in 2023	Patched Area in 2024	Patched Area in 2025	May	June	July		August	September-October
					Site Prep:	Patching	1st Weeding	Patching	Patching	2nd Weeding
Near Apache	ERP 33 Ac	7 Ac	3.9 Ac (2100 Nos.)	0.2 Ac (100 Nos.)	-	-	7 Ac	0.2 Ac (100 Nos.)	-	7 Ac
Near Apache	ERP 65 Ac	33 Ac	1.3 Ac (700 Nos.)	1.3 Ac (700 Nos.)	-	-	33 Ac	1.3 Ac (700 Nos.)	-	33 Ac
South Pyi Nyaung	ERP 100 Ac	16 Ac	1.9 Ac (1000 Nos.)	1.9 Ac (1000 Nos.)	-	-	16 Ac	-	1.9 Ac (1000 Nos.)	16 Ac
		_	9 Ac (4860 Nos.)	0.9 Ac (500 Nos.)	-	-	9 Ac	-	0.9 Ac (500 Nos.)	9 Ac
		_	_	1 Ac (4840 Nos.)	Stacking/ Digging	1 Ac (4840 Nos.)	1 Ac	-	-	1 Ac
		_	_	1 Ac (520 Nos.)		-	1 Ac	1 Ac (520 Nos.)	-	1 Ac
Grand Total						**4840 Nos.**	**67 Ac**	**1320 Nos.**	**1500 Nos.**	**67 Ac**

During the reporting period from May 2025 to October 2025, ecosystem restoration plantations (ERP) were maintained and protected through scheduled weeding and patching activities across various locations. At the Near Apache sites, 1st weeding and patching of about 800 seedlings were completed in July, followed by the 2nd weeding in October. Similarly, at the South Pyi Nyaung ERP 100-acre site, site preparation for patching of about 4,840 seedlings were completed in May and June, followed by the first weeding and additional patching of about 520 seedlings in July. Patching with a total of 1,500 seedlings and 2nd weeding was carried out consistently in August and October. Overall, by the end of October 2025, the restoration activities had effectively strengthened the success of earlier plantation phases, under continuous care and ecological improvement.

Figure – 22: Maintenance activities at Ecosystem Restoration Plantations

5.3 Biodiversity Awareness Training

STM conducted in-house training sessions on the Biodiversity Policy and Action Plan for new employees, as well as biodiversity awareness programs for local communities, particularly children, in Ku Pyin and Pyi Nyaung Villages. These programs aimed to enhance understanding of local wildlife species found in and around the STC and STM project areas. As part of the awareness activities, a coloring contest was organized for children, with awards presented to outstanding participants. The children actively engaged in the program, contributing to its success and fostering greater appreciation for biodiversity conservation.

Figure – 23: Awareness Raising Program in Pyi Nyaung & Ku Pyin Village

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, STM 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. Please see the updated “Emergency Preparedness Fire Drill Exercise Reports” in “Appendix – E”.

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 STM 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.

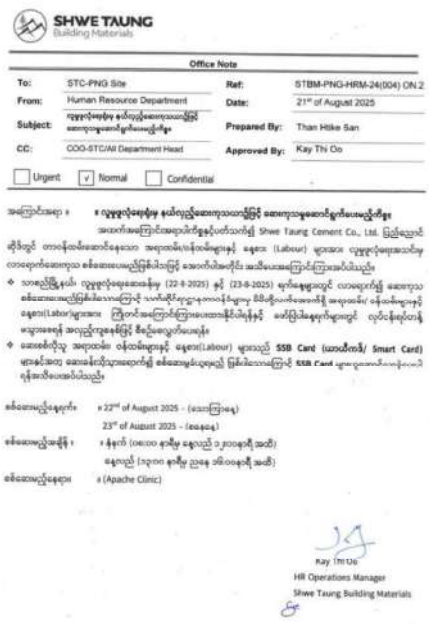
Additional training includes belt conveyor guarding and machine cover to enhance machinery safety, first aid for immediate response to injuries, and scaffolding safety for the proper erection and use of scaffolds. Programs such as "Take 2 Minutes" encourage employees to assess risks before starting tasks, 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 –24: OHS, First Aid Trainings Records and Medical check-ups from Social Security Board using Mobile Medical Unit


SHWE TAUNG
Building Materials

Office Note

To:	STC-PNG Site	Ref:	STBM-PNG-HRM-24(004) ON 2
From:	Human Resource Department	Date:	21st of August 2025
Subject:		Prepared By:	Than Htike San
CC:	COO-STC/All Department Head	Approved By:	Kay Thi Oo

☐ Urgent ☑ Normal ☐ Confidential

Kay Thi Oo
HR Operations Manager
Shwe Taung Building Materials

8. Government Inspection and Water & Soil Quality Sampling

On 30 September 2025, representatives from Mining 1 Enterprise and the Meikhtila District Environmental Conservation Department (ECD) conducted a site inspection at the quarry as part of the license extension process. The inspection team reviewed the updated conditions of the mudstone mining operations, as well as the water and soil quality sampling activities conducted at the site. The corresponding water and soil quality analysis results are provided in Appendix G.

Figure – 25: Government Inspection Photo records

9. 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-A2. Monitoring photo records can be seen in the Appendix-F.

10. Appendix

APPENDIX-A

APPENDIX-A1

Mitigation Measures for Air Quality Impact

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

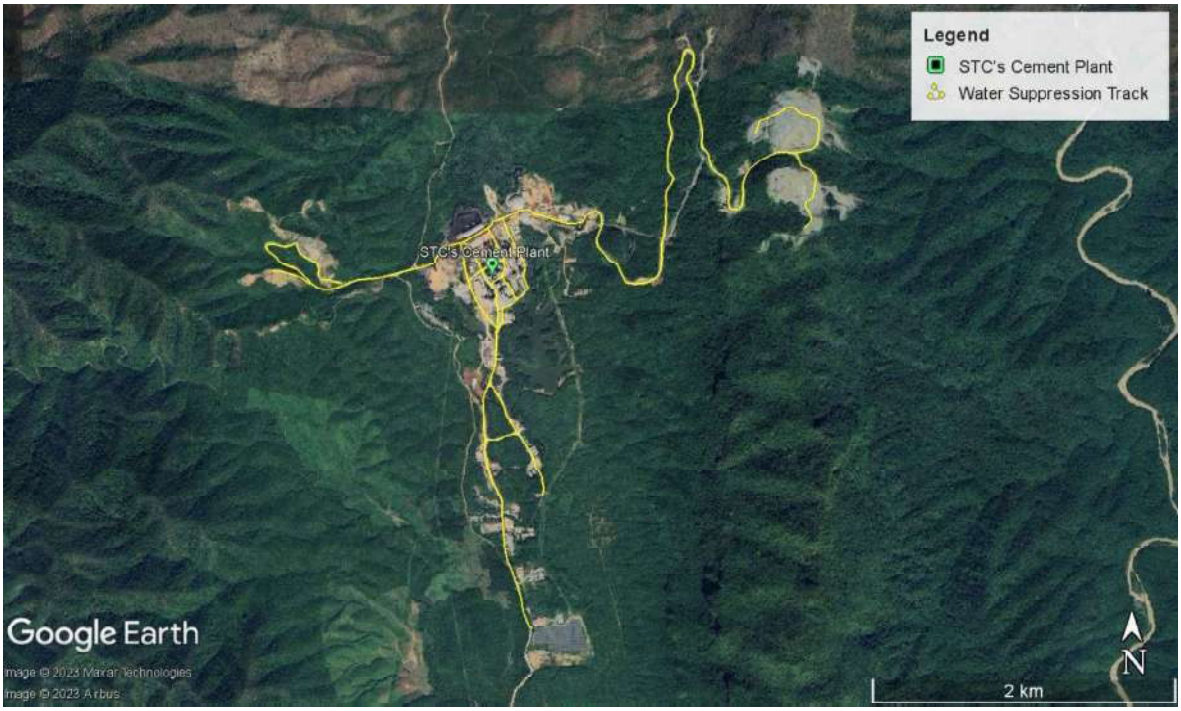


Table: Water Suppression Record from May to April 2025 to mitigate dust suppression in plant site.

Water Suppression Record 2025												
Month	Vehicle No.											
	5B -4174 (Capacity: 2200 gal)		6C-1052 (Capacity: 4000 gal)		2R-5191 (Capacity: 800 gal)		1P-4508 (Capacity: 4500 gal)		2R-5193 (Capacity: 800 gal)		7G-9512 (Capacity: 2800 gal)	
	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption	Total Load	Water Consumption
May 2025	-	-	99	396,000	-	-	65	292,500	59	47,200	107	299,600
June 2025	-	-	72	288,000	-	-	85	382,500	65	52,000	151	422,800
July 2025	-	-	-	-	-	-	53	238,500	85	68,000	210	588,000
Aug 2025	-	-	-	-	-	-	83	373,500	131	104,800	188	526,400
Sep 2025	-	-	29	116,000	-	-	87	391,500	45	36,000	37	103,600
Oct 2025	-	-	103	412,000	-	-	79	355,500	3	2,400	-	-

Note: Source of water supply from Sedimentation Ponds

APPENDIX-A2

Status of Mudstone Biannual Environmental Monitoring Reports Submission to ECD

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	ဝန်ကြီးရုံးအတည်ပြု သည့် ရက်စွဲအရ ပြန်လည်ညှိနှိုင်း ပြင်ဆင်တင်ပြခဲ့ပါသည်။
	၂၉.၁၁.၂၀၂၄	စတုတ္ထအကြိမ်	၂၀၂၄ ခုနှစ် မေလမှ ၂၀၂၄ ခုနှစ် အောက်တိုဘာလအထိ	
	၂၁.၅.၂၀၂၅	ပဉ္စမအကြိမ်	၂၀၂၄ ခုနှစ် နိုဝင်ဘာလမှ ၂၀၂၅ ခုနှစ် ဧပြီလအထိ	
	၂၀၂၅ ခုနှစ် နိုဝင်ဘာလ	ဆဋ္ဌမအကြိမ်	၂၀၂၅ ခုနှစ် မေလမှ ၂၀၂၅ ခုနှစ် အောက်တိုဘာလအထိ	
	ဆက်လက်တင်ပြရန်	***သတ္တမအကြိမ်***	***၂၀၂၅ ခုနှစ် နိုဝင်ဘာလမှ ၂၀၂၆ ခုနှစ် ဧပြီလအထိ***	***၂၀၂၆ ခုနှစ် မေလအတွင်း တင်ပြရန်***

APPENDIX-B

APPENDIX - (B-1)

(Ku Pyin Stream Water Quality Results)

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	**16.05.2025**
Date of sample examination	**17.05.2025**
Date of completing	**18.05.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.5	6.5 ~ 8.5	
Colour(True)	10	15 PCU	
Turbidity	1.46	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	10	50mg/l	
Nitrate	11	50mg/l	

Tested by

Thet Naing Win
Chemist
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Shwe Taung Cement Co., Ltd.

Approved By

Ye Naing Soe
Head of Lab & Quality Control Dept;
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	**18.06.2025**
Date of sample examination	**19.06.2025**
Date of completing	**21.06.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.7	6.5 ~ 8.5	
Colour(True)	15	15 PCU	
Turbidity	1.6	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	7.0	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by

Thet Naing Win
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Approved By

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Shwe Taung Cement Co., Ltd.

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Lab & Quality Control Department

Water Quality Test Report

Nature of water	Stream Water
Location	Ku Pyin Village
Date of sample collection	23.07.2025
Date of sample examination	24.07.2025
Date of completing	25.07.2025

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.7	6.5 - 8.5	
Colour(True)	110	15 PCU	
Turbidity	50.0	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	266.0	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by

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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	**18.08.2025**
Date of sample examination	**20.08.2025**
Date of completing	**22.08.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.7	6.5 ~ 8.5	
Colour(True)	5	15 PCU	
Turbidity	1.7	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	4.0	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by

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Head of Lab & Quality Control Dept;
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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	**17.09.2025**
Date of sample examination	**18.09.2025**
Date of completing	**20.09.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.3	6.5 ~ 8.5	
Colour(True)	10	15 PCU	
Turbidity	5.8	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	16.0	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by

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Approved By

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Head of Lab & Quality Control Dept;
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	**17.10.2025**
Date of sample examination	**18.10.2025**
Date of completing	**19.10.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.7	6.5 ~ 8.5	
Colour(True)	35	15 PCU	
Turbidity	10.4	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	28.0	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by

Thet Naing Win
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Approved By

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Shwe Taung Cement Co., Ltd.

APPENDIX - (B-2)

(Pyi Nyaung Stream Water Quality Results)

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	**16.05.2025**
Date of sample examination	**17.05.2025**
Date of completing	**18.05.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
p^H	7.3	6.5 ~ 8.5	
Colour(True)	15	15 PCU	
Turbidity	1.99	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	6	50mg/l	
Nitrate	8.5	50mg/l	

Tested by,

Thet Naing Win
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Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**18.06.2025**
Date of sample examination	**19.06.2025**
Date of completing	**21.06.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.6	6.5 ~ 8.5	
Colour(True)	15	15 PCU	
Turbidity	5.68	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	33	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**23.07.2025**
Date of sample examination	**24.07.2025**
Date of completing	**25.07.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.6	6.5 ~ 8.5	
Colour(True)	25	15 PCU	
Turbidity	9.46	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	30	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Approved By,

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Lab & Quality Control Department

Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**18.08.2025**
Date of sample examination	**20.08.2025**
Date of completing	**22.08.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.6	6.5 ~ 8.5	
Colour(True)	15	15 PCU	
Turbidity	10.8	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	30	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Approved By,

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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	**17.09.2025**
Date of sample examination	**18.09.2025**
Date of completing	**20.09.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.7	6.5 ~ 8.5	
Colour(True)	40	15 PCU	
Turbidity	13.8	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	37	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Water Quality Test Report

Nature of water	**Stream Water**
Location	**Near Pyin Nyaung Village**
Date of sample collection	**17.10.2025**
Date of sample examination	**18.10.2025**
Date of completing	**19.10.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.2	6.5 ~ 8.5	
Colour(True)	55	15 PCU	
Turbidity	29.2	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	76	50mg/l	
Nitrate	-	50mg/l	no stock chemical

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APPENDIX - (B-3)

(Ye Shin Stream Water Results)

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	**16.05.2025**
Date of sample examination	**17.05.2025**
Date of completing	**18.05.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.4	6.5 ~ 8.5	
Colour(True)	40	15 PCU	
Turbidity	10	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	38	50mg/l	
Nitrate	12.1	50mg/l	

Tested by,

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Approved By,

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Head of Lab & Quality Control Dept;
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(Ye Chin)**
Location	**Near 6 Unit(Family Housing)**
Date of sample collection	**18.06.2025**
Date of sample examination	**19.06.2025**
Date of completing	**21.06.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
p^H	7.6	6.5 - 8.5	
Colour(True)	0	15 PCU	
Turbidity	0.97	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	2	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Water Quality Test Report

Nature of water	**Stream Water(Ye Chin)**
Location	**Near 6 Unit(Family Housing)**
Date of sample collection	**23.07.2025**
Date of sample examination	**24.07.2025**
Date of completing	**25.07.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
p^H	7.8	6.5 ~ 8.5	
Colour(True)	10	15 PCU	
Turbidity	3.85	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	9	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Approved By,

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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	**18.08.2025**
Date of sample examination	**20.08.2025**
Date of completing	**22.08.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
p^H	7.7	6.5 ~ 8.5	
Colour(True)	20	15 PCU	
Turbidity	3.9	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	14	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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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	**17.09.2025**
Date of sample examination	**18.09.2025**
Date of completing	**20.09.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
p^H	7.3	6.5 ~ 8.5	
Colour(True)	35	15 PCU	
Turbidity	9.79	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	15	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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Approved By,

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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	**17.10.2025**
Date of sample examination	**18.10.2025**
Date of completing	**19.10.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.1	6.5 ~ 8.5	
Colour(True)	45	15 PCU	
Turbidity	25.3	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	65	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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APPENDIX - (B-4)

(Supply Water (Lower Reservoir) Results)

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	**16.05.2025**
Date of sample examination	**17.05.2025**
Date of completing	**18.05.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.5	6.5 ~ 8.5	
Colour(True)	55	15 PCU	
Turbidity	11.9	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	
Total Suspended Solid(TSS)	35	50mg/l	
Nitrate	15.1	50mg/l	

Tested by,

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Approved By,

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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	**18.06.2025**
Date of sample examination	**19.06.2025**
Date of completing	**21.06.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
p^H	7.6	6.5 ~ 8.5	
Colour(True)	45	15 PCU	
Turbidity	6.17	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	19	50mg/l	
Nitrate	3.3	50mg/l	

Tested by,

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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	**18.08.2025**
Date of sample examination	**20.08.2025**
Date of completing	**22.08.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.8	6.5 - 8.5	
Colour(True)	15	15 PCU	
Turbidity	1.48	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	15	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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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	**17.09.2025**
Date of sample examination	**18.09.2025**
Date of completing	**20.09.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.6	6.5 ~ 8.5	
Colour(True)	15	15 PCU	
Turbidity	5.22	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	16	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

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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	**17.10.2025**
Date of sample examination	**18.10.2025**
Date of completing	**19.10.2025**

Description of Analysis	Analysis Results	WHO Drinking water Guideline	Remark
P^H	7.3	6.5 - 8.5	
Colour(True)	25	15 PCU	
Turbidity	10.1	5 NTU	
Calcium Hardness	-	500 mg/l as $CaCO_3$	no stock chemical
Chloride(as Cl)	-	250mg/l	no stock chemical
Sulphate(as SO_4)	-	200mg/l	no stock chemical
Total Suspended Solid(TSS)	26	50mg/l	
Nitrate	-	50mg/l	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye` Naing Soe
Head of Lab & Quality Control Dept;
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-5)

(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	**19.05.2025**
Date of sample examination	**20.05.2025**
Date of completing	**21.05.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	7.3	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	83	Max 50mg/L	
Total Nitrogen	0.81	10mg/L	
Total Nitrate	3.6	44.29mg/L	
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
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	**16.06.2025**
Date of sample examination	**17.06.2025**
Date of completing	**20.06.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.1	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	108	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	10.4	44.29mg/L	
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

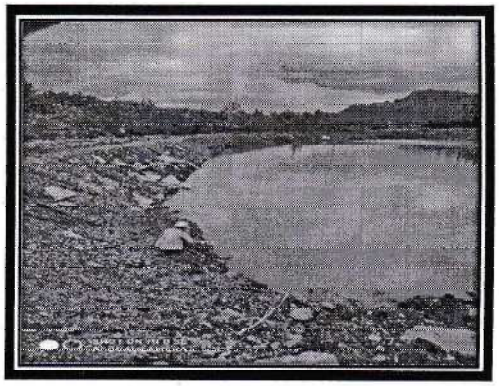
Ye Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

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	**22.07.2025**
Date of sample examination	**24.07.2025**
Date of completing	**25.07.2025**



Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	10.2	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	57	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
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	**20.08.2025**
Date of sample examination	**21.08.2025**
Date of completing	**22.08.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	7.8	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	46	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APACHE
PORTLAND CEMENT

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	**18.09.2025**
Date of sample examination	**19.09.2025**
Date of completing	**20.09.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	7.8	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	83	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
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	**17.10.2025**
Date of sample examination	**18.10.2025**
Date of completing	**19.10.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.2	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	122	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

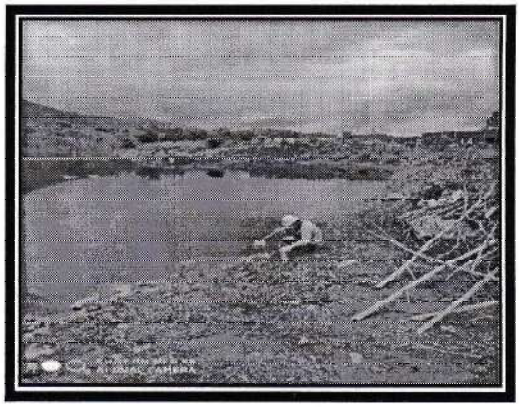
APPENDIX - (B-6)

(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	**19.05.2025**
Date of sample examination	**20.05.2025**
Date of completing	**21.05.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	7.9	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	153	Max 50mg/L	
Total Nitrogen	2.09	10mg/L	Can't Test
Total Nitrate	9.3	44.29mg/L	Can't Test
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye Naing Soe
Head of Lab & Quality Control Department
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	**16.06.2025**
Date of sample examination	**17.06.2025**
Date of completing	**20.06.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	9.0	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	**191**	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

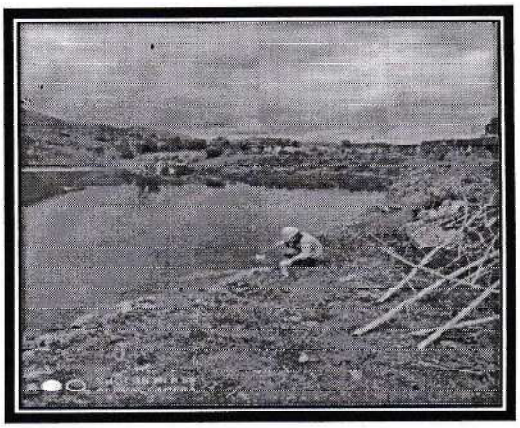
Ye Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

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	22.07.2025
Date of sample examination	24.07.2025
Date of completing	25.07.2025



Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.6	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	110	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

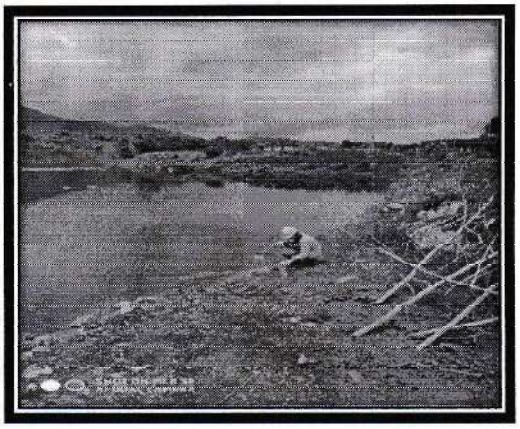
Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
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	**20.08.2025**
Date of sample examination	**21.08.2025**
Date of completing	**22.08.2025**

Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	7.9	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	74	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

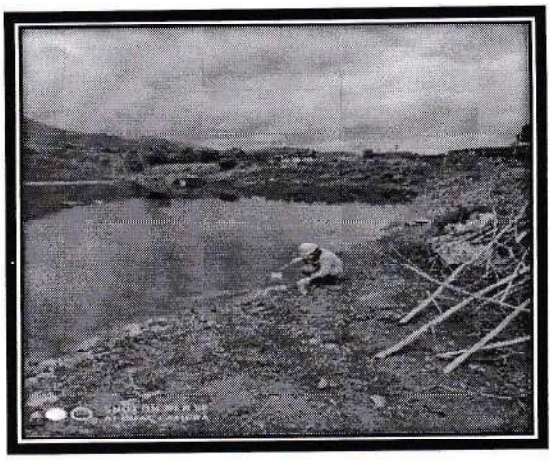
Ye' Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

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	**18.09.2025**
Date of sample examination	**19.09.2025**
Date of completing	**20.09.2025**



Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.1	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	299	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

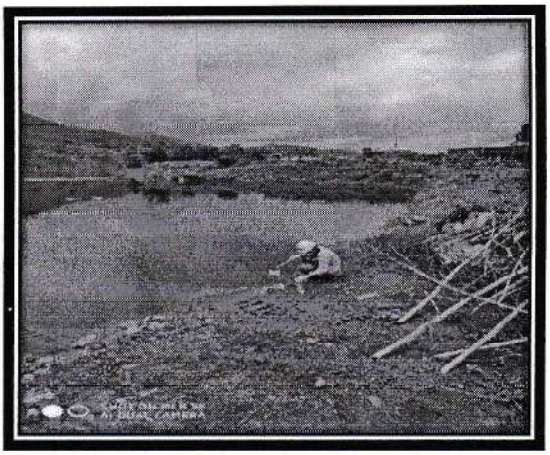
Ye' Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

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	**17.10.2025**
Date of sample examination	**18.10.2025**
Date of completing	**19.10.2025**



Description of Analysis	Analysis Results	IFC Waste Water Guideline	Remark
pH	8.6	6-9	
Chemical Oxygen Demand(COD)	-	0-125mg/L	no stock chemical
Biologycal Oxygen Demand(BOD)	-	0-30mg/L	no stock chemical
Total Suspended Solid(TSS)	397	Max 50mg/L	
Total Nitrogen	-	10mg/L	no stock chemical
Total Nitrate	-	44.29mg/L	no stock chemical
Total Phosphorous	-	2mg/L	no stock chemical

Tested by,

Thet Naing Win
Chemist
Lab & QC Department
Shwe Taung Cement Co., Ltd.

Approved By,

Ye' Naing Soe
Head of Lab & Quality Control Department
Lab & QC Department
Shwe Taung Cement Co., Ltd.

APPENDIX - (B-7)

Mudstone Runoff Discharge (Ku Pyin Stream) and Ye Shin Stream Water Results Tested by External Laboratory

DOWA

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-202510007
Revision No. : 1
Report Date : 9 October, 2025
Application No. : 0698-C001

Test Report

Client Name : SHWE TAUNG MINING COMPANY LIMITED
Address : CORNER OF MIN YE KYAW SWAR ROAD & HNIN SI GONE STREET, NO. (108)
SAW YAN PAING (EAST) WARD, AHLONE TOWNSHIP, YANGON REGION, MYANMAR
Project Name :
Sample Description

Sample Name : Ye shin Stream Water
Sample No. : W-2509116
Waste Profile No. : -

Sampling Date : 27 September, 2025
Sampling By : Withdraw GEM
Sample Received Date : 27 September, 2025
Analytical Date : 27/09-9/10/2025

No.	Parameter	Method	Unit	Result	LOQ
1	Copper	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
2	Arsenic	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.010	0.01
3	Chromium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
4	Lead	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
5	Nickel	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
6	Mercury	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
7	Cadmium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
8	Zinc	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
9	Iron	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	0.390	0.002
10	Cyanide	HACH 8027 (Pyridine -Pyrazalone Method)	mg/l	<0.002	0.002
11	Total Cyanide	Distillation Process: APAH 4500-CN-C. Total Cyanide after Distillation, Determine Cyanide Concentration Process: HACH 8027(Pyridine-Pyrazalone Method)	mg/l	<0.002	0.002

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
Manager

LAB
9 Oct, 2025
GEM

Approved By :

Ni Ni Aye Lwin 9 Oct, 2025
Senior Manager

*** End Of Document ***

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-202510008
Revision No. : 1
Report Date : 9 October, 2025
Application No. : 0698-C001

Test Report

Client Name : SHWE TAUNG MINING COMPANY LIMITED
Address : CORNER OF MIN YE KYAW SWAR ROAD & HNIN SI GONE STREET, NO. (108)
SAW YAN PAING (EAST) WARD, AHLONE TOWNSHIP, YANGON REGION, MYANMAR
Project Name :
Sample Description

Sample Name : Ku Pyin Stream Water
Sample No. : W-2509117
Waste Profile No. : -

Sampling Date : 27 September, 2025
Sampling By : Withdraw GEM
Sample Received Date : 27 September, 2025
Analytical Date : 27/09-9/10/2025

No.	Parameter	Method	Unit	Result	LOQ
1	Copper	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
2	Arsenic	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.010	0.01
3	Chromium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
4	Lead	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
5	Nickel	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
6	Mercury	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
7	Cadmium	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	≤0.002	0.002
8	Zinc	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	0.012	0.002
9	Iron	APHA 3120 B (Inductively Coupled Plasma (ICP) Method)	mg/l	0.356	0.002
10	Cyanide	HACH 8027 (Pyridine -Pyrazalone Method)	mg/l	<0.002	0.002
11	Total Cyanide	Distillation Process: APAH 4500-CN-C. Total Cyanide after Distillation, Determine Cyanide Concentration Process: HACH 8027(Pyridine-Pyrazalone Method)	mg/l	<0.002	0.002

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
Manager

LAB
9 Oct, 2025
GEM

Approved By :

Ni Ni Aye Lwin 9 Oct, 2025
Senior Manager

*** End Of Document ***

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 07-05-2025 6:15:00 AM

End Date 08-05-2025 6:14:00 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	**4.29722**	**13.6597**	**60.9923**	**.147159**	**39.8270**	**23.0930**	**9.68541**	**0**	**69.6812**	**27.525**	**138.366**	**.779236**	**9.86944**	**0**	**0**	**0**	**0**
Max	7	213	170	.84	160	90	73	0	100	35	333	6.3	10.3	0	0	0	0
Min	2	1	0	0	2	1	0	0	27	21	54	0	9.3	0	0	0	0
EPAS 919217	**4.29722**	**13.6597**	**60.9923**	**.147159**	**39.8270**	**23.0930**	**9.68541**	**0**	**69.6812**	**27.525**	**138.366**	**.779236**	**9.86944**	**0**	**0**	**0**	**0**
	7	213	170	.84	160	90	73	0	100	35	333	6.3	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	27	21	54	0	9.3	0	0	0	0
Daily Wed, May 7, 2025	**4.02629**	**17.9774**	**82.4544**	**.197492**	**53.1464**	**30.8723**	**12.7295**	**0**	**82.0469**	**25.3464**	**118.403**	**.192018**	**9.89690**	**0**	**0**	**0**	**0**
	7	213	170	.84	160	90	73	0	100	34	273	4.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	28	21	54	0	9.3	0	0	0	0
Ave Period 24 07-05-2025	**4.02629**	**17.9774**	**82.4544**	**.197492**	**53.1464**	**30.8723**	**12.7295**	**0**	**82.0469**	**25.3464**	**118.403**	**.192018**	**9.89690**	**0**	**0**	**0**	**0**
	7	213	170	.84	160	90	73	0	100	34	273	4.7	10.3	0	0	0	0
	2	1	0	0	2	1	0	0	28	21	54	0	9.3	0	0	0	0
Daily Thu, May 8, 2025	**5.06666**	**1.39733**	**.04**	**.004213**	**2**	**1**	**1.04**	**0**	**34.5626**	**33.712**	**195.061**	**2.44693**	**9.79146**	**0**	**0**	**0**	**0**
	6	4	6	.06	2	1	21	0	47	35	333	6.3	9.9	0	0	0	0
	4	1	0	0	2	1	0	0	27	32	69	.1	9.3	0	0	0	0
Ave Period 24 08-05-2025 06:14	**5.06666**	**1.39733**	**.04**	**.004213**	**2**	**1**	**1.04**	**0**	**34.5626**	**33.712**	**195.061**	**2.44693**	**9.79146**	**0**	**0**	**0**	**0**
	6	4	6	.06	2	1	21	0	47	35	333	6.3	9.9	0	0	0	0
	4	1	0	0	2	1	0	0	27	32	69	.1	9.3	0	0	0	0

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 07-08-2025 3:19:00 AM

End Date 08-08-2025 3:18:00 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	**19.7187**	**6.2875**	**0**	**0**	**2.13958**	**20.9569**	**0**	**.001687**	**0**	**72.9756**	**.142361**	**.175**	**10.8765**	**0**	**0**	**0**	**0**
Max	347	142	0	0	70	946	0	.44	0	73	29	3.3	11.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	71	0	0	10.1	0	0	0	0
EPAS 919217	**19.7187**	**6.2875**	**0**	**0**	**2.13958**	**20.9569**	**0**	**.001687**	**0**	**72.9756**	**.142361**	**.175**	**10.8765**	**0**	**0**	**0**	**0**
	347	142	0	0	70	946	0	.44	0	73	29	3.3	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	71	0	0	10.1	0	0	0	0
Daily Thu, Aug 7, 2025	**39.8829**	**10.4096**	**0**	**0**	**2.30981**	**2.48709**	**0**	**.003321**	**0**	**73**	**0**	**.088296**	**11.0440**	**0**	**0**	**0**	**0**
	347	142	0	0	70	223	0	.44	0	73	0	1.4	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	73	0	0	10.3	0	0	0	0
Ave Period 24 07-08-2025 12:59 PM	**39.8829**	**10.4096**	**0**	**0**	**2.30981**	**2.48709**	**0**	**.003321**	**0**	**73**	**0**	**.088296**	**11.0440**	**0**	**0**	**0**	**0**
	347	142	0	0	70	223	0	.44	0	73	0	1.4	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	73	0	0	10.3	0	0	0	0
Daily Fri, Aug 8, 2025	**6.08032**	**3.49941**	**0**	**0**	**2.02444**	**33.4493**	**0**	**.000582**	**0**	**72.9592**	**.238649**	**.233643**	**10.7632**	**0**	**0**	**0**	**0**
	284	60	0	0	23	946	0	.13	0	73	29	3.3	11.2	0	0	0	0
	2	1	0	0	2	1	0	0	0	71	0	0	10.1	0	0	0	0
Ave Period 24 08-08-2025 11:59 PM	**6.08032**	**3.49941**	**0**	**0**	**2.02444**	**33.4493**	**0**	**.000582**	**0**	**72.9592**	**.238649**	**.233643**	**10.7632**	**0**	**0**	**0**	**0**
	284	60	0	0	23	946	0	.13	0	73	29	3.3	11.2	0	0	0	0
	2	1	0	0	2	1	0	0	0	71	0	0	10.1	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 15-09-2025 3:14:01 AM

End Date 16-09-2025 3:13:00 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	**5.38194**	**16.8493**	**2.70208**	**.056784**	**2.28055**	**2.12291**	**.469444**	**.000937**	**.291666**	**72.6881**	**25.4979**	**.212986**	**11.0206**	**0**	**0**	**0**	**0**
Max	30	56	239	4.73	159	391	177	.17	42	87	360	2.9	11.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	20	0	0	10.3	0	0	0	0
EPAS 919217	**5.38194**	**16.8493**	**2.70208**	**.056784**	**2.28055**	**2.12291**	**.469444**	**.000937**	**.291666**	**72.6881**	**25.4979**	**.212986**	**11.0206**	**0**	**0**	**0**	**0**
	30	56	239	4.73	159	391	177	.17	42	87	360	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	20	0	0	10.3	0	0	0	0
Daily Mon, Sep 15, 2025	**5.36516**	**16.0754**	**2.64285**	**.065626**	**2.32423**	**2.14125**	**.443017**	**.001083**	**.337078**	**72.6396**	**29.4678**	**.052728**	**11.0510**	**0**	**0**	**0**	**0**
	30	56	239	4.73	159	391	177	.17	42	87	360	1.2	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	20	0	0	10.3	0	0	0	0
Ave Period 24 15-09-2025 11:59 PM	**5.36516**	**16.0754**	**2.64285**	**.065626**	**2.32423**	**2.14125**	**.443017**	**.001083**	**.337078**	**72.6396**	**29.4678**	**.052728**	**11.0510**	**0**	**0**	**0**	**0**
	30	56	239	4.73	159	391	177	.17	42	87	360	1.2	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	20	0	0	10.3	0	0	0	0
Daily Tue, Sep 16, 2025	**5.48969**	**21.8195**	**3.08247**	**0**	**2**	**2.00515**	**.639175**	**0**	**0**	**73**	**0**	**1.24226**	**10.8257**	**0**	**0**	**0**	**0**
	11	42	163	0	2	5	62	0	0	73	0	2.9	10.9	0	0	0	0
	2	1	0	0	2	1	0	0	0	73	0	0	10.3	0	0	0	0
Ave Period 24 16-09-2025 03:13 AM	**5.48969**	**21.8195**	**3.08247**	**0**	**2**	**2.00515**	**.639175**	**0**	**0**	**73**	**0**	**1.24226**	**10.8257**	**0**	**0**	**0**	**0**
	11	42	163	0	2	5	62	0	0	73	0	2.9	10.9	0	0	0	0
	2	1	0	0	2	1	0	0	0	73	0	0	10.3	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 02-10-2025 4:38:00 AM

End Date 03-10-2025 4:37:00 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	**2.02152**	**3.78958**	**0**	**.051201**	**15.6354**	**11.4923**	**.126388**	**.004402**	**0**	**24.4638**	**119.783**	**.277708**	**10.8627**	**0**	**0**	**0**	**0**
Max	5	93	0	4.81	142	137	182	.37	0	31	357	4.1	11.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	22	0	0	10.3	0	0	0	0
EPAS 919217	**2.02152**	**3.78958**	**0**	**.051201**	**15.6354**	**11.4923**	**.126388**	**.004402**	**0**	**24.4638**	**119.783**	**.277708**	**10.8627**	**0**	**0**	**0**	**0**
	5	93	0	4.81	142	137	182	.37	0	31	357	4.1	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	22	0	0	10.3	0	0	0	0
Daily Thu, Oct 2, 2025	**2.00258**	**2.74698**	**0**	**.028502**	**13.2822**	**11.6032**	**0**	**.000215**	**0**	**24.1919**	**105.119**	**.150086**	**10.9164**	**0**	**0**	**0**	**0**
	5	57	0	1.69	44	49	0	.13	0	31	357	3.1	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	22	0	0	10.3	0	0	0	0
Ave Period 24 02-10-2025 11:59 PM	**2.00258**	**2.74698**	**0**	**.028502**	**13.2822**	**11.6032**	**0**	**.000215**	**0**	**24.1919**	**105.119**	**.150086**	**10.9164**	**0**	**0**	**0**	**0**
	5	57	0	1.69	44	49	0	.13	0	31	357	3.1	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	22	0	0	10.3	0	0	0	0
Daily Fri, Oct 3, 2025	**2.10071**	**8.14748**	**0**	**.146079**	**25.4712**	**11.0287**	**.654676**	**.021906**	**0**	**25.6007**	**181.075**	**.811151**	**10.6384**	**0**	**0**	**0**	**0**
	5	93	0	4.81	142	137	182	.37	0	30	355	4.1	10.7	0	0	0	0
	2	1	0	0	2	1	0	0	0	24	90	0	10.3	0	0	0	0
Ave Period 24 03-10-2025 04:37 AM	**2.10071**	**8.14748**	**0**	**.146079**	**25.4712**	**11.0287**	**.654676**	**.021906**	**0**	**25.6007**	**181.075**	**.811151**	**10.6384**	**0**	**0**	**0**	**0**
	5	93	0	4.81	142	137	182	.37	0	30	355	4.1	10.7	0	0	0	0
	2	1	0	0	2	1	0	0	0	24	90	0	10.3	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 19-05-2025 4:15:00 AM

End Date 20-05-2025 4:14:00 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	**5.84722**	**3.32638**	**15.2548**	**.204631**	**41.5381**	**29.3131**	**11.2083**	**.003506**	**78.8284**	**26.3569**	**180.485**	**.198680**	**9.94756**	**0**	**0**	**0**	**0**
Max	49	59	66	1.08	416	180	138	.25	100	32	360	3.5	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	45	22	1	0	9.1	0	0	0	0
EPAS 919217	**5.84722**	**3.32638**	**15.2548**	**.204631**	**41.5381**	**29.3131**	**11.2083**	**.003506**	**78.8284**	**26.3569**	**180.485**	**.198680**	**9.94756**	**0**	**0**	**0**	**0**
	49	59	66	1.08	416	180	138	.25	100	32	360	3.5	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	45	22	1	0	9.1	0	0	0	0
Daily Mon, May 19,	**6.42109**	**3.18565**	**18.4962**	**.230185**	**49.3434**	**34.3223**	**11.3164**	**.004261**	**84.7282**	**25.3527**	**192.896**	**.179578**	**9.89510**	**0**	**0**	**0**	**0**
	49	59	66	1.08	416	180	138	.25	100	32	360	3.5	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	45	22	1	0	9.1	0	0	0	0
Ave Period 24 19-05-2025 11:59 PM	**6.42109**	**3.18565**	**18.4962**	**.230185**	**49.3434**	**34.3223**	**11.3164**	**.004261**	**84.7282**	**25.3527**	**192.896**	**.179578**	**9.89510**	**0**	**0**	**0**	**0**
	49	59	66	1.08	416	180	138	.25	100	32	360	3.5	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	45	22	1	0	9.1	0	0	0	0
Daily Tue, May 20, 2025	**3.18039**	**3.98039**	**.192156**	**.085882**	**5.26666**	**6.03529**	**10.7058**	**0**	**51.4117**	**31.0235**	**122.811**	**.287450**	**10.1913**	**0**	**0**	**0**	**0**
	4	46	9	.45	37	27	47	0	68	32	325	2	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	45	29	5	0	9.6	0	0	0	0
Ave Period 24 20-05-2025 04:14 AM	**3.18039**	**3.98039**	**.192156**	**.085882**	**5.26666**	**6.03529**	**10.7058**	**0**	**51.4117**	**31.0235**	**122.811**	**.287450**	**10.1913**	**0**	**0**	**0**	**0**
	4	46	9	.45	37	27	47	0	68	32	325	2	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	45	29	5	0	9.6	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 20-08-2025 3:24:00 AM

End Date 21-08-2025 11:59:00 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	**15.5555**	**12.7652**	**0**	**0**	**2.53611**	**5.19444**	**0**	**0**	**0**	**72.9986**	**.007638**	**.018888**	**11.1225**	**0**	**0**	**0**	**0**
Max	830	659	0	0	279	649	0	0	0	73	3	.7	11.6	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	72	0	0	10.6	0	0	0	0
EPAS 919217	**15.5555**	**12.7652**	**0**	**0**	**2.53611**	**5.19444**	**0**	**0**	**0**	**72.9986**	**.007638**	**.018888**	**11.1225**	**0**	**0**	**0**	**0**
	830	659	0	0	279	649	0	0	0	73	3	.7	11.6	0	0	0	0
	2	1	0	0	2	1	0	0	0	72	0	0	10.6	0	0	0	0
Daily Wed, Aug 20, 2025	**24.0538**	**27.4843**	**0**	**0**	**2.94965**	**2.62673**	**0**	**0**	**0**	**73**	**0**	**.014062**	**11.3078**	**0**	**0**	**0**	**0**
	394	343	0	0	279	458	0	0	0	73	0	.2	11.6	0	0	0	0
	2	1	0	0	2	1	0	0	0	73	0	0	10.9	0	0	0	0
Ave Period 24 20-08-2025 12:59 PM	**24.0538**	**27.4843**	**0**	**0**	**2.94965**	**2.62673**	**0**	**0**	**0**	**73**	**0**	**.014062**	**11.3078**	**0**	**0**	**0**	**0**
	394	343	0	0	279	458	0	0	0	73	0	.2	11.6	0	0	0	0
	2	1	0	0	2	1	0	0	0	73	0	0	10.9	0	0	0	0
Daily Thu, Aug 21, 2025	**9.89004**	**2.95254**	**0**	**0**	**2.26041**	**6.90625**	**0**	**0**	**0**	**72.9976**	**.012731**	**.022106**	**10.9990**	**0**	**0**	**0**	**0**
	830	659	0	0	195	649	0	0	0	73	3	.7	11.3	0	0	0	0
	2	1	0	0	2	1	0	0	0	72	0	0	10.6	0	0	0	0
Ave Period 24 21-08-2025 11:59 PM	**9.89004**	**2.95254**	**0**	**0**	**2.26041**	**6.90625**	**0**	**0**	**0**	**72.9976**	**.012731**	**.022106**	**10.9990**	**0**	**0**	**0**	**0**
	830	659	0	0	195	649	0	0	0	73	3	.7	11.3	0	0	0	0
	2	1	0	0	2	1	0	0	0	72	0	0	10.6	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 02-09-2025 3:01:00 AM

End Date 03-09-2025 3:00:00 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	**14.1159**	**18.0812**	**.209027**	**0**	**6.70277**	**5.21805**	**.49375**	**.020826**	**0**	**72.9173**	**.3**	**.179166**	**11.0459**	**0**	**0**	**0**	**0**
Max	188	115	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
EPAS 919217	**14.1159**	**18.0812**	**.209027**	**0**	**6.70277**	**5.21805**	**.49375**	**.020826**	**0**	**72.9173**	**.3**	**.179166**	**11.0459**	**0**	**0**	**0**	**0**
	188	115	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Daily Tue, Sep 2, 2025	**13.1461**	**17.0722**	**.185861**	**0**	**6.47577**	**5.16521**	**.389992**	**.021795**	**0**	**72.9277**	**.234312**	**.153534**	**11.0699**	**0**	**0**	**0**	**0**
	56	65	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Ave Period 24 02-09-2025 11:59 PM	**13.1461**	**17.0722**	**.185861**	**0**	**6.47577**	**5.16521**	**.389992**	**.021795**	**0**	**72.9277**	**.234312**	**.153534**	**11.0699**	**0**	**0**	**0**	**0**
	56	65	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Daily Wed, Sep 3, 2025	**20.8618**	**25.0994**	**.370165**	**0**	**8.28176**	**5.58563**	**1.21546**	**.014088**	**0**	**72.8453**	**.756906**	**.357458**	**10.8784**	**0**	**0**	**0**	**0**
	188	115	37	0	29	20	184	.23	0	73	16	2	11	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Ave Period 24 03-09-2025 03:00 AM	**20.8618**	**25.0994**	**.370165**	**0**	**8.28176**	**5.58563**	**1.21546**	**.014088**	**0**	**72.8453**	**.756906**	**.357458**	**10.8784**	**0**	**0**	**0**	**0**
	188	115	37	0	29	20	184	.23	0	73	16	2	11	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0

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Environmental Report

Record Cnt 1440

Start Date 16-10-2025 12:43:00 AM

End Date 17-10-2025 12:42:00 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	**3.22361**	**2.87430**	**0**	**.103791**	**13.4736**	**14.6652**	**.005555**	**0**	**0**	**24.3791**	**119.961**	**.014930**	**10.8023**	**0**	**0**	**0**	**0**
Max	118	63	0	1.19	62	36	8	0	0	31	358	.9	11.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	22	0	0	10.1	0	0	0	0
EPAS 919217	**3.22361**	**2.87430**	**0**	**.103791**	**13.4736**	**14.6652**	**.005555**	**0**	**0**	**24.3791**	**119.961**	**.014930**	**10.8023**	**0**	**0**	**0**	**0**
	118	63	0	1.19	62	36	8	0	0	31	358	.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	22	0	0	10.1	0	0	0	0
Daily Thu, Oct 16, 2025	**3.26127**	**2.93199**	**0**	**.104481**	**13.8267**	**15.0851**	**.005726**	**0**	**0**	**24.1904**	**117.915**	**.015103**	**10.8146**	**0**	**0**	**0**	**0**
	118	63	0	1.19	62	36	8	0	0	30	358	.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	22	0	0	10.1	0	0	0	0
Ave Period 24 16-10-2025 11:59 PM	**3.26127**	**2.93199**	**0**	**.104481**	**13.8267**	**15.0851**	**.005726**	**0**	**0**	**24.1904**	**117.915**	**.015103**	**10.8146**	**0**	**0**	**0**	**0**
	118	63	0	1.19	62	36	8	0	0	30	358	.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	22	0	0	10.1	0	0	0	0
Daily Fri, Oct 17, 2025	**2**	**1**	**0**	**.081395**	**2**	**1.02325**	**0**	**0**	**0**	**30.5116**	**186.418**	**.009302**	**10.4046**	**0**	**0**	**0**	**0**
	2	1	0	.17	2	2	0	0	0	31	286	.1	10.6	0	0	0	0
	2	1	0	.02	2	1	0	0	0	30	6	0	10.3	0	0	0	0
Ave Period 24 17-10-2025 12:42 AM	**2**	**1**	**0**	**.081395**	**2**	**1.02325**	**0**	**0**	**0**	**30.5116**	**186.418**	**.009302**	**10.4046**	**0**	**0**	**0**	**0**
	2	1	0	.17	2	2	0	0	0	31	286	.1	10.6	0	0	0	0
	2	1	0	.02	2	1	0	0	0	30	6	0	10.3	0	0	0	0

APPENDIX - (C-3)

Ambient Air Quality Results of Ku Pyin Village

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 15-05-2025 3:39:00 AM

End Date 16-05-2025 3:38:00 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	**4.35694**	**2.70763**	**29.0187**	**.150548**	**98.9951**	**45.2166**	**7.77430**	**.002812**	**94.0486**	**23.8736**	**132.177**	**.139861**	**10.0081**	**0**	**0**	**0**	**0**
Max	7	113	83	.48	391	154	148	.32	100	30	359	5.4	10.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	57	22	1	0	9.3	0	0	0	0
EPAS 919217	**4.35694**	**2.70763**	**29.0187**	**.150548**	**98.9951**	**45.2166**	**7.77430**	**.002812**	**94.0486**	**23.8736**	**132.177**	**.139861**	**10.0081**	**0**	**0**	**0**	**0**
	7	113	83	.48	391	154	148	.32	100	30	359	5.4	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	57	22	1	0	9.3	0	0	0	0
Daily Thu, May 15, 2025	**4.27027**	**1.47174**	**34.0204**	**.163751**	**116.374**	**52.9508**	**9.07862**	**.003112**	**97.7878**	**23.2203**	**132.009**	**.057903**	**10.0524**	**0**	**0**	**0**	**0**
	7	4	83	.48	391	154	148	.32	100	29	357	3.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	63	22	3	0	9.3	0	0	0	0
Ave Period 24 15-05-2025 11:59 PM	**4.27027**	**1.47174**	**34.0204**	**.163751**	**116.374**	**52.9508**	**9.07862**	**.003112**	**97.7878**	**23.2203**	**132.009**	**.057903**	**10.0524**	**0**	**0**	**0**	**0**
	7	4	83	.48	391	154	148	.32	100	29	357	3.6	10.5	0	0	0	0
	2	1	0	0	2	1	0	0	63	22	3	0	9.3	0	0	0	0
Daily Fri, May 16, 2025	**4.84018**	**9.59817**	**1.13242**	**.076940**	**2.10045**	**2.09589**	**.502283**	**.001141**	**73.2009**	**27.5159**	**133.114**	**.596803**	**9.76118**	**0**	**0**	**0**	**0**
	7	113	19	.18	11	13	10	.13	100	30	359	5.4	9.9	0	0	0	0
	3	1	0	0	2	1	0	0	57	25	1	0	9.3	0	0	0	0
Ave Period 24 16-05-2025 03:38 AM	**4.84018**	**9.59817**	**1.13242**	**.076940**	**2.10045**	**2.09589**	**.502283**	**.001141**	**73.2009**	**27.5159**	**133.114**	**.596803**	**9.76118**	**0**	**0**	**0**	**0**
	7	113	19	.18	11	13	10	.13	100	30	359	5.4	9.9	0	0	0	0
	3	1	0	0	2	1	0	0	57	25	1	0	9.3	0	0	0	0

Main | Preferences | Header | Data | Report

Environmental Report

Record Cnt 1440

Start Date 02-09-2025 3:01:00 AM

End Date 03-09-2025 3:00:00 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	**14.1159**	**18.0812**	**.209027**	**0**	**6.70277**	**5.21805**	**.49375**	**.020826**	**0**	**72.9173**	**.3**	**.179166**	**11.0459**	**0**	**0**	**0**	**0**
Max	188	115	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
Min	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
EPAS 919217	**14.1159**	**18.0812**	**.209027**	**0**	**6.70277**	**5.21805**	**.49375**	**.020826**	**0**	**72.9173**	**.3**	**.179166**	**11.0459**	**0**	**0**	**0**	**0**
	188	115	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Daily Tue, Sep 2, 2025	**13.1461**	**17.0722**	**.185861**	**0**	**6.47577**	**5.16521**	**.389992**	**.021795**	**0**	**72.9277**	**.234312**	**.153534**	**11.0699**	**0**	**0**	**0**	**0**
	56	65	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Ave Period 24 02-09-2025 11:59 PM	**13.1461**	**17.0722**	**.185861**	**0**	**6.47577**	**5.16521**	**.389992**	**.021795**	**0**	**72.9277**	**.234312**	**.153534**	**11.0699**	**0**	**0**	**0**	**0**
	56	65	234	0	75	61	320	.77	0	73	16	2.9	11.5	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Daily Wed, Sep 3, 2025	**20.8618**	**25.0994**	**.370165**	**0**	**8.28176**	**5.58563**	**1.21546**	**.014088**	**0**	**72.8453**	**.756906**	**.357458**	**10.8784**	**0**	**0**	**0**	**0**
	188	115	37	0	29	20	184	.23	0	73	16	2	11	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0
Ave Period 24 03-09-2025 03:00 AM	**20.8618**	**25.0994**	**.370165**	**0**	**8.28176**	**5.58563**	**1.21546**	**.014088**	**0**	**72.8453**	**.756906**	**.357458**	**10.8784**	**0**	**0**	**0**	**0**
	188	115	37	0	29	20	184	.23	0	73	16	2	11	0	0	0	0
	2	1	0	0	2	1	0	0	0	70	0	0	10.6	0	0	0	0

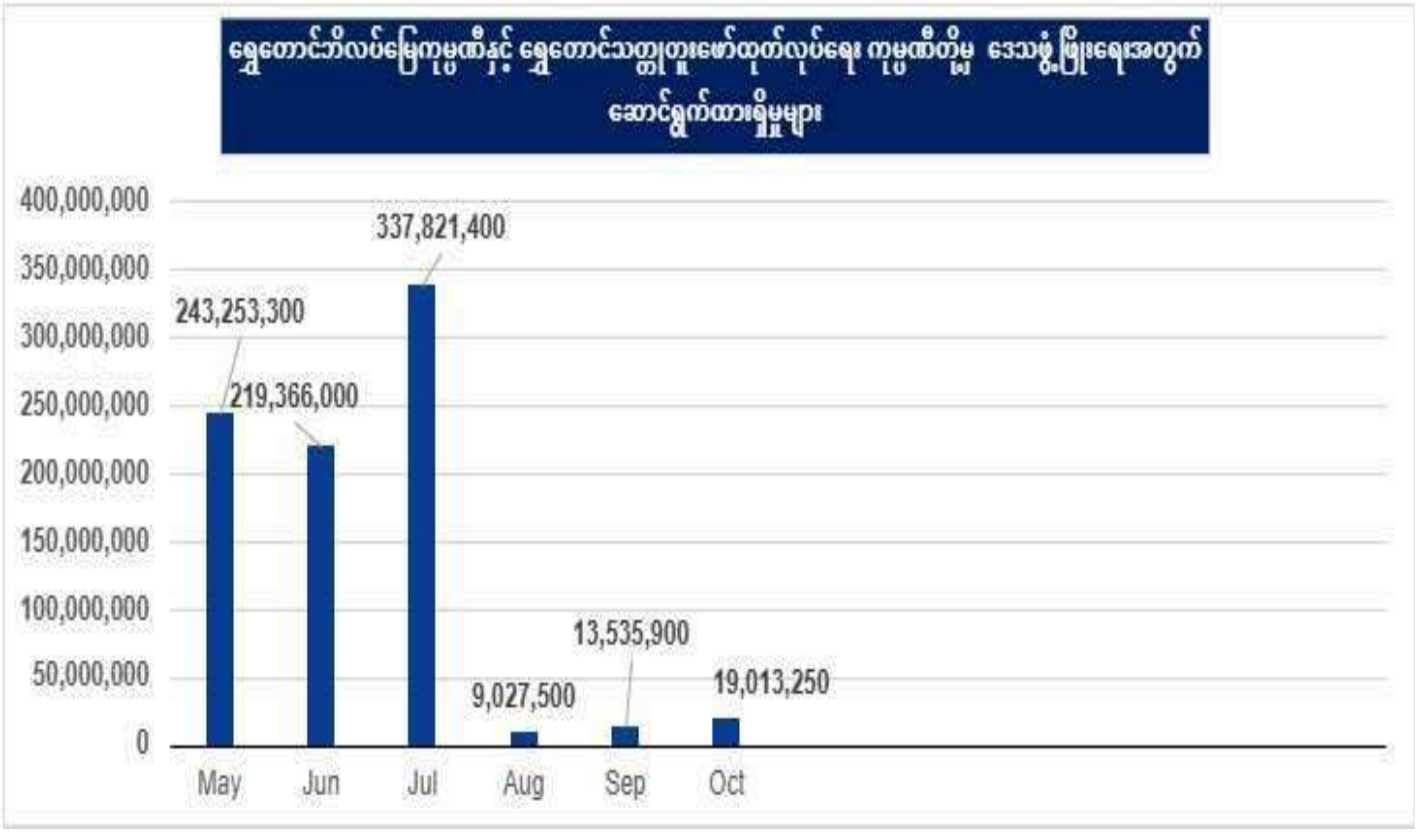
APPENDIX-D

Corporate Social Responsibility

Corporate Social Responsibility(CSR)

ရွှေတောင်ဘိလပ်မြေကုမ္ပဏီနှင့် ရွှေတောင်သတ္တုတူးဖော်ထုတ်လုပ်ရေးကုမ္ပဏီတို့မှ ဒေသဖွံ့ဖြိုးရေးအတွက် ဆောင်ရွက်ထားရှိမှုများ

စဉ်	အကြောင်းအရာ	May - 2025	Jun - 2025	Jul - 2025	Aug - 2025	Sep - 2025	Oct - 2025	Total
၁	လမ်းပန်းဆက်သွယ်ရေး ဖွံ့ဖြိုးတိုးတက်စေရန်အတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	4,154,400	2,352,000	691,200	2,519,600			9,717,200
၂	သန့်ရှင်းသောရေ ရရှိရေးအတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	900,000						900,000
၃	လျှပ်စစ်မီးလင်းရေး ဖွံ့ဖြိုးတိုးတက်စေရန်အတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	501,600						501,600
၄	ပညာရေး ဖွံ့ဖြိုးတိုးတက်စေရန်အတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	480,200	1,913,600	2,494,600	2,110,300	2,055,200	3,235,150	12,289,050
၅	ကျန်းမာရေး ဖွံ့ဖြိုးတိုးတက်စေရန်အတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း		540,000	72,000		3,838,300		4,450,300
၆	လူမှုရေးနှင့် ကယ်ဆယ်ရေး ဖွံ့ဖြိုးတိုးတက်စေရန်အတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	2,543,200	2,778,400	1,359,600	781,600	3,862,400	738,400	12,063,600
၇	ဘာသာသာသနာရေး ဖွံ့ဖြိုးတိုးတက်စေရန်အတွက် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	542,400		1,208,000	876,000	200,000	15,039,700	17,866,100
၈	သဘာဝဘေးအန္တရာယ်ကျရောက် ပျက်စီးမှုများတွင် ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း	234,131,500	211,782,000	331,996,000	2,740,000	3,580,000		784,229,500
စုစုပေါင်း		243,253,300	219,366,000	337,821,400	9,027,500	13,535,900	19,013,250	842,017,350



Corporate Social Responsibility(CSR)

လမ်းပန်းဆက်သွယ်ရေးဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ- ၂၀၂၅ခုနှစ်၊ မေလနှင့် ဇွန်လအတွင်း သာစည်မြို့နယ်၊ ယင်းမာပင်ကျေးရွာအုပ်စု၊ ယင်းမာပင်ကျေးရွာ၊ ညောင်ပင်သာရပ်ကွက်၊ အနောက်ပိုင်းရှိ အလျား(၁၁၀၀)၊ အနံ(၁၈) ပေရှိသော ကျေးရွာလမ်းအား ကွန်ကရစ်လမ်းခင်းရန်အတွက် လိုအပ်သော ဘိလပ်မြေအိတ်များကို လှူဒါန်းခြင်း။

ပုံ- ၂၀၂၅ခုနှစ်၊ မေလအတွင်း သာစည်မြို့နယ်၊ ယင်းမာပင်ကျေးရွာအုပ်စု၊ ရေပေါင်းဆုံကျေးရွာရှိ နတ်စင်သို့ သွားသည့် အလျား (၂၁၀)၊ အနံ(၁၂)ပေရှိသောလမ်းအား ကွန်ကရစ်လမ်းခင်းရန်အတွက် လိုအပ်သော ဘိလပ်မြေအိတ်များကို လှူဒါန်းခြင်း။

ပုံ- ၂၀၂၅ခုနှစ်၊ ဩဂုတ်လအတွင်း ကူပြင်ကျေးရွာရှိ ဒေသနေ ပြည်သူများ အသုံးပြုနေသည့် ကျေးရွာလမ်းမအား စက်ယန္တရားကြီးများအသုံးပြု၍ ပြုပြင်ပေးခြင်း။

ပညာရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ- ၂၀၂၅-၂၆ ပညာသင်နှစ်အတွက် ပြည်ညောင်နှင့် ကူပြင်ကျေးရွာ အခြေခံပညာကျောင်းများတွင် လိုအပ်လျက်ရှိသော ဆရာမ(၆)ဦးအား လစာငွေများ ထောက်ပံ့ပေးခြင်း။

ပုံ- ၂၀၂၅-၂၆ ပညာသင်နှစ်အတွက် ပြည်ညောင်နှင့်ကူပြင်ကျေးရွာ အခြေခံပညာကျောင်းများမှ ကျောင်းသား/ကျောင်းသူ (၁၀)ဦးအား ပညာသင် ထောက်ပံ့ကြေး ပေးအပ်ခြင်း။

ပုံ- ပြည်ညောင်ကျေးရွာရှိ Information Center & Library နှင့် ကူပြင်ကျေးရွာရှိ ထာဝရအလင်းတန်း စာကြည့်တိုက်များတွင် လစဉ်စာအုပ်များဝယ်ယူထားပေးခြင်း။

ပုံ- ပြည်ညောင်ကျေးရွာ၊ အခြေခံပညာအထက်တန်းကျောင်းမှ ယင်းမာပင်ကျေးရွာ၊ အခြေခံပညာအထက်တန်းကျောင်းသို့ G12 ကျောင်းသား/သူများ စာမေးပွဲ သွားရောက်ဖြေဆိုနိုင်ရန်အတွက် အကြိုအပို့ ကားစီစဉ် ဆောင်ရွက်ပေးခြင်း။

ပုံ- မိတ္ထီလာမြို့နယ်၊ ညောင်ကိုင်းကျေးရွာရှိ အခြေခံပညာအထက်တန်းကျောင်းအား သန့်ရှင်း၍ စိမ်းလန်းစိုပြည်သောကျောင်း ဖြစ်မြောက်လာရေးအတွက် ပျိုးပင်များ၊ မျိုးစေ့များ၊ ပန်းအိုး၊ ရေဖြန်းပုံး၊ စိုက်ပျိုးရေးသုံးပစ္စည်းများ ထောက်ပံ့ပေးခြင်း။

Corporate Social Responsibility(CSR)

ကျန်းမာရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ - ပြည်ညောင်ကျေးရွာအုပ်စုအတွင်းရှိ ဒေသနေပြည်သူများအတွက် ခွေးရူးပြန်ကာကွယ်ဆေး(၃)ဦးစာ ကနဦးမတည် လှူဒါန်းခြင်း။

ပုံ - ပြည်ညောင်ကျေးရွာရှိ ဖြူစင်လူငယ်ပရဟိတအသင်းမှ အောက်စီဂျင်(၆) အိုး ကို အောက်စီဂျင်ဖြည့်ပေးခြင်း။

ပုံ - ပြည်ညောင်ကျေးရွာအုပ်စု၊ ကူပြင်ကျေးရွာရှိ ဒေသနေ ပြည်သူများ၊ ကျောင်းသား၊ ကျောင်းသူများနှင့် ဆရာမများအတွက် မိုးကာအင်္ကျီ (၁၅၉)ထည် ပံ့ပိုးကူညီခြင်း။

ရေရရှိရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ - ယင်းမာပင်ကျေးရွာအုပ်စု၊ ပုပွါးကုန်းကျေးရွာရှိ သဲလွန်းချောင်းတွင် အလျား (၁၃၀)၊ အနံ(၆)ပေ၊ အမြင့် (၅)ပေ ရှိသော သဲရေစုကန် ဆောက်လုပ်ရန်အတွက် လိုအပ်သော ဘိလပ်မြေအိတ်များ လှူဒါန်းခြင်း။

Corporate Social Responsibility(CSR)

ဘာသာသာသနာရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ- ကူပြင်ကျေးရွာ (၁၂)ကြိမ်မြောက် မဟာပဋ္ဌာန်းရွတ်ဖတ်ပူဇော်ပွဲနှင့် ဆွမ်းဆန်စိမ်းလောင်းလှူသည့်ပွဲတွင် ဆန်နှင့် ဝတ္ထုငွေ လောင်းလှူခြင်း။

ပုံ- ပြည်ညောင်ကျေးရွာရှိ အမှတ်(၅)ရပ်ကွက်၌ ဓမ္မာရုံဆောက်လုပ်ရာတွင် လိုအပ်သော ဘိလပ်မြေအိတ်များကို လှူဒါန်းခြင်း။

ပုံ - ယင်းမာပင်ကျေးရွာ၊ ရွာဦးဘုန်းတော်ကြီးကျောင်းတွင် ညဏ်တော်အမြင့် (၁၈) တောင်ရှိ ဂျစ္ဆိတံဆုတောင်းပြည့်စေတီတော်မြတ်ကြီး ပြုပြင် ဆောက်လုပ်ရန်အတွက် လိုအပ်သော ဘိလပ်မြေအိတ်များကို လှူဒါန်းခြင်း။

ပုံ - ပြည်ညောင်ကျေးရွာ၊ စုပေါင်းမဟာဘုံကထိန်ပွဲတွင် အလှူငွေ ထည့်ဝင်လှူဒါန်းခြင်း။

ပုံ - ကူပြင်ကျေးရွာ၊ စုပေါင်းမဟာဘုံကထိန်ပွဲတွင် အလှူငွေ ထည့်ဝင်လှူဒါန်းခြင်း။

လူမှုရေးနှင့်ကယ်ဆယ်ရေး ဖွံ့ဖြိုးတိုးတက်စေရန် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ -၂၀၂၄ ခုနှစ်၊ အောက်တိုဘာလမှ စတင်၍ လစဉ် ကူပြင်ကျေးရွာရှိ အသက်အရွယ်ကြီးရင့်သော အဖိုးအဖွားများအား ကူညီထောက်ပံ့ပေးခြင်း။

ပုံ - သာစည်မြို့နယ်၊ မြန်မာ့မီးရထား၊ သွားလာပို့ဆောင်ရေးဌာန၊ သာစည်ဘူတာရုံအတွက် (၁၂၀)လီတာဆံ့ အမှိုက်ပုံး အကြီး (၄)ပုံး ကူညီပံ့ပိုးခြင်း။

သဘာဝဘေးအန္တရာယ်ကျရောက်ပျက်စီးမှုများအတွက် အထောက်အကူပြု ပံ့ပိုးကူညီ ဆောင်ရွက်ပေးခြင်း

ပုံ- ပျော်ဘွယ်မြို့ နှင့် ရမည်းသင်းမြို့၊ ငလျင်ဘေးဒဏ်ကြောင့် ထိခိုက်ပျက်စီးသွားသောစေတီများ နှင့် ပျက်စီးအဆောက်ဦးများ ရှင်းလင်းရေးလုပ်ငန်းများ ဆောင်ရွက်ရန်အတွက် စက်ယန္တရားကြီးများ အသုံးပြု၍ ကူညီပေးခြင်း။

ပုံ - ပင်းတယမြို့၊ သိမ်ကုန်းကျေးရွာအုပ်စု၊ ကုန်းစောင်းကျေးရွာတွင် ငလျင်ဒဏ်ကြောင့် ပျက်စီးသွားသော လူနေအိမ်များကို ပြုပြင်ရန်အတွက် ဘိလပ်မြေအိတ်များနှင့် အလှူငွေ လှူဒါန်းခြင်း။

ပုံ- သာစည်မြို့နယ်၊ လှိုင်းတက်ကျေးရွာ၊ ငလျင်ဘေးဒဏ်ကြောင့် ထိခိုက်ပျက်စီးသွားသော ရွှေဆင်းလှဘုရား ရှင်းလင်းရေးလုပ်ငန်းများဆောင်ရွက်ရန်အတွက် စက်ယန္တရားကြီးများ အသုံးပြု၍ ကူညီပေးခြင်း။

APPENDIX-E

Emergency Preparedness Fire Drill Exercise Report

EMERGENCY PREPAREDNESS

FIRE DRILL REPORT

(14 Aug 2025, APACHE CEMENT FACTORY)

Prepare by : Nay Soe Naing

Position : HOD

Department : OHS

Contact No : 09255112704

SHWE TAUNG
CEMENT CO.,LTD.

Title: Fire Outbreak in Coal hopper tunnel (CPP)

Contents

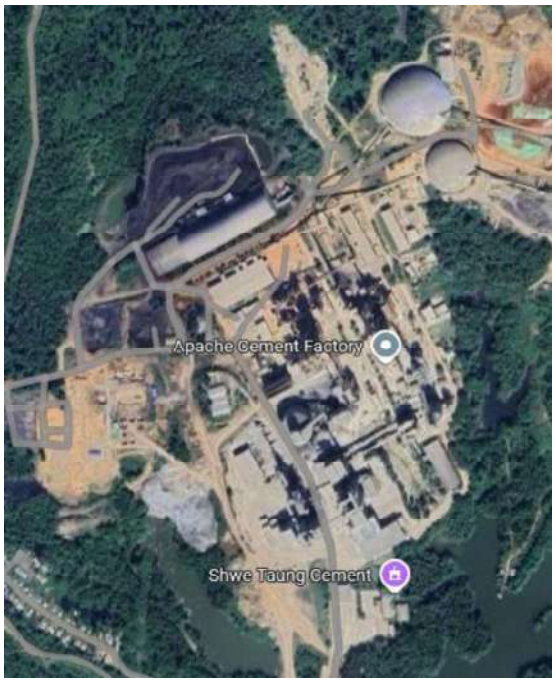
Introduction

Apache Cement Plant is situated at Pyi Nyaung Village, Thazi Township, Meiktila District, Mandalay Division.

This is recommended that ERT Emergency Response Team is prepared for any type of emergency that may occur.

Location of Apache Cement Factory

Name	**: Pyi Nyaung**
Company Name	**: Shwe Taung Cement Co.Ltd (Apache Cement)**
City	**: Tharzi Township**
State	**: Mandalay Devision**
Country	**: Myanmar**



Objective

- To ensure that everyone knows what to do in case of emergency
- To ensure all individuals in the workplace familiar with escape routes, emergency exits and safety protocols
- To practices everyone safety evacuate the nearest AA in an orderly manner
- Trained person aware on how to rescue injury person who trap inside the fire
- To familiarize on the usage of fire truck & firefighting such as Fire Hose Reel and fire extinguisher

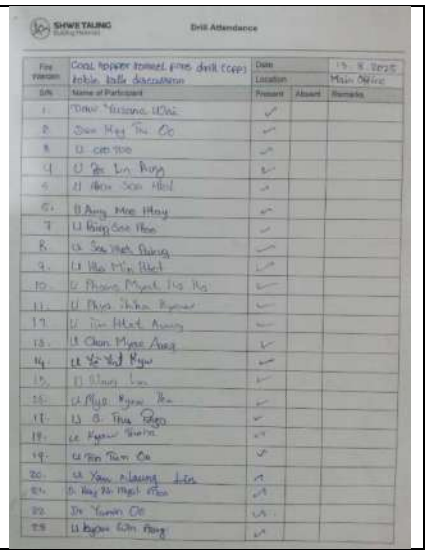
Table Talk Exercise

The below is the key information to be discussed and concluded:

- The date/time of the exercise was confirmed. The proposed date/time were to be scheduled on
- 14 Aug 2025 at approximately 3:00 am.
- All personnel involved in the premises are encouraged to participate promptly.
- The passing time criterion is 15 minutes sharp.
- Identification of the premises key roles/responsibilities.

    a) ERT commander
    b) Firefighter and Reserve firefighter Team
    c) Rescue and Medical & First Aid Team
    d) Traffic Control & Security Team
    e) Warden and Evaluation Team
    f) Communication and CCTV Watcher Team
    g) Vehicle & Machinery Support Team

- The purpose of this exercise is to permit the contractors/staffs to understand the procedures and response as accordingly.
- To have a basic knowledge on how to operate a fire extinguisher/raw meal correctly.
- To have a basic knowledge on how to assist fire truck.


SHWE TAUNG
Drill Attendance

Emergency response team role and responsibilities

ERD Manager

- The ERD manager shall be a senior member of the management and in charge of liasing with Company Management as per crisis management.
- He is person who is the overall in-charge of the emergency response operations and liaises with senior officials of government agencies such as MFBD, FGLLID etc.
- Direct all counter measures and emergency procedure to control and decide on the evacuation of the plant area site.

Firefighter and Reserve firefighter Team

- Conduct firefighting in the event of a fire emergency
- Coordinate the rescue of personnel with Rescue Team member from the scene of fire
- Remove any flammable fire

Rescue and Medical & First Aid Team

- Coordinating the evacuation & rescue of personnel
- Cooperating with firefighting team on the rescue of personnel
- Cooperating with respective person in charge of the personnel on the rescue of missing personnel from their working areas
- Reporting to ERT Lead on the status of their rescue

Traffic Control & Security Team

- Security shall control the crowd
- To clear the access and egress for firetruck and Ambulance path
- To point the incident place to firetruck driver

Warden and Evaluation Team

- Counting and make sure that all personnel are accountable at assembly area.
- If anyone is missing, immediately report to evacuation team
- Liaise with the respective person in charge from work group and collate the headcounts

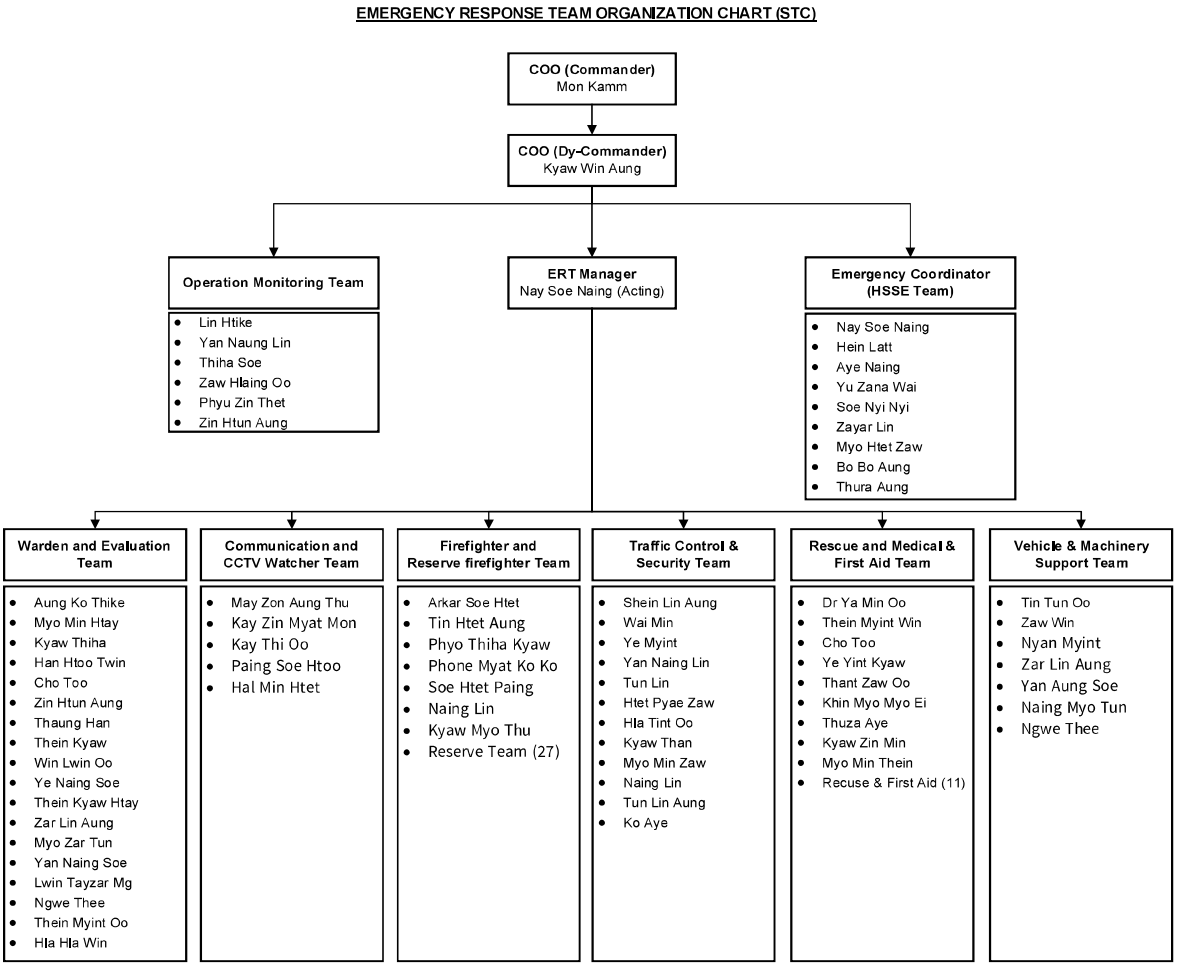
Communication and CCTV Watcher Team

- To monitor CCTV scream
- To arrange the ambulance
- To inform the Clinic
- To arrange the budget

Vehicle & Machinery Support Team

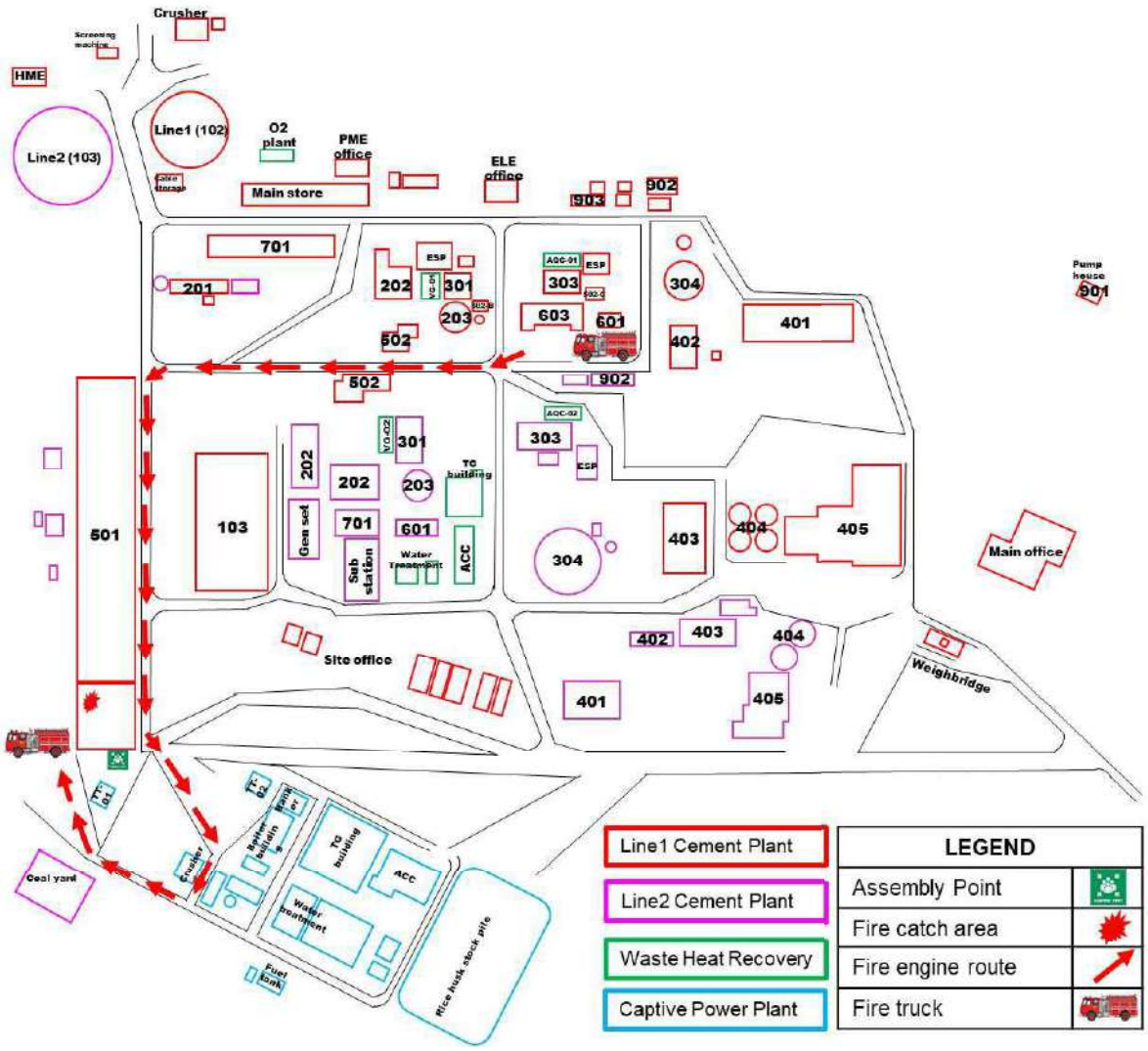
- To arrange ambulance and vehicle
- To arrange require heavy machinery such as Excavator, Mobile crane, Wheel loader etc…

Emergency response team flow chart



Scenario

- About 02:45 pm, one of CPP staff was found coal smoldering in coal hopper tunnel (CPP).
- He tries to extinguish coal smoldering fire using by raw meal
- Site supervisor call STC hotline number



Event

The events are recorded and listed below:

Estimated Time	Events(s)
2:45 PM	Coal smoldering inside coal hopper tunnel
2:46 pm	CPP stie operator try to extinguish coal smoldering using by raw meal
3:00 pm	CPP site supervisor call emergency hot line
3:03 pm	ERT was activated and move to emergency location
3:10 pm	Fire truck arrived emergency location
3:15 pm	Fire was put up and evaluated injury person
3:20 pm	Medical team was given treatment to injury person
3:30 pm	Debrief

Coal hopper inside fire drill result

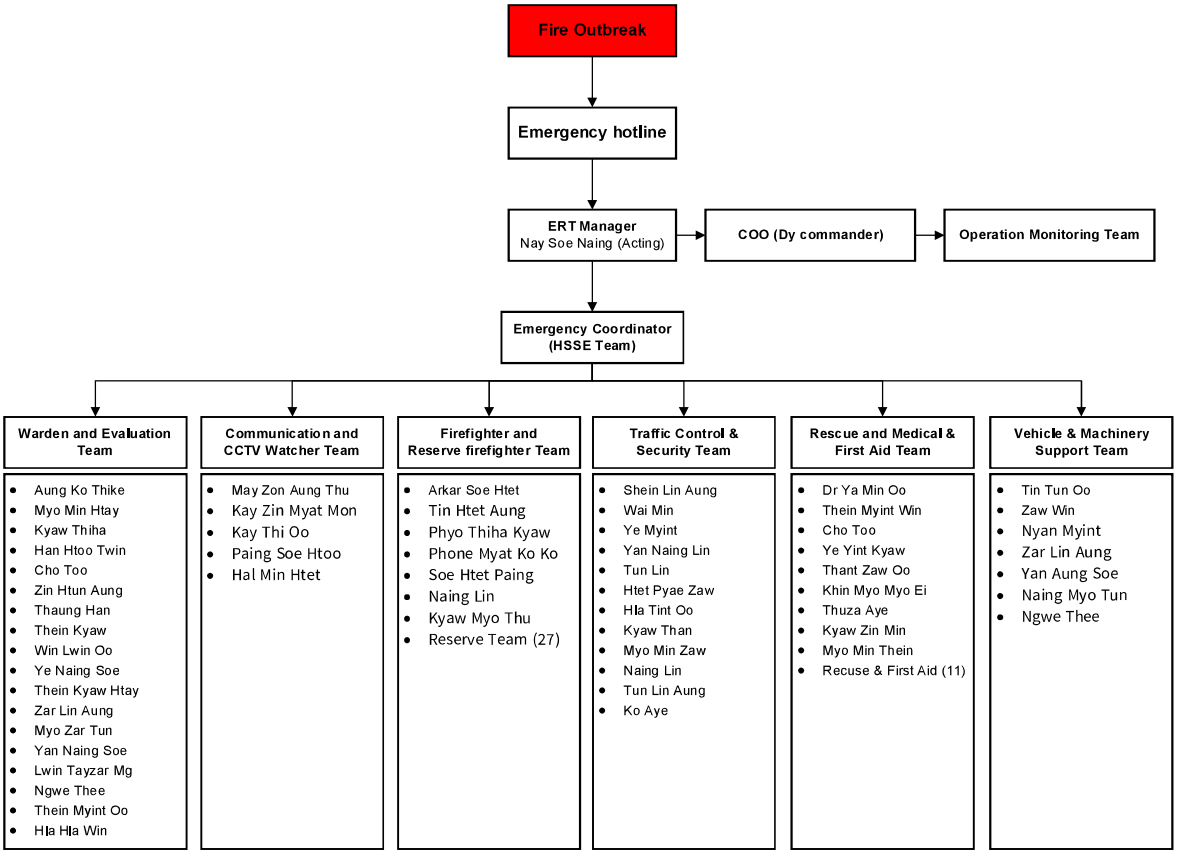
1. Total participation : 15
    a. Firefighting team : 6
    b. Rescue team : 5
    c. Traffic control team : 3
    d. Medical team : 6
    e. Communication team : 2
    f. CPP staff : 10
    g. CPP construction contractor/ workers : 45
2. Assemble Time Record : Approximately 10 ~ 15 minutes

Debrief

1. Recap on the basic procedures when occurred:
    a. Call to emergency hot line - 09255113060, 09 985525338
    b. If need, turn off the electrical supply in building
    c. If need, turn off the equipment and machinery on site
    d. Move to the assembly area; fast and slowly
    e. At the assembly area, respective dept-in-charge will act as head count officer to take head count and register in the attendance sheet
    f. Wait for further instructions by ERD Manager

Appendixes

a. Process details flow chart



b. Emergency contact list

Key Personnel	Pager / Hand phone
Police	199
Ambulance (Phyu Sin Myitta)	09968014931/ 09976897934
Rescue dept	0673404666/ 0673404777
Factory and general labour law inspection dept	095032471
Fire Service (Yin Mar Pin Station)	09445921400 /191
Meiktala General Hospital	095 84497
Fire Service (Thar Zi Station)	0642069131

STC Contact Numbers		
Name	Position	Contact numbers
Mon Kham	COO (STC)	09255112909
Kyaw Win Aung	Head of ERT	09255112052
Lin Htike	HOD	09255112918
Nan Maw Maw Aye	Head of ADM	09255112651
Nay Soe Naing	Head of OHS	09255112704
Zaw Tint	Head of MNE	09255112674
Myo Min Htay	Head of HME	09255112914
Zaw Hlaing Oo	Head of ELE	09255111988
Thiha Soe	Head of PME	09255112897
Phyu Zin Thet	Head of PRD	09255112923
Nyan Myint	Head of LGS	09255113244
Yan Naung Lin	Head of CPP	09255113364
Kyaw Thiha	SMD manager	09255112644
Daw Khin Nwei Nwei Lynn	FME manager	09255112028
Hla Hla Win	FNA manager	09255112645
May Zon Aung Thu	HSSE manager	09255113015
Hein Latt	HSSE manager	09255113077
Kay Zin Myat Mon	RSM manager	09255112940
Tin Tun Oo	ADM manager	09255112032
Ngwe Thee	ADM manager	09255113023
Aung Htoo Min	PCM manager	09255112892
Kay Thi Oo	HR manager	09883002034
Myo Aung Hlaing	ICT manager	09255112996

c. CPP site operator try to extinguish coal smoldering using by raw meal


d. Site supervisor stop belt conveyor using pull cord and inform to emergency hot line


e. After received emergency information report to ERT manager and communication team


f. Firefighter team and rescue team was activated and move to emergency location


g. Security control the incoming vehicles


h. firefighting team extinguished fire


i. Rescue team try to evaluate injury person

j. Medical team was given treatment and relocate injury person to the clinic

k. Management team & worker are move to Assembly Area

l. Debrief by Head of OHS Department

APPENDIX-F

Monitoring Photo Records

Ambient Air Monitoring Photo Records

Worker Accommodation

Pyi Nyaung Village

Ku Pyin Village

Water Quality Monitoring Photo Records

Ku Pyin Stream

Ye Shin Stream (Near Pyi Nyaung)

Ye Shin Stream (Near 6 Unit)

Supply Water (Reservoir)

Sedimentation Pond 5

Sedimentation Pond 6

Noise Monitoring Photo Record

Ku Pyin Village

Pyi Nyaung Village

APPENDIX-G

Water and Soil Quality Sampling Results

By Mandalay Region ECD Lab

Analysis Report

THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR

MINISTRY OF NATURAL RESOURCES AND ENVIRONMENTAL CONSERVATION

ENVIRONMENTAL CONSERVATION DEPARTMENT

Mandalay Region

Date.1 . 10 . 2025

Name: ရွှေတောင်သတ္တုတူးဖော်ထုတ်လုပ်ရေး ကုမ္ပဏီ၏ ရုံးစေးလုပ်ကွက်

Sample location: Lat: 20.867883, Long: 96.379001

Sample type: Wastewater

Sample No: 329/ 2025

Sample Received Date: 30.9.2025

Sampling Date: 1.10.2025

Sampling by:

Parameter	Unit	Result	NEQEGS
pH	S.U	7.15	6-9
DO	%	14	-
ORP	mV	216	-
Arsenic	mg/l	Nil	0.1
Total suspended solids	mg/l	155	50
Turbidity	NTU	108	-
Lead	mg/l	0.012	0.1
Temperature	℃	25	-
Zinc	mg/l	0.16	2
Chromium	mg/l	0.14	0.5

Method/Equipment used: optRF/ photoLab 7600UV-VIS (WTW), Lovibond water quality test kit, Turbidity & Total Suspended Solid Meter, Desktop High Precision Water Quality Analyzer (GOYOJO), Lovibond 250, Environmental Meter

Remark: TSS သည် သတ်မှတ်စံချိန်စံညွှန်းထက်ကျော်လွန်နေပါသည်။

ကောက်ယူလာသောရေနမူနာအား ဓာတ်ခွဲစမ်းသပ်ထားခြင်းဖြစ်ပါသည်။

Analyzed by:

(အေားမြတ်ထွန်း)

ပတ်ဂန်

Approved by:

(ဝန်းအိမြူ)

Analysis Report

THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR

MINISTRY OF NATURAL RESOURCES AND ENVIRONMENTAL CONSERVATION

ENVIRONMENTAL CONSERVATION DEPARTMENT

Mandalay Region

Date. ၁ . 10 . 2025

Name: ရွှေတောင်သတ္တုတူးဖော်ထုတ်လုပ်ရေး ကုမ္ပဏီ၏ ရွှံစေးလုပ်ကွက်

Sample location: Lat: 20.867883, Long: 96.379001

Sample type: Soil

Sample No: 330/ 2025

Sample Received Date: 30.9.2025

Sampling Date: 1.10.2025

Sampling by:

Parameter	Unit	Result
Arsenic	ppm	Nil
Lead	ppm	0.016
Phosphorus	ppm	1.02
Nitrogen	ppm	6.01
Potassium	ppm	4.16
Chromium	ppm	0.14
Zinc	ppm	0.15
pH	S.U	7.86

Method/Equipment used: AAS, Soil test meter

Remark: ကောက်ယူလာသောနမူနာအား ဓာတ်ခွဲစမ်းသပ်ထားခြင်းဖြစ်ပါသည်။

Analyzed by:

(အေးမြတ်ထွန်း)
ဦးစီးအရာရှိ
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

Approved by:

(ပန်းအိုဖြူ)
လက်ထောက်ညွှန်ကြားရေးမှူး
သဘာဝအရင်းအမြစ်နှင့်ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန