

ENVIRONMENTAL MANAGEMENT PLAN-EMP

FOR

“Manufacturing of Garment on CMP Basis”

Holding No. (89), Plot No.1, Aye Mya Tharyar Village (KA), Aye Mya Tharyar Village Tract, Okpho Township, Bago Region



PROPONENT

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CONTENTS

CONTENTS.....	i
LIST OF TABLES.....	i
LIST OF FIGURES.....	iii
DOCUMENT CERTIFICATION AND COMMITMENT.....	i
ACKNOWLEDGEMENT AND COMMITMENT.....	ii
ABBREVIATION.....	iii
EXECUTIVE SUMMARY.....	i
အစီရင်ခံစာအကျဉ်းချုပ်.....	xxiii
1.0 INTRODUCTION.....	1
1.1 Background of the Project.....	1
1.2 Need of EMP.....	1
1.3 Need of the Project.....	2
1.4 Objectives of the EMP.....	2
1.5 Structure of the EMP Report.....	2
1.6 Project Proponent.....	2
1.7 EMP Study Team.....	4
2.0 POLICIES AND COMMITMENTS, LEGAL REQUIREMENTS AND INSTITUTIONAL ARRANGEMENTS.....	6
2.1 Background.....	6
2.2 Policies Framework.....	6
2.3 Institutional Framework.....	6
2.4 Project-related Laws and Regulations in Myanmar.....	9
2.4.1 Overview of Myanmar Environmental Laws and Regulations.....	13
2.4.2 Overview of Other Relevant Myanmar Laws and Regulations.....	19
2.4.3 Overview of International Convention, Treaties and Protocols.....	39
2.3.4 Project Proponent’s Commitment.....	39
3.0 DESCRIPTION OF THE PROJECT.....	41
3.1 Project Location and Area.....	41
3.1.1 Project Surrounding Environment and Access Road.....	42
3.2 Project Infrastructure.....	43
3.3 Raw Materials Requirements.....	48
3.4 Machinery, Equipment, Furniture and Fixture.....	52

3.5 Operational Schedule and Manpower Requirements	53
3.5.1 Operational Schedule.....	53
3.5.2 Manpower Requirement	54
3.6 Production Processes.....	54
3.6.1 Order Receiving.....	55
3.6.2 Raw Materials and Quality Inspection	55
3.6.3 Fabric Shrinkage.....	55
3.6.4 Fabric Relaxation and Spreading.....	56
3.6.5 Garment Sampling and Fabric Development	56
3.6.6 Pattern Making and Marking.....	57
3.6.7 Cutting Process	58
3.6.8 Sewing Process	58
3.6.9 Quality Control.....	59
3.6.10 Ironing	60
3.6.11 Final Quality Inspection	60
3.6.12 Folding and Packing Section	61
3.6.13 Shipping.....	61
3.7 Product Design and Production Capacity.....	62
3.8 Boiler Usage.....	63
3.8.1 Assessment of Chimney Height	65
3.9 Power Supply and Energy Consumption	66
3.9.1 Fuel Requirement	68
3.10 Water Supply and Consumption	69
3.10.1 Water Consumption.....	70
3.11 Wastewater Management	70
3.11.1 Wastewater Generation.....	70
3.11.2 Sedimentation Pond and Factory Drainage System	70
3.11.3 Septic Tanks and Toilets.....	71
3.12 Solid Waste Management.....	72
3.12.1 Solid Waste Generation	72
3.12.2 Solid Waste Management.....	72
3.13 Climate Change Drivers and CO ₂ Emission Reduction Efforts.....	73
3.14 Firefighting System.....	75

3.15 Working Condition and Ventilation System of the Factory.....	77
3.16 Social Welfare Program of Kojima Iryo Myanmar Co., Ltd.	78
3.16.1 Self- Cleanliness	78
3.16.2 Medical Care.....	78
3.16.3 Recreation.....	79
3.16.4 Ways of Training	79
4.0 BASELINE CONDITIONS OF THE EXISTING ENVIRONMENT	80
4.1 Methodology	80
4.1.1 Primary Data Collection and Analysis	80
4.1.2 Secondary Data Collection and Analysis	80
4.2 Physical Components of Project Area.....	80
4.2.1 Topography.....	81
4.2.2 Hydrology.....	81
4.2.3 Climate.....	81
4.2.4 Geology	81
4.2.5 Soil Condition.....	83
4.3 Natural Hazards.....	84
4.3.1 Flood Hazard	84
4.3.2 Cyclone Risk	85
4.3.3 Landslide Probability.....	86
4.3.4 Seismic Intensity and Probability	87
4.4 Biological Characteristics	88
4.5 Environmental Baseline Data.....	89
4.5.1 Air Quality.....	89
4.5.2 Noise Level.....	95
4.5.3 Vibration Measurement	99
4.5.4 Water Quality	100
4.5.5 Soil Quality.....	104
4.5.6 Light Intensity.....	106
4.6 Socio-Economic Components	108
4.6.1 House, Household and Population of the Project Township.....	108
4.6.2 Ethnic Groups	109
4.6.3 Religious.....	110

4.6.4 Educational Information	110
4.6.5 Health Information	110
4.6.6 Land Use.....	111
4.6.7 Industries	112
4.6.8 Economic Information.....	112
4.6.9 Occupational Information.....	112
4.6.10 Transportation.....	112
4.6.11 Historical, Cultural and Archaeological Sites	113
5.0 POTENTIAL ENVIRONMENTAL IMPACT AND MITIGATION MEASURES.....	114
5.1 Impact Assessment Methodology and Approach.....	114
5.1.1 Factors for Assessment.....	114
5.1.2 Impact Rating	115
5.2 Potential Impact Assessment and Mitigation Measures during Construction/Decommissioning Phases	116
5.2.1 Air Pollution	122
5.2.2 Noise Pollution	122
5.2.3 Water Contamination.....	123
5.2.4 Soil Contamination	123
5.2.5 Solid Waste Generation	124
5.2.6 Occupational Health and Safety	125
5.2.7 Traffic Congestion.....	126
5.2.8 Land Use Change.....	126
5.2.9 Creation of Employment Opportunities	127
5.3 Potential Impact Assessment and Mitigation Measures during Operation Phase	127
5.3.1 Air Pollution	131
5.3.2 Noise Pollution	131
5.3.3 Water Contamination.....	132
5.3.4 Soil Contamination	132
5.3.5 Solid Waste Generation	133
5.3.6 Odor.....	133
5.3.7 Occupational Health and Safety	134
5.3.8 Traffic Congestion.....	134
5.3.9 Creation of Employment Opportunities	135
6.0 ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN	136

6.1 Environmental Management and Monitoring Sub-Plans	136
6.2 Air Pollution Management and Monitoring Sub-Plans	136
6.1.1 Objectives	136
6.1.2 Legal Requirements	136
6.1.3 Implementation Schedules.....	136
6.1.4 Air Pollution Management Actions	137
6.1.5 Air Pollution Monitoring Sub-Plan	138
6.1.6 Projected Budgets and Responsibilities.....	139
6.2 Noise Management and Monitoring Sub-Plans	140
6.2.1 Objectives	140
6.2.2 Legal Requirements	140
6.2.3 Implementation Schedules.....	140
6.2.4 Noise Pollution Management Actions	140
6.2.5 Noise Pollution Monitoring Sub-Plan	141
6.2.6 Projected Budgets and Responsibilities.....	141
6.3 Water Contamination Management and Monitoring Sub-Plans	142
6.3.1 Objectives	142
6.3.2 Legal Requirements	142
6.3.3 Implementation Schedules.....	142
6.3.4 Water Contamination Management Actions	142
6.3.5 Water Quality Monitoring Sub-Plan.....	143
6.3.6 Projected Budgets and Responsibilities.....	144
6.4 Soil Contamination Management and Monitoring Sub-Plans.....	145
6.4.1 Objectives	145
6.4.2 Legal Requirements	145
6.4.3 Implementation Schedules.....	145
6.4.4 Soil Contamination Management Action Sub-Plans	145
6.4.5 Soil Quality Monitoring Sub-Plans	145
6.4.6 Projected Budgets and Responsibilities.....	146
6.5 Solid Waste Management and Monitoring Sub-Plans	146
6.5.1 Objectives	146
6.5.2 Legal Requirements	147
6.5.3 Implementation Schedules.....	147

6.5.4 Solid Waste Management Action Sub-Plans.....	147
6.5.5 Solid Waste Monitoring Sub-Plans	148
6.5.6 Projected Budgets and Responsibilities.....	148
6.6 Occupational Health and Safety Management and Monitoring Sub-Plans.....	149
6.6.1 Objectives	149
6.6.2 Legal Requirements	149
6.6.3 Implementation Schedules.....	149
6.6.4 Occupational Health and Safety Management Action Sub-Plans	149
6.6.5 Occupational Health and Safety Monitoring Sub-Plans.....	151
6.6.6 Projected Budgets and Responsibilities.....	152
6.7 Fire Hazards Management and Monitoring Sub-Plans	152
6.7.1 Objectives	152
6.7.2 Legal Requirements	152
6.7.3 Implementation Schedules.....	152
6.7.4 Fire Hazards Management Action Sub-Plans.....	153
6.7.5 Fire Hazards Monitoring Sub-Plans	159
6.7.6 Projected Budgets and Responsibilities.....	159
6.8 Emergency Response and Disaster Management and Monitoring Sub-Plans	159
6.8.1 Objectives	159
6.8.2 Legal Requirements	159
6.8.3 Implementation Schedules.....	160
6.8.4 Emergency Response and Disaster Management Sub-Plans.....	160
6.8.5 Emergency Response and Disaster Management Monitoring Sub-Plans	160
6.8.6 Projected Budgets and Responsibilities.....	161
6.9 Environmental Management Team (EMT)	161
6.10 Overall Environmental Monitoring Plan.....	164
6.11 Overall Budget for Implementation of the EMP	168
6.12 Capacity Development and Training.....	170
6.12.1 Environmental Training and Technical Assistance	170
6.12.2 Fire Drills.....	170
6.13 Greenbelt Development Program.....	175
6.14 Corporate Social Responsibilities (CSR)	177
7.0 PUBLIC CONSULTATION AND INFORMATION DISCLOSURE	182

7.1 Methodology and Approach.....	182
7.2 Summary of Meeting with the Factory Employees.....	182
7.2 Summary of Public Consultations and Activities Undertaken.....	184
8.0 CONCLUSION.....	191
8.1 Recommendation.....	191
LIST OF APPENDICES.....	I

LIST OF TABLES

Table 1.1 Contact Person Information of KIMCL.....	2
Table 1.2 List of the Executives of KIMCL	3
Table 1.3 Organization of the EMP Study Team.....	4
Table 2.1 Key Ministries and Departments in the Industrial Sectors	6
Table 2.2 Summary of Myanmar Relevant Laws and Regulations to the Proposed Project.....	9
Table 2.3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (General Application)	17
Table 2.4 Air Emission Levels (General Application)	17
Table 2.5 Noise Level (General Guidelines)	18
Table 2.6 Small Combustion Facilities Emission Guidelines.....	18
Table 2.7 Drinking Water Quality Standards	18
Table 2.8 Project Proponent's Commitments.....	39
Table 3.1 List of Building and their Information.....	43
Table 3.2 List of Imported Raw Materials per Annum.....	48
Table 3.3 Norms for each Product	48
Table 3.4 List of Machineries & Equipment	52
Table 3.5 List of Furniture & Fixture (local purchase).....	53
Table 3.6 Operational Schedule of the Factory	53
Table 3.7 Detail List of Manpower as of October 2024	54
Table 3.8 Expected Annual Production Capacity for 30 Years.....	62
Table 3.9 Boilers Information.....	63
Table 3.10 Monthly Electricity Consumption after the Installation of Solar Panels	67
Table 3.11 Tube Wells Information.....	69
Table 3.12 Septic Tanks Information.....	71
Table 3.13 Firefighting Equipment List.....	75
Table 4.1 Geological Succession of the Bago Region.....	82
Table 4.2 Parameters Measured for Ambient and Workplace Air Quality.....	89
Table 4.3 Air Quality Measurement Locations.....	90
Table 4.4 Ambient Air Quality Results	92
Table 4.5 Workplace Air Quality Results.....	94
Table 4.6 Boiler Stack Emission Measurement Results	94
Table 4.7 Generator Stack Emission Measurement Results	95
Table 4.8 Workplace Noise Level Measurement Location	95
Table 4.9 Ambient Noise Level Measurement Result	98
Table 4.10 Workplace Noise Level Measurement Results.....	98
Table 4.11 Vibration Measurement Guideline Values (German Standard: DIN 4150-3).....	100
Table 4.12 Vibration Measurement Result	100
Table 4.13 Water Sampling Locations.....	100
Table 4.14 Tube Well Water Quality Results.....	102
Table 4.15 Wastewater Quality Results.....	103
Table 4.16 Boiler Blowdown Water Quality Results	103
Table 4.17 Soil Quality Results	105

Table 4.18 Light Intensity Measurement Locations	106
Table 4.19 Light Intensity Measurement Guidelines.....	108
Table 4.20 Light Intensity Measurement Results	108
Table 4.21 House and Household Numbers	109
Table 4.22 Population by Sex of the Project Township.....	109
Table 4.23 Population by Ethnic Groups of the Project Township	109
Table 4.24 Religious Groups of Ethnic in the Project Township	110
Table 4.25 Completion of High School Education in the Project Township.....	110
Table 4.26 Types of Land Use in the Project Township.....	111
Table 4.27 Types of Occupation in the Project Township.....	112
Table 5.1 Factors and its Definition for Assessment	114
Table 5.2 Environmental Impact Categorization	115
Table 5.3 Impact Evaluation during Construction/ Decommissioning Phase	117
Table 5.4 Impact Evaluation during Operation Phase	129
Table 6.1 Projected Budgets and Responsibilities for Air Quality	139
Table 6.2 Projected Budgets and Responsibilities for Noise Levels	141
Table 6.3 Locations of Water Sampling Points	143
Table 6.4 Projected Budgets and Responsibilities for Water Contamination.....	144
Table 6.5 Projected Budgets and Responsibilities for Soil Contamination.....	146
Table 6.6 Projected Budgets and Responsibilities for Solid Waste Management.....	148
Table 6.7 Projected Budgets and Responsibilities for Occupational Health and Safety Management.....	152
Table 6.8 Firefighting Equipment List.....	153
Table 6.9 Projected Budgets and Responsibilities for Fire Hazards Management.....	159
Table 6.10 Projected Budgets and Responsibilities for Emergency Response and Disaster Management.....	161
Table 6.11 Environmental Management Team and their Responsibilities	162
Table 6.12 Environmental Monitoring Plan	164
Table 6.13 Annual Estimated Cost of Basic Environmental Management and Monitoring .	169
Table 6.14 Member List of Fire Brigade Team	171
Table 6.15 List of Planted Trees	176
Table 6.16 CSR Plan.....	177
Table 6.17 CSR Donation List.....	181
Table 7.1 Suggestions of Employees and Responses of Factory In-charge	183
Table 7.2 Agenda of the Meeting	184
Table 7.3 Suggestion from Public Consultation Meeting.....	185
Table 7.4 Excerpts of Suggestion Letters from Public Consultation Meeting	187

LIST OF FIGURES

Figure 1.1 Organization Chart of the Factory	4
Figure 3.2 Surrounding Environment of the Project Site.....	42
Figure 3.3 Surrounding Environment of the Project Site (500 meter)	43
Figure 3.4 Layout Plans of Building: (a) Front Elevation, (b) Back Elevation, (c) Left Elevation, (d) Roof Plan	46
Figure 3.5 Factory Layout Plan	47
Figure 3.6 Raw Material Storage Area	52
Figure 3.7 Detailed Production Processes.....	55
Figure 3.8 Sponging Machine	56
Figure 3.9 Photo of Garment Sampling	57
Figure 3.10 Pattern Making	57
Figure 3.11 Photos of Cutting	58
Figure 3.12 Sewing Section in Factory	59
Figure 3.13 Quality Control Section in Factory.....	60
Figure 3.14 Ironing Section	60
Figure 3.15 Packing Photos	61
Figure 3.16 Product Design Samples	63
Figure 3.17 Boiler Information	64
Figure 3.18 Boilers Usage Certificates	65
Figure 3.19 Power Distribution Graph.....	67
Figure 3.20 Power Supply.....	68
Figure 3.21 Diesel Storage Containers	69
Figure 3.22 Tube Wells and Drinking Water Bottles	70
Figure 3.23 Drain and Natural Sedimentation Pond	71
Figure 3.24 Photos of Septic Tanks and Toilets	72
Figure 3.25 Photos of Waste Collection Bins and Invoice from Okpho City Development Department	73
Figure 3.26 Carbon Dioxide Emission Reduction from (May – Nov, 2023).....	74
Figure 3.27 Emergency Firefighting System and Exit Way	76
Figure 3.28 Ventilation System	77
Figure 3.29 Canteen Areas and Hand Wash Basins.....	78
Figure 3.30 Factory’s Clinic	79
Figure 4.1 Geological Map of Bago Region.....	83
Figure 4.2 Soil Map of Bago Region	84
Figure 4.3 Flood Hazard of Myanmar	85
Figure 4.4 Cyclone Risk of Myanmar.....	86
Figure 4.5 Landslide Probability of Myanmar.....	87
Figure 4.6 Seismic Zone Map of Myanmar	88
Figure 4.7 Air Quality Measurement Equipment	90
Figure 4.8 Air Quality Measurement Location.....	91
Figure 4.9 Air Quality Measurement Activities	92
Figure 4.10 Wind Speed and Wind Direction Results.....	93
Figure 4.11 Digital Sound Level Meter	95
Figure 4.12 Workplace Noise Level Measurement Locations.....	96

Figure 4.13 Noise Levels Measurement Activities.....	97
Figure 4.14 Noise Levels Measurement Results.....	99
Figure 4.15 Vibration Measurement Location.....	99
Figure 4.16 Vibration Measurement Activities	100
Figure 4.17 Water Sampling Locations	101
Figure 4.18 Water Sampling Activities	102
Figure 4.19 Soil Sampling Location Map.....	104
Figure 4.20 Soil Sampling Activity	105
Figure 4.21 Light Intensity Measurement Locations.....	106
Figure 4.22 Light Intensity Measurement Activities	107
Figure 6.1 Boilers Stack and Smoke Capture System	138
Figure 6.2 Air Quality Monitoring Locations.....	139
Figure 6.3 Drain and Natural Sedimentation Pond.....	143
Figure 6.4 Water Sampling Locations	144
Figure 6.5 Soil Sampling Location	146
Figure 6.6 Solid Waste Collection Bins.....	148
Figure 6.7 Occupational Health and Safety Management Actions.....	151
Figure 6.8 Emergency Firefighting System and Exit Way	155
Figure 6.9 Five Types of Fire Extinguishers and their Usages.....	156
Figure 6.10 Usage Guidelines of Fire Extinguishers	157
Figure 6.11 Emergency Evacuation Routes of the Buildings	158
Figure 6.12 Environmental Management Team	162
Figure 6.13 Notification Letter from Fire Service Department	171
Figure 6.14 Firefighting Training Certificates.....	174
Figure 6.15 Fire Drill Activities.....	175
Figure 6.16 Planted Trees within the Factory Premise	176
Figure 6.17 KIMCL’s CSR Records.....	181
Figure 7.1 Recorded Photos taken from Meeting with Factory Employees	183
Figure 7.2 Recorded Photos taken from Public Disclosure Meeting.....	190


DOCUMENT CERTIFICATION AND COMMITMENT

This Environmental Management Plan (EMP) report has been prepared by Green Myanmar Environmental Services Co., Ltd. I, the undersigned certify that the particulars in this report are correct and true to the best of my knowledge.

Kojima Iryo Myanmar Co., Ltd. (KIMCL) commits to minimize the impact of its activities on the environment. Key points of its strategy to achieve this are:

1. Make compliance with environmental, legal and other requirements by minimum standard
2. Commit to improve the Environmental Management Plan in all direct and indirect activities
3. Continue to save energy and resources by “Reduce, Reuse, and Recycle”
4. Commit to manage and prevent the generation of wastewater, air emission and solid waste material from our activities by setting objective and target for continual implementation and review
5. Proper storage and handling of fuel and systematic practice and plan for emergency cases
6. To reduce environment impact due to production and service for customer
7. To train all employees and concerned person for environmental care awareness, and responsible for doing compliance with all standards and procedures.

Hence, we will appropriately proceed and disseminate the policy to all employees and public.



Signature :

Sein Toe

Name :

Managing Director

Designation :

Kojima Iryo Myanmar Co., Ltd.

31/01/2025
Date:


ACKNOWLEDGEMENT AND COMMITMENT

An Environmental Management Plan (EMP) which includes Environmental Monitoring Plan is a procedure that identifies, describes, evaluates and develops means of mitigating potential impacts of a proposed activity on the environment.

This EMP report was prepared using information from the following sources: review of selected literature, reports, and advisories; meetings with several interested parties; personal visitation with several persons; the experience of the EMP team; and other information solicited from baseline data and stakeholders. And we strongly commit that this report was prepared in compliance with Myanmar Environmental Laws and Regulations.

The EMP team is grateful to the Project Proponent – **Kojima Iryo Myanmar Co., Ltd.** - for commissioning us to conduct this Environmental Management Plan report in respect of the proposed project. We would like to further acknowledge with great appreciation all those neighbors who participated in the public consultation process for their cooperation throughout the exercise.

We further acknowledge the support, either direct or indirect, from the various parties who assisted the EMP team towards the successful completion of this report.



Signature :

U Kyaw Soe Win

Name :

Managing Director

Designation :

Green Myanmar Environmental Services Co., Ltd.



30/01/2025

Date:

ABBREVIATION

°C	Degree Celsius
CMP	Cutting, Making and Packaging
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CSR	Corporate Social Responsibility
dB (A)	Decibel (measured with A – weighted)
DG	Diesel Generator
dz	dozen
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMT	Environmental Management Team
GMES	Green Myanmar Environmental Services Company Limited
kg	kilogram
KIMCL	Kojima Iryo Myanmar Co., Ltd.
km	kilometer
kVA	kilo volt ampere
kWh	kilo Watt hour
L _{eq}	Equivalent sound level
mg/m ³	milligram per cubic meter
mg/Nm ³	milligram per normal cubic meter
µg/L	micro gram per liter
MIC	Myanmar Investment Commission
mm	millimeter
MONREC	Ministry of Natural Resource and Environmental Conservation
MPa	Mega Pascal
mph	miles per hour
m/s	meter per second
NDWQS	National Drinking Water Quality Standards
NEQEG	National Environmental Quality Emission Guidelines
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NTU	Nephelometric Turbidity Unit
O ₂	Oxygen
OHS	Occupational Health and Safety
OHSa	Occupational Health and Safety Administration

Pcs	Pieces
PM	Particulate Matter
PM _{2.5}	Particulate Matter 2.5 micrometer or less in diameter
PM ₁₀	Particulate Matter 10 micrometer or less in diameter
PPE	Personal Protective Equipment
ppm	parts per million
SO ₂	Sulfur Dioxide
TDS	Total Dissolved Solids
TSS	Total Suspended Solid
USA	United States of America
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization

EXECUTIVE SUMMARY

The proposed project (Kojima Iryo Myanmar Co., Ltd. (KIMCL)) is the manufacturing of garment on Cut-Make-Pack (CMP) basis and it is located at holding no. 89, plot no. 1. Aye Mya Tharyar village (KA), Aye Mya Tharyar village tract, Okpho Township, Bago Region. According to Letter No. Bago/ EIA (3581/2024) issued by the Environmental Conservation Department (ECD), Bago Region, KIMCL is required to prepare and submit an Environmental Management Plan (EMP) report. KIMCL has engaged Green Myanmar Environmental Services Co., Ltd., a third-party consultancy company, to prepare the EMP report. This report has been prepared to assess the environmental impacts of the company's garment manufacturing operations on a CMP basis, develop mitigation measures, and outline environmental management plan.

The objective of an EMP report is to outline a structured approach to mitigating, monitoring, and managing the environmental impacts of a project during its construction, and operational and decommissioning phases. It ensures compliance with environmental regulations and standards, safeguarding natural resources and communities while supporting sustainable development.

Environmental Management Plan (EMP) Study Team

Green Myanmar Environmental services Co., Ltd (GMES) – Organizational Consultant License Number of EIA-CO (B) 006/2024 undertook EMP report preparation for the operation of “Garment Factory” Project in accordance with the Article 63, 76, 77 of the Environmental Impact Assessment (EIA) Procedure (2015). The detailed information of the study team is shown in Table 1.3.

Policy, Legal and Institutional Framework

The summarized relevant laws and regulations for the proposed project and the Project Proponent's commitment are described in Table 1. The project proponent also commits to adhering to international conventions, treaties, and protocols, as outlined in Section 2.4.3.

Table 1 Summary of Myanmar Relevant Laws and Regulations to the Proposed Project

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
Environmental Laws and Regulations			
1.	National Environmental Policy	2019	The Project Proponent commits to comply with the policy.
2.	Environmental Conservation Law	March 30, 2012	The Project Proponent commits to comply with Section (3), Section (7), Section (10), Section (13), Section (14), and Section (15) of this law.
3.	Environmental Conservation Rules	June 5, 2014	The Project Proponent commits to comply with Rule 69 of the

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
			rules.
4.	Environmental Impact Assessment (EIA) Procedure	December 29, 2015	The Project Proponent commits to comply with Article (103), article (104), article (107), and article (108) of the EIA Procedure (2015).
5.	National Environmental Quality (Emission) Guidelines	December, 2015	The Project Proponent commits to comply with effluent and air emission guidelines for textile manufacturing, air emission for boiler and noise level (general guidelines).
6.	National Drinking Water Quality Standards	2019	The Project Proponent commits to comply with drinking water quality standards.
Other Relevant Laws and Regulations of the Project			
7.	Myanmar Public Health Law	January 12, 1972	The Project Proponent commits to comply with this Law.
8.	The Prevention and Control of Communicable Diseases Law	March 20, 1995 (Amendment on March 20, 2011)	The Project Proponent commits to comply with Section (3) of the Law.
9.	The Control of Smoking and Consumption of Tobacco Product	May 4, 2006	Project Proponent commits to comply with Section (7).
10.	Occupational Safety and Health Law	March 15, 2019	The Project Proponent commits to comply with Section (8), Section (9) and Section (12) of the Law.
11.	Myanmar Fire Brigade Law	March 17, 2015	The Project Proponent commits to comply with Section (25) of the Law.
12.	Prevention of Hazard from Chemical and Related Substances Law	August 26, 2013	The Project Proponent commits to comply with Section (15), Section (17) and Section (22) of the Law.
13.	Conservation of Biodiversity and Natural Protected Area Law	May 21, 2018	The Project Proponent commits to comply with Section (8) of the Law.
14.	The Law relating to Aquaculture	September 7, 1989	The Project Proponent commits to comply with Section (29) of the Law.

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
15.	Conservation of Water Resource and River Law	October 2, 2006 (Amended in 2017)	The Project Proponent commits to comply with Section (11), Section (19), Section (21) and Section (22) of the Law.
16.	Conservation of Water Resource and River Rules	January 27, 2013	The Project Proponent commits to comply with Sub-rule (c) and (d) of Rule (8) and Rule (9).
17.	Underground Water Act	June 21, 1930	The Project Proponent commits to comply with Section (3).
18.	Forest Law	September 20, 2018	The Project Proponent commits to comply with Section 12 (a) of the Law.
19.	The Land Acquisition Act	May 1, 1894 Amendment on October 21, 1954	The Project Proponent commits to comply with Section (6) of the Law.
20.	Myanmar National Land Use Policy	January, 2016	The Project Proponent commits to comply with the Policy.
21.	Farm Land Law	March 30, 2012	The Project Proponent commits to comply with Section (12) and Section (14) of the Law.
22.	Farm Land Rules	August 31, 2012	The Project Proponent commits to comply with Rule (24) and Rule (35).
23.	The Administration of Vacant, Fallow and Virgin Lands Law	May 30, 2012	The Project Proponent commits to comply with Section (4) and Section (7) of the Law.
24.	The Registration of Deeds Law	March 20, 2019	The Project Proponent commits to comply with Section (16) of the Law.
25.	Bago Region Municipal Development Law	December 27, 2016	The Project Proponent commits to comply with Section (3) and Section (66) of the Law.
26.	The Electricity Law	October 27, 2014	The Project Proponent commits to comply with Section (3) and Section (44) to (53) of the Law.
27.	The Ethnic Rights Protection Law	February 24, 2015	The Project Proponent commits to comply with Section (5) of the Law.
28.	The Ethnic Rights Protection Rules	August 23, 2019	The Project Proponent commits to comply with Rule 20 and Rule

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
			(21).
29.	The Rights of the Persons with Disabilities Law	June 5, 2015	The Project Proponent commits to comply with Section (36).
30.	The Child Rights Law	July 23, 2019	The Project Proponent commits to comply with Section (4) and Section (48).
31.	The Protection and Preservation of Cultural Heritage Region Law	February 28, 2019	The Project Proponent commits to comply with Section (22).
32.	The Protection and Preservation Antique Object Law	July 22, 2015	The Project Proponent commits to comply with Section (12) and Section (15) of the Law.
33.	The Protection and Preservation of Ancient Monument Law	August 26, 2015	The Project Proponent commits to comply with Section (12).
34.	The Labour Organization Law	October 11, 2011	The Project Proponent commits to comply with Section (18) and Section (20).
35.	The Employment and Skill Development Law	August 30, 2013	The Project Proponent commits to comply with Section (5), Section (14), and Section (30).
36.	The Minimum Wage Law	March 22, 2013	The Project Proponent commits to comply with Section (12) and Section (13) of the Law.
37.	The Payment of Wage Law	January 25, 2016	The Project Proponent commits to comply with Section (3), Section (4), Section (5), Section (7), Section (8), Section (9), Section (10), Section (11), Section (14) of the Law.
38.	The Workmen's Compensation Act	1924, Amendment on May 11, 2005	The Project Proponent commits to comply with Section (3), and Section (4) of the Act.
39.	The Settlement of Labour Dispute Law	March 28, 2012	The Project Proponent commits to comply with Section (3) of the Law.
40.	The Law Amending the Leave and Holiday Act 1951	July 18, 2014	The Project Proponent commits to comply with Section (2), Section (5), and Section (8) of the Law.
41.	Social Security Law	August 31, 2012	The Project Proponent commits to comply with Section (11) (a) (i).

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
42.	The Road Safety and Motor Vehicle Management Law	May 26, 2020	The Project Proponent commits to comply with Section (18) (a) and Section (81) (g).
43.	The Road Safety and Motor Vehicle Management Rules	January 19, 2022	The Project Proponent commits to comply with sub-rule (a) of rule 15, sub-rule (a) of rule 16, sub-rule (a) of rule 58, rule 86, sub-rule (a) of rule 87, rule 88 and rule 110.
44.	The Myanmar Insurance Law	July 23, 1993	The Project Proponent commits to comply with Section (15) and Section (16).
45.	The Myanmar Investment Law	October 26, 2016	The Project Proponent commits to comply with Section (50, d) and Section (56) of the Law.
46.	The Rules which Amend the Myanmar Investment Rules	September 20, 2018	The Project Proponent commits to comply with Rule 14 and Rule 206.
47.	The Petroleum and Petroleum Product Law	August 1, 2017	The Project Proponent commits to comply with Section (11), Section (15), Section (16) and Section (18).
48.	The Petroleum Act	1934, (Amendment on December 31, 2010)	The Project Proponent commits to comply with Section (7) and Section (8) of the Act.
49.	The Export and Import Law	September 17, 2012	The Project Proponent commits to comply with Section (5), Section (6) and Section (7).
50.	Natural Disaster Management Law	July 31, 2013	The Project Proponent commits to comply with Section (31).
51.	Climate Change Policy	2019	The Project Proponent commits to comply with the Policy
52.	The Commercial Tax Law	March 31, 1990 (Amendment in 2014)	The Project Proponent commits to comply with Section (11) and Section (12) (a) and Section (13) (a).
53.	The Union Taxation Law	September 2, 2020	The Project Proponent commits to comply with Section (16) and Section (19).
54.	The Myanmar Citizens	July 29, 2013	The Project Proponent commits to comply with Section (8) and

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
	Investment Law		Section (9).
55.	The Boiler Law	July 14, 2015	The Project Proponent commits to comply with Section (7), Section (19), and Section (20) of the Law.

Project Activities and Production Processes

The salient features of the project are shown in Table 2.

Table-2 Salient Features of the Project

Salient Features	Description/ Quantities																
Project Name	Manufacturing of Garment on CMP Basic																
Project Proponent	Kojima Iryo Myanmar Co., Ltd. (KIMCL)																
Company Registration No.	117325229																
Project Location	Holding no. 89, Plot no. 1. Aye Mya Tharyar village (KA), Aye Mya Tharyar village tract, Okpho Township, Bago Region																
Geographical Information	Latitude: 18° 04' 34.19" N Longitude: 95° 43' 44.70" E																
Type of Land	Village Land																
Total Land Area	4.92 Acres																
Land Acquisition	Lease Land																
Land Owner	U Sein Toe																
Type of Investment	Joint Venture (70% Kojima Iryo Co., Ltd. and 30% JMKS)																
Investment Amount	Kyat 1,951.552 million																
Contact Person Information	Name: U Sein Toe Position: Managing Director Ph No.: 09-5181932 Email: seintoe@kojima-group.net																
Established Time	27.03.2014																
Date of Test Run	27.10.2014																
Date of Commercial Run	3.11.2014																
Surrounding Environment	East: Ayar Street West: Paddy Field North: Paddy Field South: Paddy Field																
Nearest Residential Areas	Ayemyatharyar Village																
Raw Materials and Accessories	<table border="0"> <tr> <td>Sheel Fabric</td> <td>Poly Baggs</td> </tr> <tr> <td>Lining Fabric</td> <td>Carton Box</td> </tr> <tr> <td>Interlining</td> <td>Marking Pencils/Pen</td> </tr> <tr> <td>Padding</td> <td>Fusing Tape</td> </tr> <tr> <td>Thread</td> <td>Gom</td> </tr> <tr> <td>Button</td> <td>Buckle</td> </tr> <tr> <td>Zipper</td> <td>Spring Hook</td> </tr> <tr> <td>Hangers</td> <td>Leather</td> </tr> </table>	Sheel Fabric	Poly Baggs	Lining Fabric	Carton Box	Interlining	Marking Pencils/Pen	Padding	Fusing Tape	Thread	Gom	Button	Buckle	Zipper	Spring Hook	Hangers	Leather
Sheel Fabric	Poly Baggs																
Lining Fabric	Carton Box																
Interlining	Marking Pencils/Pen																
Padding	Fusing Tape																
Thread	Gom																
Button	Buckle																
Zipper	Spring Hook																
Hangers	Leather																

	Labels Ready Made Strings Tapered Tape	Embroidery Parts Rivet Snaps
Products	Blouson Shirts Pants Vest Jacket Skirt Coat Blouse	
Water Resources	Own Deep Well	
Total Water Demand	General Water Consumption: 15,000 per day Drinking Water Consumption: 1,000 – 1,400 liters per day	
Source of Electrical Power	<ol style="list-style-type: none"> 1. National Grid Line 2. Two Transformers 3. Two Generators 4. Solar Panels 	
Boiler	<ol style="list-style-type: none"> 1. 1.5-ton Locomotive Steam Boiler 2. 2-ton Horizontal Fire-Tube Boiler 	
Fuel Consumption	<ol style="list-style-type: none"> 1. Diesel 12.1575 gallons per day (316.1 gallons per month) after solar panels installation. 2. Rice husk – 2,600 viss per day 	
Employees	1,032 as of October, 2024	
Operation Time	Monday – Friday 07:30 AM – 4:00 PM (Overtime 4:00 PM to 5 PM) Saturday 07:30 AM – 11:30 AM (Overtime 12:00 PM – 5:00 PM)	

During construction phase, there are four main buildings in the proposed project: B1, B2, B3, and B4, all of which are single-story structures. Additionally, there are associated factory buildings, including a canteen, an office building, two staff dormitories, a generator room, a driver’s house, and a security house.

During operation phase, the processes of the operation of the factory are simple and the flow diagram of the production process is shown in Figure-1. The factory imports all raw materials from abroad and exports the finished products to foreign countries.

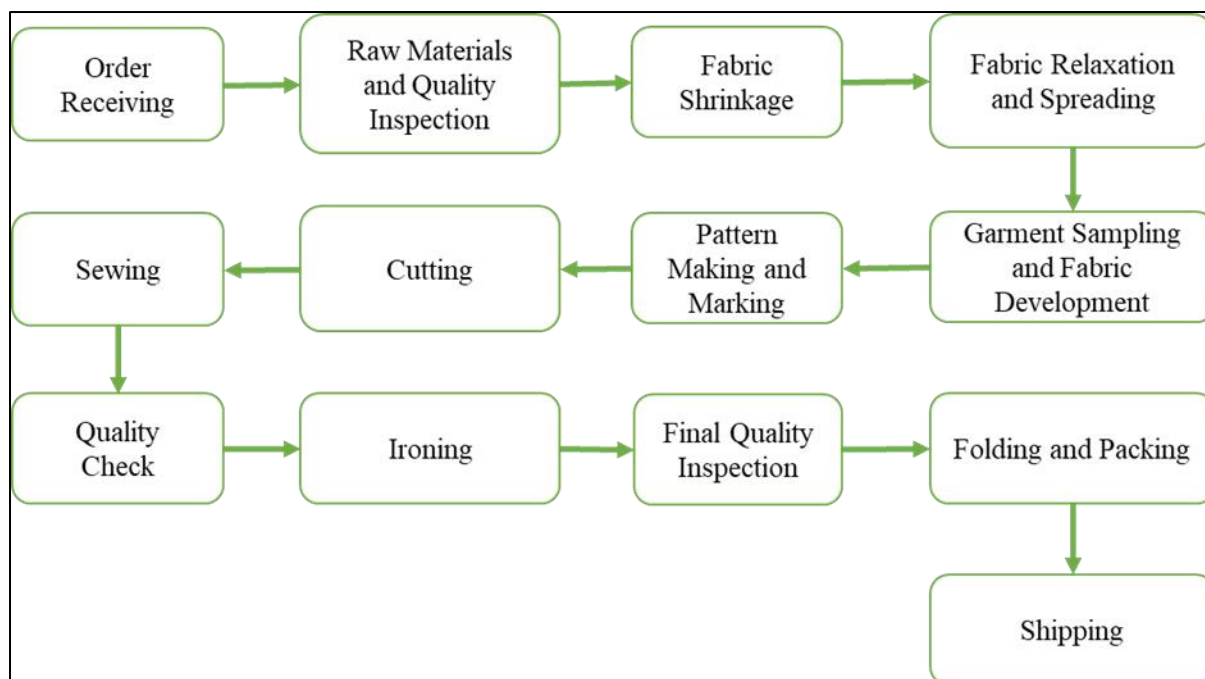


Figure-1 Flow Diagram of the Production Processes

Description of the Surrounding Environment

Environmental baseline data (primary data) such as air quality and noise levels are measured and water samples and soil samples are collected and measured at respective laboratories to analyze the qualities. Data such as socioeconomic conditions, the physical/biological environment, and weather information were collected from official Township Data and analyzed by the study team. The secondary baseline data for Okpho Township were obtained from the Township Data published by the General Administration Department in 2023. The baseline data are summarized as follows;

- 1. Topography:** The project is located within Okpho Township, approximately 7 km away. Okpho Township lies between north latitudes 27°65' and 28°15', and east longitudes 97°10' and 98°19'. Located in the Bago Region, Okpho Township has an average elevation of 77 feet above sea level. The highest area is the Bago Yoma in the east, while the lowest area is Matkadan Village in the west.
- 2. Hydrology:** Okpho Township has many rivers and creeks that flow from east to west. Gamone Creek and Myaung Creek are significant waterways in the township, both of which flow into the Myit Ma Kha River. The abundance of freshwater creeks in Okpho Township contributes significantly to the improvement of agriculture.
- 3. Climate:** The climate of the Okpho Township is a tropical hot and humid climate. The highest temperature is 39°C and lowest temperature is 12°C.
- 4. Geology:** Okpho Township is situated in the Bago Region, and its geological conditions are similar to those of the region as a whole. The Bago Region occupies the southernmost on-land segment of the Central Myanmar Belt. It is bordered:
 - ❖ on the north by Magway and Mandalay Regions,

- ❖ on the east by Kayin and Mon States,
 - ❖ on the south by Yangon and Ayeyawady Regions, and
 - ❖ on the west by Rakhine State.
5. **Soil Condition:** According to soils survey map, the soil type of project area is Meadow & Meadow Alluvial Soils.
 6. **Flood Hazard:** According to analytical brief of MIMU (2022), the proposed project location falls within an area categorized as having high flood hazard.
 7. **Cyclone Risk:** According to the cyclone risk of Myanmar, the proposed project is situated in a region identified as having low cyclone risk.
 8. **Landslide Probability:** According to the Myanmar landslide probability map, the project area is situated in low landslide probability region.
 9. **Seismic Intensity and Probability:** According to the Seismic Zone Map of Myanmar, the project location falls within the green-colored zone, which corresponds to a Moderate Zone (Zone II).
Seismic Zone Details:
 - ❖ Intensity: Moderate seismic activity.
 - ❖ Probable Range of Ground Acceleration: 0.1 – 0.15 g.
 - ❖ Equivalent Modified Mercalli Scale Class: VII.
 10. **Biological Characteristics:** There is a significant amount of natural vegetation in Okpho Township, including teak, pyingadou, padauk, inn, kanyin, htauk kyant, thadi, naw, yamanay, myoutchaw, myoutngo, binga, maouu, phankhar, deedu, latpan, thaung thayat, thit, saint, yone, thinwin, thitbagan, wabobamboo, myinbamboo, and kyathaungbamboo. In addition, there are a total of seven reserved forests. Many animals are found grazing in Okpho Township. These include elephants, tigers, leopards, wild boars, bears, rhinoceroses, wild buffalo, sambar, deer, mountain goats, wild goats, gaur, wild dogs, wild cats, and monkeys.
 11. **Air Quality:** Air quality measurements were taken at the project site using Haz-Scanner and Kane 945 Combustion Analyzer on December 4th ~ 5th, 2024. Ambient air quality at the project site was monitored at one point, workplace indoor air quality was monitored at one point and stack emissions from boiler and generator were also monitored. All parameters of ambient and workplace air quality, and stack emissions are within the acceptable limit.
 12. **Noise Level:** Two types of noise levels, ambient noise level and workplace noise level, were measured using Digital Sound Level Meter on December 4th ~ 5th, 2024. The ambient noise levels were compared with NEQEG (2015) while the workplace noise exposure levels were compared with noise exposure level of OSH-U.S Department of Labor. According to the measurement results, the noise levels of both ambient and workplace are within the guideline values.
 13. **Vibration Measurement:** The vibration level was also measured at the near entrance canteen area on December 4th ~ 5th, 2024. According to the vibration measurement results, the maximum peak velocity value is acceptable. Based on the results, the velocity does not have any impact on any type of building.

- 14. Water Quality:** The tube well water, wastewater, and boiler blowdown water samples of the factory were collected on December 6th, 2024 and analyzed at the GMES Laboratory and Ecological Laboratory. According to the findings, the tube well water quality is within the standard limit, except for colour, turbidity, and Total coliform count. Therefore, it is not suitable for drinking purposes unless it is purified. In addition, the wastewater quality meets the standard limits for most parameters; however, it exceeds the limits for TSS, ammonia, BOD₅, COD, and total coliform bacteria. Moreover, the boiler blowdown water qualities are within the standards, except TSS, Nickel, and total coliform bacteria.
- 15. Soil Quality:** Soil sample inside the factory premise was taken and tested at GMES laboratory. The findings indicate that the soil quality results fall within the acceptable guideline values.
- 16. Light Intensity:** Light intensity at four locations in the factory were measured by using Lux Meter on December 4th, 2024. According to the measurement results, only packaging area is acceptable to the guideline, and other measurement points are not reach the standard limit, more illumination is required this area.
- 17. Socio-Economic Components:** The project area is located in Okpho Township, which consists of 33,387 houses and 35,149 households, with 10 wards, 53 village tracts, and 254 villages, making it predominantly rural. Furthermore, the majority of the population resides in rural areas, with a slightly higher number of females compared to males in both urban and rural regions. In terms of ethnic composition, the Burma ethnic group is demographically dominant, while other ethnicities represent minor portions of the township's population. Additionally, most of the population identify as Buddhists. Concerning basic education, the township has a well-distributed network of educational institutions, including five basic education high schools, eight basic education high school branches, nine basic education middle schools, fourteen basic education middle school branches, one hundred and twenty-two primary schools, twenty post-primary schools, two kindergartens, and eight monastery education schools. Similarly, health care facilities are available, with four government hospitals, six public clinics, and forty rural health care centers serving the community. Regarding land use, a significant portion of the land is allocated for environmental conservation, with 130,001 acres designated as reserved and protected forest areas, 2,629 acres of wild forest, and 1,350 acres of virgin land. However, the project township does not have an industrial zone. Nevertheless, various industries operate in the area, including two garment factories (now one factory), ten rice mills, one sawmill, one oil mill, and ten domestic industries. Moreover, the township heavily relies on agriculture and trading for livelihoods. The workforce totals 106,495 individuals, with 102,209 employed and 4,401 (4.1%) unemployed, resulting in an unemployment rate of 4.1%. Lastly, the railway and highway provide convenient options for both local and external transportation, facilitating the shipment of the township's products, such as rice and various types of wood, to Yangon by train and car.

Potential Adverse Environmental Impact and Mitigation Measures

Construction Phase

KIMCL has already constructed its factory buildings; therefore, the associated impacts have already occurred. However, the impacts generated during the construction phase, along with the mitigation measures implemented, are described in Section 5.2 of Chapter 5.

Operation Phase

KIMCL manufactures garments on a CMP basis, a straightforward method with minimal environmental impact. However, during the operation phase, potential environmental impacts may be air emission from the use of boilers and generators, solid waste generation from operational processes, domestic wastewater generation from over one thousand workers, and traffic congestion caused by workers' daily commuting. To mitigate these impacts, the following measures will be implemented:

- ❖ **Boilers:** Emissions from the boilers will be minimized through regular maintenance and ensuring efficient combustion. Emission control device such as cyclone separator, and smokebox are installed in the boilers to reduce particulate matter emissions.
- ❖ **Generators:** Emissions from diesel powered generators will be minimized through regular maintenance. Additionally, solar panels have been installed to reduce both emissions and noise pollution. Proper fuel storage and handling procedures will be enforced to prevent spills and soil contamination.
- ❖ **Solid Waste Management:** Garment scraps, general solid waste and small amount of hazardous waste and e-waste, sharp waste will be generated and properly segregated. Garment scraps will be disposed as fuel in boiler operation while general domestic waste will be disposed of responsibly to prevent pollution. Additionally, small amount of hazardous waste such as used batteries, light bulbs and used oil, e-waste and sharp waste will be disposed in line with local laws and regulations.
- ❖ **Wastewater Generation:** Proper drainage system was installed in the factory compound and drains will be cleaned regularly in order to prevent clogging the drainage system. Domestic wastewater and boiler blowdown water are discharged through drains and natural sedimentation pond. Periodic water quality monitoring including wastewater and groundwater, will be conducted. If necessary, the effective wastewater treatment system will be installed.
- ❖ **Occupational Health and Safety:** Adequate personal protective equipment (PPE) will be provided for workers handling boilers and generators, and working in the cutting section. Regular safety training and emergency preparedness drills will be conducted to minimize health and safety risks.
- ❖ **Traffic Congestion:** Adequate on-site parking will be provided to prevent vehicles from blocking public roads. Deliveries and pickups will be scheduled during off-peak hours to minimize congestion. Traffic conditions will be regularly

monitored around the factory and make adjustments to traffic management strategies as needed.

Decommissioning Phase

During the decommissioning phase, potential environmental impacts may include air pollution from dust and emissions generated during dismantling activities, noise pollution from machinery use, solid waste generation from construction debris, and occupational health and safety risks for workers. To mitigate these impacts, dust suppression measures such as water spraying will be implemented, and equipment will be maintained to minimize emissions and noise. Solid waste will be properly segregated, with recyclable materials sent to authorized facilities and non-recyclable waste disposed of responsibly. Personal protective equipment (PPE) will be provided to workers, along with regular safety training and supervision to minimize accident risks. Additionally, site restoration activities, such as regrading and replanting, will be conducted to return the area to a stable condition after decommissioning.

Potential Positive Impact and Enhancement: The project supports local economic development by generating job opportunities throughout the construction, operation, and decommissioning phases. During construction, both skilled and unskilled laborers will be employed, stimulating the local economy and providing income for workers and their families. In the operation phase, long-term employment will be created for factory workers, administrative staff, and maintenance personnel, contributing to livelihood stability. The decommissioning phase will also offer temporary employment for dismantling activities and site restoration, supporting workers' financial security during the transition. To maximize community benefits, the project proponent will prioritize hiring local labor, provide skills development and capacity-building programs to enhance long-term employability, ensure fair wages and safe working conditions across all phases, and promote equal employment opportunities, including for women and marginalized groups.

Environmental Management Plan

The Project requires an Environmental Management Plan (EMP) to determine the significant impacts from implementation of the project and a range of mitigation measures. An EMP is also required as per the provision of the Environmental Laws and Regulations of Government of Myanmar. Implementing the EMP, which is composed of eight parts as follows:

- ❖ Air Pollution Management Plan
- ❖ Noise Pollution Management Plan
- ❖ Water Contamination Management Plan
- ❖ Soil Contamination Management Plan
- ❖ Solid Waste Management Plan
- ❖ Occupational Health and Safety Management Plan
- ❖ Fire Hazards Management Plan
- ❖ Emergency Response & Disaster Management Plan

The Environmental Management Plan and Environmental Monitoring Plan for

construction phase are excluded in this report because this project is already in the operating phase. The environmental management actions are described below, and detailed environmental management plans are described in Chapter 6.

Air Pollution Management Actions: During operation phase, air pollution management measures will include installing cyclone separators and smoke boxes to capture particulate matter from boiler emissions and ensuring adequate stack height for effective pollutant dispersion. Generators and vehicles will be regularly maintained to reduce emissions, while solar panels have been installed to further minimize generator emissions. Open burning of waste will be strictly prohibited, and water spraying will be used to control dust emissions. During the decommissioning phase, air pollution management measures will focus on minimizing dust and gaseous emissions. Water will be regularly sprayed on unpaved roads and construction sites to suppress dust generation, while soil and debris will be covered during storage and transport to prevent airborne particles. Additionally, vehicles and equipment will be regularly maintained to ensure efficient fuel combustion, reducing emissions of pollutants.

Noise Pollution Management Actions: During the operation phase, noise pollution management measures will include using soundproof generators, using solar panels to reduce generator noise, regularly maintaining vehicles and equipment to minimize noise from faulty components, and providing earplugs for workers when necessary. Numerous trees have also been planted around the factory premises to create a natural noise buffer, absorbing and dissipating sound waves. During the decommissioning phase, noise control actions will involve restricting noisy activities to daytime hours, maintaining vehicles and machinery to prevent excess noise, notifying nearby communities about upcoming noisy operations, and conducting regular noise level monitoring to ensure compliance with regulatory standards.

Water Contamination Management Actions: During the operation phase, water contamination management measures will include maintaining a proper drainage system with regular cleaning to prevent clogging, discharging domestic wastewater and boiler blowdown water through drains and a natural sedimentation pond to the external drainage system, disposing of used oil through authorized hazardous waste handlers, and conducting periodic water quality monitoring of boiler blowdown water, wastewater, and groundwater. During the decommissioning phase, fuels will be stored in designated areas with regular inspections, portable sanitation systems will be provided and maintained for workers, and a proper drainage system will be constructed and cleaned regularly.

Soil Contamination Management Actions: To protect soil quality, the factory will establish a solid waste management system that includes segregation, recycling, and disposal of waste in line with local laws and regulations. Regular maintenance of vehicles and machinery will be conducted to prevent oil leaks. Periodic soil quality monitoring will be conducted to detect and address any contamination promptly. Additionally, hazardous waste such as fluorescent light bulb, used batteries and spent oil will be stored separately with other waste and disposed in line with local laws and regulations.

Solid Waste Management Actions: During the operation phase, solid waste management measures will include the separate collection of non-hazardous waste such as food residues, plastics, and fabric cutting scraps using designated bins. Fabric cutting scraps will be reused

as fuel for boilers, while other non-hazardous waste will be temporarily stored at a designated site, with boiler ash disposed of in an on-site landfill. Hazardous waste such as fluorescent bulbs, batteries, and used oil will be securely stored and disposed of through authorized handlers, while sharp waste like needles and knives will be collected in containers for safe disposal. In addition, E-waste will be managed following legal requirements, and regular inspections of temporary waste storage areas will be conducted to prevent leachate leakage and maintain capacity. During the decommissioning phase, fuels will be stored in designated areas with regular checks to prevent leakage, and a solid waste management system, including hazardous waste handling, will be implemented in accordance with local regulations.

Occupational Health and Safety Management Actions: During the operation phase, occupational health and safety measures will include providing a first aid kit and an on-site clinic with a nurse for immediate medical assistance, installing proper ventilation systems to reduce heat and dust, supplying PPE such as gloves, masks, and earplugs based on work requirements, and displaying danger signboards at key locations to warn workers and visitors of potential hazards, with incidents reported monthly to the Director. During the decommissioning phase, a safety policy and plan will be established to protect workers, with PPE provided based on work conditions and danger signs placed at hazardous areas like slippery floors and excavation zones. First aid kits will be available on-site, safety training will be conducted, and supervisors will be assigned to enforce protocols. Safety compliance will be encouraged through incentive programs, while penalties will be imposed for non-compliance.

Fire Hazards Management Actions: The factory has systematically planned, designed, and constructed fixed firefighting and emergency fire management systems, including fire extinguishers, hose reels, fire alarms, and 15,000 gallons of stored water for firefighting. Emergency exit signs are clearly displayed, and an emergency fire management organization with defined procedures has been established to ensure personal safety during emergencies. Adequate firefighting equipment will be readily available in all factory sections, inspected regularly by a competent person, and recorded in a logbook. All personnel will receive instructions on using firefighting equipment, with written fire response guidelines prominently displayed on-site. "NO SMOKING" signs will be strategically placed and highlighted, and any fire incidents will be reported to the nearest fire station. The emergency evacuation routes are clearly displayed throughout the factory.

Emergency Response and Disaster Management Actions: Flood risks can be mitigated by maintaining proper drainage systems, regularly clearing drains, and monitoring weather forecasts and river levels to issue timely warnings, alongside developing response plans with evacuation procedures and emergency supplies such as first aid kits, drinking water, and food. Cyclone preparedness involves maintaining communication systems for early warnings, coordinating with disaster management authorities, and training employees in response protocols before, during, and after cyclones. Landslide risks can be reduced by implementing soil erosion control measures, such as tree planting, and training employees in landslide response protocols. For earthquakes, preparedness includes providing "Do's and Don'ts" safety instructions. Additionally, emergency contact information of nearby hospitals, police

stations, and fire services will be displayed prominently in public areas to enhance readiness for all hazards.

Environmental Monitoring Plan

According to the section 108 of EIA Procedure, the project proponent will submit the Monitoring Report prescribed in the schedule of the Environmental Management Plan to the Ministry every (6) month or as may be prescribed by the Ministry. The environmental monitoring plans during construction and operation phases are shown in Table-3.

Table-3 Environmental Monitoring Plan

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
Operation Phase					
1.	Air Quality	Ambient air quality (SO ₂ , NO ₂ , PM _{2.5} , PM ₁₀ and O ₃)	Biannually	EMT will contact a third-party organization	Factory Premise (18°4'33.53"N and 95°43'29.17"E)
		Stack combustion gas (O ₂ , CO, CO ₂ , NO and SO ₂)	Biannually	EMT will contact a third-party organization	Boiler Stack (18° 4' 34.15"N and 95°43'26.99"E) Generator Stack (18° 4' 32.71"N and 95°43'27.56"E)
		Workplace air quality (SO ₂ , NO ₂ , PM _{2.5} , PM ₁₀ and O ₃)	Biannually	EMT will contact a third-party organization	Sewing Area (18° 4'35.29"N and 95°43'27.61"E)
2.	Noise Level	Ambient noise level	Biannually	EMT will contact a third-party organization	Factory Premise (18°4'33.53"N and 95°43'29.17"E)
		Workplace noise level	Biannually	EMT will contact a third-party organization	Workplace (Sewing Area, QC Area, Between Hand Sewing Line and Cutting Area, Cutting Area)
3.	Water Quality	Tube Well Water (pH, Colour, Turbidity, TDS, Hardness,	Biannually	EMT will contact a third-party organization	Tube well water (18° 4'32.81"N 95°43'27.23"E)

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
		Chloride, Nitrite, Arsenic, Iron, Lead, Manganese, Sulfate and Total coliform count)			
		Wastewater Outlet (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	Biannually	EMT will contact a third-party organization	Wastewater Outlet (18° 4'37.96"N 95°43'26.76"E)
		Boiler blowdown water (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	Biannually	EMT will contact a third-party organization	Boiler blowdown water (18° 4'34.45"N, 95°43'26.33"E)

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
4.	Soil Quality	Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH, Total Alkalinity and Total Iron	Biannually	EMT will contact a third-party organization	18° 4' 33" N and 95° 43' 26.14" E
5.	Solid Waste Management	Amount and Types of waste including non-hazardous waste and hazardous waste	Monthly	Environmental Management Team	Workplace and Factory Premise
6.	Occupational Health and Safety	Incidents/ accidents Record Keeping, PPE and First Aid Kit	Monthly	Occupational Health and Safety Team	Workplace and Factory Premise
7.	Fire Hazards	Firefighting equipment condition	Monthly	Firefighting Team	Workplace and Factory Premise
8.	Emergency Response and Disaster Management	Emergency response equipment	Monthly	Emergency Response Team	Workplace and Factory Premise
Decommissioning Phase					
1.	Air Quality	Ambient air quality (NO ₂ , PM ₁₀ , PM _{2.5} , SO ₂ , NH ₃ , CO ₂ , CO, Temperature, VOC, O ₃ , O ₂ , wind speed and wind direction	Once	Contractor for Demolition	A Suitable Point on Site
2.	Water Quality	Ground water quality	Once	Contractor for Demolition	Water Tank for Site Use

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
		(Aluminium, arsenic, chloride, cyanide, manganese, pH, sulphate, total alkalinity as CaCO ₃ , TDS, total hardness as CaCO ₃ , total iron, turbidity)			
		Wastewater quality (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	Once	Contractor for Demolition	Drain in front of the Site
3.	Noise Level	Noise level	Once	Contractor for Demolition	A Suitable Point on Site
4.	Soil Quality	Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH, Total Alkalinity and Total Iron	Once	Contractor for Demolition	A Suitable Point on Site
5.	Solid Waste	Amount and	Monthly	Contractor for	Temporary

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
	Generation	Types of waste including non-hazardous waste and hazardous waste		Demolition	Solid Waste Site
6.	Occupational Health and Safety	Incidents/ accidents Record Keeping, PPE and First Aid Kit	Monthly	Contractor for Demolition	Demolition Site

Overall Budget for Implementation of the EMP

Table-4 outlines the estimated annual expenditures for implementing the Environmental Management Plan during the operation and decommissioning phases. The Project Proponent commits to increase the budget if the allocated funds are deemed insufficient.

Table-4 Annual Estimated Cost of Basic Environmental Management and Monitoring

No.	Description	Locations	No. of locations	Recommended monitoring frequency	Rate (MMK/ measurement)	Total Annual Amount (MMK)
Operation Phase						
1.	Air Quality Monitoring	Ambient air quality	1	2 time /year	900,000	1,800,000
		Stack combustion gas (boiler and generator)	2	2 times /year	400,000	1,600,000
		Workplace air quality	1	2 times /year	900,000	1,800,000
	Air quality management	Factory Premise	-	Yearly	-	500,000
2.	Water Quality Monitoring	Tube Well Water	1	2 times /year	250,000	500,000
		Discharged wastewater	1	2 times /year	300,000	600,000
		Boiler Blowdown	1	2 times /year	300,000	600,000

No.	Description	Locations	No. of locations	Recommended monitoring frequency	Rate (MMK/ measurement)	Total Annual Amount (MMK)
		Water				
	Water Quality Management	Factory Premise	-	Yearly	-	300,000
3.	Noise Level Monitoring	Work place	4	2 times /year	50,000	400,000
		Ambient noise	1	2 time /year	100,000	200,000
	Noise Level Management	Factory Premise	-	Yearly	-	300,000
4.	Soil Quality Monitoring	Near temporary solid waste disposal	1	2 times /year	420,000	840,000
5.	Miscellaneous					
	Solid waste disposal				Lump sum per year	420,000
	Occupational Health and Safety				Lump sum per year	620,000
	Firefighting Equipment				Lump sum per year	800,000
	Emergency Response and Disaster Management				Lump sum per year	800,000
Sub Total						12,080,000
Decommissioning Phase						
1.	Ambient Air Quality Monitoring		1	Once	900,000	900,000
	Air quality management		Included in demolition contract			
2.	Water Quality Monitoring		1	Once	300,000	300,000
	Water quality management		Included in demolition contract			
3.	Noise Level Monitoring		1	Once	50,000	50,000
	Noise Level Management		Included in demolition contract			
4.	Soil Quality Monitoring		1	Once	420,000	420,000
	Soil quality management		Included in demolition contract			
5.	Miscellaneous					
	Dispose the solid waste by monitoring				Lump sum	700,000
	Sign board on safety				Lump sum	300,000
	Emergency safety measures				Lump sum	500,000
	Fire safety measures				Lump sum	500,000
Sub Total						3,670,000

Greenbelt Development Program: Within the factory premise, a total of 159 trees are planted as part of greenbelt development program.

Corporate Social Responsibilities (CSR): The Project Proponent has a plan to contribute 2% of net profit for the corporate social responsibility fund.

Public Consultation and Information Disclosure

A discussion meeting survey with factory employees and a public consultation meeting with relevant stakeholders were held separately in the meeting hall of the proposed project's office building on December 5, 2024, in the morning and afternoon, respectively.

Summary of Meeting with the Factory Employees

The discussion meeting survey with 53 factory employees were conducted to address workers' health and safety concerns, including the drinking water system, sanitation system, noise levels, cleanliness inside and around the factory, dust reduction, light intensity, ventilation system, and social working conditions. All 53 factory employees confirmed the provision of adequate PPE, purified drinking water, sufficient and clean handwashing basins, and a good sanitation system with enough toilets. Most employees reported no issues with workplace noise, odor, smoke, dust, or lighting intensity. However, seven noted slight noise, odor, smoke, and dust presence. Regarding ventilation, two employees rated it as good, while the rest described it as moderately good. All participants highlighted positive social relations among employees.

Responses from Project Proponent

The project proponent has implemented several measures to ensure worker health and safety. Cutting-resistant metal gloves and face masks are provided, and 50-70 bottles of 20-liter purified drinking water are purchased daily from the local market for employee use. Five janitors clean the toilets daily, and twelve handwashing basins with sufficient water and soap are available. To address noise near the generator room, the original soundproof system will be reactivated during generator operation. Additional exhaust fans will be installed, and the ventilation system will be improved. Adequate 4ft-LED lights are provided across all departments and promptly repaired or replaced if damaged. To manage dust intrusion during strong winds, openable and closable windows will be installed. Regular meetings with department representatives are held to discuss and resolve challenges, supported by an open communication system that allows workers to raise concerns during regular hours for timely resolution.

Summary of Public Consultation

There are two ways of discussion, one way is participants can involve themselves in public consultation meeting and another way is by writing suggestions on distributed suggestion form. During public consultation meeting, assistant director of Tharyarwady District ECD comment and suggest regarding environmental management plan and detailed information are described in Table 8.3. Suggestions from writing letters are as follows;

- ❖ **Compliance:** To strictly comply with environmental laws, regulations, and guidelines.
- ❖ **Job Opportunities:** To provide more job opportunities for local residents, including those near the factory premises, and support employment in Ayemyatharyar.
- ❖ **Community Contributions:** It is good to have this factory for social development in

our local areas and to contribute to social, health, and educational sectors through donations and community support.

- ❖ **Traffic Management:** To take preventive measures to manage and mitigate vehicle accidents effectively.
- ❖ **Appreciation:** Positive feedback was given for providing over 1,000 jobs, local employment efforts, and the quality of the EMP presentation.

Conclusion

The EMP for KIMCL emphasizes the essential environmental management measures required to establish an environmentally friendly workplace. This EMP has been prepared in accordance with the requirements of the proponent and as mandated by MONREC for the garment manufacturing industry. The key environmental issues identified in the EMP allow factory management to take appropriate mitigation steps to address adverse environmental impacts. Necessary measures to mitigate impacts on various environmental parameters, including air quality, water quality, soil quality, solid waste and noise levels, have been outlined in this plan. KIMCL has already implemented all necessary measures to mitigate adverse environmental, health, and safety impacts, ensuring compliance with the National Environmental Quality Standards. Additionally, the factory contributes positively to employment during the operational phase, indirectly supporting national economic growth through foreign investment. This report provides an outline of the EMP, detailing measures to mitigate or enhance impacts arising during the factory's operational phase.

အစီရင်ခံစာအကျဉ်းချုပ်

အဆိုပြုထားသောစီမံကိန်း (ကိုဂျီမအိုင်ရီမြန်မာကုမ္ပဏီလီမိတက် (KIMCL) သည် CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်သည့်လုပ်ငန်းဖြစ်ပြီး၊ ၎င်းသည် ပဲခူးတိုင်းဒေသကြီး၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာ ကျေးရွာအုပ်စု၊ အေးမြသာယာကျေးရွာ(က)၊ ကွင်းအမှတ် (၁)၊ ဦးပိုင်အမှတ် (၈၉) တွင် တည်ရှိပါသည်။ ပဲခူးတိုင်းဒေသကြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ထုတ်ပြန်ထားသော စာအမှတ် ပဲခူး/အီးအိုင်အေ (၃၅၈၁/၂၀၂၄) အရ KIMCL သည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာကို ရေးသားပြုစု တင်ပြရန် လိုအပ်ပါသည်။ ထိုအစီရင်ခံစာပြင်ဆင်ရေးဆွဲရန်အတွက် KIMCL သည် တတိယအဖွဲ့အစည်းဖြစ်သော စီမံလမ်းမြန်မာပတ်ဝန်းကျင်ဆိုင်ရာ ဝန်ဆောင်မှုလုပ်ငန်းကုမ္ပဏီလီမိတက် (GMES) ကို ချိတ်ဆက်ခဲ့ပါသည်။ ဤအစီရင်ခံစာသည် KIMCL ၏ CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်သည့် လုပ်ငန်းဆိုင်ရာ ပတ်ဝန်းကျင် သက်ရောက်မှုများကို ဆန်းစစ်ရန်၊ သက်ရောက်မှု လျော့ပါးစေရေးနည်းလမ်းများ ဆောင်ရွက်ရန်နှင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်များ ချမှတ်ဖော်ပြရန် ရေးဆွဲထားခြင်းဖြစ်ပါသည်။

EMP အစီရင်ခံစာရေးဆွဲခြင်း၏ ရည်ရွယ်ချက်မှာ စီမံကိန်း၏ တည်ဆောက်ခြင်း၊ လုပ်ငန်း လည်ပတ်ခြင်းနှင့် ပိတ်သိမ်းခြင်း အဆင့်များတွင် စီမံကိန်းကြောင့် ဖြစ်ပေါ်နိုင်သော ပတ်ဝန်းကျင် ထိခိုက်မှု များကို လျော့ချနိုင်ရန်အတွက် စောင့်ကြပ်ကြည့်ရှုခြင်းနှင့် စီမံခန့်ခွဲခြင်းဆိုင်ရာ စနစ်ကျသော နည်းလမ်း တစ်ရပ်ကို ဖော်ပြရန်ဖြစ်ပါသည်။ ထိုသို့ရေးဆွဲခြင်းဖြင့် ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေများ၊ စံချိန်စံညွှန်းများနှင့် ကိုက်ညီမှုရှိစေရန်၊ သယံဇာတများနှင့် ပြည်သူလူထုကို ထိန်းသိမ်းကာကွယ်ရန်နှင့် တာဝန်ယူမှုရှိသော ရေရှည်တည်တံ့သော ဖွံ့ဖြိုးတိုးတက်မှုများကို ထောက်ပံ့ရန် ရည်ရွယ်ပါသည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် လေ့လာရေးအဖွဲ့

တတိယအကြံပေး အဖွဲ့အစည်းလိုင်စင်နံပါတ် EIA-CO (B)/006/2024 ဖြင့် လုပ်ငန်းလိုင်စင် ရရှိထားသော စီမံလမ်းမြန်မာပတ်ဝန်းကျင်ဆိုင်ရာ ဝန်ဆောင်မှုလုပ်ငန်းကုမ္ပဏီလီမိတက် (GMES)သည် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) ၏ ပုဒ်မ ၆၃၊ ၇၆၊ ၇၇ အရ "အထည်ချုပ်စက်ရုံ" စီမံကိန်း လည်ပတ်မှုအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာ (EMP) ရေးသားပြုစု ခြင်းကို တာဝန်ယူဆောင်ရွက်ပါသည်။ လေ့လာရေးအဖွဲ့၏ အသေးစိတ်အချက်အလက်များကို ဇယား ၁.၃ တွင် ဖော်ပြထားပါသည်။

မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာ မူဘောင်

အဆိုပြုစီမံကိန်းနှင့် သက်ဆိုင်သည့် ဥပဒေများ၊ စည်းမျဉ်းစည်းကမ်းများ နှင့် စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်များကို ဇယား ၁ တွင် အကျဉ်းချုံးဖော်ပြထားပါသည်။ ထို့အပြင် စီမံကိန်းအဆိုပြုသူသည် အပိုဒ် ၂.၄.၃ တွင် ဖော်ပြထားသော အပြည်ပြည်ဆိုင်ရာ သဘောတူစာချုပ်များနှင့် ပဋိညာဉ်များကို လိုက်နာ ဆောင်ရွက်မည်ဟု ကတိပြုပါသည်။

ဇယား ၁ မြန်မာနိုင်ငံ၏ အဆိုပြုလုပ်ငန်းစီမံကိန်းနှင့် ပတ်သက်သည့် သက်ဆိုင်ရာ ဥပဒေများနှင့် စည်းမျဉ်းများအကျဉ်းချုပ်

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေများနှင့် စည်းမျဉ်းများ			
၁။	အမျိုးသားပတ်ဝန်းကျင်ရေးရာမူဝါဒ	၂၀၁၉	စီမံကိန်းအဆိုပြုသူသည် မူဝါဒနှင့်အညီ လိုက်နာဆောင်ရွက်မည်ကို ကတိပြုပါသည်။
၂။	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ	၂၀၁၂ မတ်လ ၃၀ရက်နေ့ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် ဤဥပဒေ၏ ပုဒ်မ (၃)၊ ပုဒ်မ (၇)၊ ပုဒ်မ (၁၀)၊ ပုဒ်မ (၁၃)၊ ပုဒ်မ (၁၄) နှင့် ပုဒ်မ (၁၅) တို့အတိုင်း လိုက်နာဆောင်ရွက်မည်ကို ကတိပြုပါသည်။
၃။	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနည်းဥပဒေများ	၂၀၁၄ ဇွန်လ ၅ ရက်နေ့ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် ဤနည်းဥပဒေများ၏ နည်းဥပဒေ ၆၉ နှင့်အညီ လိုက်နာဆောင်ရွက်မည်ကို ကတိပြုပါသည်။
၄။	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း	၂၀၁၅ ဒီဇင်ဘာလ ၂၉ ရက်နေ့ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) ၏ အပိုဒ် (၁၀၃) ၊ အပိုဒ် (၁၀၄)၊ အပိုဒ် (၁၀၇) နှင့် အပိုဒ် (၁၀၈) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၅။	အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ	၂၀၁၅ ဒီဇင်ဘာလ ၂၉ ရက်နေ့ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် စွန့်ပစ်ရေ နှင့် ထုတ်လွှတ်အမိုးအငွေ့ လမ်းညွှန်ချက်များ၊ ဘွိုင်လာ ထုတ်လွှတ်အမိုးအငွေ့နှင့် ဆူညံသံအဆင့် (အထွေထွေ

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
			လမ်းညွှန်ချက်များ) နှင့် အညီ လိုက်နာမည်ဟု ကတိပြုပါသည်။
၆။	သောက်သုံးရေအရည်အသွေးဆိုင်ရာ မြန်မာစံချိန်စံညွှန်း	၂၀၁၉	စီမံကိန်းအဆိုပြုသူသည် သောက်သုံးရေ အရည်အသွေးဆိုင်ရာ မြန်မာစံချိန်စံညွှန်းအား လိုက်နာမည်ဟု ကတိပြုပါသည်။
စီမံကိန်းနှင့် သက်ဆိုင်သော အခြား ဥပဒေများနှင့် စည်းမျဉ်းများ			
၇။	မြန်မာနိုင်ငံပြည်သူ့ကျန်းမာရေးဆိုင်ရာ ဥပဒေ	၁၉၇၂ ခုနှစ် ဇန်နဝါရီလ ၁၂ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဤဥပဒေအား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၈။	ကူးစက်ရောဂါများ ကာကွယ်ထိန်းချုပ်ရေး ဥပဒေ	၁၉၉၅ ခုနှစ် မတ်လ ၂၀ ရက်နေ့ (၂၀၁၁ ခုနှစ် မတ်လ ၂၀ ရက်နေ့တွင် ပြင်ဆင်)	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၉။	ဆေးလိပ်နှင့်ဆေးရွက်ကြီးထွက် ပစ္စည်းသောက်သုံးမှု ထိန်းချုပ်ရေးဥပဒေ	၂၀၀၆ ခုနှစ် မေလ ၄ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၇) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၀။	လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ ဥပဒေ	၂၀၁၉ ခုနှစ် မတ်လ ၁၅ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၇) ၊ ပုဒ်မ (၈) နှင့် ပုဒ်မ (၉) အား လိုက်နာမည်ဟု ကတိပြုပါ သည်။
၁၁။	မြန်မာနိုင်ငံမီးသတ်တပ်ဖွဲ့ဥပဒေ	၂၀၁၅ ခုနှစ် မတ်လ ၁၇ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၂၅) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၂။	ဓာတုနှင့် ဆက်စပ်ပစ္စည်းများ အန္တရာယ်မှ တားဆီးကာကွယ်ရေး ဥပဒေ	၂၀၁၃ ဩဂုတ်လ ၂၆ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၅) ၊ ပုဒ်မ (၁၇) နှင့် ပုဒ်မ (၂၂) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၃။	ဇီဝမျိုးစုံမျိုးကွဲများနှင့်	၂၀၁၈ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
	သဘာဝထိန်းသိမ်းရေး နယ်မြေများ ကာကွယ်စောင့်ရှောက်ခြင်း ဆိုင်ရာဥပဒေ	မေလ ၂၁ ရက်နေ့	ပုဒ်မ (၈) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၄။	ငါးမွေးမြူခြင်းဆိုင်ရာဥပဒေ	၁၉၈၉ ခုနှစ် စက်တင်ဘာလ ၇ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၂၉) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၅။	ရေအရင်းအမြစ်နှင့် ထိန်းသိမ်းရေးဥပဒေ မြစ်ချောင်းများ	၂၀၀၆ ခုနှစ် အောက်တိုဘာလ ၂ ရက်နေ့ (၂၀၁၇ ခုနှစ်တွင် ပြင်ဆင်)	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၁) ၊ ပုဒ်မ (၁၉) ၊ ပုဒ်မ (၂၁) နှင့် ပုဒ်မ (၂၂) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၆။	ရေအရင်းအမြစ်နှင့် မြစ်ချောင်းထိန်းသိမ်းရေး နည်းဥပဒေများ	၂၀၁၃ ခုနှစ် ဇန်နဝါရီလ ၂၇ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် နည်းဥပဒေ (၈) ၊ နည်းဥပဒေခွဲ (ဂ) နှင့် (ဃ)၊ နည်းဥပဒေ (၉) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၇။	မြေအောက်ရေဥပဒေ	၁၉၃၀ ခုနှစ် ဇွန်လ ၂၁ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၈။	သစ်တောဥပဒေ	၂၀၁၈ ခုနှစ် စက်တင်ဘာလ ၂၀ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၂) (က) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၁၉။	မြေသိမ်း အက်ဥပဒေ	၁၈၉၄ ခုနှစ် မေလ ၁ရက်နေ့ (၁၉၅၄ ခုနှစ် အောက်တိုဘာလ ၂၁ ရက်နေ့ တွင် ပြင်ဆင်)	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၆) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၀။	မြန်မာနိုင်ငံ အမျိုးသား မြေအသုံးချမှု မူဝါဒ	၂၀၁၆ ခုနှစ် ဇန်နဝါရီလ	စီမံကိန်းအဆိုပြုသူသည် မူဝါဒ အားလိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၁။	လယ်ယာမြေဥပဒေ	၂၀၁၂ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
		မတ်လ ၃၀ ရက်နေ့	ပုဒ်မ (၁၂) နှင့် ပုဒ်မ (၁၄) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၂။	လယ်ယာမြေနည်းဥပဒေများ	၂၀၁၂ ခုနှစ် ဩဂုတ်လ ၃၁ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် နည်းဥပဒေ (၂၄) နှင့် နည်းဥပဒေ (၃၅) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၃။	မြေလွတ်၊ မြေလပ်နှင့်မြေရိုင်းများ စီမံခန့်ခွဲရေး ဥပဒေ	၂၀၁၂ ခုနှစ် မေလ ၃၀ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၄) နှင့် ပုဒ်မ (၇) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၄။	စာချုပ်စာတမ်းများမှတ်ပုံတင်ဥပဒေ	၂၀၁၉ ခုနှစ် မတ်လ ၂၀ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၆) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၅။	ပဲခူးတိုင်းဒေသကြီးစည်ပင်သာယာရေး ဥပဒေ	၂၀၁၆ ခုနှစ် ဒီဇင်ဘာလ ၂၇ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃) နှင့် ပုဒ်မ (၆၆) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၆။	လျှပ်စစ်ဥပဒေ	၂၀၁၄ ခုနှစ် အောက်တိုဘာလ ၂၇ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃) ၊ ပုဒ်မ (၄၄) နှင့် ပုဒ်မ(၅၃) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၇။	တိုင်းရင်းသားလူမျိုးများ၏ အခွင့်အရေး ကာကွယ်စောင့်ရှောက်သည့် ဥပဒေ	၂၀၁၅ ခုနှစ် ဖေဖော်ဝါရီလ ၂၄ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၅) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၈။	တိုင်းရင်းသားလူမျိုးများ၏ အခွင့်အရေး ကာကွယ်စောင့်ရှောက်သည့် နည်းဥပဒေများ	၂၀၁၉ ခုနှစ် ဩဂုတ်လ ၂၃ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် နည်းဥပဒေ (၂၀) နှင့် နည်းဥပဒေ (၂၁) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၂၉။	မသန်စွမ်းသူများ၏ အခွင့်အရေးဥပဒေ	၂၀၁၅ ခုနှစ် ဇွန်လ ၅ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃၆) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၀။	ကလေးသူငယ် အခွင့်အရေးများဆိုင်ရာ ဥပဒေ	၂၀၁၉ ခုနှစ် ဇူလိုင်လ ၂၃	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၄) နှင့် ပုဒ်မ (၄၈) တို့အား

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
		ရက်နေ့	လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၁။	ယဉ်ကျေးမှုအမွေအနှစ်ဒေသများ ကာကွယ်ထိန်းသိမ်းရေးဥပဒေ	၂၀၁၉ ခုနှစ် ဖေဖော်ဝါရီလ ၂၈ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၂၂) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၂။	ရှေးဟောင်းဝတ္ထုပစ္စည်း စောင့်ရှောက်ရေး ဥပဒေ ကာကွယ်	၂၀၁၅ ခုနှစ် ဇူလိုင်လ ၂၂ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၂) နှင့် ပုဒ်မ (၁၅) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၃။	ရှေးဟောင်းအဆောက်အအုံများ ကာကွယ်ထိန်းသိမ်းရေးဥပဒေ	၂၀၁၅ ခုနှစ် သြဂုတ်လ ၂၆ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၂) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၄။	အလုပ်သမားအဖွဲ့အစည်းဥပဒေ	၂၀၁၁ ခုနှစ် အောက်တိုဘာလ ၁၁ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၈) နှင့် ပုဒ်မ (၂၀) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၅။	အလုပ်အကိုင်နှင့်ကျွမ်းကျင်မှု ဖွံ့ဖြိုးတိုးတက်ရေး ဥပဒေ	၂၀၁၃ ခုနှစ် သြဂုတ်လ ၃၀ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၅) ၊ ပုဒ်မ (၁၄) နှင့် ပုဒ်မ (၃၀) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၆။	အနည်းဆုံးအခကြေးငွေဥပဒေ	၂၀၁၃ ခုနှစ် မတ်လ ၂၂ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၂) နှင့် ပုဒ်မ (၁၃) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၇။	အခကြေးငွေပေးချေရေးဥပဒေ	၂၀၁၆ ခုနှစ် ဇန်နဝါရီလ ၂၅ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၄) ၊ ပုဒ်မ (၄) ၊ ပုဒ်မ (၅) ၊ ပုဒ်မ (၇) ၊ ပုဒ်မ (၈) ၊ ပုဒ်မ (၉) ၊ ပုဒ်မ (၁၀) ၊ ပုဒ်မ (၁၁) နှင့် ပုဒ်မ (၁၄) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၃၈။	အလုပ်သမားလျော်ကြေးအက်ဥပဒေ	၁၉၂၄ (၂၀၀၅ ခုနှစ် မေလ ၁၁ ရက်နေ့တွင် ပြင်ဆင်)	စီမံကိန်းအဆိုပြုသူသည် အက်ဥပဒေ၏ ပုဒ်မ (၃) နှင့် ပုဒ်မ (၄) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
၃၉။	အလုပ်သမားရေးရာ အငြင်းပွားမှု ဖြေရှင်းရေး ဥပဒေ	၂၀၁၂ ခုနှစ် မတ်လ ၂၈ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၀။	ခွင့်ရက်နှင့်အလုပ်ပိတ်ရက်အက်ဥပဒေ (၁၉၅၁) ကို ပြင်ဆင်သော ဥပဒေ	၂၀၁၄ ခုနှစ် ဇူလိုင်လ ၁၈ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၂) ၊ ပုဒ်မ (၅) နှင့် ပုဒ်မ (၈) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၁။	လူမှုဖူလုံရေးဥပဒေ	၂၀၁၂ ခုနှစ် ဩဂုတ်လ ၃၁ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၁) ၏ ပုဒ်မခွဲ (က) နှင့် (ဈ) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၂။	ယာဉ်အန္တရာယ်ကင်းရှင်းရေးနှင့် မော်တော်ယာဉ်စီမံခန့်ခွဲမှုဥပဒေ	၂၀၂၀ ခုနှစ် မေလ ၂၆ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၈) ၏ ပုဒ်မခွဲ (က) နှင့် ပုဒ်မ (၈၁) ၏ ပုဒ်မခွဲ (ဆ) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၃။	ယာဉ်အန္တရာယ်ကင်းရှင်းရေးနှင့် မော်တော်ယာဉ်စီမံခန့်ခွဲမှု နည်းဥပဒေများ	၂၀၂၂ ခုနှစ် ဇန်နဝါရီလ ၁၉ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် နည်းဥပဒေ (၁၅) ၏ နည်းဥပဒေခွဲ (က)၊ နည်းဥပဒေ (၁၆) ၏ နည်းဥပဒေခွဲ (က)၊ နည်းဥပဒေ (၅၈) ၏ နည်းဥပဒေခွဲ (က)၊ နည်းဥပဒေ ၈၆၊ နည်းဥပဒေ (၈၇) ၏ နည်းဥပဒေခွဲ (က)၊ နည်းဥပဒေ (၈၈) နှင့် နည်းဥပဒေ (၁၁၀) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၄။	မြန်မာအာမခံ လုပ်ငန်း ဥပဒေ	၁၉၉၃ ခုနှစ် ဇူလိုင်လ ၂၃ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၅) နှင့် ပုဒ်မ (၁၆) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၅။	မြန်မာရင်းနှီးမြုပ်နှံမှု ဥပဒေ	၂၀၁၆ ခုနှစ် အောက်တိုဘာလ ၂၆ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၅၀, (ဃ)) နှင့် ပုဒ်မ (၅၆) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
၄၆။	မြန်မာရင်းနှီးမြုပ်နှံမှု နည်းဥပဒေများကို ပြင်ဆင်သည့် နည်းဥပဒေများ	၂၀၁၈ ခုနှစ် စက်တင်ဘာလ ၂၀ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် နည်းဥပဒေ (၁၄) နှင့် နည်းဥပဒေ (၂၀၆) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၇။	ရေနံနှင့် ရေနံထွက်ပစ္စည်းဆိုင်ရာဥပဒေ	၂၀၁၇ ခုနှစ် ဩဂုတ်လ ၁ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၁) ၊ ပုဒ်မ (၁၅) ၊ ပုဒ်မ (၁၆) နှင့် ပုဒ်မ (၁၈) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၈။	ရေနံအက်ဥပဒေ	၁၉၃၄ ခုနှစ် (၂၀၁၀ ခုနှစ် ဒီဇင်ဘာလ ၃၁ ရက်နေ့ တွင် ပြင်ဆင်)	စီမံကိန်းအဆိုပြုသူသည် အက်ဥပဒေ၏ ပုဒ်မ (၇) နှင့် ပုဒ်မ (၈) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၄၉။	ပို့ကုန်သွင်းကုန်ဥပဒေ	၂၀၁၂ ခုနှစ် စက်တင်ဘာလ ၁၇ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၅) ၊ ပုဒ်မ (၆) နှင့် ပုဒ်မ (၇) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၅၀။	သဘာဝဘေးအန္တရာယ်ဆိုင်ရာ စီမံခန့်ခွဲမှုဥပဒေ	၂၀၁၃ ခုနှစ် ဇူလိုင်လ ၃၁ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၃၁) အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၅၁။	ရာသီဥတုပြောင်းလဲမှုဆိုင်ရာ မူဝါဒ	၂၀၁၉ ခုနှစ်	စီမံကိန်းအဆိုပြုသူသည် မူဝါဒနှင့် အညီလိုက်နာ ဆောင်ရွက်မည်ဟု ကတိပြုပါသည်။
၅၂။	ကုန်သွယ်လုပ်ငန်းခွင်ဥပဒေ	၁၉၉၀ ခုနှစ် မတ်လ ၃၁ ရက်နေ့ (၂၀၁၄ ခုနှစ် တွင် ပြင်ဆင်)	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၁) ၊ ပုဒ်မ (၁၂, က) နှင့် ပုဒ်မ (၁၃, က) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၅၃။	ပြည်ထောင်စု၏ အခွန်အကောက်ဥပဒေ	၂၀၂၀ ခုနှစ် စက်တင်ဘာလ ၂ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၁၆) နှင့် ပုဒ်မ (၁၉) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။

စဉ်	ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများ	ပြဋ္ဌာန်းသည့် ရက်စွဲ	စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်
၅၄။	မြန်မာနိုင်ငံသားများရင်းနှီးမြှုပ်နှံမှု ဥပဒေ	၂၀၁၃ ခုနှစ် ဇူလိုင်လ ၂၉ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၈) နှင့် ပုဒ်မ (၉) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။
၅၅။	ဘွဲ့လ်လာဥပဒေ	၂၀၁၅ ခုနှစ် ဇူလိုင်လ ၁၄ ရက်နေ့	စီမံကိန်းအဆိုပြုသူသည် ဥပဒေ၏ ပုဒ်မ (၇) ၊ ပုဒ်မ (၁၉) နှင့် ပုဒ်မ (၂၀) တို့အား လိုက်နာမည်ဟု ကတိပြုပါသည်။

စီမံကိန်းဆိုင်ရာ လုပ်ငန်းများနှင့် ကုန်ထုတ်လုပ်မှုလုပ်ငန်းစဉ်

စီမံကိန်း၏ အဓိက လက္ခဏာရပ်များမှာ ဇယား (၂) တွင် ဖော်ပြထားပါသည်။

အဓိက လက္ခဏာများ	ဖော်ပြချက်
စီမံကိန်းအမည်	လခစားစနစ်ဖြင့် အထည်ချုပ်လုပ်ခြင်း
စီမံကိန်းအဆိုပြုသူ	ကိုဂျီမအိုင်ဂျီမြန်မာကုမ္ပဏီလီမိတက်
ကုမ္ပဏီမှတ်ပုံတင်အမှတ်	၁၁၇၃၂၅၂၂၉
စီမံကိန်းတည်နေရာ	မြန်မာနိုင်ငံ၊ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ဖိုမြို့နယ်၊ အေးမြ သာယာကျေးရွာအုပ်စု၊ အေးမြသာယာကျေးရွာ(က)၊ ကွင်းအမှတ် (၁) ၊ ဦးပိုင်အမှတ် (၈၉)
ပထဝီသတင်းအချက်အလက်	အရှေ့လောင်ဂျီတွင်း ၉၅ ဒီဂရီ ၄၃ မိနစ် ၄၄.၇၀ စက္ကန့်၊ မြောက်လတ္တီတွင်း ၁၈ ဒီဂရီ ၄ မိနစ် ၃၄.၁၉ စက္ကန့်
မြေအမျိုးအစား	ရွာမြေ
စီမံကိန်းမြေဧရိယာ	၄.၉၂ ဧက
မြေရရှိမှု	ဌားရမ်း
မြေရှင်	ဦးစိန်တိုး
ရင်းနှီးမြှုပ်နှံမှုအမျိုးအစား	ဖက်စပ် (၇၀ % ကိုဂျီမအိုင်ဂျီ ကုမ္ပဏီလီမိတက်နှင့် ၃၀ % ဂျေအမ်ကေအက်စ်ကုမ္ပဏီလီမိတက်)
စုစုပေါင်းရင်းနှီးမြှုပ်နှံမှု ပမာဏ	ကျပ် ၁,၉၅၁.၅၅၂ သန်း
ဆက်သွယ်ရန်ပုဂ္ဂိုလ်၏ အချက်အလက်	အမည် - ဦးစိန်တိုး ရာထူး - ဒါရိုက်တာ ဖုန်းနံပါတ် - ၀၉-၅၁၈၁၉၃၂ အီးမေးလ် - seintoe@kojima-group.net
စတင်တည်ထောင်သည့်အချိန်	၂၀၁၄.၂.၂၀၁၄

အဓိက လက္ခဏာများ	ဖော်ပြချက်	
စမ်းသပ်လည်ပတ်သည့်နေ့စွဲ	၂၇.၁၀.၂၀၁၄	
စီးပွားဖြစ်လည်ပတ်သည့်နေ့စွဲ	၃.၁၁.၂၀၁၄	
ဘေးပတ်ဝန်းကျင်အနေအထား	အရှေ့ဘက် - ဧရာလမ်း အနောက်ဘက် - လယ်ကွင်း ဘယ်ဘက် - လယ်ကွင်း ညာဘက် - လယ်ကွင်း	
အနီးဆုံး လူနေဧရိယာ	အေးမြသာယာရွာ	
ကုန်ကြမ်းပစ္စည်းများ	အထည်စ အနားကွပ်စ Interlining အခံစ အပ်ချည် ကြယ်သီး ဇစ် ချိတ်များ လေဘယ်လ်များ ရယ်ဒီမိတ်ကြိုးများ တိတ်	Polybag ကတ်ထူပုံး မှတ်ခဲ Fusing Tape Gom ခါးပတ်ကွင်း Spring hook လယ်သာ ပန်းထိုးအပိုင်းအစများ Rivet Snaps
ထုတ်ကုန်များ	ရှပ်အင်္ကျီ၊ ဘောင်းဘီ၊ လက်ပြတ်အင်္ကျီ၊ ဂျာကင်၊ စကပ်၊ ကုတ်အင်္ကျီ၊ ဘလောက်စ်အင်္ကျီ	
ရေအရင်းအမြစ်များ	ကိုယ်ပိုင် အဝီစိတွင်း	
စုစုပေါင်းရေသုံးစွဲမှု	တစ်နေ့လျှင် ၆၆၀၀ လီတာခန့်	
လျှပ်စစ်ဓာတ်အားအရင်းအမြစ်	(၁) ပင်မဓာတ်အားလိုင်း (၂) ထရန်စဖော်မာ (၃) မီးစက် (၄) ဆိုလာ	
ဘွိုင်လာ	(၁) ၁.၅ တန် ဘွိုင်လာ (၂) ၂ တန် ဘွိုင်လာ	
လောင်စာဆီသုံးစွဲမှု	ဒီဇယ် - တစ်ရက်လျှင် ၁၂.၁၅၇၅ ဂါလံ (တစ်လလျှင် ၂၈၀၀ ဂါလံ ခန့်) (ဆိုလာတပ်ဆင်ပြီးနောက် လောင်စာသုံးစွဲမှု) စပါးခွံလောင်စာထောင့် - တစ်ရက်လျှင် ၂၆၀၀ ပိဿာ ခန့်	
အလုပ်သမားဦးရေ	၂၀၂၄ ခုနှစ် အောက်တိုဘာလ အရ ၁,၀၃၂ ဦး	
လုပ်ငန်းလည်ပတ်ချိန်	တနင်္လာမှ သောကြာ မနက် ၇ နာရီခွဲ မှ ညနေ ၄ နာရီ (အချိန်ပို ညနေ ၄ နာရီ မှ ညနေ ၅ နာရီ)	

အဓိက လက္ခဏာများ	ဖော်ပြချက်
	စနေ မနက် ၇ နာရီခွဲ မှ နေ့လည် ၁၁ နာရီခွဲ (အချိန်ပို နေ့လည် ၁၂ နာရီ မှ ညနေ ၅ နာရီ)

တည်ဆောက်ခြင်းအဆင့်တွင် အဆိုပြုစီမံကိန်းတွင် အဓိကအဆောက်အဦးလေးခု ရှိပြီး၊ ၎င်းတို့မှာ B1, B2, B3 နှင့် B4 တို့ဖြစ်သည်။ အဓိက စက်ရုံ အဆောက်အဦအားလုံးမှာ တိုက်တစ်ထပ် အဆောက်အဦများဖြစ်ပါ သည်။ ထို့အပြင် စက်ရုံနှင့်ဆက်စပ် အဆောက်အဦများမှာ ထမင်းစားဆောင်၊ ရုံးအဆောက်အဦ၊ ဝန်ထမ်းအိပ်ဆောင်နှစ်ခု၊ မီးစက်အခန်း၊ ယာဉ်မောင်းအိမ်နှင့် လုံခြုံရေးဂိတ် တို့ကို ဆောက်လုပ်ခဲ့ပါသည်။

လုပ်ငန်းလည်ပတ်ရေးအဆင့်တွင် စက်ရုံ၏ ကုန်ထုတ်လုပ်မှုလုပ်ငန်းစဉ်များမှာ လွယ်ကူပြီး၊ ထုတ်လုပ်မှုလုပ်ငန်းစဉ်၏ လုပ်ငန်းစဉ်အဆင့်ဆင့်ကို ပုံ-၁ တွင် ဖော်ပြထားသည်။ စက်ရုံသည် ကုန်ကြမ်း ပစ္စည်းများအားလုံးကို နိုင်ငံခြားမှ တင်သွင်းပြီး ချုပ်လုပ်ပြီးစီးပြီးသော ထုတ်ကုန်များကို နိုင်ငံခြားသို့ တင်ပို့ပါသည်။



ပုံ-၁ ကုန်ထုတ်လုပ်မှု လုပ်ငန်းစဉ်အဆင့်ဆင့်

အနီးပတ်ဝန်းကျင်ဆိုင်ရာ အခြေအနေဖော်ပြချက်များ

ပတ်ဝန်းကျင်အခြေခံအချက်အလက်များ ဖြစ်သော လေထုအရည်အသွေးနှင့် ဆူညံသံအဆင့်များကို စက်ရုံတွင် တိုင်းတာခဲ့ပြီး၊ ရေနမူနာများနှင့် မြေနမူနာများကို ကောက်ယူ၍ သက်ဆိုင်ရာ ဓာတ်ခွဲခန်းများတွင် စမ်းသပ်ပြီး အရည်အသွေးများကို ခွဲခြမ်းစိတ်ဖြာခဲ့ပါသည်။ လူမှုစီးပွားအခြေအနေများ၊ ရုပ်ပိုင်းဆိုင်ရာ/ဇီဝဆိုင်ရာ အချက်အလက်နှင့် မိုးလေဝသအချက်အလက်များကို သက်ဆိုင်ရာ မြို့နယ်၏ ဒေသဆိုင်ရာ အချက်အလက်များမှ ရယူကောက်နုတ်ပြီး လေ့လာရေးအဖွဲ့က ဆန်းစစ်သုံးသပ်ခဲ့ပါ သည်။ ၎င်းဒေသဆိုင်ရာ အချက်အလက်များကို အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာနမှ ၂၀၂၃ ခုနှစ်တွင် ထုတ်ဝေခဲ့သော အုတ်ဖိုမြို့နယ်

ဒေသဆိုင်ရာ အချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။ အခြေခံအချက်အလက်များကို အောက်ပါ အတိုင်း အကျဉ်းချုပ်ဖော်ပြထားပါသည် -

- ၁. **မြေမျက်နှာသွင်ပြင်** - စီမံကိန်းသည် အုတ်ဖိုမြို့နယ်တွင်တည်ရှိပြီး အုတ်ဖိုမြို့မှ (၇) ကီလိုမီတာ အကွာအဝေးတွင် တည်ရှိပါသည်။ အုတ်ဖိုမြို့နယ်သည် မြောက်လတ္တီတွဒ် ၂၇ ဒီဂရီ ၆၅ မိနစ်နှင့် ၂၈ ဒီဂရီ ၁၅ မိနစ်အကြား အရှေ့လောင်ဂျီတွဒ် ၉၇ ဒီဂရီ ၀၀ မိနစ်နှင့် ၉၈ ဒီဂရီ ၁၉ မိနစ်အကြားတွင် တည်ရှိပါသည်။ ပဲခူးတိုင်းဒေသကြီးတွင် တည်ရှိပြီး ပင်လယ်ရေမျက်နှာပြင် အထက် (၇၇) ပေ တွင် တည်ရှိပါ သည်။ မြို့နယ်၏ အမြင့်ဆုံးအရပ်ဒေသမှာ အရှေ့ဘက် ပဲခူးရိုးမတောင်ဖြစ်ပြီး အနိမ့်ဆုံးအရပ်ဒေသမှာ အနောက်ဘက် မှတ္တဒန်ကျေးရွာအုပ်စု ဖြစ်ပါသည်။
- ၂. **လေဗေဒ** - အုတ်ဖိုမြို့နယ်သည် မြစ်ချောင်းများပေါများသည့် ဒေသတစ်ခုဖြစ်ပြီး မြစ်ချောင်းများသည် အရှေ့မှ အနောက်သို့ စီးဆင်းလျက်ရှိပါသည်။ ထင်ရှားသော ချောင်းမှာ ဂမုန်းချောင်းနှင့် မြောင်ချောင်း တို့ဖြစ်ပြီး မြစ်မခမြစ်သို့ စီးဝင်ပါသည်။ ဒေသအတွင်းရှိ ရေအရင်းမြစ်များမှာ ရေချိုဖြစ်၍ စိုက်ပျိုးရေးအတွက် များစွာ အထောက်အကူဖြစ်စေပါသည်။
- ၃. **ရာသီဥတု** - အုတ်ဖိုမြို့နယ်၏ ရာသီဥတုမှာ ပူအိုက်စွတ်စိုသော ရာသီဥတုရှိပြီး၊ အမြင့်ဆုံးအပူချိန် ၃၉ ဒီဂရီစင်တီဂရိတ်နှင့် အနိမ့်ဆုံးအပူချိန် ၁၂ ဒီဂရီစင်တီဂရိတ် ရှိပါသည်။
- ၄. **ဘူမိဗေဒ** - အုတ်ဖိုမြို့နယ်သည် ပဲခူးတိုင်းဒေသကြီးတွင် တည်ရှိပြီး၊ ၎င်း၏ ဘူမိဗေဒအခြေအနေများမှာ တိုင်းဒေသကြီး၏အခြေခံအခြေအနေများနှင့် ဆင်တူပါသည်။ ပဲခူးတိုင်းဒေသကြီးသည် မြန်မာ့အလယ်ပိုင်းနယ်နိမိတ်၏ တောင်ဘက်အဆုံးကျသော ပိုင်းခြမ်းတွင် တည်ရှိပြီး၊ အနောက်ဘက်တွင် ကမ်းရိုးတန်းပြင်ရှိသော တိုင်းဒေသကြီး တစ်ခုဖြစ်ပါသည်။ ၎င်းသည် အောက်ပါဒေသများနှင့် နယ်နိမိတ်ချင်းဆက်စပ်ထားပါသည်။
 - ❖ မြောက်ဘက်တွင် မကွေးတိုင်းနှင့် မန္တလေးတိုင်း၊
 - ❖ အရှေ့ဘက်တွင် ကရင်နှင့် မွန်ပြည်နယ်များ၊
 - ❖ တောင်ဘက်တွင် ရန်ကုန်တိုင်းနှင့် ဧရာဝတီတိုင်း၊
 - ❖ အနောက်ဘက်တွင် ရခိုင်ပြည်နယ်။
- ၅. **မြေထုအခြေအနေ** - မြေဆီလွှာကွင်းဆင်းတိုင်းတာခြင်း မြေပုံအရ၊ စီမံကိန်း၏ မြေဆီလွှာ အမျိုးအစားသည် လယ်မြေနှင့် နုံးရောလယ်မြေအမျိုးအစား ဖြစ်ပါသည်။
- ၆. **ရေကြီးမှုဘေးအန္တရာယ်** - မြန်မာ့သတင်းအချက်အလက် စီမံခန့်ခွဲမှု ယူနစ်၏ ၂၀၂၂ ခုနှစ်တွင် ထုတ်ဝေသော မြန်မာနိုင်ငံရှိ ရာသီဥတု၊ သဘာဝပတ်ဝန်းကျင်ယိုယွင်းပျက်စီးမှုနှင့် သဘာဝဘေးအန္တရာယ် ဆန်းစစ်မှု အကျဉ်းအရ စီမံကိန်းတည်နေရာသည် ရေကြီးရေလျှံမှု ဖြစ်နိုင်ခြေများသော ဒေသတွင် ကျရောက်ပါသည်။

- ၇. ဆိုင်ကလုန်းမုန်တိုင်း အန္တရာယ် - မြန်မာနိုင်ငံဆိုင်ကလုန်းမုန်တိုင်းအန္တရာယ် ခန့်မှန်း မြေပုံအရ စီမံကိန်းတည်နေရာသည် ဆိုင်ကလုန်းအန္တရာယ် ဖြစ်နိုင်ခြေ နည်းသော နေရာတွင် တည်ရှိပါသည်။
- ၈. မြေပြိုမှု ဖြစ်နိုင်ခြေ - မြန်မာနိုင်ငံ မြေပြိုမှု ဖြစ်နိုင်ခြေ ခန့်မှန်းချက် မြေပုံအရ စီမံကိန်းတည်နေရာသည် မြေပြိုမှု ဖြစ်နိုင်ခြေနည်းသော နေရာတွင် တည်ရှိပါသည်။
- ၉. ငလျင်ပြင်အားနှင့် ဖြစ်နိုင်ခြေ - မြန်မာနိုင်ငံ၏ ငလျင်ဇုန်မြေပုံအရ စီမံကိန်းတည်နေရာသည် အစိမ်းရောင်ဇုန်အတွင်း တည်ရှိပြီး၊ ဤဇုန်သည် အလယ်အလတ်အင်အား (ဇုန် II) နှင့် ကိုက်ညီပါသည်။
 - ❖ အင်အား: အလယ်အလတ်ငလျင်လှုပ်ရှားမှု
 - ❖ ဖြစ်နိုင်သောမြေပြင်ငလျင်လှိုင်းသွားအရှိန်တန်ဖိုးများ: 0.1 - 0.15 g
 - ❖ တူညီသောပြင်ဆင်ထားသည့် မာကယ်လီအတန်းများ: VII
- ၁၀. ဇီဝဗေဒဆိုင်ရာအချက်အလက်များ - အုတ်ဖိုမြို့နယ်တွင် ပေါက်ရောက်သော သဘာဝပေါက်ပင်များမှာ ကျွန်း၊ ပျဉ်းကတိုး၊ ပိတောက်၊ အင်၊ ကညင်၊ ထောက်ကြွံ၊ သတီ၊ နေ့၊ ယမနေ၊ မျောက်ချော၊ မျောက်ငို၊ ဘင်္ဂ၊ မအူ၊ ဖန်ခါး၊ ဒီဒူး၊ လက်ပံ၊ တောင်သရက်၊ သစ်၊ စိမ့်၊ ရုံး၊ သင်းဝင်၊ သစ်ပုဂံ၊ ဝါးဘိုးဝါး၊ မျှင်ဝါး၊ ကျသောင်းဝါး စသည်တို့ ဖြစ်ပါ သည်။ ထို့အပြင် မြို့နယ်အတွင်း ကြိုးဝိုင်း (၇) ခုရှိပါသည်။ အုတ်ဖိုမြို့နယ်အတွင်း တွေ့ရှိရသော တိရစ္ဆာန်များမှာ ဆင်၊ ကျား၊ ကျားသစ်၊ တောဝက်၊ ဝက်ဝံ၊ ကြွံ၊ ပြောင်၊ တောကျွဲ၊ ဆတ်၊ သမင်၊ တောင်ဆိတ်၊ တော်ဆိတ်၊ ဂျီ၊ တောခွေး၊ ခွေးတူဝက်တူ၊ တောကြောင်၊ သင်ခွေချပ်၊ ကြောင်မင်းနှင့် မျောက်အမျိုးမျိုး စသည်တို့ ဖြစ်ပါသည်။
- ၁၁. လေထုအရည်အသွေး - ၂၀၂၄ ခုနှစ် ဒီဇင်ဘာလ ၄ ရက်မှ ၅ ရက်အတွင်း စီမံကိန်းတည်နေရာတွင် လေထုအရည်အသွေးတိုင်းတာမှုများကို Haz-Scanner နှင့် Kane 945 Combustion Analyzer အသုံးပြု၍ တိုင်းတာခဲ့သည်။ ဝန်းကျင် လေထုအရည်အသွေးကို စီမံကိန်းတည်နေရာရှိ တစ်နေရာတွင် တိုင်းတာခဲ့ပြီး၊ လုပ်ငန်းခွင်လေထုအရည်အသွေးကို တစ်နေရာ၊ ဘွိုင်လာနှင့် မီးစက်မှ ထွက်သော အခိုးအငွေ့များကိုလည်းကောင်း တိုင်းတာခဲ့ပါ သည်။ ဝန်းကျင်လေထု၊ လုပ်ငန်းခွင်နှင့် ထုတ်လွှတ်အခိုးငွေ့ တိုင်းတာမှု၏ ပါရာမီတာများအားလုံးသည် လမ်းညွှန်ချက်၏ လက်ခံနိုင်သည့် အခြေနေအတွင်းရှိပါသည်။
- ၁၂. ဆူညံသံအဆင့် - ၂၀၂၄ ခုနှစ် ဒီဇင်ဘာလ ၄ ရက်မှ ၅ ရက်အတွင်း Digital Sound Level Meter ကို အသုံးပြုပြီး ပတ်ဝန်းကျင်ဆိုင်ရာ ဆူညံသံနှင့် လုပ်ငန်းခွင် ဆူညံသံ အစရှိသည့် ဆူညံသံအဆင့် နှစ်မျိုးကို တိုင်းတာခဲ့သည်။ ပတ်ဝန်းကျင်ဆိုင်ရာ ဆူညံသံအဆင့်များကို အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးထုတ်လွှတ်မှုလမ်းညွှန်ချက် (၂၀၁၅) နှင့် နှိုင်းယှဉ်ခဲ့ပြီး၊ လုပ်ငန်းခွင်တွင် ထိတွေ့ရသော ဆူညံသံအဆင့်များကို အမေရိကန်အလုပ်သမားဌာန OSH ၏ ဆူညံသံထိတွေ့မှုအဆင့်နှင့် နှိုင်းယှဉ်ခဲ့ပါသည်။

တိုင်းတာမှုရလဒ်များအရ၊ ပတ်ဝန်းကျင်နှင့် လုပ်ငန်းခွင်၏ ဆူညံသံအဆင့်များသည် လမ်းညွှန်ချက်ပါ တန်ဖိုးများအတွင်းရှိပါသည်။

၁၃. **တုန်ခါမှုတိုင်းတာခြင်း** - ၂၀၂၄ ခုနှစ် ဒီဇင်ဘာလ ၄ ရက်မှ ၅ ရက်အတွင်း ဝင်ပေါက်အနီးရှိ ထမင်းစားဆောင်နေရာနားတွင် တုန်ခါမှုအဆင့်ကို တိုင်းတာခဲ့ပါ သည်။ တုန်ခါမှုတိုင်းတာမှု ရလဒ်များအရ အများဆုံးထွက်ရှိသည့် အမြင့်ဆုံးအလျင်တန်ဖိုးမှာ စံချိန်စံညွှန်း၏ လက်ခံနိုင်သည့် အခြေအနေအတွင်းတွင်သာ ရှိပါ သည်။ ရလဒ်အရ ၎င်းအမြင့်ဆုံးအလျင်သည် အဆောက်အအုံမည်သည့်အမျိုးအစားကိုမှ သက်ရောက်မှုမရှိပါ။

၁၄. **ရေအရည်အသွေး** - ၂၀၂၄ ခုနှစ် ဒီဇင်ဘာလ ၆ ရက်တွင် စက်ရုံအတွင်းတွင်ရှိသော ရေတွင်းမှ ရေ၊ စွန့်ပစ်ရေ (သဘာဝ အနည်ထိုင်ကန်ထွက်ပေါက်) နှင့် ဘျိုလ်လာမှ ထွက်ရှိသော ရေ နမူနာများကို ရယူပြီး GMES ဓာတ်ခွဲခန်းနှင့် Ecological ဓာတ်ခွဲခန်းတွင် တိုင်းတာစစ်ဆေးခဲ့ပါ သည်။ ရလဒ်များအရ တွင်းရေ၏ ရေအရည်အသွေးမှာ အရောင်၊ နောက်ကျိုမှုနှင့် စုစုပေါင်းကော်လီဖော့စ်ပါဝင်မှု (Total coliform count) များ၏ တန်ဖိုးများမှ လွဲ၍ အခြားသော ပါရာမီတာများသည် စံချိန်စံညွှန်းအတွင်းတွင်ရှိပါသည်။ ထို့ကြောင့် ၎င်းရေကို သန့်စင်မထားပါက သောက်သုံးရန် မသင့်တော်ပါ။ ထို့ပြင်၊ စွန့်ပစ်ရေ၏ အရည်အသွေးသည် ပါရာမီတာအများစုအတွက် လမ်းညွှန်ချက်အတွင်းတွင် ရှိသော်လည်း TSS ၊ Ammonia ၊ BOD₅၊ COD နှင့် စုစုပေါင်းကော်လီဖော့စ်ပါဝင်မှုတို့သည် လမ်းညွှန်ချက်ကို ကျော်လွန်နေပါသည်။ ဘျိုလ်လာမှ ထွက်ရှိသော ရေအရည်အသွေးမှာ TSS, နီကယ် (Nickel) နှင့် စုစုပေါင်းကော်လီဖော့စ်ပါဝင်မှု စသည့် ပါရာမီတာများသည် လမ်းညွှန်ချက်ကို ကျော်လွန်နေသော်လည်း အခြားပါရာမီတာများသည် လမ်းညွှန်ချက်အတွင်းရှိပါသည်။

၁၅. **မြေအရည်အသွေး** - စက်ရုံဧရိယာအတွင်းမှ မြေဆီလွှာနမူနာကို ရယူပြီး GMES ဓာတ်ခွဲခန်းတွင် စမ်းသပ်ခဲ့ပါသည်။ ရလဒ်များအရ မြေဆီလွှာ၏ အရည်အသွေးကို လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်သောအခါ လက်ခံနိုင်သည့် တန်ဖိုးများအတွင်းရှိသည်ဟု တွေ့ရှိရပါသည်။

၁၆. **အလင်းရောင်ပြင်းအား** - ၂၀၂၄ ခုနှစ် ဒီဇင်ဘာလ ၄ ရက်တွင် စက်ရုံရှိ နေရာလေးခုတွင် Lux Meter ကို အသုံးပြုပြီး အလင်းရောင်ပြင်းအားကို တိုင်းတာခဲ့ပါသည်။ တိုင်းတာမှုရလဒ်အရ ထုပ်ပိုးခန်းတွင်သာ လမ်းညွှန်ချက်နှင့် ကိုက်ညီမှုရှိပြီး၊ အခြားတိုင်းတာမှုနေရာများတွင် လမ်းညွှန်ချက်အောက် လျော့နည်းနေသည်ကို တွေ့ရှိရပါသည်။ ထို့ကြောင့်၊ အဆိုပါဒေသများတွင် အလင်းရောင်အားပိုမိုတိုးမြှင့်ရန် လိုအပ်ပါသည်။

၁၇. **လူမှုစီးပွားရေး** - စီမံကိန်းဒေသတည်ရှိရာ အုတ်ဖိုမြို့နယ်တွင် အိမ်အရေအတွက် ၃၃,၃၈၇ လုံးနှင့် အိမ်ထောင်စု ၃၅,၁၄၉ ရှိပြီး ရပ်ကွက် ၁၀ ခု၊ ကျေးရွာစု ၅၃ ခု နှင့် ကျေးရွာ ၂၅၄ ရွာ ဖြင့် ဖွဲ့စည်းထားသော ကျေးလက်ဒေသအများစုဖြစ်သော မြို့နယ်တစ်ခုဖြစ်ပါသည်။ ထို့အပြင် လူဦးရေအများစုသည် ကျေးလက်ဒေသများတွင် ပိုမိုနေထိုင်ကြပြီး မြို့ပြနှင့် ကျေးလက်ဒေသ အားလုံးတွင် အမျိုးသမီးဦးရေသည် အမျိုးသားဦးရေထက် အနည်းငယ်သာလွန်ပါသည်။

တိုင်းရင်းသားလူမျိုးဖွဲ့စည်းမှုအရ ဗမာလူမျိုးသည် အဓိကအများဆုံးနေထိုင်ကြပြီး အခြားလူမျိုးများမှာ လူဦးရေသိပ်မူနည်းပါးပါ သည်။ ထို့အပြင် လူဦးရေအများစုသည် ဗုဒ္ဓဘာသာဝင်များဖြစ်ကြပါ သည်။ ပညာရေးအနေဖြင့် ပညာရေးဆိုင်ရာ အဆောက်အဦများကို လုံလောက်စွာထားရှိထားပြီး အခြေခံပညာအထက်တန်းကျောင်း (၅) ကျောင်း၊ အခြေခံပညာအထက်တန်းကျောင်းခွဲ (၈) ကျောင်း၊ အခြေခံပညာအလယ်တန်းကျောင်း (၉) ကျောင်း၊ အခြေခံပညာအလယ်တန်းကျောင်းခွဲ (၁၄) ကျောင်း၊ မူလတန်းလွန်ကျောင်း (၂၁) ကျောင်း၊ မူလတန်းကျောင်း (၁၂၂) ကျောင်း၊ မူလတန်းလွန်ကျောင်း (၂၀) ကျောင်း၊ မူကြိုကျောင်း (၂) ကျောင်းနှင့် ဘုန်းတော်ကြီးသင်စာသင်ကျောင်း (၈) ကျောင်း ရှိပါသည်။ အလားတူစွာပင် ကျန်းမာရေးဆိုင်ရာ အခြေခံအဆောက်အအုံများလည်း ရရှိနိုင်ပြီး အစိုးရဆေးရုံ ၄ ရုံ၊ ပြည်သူ့ဆေးခန်း ၆ ခန်း နှင့် ကျေးလက်ကျန်းမာရေးစောင့်ရှောက်ရေးဌာန ၄၀ တို့က ပြည်သူလူထုအား ပံ့ပိုးပေးနေပါ သည်။ မြို့နယ်၏ မြေအသုံးချမှုအနေဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအတွက် မြေဧရိယာ၏ တော်တော်များများကို သတ်မှတ်ထားပြီး ကြိုးပိုင်း/ကြိုးပြင်ကာကွယ်တော ဧရိယာ ၁၃၀,၀၀၁ ဧက၊ တော်ရိုင်း ၂,၆၂၉ ဧကနှင့် မြေရိုင်း ၁,၃၅၀ ဧကရှိပါသည်။ မြို့နယ်အတွင်း စက်မှုဇုန် မရှိသော်လည်း အထည်ချုပ်စက်ရုံ (၁) ရုံ၊ ဆန်စက် (၁၀) စက်၊ သစ်စက် (၁) စက်၊ ဆီစက် (၁) စက်၊ နှင့် အိမ်တွင်းစက်မှုလက်မှုလုပ်ငန်း (၁၀) ခုရှိပါသည်။ ထို့အပြင် မြို့နယ်သည် စိုက်ပျိုးရေးနှင့် ကုန်သွယ်ရေးကို အဓိကထား လုပ်ကိုင်ကြပါသည်။ အလုပ်လုပ်နိုင်သူ ၁၀၆,၄၉၅ ဦးအနက် အလုပ်လုပ်သူ ၁၀၂,၂၀၉ ဦး နှင့် အလုပ်လက်မဲ့ ၄,၄၀၁ ဦး (၄.၁%) ရှိပါ သည်။ ထို့ကြောင့် အလုပ်လက်မဲ့နှုန်းမှာ ၄.၁% ဖြစ်သည်။ မြို့နယ်တွင် ရထားလမ်းနှင့် အဝေးပြေးလမ်းမတို့သည် ဒေသခံနှင့် ပြင်ပသယ်ယူပို့ဆောင်ရေးအတွက် အဆင်ပြေစေပြီး မြို့နယ်မှ ထုတ်ကုန်များဖြစ်သော ဆန်နှင့် သစ်မျိုးစုံကို ရထားနှင့် ကားများဖြင့် ရန်ကုန်သို့ ပို့ဆောင်နိုင်စေရန် ကူညီပံ့ပိုးပေးပါသည်။

ဖြစ်ပေါ်နိုင်သော ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ တည်ဆောက်စဉ်ကာလ

KIMCL သည် စက်ရုံအဆောက်အအုံများကို အပြီးတည်ဆောက်ပြီးဖြစ်ပါ သဖြင့်၊ တည်ဆောက်ရေး အဆင့်အတွင်း ဖြစ်ပေါ်ခဲ့သည့် သက်ရောက်မှုများမှာ ဖြစ်ပေါ်ခဲ့ပြီး ဖြစ်ပါသည်။ သို့သော်လည်း တည်ဆောက်ရေးအဆင့်အတွင်း ဖြစ်ပေါ်ခဲ့သည့် သက်ရောက်မှုများနှင့် လုပ်ဆောင်ခဲ့သည့် လျော့ပါးရေး အရေးယူချက်များကို အခန်း (၅) ရှိ အပိုင်း (၅.၂) တွင် ဖော်ပြထားပါသည်။

လုပ်ငန်းလည်ပတ်စဉ်ကာလ

KIMCL သည် CMP စနစ်ဖြင့် အထည်များ ထုတ်လုပ်ပြီး ထုတ်လုပ်သည့်နည်းလမ်းများမှာ ရိုးရှင်းပြီး ပတ်ဝန်းကျင်အပေါ်သက်ရောက်မှု အလွန်နည်းပါသည်။ သို့သော် လုပ်ငန်းလည်ပတ်မှုအဆင့်တွင် ဘွိုင်လာ နှင့် မီးစက်များ အသုံးပြုခြင်းကြောင့် လေထုညစ်ညမ်းမှု ထုတ်လွှတ်ခြင်း၊ လုပ်ငန်းလည်ပတ်ခြင်း အဆင့်မှ

စွန့်ပစ်အမှိုက်ထွက်ရှိခြင်း၊ ဝန်ထမ်းပေါင်း တစ်ထောင်ကျော်ထံမှ စွန့်ပစ်ရေထွက်ရှိနိုင်ခြင်းနှင့် အလုပ်သမားများ နေ့စဉ်သွားလာရေးမှ ယာဉ်လမ်းပိတ်ဆို့မှုများ ဖြစ်ပေါ်နိုင်ပါသည်။ အဆိုပါ သက်ရောက်မှုများအား လျော့ပါးစေရန် အောက်ပါ နည်းလမ်းများကို လိုက်နာဆောင်ရွက်မည် ဖြစ်ပါသည်။

- ❖ **ဘွိုင်လာများ** - ဘွိုင်လာမှ ထွက်ရှိသော ထုတ်လွှတ်အခိုးအငွေ့များကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းမှုများနှင့် ထိရောက်စွာ မီးလောင်စေခြင်းအားဖြင့် လျော့ချပါမည်။ ဆိုင်ကလုန်းအမှုန်အမွှားဖမ်း ကိရိယာနှင့် မီးခိုးဖမ်းသေတ္တာကို ဘွိုင်လာတွင် တပ်ဆင်ထားပြီး အမှုန်အမွှားများကို လျော့ချမည်ဖြစ်ပါသည်။
- ❖ **မီးစက်များ** - ဒီဇယ်ဆီသုံးမီးစက်များကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းခြင်းများ ပြုလုပ်မည်ဖြစ်ပါသည်။ ထို့အပြင် ဆိုလာစွမ်းအင်စနစ်ကို တပ်ဆင်ထားခြင်းဖြင့် မီးစက်အသုံးပြုမှုကို လျော့ချကာ အခိုးအငွေ့နှင့် ဆူညံသံကို လျော့ချစေပါမည်။ လောင်စာဆီများကို စနစ်တကျ သိုလှောင်ထားရှိပြီး စနစ်တကျ ကိုင်တွယ်အသုံးပြုသည့် လုပ်ထုံးလုပ်နည်းအတိုင်း ဆောင်ရွက်စေခြင်းအားဖြင့် ယိုဖိတ်မှုနှင့် မြေဆီလွှာညစ်ညမ်းမှုကို ကာကွယ်မည်ဖြစ်ပါသည်။
- ❖ **စွန့်ပစ်အမှိုက်စီမံခန့်ခွဲခြင်း** - အထည်စများ၊ အထွေထွေစွန့်ပစ်ပစ္စည်းများနှင့် အန္တရာယ်သော စွန့်ပစ်ပစ္စည်းအနည်းငယ်၊ အီလက်ထရွန်းနစ်စွန့်ပစ်ပစ္စည်းအနည်းငယ် နှင့် ချွန်ထက်သော အမှိုက်များ ထွက်ရှိနိုင်ပြီး ၎င်းအမှိုက်များကို စနစ်တကျ ခွဲခြားထားမည်ဖြစ်ပါသည်။ စွန့်ပစ်အထည်စများကို ဘွိုင်လာတွင် လောင်စာအဖြစ် ပြန်လည် အသုံးပြု စွန့်ပစ်မည်ဖြစ်ပြီး အထွေထွေ အလုပ်သမားသုံး စွန့်ပစ် ပစ္စည်းများကို ပတ်ဝန်းကျင်ညစ်ညမ်းမှုမရှိစေရန် တာဝန်ယူစွန့်ပစ်မည် ဖြစ်ပါသည်။ အသုံးပြုပြီးသော ဘက်ထရီများ၊ မီးအိမ်များ၊ သုံးပြီးသော ဆီများ ကဲ့သို့သော အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်း အနည်းငယ်၊ အီလက်ထရွန်းနစ်စွန့်ပစ်ပစ္စည်းအနည်းငယ်နှင့် ချွန်ထက်သော သော စွန့်ပစ်ပစ္စည်းများကို ဒေသဆိုင်ရာဥပဒေနှင့် စည်းကမ်းချက်များနှင့် အညီစွန့်ပစ်မည်ဖြစ်ပါသည်။
- ❖ **စွန့်ပစ်ရေထွက်ရှိမှု** - စက်ရုံဝန်းအတွင်း သင့်လျော်သော ရေမြောင်းစနစ်ကို တပ်ဆင်ပြီး ရေမြောင်းများ ပိတ်ဆို့မှုများ မဖြစ်ပေါ်စေရန် ပုံမှန်သန့်ရှင်းရေး ပြုလုပ်မည်ဖြစ်ပါ သည်။ အလုပ်သမားသုံးစွန့်ပစ်ရေ နှင့် ဘွိုင်လာမှ ထွက်သော စွန့်ပစ်ရေများကို ရေမြောင်းများနှင့် သဘာဝ အနည်ထိုင်ကန်မှ တဆင့် စက်ရုံပြင်ပ စွန့်ပစ်ရေမြောင်းသို့ စနစ်တကျစွန့်ပစ်မည် ဖြစ်ပါသည်။ စွန့်ပစ်ရေနှင့် မြေအောက်ရေတို့၏ ရေအရည်အသွေးကို သတ်မှတ်ချက်အတိုင်း တိုင်းတာစစ်ဆေးမည်ဖြစ်ပါ သည်။ လိုအပ်ပါက ထိရောက်သော စွန့်ပစ်ရေသန့်စင်ရေးစနစ်ကို တပ်ဆင်ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။
- ❖ **လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး** - ဘွိုင်လာနှင့် မီးစက်များကို ကိုင်တွယ်လုပ်ဆောင်သော ဝန်ထမ်းများနှင့် အထည်ဖြတ်သည့် နေရာတွင် လုပ်ကိုင်နေသော အလုပ်သမားများကို လုံလောက်သော တစ်ကိုယ်ရေကာကွယ်ရေးသုံးပစ္စည်းများ ပံ့ပိုးပေး မည်ဖြစ်

ပါသည်။ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်များကို အနည်းဆုံးဖြစ်စေရန် ဘေးအန္တရာယ်ကင်းရှင်းရေး သင်တန်းများနှင့် အရေးပေါ်အခြေအနေများအတွက် သင်တန်းများကို ပုံမှန်ကျင်းပ မည်ဖြစ်ပါသည်။

❖ **ယာဉ်လမ်းကြောင်းပိတ်ဆို့မှု** - အများပြည်သူလမ်းများ ပိတ်ဆို့မှုမဖြစ်စေရန် စက်ရုံအတွင်း လုံလောက်သော ယာဉ်ရပ်နားရာနေရာများ ပံ့ပိုးပေးထားပါသည်။ ကုန်တင်ကုန်ချခြင်းကြောင့် လမ်းပိတ်ဆို့မှုများ အနည်းဆုံးဖြစ်စေရန် လူသွားလူလာ မများသောအချိန်များတွင် စီစဉ်ဆောင်ရွက်မည်ဖြစ်ပါ သည်။ စက်ရုံ၏ပတ်ဝန်းကျင် လမ်းမပေါ် ယာဉ်သွားလာမှု အခြေအနေများကို အချိန်နှင့်တပြေးညီ စောင့်ကြပ်ကြည့်ရှုပြီး လိုအပ်ပါက ယာဉ်အသွားအလာ စီမံခန့်ခွဲမှု မဟာဗျူဟာများကို ပြင်ဆင်ပြုလုပ်သွားမည်ဖြစ်ပါသည်။

ပိတ်သိမ်းစဉ်ကာ

စက်ရုံပိတ်သိမ်းရေးအဆင့်တွင် ပတ်ဝန်းကျင်အပေါ် ဖြစ်ပေါ်နိုင်သည့် အကျိုးသက်ရောက်မှုများတွင် ဖျက်သိမ်းလုပ်ငန်းများမှ ထွက်ရှိနိုင်သော ဖုန်မှုန့်နှင့် အခိုးအငွေ့များကြောင့်ဖြစ်သည့် လေထုညစ်ညမ်းခြင်း၊ စက်ပစ္စည်းအသုံးပြုမှုကြောင့် ဖြစ်သော ဆူညံသံညစ်ညမ်းမှု၊ ဆောက်လုပ်ရေးသုံး အကြွင်းအကျန်ပစ္စည်းများ ကဲ့သို့သော စွန့်ပစ်ပစ္စည်းများ၊ အလုပ်သမားများ၏ လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်များ ပါဝင်နိုင်ပါသည်။ ဤအကျိုးသက်ရောက်မှုများကို လျှော့ချနိုင်ရန် ဖုန်မှုန့်ထွက်ရှိခြင်းကို ရေဖြန်းခြင်း ကဲ့သို့သော လုပ်ငန်းများကို ဆောင်ရွက်ခြင်း၊ အခိုးအငွေ့ထွက်ရှိခြင်းနှင့် ဆူညံသံများကို အနည်းဆုံးဖြစ်စေရန် စက်ပစ္စည်းများကို ပြုပြင်ထိန်းသိမ်းခြင်းများ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ စွန့်ပစ်ပစ္စည်းများကို သေချာခွဲခြား စီမံပြီး ပြန်လည်အသုံးပြုနိုင်သော ပစ္စည်းများကို ခွင့်ပြုထားသော နေရာများသို့ ပို့ဆောင်ရောင်းချပြီး ပြန်လည်အသုံးမပြုနိုင်သော ပစ္စည်းများကို တာဝန်ယူစွန့်ပစ်မည်ဖြစ်ပါသည်။ ဝန်ထမ်းများအတွက် တစ်ကိုယ်ရေကာကွယ်ရေးသုံးပစ္စည်းများကို ပံ့ပိုးပေးပြီး ဘေးအန္တရာယ်ကင်းရှင်းရေး သင်တန်းများနှင့် ကြီးကြပ်မှုများကို ပုံမှန်ဆောင်ရွက်ခြင်းဖြင့် မတော်တဆမှုများကို အနည်းဆုံးဖြစ်စေရန် ဆောင်ရွက် မည်ဖြစ်ပါသည်။ ပိတ်သိမ်းမှုအပြီးတွင် စက်ရုံမြေနေရာကို မူလအခြေအနေသို့ ပြန်လည်ဖြစ်လာစေရန် မြေပြင်ကိုပြန်လည်ပြုပြင်ခြင်း၊ အပင်ပြန်လည်စိုက်ပျိုးခြင်းကဲ့သို့သော ပြန်လည်ထိန်းသိမ်းရေး လုပ်ငန်းများ ကို ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။

ဖြစ်ပေါ်နိုင်သော ကောင်းကျိုးသက်ရောက်မှုများနှင့် တိုးပွားလာစေရေးနည်းလမ်းများ

စီမံကိန်းသည် တည်ဆောက်ရေးအဆင့်၊ လုပ်ငန်းလည်ပတ်ရေးအဆင့်နှင့် ပိတ်သိမ်းရေးအဆင့် တို့တွင် အလုပ်အကိုင်အခွင့်အလမ်းများကို ဖန်တီးပေးခြင်းအားဖြင့် ဒေသခံ စီးပွားရေး ဖွံ့ဖြိုးတိုးတက်ခြင်းကို ထောက်ပံ့ပေးပါသည်။ ဆောက်လုပ်ရေးအဆင့်တွင် ကျွမ်းကျင်အလုပ်သမားများနှင့် အထွေထွေ အလုပ်သမားများကို အလုပ်ခန့်အပ်ခြင်းဖြင့် ဒေသခံ စီးပွားရေးကို တိုးပွားစေပြီး ဝန်ထမ်းများနှင့် ၎င်းတို့၏မိသားစုများ အတွက် ဝင်ငွေရရှိစေပါမည်။ စက်ရုံလည်ပတ်မှုအဆင့်တွင် စက်ရုံဝန်ထမ်းများ၊ စီမံခန့်ခွဲရေး ဝန်ထမ်းများနှင့် ပြုပြင်ထိန်းသိမ်းရေးဝန်ထမ်းများအတွက် ရေရှည်အလုပ်အကိုင်များ

ဖန်တီးပေးမည်ဖြစ်ပြီး စားဝတ်နေရေး အဆင်ပြေစေရန်အတွက် ထောက်ပံ့ပေးပါသည်။ ပိတ်သိမ်းရေး အဆင့်တွင်လည်း ရေကို အလုပ်အကိုင်များ ဖန်တီးပေးပြီး ဖြိုဖျက်ရေးလုပ်ငန်းများနှင့် မြေနေရာပြန်လည် ထိန်းသိမ်းရေးလုပ်ငန်းများတွင် ဝန်ထမ်းများ၏ ပြောင်းလဲမှုကာလအတွင်း ငွေကြေးအဆင်ပြေစေမည်ဖြစ် ပါသည်။ ဒေသခံပြည်သူများကို အကျိုးကျေးဇူးများ အများဆုံးရရှိစေရန် စီမံကိန်းအဆိုပြုသူသည် ဒေသခံ လုပ်သားများကို ဦးစားပေးခန့်အပ်ခြင်း၊ ရေရှည်အလုပ်အကိုင် ရရှိနိုင်ရေးအတွက် ကျွမ်းကျင်မှုတိုးတက်ရေး နှင့် စွမ်းရည်ဖွံ့ဖြိုးရေး အစီအစဉ်များ ပံ့ပိုးပေးခြင်း၊ အဆင့်အားလုံးတွင် သင့်တော်သော လစာနှင့် မျှတသော အလုပ်ခွင်အလမ်းများကို ပံ့ပိုးပေးခြင်း၊ အထူးသဖြင့် အမျိုးသမီးများနှင့် လူနည်းစုလူမျိုးစုများအတွက် တန်းတူအလုပ်အကိုင် အခွင့်အလမ်းများကို ဦးစားပေး ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်

စီမံကိန်းကို ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာမည့် သက်ရောက်မှုများကို ဆန်းစစ်ရန်နှင့် လျော့ချရေးနည်းလမ်းများကို စဉ်ဆက်မပြတ် ဆောင်ရွက်ရန်အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ကိုရေးဆွဲရန် လိုအပ်ပါသည်။ EMP ကို မြန်မာနိုင်ငံအစိုးရ၏ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေများနှင့် စည်းမျဉ်းများအရ လည်းလိုအပ်ပါသည်။ စီမံကိန်း၏ EMP ကို အောက်ပါ (၈) ချက်အတိုင်း ရေးဆွဲထား ပါသည်။

- ❖ လေထုညစ်ညမ်းမှုစီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ ဆူညံသံညစ်ညမ်းမှုစီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ ရေညစ်ညမ်းမှုစီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ မြေညစ်ညမ်းမှုစီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ စွန့်ပစ်အမှိုက်စီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်စီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ မီးဘေးအန္တရာယ်စီမံခန့်ခွဲမှုအစီအစဉ်
- ❖ အရေးပေါ်တုံ့ပြန်မှုနှင့် သဘာဝဘေးအန္တရာယ် စီမံခန့်ခွဲမှုအစီအစဉ်

စီမံကိန်း၏ လက်ရှိအဆင့်မှာ လည်ပတ်နေပြီးဖြစ်သောကြောင့် တည်ဆောက်ခြင်းအဆင့်အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် ပတ်ဝန်းကျင်စောင့်ကြည့်မှုအစီအစဉ်ကို အစီရင်ခံစာတွင် မပါဝင်ပါ ။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု လုပ်ဆောင်ချက်များကို အောက်တွင် ဖော်ပြထားပြီး အသေးစိတ်ကျသော ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်များကို အခန်း (၆) တွင် ဖော်ပြထားပါသည်။

လေထုညစ်ညမ်းခြင်းစီမံခန့်ခွဲမှု လုပ်ငန်းများ - လုပ်ငန်းလည်ပတ်ခြင်းအဆင့်တွင် လေထုညစ်ညမ်းခြင်း စီမံခန့်ခွဲမှု အစီအမံများတွင် ဘျိုလ်လာမှ ထွက်လာသော အမှုန်အမွှားများကို ဖမ်းရန် cyclone separators နှင့် smoke boxes တပ်ဆင်ခြင်း၊ လေထုညစ်ညမ်းမှုများ ပျံ့နှံ့မှုကို ထိရောက်စေရန်အတွက် မီးခိုးခေါင်းတိုင်အမြင့် (stack height) ကို လုံလောက်စွာ တပ်ဆင်ခြင်းတို့ ပါဝင်ပါသည်။ မီးစက်များနှင့် ယာဉ်များကို ပုံမှန်

ပြုပြင်ထိန်းသိမ်းမှုများ ပြုလုပ်ပြီး ထုတ်လွှတ်မှုများကို လျော့ချသည့်အပြင် မီးစက်မှ ထုတ်လွှတ်မှုများကို လျော့ချရန် ဆိုလာစွမ်းအင်ကို တပ်ဆင်ထားပါသည်။ အမှိုက်များကို မီးရှို့ခြင်းကို ပြင်းပြင်းထန်ထန် တားမြစ်ထားပြီး၊ ဖုန်မှုန့်ပျံ့နှံ့မှုကို ထိန်းချုပ်ရန် ရေဖြန်းခြင်းကို ပုံမှန်ဆောင်ရွက်သွားမည်ဖြစ်သည်။ ပိတ်သိမ်းခြင်းအဆင့်တွင် လေထုညစ်ညမ်းခြင်း စီမံခန့်ခွဲမှု အစီအမံများသည် ဖုန်မှုန့်နှင့် ဓာတ်ငွေ့ ထုတ်လွှတ်မှုကို လျော့နည်းစေရန် အဓိကထားဆောင်ရွက်မည်ဖြစ်သည်။ ဖုန်မှုန့်ထွက်ရှိမှုများကို လျော့ချရန် မြေသားလမ်းများနှင့် ဆောက်လုပ်ရေးလုပ်ငန်းခွင်ကို ရေဖြန်းခြင်းများပြုလုပ်ပြီး မြေနှင့် အမှိုက်များ သယ်ယူပို့ဆောင်ခြင်းနှင့် သိုလှောင်ရာတွင် ဖုန်မှုန့်များ ပျံ့နှံ့ခြင်းကို ကာကွယ်ရန် အကာအကွယ်ဖြင့် ဖုံးအုပ်ပြီး သယ်ယူပို့ဆောင်ပါမည်။ ထို့အပြင် အခိုးအငွေ့ထုတ်လွှတ်မှုကို လျော့နည်းစေရန်နှင့် ထိရောက်သော လောင်စာလောင်ကျွမ်းခြင်းဖြစ်စေရန် ယာဉ်နှင့် စက်ပစ္စည်းကိရိယာများကို ပုံမှန် ပြုပြင်ထိန်းသိမ်း ထားမှုများ ပြုလုပ်မည်ဖြစ်ပါသည်။

ဆူညံသံညစ်ညမ်းခြင်းစီမံခန့်ခွဲမှု လုပ်ငန်းများ - လုပ်ငန်းလည်ပတ်ခြင်းအဆင့်တွင် ဆူညံသံဖြစ်ပွားခြင်း စီမံခန့်ခွဲရေး အစီအမံများတွင် အသံလုံမီးစက်များကို အသုံးပြုခြင်း၊ မီးစက်အသုံးပြုခြင်းမှ ထွက်ရှိသော ဆူညံသံကို လျော့ချပေးနိုင်ရန်အတွက် ဆိုလာစွမ်းအင်ကို အသုံးပြုခြင်း၊ ပျက်စီးခြင်းကြောင့် ထွက်ရှိသော ဆူညံသံကို လျော့ချရန် ယာဉ်နှင့် စက်ပစ္စည်းကိရိယာများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းခြင်းများ ပြုလုပ်ခြင်းနှင့် အလုပ်သမားများအတွက် လိုအပ်သည့်အခါ နားကြပ်ကိရိယာများ ထောက်ပံ့ပေးခြင်းများ ပါဝင်ပါသည်။ ထို့အပြင် စက်ရုံဝင်းပတ်လည်တွင် ဆူညံသံဖြစ်ပွားခြင်းကို သဘာဝအတိုင်း တားဆီးနိုင်ရန် သစ်ပင်များ စိုက်ပျိုးထားပါသည်။ ပိတ်သိမ်းခြင်းအဆင့်တွင် ဆူညံသံထိန်းချုပ်ရေးအတွက် လုပ်ဆောင်မှုများမှာ ဆူညံသံ ထွက်ရှိမှုများကို နေ့လယ်ပိုင်းအချိန်တွင်သာ ကန့်သတ်ပြီး လုပ်ဆောင်ခြင်း၊ ဆူညံသံပိုများစေခြင်းမရှိစေရန် ယာဉ်များနှင့် စက်ကိရိယာများကို ပြုပြင်ထိန်းသိမ်းခြင်း၊ အနီးနားနေထိုင်သူများကို ဆူညံသံထွက်ရှိမည့် လုပ်ဆောင်မှုများအကြောင်း ကြိုတင်အသိပေးခြင်း၊ ဆူညံသံအဆင့်များကို နိုင်ငံတော်၏ စည်းမျဉ်းများ၊ စံချိန်စံနှုန်းများနှင့် ကိုက်ညီမှုရှိစေရန် စောင့်ကြပ်ကြည့်ရှုခြင်းများ ပါဝင်ပါသည်။

ရေညစ်ညမ်းမှု စီမံခန့်ခွဲခြင်း လုပ်ငန်းများ - လုပ်ငန်းလည်ပတ်ခြင်းအဆင့်တွင် ရေညစ်ညမ်းမှု စီမံခန့်ခွဲရေး အတွက် အစီအစဉ်များမှာ သင့်လျော်သော ရေမြောင်းစနစ်ကို ပိတ်ဆို့ခြင်းမရှိအောင် ပုံမှန်သန့်ရှင်းရေးများ လုပ်ဆောင်ကာ ထိန်းသိမ်းထားရှိခြင်း၊ အလုပ်သမားသုံးစွန့်ပစ်ရေနှင့် ဘျိုလ်လာမှထွက်သော စွန့်ပစ်ရေကို ရေမြောင်းနှင့် သဘာဝအနည်ထိုင်ကန်ကို ဖြတ်သန်းစီးဆင်းစေပြီး ပြင်ပရေမြောင်းသို့ စွန့်ပစ်ခြင်း၊ အသုံးပြုပြီးသော ဆီများကို ခွင့်ပြုထားသော အန္တရာယ်ရှိသော အမှိုက်စီမံသူများနှင့် ချိတ်ဆက်စွန့်ပစ်ခြင်း၊ ဘျိုလ်လာမှ ထွက်သော စွန့်ပစ်ရေ၊ စက်ရုံမှထွက်ရှိသော အလုပ်သမားသုံးစွန့်ပစ်ရေနှင့် မြေအောက်ရေများ၏ ရေအရည်အသွေးကို ပုံမှန်စစ်ဆေးခြင်းများ လုပ်ဆောင်ခြင်း အစရှိသည်တို့ ဖြစ်ပါသည်။ ပိတ်သိမ်းခြင်း အဆင့်တွင် လောင်စာများကို သတ်မှတ်ထားသည့်နေရာများတွင် သိုလှောင်ပြီး ပုံမှန်စစ်ဆေးမှု များပြုလုပ်ခြင်း၊ အလုပ်သမားများအတွက် ယာယီသန့်ရှင်းရေးစနစ်များကို ထောက်ပံ့ပြုလုပ်ထားပြီး

ပြုပြင်ခြင်းများ ပြုလုပ်ခြင်း၊ ရေမြောင်းစနစ်ကို သင့်လျော်စွာတည်ဆောက်ပြီး ပုံမှန်သန့်ရှင်းရေး ပြုလုပ်ခြင်း များ ပါဝင်သည်။

မြေညစ်ညမ်းမှု စီမံခန့်ခွဲရေး လုပ်ငန်းများ - မြေအရည်အသွေးကို ထိန်းသိမ်းရန်အတွက် စက်ရုံသည် စွန့်ပစ်အမှိုက်စနစ်တကျစီမံခန့်ခွဲမှု စနစ်တစ်ခုကို အကောင်အထည်ဖော် ဆောင်ရွက်မည်ဖြစ်ပြီး အဆိုပါ စနစ်တွင် အမှိုက်များကို အမျိုးအစားလိုက် သီးခြားခွဲခြားခြင်း၊ ပြန်လည်အသုံးပြုခြင်းနှင့် ဒေသဆိုင်ရာ ဥပဒေများနှင့် စည်းမျဉ်းများနှင့် အညီစွန့်ပစ်ခြင်းတို့ ပါဝင်ပါသည်။ ဆီယိုဖိတ်မှုများကို ကာကွယ်ရန် မော်တော်ယာဉ်များနှင့် စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းမှုများ ပြုလုပ်ပါမည်။ အချိန်မီ ညစ်ညမ်းမှုကို သိရှိနိုင်ရန် မြေအရည်အသွေးကို စောင့်ကြပ်ကြည့်ရှုမှုများ ပြုလုပ်ပါမည်။ ထို့အပြင် မီးလုံးများ၊ အသုံးပြုပြီးသော ဘက်ထရီများနှင့် အသုံးပြုပြီးသော ဆီများကဲ့သို့သော အန္တရာယ်ရှိသော အမှိုက်များကို အခြားအမှိုက်များနှင့် သီးခြားသိမ်းဆည်းပြီး ဒေသဆိုင်ရာ ဥပဒေများနှင့် စည်းမျဉ်းများအတိုင်း စွန့်ပစ်မည်ဖြစ်ပါသည်။

စွန့်ပစ်အမှိုက်စီမံခန့်ခွဲခြင်း လုပ်ငန်းများ - လုပ်ငန်းလည်ပတ်မှုအဆင့်တွင် စွန့်ပစ်အမှိုက် စီမံခန့်ခွဲရေးအနေဖြင့် အစားအစာကျန်၊ ပလတ်စတစ်နှင့် အထည်ဖြတ်စ အမှိုက်များ ကဲ့သို့သော အန္တရာယ်မရှိသော အမှိုက်များကို သတ်မှတ်ထားသော အမှိုက်ပုံးများတွင် သီးခြား စုဆောင်းထားပါမည်။ အထည်ဖြတ်စ အမှိုက်များကို ဘွိုင်လာတွင် လောင်စာအဖြစ် ပြန်လည်အသုံးပြုမည်ဖြစ်ပြီး အခြားအန္တရာယ်မရှိသော အမှိုက်များကို သတ်မှတ်ထားသော နေရာတွင် ယာယီသိမ်းဆည်း မည်ဖြစ်ပါသည်။ ဘွိုင်လာမှ ထွက်ရှိသော ပြာများကို စက်ရုံဝန်းအတွင်းတွင် မြေဖိုရန်အတွက် အသုံးပြုမည်ဖြစ်ပါသည်။ အသုံးပြုပြီးသော မီးလုံးများ၊ ဘက်ထရီများနှင့် ဆီများ ကဲ့သို့သော အန္တရာယ်ရှိသော အမှိုက်များကို လုံခြုံစွာ သိမ်းဆည်းပြီး ခွင့်ပြုထားသော အမှိုက်စီမံခန့်ခွဲသည့် အဖွဲ့များနှင့် ချိတ်ဆက် စွန့်ပစ်မည်ဖြစ်ပါသည်။ အပ်များနှင့် ဓါးများကဲ့သို့သော စူးရှသော အမှိုက်များကို သီးခြားအလုပ်ပိတ်ပုံးများတွင် သိမ်းဆည်းပြီး လုံခြုံစွာ စွန့်ပစ်မည်ဖြစ်ပါသည်။ ထို့အပြင် အီလက်ထရွန်နစ်အမှိုက်များကို စည်းမျဉ်းများနှင့် ကိုက်ညီစွာ စီမံခန့်ခွဲ မည်ဖြစ်ပါသည်။ ယာယီအမှိုက်သိုလှောင်ထားသောနေရာများကို ယိုစိမ့်မှုမဖြစ်စေရန်နှင့် နေရာဆန့်မဆန့် သိရှိနိုင်ရန် စစ်ဆေးမှုများကို ပုံမှန်ပြုလုပ်မည်ဖြစ်ပါသည်။ စက်ရုံပိတ်သိမ်းခြင်းအဆင့်တွင် လောင်စာများကို သတ်မှတ်ထားသောနေရာများတွင် သိမ်းဆည်းကာ ယိုစိမ့်မှုမရှိစေရန် ပုံမှန်စစ်ဆေးမှုများ ပြုလုပ်မည်ဖြစ် ပါသည်။ ထို့အပြင် အန္တရာယ်ရှိသော အမှိုက်များကို စည်းမျဉ်းစည်းကမ်းများနှင့်အညီစီမံခန့်ခွဲမည့် အမှိုက် စနစ်တစ်ခု လုပ်ဆောင်မည်ဖြစ်ပါသည်။

လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး စီမံခန့်ခွဲမှု လုပ်ငန်းများ - လုပ်ငန်းလည်ပတ်မှု အဆင့်တွင် လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးဆိုင်ရာ အစီအမံများမှာ အရေးပေါ်ကုသ နိုင်ရန် ဆေးသေတ္တာနှင့် အရေးပေါ်ဆေးကုသရေးအတွက် သူနာပြုတစ်ဦးရှိသော ဆေးကုသခန်းကို ထောက်ပံ့ပေးခြင်း၊ အပူနှင့်ဖုန်မှုန့်များကို လျှော့ချနိုင်ရန် စနစ်ကျသော လေဝင်လေထွက်စနစ်များ တပ်ဆင်ခြင်း၊ အလုပ်လိုအပ်ချက်များအပေါ်မူတည်၍ လက်အိတ်များ၊ နှားခေါင်းစည်းနှင့် နှားကြပ်များ ကဲ့သို့သော တစ်ကိုယ်ရကာကွယ်ရေးသုံးပစ္စည်းများ ထောက်ပံ့ပေးခြင်းနှင့် အလုပ်သမားများနှင့် ဧည့်သည်

များအား ဖြစ်ပေါ်နိုင်သော အန္တရာယ်များကို သတိပေးရန် အရေးကြီးနေရာများတွင် အန္တရာယ်သင်္ကေတ ဆိုင်းဘုတ်များ ထောင်ထားခြင်းတို့ ဆောင်ရွက်မည်ဖြစ်ပြီး မတော်တဆမှုများရှိပါက မှတ်တမ်းများထားရှိပြီး စက်ရုံဒါရိုက်တာအား လစဉ်အစီရင်ခံစာ တင်ပြပေးသွားမည်ဖြစ်ပါသည်။ ပိတ်သိမ်းရေးအဆင့်တွင် အလုပ်သမားများကို ကာကွယ်ရန် ဘေးအန္တရာယ်ကင်းရှင်းရေးမူဝါဒနှင့် အစီအစဉ်တစ်ခု ချမှတ်ပြီး၊ လုပ်ငန်း သဘာဝအခြေအနေအပေါ်မူတည်၍ တစ်ကိုယ်ရေကာကွယ်ရေးသုံးပစ္စည်းများ ထောက်ပံ့ပေးခြင်းနှင့် အန္တရာယ်ရှိသည့်နေရာများတွင် သတိပေးဆိုင်းဘုတ်များ ထောင်ထားခြင်းတို့ကို လုပ်ဆောင်သွားမည်ဖြစ် ပါသည်။ အရေးပေါ်သုံး ဆေးသေတ္တာများကို လုပ်ငန်းခွင်အတွင်း ထောက်ပံ့ပေးထားခြင်း၊ ဘေးအန္တရာယ် ကင်းရှင်းရေးသင်တန်းများပို့ချခြင်းနှင့် အစီအစဉ်များကို လိုက်နာရန် ကြီးကြပ်ရေးမှူးများ ခန့်အပ်မည်ဖြစ် ပါသည်။ လိုက်နာမှုအားမြှင့်တင်ရန် အကျိုးခံစားခွင့်အစီအစဉ်များဖြင့် လှုံ့ဆော်မည်ဖြစ်ပြီး လိုက်နာမှုမရှိသူ များကို ပြစ်ဒဏ်ပေးမည်ဖြစ်ပါသည်။

မီးဘေးအန္တရာယ်စီမံခန့်ခွဲမှု လုပ်ငန်းများ - စက်ရုံသည် မီးသတ်နှင့် အရေးပေါ်မီးဘေးအန္တရာယ် စီမံခန့်ခွဲမှု စနစ်များကို စနစ်တကျစီမံရေးဆွဲပြီး တည်ဆောက်ထားပါသည်။ ထိုစနစ်များတွင် မီးသတ်ဆေးဗူးများ၊ မီးသတ်ပိုက်များ၊ မီးသတ်ပေးစနစ်များ နှင့် ၁၅,၀၀၀ ဂါလံဆွဲသော မီးသတ်ရေကန်တို့ ပါဝင်ပါသည်။ အရေးပေါ်ထွက်ပေါက်အချက်ပြဆိုင်းဘုတ်များကို ရှင်းလင်းစွာပြသထားပြီး၊ အရေးပေါ်အခြေအနေတွင် တစ်ကိုယ်ရေဘေးအန္တရာယ်ကင်းရှင်းရေးအတွက် လုပ်ထုံးလုပ်နည်းများနှင့် အရေးပေါ်မီးဘေးအန္တရာယ် စီမံခန့်ခွဲရေးအဖွဲ့ကို ဖွဲ့စည်းထားပါသည်။ စက်ရုံ၏ နေရာများအားလုံးတွင် လုံခြုံရေးအတွက် လုံလောက်သော မီးသတ်ပစ္စည်းများကို ထားရှိထားပြီး၊ မီးသတ်ပစ္စည်းများ အခြေအနေကို ကျွမ်းကျင်သူများမှ စစ်ဆေးပြီး မှတ်တမ်းစာအုပ်တွင် မှတ်တမ်းတင်ထားပါသည်။ စက်ရုံဝန်ထမ်းအားလုံးကို မီးသတ်ပစ္စည်းအသုံးပြုနည်းများနှင့် ပတ်သက်၍ သင်ကြားပေးမည်ဖြစ်ပြီး၊ မီးလောင်မှု အရေးပေါ်တုံ့ပြန်ရေး လမ်းညွှန်ချက်များကို ရှင်းလင်းသောနေရာတွင် ချိတ်ဆွဲထားမည်ဖြစ်ပါသည်။ "ဆေးလိပ်မသောက်ရ" သင်္ကေတများကို မီးလောင်မှုဖြစ်နိုင်သောနေရာများတွင် သိသာထင်ရှားစွာပြသထားပြီး၊ မီးလောင်မှုဖြစ်ပွားပါက အနီးဆုံးမီးသတ်စခန်းသို့ ချက်ချင်း သတင်းပေးကာ ဆောင်ရွက်သွားမည်ဖြစ်ပါ သည်။ အရေးပေါ်ထွက်ပြေးလမ်းကြောင်းများကို စက်ရုံအတွင်းအနေနဲ့ ရှင်းလင်းစွာပြသထားပါသည်။

အရေးပေါ်အခြေအနေ တုံ့ပြန်ခြင်းနှင့် ဘေးအန္တရာယ် စီမံခန့်ခွဲခြင်း လုပ်ငန်းများ - ရေကြီးမှုဘေးအန္တရာယ်ကို စနစ်ကျသော ရေမြောင်းစနစ်များ ဆောက်လုပ်ခြင်း၊ ရေမြောင်းများကို ပိတ်ဆို့ခြင်းမရှိစေရန် ရှင်းလင်းခြင်း၊ အချိန်နှင့် တပြေးညီသတိပေးချက်များ ထုတ်ပြန်နိုင်ရန် ရာသီဥတုအခြေအများနှင့် မြစ်ရေအခြေအနေကို သတင်းများကို စောင့်ကြည့်နားထောင်ခြင်းနှင့် အတူ အရေးပေါ်သုံးဆေးသတ္တာများ၊ သောက်သုံးရေများ၊ အစားအစာ ကဲ့သို့သော အရေးပေါ်ထောက်ပံ့မှုများ နှင့် ကယ်ဆယ်ရေး လုပ်ထုံးလုပ်နည်းများပါဝင်သည့် တုံ့ပြန်အစီအစဉ်များကို ရေးဆွဲဆောင်ရွက်ပါမည်။ ဆိုင်ကလုန်းမုန်တိုင်း အန္တရာယ်ကင်းရှင်းရေးအတွက် အချိန်မီသတိပေးချက်များရရန် ဆက်သွယ်ရေးစနစ်များကို ထိန်းသိမ်းထားခြင်း၊ ဘေးအန္တရာယ်စီမံခန့်ခွဲမှု တာဝန်ခံများနှင့် ဆက်သွယ်ဆောင်ရွက်ခြင်း နှင့် မုန်တိုင်း မဖြစ်ပွားမီ ဖြစ်ပွားနေချိန်နှင့်

ဖြစ်ပွားပြီးအချိန်အတွင်း လုပ်ဆောင်ရွက်ရမည့် လုပ်ထုံးလုပ်နည်းများကို ဝန်ထမ်းများကို လေ့ကျင့်သင်ကြားပေးခြင်းတို့ ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ မြေပြိုမှုအန္တရာယ်များအား သစ်ပင်များစိုက်ပျိုးခြင်းကဲ့သို့သော မြေဆီလွှာတိုက်စားမှု ကာကွယ်ရေးအစီအမံများနှင့် ဝန်ထမ်းများကို မြေပြိုမှုအန္တရာယ်ဖြစ်ပေါ်လျှင် ပြုလုပ်သင့်သည့် တုံ့ပြန်မှုလုပ်ထုံးလုပ်နည်းဆိုင်ရာ သင်တန်းများကို ထောက်ပံ့ပေးခြင်းဖြင့် လျှော့ချသွားမည်ဖြစ်ပါသည်။ ငလျင်ဖြစ်ပွားမှုအန္တရာယ်များအတွက် “လုပ်သင့်သည်အရာများနှင့် မလုပ်သင့်သည့်အရာများ” ကဲ့သို့သော ဘေးအန္တရာယ်ကင်းရှင်းရေး လမ်းညွှန်ချက်များကို သင်တန်းပေးခြင်းဖြင့် ဘေးအန္တရာယ်ဖြစ်ပွားခြင်းကို လျှော့ချသွားပါမည်။ ထို့ပြင် အနီးအနားရှိ ဆေးရုံများ၊ ရဲစခန်းများနှင့် မီးသတ်စခန်းများ၏ အရေးပေါ်ဆက်သွယ်ရန်အချက်အလက်များကို အများပြည်သူများ မြင်သာသောနေရာများတွင် အန္တရာယ်အားလုံးအတွက် အဆင်သင့်ဆက်သွယ်နိုင်စေရန် ချိတ်ဆွဲပြသထားမည်ဖြစ်ပါသည်။

ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း၏ အပိုဒ် ၁၀၈ အရ စီမံကိန်းအဆိုပြုသူသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်၏ အချိန်ဇယားတွင် ဖော်ပြထားသော စောင့်ကြည့်မှုအစီရင်ခံစာကို ၆ လ တစ်ကြိမ်၊ သို့မဟုတ် ဝန်ကြီးဌာနက သတ်မှတ်သော အချိန်အတိုင်း ဝန်ကြီးဌာနသို့ တင်ပြမည်ဖြစ်ပါ သည်။ တည်ဆောက်ရေးအဆင့်နှင့် လုပ်ငန်းလည်ပတ်ရေး အဆင့်များအတွက် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်များကို ဇယား-၃ တွင် ဖော်ပြထားသည်။

ဇယား-၃: ပတ်ဝန်းကျင်စောင့်ကြည့်မှုအစီအစဉ်

စဉ်	စောင့်ကြပ် ကြည့်ရှုမည့် အပိုင်း	ပါရာမီတာများ	အကြိမ်ရေ	တာဝန်ရှိသော အဖွဲ့အစည်း	တည်နေရာ
လုပ်ငန်းလည်ပတ်စဉ်ကာလ					
၁	လေအရည်အသွေး	ဝန်းကျင်လေအရည် အသွေး (SO ₂ , NO ₂ , PM _{2.5} , PM ₁₀ and O ₃)	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	စက်ရုံဝန်းအတွင်း (မြောက်လတ္တီတွဒ် ၁၆° ၄' ၃၃.၅၃" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃' ၂၉.၁၇")
	း	မီးခိုးခေါင်းတိုင် လောင်ကျွမ်း အခိုးအငွေ့ (O ₂ , CO, CO ₂ , NO and SO ₂)	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည်	ဘျိုလ်လာ မီးခိုးခေါင်းတိုင် (မြောက်လတ္တီတွဒ် ၁၆° ၄' ၃၄.၁၅" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃' ၂၆.၉၉")

စဉ်	စောင့်ကြပ် ကြည့်ရှုမည့် အပိုင်း	ပါရာမီတာများ	အကြိမ်ရေ	တာဝန်ရှိသော အဖွဲ့အစည်း	တည်နေရာ
				ဖြစ်သည်။	မီးစက် မီးခိုးခေါင်းတိုင် (မြောက်လတ္တီတွဒ် ၁၈° ၄' ၃၂.၇၁" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃' ၂၇.၅၆")
		လုပ်ငန်းခွင် လေအရည်အသွေး (SO ₂ , NO ₂ , PM _{2.5} , PM ₁₀ and O ₃)	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	စက်ချုပ်သည့်နေရာ (မြောက်လတ္တီတွဒ် ၁၈° ၄' ၃၅.၂၉" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃' ၂၇.၆၁")
၂။	ဆူညံသံအဆင့်	ဝန်းကျင်ဆူညံသံ အဆင့်	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	စက်ရုံဝန်းအတွင်း (မြောက်လတ္တီတွဒ် ၁၈° ၄' ၃၃.၅၃" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃' ၂၉.၁၇")
		လုပ်ငန်းခွင် ဆူညံသံ အဆင့်	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	လုပ်ငန်းခွင်နေရာ (စက်ချုပ်သည့် နေရာ၊ အရည်အသွေး စစ်ဆေးသည့် နေရာ၊ လက်ချုပ်နှင့် ဖြတ်တောက် သည့် နေရာကြား၊ ဖြတ်တောက်သည့်)
၃။	ရေအရည်အသွေး	တွင်းရေ (pH, Colour, Turbidity, TDS, Hardness, Chloride, Nitrite, Arsenic, Iron, Lead, Manganese, Sulfate and Total coliform count)	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	တွင်းရေ (မြောက်လတ္တီတွဒ် ၁၈° ၄' ၃၂.၈၁" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃' ၂၇.၂၃")

စဉ်	စောင့်ကြပ် ကြည့်ရှုမည့် အပိုင်း	ပါရာမီတာများ	အကြိမ်ရေ	တာဝန်ရှိသော အဖွဲ့အစည်း	တည်နေရာ
		စွန့်ပစ်ရေ (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	စွန့်ပစ်ရေ အထွက် (မြောက်လတ္တီတွဒ် ၈° ၄'၃၇.၉၆" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃'၂၆.၇၆")
		ဘိုင်းလာစွန့်ပစ်ရေ (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	ဘိုင်းလာစွန့်ပစ်ရေ (မြောက်လတ္တီတွဒ် ၈° ၄'၃၄.၄၅" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃'၂၆.၃၃")
၄။	မြေအရည်အသွေး	Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH,	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့မှ တတိယ အဖွဲ့အစည်း အားဆက်သွယ် ဆောင်ရွက်မည် ဖြစ်သည်။	မြောက်လတ္တီတွဒ် ၈° ၄'၃၃" နှင့် အရှေ့လောင်ဂျီတွဒ် ၉၅° ၄၃'၂၆.၁၄")

စဉ်	စောင့်ကြပ် ကြည့်ရှုမည့် အပိုင်း	ပါရာမီတာများ	အကြိမ်ရေ	တာဝန်ရှိသော အဖွဲ့အစည်း	တည်နေရာ
		Total Alkalinity and Total Iron			
၅။	စွန့်ပစ်အမှိုက် စီမံခန့်ခွဲမှု	အန္တရာယ်မရှိသော စွန့်ပစ်အမှိုက်နှင့် အန္တရာယ်ရှိ စွန့်ပစ်အမှိုက် ထွက်ရှိမှု ပမာဏနှင့် အမျိုးအစား	လစဉ်	ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့	လုပ်ငန်းခွင်နေရာ နှင့် စက်ရုံဝန်းအတွင်း
၆။	လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး	မတော်တဆမှုများ မှတ်တမ်းတင်ခြင်း၊ တစ်ကိုယ်ရေ ကာကွယ်သုံးပစ္စည်း များ နှင့် အရေးပေါ်သုံး ဆေးသေတ္တာ	လစဉ်	လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးအဖွဲ့	လုပ်ငန်းခွင်နေရာ နှင့် စက်ရုံဝန်းအတွင်း
၇။	မီးဘေးအန္တရာယ်	မီးသတ်ကိရိယာ အခြေအနေ နှင့် လုံလောက်မှု	လစဉ်	မီးသတ်အဖွဲ့	လုပ်ငန်းခွင်နေရာ နှင့် စက်ရုံဝန်းအတွင်း
၈။	အရေးပေါ်တုံ့ပြန် ရေး နှင့် ဘေးအန္တရာယ် စီမံခန့်ခွဲမှု	အရေးပေါ်တုံ့ပြန်ရေး ပစ္စည်း ကိရိယာ	လစဉ်	အရေးပေါ် တုံ့ပြန်ရေးအဖွဲ့	လုပ်ငန်းခွင်နေရာ နှင့် စက်ရုံဝန်းအတွင်း
ပိတ်သိမ်းစဉ်ကာလ					
၁။	လေအရည်သွေး	ဝန်းကျင်လေအရည် အသွေး (NO ₂ , PM ₁₀ , PM _{2.5} , SO ₂ , NH ₃ , CO ₂ , CO, Temperature, VOC, O ₃ , O ₂ , wind speed and wind direction	တစ်ကြိမ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	လုပ်ငန်းခွင် အတွင်း သင့်လျော်သော နေရာ
၂။	ရေအရည်အသွေး	မြေအောက်ရေ အရည်အသွေး (Aluminium, arsenic, chloride, cyanide, manganese, pH,	တစ်ကြိမ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	လုပ်ငန်းခွင်သုံး ရေကန်

စဉ်	စောင့်ကြပ် ကြည့်ရှုမည့် အပိုင်း	ပါရာမီတာများ	အကြိမ်ရေ	တာဝန်ရှိသော အဖွဲ့အစည်း	တည်နေရာ
		sulphate, total alkalinity as CaCO ₃ , TDS, total hardness as CaCO ₃ , total iron, turbidity) စွန့်ပစ်ရေအရည်အသွေး (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	တစ်ကြိမ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	လုပ်ငန်းခွင်အရှေ့ ရေမြောင်း
၃။	ဆူညံသံအဆင့်	Decibel ဖြင့် ဖော်ပြသော ဆူညံသံ အဆင့်	တစ်ကြိမ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	လုပ်ငန်းခွင် အတွင်း သင့်လျော်သော နေရာ
၄။	မြေအရည်အသွေး	Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH, Total Alkalinity and Total Iron	တစ်ကြိမ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	လုပ်ငန်းခွင် အတွင်း သင့်လျော်သော နေရာ
၅။	စွန့်ပစ်အမှိုက် ထွက်ရှိမှု	အန္တရာယ်မရှိသော စွန့်ပစ်အမှိုက်နှင့် အန္တရာယ်ရှိ	လစဉ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	ယာယီစွန့်ပစ် အမှိုက်ကန်

စဉ်	စောင့်ကြပ် ကြည့်ရှုမည့် အပိုင်း	ပါရာမီတာများ	အကြိမ်ရေ	တာဝန်ရှိသော အဖွဲ့အစည်း	တည်နေရာ
		စွန့်ပစ်အမှိုက် ထွက်ရှိမှု ပမာဏနှင့် အမျိုးအစား			
၇။	လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်က င်းရှင်းရေး	မတော်တဆမှုများ မှတ်တမ်းတင်ခြင်း၊ တစ်ကိုယ်ရေ ကာကွယ်သုံးပစ္စည်း များ နှင့် အရေးပေါ်သုံး ဆေးသေတ္တာ	လစဉ်	ပိတ်သိမ်းမှု အဆင့် တာဝန်ခံ	ဖြိုဖျက်သည့် နေရာ

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ဆောင်ရွက်မှုအတွက် ရန်ပုံငွေလျားချက်

ဇယား-၄ တွင် လည်ပတ်ရေးအဆင့်နှင့် စီမံကိန်းပိတ်သိမ်းရေးအဆင့်များတွင် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ကို ဆောင်ရွက်ရန်အတွက် ခန့်မှန်းထားသော နှစ်စဉ်အသုံးစရိတ်များကို ဖော်ပြထားသည်။ စီမံကိန်းအဆိုပြုသူသည် အောက်တွင်ဖော်ပြထားသော ရန်ပုံငွေ မလုံလောက်ပါက အသုံးစရိတ်ကို တိုးမြှင့်ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

ဇယား-၄: ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုနှင့် စောင့်ကြည့်မှုအတွက် ခန့်မှန်းထားသော နှစ်စဉ်ကုန်ကျငွေ

စဉ်	ဖော်ပြချက်	တည်နေရာများ	တည်နေရာ အရေအတွက်	အကြိမ်ရေ	နှုန်း (မြန်မာကျပ်ငွေ/ တိုင်းတာမှု)	စုစုပေါင်း ပမာဏ (မြန်မာ ကျပ်ငွေ)
လုပ်ငန်းလည်ပတ်စဉ်ကာလ						
၁။	လေအရည်အသွေး စောင့်ကြပ် ကြည့်ရှုမှု	ဝန်းကျင် လေအရည် အသွေး	၁	၁ နှစ် လျှင် (၂) ကြိမ်	၉၀၀,၀၀၀	၁,၈၀၀,၀၀၀
မီးခိုးခေါင်း တိုင်လောင် ကျွမ်း အခိုးအငွေ့ (ဘွိုင်လာ နှင့် မီးစက်)		၂	၁ နှစ် လျှင် (၂) ကြိမ်	၄၀၀,၀၀၀	၁,၆၀၀,၀၀၀	
လုပ်ငန်းခွင်		၁	၁ နှစ် လျှင် (၂)	၉၀၀,၀၀၀	၁,၈၀၀,၀၀၀	

စဉ်	ဖော်ပြချက်	တည်နေရာများ	တည်နေရာအရေအတွက်	အကြိမ်ရေ	နှုန်း (မြန်မာကျပ်ငွေ/တိုင်းတာမှု)	စုစုပေါင်းပမာဏ (မြန်မာကျပ်ငွေ)
		လေအရည်အသွေး		ကြိမ်		
	လေအရည်အသွေးစီမံခန့်ခွဲခြင်း	စက်ရုံဝန်းအတွင်း	-	နှစ်စဉ်	-	၅၀၀,၀၀၀
၂။	ရေအရည်အသွေးစောင့်ကြပ်ကြည့်ရှုခြင်း	တွင်းရေ	၁	၁ နှစ် လျှင် (၂) ကြိမ်	၂၅၀,၀၀၀	၅၀၀,၀၀၀
		စွန့်ပစ်ရေ	၁	၁ နှစ် လျှင် (၂) ကြိမ်	၃၀၀,၀၀၀	၆၀၀,၀၀၀
		ဘျိုင်းလာမှ ထွက်သော စွန့်ပစ်ရေ	၁	၁ နှစ် လျှင် (၂) ကြိမ်	၃၀၀,၀၀၀	၆၀၀,၀၀၀
	ရေအရည်အသွေးစီမံခန့်ခွဲမှု	စက်ရုံဝန်းအတွင်း	-	နှစ်စဉ်	-	၃၀၀,၀၀၀
၃။	ဆူညံသံအဆင့်စောင့်ကြပ်ကြည့်ရှုခြင်း	လုပ်ငန်းခွင်	၄	၁ နှစ် လျှင် (၂) ကြိမ်	၅၀,၀၀၀	၄၀၀,၀၀၀
		ဝန်းကျင်ဆူညံသံ	၁	၁ နှစ် လျှင် (၂) ကြိမ်	၁၀၀,၀၀၀	၂၀၀,၀၀၀
	ဆူညံသံ အဆင့်စီမံခန့်ခွဲခြင်း	စက်ရုံဝန်းအတွင်း	-	နှစ်စဉ်	-	၃၀၀,၀၀၀
၄။	မြေအရည်အသွေးစောင့်ကြပ်ကြည့်ရှုခြင်း	ယာယီစွန့်ပစ်အမှိုက်ကန်အနီး	၁	၁ နှစ် လျှင် (၂) ကြိမ်	၄၂၀,၀၀၀	၈၄၀,၀၀၀
၅။	အထွေထွေသုံး					
	စွန့်ပစ်အမှိုက် စွန့်ပစ်ခြင်း				တစ်နှစ်အတွက် စုစုပေါင်း	၄၂၀,၀၀၀
	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး				တစ်နှစ်အတွက် စုစုပေါင်း	၆၂၀,၀၀၀
	မီးသတ်ပစ္စည်း				တစ်နှစ်အတွက် စုစုပေါင်း	၈၀၀,၀၀၀
အရေးပေါ်တုံ့ပြန်ရေးနှင့် သဘာဝဘေးအန္တရာယ်စီမံခန့်ခွဲရေး				တစ်နှစ်အတွက် စုစုပေါင်း	၈၀၀,၀၀၀	
စုစုပေါင်း						၁၂,၀၈၀,၀၀၀
ပိတ်သိမ်းစဉ်ကာလ						

စဉ်	ဖော်ပြချက်	တည်နေရာများ	တည်နေရာအရေအတွက်	အကြိမ်ရေ	နှုန်း (မြန်မာကျပ်ငွေ/တိုင်းတာမှု)	စုစုပေါင်းပမာဏ (မြန်မာကျပ်ငွေ)
၁။	လေအရည်အသွေး စောင့်ကြပ်ကြည့်ရှုမှု		၁	၁ ကြိမ်	၉၀၀,၀၀၀	၉၀၀,၀၀၀
	လေအရည်အသွေး စီမံခန့်ခွဲခြင်း	ဖြိုဖျက်သည့် ကုန်ကျစရိတ်တွင် ပါဝင်ပြီး				
၂။	ရေအရည်အသွေး စောင့်ကြပ်ကြည့်ရှုမှု		၁	၁ ကြိမ်	၃၀၀,၀၀၀	၃၀၀,၀၀၀
	ရေအရည်အသွေး စီမံခန့်ခွဲခြင်း	ဖြိုဖျက်သည့် ကုန်ကျစရိတ်တွင် ပါဝင်ပြီး				
၃။	ဆူညံသံအဆင့် စောင့်ကြပ်ကြည့်ရှုမှု		၁	၁ ကြိမ်	၅၀,၀၀၀	၅၀,၀၀၀
	ဆူညံသံ စီမံခန့်ခွဲခြင်း	ဖြိုဖျက်သည့် ကုန်ကျစရိတ်တွင် ပါဝင်ပြီး				
၄။	မြေအရည်အသွေး စောင့်ကြပ်ကြည့်ရှုမှု		၁	၁ ကြိမ်	၄၂၀,၀၀၀	၄၂၀,၀၀၀
	မြေအရည်အသွေး စီမံခန့်ခွဲခြင်း	ဖြိုဖျက်သည့် ကုန်ကျစရိတ်တွင် ပါဝင်ပြီး				
၅။	အထွေထွေသုံး					
	စွန့်ပစ်အမှိုက် စွန့်ပစ်ခြင်း				စုစုပေါင်း	၇၀၀,၀၀၀
	ဘေးအန္တရာယ်ကင်းရှင်းရေး ဆိုင်းဘုတ်များတပ်ဆင်ခြင်း				စုစုပေါင်း	၃၀၀,၀၀၀
	အရေးပေါ်ဘေးအန္တရာယ်ကင်းရှင်းရေး နည်းလမ်းများ				စုစုပေါင်း	၅၀၀,၀၀၀
	မီးဘေးအန္တရာယ် ကာကွယ်ရေးနည်းလမ်းများ				စုစုပေါင်း	၅၀၀,၀၀၀
စုစုပေါင်း						၃,၆၇၀,၀၀၀

အစိမ်းရောင်နယ်မြေဖွံ့ဖြိုးရေးအစီအစဉ် - စက်ရုံဝန်းအတွင်း အစိမ်းရောင်နယ်မြေ ဖွံ့ဖြိုးရေးအစီအစဉ်၏ အစိတ်အပိုင်းအနေဖြင့် သစ်ပင် စုစုပေါင်း ၁၅၉ ပင် စိုက်ပျိုးထားပါသည်။

လူမှုတာဝန်ယူမှု - စီမံကိန်းအဆိုပြုသူသည် ၎င်း၏ အသားတင်အမြတ်၏ ၂% ကို ကုမ္ပဏီလူမှုတာဝန်ယူ အစီအစဉ်အတွက် ရန်ပုံငွေ ထည့်ဝင်ရန်စီစဉ်ထားပါသည်။

အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သတင်းအချက်အလက်များ ထုတ်ဖော်တင်ပြခြင်း

၂၀၂၄ ခုနှစ် ဒီဇင်ဘာလ ၅ ရက်နေ့၌ နံနက်ပိုင်းတွင် စက်ရုံအလုပ်သမားများနှင့် စစ်တမ်းကောက်ယူရန် ဆွေးနွေးမှုပြုလုပ်ခြင်း၊ နေ့လယ်ပိုင်းတွင် သက်ဆိုင်သော သူများပါဝင်သော အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးပွဲများကို သီးခြား ခွဲခြား၍ စီမံကိန်းစက်ရုံ၏ ရုံးအဆောက်အဦးအတွင်းရှိ အစည်းအဝေးခန်းမတွင် ကျင်းပခဲ့ပါ သည်။

စက်ရုံအလုပ်သမားများနှင့် တွေ့ဆုံဆွေးနွေးချက်အကျဉ်းချုပ်

အလုပ်သမားများ၏ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး ဆိုင်ရာ အကြောင်းအရာများကို စစ်တမ်းကောက်ယူရန် စက်ရုံအလုပ်သမား ၅၃ ဦးနှင့် ဆွေးနွေးမှုများပြုလုပ်ပြီး သောက်သုံးရေစနစ်၊ သန့်ရှင်းရေးစနစ်၊ ဆူညံသံအဆင့်များ၊ စက်ရုံအတွင်းနှင့်ဝန်းကျင် သန့်ရှင်းမှု၊ ဖုန်မှုန့်လျော့ချမှု၊ မီးအလင်းအရောင်ရရှိမှု၊ လေဝင်လေထွက်စနစ်၊ လူမှုဆက်ဆံရေး အခြေအနေများကို စစ်တမ်းကောက်ယူခဲ့ပါသည်။ ဝန်ထမ်း (၅၃) ဦးအားလုံးသည် လုံလောက်သော တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်းများ၊ သန့်စင်ထားသော သောက်သုံးရေ၊ လုံလောက်ပြီး သန့်ရှင်းသော လက်ဆေးကန်များနှင့် လုံလောက်သော အိမ်သာများနှင့် ကောင်းမွန်သော သန့်ရှင်းမှုစနစ်များ ထောက်ပံ့ပေးထားကြောင်း အတည်ပြုခဲ့ပါသည်။ အလုပ်သမားအများစုသည် လုပ်ငန်းခွင် ဆူညံသံ၊ အနံ့၊ အခိုးအငွေ့၊ ဖုန်မှုန့်၊ မီးအလင်းအရောင်နှင့် ပတ်သက်၍ ပြဿနာမရှိကြောင်းပြောကြားခဲ့သော်လည်း အလုပ်သမား (၇) ဦးသည် ဆူညံသံ၊ အနံ့၊ အခိုးအငွေ့၊ ဖုန်မှုန့်အနည်းငယ်ရှိ ကြောင်း ဖြေကြားခဲ့ပါသည်။ လေဝင်လေထွက်စနစ်အပေါ်တွင် အလုပ်သမား ၂ ဦးက ကောင်းမွန်ကြောင်း ဖြေကြားခဲ့ပြီး ကျန်သူများက အလယ်အလတ် ကောင်းမွန်ကြောင်း ဖော်ပြခဲ့ပါသည်။ ထို့အပြင် ပါဝင်သူအားလုံးသည် အလုပ်သမားများအကြား လူမှုဆက်ဆံရေး ကောင်းမွန်ကြောင်း ဖြေကြားခဲ့ပါသည်။

စီမံကိန်းအဆိုပြုသူ၏ ပြန်လည်ဖြေကြားမှုများ

စီမံကိန်းအဆိုပြုသူသည် အလုပ်သမားများ၏ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးကို သေချာစေရန်အတွက် အမျိုးမျိုးသော လျှော့ချရေးနည်းလမ်းများကို ဆောင်ရွက်ထားရှိပြီးဖြစ်ပါသည်။ ဖြတ်တောက်မှု ဒဏ်ခံနိုင်သော သံလက်အိတ်နှင့် မျက်နှာဖုံးများအား ထောက်ပံ့ပေးထားပြီး၊ သန့်စင်ထားသော ၂၀ လီတာပုလင်းရေ (၅၀) မှ (၇၀)ကို နေ့စဉ် ဒေသဈေးကွက်မှ ဝယ်ယူပြီး အလုပ်သမားများအတွက် ထောက်ပံ့ပေးနေပါသည်။ အိမ်သာများကို နေ့စဉ် သန့်ရှင်းရေးသမား၅ဦးမှ သန့်ရှင်းဆေးကြောပေးထားပြီး၊ လက်ဆေးရန်အတွက် လုံလောက်သော ရေ၊ ဆပ်ပြာနှင့် လက်ဆေးရန်ဘေစင် (၁၂) ခုကို သုံးစွဲနိုင်အောင် ပြင်ဆင်ထားပါသည်။ မီးစက်ခန်းအနီးရှိ ဆူညံသံပြဿနာကို ဖြေရှင်းရန် မူလပါဝင်သော ဆူညံသံလုံစနစ်ကို မီးစက်လည်ပတ်ချိန်တွင် သေချာအသုံးပြုမည်ဖြစ်ပါသည်။ ထို့အပြင် လေထုတ်ပန်ကာများကို တပ်ဆင်ထားပြီး လေဝင်လေထွက်စနစ်ကို တိုးတက်စေရန် လုပ်ဆောင်နေပါသည်။ ဌာနအားလုံးတွင် ၄ ပေအလျားရှိ LED မီးချောင်းများကို လုံလောက်စွာ တပ်ဆင်ထားပြီး ပျက်စီးပါက ချက်ချင်းပြုပြင်ခြင်း သို့မဟုတ် အသစ်တစ်ခုလဲပေးပါသည်။ ပြင်းထန်သော လေတိုက်လျှင် ဖုန်မှုန့်ဝင်ရောက်မှုကို ထိန်းချုပ်နိုင်ရန် ဖွင့်ရလွယ် ပိတ်ရလွယ်သော ပြတင်းပေါက်များကို တပ်ဆင်ထားမည်ဖြစ်ပါသည်။ ထို့အပြင် လိုအပ်ချက်များနှင့် ပြဿနာများကို ဆွေးနွေးပြီး ဖြေရှင်းနိုင်ရန်အတွက် ဌာနကိုယ်စားလှယ်များနှင့် ပုံမှန်ဆွေးနွေးပွဲများ ကျင်းပပေးနေပြီး၊ အလုပ်သမားများမှ ထိုပြဿနာများကို သတ်မှတ်ချိန်အတွင်း မြန်မြန်ဆန်ဆန်ဖြေရှင်းနိုင်ရန် ပွင့်လင်းမြင်သာသော ဆက်သွယ်မှုစနစ်တစ်ခုလည်း ရှိစေရန် စီစဉ်ထားပါသည်။

အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးပွဲ အကျဉ်းချုပ်

ဆွေးနွေးမှုကို ပုံစံနှစ်မျိုးပြုလုပ်ခဲ့ပြီး တစ်ခုမှာ အများပြည်သူတိုင်ပင်ဆွေးနွေးပွဲတွင် တက်ရောက်သူများမှ မိမိအကြံပြုချက်များကို တိုက်ရိုက်တင်ပြနိုင်ခြင်းဖြစ်ကာ၊ နောက်တစ်ခုမှာ လက်ရေးဖြင့် မိမိအကြံပြုချက်များကို အကြံပြုစာများ ရေးသားတင်ပြနိုင်ခြင်းဖြစ်ပါသည်။ အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးပွဲအတွင်းတွင် သာယာဝတီခရိုင် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန(ECD)၏ လက်ထောက်ညွှန်ကြားရေးမှူးမှ ပတ်ဝန်းကျင်စီမံခန့်ခွဲရေးအစီအစဉ်နှင့် ပတ်သက်သော မှတ်ချက်များပေးခဲ့ပြီး ၎င်းအကြံပြုချက်များကို ဇယား ၈.၃ တွင် အသေးစိတ်ဖော်ပြထားသည်။ အကြံပြုစာမှ ကောက်နုတ်အကျဉ်းချုပ်ထားသော အကြံပြုချက်များမှာ အောက်ပါအတိုင်းဖြစ်ပါသည်-

- ❖ **လိုက်နာမှု:** ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေများ၊ စည်းမျဉ်းများနှင့် လမ်းညွှန်ချက်များကို အတိအကျလိုက်နာရန်။
- ❖ **အလုပ်အကိုင်အခွင့်အလမ်းများ:** စက်ရုံနီးစပ်ရာ ဒေသခံများနှင့် အေးမြသာယာ ဒေသခံများအတွက် အလုပ်အကိုင်အခွင့်အလမ်းများ ပိုမိုပေးရန်။
- ❖ **အများပြည်သူထောက်ပံ့မှု:** ဒေသဖွံ့ဖြိုးရေးအတွက် စက်ရုံမှ ဆောင်ရွက်ပေးခြင်းမှာ ကောင်းမွန်ပြီး လူမှုရေး၊ ကျန်းမာရေးနှင့် ပညာရေးနယ်ပယ်များကို လှူဒါန်းမှုများနှင့် ပံ့ပိုးမှုများဖြင့် ထောက်ပံ့ရန်။
- ❖ **ယာဉ်လမ်းကြောင်း စီမံခန့်ခွဲမှု:** ယာဉ်တိုက်မှုများ လျော့ကျစေရန်နှင့် မဖြစ်ပေါ်စေရန် လျော့ပါးသက်သာစေရေး နည်းလမ်းများ ပြုလုပ်ရန်။
- ❖ **ကျေးဇူးတင်ချက်:** အလုပ်သမား ၁,၀၀၀ ကျော် အား အလုပ်အကိုင်ပေးနိုင်မှု၊ ဒေသခံလူမှုရေးကို ထောက်ပံ့မှုနှင့် EMP အားရှင်းလင်းစွာ တင်ပြမှုအရည်အသွေး ကောင်းမွန်ကြောင်း ကျေးဇူးတင်ထောက်ခံချက်ပေးခဲ့ပါသည်။

နိဂုံးချုပ်

KIMCL အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) သည် ပတ်ဝန်းကျင်နှင့် သင့်လျော်သော လုပ်ငန်းခွင် တစ်ခုကို ဖော်ဆောင်ရန် လိုအပ်သော ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု နည်းလမ်းများကို အလေးပေးဆောင်ရွက်ထားပါသည်။ ဤ EMP ကို စီမံကိန်းအဆိုပြုသူ၏ လိုအပ်ချက်များ နှင့် အထည်ချုပ်လုပ်ငန်းအတွက် သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းရေး ဝန်ကြီးဌာန (MONREC) ၏ လမ်းညွှန်ချက်များအတိုင်း ရေးဆွဲပြုလုပ်ထားပါသည်။ EMP တွင် ဖော်ပြထားသည့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဓိကပြဿနာများသည် စက်ရုံစီမံခန့်ခွဲမှုအနေဖြင့် ပတ်ဝန်းကျင်ပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ပါးစေရန် သင့်လျော်သော လျော့ချရေးနည်းလမ်းများ လုပ်ဆောင်နိုင်ရန် အထောက်အကူဖြစ်စေ ပါ သည်။ လေထုအရည်အသွေး၊ ရေအရည်အသွေး၊ မြေအရည်အသွေး၊ စွန့်ပစ်အမှိုက်နှင့် ဆူညံသံအဆင့်များ ကဲ့သို့သော ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုကို လျော့ချပေးနိုင်ရန် လိုအပ်သော လျော့ပါးသက်သာစေရေး နည်းလမ်းများကို ဤအစီရင်ခံစာတွင် ဖော်ပြထားပါသည်။ KIMCL သည် ပတ်ဝန်းကျင်၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချပေးရန်လိုအပ်သော ဆောင်ရွက်မှုအားလုံးကို

ဆောင်ရွက်ခဲ့ပြီး၊ အမျိုးသားပတ်ဝန်းကျင် အရည်အသွေးစံချိန်စံညွှန်းများ (National Environmental Quality Standards) နှင့် ကိုက်ညီမှုရှိစေရန် ဆောင်ရွက်နေပါသည်။ ထို့အပြင် စက်ရုံလုပ်ငန်း လည်ပတ်ခြင်း သည် အလုပ်အကိုင်အခွင့်အလမ်းများ ထောက်ပံ့ပေးခြင်း၊ နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုမှတစ်ဆင့် အမျိုးသား စီးပွားရေးဖွံ့ဖြိုးတိုးတက်မှုကို တစ်ဖက်တစ်လမ်းဖြင့် ထောက်ပံ့ပေးနေပါသည်။ ဤအစီရင်ခံစာသည် စက်ရုံ လုပ်ငန်း လည်ပတ်မှုတွင် ဖြစ်ပေါ်နိုင်သော ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချပေးရန်နှင့် ကောင်းကျိုး သက်ရောက်မှုများကို မြှင့်တင်ပေးရန် ဆောင်ရွက်ထားသည့် နည်းလမ်းများ အသေးစိတ်ကို အကျဉ်းချုပ် တင်ပြထားသည်။

1.0 INTRODUCTION

1.1 Background of the Project

Kojima Iryo Myanmar Co., Ltd. (KIMCL) was established as a joint venture between Kojima Iryo Co., Ltd. (Japan), holding an equity ratio of 85%, and JMKS Co., Ltd. (Myanmar), holding an equity ratio of 15%. The joint venture was formed under the Foreign Investment Law (2012) and in accordance with the Myanmar Companies Act (1914, as amendment in 1989). The Myanmar Investment Commission (MIC) issued the company's permit (*see Appendix A*) on March 17, 2015 in accordance with section 13 (b) of the Myanmar Foreign Investment Law. The company was officially registered on April 1, 2015, in the Republic of the Union of Myanmar, with the registration number 117325229 as a private company (*see Appendix A*).

The investment amount increased from original capital of Kyat 1,200 million to Kyat 1,349.313 million as per amendment on Permit No. 912/2015 (*see Appendix A*) on April 29, 2016. The company's investment amount increased again from Kyat 1,349.313 million to Kyat 1,951.552 million, and the equity ratio was revised 70% for Kojima Iryo Co., Ltd. and 30% for JMKS Co., Ltd. as per Amendment on Permit No. 912/2015 (*see Appendix A*), which was approved on May 31, 2024.

The proposed project is the manufacturing of garment on Cut-Make-Pack (CMP) basis and it is located at holding no. 89, plot no. 1. Aye Mya Tharyar village (KA), Aye Mya Tharyar village tract, Okpho Township, Bago Region.

According to Letter No. Bago/ EIA (3581/2024) issued by the Environmental Conservation Department (ECD), Bago Region, KIMCL is required to prepare and submit an Environmental Management Plan (EMP) report. KIMCL has engaged Green Myanmar Environmental Services Co., Ltd., a third-party consultancy company, to prepare the EMP report. This report has been prepared to assess the environmental impacts of the company's garment manufacturing operations on a CMP basis, develop mitigation measures, and outline environmental management plan.

1.2 Need of EMP

An EMP is a study that predicts the environmental consequences of a proposed development. It evaluates the potential impacts on the natural environment, human health and property, requiring a multi-disciplinary approach. It is a critical tool for informed decision-making and achieving sustainable development.

This EMP report serves as a guideline for the proponent to obtain environmental authorization and informs the environmental authorities about the operational processes of KIMCL. The Project Proponent is required to prepare an EMP report that analyzes the potential environmental impacts of the project and identifies mitigation measures. This report is essential for obtaining an Environmental Compliance Certificate (ECC) from the ECD.

1.3 Need of the Project

Ready-made garments have become a popular choice among urban residents and are steadily gaining acceptance in semi-urban and rural areas. Over the past decade, this sector has achieved remarkable growth in both domestic and export markets. As a result, the garment industry is thriving, attracting significant foreign investment due to its low-risk and high-profit potential. The industry serves as a vital source of livelihood for many, offering substantial employment opportunities with minimal capital investment. Being highly labor-intensive, it is well-suited to Myanmar's economic and social conditions. Given these advantages, it is expected that establishing a garment factory will face minimal challenges.

1.4 Objectives of the EMP

The objective of an EMP report is to outline a structured approach to mitigating, monitoring, and managing the environmental impacts of a project during its construction, and operational and decommissioning phases. It ensures compliance with environmental regulations and standards, safeguarding natural resources and communities while supporting sustainable development. The EMP serves as a practical tool for guiding project stakeholders in implementing effective mitigation measures, reducing potential risks, and enhancing environmental performance.

1.5 Structure of the EMP Report

This report is framed with ten sections including this introduction chapter:

- (1) Introduction
- (2) Policies and Commitments, Legal Requirements and Institutional Arrangements
- (3) Description of the Project and Process
- (4) Baseline Conditions of the Existing Environment
- (5) Potential Environmental Impacts and Mitigation Measures
- (6) Environmental Management Plan and Monitoring Plan
- (7) Public Consultation and Disclosure
- (8) Conclusion

1.6 Project Proponent

The contact person information of KIMCL is shown in Table 1.1 and the list of the executives of the KIMCL is shown in Table 1.2. The organization chart of the proposed project is shown in the Figure 1.1.

Table 1.1 Contact Person Information of KIMCL

Contact Person Name	U Sein Toe
Designation	Managing Director
Address	No. (16), Aung Mingalar Street, Tadaagyi Ward, North Okklapa Township, Yangon

	Region
Mobile Phone	09 5181932
Email Address	seintoe@kojima-group.net

Table 1.2 List of the Executives of KIMCL

No.	Name of Executives	Citizenship and Passport No./NRC No.	Designation	Address	Percentage of Shares (Origin)	Percentage of Shares (Amendment)
1.	Kojima Iryo Co., Ltd. (Japan)				85%	70%
	1. Mr. Takashi Ishiguro	Japanese Passport No. MS 6944527	Managing Director	684 Awanonishi 5-chome, Gifu-shi, Japan		
	2. Mr. Jun Nohisa	Japanese Passport No. MS 6277763	Director	684 Awanonishi 5-chome, Gifu-shi, Japan		
2.	JMKS Company Limited)				15%	30%
	U Sein Toe	Myanmar NRC No. 12/ Ou Ka Ma (N) 025988	Director	No. (16), Aung Mingalar Street, Tadaagy Ward, North Okklapa Township, Yangon Region		

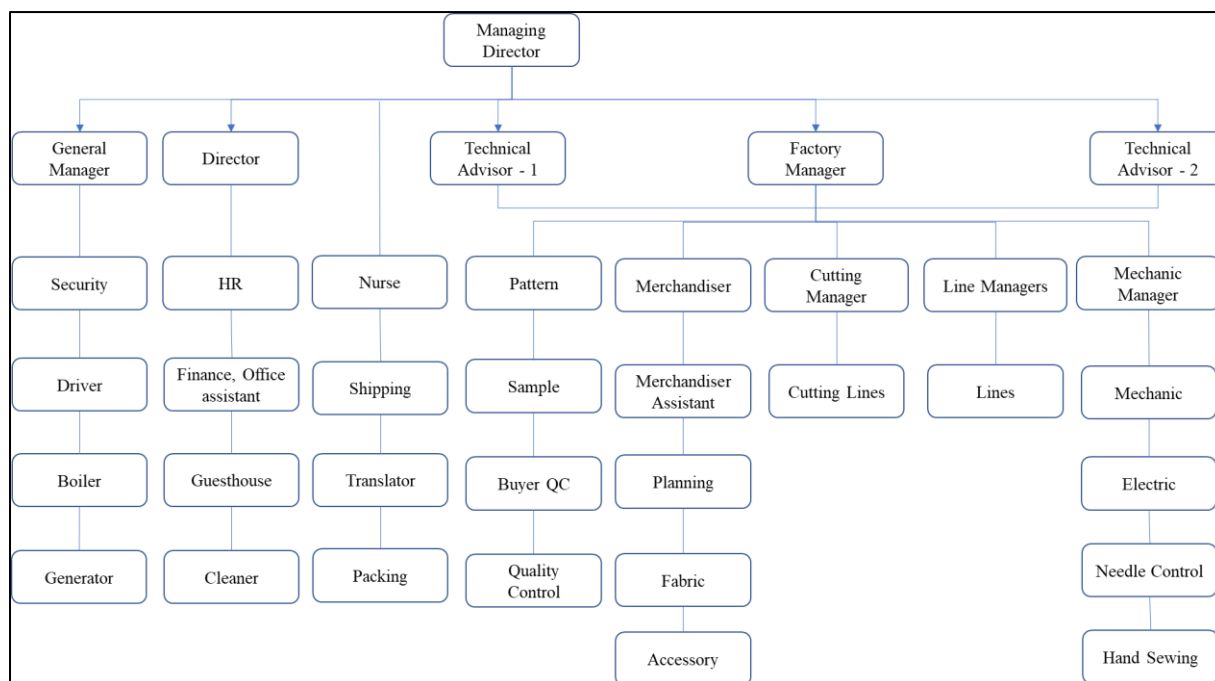


Figure 1.1 Organization Chart of the Factory

1.7 EMP Study Team

Green Myanmar Environmental services Co., Ltd (GMES) – **Organizational Consultant License Number of EIA-CO (B) 006/2024** undertook EMP report preparation for the operation of “Garment Factory” Project in accordance with the Article 63, 76, 77 of the Environmental Impact Assessment (EIA) Procedure (2015). Consultant License of Organization and Consultants for the preparation of this report are as shown in **Appendix B**. The information of contact representative of the GMES Co., Ltd. is shown as follow.

Name:	U Kyaw Soe Win
Designation:	Managing Director
Address:	No.115, kanaung min thar gyi road, industrial zone (1), hlaing thar yar industrial city, yangon, yangon region, myanmar
Phone Number:	+95-1-685572, fax: +95-1-685571,
Email Address:	gmescompany@gmail.com , info@gmes-mm.com

Table 1.3 Organization of the EMP Study Team

No.	Name and Educational Information	Designation, and Consultant License No.	Responsibilities
1.	U Kyaw Soe Win B.Sc (Industrial Chemistry) B.E (Chemical Engineering)	<ul style="list-style-type: none"> Managing Director EIA-AC 046/2023 	<ul style="list-style-type: none"> Review of the EMP Report Leader of Public Consultation Meeting Participating in Stakeholders Engagement Meeting

			<ul style="list-style-type: none"> • Data compilation & analysis
2.	U Myo Myint Retired Former Factory Manager, Ministry of Industry	<ul style="list-style-type: none"> • Environmental Consultant • EIA-AC 100/2024 	<ul style="list-style-type: none"> • Water Quality Pollution Prevention, Control, Monitoring and Prediction of Impacts
3.	Daw Khin Shwe Htay B.E (Chemical Engineering) M.E (Chemical Engineering) M.Sc (Environmental Engineering)	<ul style="list-style-type: none"> • Environmental Consultant • EIA-AC 047/2023 	<ul style="list-style-type: none"> • Solid Waste and Hazardous Waste Management
4.	U Kyi Han Bo B.E (Aerospace Fuel and Propellant Engineer)	<ul style="list-style-type: none"> • Field Supervisor • EIA-AC 048/2023 	<ul style="list-style-type: none"> • Supervising on Water Sample Collection • Supervising on Noise and Vibration Measurement • Supervising on Air Quality Measurement
5.	U Aung Ko Min B.E (Chemical Engineering)	<ul style="list-style-type: none"> • Environmental Monitoring Technician • In the application process 	<ul style="list-style-type: none"> • Noise and vibration measurement • Air quality measurement • Coordinate for public consultation meeting

2.0 POLICIES AND COMMITMENTS, LEGAL REQUIREMENTS AND INSTITUTIONAL ARRANGEMENTS

2.1 Background

The emerging environmental scenario calls for attention on conservation and judicious use of natural resources. There is a need to integrate the environmental consequences of the development activities and for planning suitable measures in order to ensure sustainable development. The environmental considerations in any developmental process have become necessary for achieving sustainable development. To achieve such goals, the basic principles to be adopted are:

- ❖ To enhance the quality of environment in and around the project area by adopting proper measures for conservation of natural resources;
- ❖ Prevention of adverse environmental and social impact to the maximum possible extent;
- ❖ To mitigate the possible adverse environmental and socio-economic impact on the project-affected areas.

Policy, legal and institutional framework of the proposed project relating to the environmental, social, health and economic conditions are discussed in this section.

2.2 Policies Framework

This section highlights the relevant environmental policies established by the Government of Myanmar for purposes of environmental protection towards the process of sustainable development. The Government, through the Ministry of Natural Resources and Environmental Conservation (MONREC), has established environmental policies which broadly aim at:

- ❖ Encouraging respect for the environment by all and being mindful and taking care of the environment;
- ❖ Ensuring environmental issues are integrated with economic matters to attain sustainable development;
- ❖ Reviewing and evaluating development plans to ensure they follow the set environmental guidelines/policies;
- ❖ Encouraging the public to take part in environmental matters so as to enlighten them on the same hence improve on environmental performance.

2.3 Institutional Framework

Regarding to Health, Safety and Environment (HSE) requirements, Key Ministries and Departments are generally involved in the industrial sector as Table (2.1).

Table 2.1 Key Ministries and Departments in the Industrial Sectors

Ministry of Natural Resources and Environmental Conservation (MONREC)	Ministry of Natural Resources and Environmental Conservation (MONREC) is the focal ministry for environmental management and empowered to undertake a range of
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	regulatory activities under the Environmental Conservation Law (ECL). The ECL gives MONREC mandate to implement the EIA-regime in Myanmar through the EIA Procedure.
The Environmental Conservation Department (ECD)	The Environmental Conservation Department (ECD) under MONREC has an executive role in environmental licensing, pollution control and monitoring of environmental impacts and a coordination and collaboration role for the integration of environmental issues into sectorial planning. ECD is creating sub-national offices, at the regional level, with further offices planned at the district and township levels. National Environmental Conservation and Climate Change Committee (NECCCC) has a coordinating role and a role in the approval of the EIAs.
Myanmar Investment Commission (MIC)	Myanmar Investment Commission (MIC) is the main administrative body for the granting of investment permits under the Myanmar Investment Law. Directorate of Investment and Company Administration (DICA) acts a secretariat to the MIC.
Department of Public Health	Department of Public Health within the Ministry of Health and Sports is responsible for occupational and health protection in Myanmar.
Ministry of Labour	Ministry of Labour also is responsible for labour and welfare administration. The Department of Factories and general labour laws inspection monitors and enforces safety and health standards in factories and disseminates industrial safety information.
Directorate of Industrial Supervision and Inspection (DISI)	Directorate of Industrial Supervision and Inspection (DISI) is responsible to inspect and register for boiler according to the boiler law (2012) and electrical system in factory according to the electrical power law (2014).
Departmental Cooperation Team	The Departmental Cooperation Team is organized for the field inspection of the operation of business in accordance with section 14 of the Foreign Investment Law. The Departmental Cooperation Team is responsible for coordination between business and government department

	<p>and to guide to the business for the government department's requirements</p> <p>The Departmental Cooperation Team is organized by representatives from the governmental departments:</p> <ol style="list-style-type: none">(1) Directorate of Investment and Company Administration(2) Department of Customs(3) Department of Commerce(4) Directorate of Labor(5) Department of Immigration and National Registration(6) Ministry of Hotel and Tourism(7) Internal Revenue Department(8) Central Bank of Myanmar(9) Ministry of Electricity and Energy(10) Directorate of Industrial Supervision and Inspection(11) Ministry of Natural Resources and Environmental Conservation(12) Ministry of Agriculture, Livestock and Irrigation
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2.4 Project-related Laws and Regulations in Myanmar

The summarized relevant laws and regulations for the proposed project and the Project Proponent's commitment are described in Table 2.2. The detailed information of the laws and regulations are shown in Section and 2.4.1 and 2.4.2.

Table 2.2 Summary of Myanmar Relevant Laws and Regulations to the Proposed Project

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
Environmental Laws and Regulations			
1.	National Environmental Policy	2019	The Project Proponent commits to comply with the policy.
2.	Environmental Conservation Law	March 30, 2012	The Project Proponent commits to comply with Section (3), Section (7), Section (10), Section (13), Section (14), and Section (15) of this law.
3.	Environmental Conservation Rules	June 5, 2014	The Project Proponent commits to comply with Rule 69 of the rules.
4.	Environmental Impact Assessment (EIA) Procedure	December 29, 2015	The Project Proponent commits to comply with Article (103), article (104), article (107), and article (108) of the EIA Procedure (2015).
5.	National Environmental Quality (Emission) Guidelines	December 29, 2015	The Project Proponent commits to comply with effluent and air emission guidelines, air emission for boiler and noise level (general guidelines).
6.	National Drinking Water Quality Standards	2019	The Project Proponent commits to comply with drinking water quality standards.
Other Relevant Laws and Regulations of the Project			
7.	Myanmar Public Health Law	January 12, 1972	The Project Proponent commits to comply with this Law.
8.	The Prevention and Control of Communicable Diseases Law	March 20, 1995 (Amendment on March 20, 2011)	The Project Proponent commits to comply with Section (3) of the Law.
9.	The Control of Smoking and Consumption of Tobacco Product	May 4, 2006	Project Proponent commits to comply with Section (7).
10.	Occupational Safety and Health	March 15,	The Project Proponent commits

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
	Law	2019	to comply with Section (8), Section (9) and Section (12) of the Law.
11.	Myanmar Fire Brigade Law	March 17, 2015	The Project Proponent commits to comply with Section (25) of the Law.
12.	Prevention of Hazard from Chemical and Related Substances Law	August 26, 2013	The Project Proponent commits to comply with Section (15), Section (17) and Section (22) of the Law.
13.	Conservation of Biodiversity and Natural Protected Area Law	May 21, 2018	The Project Proponent commits to comply with Section (8) of the Law.
14.	The Law relating to Aquaculture	September 7, 1989	The Project Proponent commits to comply with Section (29) of the Law.
15.	Conservation of Water Resource and River Law	October 2, 2006 (Amended in 2017)	The Project Proponent commits to comply with Section (11), Section (19), Section (21) and Section (22) of the Law.
16.	Conservation of Water Resource and River Rules	January 27, 2013	The Project Proponent commits to comply with Sub-rule (c) and (d) of Rule (8) and Rule (9).
17.	Underground Water Act	June 21, 1930	The Project Proponent commits to comply with Section (3).
18.	Forest Law	September 20, 2018	The Project Proponent commits to comply with Section 12 (a) of the Law.
19.	The Land Acquisition Act	May 1, 1894 Amendment on October 21, 1954	The Project Proponent commits to comply with Section (6) of the Law.
20.	Myanmar National Land Use Policy	January, 2016	The Project Proponent commits to comply with the Policy.
21.	Farm Land Law	March 30, 2012	The Project Proponent commits to comply with Section (12) and Section (14) of the Law.
22.	Farm Land Rules	August 31, 2012	The Project Proponent commits to comply with Rule (24) and Rule (35).
23.	The Administration of Vacant,	May 30, 2012	The Project Proponent commits

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
	Fallow and Virgin Lands Law		to comply with Section (4) and Section (7) of the Law.
24.	The Registration of Deeds Law	March 20, 2019	The Project Proponent commits to comply with Section (16) of the Law.
25.	Bago Region Municipal Development Law	December 27, 2016	The Project Proponent commits to comply with Section (3) and Section (66) of the Law.
26.	The Electricity Law	October 27, 2014	The Project Proponent commits to comply with Section (3) and Section (44) to (53) of the Law.
27.	The Ethnic Rights Protection Law	February 24, 2015	The Project Proponent commits to comply with Section (5) of the Law.
28.	The Ethnic Rights Protection Rules	August 23, 2019	The Project Proponent commits to comply with Rule 20 and Rule (21).
29.	The Rights of the Persons with Disabilities Law	June 5, 2015	The Project Proponent commits to comply with Section (36).
30.	The Child Rights Law	July 23, 2019	The Project Proponent commits to comply with Section (4) and Section (48).
31.	The Protection and Preservation of Cultural Heritage Region Law	February 28, 2019	The Project Proponent commits to comply with Section (22).
32.	The Protection and Preservation Antique Object Law	July 22, 2015	The Project Proponent commits to comply with Section (12) and Section (15) of the Law.
33.	The Protection and Preservation of Ancient Monument Law	August 26, 2015	The Project Proponent commits to comply with Section (12).
34.	The Labour Organization Law	October 11, 2011	The Project Proponent commits to comply with Section (18) and Section (20).
35.	The Employment and Skill Development Law	August 30, 2013	The Project Proponent commits to comply with Section (5), Section (14), and Section (30).
36.	The Minimum Wage Law	March 22, 2013	The Project Proponent commits to comply with Section (12) and Section (13) of the Law.
37.	The Payment of Wage Law	January 25, 2016	The Project Proponent commits to comply with Section (3), Section (4), Section (5), Section

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
			(7), Section (8), Section (9), Section (10), Section (11), Section (14) of the Law.
38.	The Workmen's Compensation Act	1924, Amendment on May 11, 2005	The Project Proponent commits to comply with Section (3), and Section (4) of the Act.
39.	The Settlement of Labour Dispute Law	March 28, 2012	The Project Proponent commits to comply with Section (3) of the Law.
40.	The Law Amending the Leave and Holiday Act 1951	July 18, 2014	The Project Proponent commits to comply with Section (2), Section (5), and Section (8) of the Law.
41.	Social Security Law	August 31, 2012	The Project Proponent commits to comply with Section (11) (a) (i).
42.	The Road Safety and Motor Vehicle Management Law	May 26, 2020	The Project Proponent commits to comply with Section (18) (a) and Section (81) (g).
43.	The Road Safety and Motor Vehicle Management Rules	January 19, 2022	The Project Proponent commits to comply with sub-rule (a) of rule 15, sub-rule (a) of rule 16, sub-rule (a) of rule 58, rule 86, sub-rule (a) of rule 87, rule 88 and rule 110.
44.	The Myanmar Insurance Law	July 23, 1993	The Project Proponent commits to comply with Section (15) and Section (16).
45.	The Myanmar Investment Law	October 26, 2016	The Project Proponent commits to comply with Section (50, d) and Section (56) of the Law.
46.	The Rules which Amend the Myanmar Investment Rules	September 20, 2018	The Project Proponent commits to comply with Rule 14 and Rule 206.
47.	The Petroleum and Petroleum Product Law	August 1, 2017	The Project Proponent commits to comply with Section (11), Section (15), Section (16) and Section (18).
48.	The Petroleum Act	1934, (Amendment on December 31, 2010)	The Project Proponent commits to comply with Section (7) and Section (8) of the Act.

No.	Name of Laws and Regulations	Enacted Date	Project Proponent's Commitment
49.	The Export and Import Law	September 17, 2012	The Project Proponent commits to comply with Section (5), Section (6) and Section (7).
50.	Natural Disaster Management Law	July 31, 2013	The Project Proponent commits to comply with Section (31).
51.	Climate Change Policy	2019	The Project Proponent commits to comply with the Policy
52.	The Commercial Tax Law	March 31, 1990 (Amendment in 2014)	The Project Proponent commits to comply with Section (11) and Section (12) (a) and Section (13) (a).
53.	The Union Taxation Law	September 2, 2020	The Project Proponent commits to comply with Section (16) and Section (19).
54.	The Myanmar Citizens Investment Law	July 29, 2013	The Project Proponent commits to comply with Section (8) and Section (9).
55.	The Boiler Law	July 15, 2015	The Project Proponent commits to comply with Section (7), Section (19), and Section (20) of the Law.

2.4.1 Overview of Myanmar Environmental Laws and Regulations

2.4.1.1 National Environmental Policy (2019)

Myanmar National Environmental Policy was enacted by the Republic of the Union of Myanmar in 2019. The objective of Myanmar's environment policy is aimed at achieving harmony and balance between these through the integration of environmental considerations into the development process to enhance the quality of the life of all citizens. The vision of the policy is a clean environment, with healthy and functioning ecosystems, that ensures inclusive development and wellbeing for all people in Myanmar. Its mission is to establish national environment policy principles for guiding environmental protection and sustainable development and for mainstreaming environmental considerations into all policies, laws, regulations, plans, strategies, programmes and projects in Myanmar. Section 8 states that the Government of the Republic of the Union of Myanmar is committed to putting this National Environmental Policy into action through a Strategic Framework and a series of master plans.

2.4.1.2 Environmental Conservation Law (2012)

The principal law governing environmental management in Myanmar is the Environmental Conservation Law, which was issued in March, 2012 (The Pyidaungsu Hluttaw Law No.9/2012). The law stipulates that government bodies are in charge of environmental conservation as well as their relevant roles and responsibilities. It touches on

water, noise, vibration and solid waste qualities but does not provide specific standards to be met.

It also mentions that any new development project must perform a system of Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) in order to find out whether or not a project or activity to be undertaken by any government department, organization or person may cause a significant impact on the environment or not. In the context of project development, it is important to note that the law adopts the notion of 'Polluter Pays Principle' as it implies that the Project Proponents are responsible for covering all environmental and social costs generated by the project.

The law serves as the basic for founding of Environmental Conservation Department (ECD) under the Ministry of Natural Resources and Environmental Conservation (MONREC), both of which will be explained later. Following the Environmental Conservation Law are two legal instruments: Environmental Conservation Rules (2014) and EIA Procedures (2015).

The main objectives of Environmental Conservation Law related to this Project are abstracted from *Section 3* as follows.

- (a) To enable to emerge a healthy and clean environment and to enable to conserve natural and cultural heritage for the benefit of present and future generations;
- (b) To reclaim ecosystems as may be possible which are starting to generate and disappear;
- (c) To enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;

As the important reference, the following sections are excerpted: Section 7 for provisions of duties and powers of MONREC, Section 10 for Environmental Quality Standards, Section 13 for monitoring as well as Section 14 and Section for polluter's responsible.

Section 7: Duties and Powers relating to the Environmental Conservation of the Ministry

- a. To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities;
- b. To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment;
- c. To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances;
- d. To prescribe the terms and conditions relating to effluent treatment in industrial estates and other necessary places and buildings and emissions of machines, vehicles and mechanisms;
- e. To lay down and carry out a system of EIA and SIA as to whether or not a project or activity to be undertaken by any Government department, organization or person may cause a significant impact on the environment;

- f. To manage to cause the polluter to compensate for environmental impact, cause to contribute fund by the organizations which obtain benefit from the natural environmental service system, cause to contribute a part of the benefit from the businesses which explore, trade and use the natural resources in environmental conservation works.

Section 10: Environmental Quality Standards

The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards:

- a. Suitable surface water quality standards in the usage in rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs and other inland water sources of the public;
- b. Water quality standards for coastal and estuarine areas;
- c. Underground water quality standards;
- d. Atmospheric quality standards;
- e. Noise and vibration standards;
- f. Emissions standards;
- g. Effluent standards;
- h. Solid wastes standards;
- i. Other environmental quality standards stipulated by the Union Government.

Section 13: Monitoring

The Ministry shall, under the guidance of the Committee, maintain a comprehensive monitoring system and implement by itself or in co - ordination with relevant Government departments and organizations in the following matters:

- a. The use of agro- chemicals which cause to impact on the environment significantly;
- b. Transport, storage, use, treatment and disposal of pollutants and hazardous substances in industries;
- c. Disposal of wastes come out from exploration, production and treatment of minerals, industrial mineral raw materials and gems;
- d. Carrying out waste disposal and sanitation works;
- e. Carrying out development and constructions;
- f. Carrying out other necessary matters relating to environmental pollution.

Section 14: A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.

Section 15: The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.

2.4.1.3 Environmental Conservation Rules (2014)

Environmental Conservation Rules was promulgated in 2014 and provides a platform to bridge the Environmental Conservation Law (2012) with more specific and practical rules and guidelines including the EIA Procedure (2015) and National Environmental Quality (Emission) Guidelines (NEQEG, 2015). Specific provisions are stipulated in the EIA Procedure (2015) and the environmental quality standards.

Under Rule 69, sub-rule (a) states that any person shall not emit, ask to emit, dispose, ask to dispose, pile and ask to pile, by any means, hazardous waste or hazardous substances stipulated by notification according to any rules in this rule at any place, which may affect the public directly or indirectly. Sub-rule (b) states that nobody shall carry out any activity, which can damage the ecosystem, and the natural environment, which is affected due to such system, except for the permission of the Ministry for the interests of the people.

2.4.1.4 Environmental Impact Assessment Procedure (2015)

The objectives of the EIA Procedure (2015) are to provide a common framework for EIA reporting and to ensure that the EIA reporting is in line with legal requirements, good practices and professional standards. Concrete steps to be followed in conducting an EIA are stipulated in the EIA Procedure (2015).

Article 103 states that the Project Proponent shall fully implement the Environmental Management Plan (EMP), all Project commitments, and conditions, and is liable to ensure that all contractors and subcontractors of the Project comply fully with all applicable Laws, the Rules, this Procedure, the EMP, Project commitments and conditions when providing services to the Project.

Article 104 states that the Project Proponent shall be responsible for, and shall fully and effectively implement, all requirements set forth in the Environmental Compliance Certificate (ECC), applicable Laws, the Rules, this Procedure and standards.

Article 107 states that the Project Proponent shall notify and identify in writing to the Ministry any breaches of its obligations or other performance failures or violations of the ECC and the EMP as soon as reasonably possible and in any event, in respect of any breach which would have a serious impact or where the urgent attention of the Ministry is or may be required, within not later than twenty-four (24) hours, and in all other cases within seven (7) days of the Project Proponent becoming aware of such incident.

Article 108 states that the Project Proponent shall submit monitoring reports to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP, or periodically as prescribed by the Ministry.

2.4.1.5 National Environmental Quality (Emission) Guidelines (2015)

NEQEG (2015) was established in December 2015 with financial and technical assistance of the Asian Development Bank (ADB). Effluent parameters and air emission from the project operation processes will be compared with effluent and air emission guidelines outlined in sub-section 1.2 and 1.1, Section 1.0 General Application of NEQEG (2015), as shown in Table 2.3 and Table 2.4, respectively. In addition, noise levels will be compared with noise levels (general guidelines) of NEQEG (2015), as shown in Table 2.5. The

emission from the boiler and generator of the project will be compared with Section (1.1) Air Emissions for small-combustion facilities with a total, rated heat input capacity of 3-50 megawatt thermal of NEQEG (2015), as shown in Table (2.6).

Table 2.3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (General Application)

Parameter	Unit	Guideline Value
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and Grease	mg/l	10
pH	S.U	6 – 9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulphide	mg/l	1
Temperature increase	C	<3
Total coliform bacteria	100 mal	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

Table 2.4 Air Emission Levels (General Application)

Parameter	Averaging Period	Guideline Value ($\mu\text{g}/\text{m}^3$)
Nitrogen dioxide (NO ₂)	1-year	40
	1-hour	200
Ozone (O ₃)	8-hour daily maximum	100
Particulate matter PM ₁₀	1-year	20
	24-hour	50
Particulate matter PM _{2.5}	1-year	10
	24-hour	25
Sulfur dioxide (SO ₂)	24-hour	20
	10-minute	500

Table 2.5 Noise Level (General Guidelines)

Receptor	One Hour L_{Aeq} , dB (A)	
	Day time 07:00-22:00 (10:00-22:00 for Public holidays)	Night time 22:00-07:00 (22:00-10:00 for Public holidays)
Industrial, Commercial	70	70
Resident, Institutional, Educational	55	45

Table 2.6 Small Combustion Facilities Emission Guidelines

Combustion Technology / Fuel	Particulate matter PM_{10}^a	Sulfur Dioxide	Nitrogen Oxides
Gas	-	-	200 ^b mg/Nm ^{3c} 400 ^d mg/Nm ³ 1,600 ^e mg/Nm ³
Liquid	100	3 %	1,600-1,850 ^f mg/Nm ³
Natural gas (3-<15 MW ^g)	-	-	200 ^h mg/Nm ³ 310 ⁱ mg/Nm ³
Natural gas (3-<15 MW)	-	-	50 mg/Nm ³
Fuels other than natural gas (3-<15 MW)	-	0.5 % sulfur	200 ^h mg/Nm ³ 310 ^j mg/Nm ³
Fuels other than natural gas (15-<50 MW)	-	0.5 % sulfur	150 mg/Nm ³
Gas	-	-	320 mg/Nm ³
Liquid	150 mg/Nm ³	2,000 mg/Nm ³	460 mg/Nm ³
Solid ^j	150 mg/Nm ³	2,000 mg/Nm ³	650 mg/Nm ³

a Particulate matter 10 micrometers or less in diameter

b Spark ignition

c Milligrams per normal cubic meter at specified temperature and pressure

d dual fuel

e compression ignition

f higher value applies if bore size > 400 m

g Megawatt

h Electric generation

i mechanical drive

j include biomass

2.4.1.6 National Drinking Water Quality Standards

Myanmar National Drinking Water Quality Standards Myanmar (MNDWQS, 2019) is standards for drinking water quality in Myanmar. For this project, MNDWQS standards will be used to compare with the result of underground water and the standard values are shown in Table (2.7).

Table 2.7 Drinking Water Quality Standards

No.	Parameter	MNDWQS (2019)
1.	Total Coliform Count	0 MPN/100ml
2.	Arsenic	0.05 mg/l
3.	Chloride	250 mg/l
4.	Copper	-

No.	Parameter	MNDWQS (2019)
5.	Colour	15 TCU
6.	Manganese	0.4 mg/l
7.	pH	6.5~8.5
8.	Sulfate	250 mg/l
9.	Lead	0.01 mg/l
10.	Total Dissolved Solids	1,000 mg/l
11.	Total Hardness	500 mg/l
12.	Total Iron	1 mg/l
13.	Turbidity	5 NTU

2.4.2 Overview of Other Relevant Myanmar Laws and Regulations

The overview of other relevant Myanmar Laws and Regulations are shown in below table.

Name of Laws and Regulations
Health and Safety
<p>Myanmar Public Health Law (1972)</p> <p>This law was enacted by the Myanmar State and Revolution Council with the notification number 1/1972 on January 12, 1972. This law is related with protection of people’s health by controlling the quality and cleanliness of food, drugs, environmental sanitation, epidemic diseases and regulation of private clinics.</p>
<p>The Prevention and Control of Communicable Diseases Law (1995, Amendment on March 20th, 2011)</p> <p>This law was enacted by the State Law and Order Restoration Council with the notification no. 1/95 on 20th March 1995 and amended in March 20th, 2011. The main purpose of this law is to prevent the outbreak of Communicable Diseases. Section 3 stated that the public shall comply with the measures undertaken by the Ministry of Health and the Department of Health under section 3 in respect of prevention of the occurrence and spread of communicable disease and control thereof.</p>
<p>The Control of Smoking and Consumption of Tobacco Product (2006)</p> <p>This law was enacted by the State Peace and Development Council Law with the notification No. 5/2006 on 4th May 2006. Section (7) state that places to which the public have access in the buildings, vehicles and crafts are non-smoking areas except the private offices and rooms.</p>
<p>Occupational Safety and Health Law (2019)</p> <p>This law was enacted by Pyidaungsu Hluttaw with the notification No. 8/2019 in the Union of Myanmar on 15th March 2019. Section (8) states that a person who is currently operating and wishes to start any industry applicable to this Law shall register at the Department in accordance with the specifications for performing the occupational safety and health matters. Section (9) states that a person, who wishes to perform construction, extension, demolition of any establishment or building and laying out, installation, extension or alternation of machineries, shall inform the Department for occupational safety and health. According to Section (12), the employer shall appoint a person in-charge for occupational safety and health or establish each occupational safety and health committee comprising equal number of employers and workers’ representatives.</p>
<p>Myanmar Fire Brigade Law (2015)</p>

Name of Laws and Regulations
<p>Myanmar Fire Brigade Law was enacted by the Pyidaungsu Hluttaw on 17th March 2015. Section 25 states that any factory, industry, bus stop, airport, port, hotels, motels, guest houses, high rise mixed used buildings, markets, offices, organizations, concerning fire risk owners or management person in accordance with fire department guidance:</p> <ul style="list-style-type: none"> (a) No one can default to compose reserved fire force. (b) No one can absence to place fire safety equipment.
<p>Prevention of Hazard from Chemical and Related Substances Law (2013)</p> <p>This law was enacted by Pyidaungsu Hluttaw with notification number 28/ 2013 on 26th August 2013.</p> <p>Section 15 states that a person has to obtain a license before starting the respective chemical and related substances business. The followings are listed under Section 15.</p> <ul style="list-style-type: none"> (a) Workplace shall be inspected for the safety and the power of resistance of the machinery and equipment by the respective Supervisory Board and Board of Inspection; (b) Workplace shall be attended by the person who serve in the work to the respective foreign trainings or the trainings and the expert trainings on prevention of hazard from the chemical and related substances opened by the government department and the government organizations. <p>Section 17 states that a person who has obtained a license shall put the insurance in accordance with the prescriptive stipulations to be able to pay the compensation, if the impact and damage is occurred on the Human Being and Animals or the environment in respect of the chemical and related substances businesses.</p> <p>According to Section 22, a person who has obtained the registration certificate shall abide the regulations consisted in the registration certificate furthermore shall also abide the order and instructions issued occasionally by the Central Supervisory Board.</p>
Biodiversity and Resource Conservation
<p>Conservation of Biodiversity and Natural Protected Area Law (2018)</p> <p>This law was enacted by Pyidaungsu Hluttaw with notification number 12/ 2018 on May 21st, 2018. This law designates and protects the areas such as Scientific Reserve, National Park, Marine National Park, Nature Reserve, Wildlife Sanctuary, Geo-physically Significant Reserve, or Other Nature Reserve designated by the Minister in order to regulate protected endangered wild fauna and wild flora in accordance with the Convention (Section 8).</p>
<p>The Law relating to Aquaculture (1989)</p> <p>This law was enacted in the state law and order restoration council law Notification No. 24/89 on September 7th, 1989. According to Sub-section (b) of Section (29), Project Proponents shall not obstruct navigation and water flow or polluted water within fisheries waters or abet such acts.</p>
<p>Conservation of Water Resource and River Law (2006)</p> <p>This law was enacted on 2nd October 2006 then amended in 2017 with Pyidaungsu Hluttaw Law No.11. Section 8 states that no person shall carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks. Section 11 states that no person shall:</p> <ul style="list-style-type: none"> (a) dispose of engine oil, chemical, poisonous material and other materials, which may cause environmental damage, or dispose of explosives from the bank or from a vessel,

Name of Laws and Regulations
<p>which is plying, vessel, which has berthed, anchored, stranded or sunk.</p> <p>(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.</p> <p>(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully, which can flow into the river and creek.</p> <p>Section 19 states that no one shall dispose of any substance into the river-creek that may cause damage to waterway or change of watercourse from the bank or vessel, which is plying, vessel which has berthed, anchored, stranded or sunk. Section 21 (b) states that no one shall: drill well or pond or dig earth without the permission of the Directorate.</p> <p>Moreover, Section 22 states that no one shall, without the permission of the directorate, pile sand, shingle and other heavy materials for business purposes in the bank area and waterfront area.</p>
<p>Conservation of Water Resource and River Rules (2013)</p> <p>Ministry of Transportation enacted Conservation of Water Resources and River Rules on 27th January 2013. The Project Proponent must, in accordance with the Rules:</p> <p>(a) construct the toilets far away from the river bank and sewage discharge to septic tank, under sub-rule (c) of rule 8;</p> <p>(b) avoid discharging sewage, engine oil, chemical, poisonous material, hazardous materials and other materials which may cause water pollution, under sub-rule (d) of rule 8; and</p> <p>(c) pay to prevent water pollution and to conserve the environment if water pollution and environmental impact is generated as a result of the project, under rule 9.</p>
<p>Underground Water Act (1930)</p> <p>This law was enacted in Burma act notification number IV on 21st June 1930. Section 3 of the law states that no person shall sink a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officers. Every person owning a tube which was in existence before the extension of this act to the local area concerned shall apply to the water officer for a license for the said tube and such license shall be granted free of charge.</p>
<p>Forest Law (2018)</p> <p>Ministry of Environmental Conservation and Forestry implements this Law on 20th September 2018. According to the sub-section 12 (a), anyone within the jurisdiction of the forest area and government-administered land: If he wants to carry out any development business or business project, he must obtain the prior approval of the Ministry.</p>
Law Related to Land
<p>The Land Acquisition Act (1894, Amendment on 21st October 1954)</p> <p>This Act was enacted in 1st May 1894 and amended in 21st October 1954. In accordance with sub-section (1) of Section (6), subject to the provisions of Part VII of this Act, when the President of the Union is satisfied, after considering the report, if any, made under section 5A, sub-section (2), that any particular land is needed for a public purpose, or for a company, a declaration shall be made to that effect: Provided that no such declaration shall be made unless the compensation to be awarded for such property is to be paid by a company, or</p>

Name of Laws and Regulations
wholly or partly out of public revenues or some fund controlled or managed by a local authority.
Myanmar National Land Use Policy (2016) The objectives of the policy are as follows: <ul style="list-style-type: none">(a) To promote sustainable land use management and protection of cultural heritage areas, environment, and natural resources for the interest of all people in the country;(b) To strengthen land tenure security for the livelihoods improvement and food security of all people in both urban and rural areas of the country;(c) To recognize and protect customary land tenure rights and procedures of the ethnic nationalities;(d) To develop transparent, fair, affordable and independent dispute resolution mechanisms in accordance with rule of law;(e) To promote people centered development, participatory decision making, responsible investment in land resources and accountable land use administration in order to support the equitable economic development of the country;(f) To develop a National Land Law in order to implement the above objectives of National Land Use Policy.
Farm Land Law (2012) This law was enacted by Pyidaungsu Hluttaw with notification number 11/ 2012 on March 30 th , 2012. Sub-section (g) of Section (12) states that the person who has the right to carry out the farm land shall not carry out the farm land by other means without permission. According to Section (14), the person who has the right to carry out the farm land shall not sell, mortgage, lease, exchange or gift the whole or part of the right to carry out the farm land without permission of the Government to any foreigner or any organization in which the foreigner is included.
Farm Land Rules (2012) The Ministry of Agriculture and Irrigation promulgated the rules with notification No. 62/2012 on August 31, 2012. According to Rule (24), the farm land received by transfer. <ul style="list-style-type: none">(a) If the right to work on farm land is transferred by selling, exchanging or giving, the transferer and transferee shall sign the deed by paying stamp duty in front of the concerned ward/village tract farm land management committee where the said farm land situate.(b) The deed made under sub-rule (a) shall be registered at the concerned township department office within 120 days of so signing the deed. According to Rule (35), any person who get the right to work on vacant, fallow and virgin land from the vacant, fallow and virgin land central management committee may apply to the central farm land management committee to designate the as farm land from vacant, fallow and virgin land (form – 10) with the photos showing the stable working condition after the crop wise plantation and harvest as per the regulation stipulated under vacant, fallow, and virgin land management law, or vacant, fallow and virgin land worked or used by him.
The Administration of Vacant, Fallow and Virgin Lands Law (2012) This law was enacted by Pyidaungsu Hluttaw with notification number 10/ 2012 on May 30 th , 2012. Section (4) states that the central committee may permit the right to carry out or use

Name of Laws and Regulations
<p>vacant, fallow and virgin lands in the State for the following businesses:</p> <ul style="list-style-type: none">(a) Agricultural business;(b) Livestock breeding business;(c) Mineral production business;(d) Other businesses permitted by the Government which are in accord with law. <p>According to Section (7), the central committee may allow the businesses applied for the right to carry out or use vacant, fallow and virgin lands for making foreign investment with the approval of the Myanmar Investment Commission.</p>
<p>The Registration of Deeds Law (2018)</p> <p>This law was enacted by Pyidaungsu Hluttaw with notification number 10/ 2012 on March 20th, 2018. According to section (16), the following documents are determined as the documents which require compulsory registration under this law:</p> <ul style="list-style-type: none">(a) Instruments of gift of immovable property;(b) Instruments of sale of immovable property which is valued at one hundred thousand kyats and upwards, instruments, other than wills which are executed for the validity of declaration, assignment, limitation, extinction or abolishment of any right, title or interest to or in such immovable property, and judgements, decrees or orders of the court on the ownership related to such instruments;(c) Mortgage instruments and instruments that extinguish the mortgage signed by the mortgagee and at least two witnesses except a mortgage by deposit of title deeds to property which is valued at one hundred thousand kyats and upwards;(d) Leases of immovable property from year to year, or for any term exceeding one year, or reserving a yearly rent;(e) Instruments by which a whole or part of immovable property or interest in such immovable property is mortgaged or given or assigned in any manner by a company or association to the trustee;(f) Other instruments prescribed by the Union Government from time to time.
Laws Related to Urban Development
<p>Bago Region Municipal Development Law (2016)</p> <p>This law was enacted by Bago Region Hluttaw with notification number 4/ 2016 on December 27th, 2016. According to Section (3), the purposes of the law are as follow;</p> <ul style="list-style-type: none">(a) To continuously develop cities, towns, and regions under the leadership of municipal development committees elected by the people, and to improve the living standards of the people.(b) To ensure that all municipal taxes are fully collected at the prescribed rates and to establish a people-centered management system that is responsible, accountable, and transparent.(c) All municipal development taxes received from the public shall be systematically used in accordance with existing laws and regulations in the relevant city, urban, and regional development projects, with the objective of “being for the public good only.” <p>Section 66 states that no person shall, within the municipal boundaries, without the permission of the township or city municipal body or in accordance with the terms and conditions of the permission or the rules issued:</p>

Name of Laws and Regulations
<p>(c) No one shall destroy the city's clean and beautiful facilities.</p> <p>(d) Garbage, sewage, dirt, sewage, etc. shall not be disposed of on the street or in any place not designated for disposal.</p> <p>(e) No private road construction shall be permitted.</p> <p>(f) No road shall be paved on a public road or road boundary that would cause obstruction of water flow.</p> <p>(g) No buildings shall be constructed on land that does not have an access road.</p>
<p>The Electricity Law (2014)</p> <p>This law was enacted by the Pyidaungsu Hluttaw with the notification No.44 on 27th October 2014. There are 16 chapters included in this law. According to the chapter 2 – section 3, the objectives of the law are described below.</p> <p>(a) To achieve further development in the electric power sector, to meet the State electric power demand and to supervise the electrical businesses by managing the electrical matters systematically in line with the Union Government policies;</p> <p>(b) To encourage the production and distribution of large-scale electric power that has the right to be managed by the Union in addition the production and distribution of both small and medium scale electric power in Regions and States;</p> <p>(c) To enable to use electric power safely and broadly;</p> <p>(d) To carry out the electrical business in accordance with the specified standards;</p> <p>(e) To encourage the local and foreign investment in the electrical business;</p> <p>(f) To enact fair, transparent and appropriate rules and regulations in order to prescribe the rates of electric power fee which are consistent with current times;</p> <p>(g) To have the right to use the electric power which has the standardized voltage, current, and frequency by the users of electric power and to protect from causing damages to the electrical equipment of users due to the electric power which is not consistent with standardization;</p> <p>(h) To adhere in accord with the international environmental protection treaties which Myanmar has ratified.</p> <p>In addition to, the prohibitions of law are described in Chapter 12- Section 44 to 53 as the following:</p> <ul style="list-style-type: none">❖ Section 44 states that no person shall operate the electrical business without permit.❖ Section 45 states that no permit holder shall operate any other electrical business except the business contained in the permit.❖ Section 46 states that no person shall operate the electrical installation and repair without obtaining the electrical professional certificate.❖ Section 47 states that no person shall operate the generation, transmission, connection

Name of Laws and Regulations
<p>of electric power without obtaining the electrical safety certificate.</p> <ul style="list-style-type: none"> ❖ Section 48 states that no person shall operate the importing, manufacturing in the country, exporting, distributing and selling of the electrical equipment which are not consistent with the prescribed norm and standard. ❖ Section 49 states that no permit holder shall operate the electrical business in collaboration with any other entity without the approval of the relevant department and organization. ❖ Section 50 states that no permit holder shall sell, mortgage, lease, exchange or transfer by any other means the permit the whole or any part of the business contained in the permit without the approval of the relevant Government department or Government organization which has issued the permit. ❖ Section 51 states that no person shall operate the construction of building, planting of trees or other activities within the area of the electric line. ❖ Section 52 states that no person shall connect, waste, utilize the electric power without the permission of the permit holder. ❖ Section 53 states that no person shall divert the electric current, cut-off the electric power line, destroy any equipment being used in any electrical business.
Law Related to Rights
<p>The Ethnic Rights Protection Law (2015)</p> <p>This law was enacted by the Pyidaungsu Hluttaw with notification number 8/2015 on 24th February in 2015. The objectives of this law are described below.</p> <ul style="list-style-type: none"> ❖ To obtain equal citizen's rights for all ethnic groups; ❖ To live eternally together with amicable relations among ethnic groups on the basic of genuine Union Spirit; ❖ To preserve and develop language, literature, fine art, culture, custom, national character and historical heritage of ethnic groups; ❖ To promote solidarity, mutual amity and respect, and mutual assistance among ethnic groups; ❖ To promote socio-economic development including education, health, economy, transport and communication, so forth, of less-developed ethnic groups; and, ❖ To fully obtain the rights prescribed in the Constitution by ethnic groups. <p>This law mandates that development works, major projects, businesses, and natural resource extraction planned within ethnic group areas must be informed, coordinated, and executed in consultation with the relevant local ethnic communities, as stipulated in Section 5.</p>

Name of Laws and Regulations
<p>The Ethnic Rights Protection Rules (2019)</p> <p>These rules were enacted by the Ministry of Ethnic Nationalities Affairs with notification No. 48/2019 on August 23, 2019.</p> <p>Rule (20) states that person proposing the project in relation to the project to be developed in the area inhabited by ethnic peoples. The Project Proponent shall-</p> <ul style="list-style-type: none">(a) The benefits and drawbacks of the project and its contents must be fully and accurately explained in advance to the indigenous peoples living in the area where the project will be implemented, using language and methods that they can understand.(b) Must act in accordance with the policy directions, strategies, and processes of the Myanmar Sustainable Development Plan (MSDP).(c) An environmental impact assessment and socio-economic development impact assessment shall be conducted in accordance with the guidelines of the relevant department to determine whether there is a potential for changes in the natural environment and socio-economic life in the area.(d) Consultations with indigenous peoples shall be conducted in an open and transparent manner at all stages of the environmental impact assessment and socio-economic development impact assessment processes. <p>According to Rule (21), the Project Proponent –</p> <ul style="list-style-type: none">(a) A comprehensive report on the progress made under Rule 20 shall be submitted to the Ministry before the project commences and comments shall be obtained.(b) Upon completion of project implementation, the preliminary arrangements and progress status shall be reported to the Ministry.
<p>The Rights of the Persons with Disabilities Law (2015)</p> <p>The Union Parliament Law hereby enacted the Rights of the Persons with Disabilities Law with the Law No. 30/2015 on June 5th, 2015.</p> <p>According to Section (36), the employer shall</p> <ul style="list-style-type: none">(a) Obey and implement the policies and plans set up by the National Committee regarding with the job opportunities of persons with disabilities;(b) Employ the persons with disabilities with employability for appropriate work depending on the type of employment in accordance with the quota for the number of people with disabilities specified by the National Committee;(c) Choose and employ the persons with disabilities registered at Employment Exchange Offices in relevant townships and departments in accordance with the subsection (b);(d) Make appropriate arrangements including interviewing, the equal rights for interviewing salaries and opportunities, promotion, job security, access to the free vocational education and training based on employability of the persons with disabilities.(e) Pay the amount of money to the funds related to the rights of the persons with disabilities when impossible to employ in accordance with the quota for the number of people with disabilities as specified in the subsection (b);(f) Submit the list of the employed staff or workers with disabilities and the vacant positions to the Department and the Employment Exchange Offices in the relevant township in accordance with the subsection (b).

Name of Laws and Regulations
<p>The Child Rights Law (2019)</p> <p>The Pyidaungsu Hluttaw enacted the Child Rights Law with the Pyidaungsu Hluttaw Law No. 22/2019 on July 23, 2019.</p> <p>According to Section (4), the objectives of this law are:</p> <ul style="list-style-type: none">(a) To implement the rights of the child in the United Nations Convention on the Rights of the Child;(b) To ensure the best interests of children, and to protect the entitlement of the rights of the child in accordance with law;(c) To take necessary measures for basic health, nutrition, educational opportunity of all-round development of children;(d) To protect the children who are suffering from neglect, abuse, cruelty and exploitation by the State, volunteers, and non-governmental organizations;(e) To proceed a separate trial of a juvenile crime, and to ensure the rehabilitation of character of a juvenile offender;(f) To ensure that all children have the relevant equal rights and protection prescribed according to the existing law, and there is no discrimination of children. <p>According to Section (48),</p> <ul style="list-style-type: none">(a) No child shall be forced to work or employed in the worst forms of labour.(b) The age of the employable child shall not be younger than 14 years of age. If the age prescribed for the free compulsory education system envisaged by the State is more than 14 years, the employable age of children to be in school is not younger than that age.(c) The child who has attained the age specified in subsection (b) has the right to employment in accordance with the existing Labour Law and Employment Law if he or she is in good health and capable of working the relevant work.
Law Related to Cultural Heritages
<p>The Protection and Preservation of Cultural Heritage Region Law (2019)</p> <p>This law was enacted by Pyidaungsu Hluttaw Notification No. 6/2019 on February 28, 2019. The purpose of the law is to ensure protection of cultural heritage and the cultural heritage area from damages caused by natural and man-made disasters.</p> <p>Section 22 states that no person shall construct a building, which is not in conformity with the conditions prescribed region wise by the Ministry of Culture in the cultural heritage region.</p>
<p>The Protection and Preservation Antique Object Law (2015)</p> <p>This law was enacted by Pyidaungsu Hluttaw Notification No. 43/2015 on July 22, 2015. The purpose of the law is to ensure the protection of antique object and its information if it was found in the project area.</p> <p>According to the section (12) of the law, the person who finds any object which has no owner or custodian shall promptly inform the relevant Ward or Village-Tract Administrator if he knows or it seems reasonable to assume that the said object is an antique object.</p> <p>Section (15) states that whoever carries or transports an antique object or a foreign country without permission shall, on conviction, be punished with imprisonment for a term from a minimum of five years to a maximum of ten years or with a fine from a minimum of five million kyats to a maximum of ten million kyats or with both. In addition, the exhibit of the</p>

Name of Laws and Regulations
antique object involved in the offense shall be confiscated.
The Protection and Preservation of Ancient Monument Law (2015) This law was enacted by Pyidaungsu Hluttaw Notification No. 51/2015 on August 26, 2015. The purpose of the law is to ensure the protection of ancient monument and information about it if it was in the project area. According to Section 12, the person who found the ancient buildings over 100 years on the ground or under the ground or on the water or under the water to the owner or without maintained person that buildings may be known or assumed the ancient buildings must inform early to the respective ward administrator or village administrator. Section 15 states that the person who made the following things in the regarded area of the ancient buildings should apply to the department in advance allowance; <ul style="list-style-type: none">(b) The new building construction or extensions or preparation or fencing or annexes including hotels, factories, residential buildings;(e) Digging or extension of well, lake, channel, husbandry pond;
Law Related to Labour
The Labour Organization Law (2011) The Pyidaungsu Hluttaw enacted this law with the Pyidaungsu Hluttaw No. 7/2011 on October 11, 2011. The purpose of the law is to ensure protection of employees' rights, developing a good relationship between the employees and employer and enabling to form and carry out labour organizations systematically and independently. According to Section (18), the labour organization has the right to demand the relevant employer to re-appoint a worker if the employer dismisses such worker and if there is cause to believe that the reasons of such dismissal were based on labour organization membership or activities, or were not in conformity with the labour laws. According to Section (20), in discussing with the Government, the employer and the complaining workers in respect of worker's rights or interests contained in the labour laws, the representatives of the labour organization also have the right to participate and discuss.
The Employment and Skill Development Law (2013) This law was enacted by the Pyidaungsu Hluttaw Notification No. 29/2013 on August 30, 2013. According to Section 5 (a), <ol style="list-style-type: none">1. The employer shall conclude an employment agreement within thirty days after appointing a worker to do any work. However, it does not concern with appointment of permanent staff at the Government department, Government organization;2. If the pre-orientation period and probation period are prescribed before the appointment, such trainee shall not concern with stipulation in sub-section (1). According to Section 5 (b), The employment agreement shall include the followings: <ol style="list-style-type: none">1. category of employment;2. period of probation;3. wage, salary;4. place of employment;5. term of agreement;

Name of Laws and Regulations

6. working hour;
7. holiday, day-off and leave;
8. over-time;
9. messing arrangement during working hour;
10. accommodation;
11. medical treatment;
12. arrangement for ferry and travelling;
13. terms and conditions to be abided by the workers;
14. term of period agreed by the worker to continue to work after attending the training if the worker has to attend the training sent by the employer;
15. resignation from work and termination of work;
16. termination of agreement;
17. obligation from work and termination of work;
18. termination of employment agreement by mutual consent of employer and worker;
19. other matters;
20. prescribing, amending and adding the terms and condition of the agreement;
21. miscellaneous.

According to Section 5 (c), workplace terms and conditions included in the employment agreement shall be in conformity with any existing law and benefits of the worker shall not be less than benefits contained in any existing law;

According to Section 5 (d), the Ministry shall issue notification to pay stipulated compensation to worker by the employer if the work is completed earlier than the period concluded in the employment agreement or if all or any part of the work is terminated due to unexpected cause or if a matter to terminate the work arises for any other cause;

According to Section 5 (e), the employment agreement concluded under sub-section (a) shall apply to daily wage earners and piece-workers temporarily at the Government organization;

According to Section 5 (f), the employer and the worker or workers may amend, by mutual agreement, conditions and benefits contained in the employment agreement as may be necessary in accord with the existing law;

According to Section 5 (g), the copy of employment agreement concluded between the employer and worker shall be sent to the relevant labour exchange office by the employer within the stipulated time and obtain approval;

According to Section 5 (h), the employment agreements concluded before coming into force of this Law shall be valid until the original term terminates.

Section 14 states that the employer shall carry out training programmers for increasing employment skill of the workers who are intended to appoint or who are working presently in his work in accord with the policy of the Skill Development Body according to the requirement of the work.

Section 30 (a) states that the employer of the industry and service shall pay money not less below 0.5% of salary, total wages paid to the level of worker supervisor and the workers below such level in such work monthly without fail as the contribution to the fund. (b) The contribution paid under sub-section (a) shall not be deducted from the wage or salary of the workers.

Name of Laws and Regulations
<p>The Minimum Wage Law (2013)</p> <p>This Pyidaungsu Hluttaw enacted this law with Notification No. 7/2013 on March 22, 2013. The purpose of the law is to ensure that the employer gives payment not less than the wage, which is notified, at the workplace.</p> <p>Section 12 describes the duties of the employer in which:</p> <ul style="list-style-type: none">(a) shall not pay wage to the worker less than the minimum wage stipulated under this Law;(b) may pay more than the minimum wage stipulated under this Law;(c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law; <p>Section 13 describes the duties of the employer in which:</p> <ul style="list-style-type: none">(a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;(b) shall record the lists, schedules, documents and wages of the workers correctly in accord with the stipulation;(c) shall report the lists, schedules and documents recorded under sub-section (b) to the relevant department in accord with the stipulations;(d) shall accept the inspection when summoned by the inspection. Moreover, he shall produce the said lists and documents when so required;(e) shall allow the entry and inspection of the inspector workplaces of commerce, production and service, agriculture and livestock breeding and give necessary assistances;(f) shall give them holiday for medical treatment in accord with the stipulations if the workers cannot work due to sickness;(g) shall give holiday without deducting from the minimum wage, in accord with the stipulations if the funeral matter of the family of worker or his parent occurs.
<p>The Payment of Wage Law (2016)</p> <p>The Pyidaungsu Hluttaw enacted this law with the Pyidaungsu Hluttaw Law No. 17,2016 on January 25, 2016.</p> <p>In Chapter (2) Section 3, the employer must:</p> <ul style="list-style-type: none">(a) pay in local currency or foreign currency recognized by the Central Bank of Myanmar. This may be in cash, check or deposit into the bank account of Employee.(b) pay can be in the form of: (1) in cash or half in cash and half in things set according to the local price to those employees working in trade, manufacturing and service sectors. <p>In Section 4 describes that an employer must pay for-</p> <ul style="list-style-type: none">(a) part-time, daily, weekly or other part-time job, temporary or piecework when the work is done or at the agreed time.(b) according to the Article (a), the period shall not exceed one month.(c) wages for the permanent work must pay per monthly basis.(d) must pay at the end of the payment period when there are not more than 100 workers.

Name of Laws and Regulations
<p>(e) if there are 100 workers and above, pay must not be administered later than 5 days after the end of the payment period.</p> <p>(f) upon termination, wages must be paid within 2 days from the date of termination.</p> <p>(g) if a resignation letter is submitted, wages must be paid at the ending day of the payment period.</p> <p>(h) if an employee dies, wages must be paid to the legally recognized heir within 2 working days after the day he/she has died.</p> <p>(i) all wages must be paid during the working day.</p> <p>Section 5 states that the employer may be subject to unforeseen circumstances, including natural disasters. If it is difficult to pay in accordance with the provision of sub-section (c), it shall be submitted to the Department with good reason as to when the wages will be changed with the consent of the workers.</p> <p>Chapter (3) Describe the followings;</p> <p>In Section 7, the employer:</p> <ul style="list-style-type: none">(a) can deduct from the fee for the period of non-working time except for paid leave and public holidays according to the relevant law.(b) accommodation and transportation expenses arranged by the employer not included in the fee; food expenses; electricity price, water tax and income tax to be paid by the worker; wrong and overpayments can be deducted.(c) advance payment at the request of the worker; cash out; savings or legal contributions for workers can be deducted from wages.(d) may deduct from the employee's wages as decided by the court or the arbitral tribunal or the arbitral tribunal. <p>In Section 8, the employer shall not deduct for any purpose except deduction from wages in accordance with the provisions of section 7 and section 11.</p> <p>In Section 9, the employer shall not deduct more than 50% of the total wages deducted from the wages, except for deductions for the employee's failure to perform his duties when deducted from wages under section 7.</p> <p>In Section 10, the employer:</p> <ul style="list-style-type: none">(a) before the deduction from the fee shall be determined as, a fine to be paid under section 11 and the deduction shall be obtained with the prior approval of the Department.(b) the permission in sub-section (a) shall be given to the relevant workshop; It should be posted in a public place in the office.(c) the deductible indemnity shall not exceed the value of the damage or loss due to the work or failure of the worker.(d) in deducting from the fee under section 11:<ul style="list-style-type: none">1. the wage shall not be deducted from the work without giving the worker any right to settle.2. no more than 5% per month shall be deducted from the employee's monthly salary.(e) the fine shall not be deducted from the worker under 16 years of age as a fine.(f) the period for payment of the prescribed fine may be carried out in accordance with the agreement between the employer and the employee.(g) the deductible for loss of property shall be deducted within the prescribed period

Name of Laws and Regulations
<p>within the prescribed period by the negotiation agreement with the township mediation body formed by law.</p> <p>(h) the money deducted from the fee shall be recorded in the record and kept systematically.</p> <p>(i) the monthly report shall be submitted to the Department in respect of the amount deducted from the fee.</p> <p>(j) Section 11; The fines deducted under sub-section (b) shall be used for the benefit of the workers in consultation with the officially registered labor organization at the factory.</p> <p>In Section 11, the employer may impose a penalty for compensation for the following actions or omissions of the employee:</p> <p>(a) Deliberate negligence of the worker whether due to negligence or not. damage to property or money that the employer has explicitly entrusted to the care of the worker, whether due to dishonesty or misconduct, is a direct consequence of the employee's negligence and misconduct.</p> <p>(b) violation of any of the workplace conditions prescribed by a fine in the employment contract.</p> <p>Section 14 states that the worker has the right to enjoy overtime wages stipulated by the law if he works over time</p>
<p>The Workmen's Compensation Act (1924, amendment in 2005)</p> <p>The Workers' Compensation Act was enacted by 1924 and amended on May 11, 2005. Under Chapter (2), followings are stated.</p> <p>Section 3 (1) - If personal injury is caused to a workman by accident arising out of and in the course of his employment, his employer shall be liable to pay compensation in accordance with the provisions of this Chapter.</p> <p>Section 4 (1) - Subject to the provisions of this Act, the amount of compensation shall be as follows;</p> <p>A. where death results from the injury-</p> <p>(i) in the case of an adult, a sum equal to 36 times the worker's monthly wages calculated in accordance with this Act:</p> <p>Provided that the minimum and the maximum payment in such a case shall be the amount of compensation prescribed by notification made by the Ministry of Labour with the approval of the Government respectively, and</p> <p>(ii) in the case of a minor- the amount of compensation prescribed by notification made by the Ministry of Labour with the approval of the Government;</p> <p>B. where permanent total disablement results from the injury-</p> <p>(i) in the case of an adult, a sum equal to 36 times 140 per cent of the worker's monthly wages calculated in accordance with this Act:</p> <p>Provided that the minimum and the maximum payment in such a case shall be the amount of compensation prescribed by notification made by the Ministry of Labour with the approval of the Government respectively, and</p> <p>(ii) in the case of a minor- the amount of compensation prescribed by notification made by the Ministry of Labour with the approval of the Government;</p>

Name of Laws and Regulations
<p>C. where permanent partial disablement results from the injury-</p> <p>(i) in the case of an injury specified in Schedule I, such percentage of the compensation which would have been payable in the case of permanent total disablement as is specified therein as being the percentage of the loss of earning capacity caused by that injury, and</p> <p>(ii) in the case of an injury not specified in Schedule I, such percentage of the compensation payable in the case of permanent total disablement as is proportionate to the loss of earning capacity permanently caused by the injury;</p>
<p>The Settlement of Labour Dispute Law (2012)</p> <p>The Pyidaungsu Hluttaw enacted this law with the Notification No.5/2012 on March 28, 2012 for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully, and quickly by settling the dispute of employer and worker justly.</p> <p>According to Section (3), in any trade in which more than 30 workers are employed to obtain the collective agreement by negotiating, the employer shall:</p> <ul style="list-style-type: none">(a) if there is any labour organization, shall form the Workplace Coordinating Committee with the view to make a collective bargaining as follows:<ul style="list-style-type: none">i. two representatives of workers nominated by each of the labour organizationii. representatives of worker and an equivalent number of representatives of employer;(b) if there is no labour organization, shall form the Workplace Coordinating Committee as follows:<ul style="list-style-type: none">i. two representatives of workers elected by them;ii. two representatives of employer.
<p>The Law Amending the Leave and Holiday Act, 1951 (2014)</p> <p>The Pyidaungsu Hluttaw enacted this law with Notification No.30, 2014 on July 18, 2014. Sub-section (b) of Section (2) states that leave includes earned leave, casual leave, medical leave and maternity leave.</p> <p>According to Section (5), the employer shall determine and allow at least a day in a week as the holiday on full wage or pay.</p> <p>According to Section (8), the pregnant woman workers shall be allowed six weeks before and eight weeks after the delivery as maternity leave with the relevant wage or pay. The maternity leave may be allowed joining with medical leave.</p>
<p>Social Security Law (2012)</p> <p>The Pyidaungsu Hluttaw enacted this law with Notification No.15, 2012 on August 31, 2012. According to Section (11) (a) (i), The law mandates compulsory social security registration for production industries, including those utilizing mechanical power or engages in production, repair, services, engineering, mills, or warehouse operations, if they meet minimum number of workers specified by the Ministry of Labour in coordination with the Social Security Board.</p>
Road Safety
<p>The Road Safety and Motor Vehicle Management Law (2020)</p> <p>This law was enacted by the Pyidaungsu Hluttaw with Notification No.6/2020 on May 26,</p>

Name of Laws and Regulations
<p>2020.</p> <p>Section 18 (a) states that the vehicle shall be maintained and repaired in accordance with the standards set by the Department in order to drive it safely.</p> <p>Section 81 (g) states that no person in a public place: dangerous goods shall not be loaded or transported in a vehicle without complying with the requirements;</p>
<p>The Road Safety and Motor Vehicle Management Rules (2022)</p> <p>These rules were enacted by the Ministry of Transport and Communications with the Notification number 1/2022 on January 19, 2022.</p> <p>According to sub-rule (a) of rule 15, the vehicle owner: the vehicle registration certificate issued by the registration officer shall be kept with the vehicle.</p> <p>According to sub-rule (a) of rule 16, the vehicle owner: the high-tech identification document (RFID Sticker or Tag) implemented by the Department shall be installed in the vehicle at the place specified by the Department for a specified period.</p> <p>Rule 58, sub-rule (a) states that vehicles shall be equipped with a left-hand steering system that is compatible with the country's traffic system. Vehicles registered before the publication of these regulations and vehicles permitted by exception under the state's annual vehicle import policy shall not be subject to this requirement.</p> <p>According to rule 86;</p> <ul style="list-style-type: none"> (a) The noise caused by the engine and body of the vehicle shall not disturb the environment. The noise level shall be as specified by the Department according to the type of vehicle. (b) Internal combustion engine vehicles shall have an exhaust silencer and must be able to work effectively. If the machine is not properly maintained, the Department may refuse or temporarily suspend the vehicle registration. (c) changing the sound control device to make it louder; Do not modify the exhaust pipe to release more exhaust gases. <p>Rule 87, sub-rule (a) states that excessive smoke that pollutes the surrounding air; Regarding the registration of a vehicle that emits odorous gases that can harm health, the registration officer of the Department may temporarily suspend the registration of the vehicle or cancel the registration with the approval of the Director General.</p> <p>Rule 88 states that the emission standard of the vehicle shall be as determined by the Department.</p> <p>According to rule 110, the vehicle shall be equipped with a life-saving air bag that is in good condition in the original factory condition.</p>
Other Laws Related to this Project
<p>The Myanmar Insurance Law (1993)</p> <p>This law was enacted by the State Law and Order Restoration Council on July 23, 1993.</p> <p>In Section 15, owners of motor vehicles shall affect compulsory Third Party Liability Insurance with the Myanmar Insurance.</p> <p>According to Section (16), An entrepreneur or an organization operating an enterprise which may cause loss to State-owned property or which may cause damage to the life and property of the public or which may cause pollution to the environment shall affect compulsory General Liability Insurance with the Myanmar Insurance.</p>

Name of Laws and Regulations
<p>Myanmar Investment Law (2016)</p> <p>This law was enacted by the Pyidaungsu Hluttaw with the Notification No. 40/ 2016 on October 18, 2016.</p> <p>In Section 50(d), the investor shall register the land lease contract at the Office of Registry of Deeds in accordance with the Registration Act.</p> <p>According to Section (56), Foreign Investors may transfer the following funds abroad relating to the investments made under this law:</p> <ul style="list-style-type: none"> (d) capitals designated under the provisions relating to capital account rules stipulated by the Central Bank of Myanmar; (e) proceeds, profits from the asset, dividends, royalties, patent fees, license fees, technical assistance and management fees, shares, and other current income resulting from any investment under this Law; (f) proceeds from the total or partial sale or liquidation of an investment or assets owned by an investment; (g) payments made under a contract, including a loan agreement; (h) payments resulting from any settlement of investment disputes; (i) other compensation or moneys as compensation under investment or expropriation; (j) remuneration, salary, and earnings of foreign experts legally employed in the Union.
<p>The Rules Which Amend the Myanmar Investment Rules (2018)</p> <p>The Ministry of Planning and Finance, with the approval of the Union Government, hereby issues these rules with the Notification No. 76/2018 on September 20, 2018.</p> <p>According to Rule 14 of Amended Rules, the rule of 197 of Myanmar Investment Rules shall be replaced as follows: the investor shall, during the operation period under the permit of the Commission, submit business report including the employment of staff and workers quarterly in the prescribed form in accordance with section 51 of the Law.</p> <p>According to Rule 206, If the Investor is desirous to appoint a foreigner as senior management, technician expert or consultant according to Section 51 (a) of the Law, the investor shall submit such foreigner's passport, expertise evidence or degree and profile to the Commission Office for approval.</p>
<p>The Petroleum and Petroleum Product Law (2017)</p> <p>This law was enacted by the Pyidaungsu Hluttaw with Notification No. 20/2017 on August 1, 2017.</p> <p>Section (11) states that on all receptacles containing any dangerous petroleum and petroleum product, the warning sign of danger by stamping, embossing, painting, printing or any other means shall be expressed. If it is impossible to express as such, similar warning signs of the nature of danger of gasoline, spirit or petroleum shall be expressed in writing at the sensible place in salient words or signs near the receptacle.</p> <p>According to Section (15), if a person wishes to transport or store more than 500 gallons of harmless petroleum and petroleum products, this person shall obtain a license. Containers with a storage capacity of maximum 200 gallons shall be used for the storage of up to 500 gallons.</p> <p>Section (16) states that anyone may store, import or export less than 6 gallons of dangerous petroleum or petroleum products not intended for sale.</p>

Name of Laws and Regulations
<p>According to Section (18), the driver, captain or owner of machines with engines using petroleum or any types of petroleum products is not required to obtain a license or permit for the import, transportation and storage of less than 20 gallons of dangerous petroleum and any types of dangerous petroleum products in addition to the amount contained in the tank of the engine.</p>
<p>The Petroleum Act (1934, Amendment in 2010)</p> <p>According to Section (7), no license needed for small stocks of non-dangerous petroleum not in bulk. Notwithstanding anything contained in this Chapter, a person need not obtain a license for the transport or storage of non-dangerous petroleum if the total quantity in his possession at any one place does not exceed five hundred gallons and none of it is contained in a receptacle exceeding two hundred gallons in capacity.</p> <p>According to Section (8), no license needed for small quantities of dangerous petroleum.</p> <ol style="list-style-type: none">(1) Notwithstanding anything contained in this Chapter, a person need not obtain a license for the import, transport, or storage of dangerous petroleum not intended for sale if the total quantity in his possession does not exceed six gallons.(2) Dangerous petroleum possessed without a license under this section shall be kept in securely stoppered receptacles of glass, stoneware, or metal, which shall not, in the case of receptacles of glass or stoneware, exceed one quart in capacity or, in the case of receptacles of metal, five gallons in capacity.
<p>The Export and Import Law (2012)</p> <p>This law was enacted by the Pyidaungsu Hluttaw with the Notification No. 17/2012 on September 17, 2012.</p> <p>According to Section (5), no person shall export or import restricted, prohibited and banned goods.</p> <p>Section (6) states that no person shall export or import the specified goods, which is to obtain permission, without obtaining license.</p> <p>Section (7) states that a person who obtained any license shall not violate the conditions contained in the license.</p>
<p>Natural Disaster Management Law (2013)</p> <p>The Pyidaungsu Hluttaw enacted this law with the Notification No. 21/2013 on July 31, 2013.</p> <p>According to Section (31), whoever fails willfully to comply with the direction of remove or evacuation from an area or building at risk natural disaster to the public in such place for the purpose of reduction of damage and losses when the natural disaster strikes or it will be a natural disaster and for the purpose of no obstruction to the prevention and reduction activities of the natural disaster shall, on conviction, be punished with imprisonment for a term not exceeding one month or with fine or with both.</p>
<p>Climate Change Policy (2019)</p> <p>The policy is adopted by the Republic of the Union of Myanmar in 2019. The purpose of the Climate Change Policy is to provide long-term direction and guidance to: (a) take and promote climate change action on adaptation and mitigation in Myanmar; (b) integrate climate change adaptation and mitigation consideration into Myanmar's national priorities and across all levels and sectors in an iterative and progressive manner; and (c) take decision to create and maximize opportunities for sustainable, low carbon, climate resilient development,</p>

Name of Laws and Regulations
ensuring benefits for all.
<p>The Commercial Tax Law (1990, Amended in 2014)</p> <p>The Pyidaungsu Hluttaw enacted this Law with the Notification No. 16/2014 on March 31, 1990 and amended in March 24, 2014.</p> <p>According to Section (11),</p> <ul style="list-style-type: none">(a) Whoever carries on a goods production enterprise or a service enterprise liable to tax shall register with the Township Revenue Officer as prescribed by the Regulations;(b) Whoever commences to engage in the goods production enterprise, or the service enterprise liable to tax shall send intimation of such commencement to the Township Revenue Officer as prescribed by the Regulations;(c) The Township Revenue Officer may send intimation to any person to register his enterprise in accordance with the Regulations or to send intimation of the commencement of his enterprise. <p>According to Sub-section (a) of Section (12), whoever has received in any year assessable proceeds of sale or proceeds of service shall furnish to the Township Revenue Officer a monthly return within ten days of the end of the respective month. In addition, the tax payable under the said return shall be paid within ten days as aforesaid.</p> <p>According to Section (14) (a), whoever has received in any year assessable proceeds of sale or proceeds of service shall furnish to the Township Revenue Officer an annual return for the said year within three months of the end of the respective year.</p>
<p>The Union Taxation Law (2020)</p> <p>The Pyidaungsu Hluttaw enacted this law with the Notification No. 18/2020 on September 2, 2020.</p> <p>Section (16) states that any person shall, if he receives foreign currency from producing and selling any type of goods chargeable to the commercial tax, providing any service chargeable to the commercial tax and trading under this law, pay the commercial tax in kyats on such sale proceeds or proceeds of service in foreign currency in accordance with the commercial tax regulations calculated at the appropriate rates calculated in this law.</p> <p>According to Section (19),</p> <ul style="list-style-type: none">(a) No income tax shall be levied on any person who receives the income from salary up to 4.8 million kyats per year. Not to be assessed, the Internal Revenue Department shall issue it in accordance with stipulations.(b) However, if a person earns income from salary per year exceeds 4.8 million kyats, the income tax shall be charged on total income.(c) However, if a person earns income from salary per year exceed 4.8 million kyats, the income is from professional business, enterprise and other issues, the tax rate to be levied on any person according to the income bracket on the remaining income, after setting off the reliefs under section 6 of the Income Tax Law from the total income, are prescribed as follows.(d) Notwithstanding any provision contained in the Income Tax Law, the income tax shall be levied separately at ten percent on the remaining income of any person after deducting reliefs from the total rental income received from leasing land, buildings, and apartments under section 6 of the Income Tax Law. The tax shall not be levied again in combination with other income. In the case of State-owned enterprises and businesses, companies, and cooperative societies operating with the permission of the

Name of Laws and Regulations
<p>Myanmar Investment Commission, the income tax shall be levied at the specific tax rates prescribed according to the types of taxpayers.</p> <p>(e) If it is a partnership, the income tax shall be paid according to the income tax rates contained in subsection (c) after deducting the reliefs under section 6 of the Income Tax Law.</p> <p>(f) The income tax rates in this section shall not apply to the taxpayers for whom the specific income tax rates are prescribed for any person receiving income or any type of income.</p>
<p>The Myanmar Citizens Investment Law (2013)</p> <p>The Pyidaungsu Hluttaw enacted this law with Notification No.18, 2013 on July 29, 2013. According to Section (8), the investment may be carried out in any of the following forms:</p> <p>(a) carrying out an investment by a citizen with one hundred percent capital;</p> <p>(b) carrying out a joint venture between a citizen and the relevant government department and organization;</p> <p>(c) carrying out by the system approved by both parties including BOT, BOO in concluding the investment agreement between the Union and a citizen;</p> <p>(d) carrying out by any system which is consistent with the Law contained in the business contract.</p> <p>According to Section (9),</p> <p>(a) In forming the form of investment under section 8, business owned by an individual, group, or a company may be formed;</p> <p>(b) In carrying out the investment business under sub-section (a), liquidating before the expiry of the term of the contract as it has obtained the right to terminate or on the conclusion of the business shall be complied with and exercised in accord with the existing Laws of the Union.</p>
<p>The Boiler Law (2015)</p> <p>The Pyidaungsu Hluttaw enacted this law with Notification No. 39, 2015 on July 14, 2015. Section (5) states that any person desirous to use a boiler for any enterprise shall register under this law.</p> <p>According to Section (7), the documents and certificates relating to the boiler shall be attached to the application and submitted to the inspector when applying for registration of boiler under section 5.</p> <p>According to Section 19, the owner shall not</p> <p>(a) use a boiler at a pressure higher than allowable pressure.</p> <p>(b) Repair and alter or force to repair and alter the safety valve to exceed allowable pressure.</p> <p>(c) Do any act contained in sub-section (b) of section (14) without permission.</p> <p>According to Section (20), the owner shall not use the following boiler;</p> <p>(a) Boiler without certificate or provisional order;</p> <p>(b) Boiler of which certificate or provisional order is void;</p> <p>(c) Boiler of which certificate or provisional order is revoked.</p>

2.4.3 Overview of International Convention, Treaties and Protocols

Myanmar has signed a number of international treaties related to the environment which may have implications for the project. These include:

- ❖ Convention Concerning the Protection of the World Cultural and Natural Heritage
- ❖ Montreal Protocol on Substances that Deplete the Ozone Layer & all amendments
- ❖ Stockholm Convention on Persistent Organic Pollutants
- ❖ Convention on Biological Diversity
- ❖ Cartagena Protocol on Bio-safety
- ❖ International Tropical Timber Agreement
- ❖ Ramsar Convention on Wetlands
- ❖ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- ❖ ASEAN Agreement on the Conservation of Nature and Natural Resources
- ❖ United Nations Convention to Combat Desertification
- ❖ United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol
- ❖ ASEAN Agreement on Trans-boundary Haze
- ❖ Global Tiger Forum, India in August 1994.

The Project Proponent commits to comply with international conventions, treaties and protocols.

2.3.4 Project Proponent's Commitment

The project proponent's commitment is shown in Table 2.8.

Table 2.8 Project Proponent's Commitments

No	Summary of Commitment	Description of Commitment	Reference in the report
1	Policy, law, rules and regulations and standard guidelines of air (emission) quality, water quality, noise levels, soil quality and light intensity	The project proponent commits to comply with NEQ(E)G standards and international standards and the relevant Myanmar laws, rules and regulations.	Chapter (2) refers to the policy, legal and institutional framework.
2	Issues related to domestic wastewater, sanitation and sewage disposal	The project proponent commits to manage wastewater and sewage disposal to minimize environmental impact.	It refers to the domestic wastewater, sanitation and sewage disposal system of Chapter (3), Section (3.11).
3	Issues related to solid waste generation due to project activities	The project proponent commits to manage solid waste generation to minimize environmental impact.	It refers to the solid waste management of Chapter (3), Section (3.12).
4	Environmental Quality Measurement	The project proponent contacts third-party organization to measure environmental baseline data.	It refers to Chapter (4).
5	Impact Assessment and Mitigation	The project proponent commits to implement all the mitigation measures	It refers to Chapter (5).

No	Summary of Commitment	Description of Commitment	Reference in the report
	Measures	to minimize the identified adverse impacts during operation phase and decommissioning phase.	
6	Issues related to Environmental Management Plan	The project proponent commits to implement the management plans and to reduce the impact on the environment.	It refers to the Environmental Management Plan of Chapter (6), Section (6.2) to Section (6.8).
7	Issues related to Environmental Monitoring Plan	The project proponent commits to monitor the environmental issues included in the monitoring plan during operation phase and decommissioning phase of the project, and to submit a monitoring report to Environmental Conservation Department (ECD), periodically.	It refers to the Environmental Monitoring Plan of Chapter (6), Section (6.10).
8	Issues related to estimate cost for environmental monitoring plan	The project proponent commits to use the budget allocation to implement the environmental management and monitoring plan. In addition, the project proponent commits to use additional funds if the described fund is not sufficient.	It refers to the estimate cost for Environmental Monitoring Plan of Chapter (6), Section (6.11).
9	Issues related to the corporate social responsibility (CSR)	The project proponent commits to spend 2% of net profit on CSR issues for factory employees and the surrounding community, as designated as CSR program funds.	It refers to the corporate social responsibility of Chapter (6), Section (6.14).
10	Public consultation meeting	The project proponent commits to implement preventive measures to all the concerns received from both public consultation meeting and survey meeting with factory workers.	It refers to Chapter (7).

3.0 DESCRIPTION OF THE PROJECT

3.1 Project Location and Area

The proposed project, garment factory on CMP Basis, is situated at Holding No. (89), Plot No.1, Aye Mya Tharyar Village (KA), Aye Mya Tharyar Village Tract, Okpho Township, Bago Region, Myanmar, and the location map is shown in the following Figure 3.1 and Figure 3.2. The geographical coordinates of project sites are 18° 04' 34.19" N in latitude and 95° 43' 44.70" E in longitude. The owner of the land is U Sein Toe and the total area of the proposed project is 4.92 acres. There are four buildings in the project site and detailed building information are described in Section (3.2).

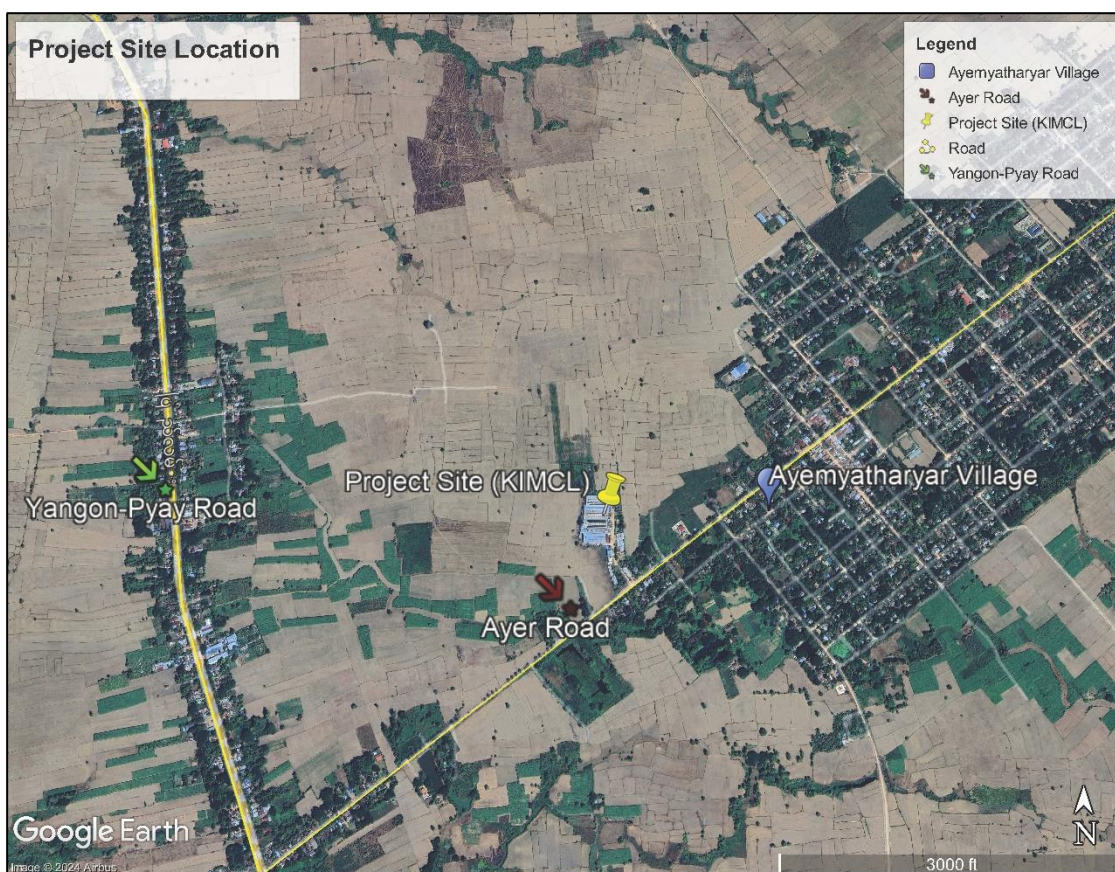


Figure 3.1 Google Earth Map of the Project Location

Yangon - Pyay highway road. The mini-road provides access to the project site and connects to Ayer Road, which then links to the Yangon-Pyay Highway.

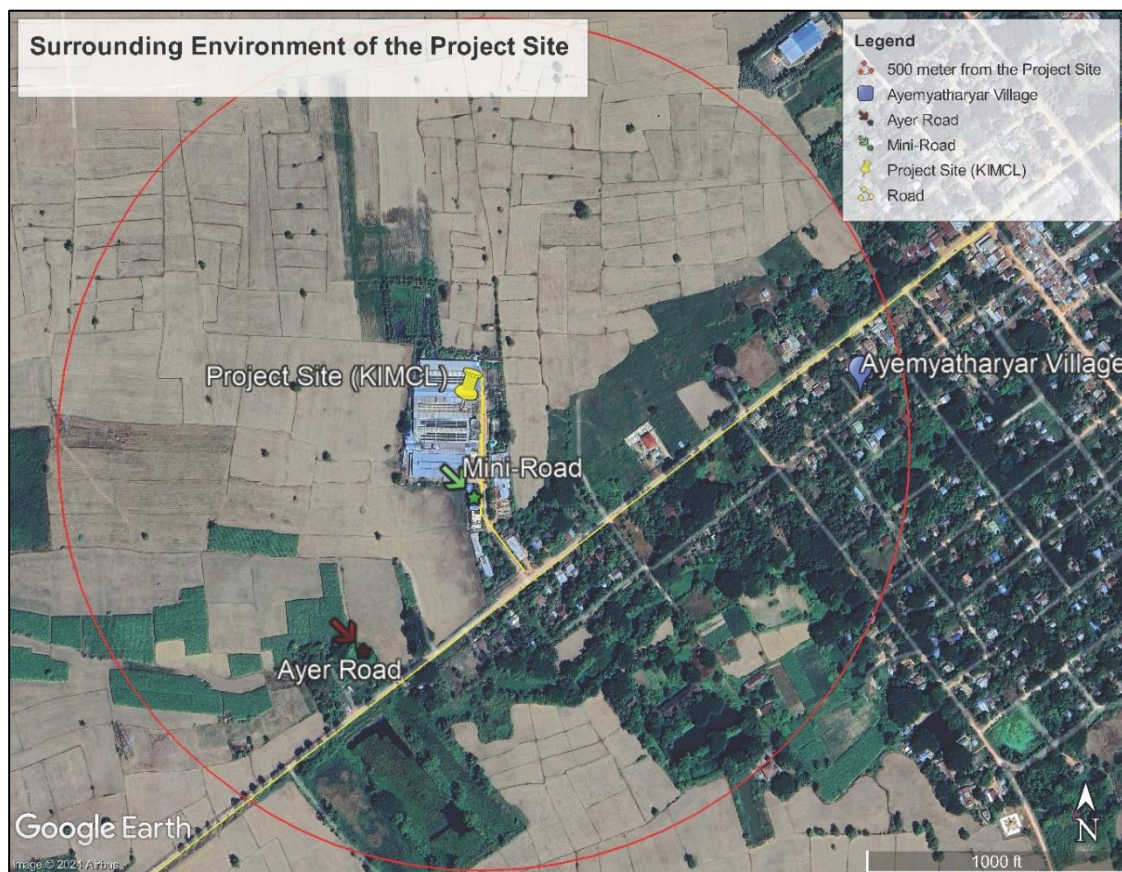


Figure 3.3 Surrounding Environment of the Project Site (500 meter)

3.2 Project Infrastructure

There are four main buildings in the proposed project: B1, B2, B3, and B4, all of which are single-story structures. Additionally, there are associated factory buildings, including a canteen, an office building, two staff dormitories, a generator room, a driver’s house, and a security house. The detailed information of each building is shown in Table 3.1. Building B1 was constructed by local construction workers in approximately six months, while B2, B3, and B4 were each constructed by Golden Gate Engineering Co., Ltd. over about one year. B1 is used as warehouse, while B2, B3, and B4 are used for the manufacturing processes such as cutting, sewing, sampling, pattern, quality control, finishing iron, and packing. The layout plans of buildings are shown in Figure 3.4. Factory layout plan is shown in Figure 3.5.

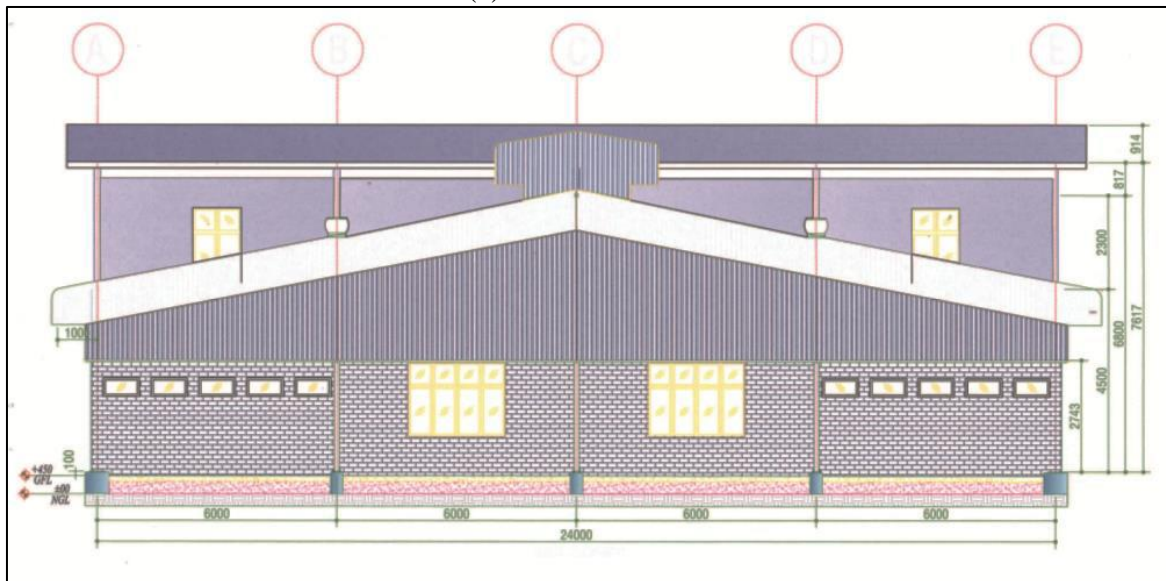
Table 3.1 List of Building and their Information

No	Building Name	Dimension (Length x width x height)	Floor No.	Construction Contractor and Schedule
Main Building				
1.	B1	220 ft x 80 ft x 15 ft	One floor	- Local construction workers

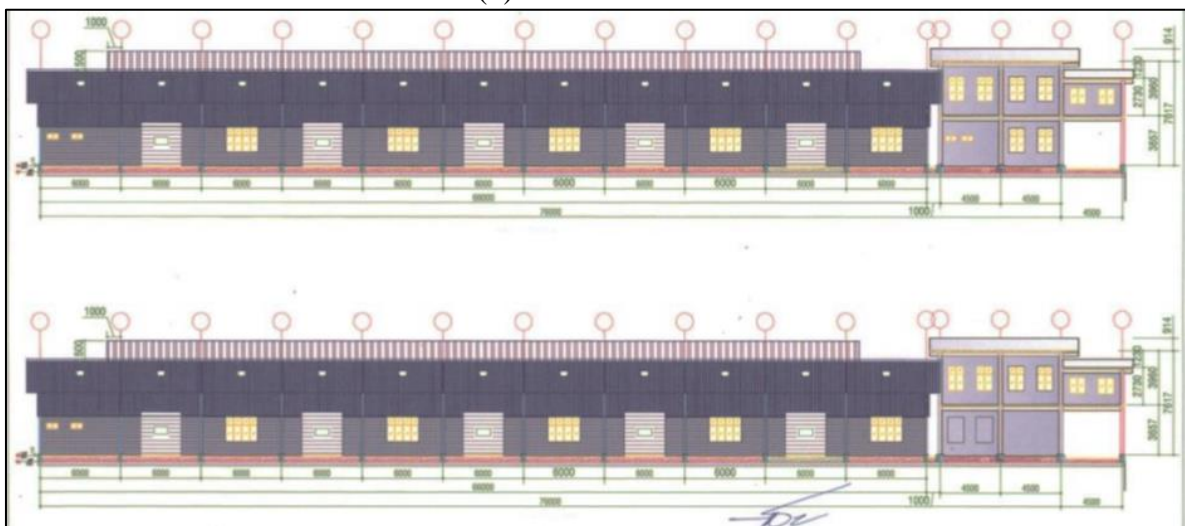
No	Building Name	Dimension (Length x width x height)	Floor No.	Construction Contractor and Schedule
				- 6 months, finished in 2013
2.	B2	220 ft x 80 ft x 15 ft	One floor	- Golden Gate Engineering Co., Ltd. - One year, finished in 2014
3.	B3	220 ft x 80 ft x 15 ft	One floor	- Golden Gate Engineering Co., Ltd. - One year, finished in 2015
4.	B4	220 ft x 100 ft x 15 ft	One floor	- Golden Gate Engineering Co., Ltd. - One year, finished in 2016
Associated Building				
1.	Canteen	170 ft x 60 ft x 20 ft	One floor	-
2.	Office Building	180 ft x 80 ft x 30 ft	Two floors	-
3.	Staff Dormitory (foreigners)	60 ft x 40 ft x 30 ft	Two floors	-
4.	Staff Dormitory (some local)	110 ft x 20 ft x 12 ft	One floor	-
5.	Generator Room	30 ft x 30 ft x 10 ft	One floor	-
6.	Driver House	80 ft x 15 ft x 10 ft	One floor	-
7.	Security House	10 ft x 8 ft x 10 ft	One floor	-



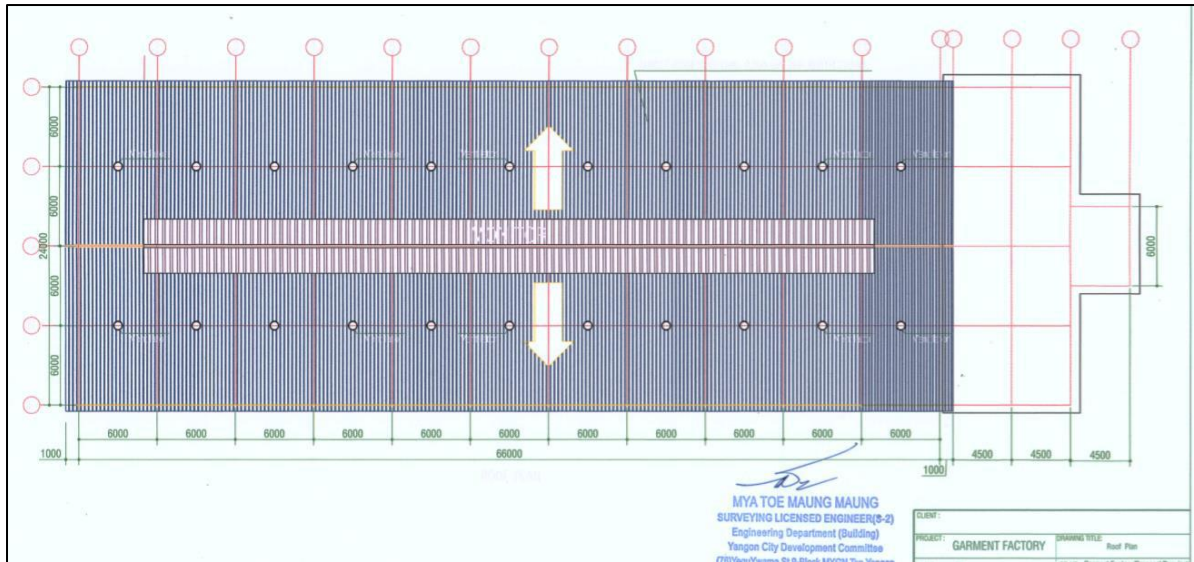
(a) Front Elevation



(b) Back Elevation



(c) Left Elevation



(d) Roof Plan

Figure 3.4 Layout Plans of Building: (a) Front Elevation, (b) Back Elevation, (c) Left Elevation, (d) Roof Plan

3.3 Raw Materials Requirements

The annual requirements of main raw materials are listed in Table 3.2 and norms for each product item are shown in Table 3.3. Raw materials are imported from Japan and the order raw materials are transported by container trucks and stored in warehouse. The raw materials storage area is shown in Figure 3.6. The certificate of exporter/importer registration is shown in *Appendix C*.

Table 3.2 List of Imported Raw Materials per Annum

No	Particular	A/U	Year-1	Year-2	Year-3	Year-4	Year-5 to 30
1	Sheel Fabric	Meters	2,950,080	3,245,088	3,569,597	3,926,557	4,319,213
2	Lining Fabric	Meters	2,108,400	2,319,240	2,551,164	2,806,280	3,086,908
3	Interlining	Meters	600,000	660,000	726,000	798,600	878,460
4	Down	kg	100,000	110,000	121,000	133,100	146,410
5	Padding	kg	100,000	110,000	121,000	133,100	146,410
6	Thread	Meters	3,500,000	3,850,000	4,235,000	4,658,500	5,124,350
7	Button	Pcs	3,000,000	3,300,000	3,630,000	3,993,000	4,392,300
8	Zipper	Pcs	2,000,000	2,200,000	2,420,000	2,662,000	2,928,200
9	Hangers	Pcs	700,000	770,000	847,000	931,700	1,024,870
10	Labels	Pcs	700,000	770,000	847,000	931,700	1,024,870
11	Ready Made Strings	Meters	200,000	220,000	242,000	266,200	292,820
12	Tapered Tape	Meters	800,000	880,000	968,000	1,064,800	1,171,280
13	Poly Bags	Bags	600,000	660,000	726,000	798,600	878,460
14	Carton Box	Boxes	200,000	220,000	242,000	266,200	292,820
15	Marking Pencils/ Pen	Pcs	15,000	16,500	18,150	19,965	21,962
16	Fusing Tape	Meters	650,000	715,000	786,500	865,150	951,665
17	Gom	Meters	150,000	165,000	181,500	199,650	219,615
18	Buckle	Pcs	200,000	220,000	242,000	266,200	292,820
19	Spring Hook	Pcs	200,000	220,000	242,000	266,200	292,820
20	Leather	Meters	200,000	220,000	242,000	266,200	292,820
21	Embroidery Parts	Pcs	200,000	220,000	242,000	266,200	292,820
22	Rivet	Pcs	100,000	110,000	121,000	133,100	146,410
23	Snaps	Pcs	200,000	220,000	242,000	266,200	292,820

Table 3.3 Norms for each Product

No.	Raw Materials	A/U	Quality
1.	Blouson		
1.	Fabric	Yds	2.5
2.	Lining	Yds	2
3.	Pocketing	Yds	0.5

4.	Zipper	pcs	1
5.	S.P Thread	Doz	0.2
6.	Button	Cones	4
7.	Hook & Eye	pcs	4
8.	Label	pcs	2
9.	Nylon Quicklon	pcs	1
10.	Paper Sticker	pcs	1
11.	Urethane Wappen	pcs	1
12.	Nylon Loxpin	Pcs	1
13.	Nylon Bag (Polybag)	pcs	1
14.	Non Woven	Yds	2.3
15.	Elastic Webbing	Yds	3
16.	65% Polyester 35% Rayan Sleek Fabric Dyed	Yds	0.1
17.	Polyester 50% Rayon 50% Non Woven Fabric	Yds	0.1
2.	<u>Shirts</u>		
1.	Fabric	Yds	2.5
2.	Lining	Yds	2
3.	Pocketing	Yds	0.5
4.	Zipper	pcs	1
5.	S. P Thread	Doz	0.2
6.	Button	Cones	4
7.	Hook & Eye	Pcs	4
8.	Label	Pcs	2
9.	Nylon Quicklon	Pcs	1
10.	Paper Sticker	Pcs	1
11.	Urethane Wappen	Pcs	1
12.	Nylon Loxpin	Pcs	1
13.	Nylon Bag (Polybag)	Pcs	1
14.	Non Woven	Yds	2.3
15.	Elastic Webbing	Yds	3
16.	65% Polyester 35% Rayan Sleek Fabric Dyed	Yds	0.1
17.	Polyester 50% Rayon 50% Non Woven Fabric	Yds	0.1
3.	<u>Pants</u>		
1.	Fabric	Yds	2
2.	Lining	Yds	1.5
3.	Pocketing	Yds	0.2
4.	Zipper	pcs	1
5.	S.P Thread	Doz	0.1
6.	Button	Cones	4
7.	Hook & Eye	Pcs	4
8.	Label	Pcs	1
9.	Paper Sticker	Pcs	1
10.	Nylon Loxpin	Pcs	1
11.	Nylon Bag (Polybag)	Pcs	1

12.	Non Woven	Yds	0.5
13.	65% Polyester 35%Rayan Sleek Fabric Dyed	Yds	0.1
14.	Polyester 50% Rayon 50% Non Woven Fabric	Yds	0.1
4.	<u>Vest</u>		
1.	Fabric	Yds	2.2
2.	Lining	Yds	1
3.	Pocketing	Yds	0.3
4.	Zipper	pcs	3
5.	S.P Thread	Doz	0.1
6.	Button	Cones	8
7.	Hook & Eye	Pcs	2
8.	Label	Pcs	2
9.	Paper Sticker	pcs	1
10.	Nylon Loxpin	pcs	1
11.	Nylon Bag (Polybag)	Pcs	3
12.	Non Woven	Yds	2
13.	65% Polyester 35%Rayan Sleek Fabric Dyed	Yds	0.1
14.	Polyester 50% Rayon 50% Non Woven Fabric	Yds	0.2
5.	<u>Jacket</u>		
1.	Fabric	Yds	2.5
2.	Lining	Yds	2
3.	Pocketing	Cones	0.5
4.	Zipper	Pcs	3
5.	S.P Thread	Pcs	0.2
6.	Button	Pcs	8
7.	Hook & Eye	Pcs	6
8.	Label	Pcs	2
9.	Nylon Quicklon	Pcs	1
10.	Paper Sticker	Pcs	1
11.	Urethane Wappen	Pcs	1
12.	Nylon Loxpin	Pcs	1
13.	Nylon Bag (Polybag)	Pcs	1
14.	Non Woven	Yds	3
15.	Elastic Webbing	Yds	2
16.	65% Polyester 35% Rayan Sleek Fabric Dyed	Yds	0.2
6.	<u>Skirt</u>		
1.	Fabric	Yds	2.2
2.	Lining	Yds	1
3.	Pocketing	Yds	0.3
4.	Zipper	pcs	3
5.	S.P Thread	Doz	0.1
6.	Button	Cones	8
7.	Hook & Eye	Pcs	2

8.	Label	Pcs	2
9.	Paper Sticker	pcs	1
10.	Nylon Loxpin	pcs	1
11.	Nylon Bag (Polybag)	Pcs	3
12.	Non Woven	Yds	2
13.	65% Polyester 35%Rayan Sleek Fabric Dyed	Yds	0.1
14.	Polyester 50% Rayon 50% Non Woven Fabric	Yds	0.2
7.	<u>Coat</u>		
1.	Fabric	Yds	2.5
2.	Lining	Yds	2
3.	Pocketing	Yds	0.5
4.	Zipper	pcs	1
5.	S.P Thread	Doz	0.2
6.	Button	Cones	4
7.	Hook & Eye	Pcs	4
8.	Label	Pcs	2
9.	Nylon Quicklon	Pcs	1
10.	Paper Sticker	pcs	1
11.	Urethane Wappen	pcs	1
12.	Nylon Loxpin	Pcs	1
13.	Nylon Bag (Polybag)	Pcs	1
14.	Non Woven	Yds	2.3
15.	Elastic Webbing	Yds	3
16.	65% Polyester 35% Rayan Sleek Fabric Dyed	Yds	0.1
17.	Polyester 50% Rayon 50% Non Woven Fabric	Yds	0.1
8.	<u>Blouse</u>		
1.	Fabric	Yds	2.5
2.	Lining	Yds	2
3.	Pocketing	Yds	0.5
4.	Zipper	pcs	1
5.	S.P Thread	Doz	0.2
6.	Button	Cones	4
7.	Hook & Eye	Pcs	4
8.	Label	Pcs	2
9.	Nylon Quicklon	Pcs	1
10.	Paper Sticker	pcs	1
11.	Urethane Wappen	pcs	1
12.	Nylon Loxpin	Pcs	1
13.	Nylon Bag (Polybag)	Pcs	1
14.	Non Woven	Yds	2.3
15.	Elastic Webbing	Yds	3
16.	65% Polyester 35% Rayan Sleek Fabric Dyed	Yds	0.1
17.	Polyester 50% Rayon 50% Non	Yds	0.1

	Woven Fabric		
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Figure 3.6 Raw Material Storage Area

3.4 Machinery, Equipment, Furniture and Fixture

Machinery and equipment required for the production processes were imported whereas some office furniture and accessories are purchased locally. The imported machinery and equipment list are shown in Table 3.4 and list of furniture and office equipment are shown in Table 3.5.

Table 3.4 List of Machineries & Equipment

Sr. No.	Particular	Quantity
1	Single Machine	120
2	High Speed 5 Thread Safety Stitch Machine	15
3	High Speed 3 Thread for Rolled Hemming Machine	10
4	High Speed 4 Thread	10
5	Sleeve Seeting Machine	10
6	Button Hole Machine	5
7	Bartacking Machine	5
8	Vertical Edge Trimmer Machine	10
9	Blind Stitch Machine	10
10	Blind Hemming Stitch	5
11	Welting Machine	5
12	Serging Machine	5

13	Pinpoint Stitching Machine	3
14	Button Hole Machine	2
15	Zigzag Stitching Machine	5
16	Needle Detector	2
17	Hand Type Needle Detector	5
18	Cutting Table	5
19	Spreading Fabric Machine	3
20	Cutting Machine	5
21	END Cutter	2
22	Straight Laser Ray	4
23	Band Knife	3
24	Straight Linear Fusing Press*	2
25	Straight Linear Fusing Press	1
26	Cleaning Machine	2
27	Plotter	2
28	Ironing Board	60
29	Interspace Iron	60
30	Compressor	5

Table 3.5 List of Furniture & Fixture (local purchase)

No.	Particular	A/U	Quantity
1	Tables	No	40
2	Chairs	No	40
3	Computer	Set	5
4	Fax	No	1
5	Copier	No	1
6	Money Calculate Machine	No	2
7	Safe Box	No	2
8	Printer	No	4
9	Fans	No	30
10	Aircon	No	13

3.5 Operational Schedule and Manpower Requirements

3.5.1 Operational Schedule

The typical working time is 8-hr per day from Monday to Friday and 4-hr per day in Saturday. Working duration is 5 and half day per week. Annual operation time is 264 days and the Table 3.6 shows the detailed working schedule.

Table 3.6 Operational Schedule of the Factory

Working Day	Working Hour
Monday to Friday	07:30 AM ~ 11:30 AM (Morning Section) 11:30 PM ~ 12:00 PM (Lunch Break) 12:00 PM ~ 04:00 PM (Afternoon Section) 04:00 PM ~ 05:00 PM (Overtime if required)
Saturday	07:30 AM ~ 11:30 AM (Morning Section)

	11:30 PM ~ 12:00 PM (Lunch Break if OT arranged)
Overtime (if required)	12:00 PM ~ 05:00 PM

3.5.2 Manpower Requirement

Manpower is the main resources for the factory operation. As of October 2024, the Project Proponent hired a total of 1,022 local employees and a total of 10 foreign staffs. The detailed information of employees list is shown in Table 3.7. The number of employees lists may vary from time to time depending on staff turnover rate.

Table 3.7 Detail List of Manpower as of October 2024

No.	Employment from Local	Numbers
1	Male	113
2	Female	909
Total Local Employment		1,022
No.	Employment from Foreign	Numbers
1	Male	7
2	Female	3
Total Foreign Employment		10
All Total		1,032

Note: The number of employee lists may vary over time depending on staff turnover rate.

3.6 Production Processes

KIMCL operates the manufacturing of garments on CMP basis. The main idea of the production processes is simple, and there are three main steps in the production processes: such as cutting, making and packaging. The garment production process begins with fabric cutting, where raw materials are precisely cut into required patterns using cutting machines. The next stage, sewing or stitching, involves assembling the cut pieces into finished garments through sewing techniques, ensuring durability and adherence to design specifications. During the quality control stage, each garment is thoroughly inspected for defects such as uneven stitching, fabric flaws, or inconsistencies in sizing. This ensures compliance with buyer expectations and industry standards. Following quality assurance, the garments undergo finishing processes, which may include ironing, and attaching labels or tags. These steps enhance the product's appearance and readiness for packaging. Finally, in the packing phase, garments are carefully folded, packed, and prepared for shipment, ensuring safe transportation to their destination. The flow chart of the detailed production processes is shown in Figure 3.7.

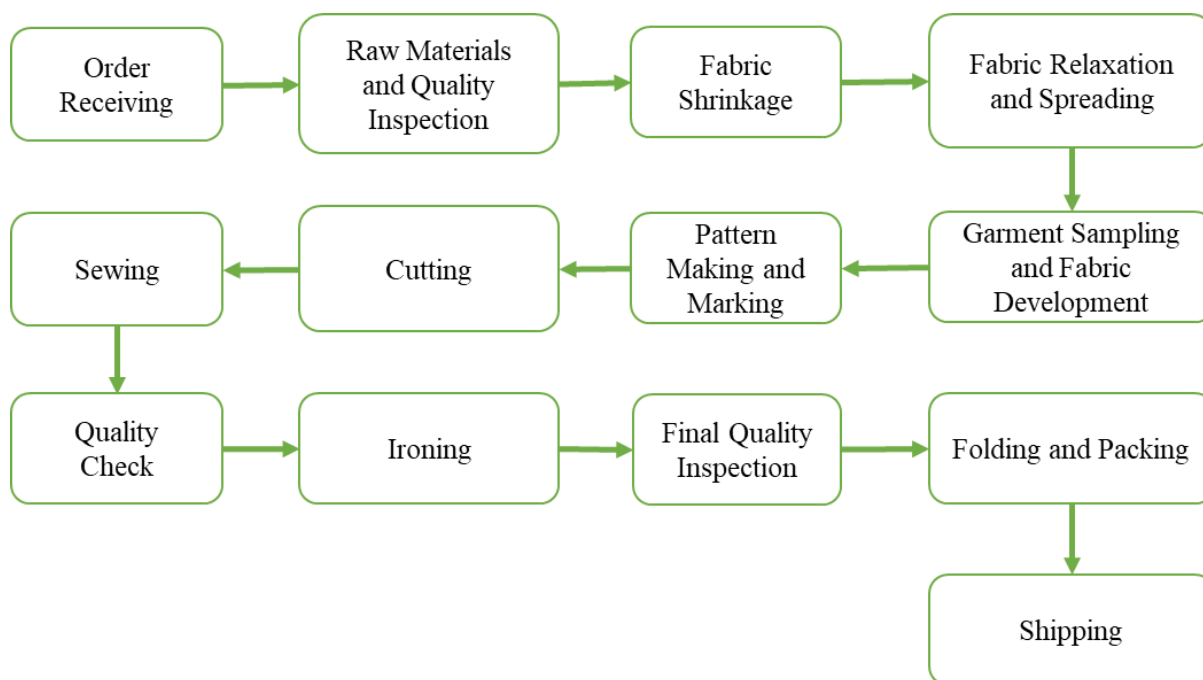


Figure 3.7 Detailed Production Processes

3.6.1 Order Receiving

KIMCL receives orders from both international buyers and local buyers. The factory typically receives orders for multiple sizes (S, M, L, and XL) and with a size-wise order ratio. The factory mainly makes blouson, shirts, pants, vest, jacket, skirt, coat and blouse. 99 % of production is exported to Japan via sea and air while only 1% is sold locally. Material requirements for orders are calculated, and sourcing is done directly from mills and fabric suppliers.

3.6.2 Raw Materials and Quality Inspection

Raw Materials used for operation process are imported from Japan. The ordered raw materials are transported to the factory by container trucks and stored in the warehouse. The warehouse is organized to facilitate easy access and efficient inventory management. Before production, materials such as fabric and accessories undergo quality checks to ensure they meet the required standards. This step is crucial to maintaining smooth production and consistent product quality.

3.6.3 Fabric Shrinkage

Shrinkage is an undesirable property of fabric, so to manufacture high-quality clothing, shrink-resistant fabric is used. During the fabric shrinkage process, a sponging machine is utilized. This process helps to preshrink the fabric and further stabilizes it, reducing the risk of shrinkage during garment production. The primary goal of sponging is to ensure that shrinkage in the finished garments does not exceed 2%. This not only enhances the efficiency of the production process but also improves the overall quality and consistency of the final products. The sponging machine is shown in Figure 3.8.



Figure 3.8 Sponging Machine

3.6.4 Fabric Relaxation and Spreading

After the fabric shrinkage process, fabric has been relaxed 24 hours to keep fabric's dimensional stability after cutting. Then, it is transferred to the spreading and cutting area of the garment manufacturing facility. The fabric is first to cut into uniform plies and then spread manually in preparation for the cutting process. The fabric is spread to:

- ❖ allow operators to identify fabric defects;
- ❖ control the tension and slack of the fabric during cutting; and
- ❖ ensure each ply is accurately aligned on top of the others.

The number of plies in each spread depends on the fabric type, spreading method, cutting equipment, and size of the garment order. After spreading, garment patterns are placed on top, either manually or using an automated cutting system. The fabric is then cut into the desired shapes using manually operated cutting equipment. In the factory, safety and efficiency are ensured by following these guidelines: check the machine for any obstructions before starting, reduce speed after placing the fabric rolls, keep hands away from the rollers while the machine is operating, and turn off the lights and clean the workspace after work.

3.6.5 Garment Sampling and Fabric Development

The main goal of sampling is to closely follow detailed instructions for a specific garment style. During the sampling stage, the factory learns the garment's construction details and identifies the materials required for the order. Once the sample is prepared, it is sent to the buyer for review and rectification. The garment maker communicates fabric quality requirements to the fabric supplier for developing a new fabric design. The fabric sample is tested to ensure it meets the desired quality standards. Afterward, the garment maker sends a fabric swatch to the buyer for bulk fabric approval. During order confirmation, the buyer provides guidance on the size ratio, ensuring the order is graded according to their instructions.



Figure 3.9 Photo of Garment Sampling

3.6.6 Pattern Making and Marking

The design is provided by the buyer. After placing an order, the buyer sends the technical sheet and artwork for the order to the merchandiser. Using these documents as a guide, patterns for each garment style are created through a computerized method. The photos of pattern making room are shown in Figure 3.10. The cutting order sheet, essential for accurate garment production, includes the following information:

- ❖ Sampling average, garment weight, and averages of other trims
- ❖ Measurement sheet
- ❖ Design of the garment
- ❖ Purchase order
- ❖ Fabric request sheet
- ❖ Marker planning, including the length of lay, size ratio, and the colors in which the patterns will be cut.



Figure 3.10 Pattern Making

3.6.7 Cutting Process

In the cutting room, the fabric is laid manually to arrange fabric inlays of up to 100 layers, along with the markers for production and any specific orders planned. Band knife cutting machines are used to cut the fabric. Among all the operations in the cutting room, cutting is the most critical, as serious defects are difficult to rectify once the fabric has been cut. The first consideration in planning is ensuring that the quantities produced in the cutting room match the requirements for maintaining full production in the sewing room and adhering to the planned delivery schedule. Any issues with the fabric that arise during cutting can negatively impact sewing room output. If all components, including fabric, design, and trims, are acceptable and properly planned and cut, the next step is to seamlessly extend the cutting room workflow to the sewing room. All cutting operations are performed using straight knife cutting machines, ensuring precision and efficiency. The photos of cutting room are shown in Figure 3.11.



Figure 3.11 Photos of Cutting

3.6.8 Sewing Process

After receiving all the garment components from the cutting section, these parts are assembled using sewing machines. The garment is created by joining these pieces in an assembly line, gradually becoming complete as it moves along the sewing line. Each sewing machine operator handles a specific part of the garment, working on a bundle of cut fabric and repeatedly sewing the same section before passing it to the next operator. For instance, one operator might attach the collar to the garment's body, while the following operator sews a sleeve to the body.

Once all parts are joined, additional tasks like attaching zippers, buttons, and main labels are performed as required. High-power single-needle and computerized sewing machines are used for this operation. Specialized equipment, such as fusing machines for collar parts and machines for sewing buttons and buttonholes, are also employed. Sewing activities are shown in Figure 3.12.



Figure 3.12 Sewing Section in Factory

3.6.9 Quality Control

At the end of the sewing line, the quality control process in a garment factory ensures that each finished product meets the required standards. Inspectors carefully examine each garment for defects such as loose threads, uneven stitching, fabric damage, or incorrect assembly. Measurements are checked to confirm that the garment meets specified size guidelines. Functional elements like zippers, buttons, and buttonholes are tested for proper operation. If defects are found, the garments are sent to designated repair stations for rework. Once the garments pass inspection, they proceed to the finishing and packing sections, ensuring only high-quality products are shipped to customers. The quality control section is shown in Figure 3.13.



Figure 3.13 Quality Control Section in Factory

3.6.10 Ironing

After the quality checking process, the garments are sent to the ironing section for final pressing. Skilled workers use steam irons to press the garment pieces, ensuring they are wrinkle-free and have a neat, polished appearance. This process helps set the shape of the garment and enhances its overall presentation. Special attention is given to details like collars, cuffs, and seams to ensure they are crisp and properly finished. Once pressed, the garments are sent to final quality inspection. Ironing activities are shown in Figure 3.14.



Figure 3.14 Ironing Section

3.6.11 Final Quality Inspection

Finally, the completed garments undergo a thorough inspection to ensure they meet the buyer's specifications. Each garment is manually checked for quality and subjected to a needle detection process to ensure no broken needles or metal fragments remain. After this inspection, the garments are placed in a dry room (around 30°C) for approximately 24 hours to reduce moisture content. This step ensures the garments are properly dried and ready for

the final packing and shipment stages. The needle testing room and dry room are shown in below figure.



3.6.12 Folding and Packing Section

The finished garments are then folded to specific dimensions, often using templates, plastic clips, or stainless-steel clips to ensure consistency. After folding, price tags, hang tags, and other required labels are attached according to buyer specifications. The folding style can vary depending on the type of garment and the buyer's requirements. Once folded, the garments are packed into poly bags or templates as needed, ensuring they are protected and ready for shipment. Packing photos are shown in Figure 3.15.



Figure 3.15 Packing Photos

3.6.13 Shipping

To minimize the damages of garments, all the garments have to cartoon by maintaining buyer's instruction. After completing all the required processes it's finally send to the buyer. Lastly, garments are placed in cardboard boxes and shipped to client distribution centers to eventually be sold in retail stores.

3.7 Product Design and Production Capacity

KIMCL produces a variety of garments, including blousons, shirts, pants, vests, jackets, skirts, coats, and blouses. The production capacity is expected to gradually increase, with garments being exported to Japan via sea and air. The projected annual production capacity for the next 30 years is detailed in Table 3.8. The samples of product design are shown in Figure 3.16. Private Industrial Registration Certificate, Certificate of Membership of the republic of the Union of Myanmar Federation of Chambers of Commerce and Industry, and Certificate of Membership of Myanmar Garment Manufacturers Association are shown in *Appendix D*.

Table 3.8 Expected Annual Production Capacity for 30 Years

Sr. No.	Product Name	Units	Year-1	Year-2	Year-3	Year-4	Year-5-30
1.	Blouson	Pcs	134,400	147,840	162,624	178,886	196,775
2.	Shirts	Pcs	168,000	184,800	203,280	223,608	245,969
3.	Pants	Pcs	218,400	240,240	264,264	290,690	319,759
4.	Vest	Pcs	134,400	147,840	162,624	178,886	196,775
5.	Jacket	Pcs	134,400	147,840	162,624	178,886	196,775
6.	Skirt	Pcs	168,000	184,800	203,280	223,608	245,969
7.	Coat	Pcs	168,000	184,800	203,280	223,608	245,969
8.	Blouse	Pcs	134,400	147,840	162,624	178,886	196,775
Total		Pcs	1,260,000	1,386,000	1,524,600	1,677,058	1,844,766





Figure 3.16 Product Design Samples

3.8 Boiler Usage

Two types of boilers, namely locomotive steam boiler and horizontal fire-tube boiler are used for the factory operation processes with only one boiler operating per day. Both boilers primarily use rice husk as fuel source and occasionally fabric waste, making them effective solutions for sustainable energy in factory operations. The detailed information of boilers is shown in Table 3.9 and Figure 3.17. The horizontal fire-tube boiler is equipped with a cyclone and an induced draft (ID) fan to effectively capture emissions, ensuring cleaner air and compliance with environmental standards. On the other hand, the locomotive steam boiler uses a brick-constructed smoke box to manage exhaust, combining traditional design with practical emission control. The boilers usage certificates are shown in Figure 3.18.

Table 3.9 Boilers Information

Description	Locomotive Steam Boiler	Horizontal Fire-Tube Boiler
Pressure	100 psi	100 psi
Rated Capacity	1.5 ton/hr	2 ton/hr
Fuel Type and	Rice Husk (2,600 viss per day)	Rice Husk (2,600 viss per day)

Consumption		
Stack (chimney) Height	58 ft	56 ft
Emission Control System	Smoke Box	Cyclone
Boiler Ash Disposal	Disposal at the factory compound	Disposal at the factory compound
Boiler Blowdown Water Estimated Amount	140 gallon per day	180 gallon per day
Blowdown Water Discharge	Through the factory drainage channel to the sedimentation pond and then to the drainage channel outside the factory	

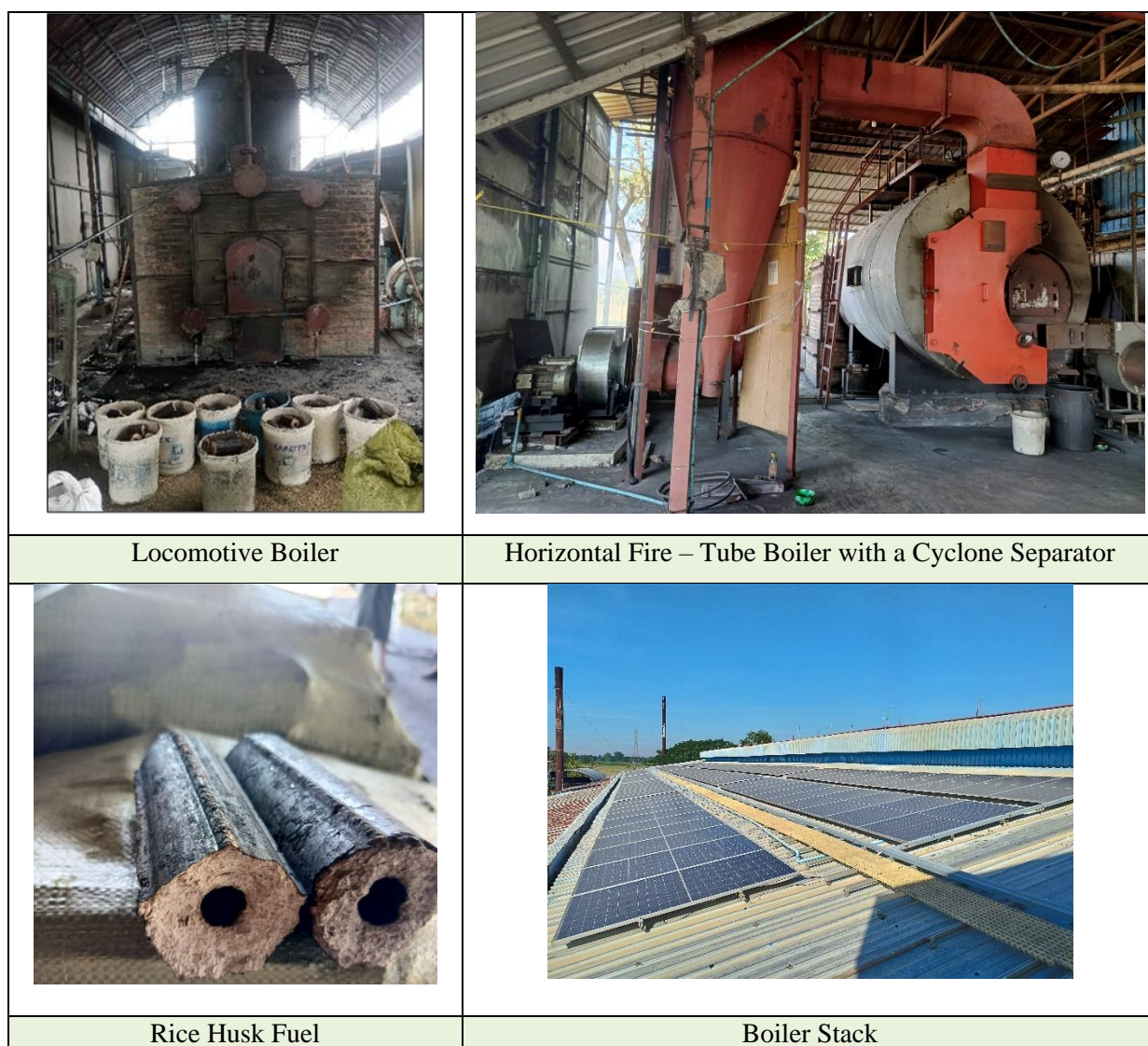


Figure 3.17 Boiler Information

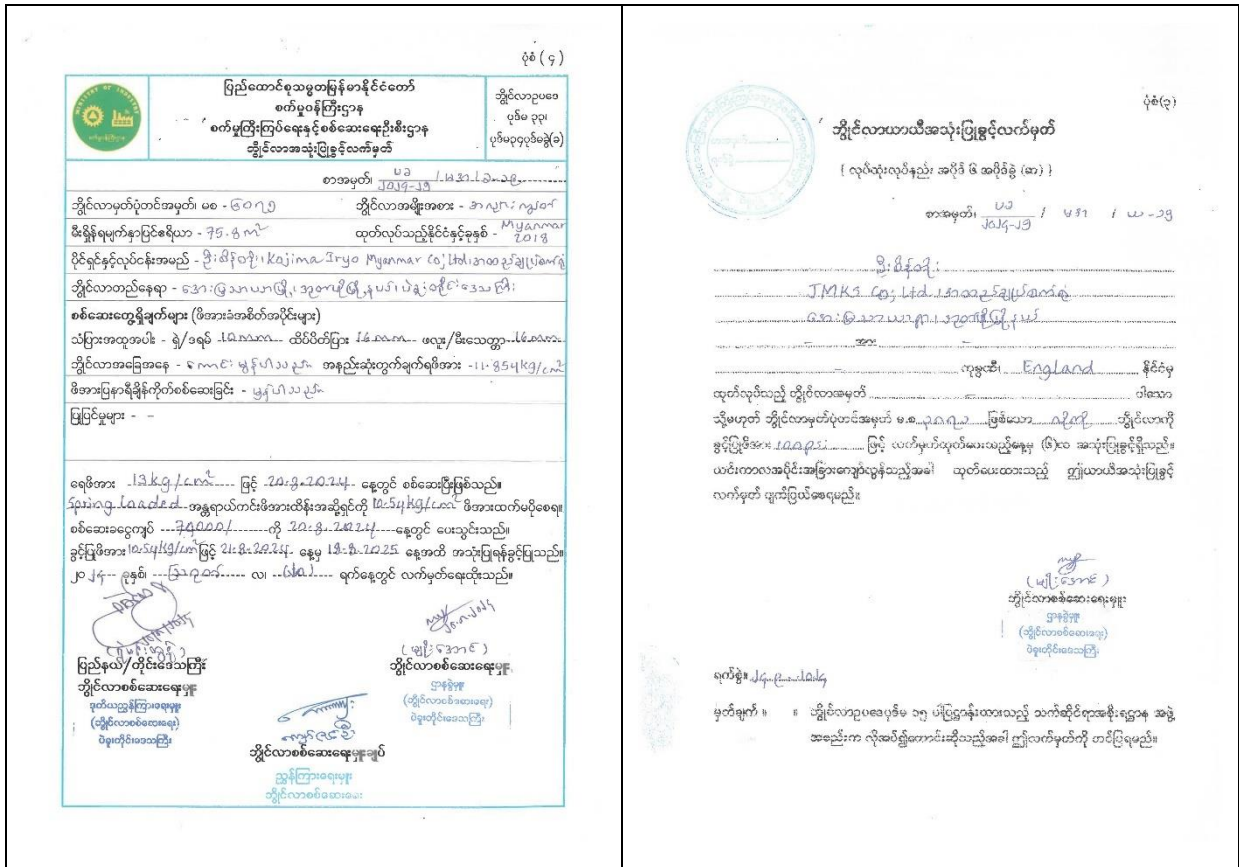


Figure 3.18 Boilers Usage Certificates

3.8.1 Assessment of Chimney Height

Chimney stacks are installed on both boilers to direct smoke and other exhaust gases away from residential areas and into the atmosphere. Greater chimney height allows for better dispersion of these gases. The stack heights for locomotive steam boiler and horizontal fire-tube boiler are 58 ft and 56 ft, respectively. According to the International Finance Corporation (IFC) Environmental Health and Safety General Guidelines (Page 16. Annex 1.1.3), which outline Good International Industry Practice (GIIP), the adequacy of stack height will be confirmed using the following formula.

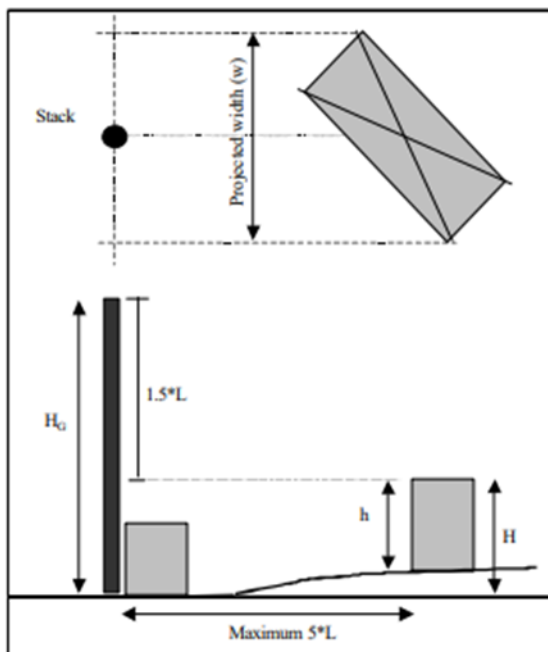
$$H_G = H + 1.5 L$$

Where, H_G = GEP stack height measured from the ground level elevated at the base of the stack.

H = Height of nearby structure (s), above the base of the stack

L = Lesser dimension, height (h) or width (w) of nearby structures

Note: “Nearby structure” mean the structure within/ touching a radius of 5L but less than 800m.



The surrounding area of the project is covered mostly by paddy field and followed by some residential areas of Aye Mya Tharyar Village. Assume the lesser dimension width (L) of nearby structure is 6 meter and the height (H) is 5.4 meters.

$$H_G = 8 + 1.5 (6)$$

$$= 14.4 \text{ meters (47.2 ft)}$$

Comparison: Stack height of Locomotive Steam Boiler, 58 ft > H_G, 47.2 ft

Stack height of horizontal fire-tube boiler, 56 ft > H_G, 47.2 ft

Therefore, the stack heights of boilers are sufficient.

3.9 Power Supply and Energy Consumption

Electricity for the factory is supplied by connecting the Company's electrical system to the existing national grid through transformers. The system utilizes two transformers with capacities of 11/0.4 kV, rated at 400 kVA and 315 kVA, respectively. In addition, the factory has two backup generators with capacities of 300 kVA and 375 kVA to ensure uninterrupted power supply.

Moreover, the project proponent has installed three numbers of 60 kW-solar panels (maximum electricity production 180 kW) on April 2023 to provide a renewable energy alternative, reducing both noise and air emissions from generators while promoting sustainable practices. The electricity requirement is 2,200 kWh per day and the monthly energy consumption and its distribution after the installation of solar panels are shown in Table 3.10 and Figure 3.19. The internal electrical infrastructure will be designed to meet the projected electrical demand, with necessary layouts and appropriate cable sizes determined accordingly. All relevant guidelines and precautionary measures for electrical safety and usage will be strictly followed to ensure safe and efficient operation. The photos of generators and transformer are shown in Figure 3.20. The certificates for electrical safety certificates of generators and transformers are shown in *Appendix E*.

Table 3.10 Monthly Electricity Consumption after the Installation of Solar Panels

Month	Monthly Consumption	Solar	Grid Line	Generator
May - 23	100%	42.9%	34.4 %	22.6%
	51,442.7 kWh	22,084.8 kWh	17,708.0 kWh	11,649.9 kWh
Jun - 23	100%	33.4%	41.7%	24.9 %
	55,103.0 kWh	18,380.8 kWh	22,976.2 kWh	13,746.0 kWh
Jul-23	100%	33.3%	34.1%	32.6%
	55,415.1 kWh	18,452.3 kWh	18,887.5	18,075.3 kWh
Aug – 23	100%	31.4%	47.4%	21.2%
	53,663.9 kWh	16,844.0 kWh	25,434.3 kWh	11,385.6 kWh
Sep – 23	100%	29.1%	41.5%	29.4%
	59,763.6 kWh	17,407.1 kWh	24,800.9	17,555.6 kWh
Oct - 23	100%	33.3%	46.5%	20.2%
	51,541 kWh	17,162.5 kWh	23,955.2 kWh	10,423.3 kW
Nov – 23	100%	35.8%	38.9%	25.25%
	54,522 kWh	19,522.3 kWh	21,233.1 kWh	13,766.6 kWh
Dec – 23	100%	36.1%	27.7%	36.2%
	50,974.4kWh	18,416.9 kWh	14,098.7 kWh	18,458.8 kWh
Jan - 24	100%	38.3%	23.9%	29.0%
	49,701.3 kWh	20,882.3 kWh	13,007.3 kWh	15,811.7 kWh

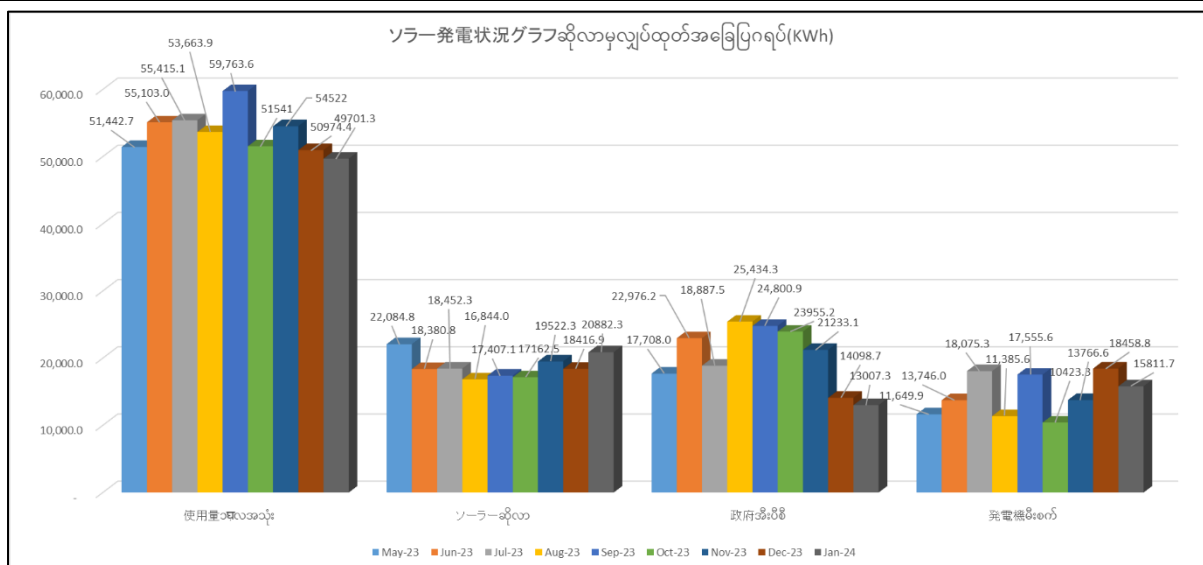


Figure 3.19 Power Distribution Graph

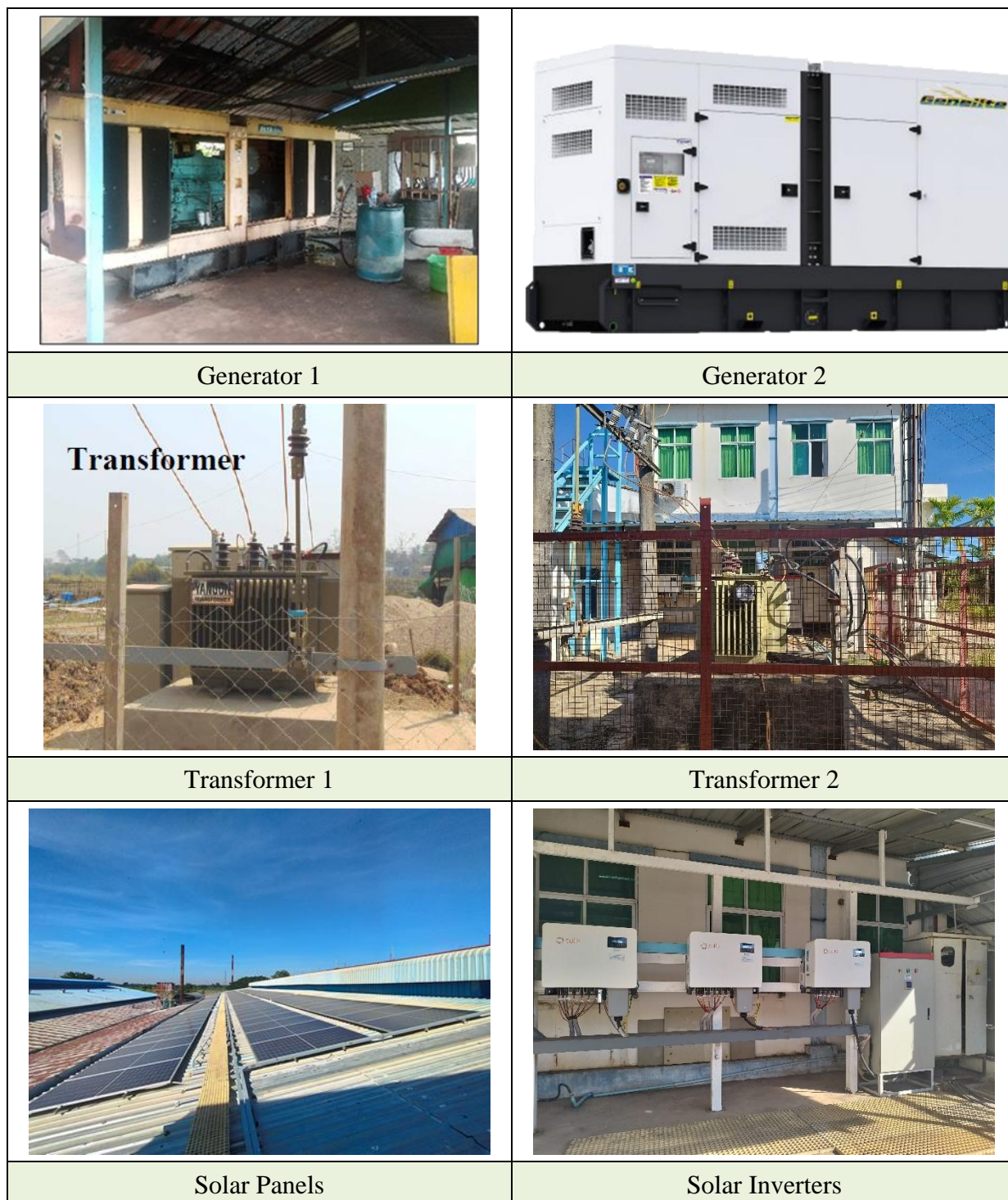


Figure 3.20 Power Supply

3.9.1 Fuel Requirement

Diesel is used as fuel for the generators, and it is purchased from a gasoline station. The approximate regular diesel consumption is 16.875 gallons per day (438.75 gallons per month). However, after the installation of solar panels, diesel consumption is reduced to 12.1575 gallons per day (316.1 gallons per month), representing a reduction of 27.96%. Diesel is stored in plastic containers located near the generator room. The diesel storage containers are shown in Figure 3.21.



Figure 3.21 Diesel Storage Containers

3.10 Water Supply and Consumption

The Project Proponent sources water from six tube wells located within the project site. The water is used for the staff dormitory kitchen, boilers, hygiene and sanitation of factory workers, the firefighting system, and the dust suppression system. For drinking water, the Project Proponent purchases 20-liter bottled water from local suppliers. The detailed information of tube wells is shown in Table 3.11. The permit for underground water extraction is attached in *Appendix F*. The photos of tube wells and drinking water bottles are shown in Figure 3.22.

Table 3.11 Tube Wells Information

Description	Dimension (Depth x Diameter)
Tube Well-1	130 ft x 2 inches
Tube Well-2	130 ft x 2 inches
Tube Well-3	420 ft x 3 inches
Tube Well-4	130 ft x 2 inches
Tube Well-5	150 ft x 2 inches
Tube Well-6	230 ft x 4 inches





Figure 3.22 Tube Wells and Drinking Water Bottles

3.10.1 Water Consumption

Amount of general water usage including domestic usage, boilers and firefighting system is approximately 15,000 gallons per day. Amount of drinking water usage is approximately 1,000 liters – 1,400 liters per day.

3.11 Wastewater Management

3.11.1 Wastewater Generation

Wastewater generation in the garment factory primarily comes from staff facilities such as kitchens, bathrooms, and dormitories, as well as from the firefighting system and boiler operations. This wastewater typically contains organic matter, detergents, and sanitary waste. The wastewater generated from the factory is calculated to be 90% of the total water usage as wastewater. Based on this calculation, the estimated daily wastewater generation is 13,500 gallons.

3.11.2 Sedimentation Pond and Factory Drainage System

Wastewater from the domestic usage and boiler blowdown water are discharged into the natural sedimentation pond through the drain. The wastewater from the natural sedimentation pond is finally discharged into the drains outside the factory. The drain and natural sedimentation pond of the factory are shown in Figure 3.23.



Figure 3.23 Drain and Natural Sedimentation Pond

3.11.3 Septic Tanks and Toilets

There are three main septic tanks and their dimension are shown in Table 3.12. To effectively manage the sludge generated from these tanks, biotechnology-based sludge treatment can be employed. This approach involves using beneficial microorganisms and enzymes to break down organic matter, reduce sludge volume, and minimize environmental impact. Additionally, the factory has a total of 29 toilets: 22 units for female staff and 7 units for male staff. These toilets are connected to the septic tanks through a network of sewage pipes designed to ensure efficient and safe transport of wastewater. The pipes are properly laid out and maintained to prevent blockages, leaks, and contamination risks. The photos of septic tanks and toilets are shown in Figure 3.23.

Table 3.12 Septic Tanks Information

Description	Dimension (Length x Width x Depth)
Septic Tank-1	15 ft x 8 ft x 7 ft
Septic Tank-2	40 ft x 10 ft x 7 ft
Septic Tank-3	20 ft x 10 ft x 7 ft

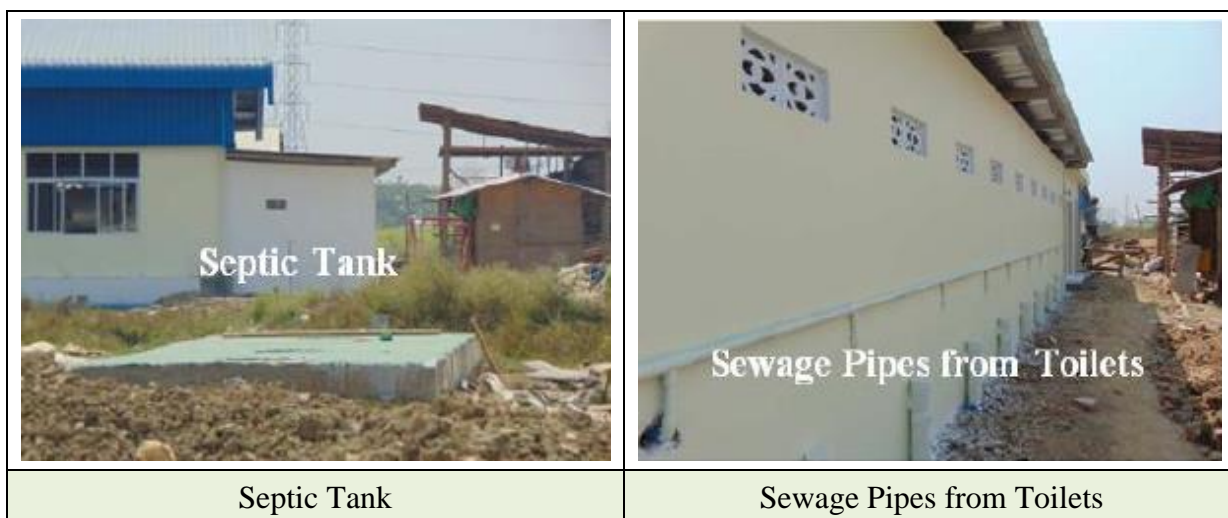




Figure 3.24 Photos of Septic Tanks and Toilets

3.12 Solid Waste Management

3.12.1 Solid Waste Generation

Solid waste generated in a garment factory consists of both non-hazardous and hazardous waste. Non-hazardous waste includes fabric scraps, off-cuts, paper, cardboard, plastic packaging materials, food waste from staff kitchens, and general office waste. Hazardous waste, though produced in smaller quantities, includes items like used oil, lubricants, fluorescent light bulbs, sharp needles, and batteries. A total of approximately 56 kg of solid waste per day will be generated.

3.12.2 Solid Waste Management

Solid waste will be collected in separate waste bins based on the types of waste. Non-hazardous waste, such as fabric scraps and off-cuts, will be utilized as an additional fuel source for boilers. The remaining non-hazardous waste collected from the separate bins will be disposed of in temporary storage areas. Additionally, hazardous waste, including used oil, lubricants, fluorescent light bulbs, and batteries, will be collected and stored separately. These hazardous materials will later be disposed of in coordination with the local city development committee in compliance with applicable laws and regulations. Waste from the temporary storage areas will be disposed of weekly by working with the local city development committee. The solid waste bins at the factory and invoice from Okpho City Development Department are shown in Figure 3.25. Hazardous business license issued from Okpho City Development Department is shown in *Appendix G*.



Figure 3.25 Photos of Waste Collection Bins and Invoice from Okpho City Development Department

3.13 Climate Change Drivers and CO₂ Emission Reduction Efforts

A total of 13 air conditioners are installed in the factory buildings: 8 units with a capacity of 1.5 HP and 5 units with a capacity of 2.0 HP. The refrigerant used in the air conditioners is R22. Regular maintenance is conducted to ensure optimal performance and to minimize environmental impacts. This includes cleaning filters, inspecting refrigerant levels, and checking for leaks. Proper handling and storage of R22 refrigerant are ensured during servicing to comply with environmental regulations, as R22 is a hydrochlorofluorocarbon (HCFC) with potential ozone-depleting properties.

To enhance energy efficiency, the factory plans to transition to air conditioners using environmentally friendly refrigerants such as R410A in the near future. As of December, 2024, the project proponent has planted a total of 159 trees, contributing positively to climate action and environmental sustainability. Additionally, the project proponent has installed solar panels to promote environmental sustainability and reduce reliance on conventional energy sources.

In addition, CO₂ emission from diesel generator was reduced by installing solar panels. The CO₂ emission reduction is calculated as follows;

CO₂ emission from fuel consumption = 0.721 kg per kWh

Monthly electricity consumption = 54,500 kWh

Average solar energy = 34.2%

Monthly CO₂ emission reduction = 0.721 kg per kWh x 54,500 kWh x 0.342
 =13,438.719 kg per month

Annual CO₂ emission reduction = 13,438.719 kg x 12 = 161,264.63 kg per year
 = 161.26 Ton per year

The carbon dioxide emission reduction from the operation diesel generator is shown in Figure 3.26. The pie chart illustrates the monthly CO₂ emission reductions in tons and percentages from May to November 2023. The highest reduction occurred in May, with 15.92 tons accounting for 17% of the total. November followed with 14.08 tons (15%), while June, July, and September each contributed 14% reductions, ranging between 12.55 and 13.25 tons. October and August recorded the smallest reduction among other months, with 12.37 tons (13%) and 12.14 tons (13%), respectively.

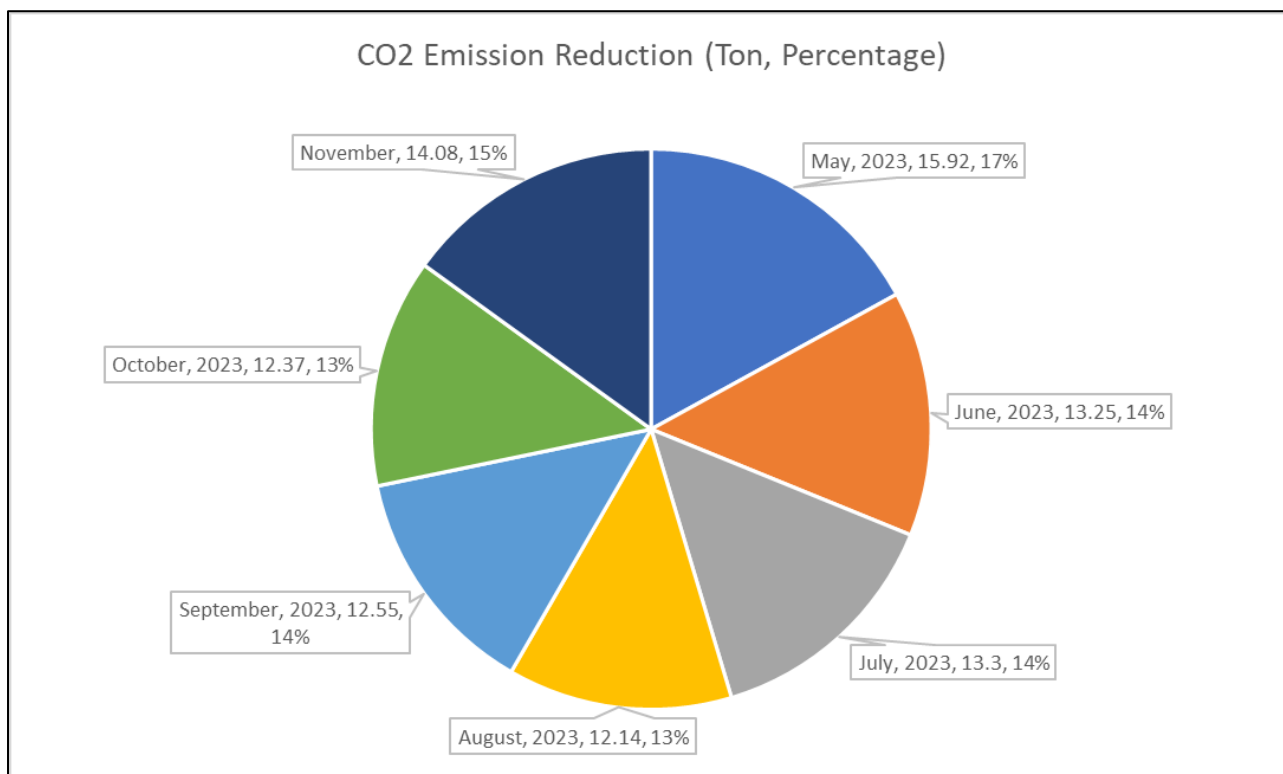


Figure 3.26 Carbon Dioxide Emission Reduction from (May – Nov, 2023)

3.14 Firefighting System

The factory has planned, designed and constructed fixed firefighting and emergency fire management installations systematically. The adequate number of fire extinguishers, hose reels, and fire alarm are installed in all buildings and 15,000 gallons of water is stored for firefighting purpose. Emergency exit way sign is also designed and shown clearly. Moreover, it has set up emergency fire management organization and process for emergency firefighting system has been developed. The firefighting equipment list are shown in Table 3.13 and the photos of firefighting equipment and firefighting system installation are shown in Figure 3.27. The fire inspection certificates issued by Aye Mya Tharyar Village’s firefighting service department are shown in *Appendix H*.

Table 3.13 Firefighting Equipment List

Firefighting Equipment	Description	Quantity
Fire extinguisher	DCP 3kg	60
	DCP 35 kg	2
	DCP 35 kg	3
Fire Hose Reel	3 inches water pipe	8
Fire Hydrant	-	25
Fire Sprinkler	Outside the factory	15
	Inside the factory	Planning to install



Fire Extinguisher



Exit Way



Fire Pump System



Fire Hose and Fire Hydrant



Fire Extinguisher and Fire Hose Reel



Fire Alarm



Fire Exit

Fire Alarm



Firefighting Pool

Figure 3.27 Emergency Firefighting System and Exit Way

3.15 Working Condition and Ventilation System of the Factory

Safe working temperatures are essential in any workplace. Excessive heat can lead to drowsiness, which may result in careless or incomplete work. Prolonged exposure to high temperatures can cause heat stress and other health issues. However, there is no legally defined maximum safe working temperature. The only legal requirement is that indoor workplace temperatures must be maintained at a reasonable level. For manual workers, the impact of hot conditions can be severe, leading to symptoms such as fainting, dizziness, and muscle cramps. In extreme cases, excessive heat places a significant strain on the lungs and heart. Common medical conditions associated with overheated workplaces include asthma, throat infections, and rhinitis. In the absence of specific legal standards, general guidelines recommend maximum temperatures of 27°C for manual workers and 30°C for sedentary workers.

Inside buildings, the Project Proponent often maintains a maximum temperature below 30°C by implementing effective ventilation and shading. Factories achieve suitable ventilation through measures such as air conditioning at office building, open windows, and rooftop fans, which help ensure fresh air circulation. Additionally, Project Proponent uses sprinklers installed outside the factory to suppress the heat during hot weather, and plant the trees for shading. Proper ventilation prevents stuffy air, which can hinder workers' concentration and increase temperatures to uncomfortable levels. Adequate lighting systems are also provided to support productivity and comfort. The photos of air conditioners and fans installed at the buildings are shown in Figure 3.28.



Figure 3.28 Ventilation System

3.16 Social Welfare Program of Kojima Iryo Myanmar Co., Ltd.

In order that the employees may enjoy proper welfare commensurate with that of a prestigious company, Kojima Iryo Myanmar Co., Ltd. has set up a plan, as stated below, for employees as employees' welfare plan.

3.16.1 Self- Cleanliness

- ❖ To teach the laborers how to keep self-cleanliness: washing hands with soap before and after having meals and after using the toilet.
- ❖ To train them to wear clean uniforms, gloves, masks and caps.
- ❖ There will be clean dining rooms with enough tables and benches, clean drinking water and soap for washing hands, and lunch boxes and clean kitchen utensils for cooking shown in Figure 3.28.
- ❖ The toilet will be provided with soap, enough water and deodorants. If necessary, antiseptic liquid will be sprayed.



Figure 3.29 Canteen Areas and Hand Wash Basins

3.16.2 Medical Care

- ❖ Sometimes, there will be educational seminar on medical care.
- ❖ If necessary, treatment with free of charges will be given.
- ❖ First-aid kit and Clinic facility with at least one nurse have been provided at factory.
- ❖ The health certificate of the nurse is shown in *Appendix I*.



Figure 3.30 Factory's Clinic

3.16.3 Recreation

- ❖ A culture and sport center will be built for employee to relax and enjoy after working time.
- ❖ For those who prefer reading, there will be books chosen not only for pleasure but also for knowledge and the others on various languages and interesting technologies.

3.16.4 Ways of Training

- ❖ Employees will be trained to be honest, good and clever ones by using awarding and punishing system.
- ❖ Those who work hard will be encouraged by suitable on-job training courses, e.g., basic electrical course.
- ❖ There will be a promotion and demotion system depending on their skills.
- ❖ They will be trained to have mutual respects among senior and junior laborers and supervisors.
- ❖ They will be trained to understand the value of unity in every field.

4.0 BASELINE CONDITIONS OF THE EXISTING ENVIRONMENT

This chapter describes the existing environment and secondary information related to the proposed project's location. It includes the delineation of the study areas along with a justification for these boundaries, as well as a description of the socio-economic, cultural, visual, physical, and biological characteristics of the study area. To characterize and quantify various pollutants, field survey visits were conducted, and detailed field studies were carried out in each category. The average values derived from the measured data have been used as the basis for characterizing the typical pollution streams.

4.1 Methodology

The following methodology has been used to collect the baseline data on physical environment:

- ❖ Collection of secondary data and desktop review
- ❖ Field survey and investigation by the EMP team
- ❖ Data Analysis and Observation
- ❖ Public/stakeholders' consultation through group meetings/ key person interview

For preparation purposes of this EMP Report, the following two methodologies have been used for baseline data collection and analysis.

4.1.1 Primary Data Collection and Analysis

Environmental baseline data (primary data) such as air quality and noise levels are measured and water samples and soil samples are collected and measured at respective laboratories to analyze the qualities, and results are mentioned in this Chapter. The primary measurement results are attached in *Appendix J*.

All necessary criteria such as site selections for sampling and measurement of ambient air quality, indoor air quality, noise level, water quality and soil quality were carried out by GMES.

4.1.2 Secondary Data Collection and Analysis

Data such as socioeconomic conditions, the physical/biological environment, and weather information were collected from official Township Data and analyzed by the study team. The secondary baseline data for Okpho Township were obtained from the Township Data published by the General Administration Department in 2023.

4.2 Physical Components of Project Area

Physical environment essentially illustrates baseline conditions of topography, hydrology, climate, and soil condition of the project township area, where necessary, of proposed project regardless of an assessment study. These data are extracted from the regional facts about Okpho Township prepared by the Administrative Department of Township (GAD, 2023) and other research studies.

4.2.1 Topography

The project is located within Okpho Township, approximately 7 km away. Okpho Township lies between north latitudes 27°65' and 28°15', and east longitudes 97°10' and 98°19'. It covers 405.48 square miles, spanning 28.49 miles from east to west and 16.8 miles from south to north. Located in the Bago Region, Okpho Township has an average elevation of 77 feet above sea level. The highest area is the Bago Yoma in the east, while the lowest area is Matkadan Village in the west.

4.2.2 Hydrology

Okpho Township has many rivers and creeks that flow from east to west. Gamone Creek and Myaung Creek are significant waterways in the township, both of which flow into the Myit Ma Kha River. The abundance of freshwater creeks in Okpho Township contributes significantly to the improvement of agriculture.

4.2.3 Climate

The climate of the Okpho Township is a tropical hot and humid climate. The highest temperature is 39°C and lowest temperature is 12°C. The annual rainfall and temperatures of last five years are as follow:

Sr. No.	Year	Precipitation		Temperature	
		Rainy day	Total rainfall (inches)	Highest (°C)	Lowest (°C)
1.	2019	79	51.18	39	14
2.	2020	82	62.22	39	12
3.	2021	85	62.82	39	14
4.	2022	42	32.71	39	14
5.	2023	37	20.98	39	14

Source: Okpho Township GAD, 2023

4.2.4 Geology

Okpho Township is situated in the Bago Region, and its geological conditions are similar to those of the region as a whole. The Bago Region occupies the southernmost on-land segment of the Central Myanmar Belt. It is bordered:

- ❖ on the north by Magway and Mandalay Regions,
- ❖ on the east by Kayin and Mon States,
- ❖ on the south by Yangon and Ayeyawady Regions, and
- ❖ on the west by Rakhine State.

Apart from the low hills of the Bago Yoma, which run north-south across the center of the region, the foothills of the Eastern Highlands Province in the east, and those of the Western Ranges (WR) in the west, the Bago Region is composed predominantly of flat alluvial plains.

Despite its geological diversity, the Bago Region has not received the level of geological investigation it merits, except for its small northwestern part. This lack of study is likely due to the perception that the Bago Yoma, primarily underlain by Miocene clastic sedimentary rocks, holds limited economic mineral potential. Interest has typically been

directed toward areas with reported economic mineral occurrences or locations with local mining activities. Additionally, the Bago Yoma's sparse population and dense forests, much of which is reserved forest area, have hindered rigorous geological fieldwork. In contrast, the surrounding flat agricultural lands are more densely populated and accessible.

The northwestern part of the Bago Region, however, has been extensively investigated due to its oil potential. The geology of the Bago Region is both fascinating and unique. It encompasses the southern segment of the Western Ranges (WR), the southern segment of the Central Myanmar Belt (CMB), and a narrow western portion of the Eastern Highlands Province (EHP). Therefore, the geological succession of the Bago region is composed of a mixture of some rock units of the WR, the CMB and a few of the EHP, as shown in Table 4.1 and Figure 4.1.

Table 4.1 Geological Succession of the Bago Region

Age	Unit
Quaternary	Laterite, landslide material and Alluvium Unconformity
Upper Miocene-Pliocene	Irrawaddy Formation Unconformity
Miocene } Oligocene }	Bago Group Unconformity
Eocene	Eocene Strata (molasse facies): Several Rock Units Faulted Contact
Cretaceous-Eocene	Indoburman Flysch of WR
Premian	Moulmein Limestone Unconformity
Precambrian	Gneisses and Schists
Igneous Rocks	
Quaternary/ Tertiary	Dolerites of Bago Yoma
Eocene } Cretaceous }	Granitoid Rocks
Mesozonic	Dislocated Ultramafic Rocks

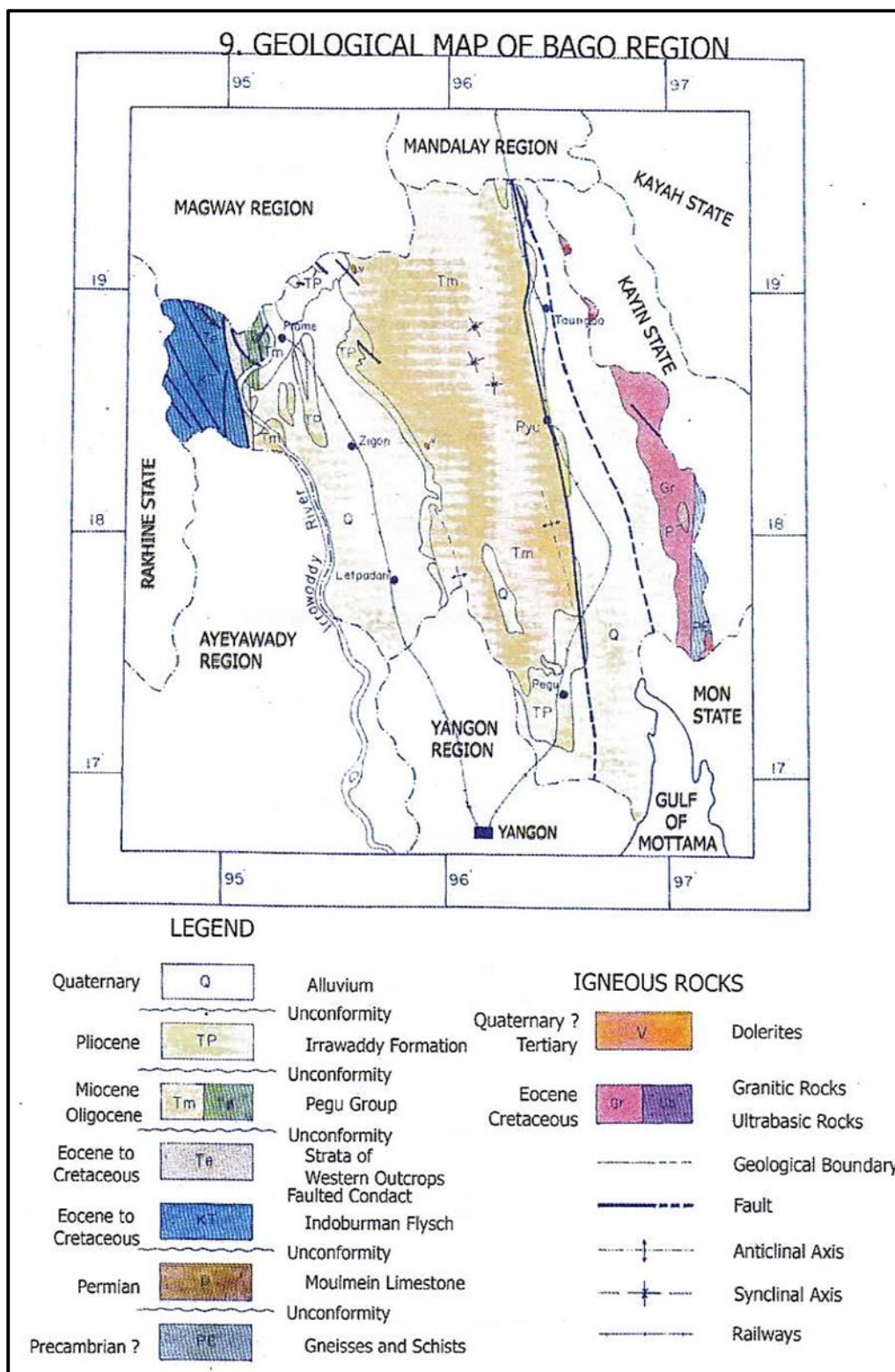


Figure 4.1 Geological Map of Bago Region

4.2.5 Soil Condition

Figure 4.2 shows the soil map of Bago Region which is derived from the Land Use Division, Department of Agriculture. According to soils survey map, the soil type of project area is Meadow & Meadow Alluvial Soils.

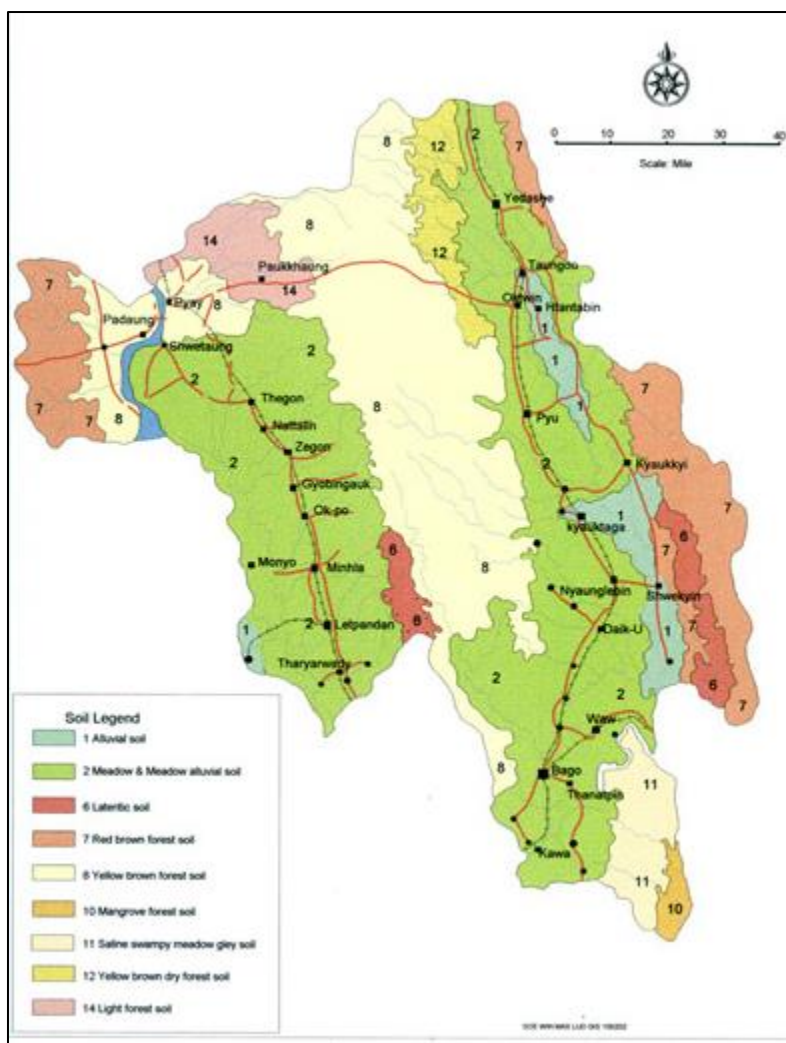


Figure 4.2 Soil Map of Bago Region¹

4.3 Natural Hazards

Natural hazards occurring in the project area have been analyzed using the analytical brief report on climate, environmental degradation, and disaster risk in Myanmar, prepared by the Myanmar Information Management Unit (MIMU). The analysis includes a description of flood hazards, cyclone risk, landslide probability and seismic intensity and probability.

4.3.1 Flood Hazard

According to analytical brief of MIMU (2022), the proposed project location, as indicated on the map, falls within an area categorized as having high flood hazard. This classification suggests a significant likelihood of flooding events. The region's vulnerability to flooding can result from a combination of factors, including heavy rainfall, poor drainage, and proximity to water bodies. Mitigation measures and adaptive strategies should be carefully planned and implemented to minimize potential flood-related risks to the project and its surrounding communities.

¹ Soils Survey and Mapping Section, Land Use Division, Department of Agriculture, <https://landusedivision.doa.gov.mm/en/soils-survey-and-mapping-section/>

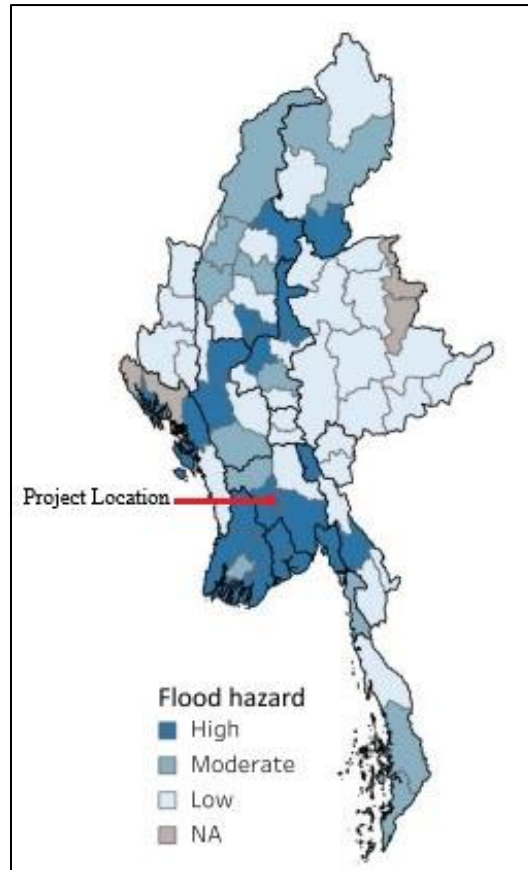


Figure 4.3 Flood Hazard of Myanmar²

4.3.2 Cyclone Risk

Figure 4.4 shows the cyclone risk of Myanmar, which is situated in a region identified as having low cyclone risk. This indicates that while the area has a lower probability of experiencing cyclonic events, it is not entirely immune to them. Such events may still result in strong winds, heavy rainfall, and minor storm surges.

² Climate, Environmental Degradation and Disaster Risk in Myanmar, Analytical Brief (May, 2022), Myanmar Information Management Unit (MIMU)

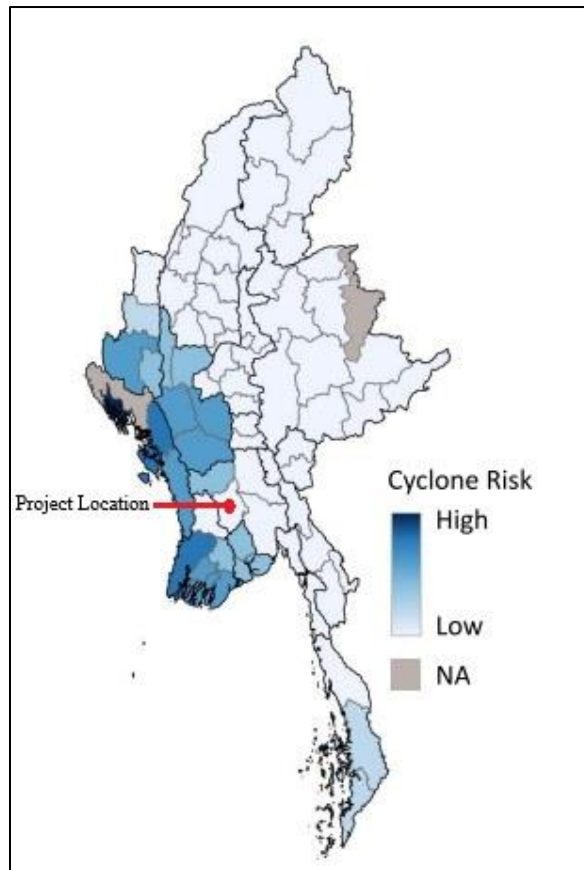


Figure 4.4 Cyclone Risk of Myanmar

4.3.3 Landslide Probability

The map shows landslide probability of Myanmar. According to the map, the project area is situated in low landslide probability region. This suggests that the project site is less likely to be impacted by landslides, which is favorable for infrastructure development and other activities. However, despite the low landslide probability, it remains essential to conduct thorough site assessments and risk evaluations. Factors such as seasonal changes, heavy rainfall, deforestation, and land-use patterns can influence the risk over time. Implementing appropriate disaster risk reduction (DRR) measures and safeguard strategies will help ensure the project's long-term sustainability and resilience.

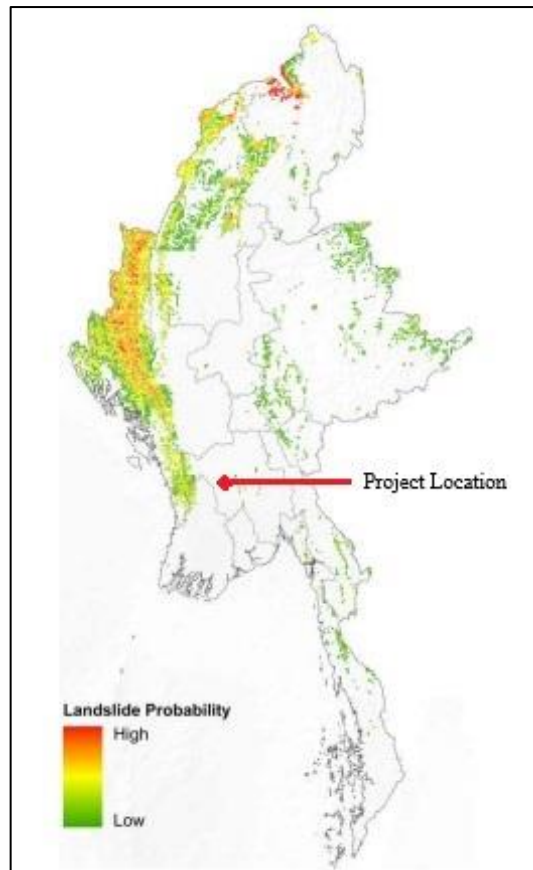


Figure 4.5 Landslide Probability of Myanmar

4.3.4 Seismic Intensity and Probability

According to the Seismic Zone Map of Myanmar, the project location falls within the green-colored zone, which corresponds to a Moderate Zone (Zone II).

Seismic Zone Details:

- ❖ Intensity: Moderate seismic activity.
- ❖ Probable Range of Ground Acceleration: 0.1 – 0.15 g.
- ❖ Equivalent Modified Mercalli Scale Class: VII.

This indicates that while the area has a moderate risk of seismic activity, it is not among the most seismically active zones of the country. Although the risk is lower compared to zones III, IV, and V (severe to destructive zones), it is still essential to incorporate earthquake-resistant design measures and safety protocols for infrastructure projects to mitigate potential risks.

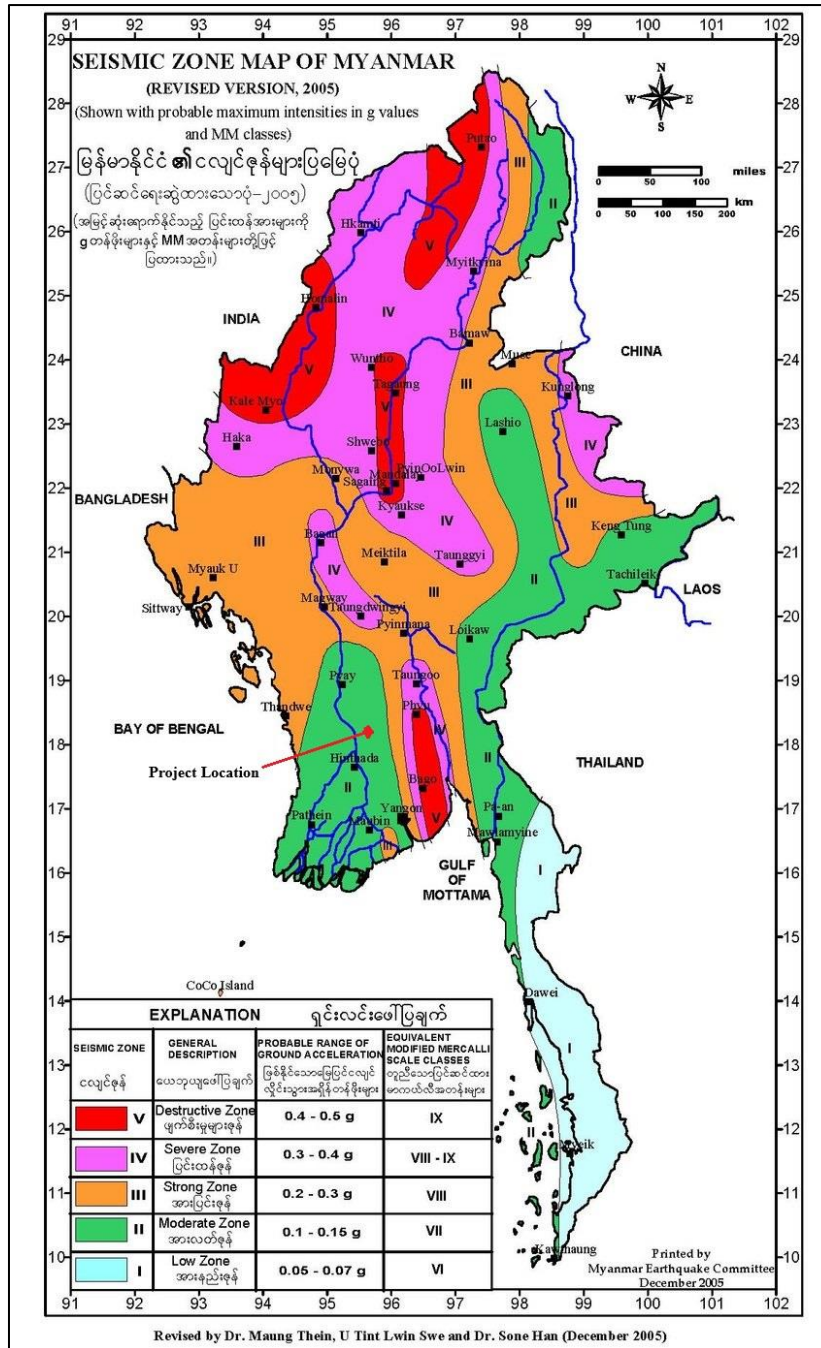


Figure 4.6 Seismic Zone Map of Myanmar³

4.4 Biological Characteristics

Biological characteristics data such as flora and fauna of Okpho Township are derived from Okpho Township GAD 2023.

There is a significant amount of natural vegetation in Okpho Township, including teak, pyingadou, padauk, inn, kanyin, htawk kyant, thadi, naw, yamanay, myoutchaw, myoutngo, binga, maouu, phankhar, deedu, latpan, thaung thayat, thit, saint, yone, thinwin,

³ Revised by Dr. Maung Thein, U Tint Lwin Swe and Dr. Sone Han (December 2005), Printed by Myanmar Earthquake Committee December 2005.

thitbagan, wabobamboo, myinbamboo, and kyathaungbamboo. In addition, there are a total of seven reserved forests.

Many animals are found grazing in Okpho Township. These include elephants, tigers, leopards, wild boars, bears, rhinoceroses, wild buffalo, sambar, deer, mountain goats, wild goats, gaur, wild dogs, wild cats, and monkeys.

4.5 Environmental Baseline Data

GMES had done measuring primary data or baseline environmental parameters such as ambient and indoor air quality, noise level, water quality and soil quality in December 2024. The materials and methods of instruments used for surveying the environmental baseline data and the results are mentioned in the following section.

The water samples, tube well water, wastewaters and soil samples were collected and analyzed the results in the laboratory.

4.5.1 Air Quality

The dispersion of various air pollutants released into the atmosphere significantly affects the surrounding air environment of an industrial project. Therefore, it is a crucial component of impact assessment studies.

4.5.1.1 Methodology of Air Quality

Sampling rate of ambient air quality was recorded automatically every one minute for important gases (Sulfur dioxide, Nitrogen dioxide, Particulate matter, and Ozone) to describe ambient air quality.

Sampling pump was adjusted to 2 liter/min. Different analysis methods are integrated in the instrument, such as particulates, 90° Infrared Light Scattering for particulate matters (PM₁₀, PM_{2.5}), electrochemical sensors for toxic gases (SO₂, NO₂), and Gas Sensing Semiconductor- GSS technology (optional sensor) for O₃. The parameters measured for ambient and workplace indoor air quality, and analysis method are shown in Table 4.2.

For stack emission, O₂, CO, CO₂, NO, and SO₂ were measured using KANE 945 Combustion Analyzer. The equipment used to measure air quality are shown in Figure 4.7.

Table 4.2 Parameters Measured for Ambient and Workplace Air Quality

No.	Parameters	Analysis Methods
1.	Sulfur dioxide (SO ₂)	Electrochemical sensors
2.	Nitrogen dioxide (NO ₂)	Electrochemical sensors
3.	Particulate matter 2.5 (PM _{2.5})	Infrared light scattering
4.	Particulate matter 10 (PM ₁₀)	Infrared light scattering
5.	Ozone (O ₃)	Gas Sensing Semiconductor- GSS technology (optional sensor)

The ambient air quality and workplace air quality parameters are measured Ozone (O₃), Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Particulate Matter (PM) and (VOC), wind speed, wind direction are measured by using **Haz-Scanner**.



KANE 988 Combustion Analyzer is used to measure the stack emission gas of boiler and generator. It can monitor the parameters such as Oxygen (O₂), Carbon monoxide (CO), Carbon Dioxide (CO₂), Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), differential pressure and temperature.



Figure 4.7 Air Quality Measurement Equipment

4.5.1.2 Selection of Sampling Location

Air quality measurements were taken at the project site on December 4th ~ 5th, 2024. The sampling points were selected based on their locations relative to key community receptors, as well as their current or potential for impairments. Ambient air quality at the project site was monitored at one sampling point, workplace indoor air quality was monitored at one point and stack emissions from boiler and generator were also monitored. The air quality measurement location’s coordinates are shown in Table 4.3. The location of the air quality measurement photo is shown in Figure 4.8 and the measurement activities are shown in Figure 4.9.

Table 4.3 Air Quality Measurement Locations

No.	Description	Coordinates	Place
1.	Ambient Air Quality	18° 4' 35.63"N and 95°43'29.80"E	Project premise
2.	Workplace Air Quality	18° 4'35.29"N and 95°43'27.61"E	Sewing Section
3.	Boiler Stack Emission	18° 4' 34.15"N and 95°43'26.99"E	-
4.	Generator Stack Emission	18° 4' 32.71"N and 95°43'27.56"E	-



Figure 4.8 Air Quality Measurement Location





Figure 4.9 Air Quality Measurement Activities

4.5.1.3 Ambient Air Quality Results

The ambient air quality results are shown in Table 4.4. The results are compared with Section 1.1- Air Emissions for Generation Application of NEQEG (2015). According to the ambient air quality measuring results, all parameters are within the acceptable limit. Additionally, the wind speed and wind direction results are shown in Figure 4.10. According to wind class distribution, the majority of occurrences are in the "0.50 - 2.10" m/s range (48%), followed by "Calms" (36%), while higher wind speeds above 3.60 m/s occur far less frequently. Wind rose diagram shows that the dominant wind direction appears to be from the west (W) and northwest (NW), with some contributions from the South (S) and east (E) directions as well.

Table 4.4 Ambient Air Quality Results

No	Parameters	Result	Unit	Measuring Avg. Period		Guideline Value	Avg. Period	Remark
1	Nitrogen Dioxide	16.79	$\mu\text{g}/\text{m}^3$	24	hours	$200\mu\text{g}/\text{m}^3$	1-hour	4/12/2024 11:30 AM- 12:29 PM (Peak Hour)
		5.86	$\mu\text{g}/\text{m}^3$	24	hours	-	-	-
2	Sulphur Dioxide	0	$\mu\text{g}/\text{m}^3$	24	hours	$20 \mu\text{g}/\text{m}^3$	24-hours	-
3	Particulate matter PM_{10}	29.51	$\mu\text{g}/\text{m}^3$	24	hours	$50 \mu\text{g}/\text{m}^3$	24-hours	-
4	Particulate matter $\text{PM}_{2.5}$	14.52	$\mu\text{g}/\text{m}^3$	24	hours	$25 \mu\text{g}/\text{m}^3$	24-hours	-
5	Ozone	0.85	$\mu\text{g}/\text{m}^3$	24	hours	$100\mu\text{g}/\text{m}^3$	8-hour daily Maximum	4/12/2024 8:30AM – 16:29 PM (8 hr avg)

		0.83	μg/m ³	24	hours	-	-	-
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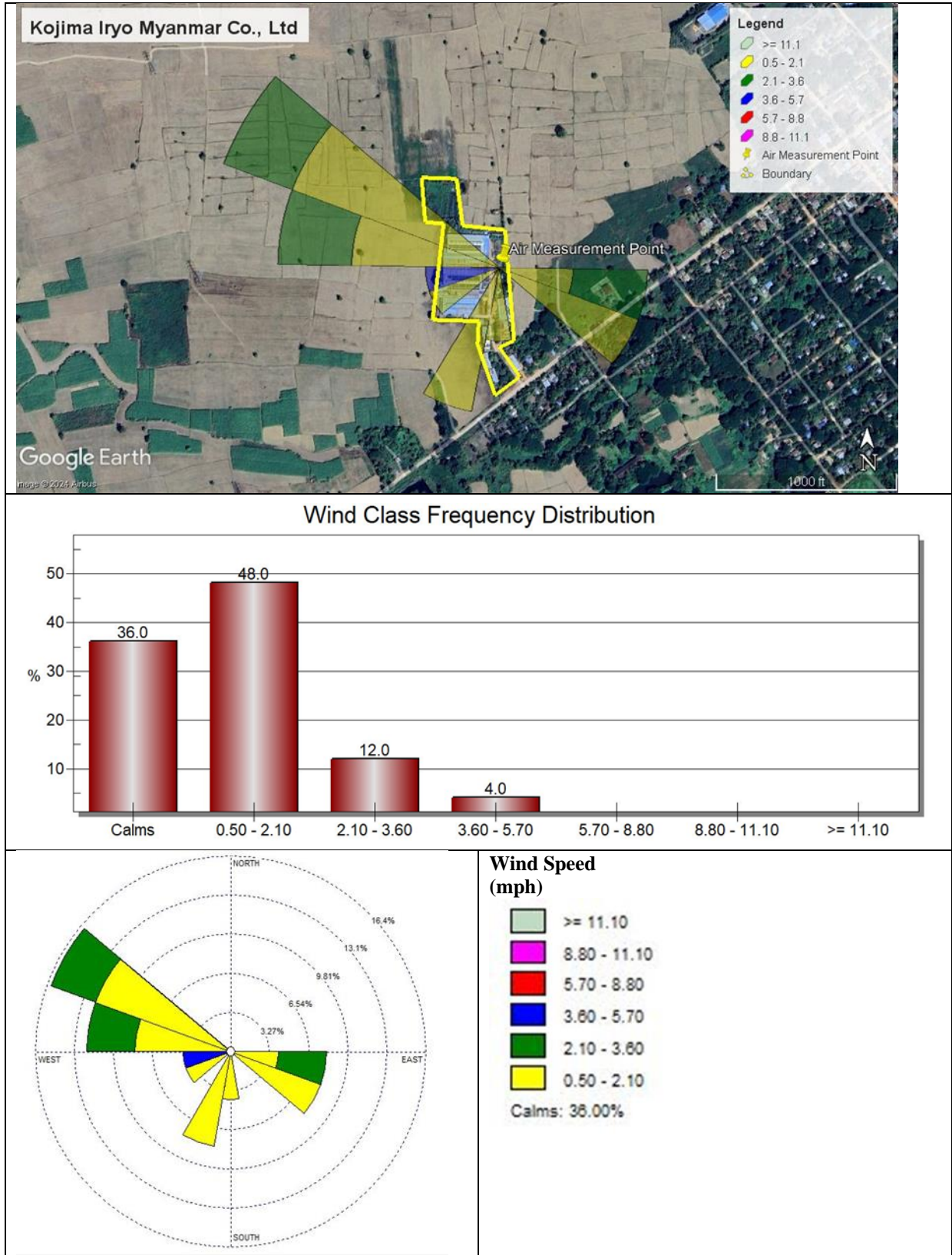


Figure 4.10 Wind Speed and Wind Direction Results

4.5.1.4 Workplace Air Quality Results

The workplace air quality results are shown in Table 4.5. According to the workplace (indoor) air quality measurement results, there is no guideline value. Therefore, the values are compared with NEQEG Guideline Value. The comparison of measurement results is within than the guideline values.

Table 4.5 Workplace Air Quality Results

No	Parameters	Result	Unit	Measuring Avg. Period		Guideline Value	Avg. Period	Remark
1	Nitrogen Dioxide	7.77	µg/m ³	24	hours	200µg/m ³	1-hour	4/12/2024 13:30 PM- 14:29 PM (Peak Hour)
		4.73	µg/m ³	24	hours	-	-	-
2	Sulphur Dioxide	0	µg/m ³	24	hours	20 µg/m ³	24-hours	-
3	Particulate matter PM ₁₀	21.11	µg/m ³	24	hours	50 µg/m ³	24-hours	-
4	Particulate matter PM _{2.5}	13.89	µg/m ³	24	hours	25 µg/m ³	24-hours	-
5	Ozone	0.91	µg/m ³	24	hours	100µg/m ³	8-hour daily Maximum	4/12/2024 10:30AM – 18:29 PM (8 hr avg)
		0.84	µg/m ³	24	hours	-	-	-

4.5.1.5 Stack Emission Measurement Results

The stack emission measurement results of 2-ton boiler (rice husk) and 375 KVA generator (diesel) are shown in Table 4.6 and Table 4.7, respectively. The results are compared with small combustion facilities emission of NEQEG (2015). As shown in tables, the emission results from both stacks do not exceed the guideline values.

Table 4.6 Boiler Stack Emission Measurement Results

No	Parameter	Unit	Results		Small Combustion Facilities Emission Guideline
			After 30 min	After 60 min	
1	O ₂	mol %	15.3	15.9	-
2	CO	mg/m ³	1850	1640	-
3	CO ₂	mol %	5.1	4.6	-
4	NO	mg/m ³	68	56	650
5	SO ₂	mg/m ³	72	62	2000

Table 4.7 Generator Stack Emission Measurement Results

No	Parameter	Unit	Results		Small Combustion Facilities Emission Guideline
			After 30 min	After 60 min	
1	O ₂	mol %	17.07	16.79	-
2	CO	mg/m ³	1749	1767	-
3	CO ₂	mol %	3.1	3.3	-
4	NO	mg/m ³	128	117	460
5	SO ₂	mg/m ³	12	9	2000

4.5.2 Noise Level

4.5.2.1 Methodology and Location of Noise Level Measurement

Two types of noise levels, ambient noise level and workplace noise level, were measured using Digital Sound Level Meter. The measuring device information is shown in Figure 4.11. There is ambient noise level to evaluate how much the factory's noise level will reach the resident area and the workplace noise level to evaluate the worker exposure limits due to machineries noise level. The ambient noise level was done at the same places of ambient air quality measuring points. The location of ambient noise level measurement is 18° 4' 35.63"N & 95°43'29.80"E and the locations of workplace noise level measurement are shown in Table 4.8 and Figure 4.12. Moreover, the noise levels measurement activities are shown in Figure 4.13. Noise measurements were also taken at the project site on December 4th ~ 5th, 2024.

Digital Sound Level Meter measures the environmental conditions of working environment of the factory carried out for short-time interval samples (one hour for each sample measurement). Ambient noise level measured continuously for 24 hours.



Figure 4.11 Digital Sound Level Meter

Table 4.8 Workplace Noise Level Measurement Location

No	Point	Location	Monitoring Period
1	NMP - 1	Sewing Area	24 hr
2	NMP - 2	QC Area	24 hr
3	NMP - 3	Between Hand Sewing Line and Cutting Area	24 hr
4	NMP - 4	Cutting Area	24 hr



Figure 4.12 Workplace Noise Level Measurement Locations





Figure 4.13 Noise Levels Measurement Activities

4.5.2.2 Noise Level Results

The ambient noise level results and workplace noise level results are shown in Table 4.9 and Table 4.10, respectively. Additionally, the noise levels result graphs are shown in Figure 4.14. The ambient noise levels were compared with NEQEG (2015) while the workplace noise exposure levels were compared with noise exposure level of OSH-U. S Department of Labor. According to the measurement results, the noise levels of both ambient and workplace are within the guideline values.

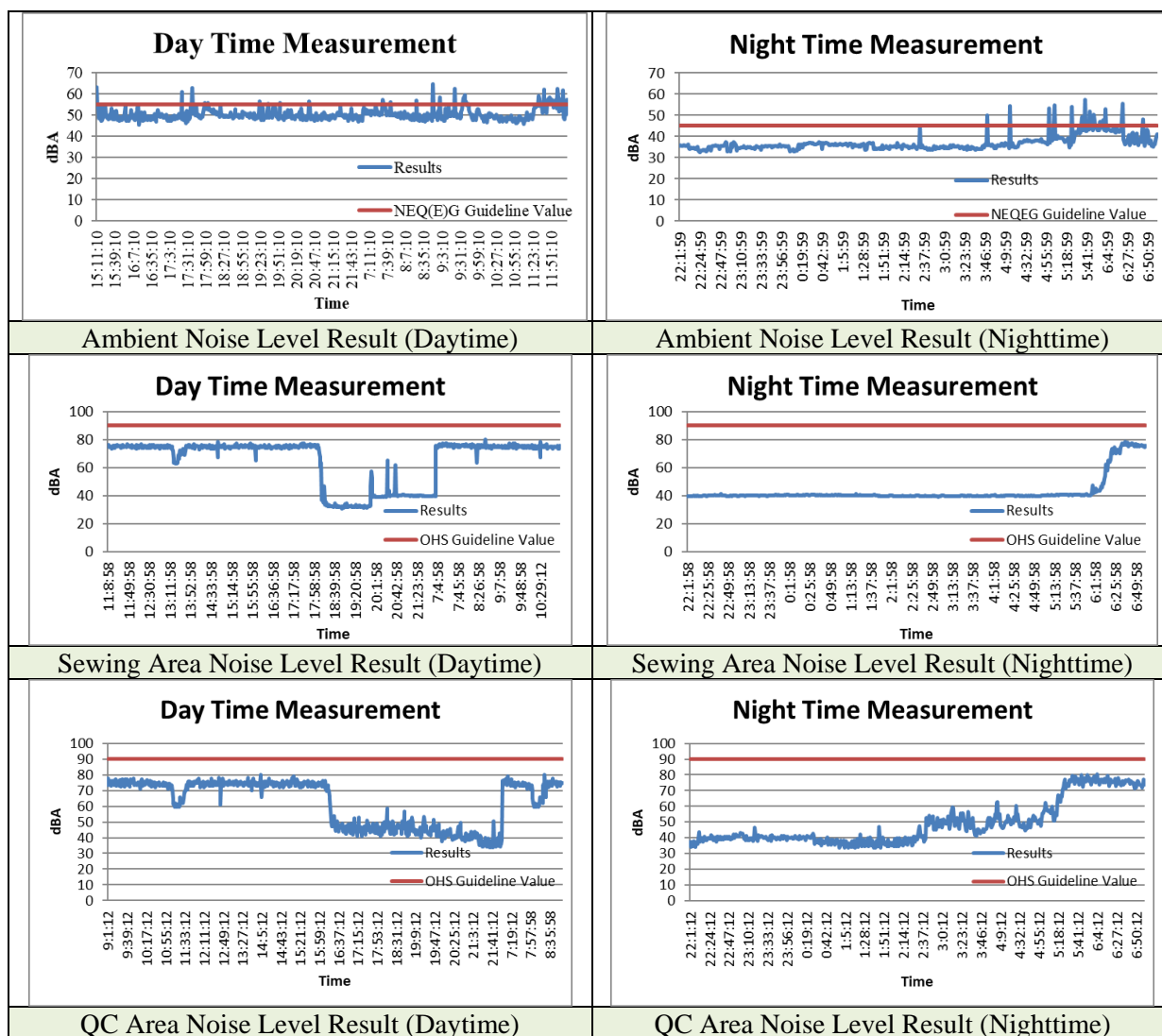
Table 4.9 Ambient Noise Level Measurement Result

Parameters	Noise Level (dBA)	NEQEG Guideline Value
Sound Level Meter	52.80 (Day Time)	55
	36.90 (Night Time)	45

Table 4.10 Workplace Noise Level Measurement Results

No.	Monitoring Point	Measurement	Unit	Noise Level (L _{eq})			OSH Exposure Guideline (8 hr.) ^a
				Avg	Max	Min	
1	NMP - 1	Day	dBA	65.26	80.00	30.50	90
		Night	dBA	43.15	78.30	39.20	90
2	NMP - 2	Day	dBA	62.17	80.20	33.80	90
		Night	dBA	49.12	80.50	33.50	90
3	NMP - 3	Day	dBA	59.58	85.70	31.90	90
		Night	dBA	41.77	81.40	32.20	90
4	NMP - 4	Day	dBA	61.68	89.30	32.70	90
		Night	dBA	47.24	83.90	32.80	90

^a noise exposure guideline of Occupational Safety and Health Administration – U.S Department of Labor



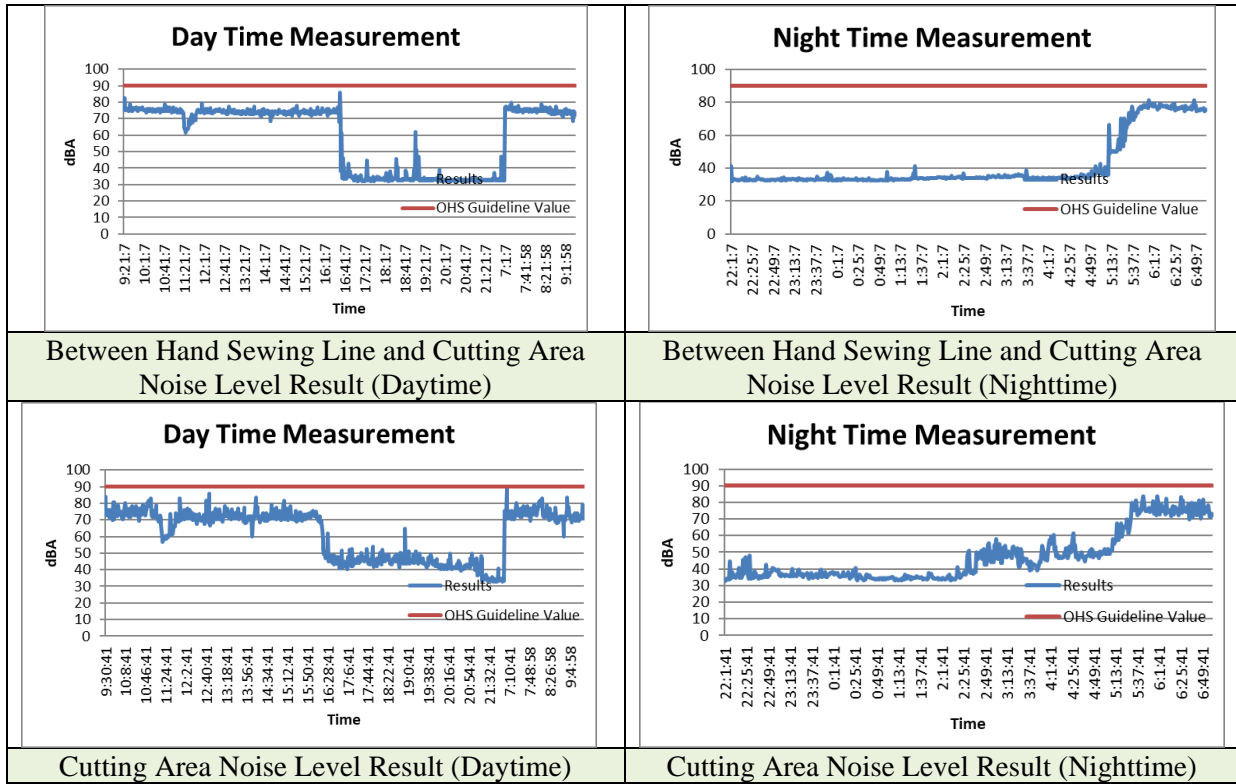


Figure 4.14 Noise Levels Measurement Results

4.5.3 Vibration Measurement

The vibration level was also measured at the near entrance canteen area on December 4th ~ 5th, 2024. The coordination is 18° 4'33.99"N & 95°43'29.54"E. The location map of vibration measurement is illustrated in Figure 4.15, and vibration measurement activities are shown in Figure 4.16. The vibration results are compared with German Standard: DIN 4150-3, as shown in Table 4.11.



Figure 4.15 Vibration Measurement Location



Figure 4.16 Vibration Measurement Activities

Table 4.11 Vibration Measurement Guideline Values (German Standard: DIN 4150-3)

Type of Structure	Peak Particle Velocity (mm/sec)		
	Acceptable Level	Moderate Level	Extreme Level
Commercial and Industrial Building (Type-1)	20	20 ~ 40	40 ~ 50
Dwellings (Type-2)	5	5 ~ 15	15 ~ 20
Ancient and Historic Buildings (Type-3)	3	3 ~ 8	8 ~ 10

The vibration measurement result is shown in Table 4.12. According to the vibration measurement results, the maximum peak velocity value is acceptable. Based on the results, the velocity does not have any impact on any type of building.

Table 4.12 Vibration Measurement Result

Date	Maximum Peak Velocity (mm/s)	Remark
04.12.2024 ~ 05.12.2024	1.79	Max: PVS on 4 th , December 2024, 14:40 PM

4.5.4 Water Quality

4.5.4.1 Water Sampling Locations

The tube well water, wastewater, and boiler blowdown water samples of the factory were collected on December 6th, 2024 and analyzed at the GMES Laboratory and Ecological Laboratory. The sampling locations are shown in Table 4.13 and Figure 4.17, and water sampling activities are shown in Figure 4.18.

Table 4.13 Water Sampling Locations

No.	Sampling Location	Coordination	Description
1	WSP-1	18° 4'32.81"N 95°43'27.23"E	Tube well Water
3	WSP-2	18° 4'37.96"N	Effluent Discharge (Wastewater –

		95°43'26.76"E	Outlet)
4	WSP-3	18° 4'34.45"N, 95°43'26.33"E	Boiler Blowdown Water



Figure 4.17 Water Sampling Locations



Tube Well (WSP – 1)

Wastewater Outlet (WSP – 2)



Boiler Blowdown Water (WSP - 3)

Figure 4.18 Water Sampling Activities

4.5.4.2 Tube Well Water Quality Result

Table 4.14 shows the water quality results of the tube well. These results are compared with drinking water quality standards. According to the findings, the tube well water quality is within the standard limit, except for colour, turbidity, and Total coliform count. Therefore, it is not suitable for drinking purposes unless it is purified.

Table 4.14 Tube Well Water Quality Results

No.	Parameters	Results	Unit	Drinking Standards	Remark
1.	pH	7.6	S.U	6.5 – 8.5	Normal
2.	Colour	321	HU	15	Above the limit
3.	Turbidity	503	FAU	5	Turbid
4.	TDS	565	mg/L	1,000	Normal
5.	Hardness	5	mg/L	500	Normal
6.	Chloride	28.4	mg/L	250	Normal
7.	Nitrite	0.211	mg/L	1	Normal
8.	Arsenic	0.005	mg/L	0.05	Normal
9.	Iron	0.32	mg/L	1	Normal
10.	Lead	ND	mg/L	0.01	LOD = 0.1 mg/L
11.	Manganese	0.24	mg/L	0.4	Normal
12.	Sulfate	82	mg/L	250	Normal
13.	Total coliform count	4	MPN/100ml	0	Above the limit

4.5.4.3 Wastewater Quality

Table 4.15 shows the wastewater quality results of sedimentation pond (outlet). These results are compared with effluent wastewater quality standards (general application) of NEQEG (2015). The findings indicate that the wastewater quality meets the standard limits for most parameters; however, it exceeds the limits for TSS, ammonia, BOD₅, COD, and total coliform bacteria.

Table 4.15 Wastewater Quality Results

No.	Parameters	Results	Unit	Drinking Standards	Remark
1.	pH	7.8	S.U	6.0 – 9.0	Normal
2.	Temperature	27.2	°C	<3	-
3.	Colour	237	HU	-	-
4.	TSS	183	mg/L	50	Above the Limit
5.	Ammonia	15.3	mg/L	10	Above the Limit
6.	BOD5	125	mg/L	50	Above the Limit
7.	COD	370	mg/L	250	Above the Limit
8.	Total Phosphorous	1.8	mg/L	2	Normal
9.	Cadmium	ND	mg/L	0.1	LOD = 0.01 mg/L
10.	Copper	ND	mg/L	0.5	LOD = 0.02 mg/L
11.	Zinc	0.02	mg/L	2	Normal
12.	Nickel	0.15	mg/L	0.5	Normal
13.	Chromium (Hexavalent)	0.098	mg/L	0.1	Normal
14.	Sulfide	0.317	mg/L	1	Normal
15.	Phenol	<0.1	mg/L	0.5	Normal
16.	Oil & Grease	6	mg/L	10	Normal
17.	Total Nitrogen	18.6	mg/L	-	-
18.	Total Coliform Bacteria	>1,100	MPN/100ml	400	Above the Limit

4.5.4.4 Boiler Blowdown Water Quality

Table 4.16 shows the boiler blowdown water quality results. These results are compared with effluent wastewater quality standards (general application) of NEQEG (2015). The findings indicate that the boiler blowdown water qualities are within the standards, except TSS, Nickel, and total coliform bacteria.

Table 4.16 Boiler Blowdown Water Quality Results

No.	Parameters	Results	Unit	Drinking Standards	Remark
1.	pH	8.3	S.U	6.0 – 9.0	Normal
2.	Temperature	27.4	°C	<3	-
3.	Colour	178	HU	-	-
4.	TSS	167	mg/L	50	Above the Limit
5.	Ammonia	0.54	mg/L	10	Normal
6.	BOD5	15	mg/L	50	Normal
7.	COD	29	mg/L	250	Normal
8.	Total Phosphorous	1.2	mg/L	2	Normal
9.	Cadmium	ND	mg/L	0.1	LOD = 0.01 mg/L
10.	Copper	0.13	mg/L	0.5	Normal

11.	Zinc	<0.02	mg/L	2	Normal
12.	Nickel	1.32	mg/L	0.5	Above the Limit
13.	Chromium (Hexavalent)	0.084	mg/L	0.1	Normal
14.	Sulfide	0.303	mg/L	1	Normal
15.	Phenol	<0.1	mg/L	0.5	Normal
16.	Oil & Grease	5	mg/L	10	Normal
17.	Total Nitrogen	3.2	mg/L	-	-
18.	Total Coliform Bacteria	1,100	MPN/100ml	400	Above the Limit

4.5.5 Soil Quality

4.5.5.1 Soil Sampling Location

In order to monitor the soil quality, soil sample inside the factory premise was taken and tested at GMES laboratory. The soil sample location is 18° 4' 37.61" N and 95° 43' 26.14" E, and the location map is shown in Figure 4.19. In addition, the soil sampling activity is shown in Figure 4.20.



Figure 4.19 Soil Sampling Location Map



Figure 4.20 Soil Sampling Activity

4.5.5.2 Soil Quality Results

The soil quality results are presented in Table 4.17. These results are compared with guideline values, specifically the Limits of Topsoil Concentration for Chemical Contaminants (Environmental Protection Authority, Australia) and the Topsoil Quality Guideline for Landscaping (2010, Utah State University), as Myanmar does not have topsoil guidelines. The findings indicate that the soil quality results fall within the acceptable guideline values.

Table 4.17 Soil Quality Results

No.	Parameters	Unit	Analysis Value	Guideline Value
1.	Aluminum	mg/kg soil	0.06	-
2.	Arsenic	mg/kg soil	0.03	20 ^a
3.	Chloride	g/kg soil	0.07	-
4.	Copper	mg/kg soil	<2.5	100 ^a
5.	Cyanide	mg/kg soil	<0.05	-
6.	Extractable Acidity	cmol/kg soil	4.7	-
7.	Manganese	mg/kg soil	<1	-
8.	P - Alkalinity	mmol/l extract	0	-
9.	pH	-	5.7	5.0 – 8.2 ^b
10.	Total Alkalinity	mmol/l extract	4.1	-
11.	Total Iron	mg/kg soil	0.5	>10 ^b

^aLimits of Topsoil Concentration for Chemical Contaminants, Environmental Protection Authority (Australia)

^bTopsoil Quality Guideline for Landscaping (2010), Utah State University

4.5.6 Light Intensity

4.5.6.1 Measurement Method and Locations

Light intensity is important for the work place. Therefore, study team from Green Myanmar Environmental Services Co., Ltd. investigated light intensity at four locations in the factory by using Lux Meter on December 4th, 2024. The light intensity measurement locations are shown in Figure 4.21 and Table 4.18. In addition, light intensity measurement activities are shown in Figure 4.22.



Figure 4.21 Light Intensity Measurement Locations

Table 4.18 Light Intensity Measurement Locations

No	Point	Location	Monitoring Period
1	LMP - 1	Sewing Area	Point Check
2	LMP - 2	Packaging Area	Point Check
3	LMP - 3	Between Hand Sewing Line and Cutting Area	Point Check
4	LMP - 4	Cutting Area	Point Check



Figure 4.22 Light Intensity Measurement Activities

Accurate and quantifiable measurement of light is essential in creating desired outcomes in practical day-to-day applications as well as unique applications. From measuring the amount of light in a workspace surface to ensuring emergency exits have proper illumination, light measurement and analysis is an important step in ensuring efficiency and safety. To perform these measurements, technicians often make use of lux meters, which are specialized devices that measure the intensity of light falling on a surface, or "lux."

From the workers' perspective, poor lighting at work can lead to eyestrain, fatigue, headaches, stress and accidents. On the other hand, too much light can also cause health and safety problems such as "glare" headaches and stress. Both can lead to mistakes at work, poor quality and low productivity. Various studies suggest that good lighting at the workplace pays dividends in terms of improved productivity, and a reduction. Improvements in lighting do not necessarily mean that you need more lights and therefore use more electricity – it is often a case of making better use of existing lights; making sure that all lights are clean and in good condition; and those lights are positioned correctly for each task. It is also a case of making the best use of natural light. Most garment factories have a combination of natural and artificial lighting. However, little attention appears to be paid on the nature of the work - it is as though all work in the factory requires the same degree of lighting. Light intensity measurement guidelines are shown in Table 4.19.

Table 4.19 Light Intensity Measurement Guidelines

No.	Location/Activity	Light Intensity (Lux)
1.	Emergency light	10
2.	Outdoor non-working areas	20
3.	Simple orientation and temporary visits (machine storage, garage, warehouse)	50
4.	Workspace with occasional visual tasks only (corridors, stairways, lobby, elevator, auditorium, etc.)	100
5.	Medium precision work (simple assembly, rough machine works, welding, packaging, etc.)	200
6.	Precision work (reading, moderately, difficult assembly, sorting, checking, medium bench and machine works, etc.), offices.	500
7.	High precision work (difficult assembly, sewing, color inspection, fine sorting etc.)	1,000 ~ 3,000

4.5.6.2 Light Intensity Measurement Results

Light measurement results are shown in Table 4.20. According to the measurement results, only packaging area is acceptable to the guideline, and other measurement points are not reach the standard limit, more illumination is required this area.

Table 4.20 Light Intensity Measurement Results

No.	Location	Measured Values (Lux)	Guideline Values (Lux)
1	Sewing Area	650	1,000-3,000
2	Packaging Area	1724	1,000-3,000
3	Between Hand Sewing Line and Cutting Area	680	1,000-3,000
4	Cutting Area	778	1,000-3,000

4.6 Socio-Economic Components

The socio-economic information was derived from Okpho Township GAD, 2023.

4.6.1 House, Household and Population of the Project Township

The project area is located in Okpho Township. Okpho Township is composed of two towns, Okpho and Othegon. The household and number of houses of Okpho Township surveyed from April 2022 to March 2023 is shown in the Table 4.21 and Table 4.22.

In the urban area, there are 4,029 houses and 4,406 households distributed across 10 wards. There are no village tracts or villages recorded in the urban section. In the rural area, there are significantly more houses and households, with 29,358 houses and 30,743 households. These are spread across 53 village tracts and 254 villages. The combined total for the area is 33,387 houses and 35,149 households, with 10 wards, 53 village tracts, and 254 villages. This data indicates a predominantly rural composition for the project area.

Regarding population, there are 8,159 males and 9,494 females, totaling 17,653 people in the urban area. In the rural area, the population is significantly higher, with 56,769 males and 60,853 females, totaling 117,622 people. The overall population for the entire area is 135,275, consisting of 64,928 males and 70,347 females. This data highlights that the majority of the population resides in rural areas, and there is a slightly higher number of females compared to males in both urban and rural areas.

Table 4.21 House and Household Numbers

No.	Description	House	Household	Ward	Village Tract	Village
1.	Urban	4,029	4,406	10	-	-
2.	Rural	29,358	30,743	-	53	254
Total		33,387	35,149	10	53	254

Source: Okpho Township GAD, 2023

Table 4.22 Population by Sex of the Project Township

No.	Description	Male	Female	Total
1.	Urban	8,159	9,494	17,653
2.	Rural	56,769	60,853	117,622
Total		64,928	70,347	135,275

Source: Okpho Township GAD, 2023

4.6.2 Ethnic Groups

Table 4.23 presents the distribution of various ethnic groups within the township. The Burma ethnic group makes up the overwhelming majority, with a population of 124,554 accounting for 92.1% of the total. The Kayin group follows with 6,866 people (5.1%). Other ethnic groups are represented in much smaller numbers: the Chin (2,308 or 1.7%), Shan (524 or 0.4%), Mon (41 or 0.03%), and Rakhine (23 or 0.01%). The Kachin group is the smallest recorded, with only 3 people (0.002%). Data for the Kayah ethnic group is unavailable or not recorded. This distribution highlights the demographic dominance of the Burma ethnic group, with other ethnicities representing minor portions of the township's population.

Table 4.23 Population by Ethnic Groups of the Project Township

No.	Ethnic	Population	Percentage
1.	Kayin	6,866	5.1%
2.	Chin	2,308	1.7%
3.	Mon	41	0.03%
4.	Burma	124,554	92.1%
5.	Rakhine	23	0.01%
6.	Shan	524	0.4%

7.	Kachin	3	0.002%
8.	Kayah	-	-
Total		135,275	99.3%

Source: Okpho Township GAD, 2023

4.6.3 Religious

Table 4.24 provides a summary of the religious composition of a population, listing the number of individuals associated with four religions. The majority of the population, totaling 131,325 people, identify as Buddhists, accounting for an overwhelming proportion. Christians constitute the second-largest group, with 3,361 individuals. The Hindu and Islamic populations are significantly smaller, comprising 35 and 554 individuals, respectively. The overall total population represented in the table is 135,275 people, showcasing the predominant presence of Buddhism within the community.

Table 4.24 Religious Groups of Ethnic in the Project Township

No.	Type of Religious	No. of Person
1	Buddhist	131,325
2	Christian	3,361
3	Hindu	35
4	Islam	554
Total		135,275

Source: Okpho Township GAD, 2023

4.6.4 Educational Information

According to Okpho Township GAD (2023), there is no university or institution in the project township. Regarding basic education, there are five basic education high schools, eight basic education high school branches, nine basic education middle schools, fourteen basic education middle school branches, one hundred and twenty-two primary schools, twenty post-primary schools, two kindergartens, and eight monastery education schools. The list of completion on high school education within the project township is shown in Table 4.25.

Table 4.25 Completion of High School Education in the Project Township

Township	2021 - 2022			2023 July		
	List	Take Exam	Pass	List	Take Exam	Pass
Okpho Township	675	599	329 (54.92%)	353	309	212 (68.60%)

Source: Okpho Township GAD, 2023

4.6.5 Health Information

According to Okpho Township GAD (2023), the project township has four government hospitals, six public clinics, and forty rural health care centers. The common diseases reported in the project township include malaria, diarrhea, tuberculosis, dysentery,

hepatitis, and pneumonia. There were six cases of malaria, six hundred cases of diarrhea, one hundred and sixteen cases of tuberculosis, sixty cases of dysentery, sixteen cases of hepatitis, and twenty-five cases of pneumonia. While six deaths occurred due to tuberculosis, no mortalities were reported for the other diseases.

4.6.6 Land Use

Table 4.26 describes the land use classification of Okpho Township. The table summarizes the distribution of various types of land and their respective areas in acres, reflecting the total land area of 259,506 acres. The "Net Cultivation Area" includes 92,457 acres of paddy land, 6,526 acres of farmland for crops, 3,002 acres of cultivated island, and 1,403 acres of garden land, with nipa palm land not specified. Additionally, other land types include 2,684 acres of grazing ground, 152 acres of industrial land, 563 acres of urban area, 9,443 acres of rural area, and 9,296 acres classified as "Other." Significant portions of land are allocated for environmental conservation, with 130,001 acres designated as reserved and protected forest areas, 2,629 acres of wild forest, and 1,350 acres of virgin land. Non-cultivated land and vacant areas are not specified.

Table 4.26 Types of Land Use in the Project Township

No.	Types of Land	Area (acres)
1.	Net Cultivation Area	103,388
	(i) Paddy land	92,457
	(ii) Farmland for crop	6,526
	(iii) Cultivated Island	3,002
	(iv) Garden Land	1,403
	(v) Nipa palm land	-
2.	Vacant Land Area	-
	(i) Paddy land	-
	(ii) Farmland for crop	-
	(iii) Cultivated Island	-
	(iv) Garden Land	-
	(v) Nipa palm land	-
3.	Grazing Ground	2,684
4.	Industrial Land	152
5.	Urban Area	563
6.	Rural Area	9,443
7.	Other	9,296
8.	Reserved Forest and Protected Forest Area	130,001
9.	Wild forest	2,629
10.	Virgin land	1,350
11.	Non-cultivated area	-
	Total	259,506

Source: Okpho Township GAD, 2023

4.6.7 Industries

According to Okpho Township GAD (2023), the project township has no industrial zone. However, there are many types of industries such as two garment factories (now one factory), ten rice mills, one saw mill, one oil mill, and ten domestic industries.

4.6.8 Economic Information

According to Okpho Township GAD (2023), the main livelihood of the Okpho township is agriculture. The township is located 2.5 miles away from Yangon-Pyay Road and has good transportation access. The primary products of the township include rice, mat pal, cabbage and chilies, which are distributed to other areas.

4.6.9 Occupational Information

Table 4.27 provides a breakdown of employment by job type in the township, with a total of 102,109 persons engaged in various occupations. Agriculture is the dominant livelihood, employing 44,320 people, followed by trading with 16,650 individuals and livestock with 12,720 workers. Wage workers account for 11,045 persons, while 9,770 are engaged in other unspecified jobs. Factory and handicraft employees total 5,290, while government employees make up 2,257 individuals. Only 40 people are involved in services, and fishery is the least common occupation with just 17 individuals. This distribution highlights the township's heavy reliance on agriculture and trading for livelihoods. Additionally, there is a total workforce of 106,495 individuals, with 102,209 employed and 4,401 (4.1%) unemployed, resulting in an unemployment rate of 4.1%.

Table 4.27 Types of Occupation in the Project Township

No.	Types of Job	No. of Persons
1.	Government Employee	2,257
2.	Services	40
3.	Agriculture	44,320
4.	Livestock	12,720
5.	Trading	16,650
6.	Factory / Handicraft Employee	5,290
7.	Fishery	17
8.	Wage Worker	11,045
9.	Others	9,770
Total		102,109

Source: Okpho Township GAD, 2023

4.6.10 Transportation

The railway and highway provide convenient options for both local and external transportation. The township's products, such as rice and various types of wood, are transported to Yangon by train and car.

4.6.11 Historical, Cultural and Archaeological Sites

According to Okpho Township GAD (2023), there are thirty-three pagodas, sixty-four stupas, two hundred and eighteen monasteries, fifteen nunneries, and five religious halls. Although there are no famous monasteries, the township has two well-known pagodas: Maharatulayathi Pagoda and Mahartakyalawkamuni Pagoda. Additionally, there are twelve churches, two mosques, and two Chinese temples.

5.0 POTENTIAL ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

Garment manufacturing has significant potential to contribute to economic growth by generating substantial employment opportunities and attracting foreign investment. The garment industry is labor-intensive and characterized by low fixed capital investment, a wide range of product designs and input materials, variable production volumes, high competitiveness, and often stringent demands for product quality. From an environmental perspective, garment manufacturing poses concerns, including water and energy consumption, and the generation of waste and emissions. Assessing the environmental impact is critical to promoting sustainable practices, such as adopting cleaner technologies, efficient resource management, and waste reduction strategies. A comprehensive impact assessment will help identify both the opportunities and challenges associated with garment manufacturing, providing a foundation for informed decision-making and policy interventions to maximize its benefits while minimizing its drawbacks.

5.1 Impact Assessment Methodology and Approach

The environmental impact assessment was conducted to evaluate the effects of the proposed project and its associated activities on key environmental and social components. During field visits, all environmental components sensitive to the proposed activities were identified. Mitigation measures for the identified impacts were developed based on literature reviews, professional judgment, and experience from similar projects.

5.1.1 Factors for Assessment

The impact assessment methodology considers several key factors to evaluate the potential effects of the proposed project. These factors include duration, which assesses whether the impact is short-term, medium-term, or long-term; extent, which determines the geographical area or population affected; magnitude, which evaluates the scale or severity of the impact; and probability, which assesses the likelihood of the impact occurring. Both negative and positive impacts are analyzed to provide a balanced understanding of the project's effects. This systematic approach ensures that all potential outcomes are thoroughly examined, enabling the development of effective mitigation measures for adverse impacts while maximizing the benefits of positive ones.

Table 5.1 Factors and its Definition for Assessment

Duration		
Very Low	1	Immediate (< 1 year)
Low	2	Short Term (1 – 5 years)
Moderate	3	Medium Term (6-15 years)
High	4	Long Term (>15 years)
Very High	5	Permanent
Extent		
Very Low	1	Project area
Low	2	Surrounding area

Moderate	3	Local municipal area
High	4	Regional
Very High	5	National and international
Magnitude/ Severity		
Very Low	1	Minor (The impact can be managed in a way that preserves natural, cultural, and social functions and processes, ensuring they remain unaffected.)
Low	2	Low (The impact affects the environment in a way that results in only minimal disruption to natural, cultural, and social functions and processes.)
Moderate	3	Moderate (The affected environment is altered, but natural, cultural, and social functions and processes persist, albeit in a modified form.)
High	4	High (Natural, cultural, and social functions or processes are altered to the extent that they will temporarily cease.
Very High	5	Very high (where natural, cultural, or social functions or processes are altered to the extent that it will permanently cease.)
Probability: describes the likelihood of impact actually occurring:		
Very Low	1	Very Improbably (the possibility is < 25%)
Low	2	Improbably (the possibility is <50%)
Moderate	3	Probably, sometimes (the possibility is >50% and <75%)
High	4	Highly probably, frequently (the possibility is > 75%)
Very High	5	Definitely (the impact will occur)
<p>Nature: This includes a brief description of how the proposed activity will impact on the environment, whether the impact is positive or negative, direct or indirect.</p> <ul style="list-style-type: none"> ➤ Positive (+) Beneficial impact ➤ Negative (-) Adverse impact 		
<p>Cumulative: In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.</p>		
<p>Mitigation: Where negative impacts are identified, mitigation measures (ways of reducing impacts) have been identified.</p>		

5.1.2 Impact Rating

Significance refers to the importance of an impact, assessed based on its physical extent, duration, and intensity. It highlights the potential need for mitigation measures to address the severity of the impact. To evaluate the level of environmental impact risk, an impact rating system is applied as follow.

$$\text{Score of Impact} = (\text{Duration} + \text{Extent} + \text{Magnitude}) \times \text{Probability}$$

Table 5.2 Environmental Impact Categorization

Score	Level of Risk	Description	Action Required
<15	Negligible	The impact is non-existent or unsubstantial	No immediate action

Score	Level of Risk	Description	Action Required
		and is of no or little importance to any stakeholder and can be ignored.	required; however, surveillance is required.
15 – 30	Low	The impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is likely to require management intervention with increased costs.	No immediate action required unless escalation of risk is possible. However, surveillance is required.
31 - 60	Medium	The impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.	Activity can operate subject to management and/ or modification.
>60	High	The impact could render development options controversial or the project unacceptable if it cannot be reduced to acceptable levels; and/ or the cost of management intervention will be a significant factor in mitigation.	Activity should be modified to include remedial planning and actions and be subject to detailed assessment.

5.2 Potential Impact Assessment and Mitigation Measures during Construction/Decommissioning Phases

During the construction phase, activities such as land clearing, excavation, material transportation, and infrastructure development can cause considerable environmental impacts, including habitat disruption, air and water pollution, and noise disturbances. These impacts often require proactive mitigation strategies, such as emission and traffic control measures, waste management, and adherence to environmental regulations.

The decommissioning phase, which involves dismantling and removing infrastructure once the project is no longer operational. This phase may generate large quantities of waste, risk contamination of soil and water, and disrupt local ecosystems. Effective planning for decommissioning includes measures like material recycling, site restoration, and the safe disposal of hazardous materials. Both phases require management to minimize negative impacts and ensure compliance with environmental and safety standards. The impact evaluation is shown in Table 5.3.

Table 5.3 Impact Evaluation during Construction/ Decommissioning Phase

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude	Probability	Impact Score
Construction Phase							
1.	Air Pollution (Negative)	<ul style="list-style-type: none"> ❖ Dust and particulate matter emission from land clearing, excavation, material handling, and the use of heavy machinery ❖ Gaseous emission from transportation vehicles, generators, and construction machinery 	2	2	2	3	Low (18)
2.	Noise Pollution (Negative)	<ul style="list-style-type: none"> ❖ Noise pollution from activities such as excavation, drilling, concrete mixing, and the operation of heavy machinery like cranes, and trucks, and use of generators and transportation vehicles. 	2	2	2	3	Low (18)
3.	Water Contamination (Negative)	<ul style="list-style-type: none"> ❖ Wastewater from utility such as kitchen, domestic wastewater, toilet and septic tanks ❖ Accidental spills of fuels, oils, and paints can contaminate nearby water bodies. ❖ Uncontrolled runoff can carry construction debris and other pollutants into nearby rivers and lakes. 	2	2	3	3	Low (21)
4.	Soil Contamination (Negative)	<ul style="list-style-type: none"> ❖ Fuel and oil leaks from construction vehicles and machinery, as well as the improper disposal of various types of waste on the ground can lead to soil contamination. ❖ Improper discharge of domestic wastewater can also contribute to soil contamination. ❖ Temporary solid waste disposal sites may cause leachate leakage, which can contaminate the surrounding soil at the project site. 	2	1	1	3	Negligible (12)
5.	Solid Waste (Negative)	<ul style="list-style-type: none"> ❖ The foundation work and building construction activities can generate various types of waste, including concrete, excavated soil, and masonry debris. ❖ Wood products such as lumber, plywood, particleboard, 	2	2	2	3	Low (18)

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude	Probability	Impact Score
		<p>and other materials can result from activities like framing, formwork, and packaging of construction materials.</p> <ul style="list-style-type: none"> ❖ Small amounts of plastic waste, including PVC pipes and packaging materials, may also be produced. ❖ Domestic waste, such as plastic, garbage, and food waste, can be generated by construction workers. ❖ Hazardous wastes, including treated timber, concrete additives, preservatives, adhesives, paint, fluorescent light tubes, and lead-acid batteries, may cause negative environmental impacts if not properly managed. 					
6.	Occupational Health and Safety (Negative)	<ul style="list-style-type: none"> ❖ Slips and falls due to improper housekeeping on-site, slippery surfaces, or careless behavior of workers. ❖ Heat exposure from working with high-temperature surface equipment or during extended periods under the sun. ❖ Noise-induced hazards due to prolonged exposure to noise from machinery, vehicles, or equipment ❖ Accidents involving moving machinery, such as vehicle traffic, and hazards associated with lifting and operating equipment. Improper use of construction equipment may lead to injuries. 	2	1	3	3	Low (18)
7.	Traffic Congestion (Negative)	<ul style="list-style-type: none"> ❖ In the construction phase, the movement of heavy machinery, equipment, and materials to and from the site increases road usage, often leading to traffic congestion. 	2	2	2	3	Low (18)
8.	Land Use Change (Negative)	<ul style="list-style-type: none"> ❖ The Project Proponent has constructed buildings on 4.92 acres of land, resulting in a permanent alteration of land use. ❖ Clearing land for construction often involves the removal of vegetation, which can lead to habitat loss, soil erosion, and a reduction in biodiversity. 	5	1	2	5	Medium (40)

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude	Probability	Impact Score
		❖ The alteration of natural landscapes can disrupt local ecosystems and hydrological patterns, increasing the risk of flooding or water contamination.					
9.	Creation of Employment Opportunities (Positive)	<ul style="list-style-type: none"> ❖ Job opportunities for local people according to their skill and abilities ❖ Improve their skills by getting trainings from experienced managers, experts and technicians ❖ Job opportunities for regional will be boosted. 	4	3	2	4	Medium (36)
Decommissioning Phase							
1.	Air Quality (Negative)	<ul style="list-style-type: none"> ❖ Activities such as dismantling structures, demolishing buildings, and transporting waste can release significant amounts of dust and particulate matter into the air. ❖ Heavy machinery and vehicles used for site clearance and waste transport also emit NOx, CO, and greenhouse gases (GHGs). 	1	2	2	3	Low (15)
2.	Noise Pollution (Negative)	<ul style="list-style-type: none"> ❖ Noise pollution from dismantling structures, use of generators and transportation vehicles, and demolition ❖ Specific 	1	2	2	3	Low (15)
3.	Water Contamination (Negative)	<ul style="list-style-type: none"> ❖ Demolition activities can release particulates and contaminants into water sources through surface runoff. ❖ Additionally, fuels leaks from decommissioning equipment and vehicles can enter nearby water sources via surface runoff or seep into the groundwater. 	1	2	2	3	Low (15)

Environmental Management Plan -EMP for

Manufacturing of Garment on CMP Basis

Kojima Iryo Myanmar Co., Ltd.

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude	Probability	Impact Score
4.	Soil Contamination (Negative)	<ul style="list-style-type: none"> ❖ Fuel and oil leaks from dismantling equipment and vehicles, as well as improper handling and disposal of demolition waste can result soil contamination. ❖ Residual hazardous materials, such as used batteries, fluorescent light bulbs and paints, can further contribute to soil contamination if not managed properly. ❖ Waste temporary storage areas may cause leachate leakage, which can affect the surrounding soil at the project site. 	1	1	2	3	Negligible (12)
5.	Solid Waste (Negative)	<ul style="list-style-type: none"> ❖ Decommissioning activities can generate substantial amounts of demolition waste, including concrete rubble, bricks, metal scraps, and excavated soil. ❖ Wood waste, such as dismantled plywood, lumber, and formwork materials, may also be produced during the dismantling of structures. ❖ Plastic waste, such as broken pipes, insulation materials, and packaging remnants, can accumulate on-site. ❖ Domestic waste, including garbage and food waste, may result from worker activities during the decommissioning process. ❖ Hazardous wastes, such as residual paints, treated wood, fluorescent light tubes, and batteries, pose environmental risks if not handled and disposed of properly. 	1	2	3	3	Low (18)
6.	Occupational Health and Safety (Negative)	<ul style="list-style-type: none"> ❖ Slips, trips, and falls due to debris, dismantled materials, or uneven surfaces during site clearance. ❖ Injuries from falling objects, such as bricks, dismantled equipment, or debris during demolition activities. ❖ Noise hazards from demolition equipment and machinery, which may lead to temporary hearing issues. 	1	2	2	3	Low (15)
7.	Traffic Congestion	<ul style="list-style-type: none"> ❖ During decommissioning, the removal of structures and transport of waste materials can cause additional traffic 	1	2	2	3	Low (15)

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude	Probability	Impact Score
	(Negative)	strain, as large vehicles frequently occupy roads, leading to slowdowns.					
8.	Land Use Change (Positive and Negative)	<ul style="list-style-type: none"> ❖ Decommissioning often involves the dismantling of infrastructure, removal of debris, and reclamation of land, which can temporarily disturb the environment. ❖ It also provides an opportunity to restore the land to its natural state or repurpose it for other uses, such as agriculture, conservation, or urban development. ❖ Poorly managed decommissioning activities can leave behind contaminated soil, abandoned structures, which may hinder ecosystem recovery and limit future land usability. ❖ Effective decommissioning plans that include soil rehabilitation, reforestation, and ecological restoration can mitigate long-term environmental damage and promote sustainable land use. 	5	1	2	5	Medium (40)
9.	Creation of Employment Opportunities (Positive)	<ul style="list-style-type: none"> ❖ Job opportunities for local people according to their skill and abilities ❖ Improve their skills by getting trainings from experienced managers, experts and technicians ❖ Job opportunities for regional will be boosted. 	2	3	2	4	Low (28)

5.2.1 Air Pollution

5.2.1.1 Impact Assessment

During the construction phase, air pollution primarily arises from activities such as land clearing, excavation, material handling, and the use of heavy machinery. These activities generate dust and particulate matter (PM₁₀ and PM_{2.5}), which can be harmful to human health and the environment. Additionally, transportation vehicles, generators, and machinery emissions contribute to the release of carbon dioxide (CO₂), carbon monoxide (CO), Sulphur dioxide (SO₂), and nitrogen oxides (NO_x). Dust and airborne pollutants can affect nearby communities and ecosystems.

In the decommissioning phase, air pollution sources are often similar to those in construction. Activities such as dismantling structures, demolishing buildings, and transporting waste can release significant amounts of dust and particulate matter into the air. Heavy machinery and vehicles used for site clearance and waste transport also emit NO_x, CO, and greenhouse gases (GHGs).

5.2.1.2 Mitigation Measures

- ❖ Water will be regularly sprayed on unpaved roads, construction sites, and material stockpiles to suppress dust generation.
- ❖ Soil and debris will be covered during storage and transport to prevent particles from becoming airborne.
- ❖ Vehicles and equipment will be regularly maintained to ensure efficient fuel combustion and reduce emissions of gaseous pollutants, such as NO_x and CO.

5.2.2 Noise Pollution

5.2.2.1 Impact Assessment

Noise pollution during the construction phase arises from activities such as excavation, drilling, concrete mixing, and the operation of heavy machinery like cranes, and trucks, and use of generators and transportation vehicles. The noise pollution can negatively impact nearby residents, workers, and wildlife.

The decommissioning phase involves similar noise-generating activities, such as dismantling structures, use of generators and transportation vehicles, and demolition. Specific processes, like breaking down reinforced concrete or operating loaders and crushers, contribute moderately to noise pollution.

5.2.2.2 Mitigation Measures

- ❖ Noisy operations will be limited to daytime hours to reduce disturbances during sensitive periods.
- ❖ Vehicles, machinery and equipment will be regularly maintained to prevent excess noise due to malfunctioning components.
- ❖ Nearby communities will be notified about upcoming noisy activities and expected timelines.

- ❖ Regular noise level monitoring will be conducted to ensure compliance with regulatory standards.

5.2.3 Water Contamination

5.2.3.1 Impact Assessment

During construction phase, water contamination can cause due to improper handling of materials and site runoff. Accidental spills of fuels, oils, and paints can contaminate nearby water bodies. Improper disposal of wastewater from site facilities, such as temporary toilets and washing areas, can introduce contaminants into the water. Uncontrolled runoff can carry construction debris and other pollutants into nearby rivers and lakes.

During decommissioning phase, demolition activities can release particulates and contaminants into water sources through surface runoff. Additionally, fuels leaks from decommissioning equipment and vehicles can enter nearby water sources via surface runoff or seep into the groundwater.

5.2.3.2 Mitigation Measures

- ❖ Fuels will be stored in designated areas and checked regularly.
- ❖ Portable sanitation systems will be provided and maintained regularly for worker facilities.
- ❖ Proper drainage system will be constructed and drains will be cleaned to ensure effective drainage.
- ❖ Wastewater from washing bins and workers' kitchens will be treated with a sedimentation pond.
- ❖ Construction wastes will be disposed properly.

5.2.4 Soil Contamination

5.2.4.1 Impact Assessment

Construction activities can lead to soil contamination through fuel and oil leaks from construction vehicles and machinery, as well as the improper disposal of various types of waste on the ground. Improper discharge of domestic wastewater can also contribute to soil contamination. Additionally, temporary solid waste disposal sites may cause leachate leakage, which can contaminate the surrounding soil at the project site.

Decommissioning activities can result in soil contamination through fuel and oil leaks from dismantling equipment and vehicles, as well as improper handling and disposal of demolition waste. Residual hazardous materials, such as used batteries, fluorescent light bulbs, and paints, can further contribute to soil contamination if not managed properly. Additionally, waste temporary storage areas may cause leachate leakage, which can affect the surrounding soil at the project site.

5.2.4.2 Mitigation Measures

- ❖ Fuels will be stored in designated areas and checked regularly in order to prevent leakage of fuel and oil to the soil.

- ❖ Proper solid waste management system for various types of waste including hazardous waste will be implemented in line with local laws and regulations during construction and decommissioning phases.
- ❖ Regular inspection of temporary waste storage areas will be conducted to prevent leachate leakage.
- ❖ Domestic wastewater will be discharged properly by installing effective drainage system.

5.2.5 Solid Waste Generation

5.2.5.1 Impact Assessment

The foundation work and building construction activities can generate various types of waste, including concrete, excavated soil, and masonry debris. Additionally, wood products such as lumber, plywood, particleboard, and other materials can result from activities like framing, formwork, and packaging of construction materials. Small amounts of plastic waste, including PVC pipes and packaging materials, may also be produced. Domestic waste, such as plastic, garbage, and food waste, can be generated by construction workers.

Hazardous wastes, including treated timber, concrete additives, preservatives, adhesives, paint, fluorescent light tubes, and lead-acid batteries, may cause negative environmental impacts if not properly managed.

Decommissioning activities can generate substantial amounts of demolition waste, including concrete rubble, bricks, metal scraps, and excavated soil. Wood waste, such as dismantled plywood, lumber, and formwork materials, may also be produced during the dismantling of structures. Additionally, plastic waste, such as broken pipes, insulation materials, and packaging remnants, can accumulate on-site. Domestic waste, including garbage and food waste, may result from worker activities during the decommissioning process. Hazardous wastes, such as residual paints, treated wood, fluorescent light tubes, and batteries, pose environmental risks if not handled and disposed of properly.

5.2.5.2 Mitigation Measures

- ❖ Proper solid waste management system will be implemented to segregate waste into categories such as construction debris, hazardous waste, plastic wastes, and domestic wastes.
- ❖ Materials like concrete debris, excavated soil, and masonry waste will be reused for backfilling or other site activities where feasible.
- ❖ Hazardous wastes such as residual paints, used batteries, and fluorescent light bulbs, and treated wood will be disposed in line with local laws and regulations.
- ❖ Adequate waste collection bins will be provided on-site for domestic waste, including food and plastic waste.
- ❖ Training programs on proper waste handling, segregation, and disposal procedures will be conducted for workers.

5.2.6 Occupational Health and Safety

5.2.6.1 Impact Assessment

During construction phases, the following potential impacts on occupational health and safety can be occurred.

- ❖ Slips and falls due to improper housekeeping on-site, slippery surfaces, or careless behavior of workers.
- ❖ Heat exposure from working with high-temperature surface equipment or during extended periods under the sun.
- ❖ Noise-induced hazards due to prolonged exposure to noise from machinery, vehicles, or equipment
- ❖ Accidents involving moving machinery, such as vehicle traffic, and hazards associated with lifting and operating equipment. Improper use of construction equipment may lead to injuries.

During decommissioning phase, the following potential impacts on occupational health and safety can be occurred.

- ❖ Slips, trips, and falls due to debris, dismantled materials, or uneven surfaces during site clearance.
- ❖ Injuries from falling objects, such as bricks, dismantled equipment, or debris during demolition activities.
- ❖ Noise hazards from demolition equipment and machinery, which may lead to temporary hearing issues.

5.2.6.2 Mitigation Measures

- ❖ A safety policy will be established by the Project Proponent or construction contractor for implementation at the construction site.
- ❖ A safety plan will be developed by the Project Proponent or contractor to ensure the protection of construction workers.
- ❖ Danger signs will be displayed at the slippery floors, wet muddy surface, areas with ongoing excavation to alert and caution the workers.
- ❖ Personal Protective Equipment (PPE) such as safety helmets, face masks, gloves, safety glasses, and earplugs will be provided to the workers based on their nature of work.
- ❖ First aid kits will be readily available at the construction site.
- ❖ Safety awareness training will be conducted to educate workers on safety guidelines and practices.
- ❖ Safety supervisors will be assigned to monitor and enforce safety protocols on-site.
- ❖ Incentive programs will reward workers who comply with safety practices.
- ❖ Penalties will be imposed on workers who fail to adhere to safety procedures.
- ❖ A health and safety matrix will be prepared to track and manage safety performance effectively.
- ❖ Incidents/accidents will be recorded and monitor at the construction site.

5.2.7 Traffic Congestion

5.2.7.1 Impact Assessment

During the construction and decommissioning phases, traffic congestion can affect both local communities and project timelines. In the construction phase, the movement of heavy machinery, equipment, and materials to and from the site increases road usage, often leading to traffic congestion.

Similarly, during decommissioning, the removal of structures and transport of waste materials can cause additional traffic strain, as large vehicles frequently occupy roads, leading to slowdowns.

However, these impacts are short-term and typically occur during peak hours.

5.2.7.2 Mitigation Measures

- ❖ Heavy vehicle movements, deliveries, and other transport activities will be planned during non-rush hours (e.g., early mornings, evenings, or weekends) to minimize disruptions during peak traffic times.
- ❖ The Project Proponent will engage with stakeholders to ensure that traffic plans are aligned with public needs and to facilitate better road management during the project.
- ❖ The Project Proponent will inform the public about the project timelines and potential disruptions if any.

5.2.8 Land Use Change

5.2.8.1 Impact Assessment

The Project Proponent has constructed buildings on 4.92 acres of land, resulting in a permanent alteration of land use. Clearing land for construction often involves the removal of vegetation, which can lead to habitat loss, soil erosion, and a reduction in biodiversity. The alteration of natural landscapes can disrupt local ecosystems and hydrological patterns, increasing the risk of flooding or water contamination.

Decommissioning often involves the dismantling of infrastructure, removal of debris, and reclamation of land, which can temporarily disturb the environment. However, it also provides an opportunity to restore the land to its natural state or repurpose it for other uses, such as agriculture, conservation, or urban development. Poorly managed decommissioning activities can leave behind contaminated soil, abandoned structures, which may hinder ecosystem recovery and limit future land usability. On the other hand, effective decommissioning plans that include soil rehabilitation, reforestation, and ecological restoration can mitigate long-term environmental damage and promote sustainable land use.

5.2.8.2 Mitigation Measures

- ❖ Site clearance are minimized by adopting sustainable practices, such as retaining existing vegetation wherever possible and carefully planning construction activities to avoid unnecessary removal of trees and shrubs.
- ❖ Native tree species are planted within the project area to compensate for the loss of vegetation and biodiversity due to land use changes.

- ❖ The planted trees are regularly maintained to maximize survival rates and long-term ecological benefits.
- ❖ During the decommissioning phase, a land restoration plan will be prepared and implemented, including measures such as reforestation or restoring the site to its original land use. If the land is to be repurposed for alternative uses, such as agriculture, conservation, or urban development, the decommissioning activities will be carefully managed to ensure minimal environmental impact and long-term sustainability.

5.2.9 Creation of Employment Opportunities

5.2.9.1 Impact Assessment

The construction phase generates significant employment opportunities for local communities, including skilled and unskilled labor. Job roles may include construction workers, engineers, architects, equipment operators, and project managers. Indirect employment opportunities are also created in supporting industries, such as transportation, logistics, material supply, and hospitality services. Local hiring policies can further enhance economic benefits for nearby communities, fostering socio-economic development in the region. Moreover, the necessary materials and equipment may be purchased from local shops.

The decommissioning phase provides employment opportunities for activities such as dismantling infrastructure, waste management, site restoration, and reforestation. Jobs related to environmental restoration, such as soil remediation specialists and landscaping workers, are also created during this phase. As with the construction phase, indirect employment is generated in associated industries, such as recycling, transportation, and equipment handling.

5.2.9.2 Enhancement Activities for Positive Impact

To maximize the positive impacts of employment opportunities created during the construction and decommissioning phases, the Project Proponent will implement the following enhancement activities.

- ❖ Training and skill development programs will be provided for local workers to enhance their skills.
- ❖ Hiring from local communities will be prioritized to ensure that economic benefits are distributed among the people directly impacted by the project.

5.3 Potential Impact Assessment and Mitigation Measures during Operation Phase

The following are predicted impacts during operation phase of manufacturing of garment on CMP basis;

- ❖ Air Pollution
- ❖ Noise Pollution
- ❖ Water Contamination
- ❖ Soil Contamination
- ❖ Solid Waste Generation
- ❖ Odor

- ❖ Occupational Health and Safety
- ❖ Traffic Congestion
- ❖ Creation of Employment Opportunities

The impact evaluation was described in Table 5.4.

Table 5.4 Impact Evaluation during Operation Phase

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude/Severity	Probability	Significance
1.	Air Pollution (Negative)	<ul style="list-style-type: none"> ❖ Boilers used from steam production, which utilize fuels like rice husk and garment cutting waste, produce emissions during combustion. These emissions include particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO₂). ❖ Diesel generators used for backup power supply contribute to emissions of NO_x, CO, volatile organic compounds (VOCs), PM, and greenhouse gases like CO₂. ❖ Transportation vehicles, including trucks used to deliver raw materials and distributing finished products, produce NO_x, CO, PM, and CO₂ through the burning of diesel. 	4	2	2	3	Low (24)
2.	Noise Pollution (Negative)	<ul style="list-style-type: none"> ❖ Generation from vehicular movement ❖ Operation of DG set, boilers, sewing machine and pumps 	4	2	2	3	Low (24)
3.	Water Contamination (Negative)	<ul style="list-style-type: none"> ❖ Wastewater from utility such as kitchen, domestic wastewater, toilet and septic tanks ❖ Disposal of oil used for maintenance of machines ❖ Uncontrolled fiber scrap can cause high level of total suspended solids content in wastewater 	4	2	2	4	Medium (32)
4.	Soil Pollution (Negative)	<ul style="list-style-type: none"> ❖ Improper disposal of solid waste including hazardous waste and non-hazardous waste ❖ Leakage of oil from vehicle and accidental oil spillage 	4	1	2	3	Low (21)
5.	Solid Waste Disposal (Negative)	<ul style="list-style-type: none"> ❖ Non-hazardous waste including food residues, plastics, and fabric cutting scraps ❖ Hazardous waste such as fluorescent light bulbs, batteries, and used oil ❖ Sharp waste including needles and knives ❖ Small amount of E-waste such as damaged electronic devices ❖ Ash from boiler fuel 	4	2	3	4	Medium (36)

No.	Impact and Nature	Activities and Aspects	Duration	Extent	Magnitude/Severity	Probability	Significance
6.	Odor (Negative)	<ul style="list-style-type: none"> ❖ Odor from kitchen and boiler ❖ Odor nuisance from toilets, drainage channels, temporary waste disposal site and septic tank 	4	1	2	3	Low (21)
7.	Occupational Health and Safety (Negative)	<ul style="list-style-type: none"> ❖ Physical injuries can cause from sharp tools like scissors, needles, and knives and prolonged sitting or standing during sewing and cutting processes. ❖ Noise from sewing machines and other equipment can lead to auditory discomfort. ❖ Workers may experience heat exposure due to hot weather. 	4	1	2	3	Low (21)
8.	Traffic Congestion	<ul style="list-style-type: none"> ❖ Traffic congestion may occur around the garment factory due to increased movement of workers, delivery vehicles, and raw material transportation during peak hours. ❖ The influx of vehicles, including trucks, employee transport, and visitor cars, can lead to delays, reduced accessibility, and potential conflicts with local traffic. 	4	2	2	3	24
9.	Creation of Employment Opportunities (Positive)	<ul style="list-style-type: none"> ❖ Job opportunities for local people according to their skill and abilities ❖ Improve their skills by getting trainings from experienced managers, experts and technicians ❖ Job opportunities for regional will be boosted. 	5	3	3	5	Medium (55)

5.3.1 Air Pollution

5.3.1.1 Impact Assessment

During factory operation, the manufacturing processes themselves do not emit significant air pollutants. However, the emissions can arise from the supporting facilities such as boilers, generators, and transportation vehicles. Boilers used from steam production, which utilize fuels like rice husk and garment cutting waste, produce emissions during combustion. These emissions include particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO₂). Similarly, diesel generators used for backup power supply contribute to emissions of NO_x, CO, volatile organic compounds (VOCs), PM, and greenhouse gases like CO₂. Additionally, transportation vehicles, including trucks used to deliver raw materials and distributing finished products, produce NO_x, CO, PM, and CO₂ through the burning of diesel, and dust. Moreover, open burning of waste generates gaseous emissions, including carbon dioxide (CO₂), carbon monoxide (CO), methane (CH₄), and other harmful pollutants such as particulate matter (PM), volatile organic compounds (VOCs), and toxic substances like dioxins and furans.

5.3.1.2 Mitigation Measures

- ❖ To mitigate particulate matter emissions from boilers, cyclone separator and smoke box are installed to capture solid particles before the smoke is emitted into the environment through the chimney.
- ❖ Adequate stack height is installed for both boilers to ensure effective dispersion of pollutants and it helps minimize the impact of emissions on surrounding environments and communities by ensuring pollutants are dispersed at a safe distance from the ground level.
- ❖ Generators and vehicles will be regularly maintained to ensure efficient fuel combustion and reduce emissions of gaseous pollutants.
- ❖ To reduce generator emissions, solar panels have been installed at the factory as a renewable energy source.
- ❖ Open burning of waste will be strictly prohibited within the factory premises.
- ❖ Water will be sprayed in areas with significant dust emissions to effectively suppress and minimize airborne particles.

5.3.2 Noise Pollution

5.3.2.1 Impact Assessment

During operation phase, noise pollution arises from various sources, including vehicular movement and the operation of equipment such as diesel generator sets, boilers, sewing machines, and pumps. Prolonged exposure to such noise can lead to disrupted communication, and reduced productivity.

5.3.2.2 Mitigation Measures

- ❖ Soundproof enclosures around DG sets are installed to reduce sound propagation.

- ❖ To reduce noise from the generator and promote sustainability, solar panels have been installed at the factory to provide a renewable energy alternative.
- ❖ Vehicles and equipment will be regularly maintained to minimize noise from faulty components.
- ❖ Earplugs will be provided for workers if necessary.
- ❖ Around the factory premise, numerous trees have been planted to create a buffer zone for noise reduction. This natural barrier helps to absorb and dissipate sound waves, reducing the impact of noise pollution on the surrounding environment and nearby communities.

5.3.3 Water Contamination

5.3.3.1 Impact Assessment

The operation processes do not include washing or dyeing processes. The factory mostly generates wastewater from various utility sources such as kitchens, domestic activities, blowdown from boilers, toilets, and septic tanks, which can contribute to nearby waterbodies contamination if not properly managed. Improper disposal of oil used for machine maintenance poses another significant risk, as it can seep into nearby water bodies. Additionally, uncontrolled disposal of fiber scraps can increase the total suspended solids (TSS) content in wastewater, clogging drainage systems and reducing water quality.

5.3.3.2 Mitigation Measures

- ❖ Proper drainage system was installed in the factory compound and drains will be cleaned regularly in order to prevent clogging the drainage system.
- ❖ Domestic wastewater and boiler blowdown water are discharged through drains and natural sedimentation pond.
- ❖ Used oil will be collected and disposed of through authorized hazardous waste handlers to avoid seepage into the environment.
- ❖ Periodic water quality monitoring including boiler blowdown water, wastewater, and groundwater, will be conducted.
- ❖ If necessary, the effective wastewater treatment system will be installed.

5.3.4 Soil Contamination

5.3.4.1 Impact Assessment

Improper disposal of solid waste, such as fiber scraps, packaging materials, ash from boilers, food waste, hazardous waste and other non-biodegradable items, can degrade soil quality by altering its physical and chemical properties. This may lead to reduced soil fertility and contamination. Leakage of oil from vehicles and accidental oil spills can introduce toxic hydrocarbons into the soil, resulting in long-term contamination.

5.3.4.2 Mitigation Measures

To protect soil quality, the factory will establish a solid waste management system that includes segregation, recycling, and disposal of waste in line with local laws and regulations. Regular maintenance of vehicles and machinery will be conducted to prevent oil

leaks. Periodic soil quality monitoring will be conducted to detect and address any contamination promptly. Additionally, hazardous waste such as fluorescent light bulb, used batteries and spent oil will be stored separately with other waste and disposed in line with local laws and regulations.

5.3.5 Solid Waste Generation

5.3.5.1 Impact Assessment

Small amount of hazardous waste such as fluorescent light bulbs, batteries, and used oil will be generated from the facilities of the factory. Improper handling of these materials can pose risks to ecosystem and human health due to the presence of toxic substances.

Non-hazardous waste, including food residues, plastic, ash from boiler fuel, and fabric cutting scraps, will also be generated throughout the operation phase. While less toxic, improper management of these wastes can still lead to environmental degradation, including soil and water contamination. Additionally, sharp waste such as needles, knives, pose a risk of injury to workers and waste handlers if not disposed of safely. Moreover, small quantity of E-waste, including damaged or expired electronic devices and appliances, will be generated. Improper disposal of e-waste can lead to the release of harmful chemicals and heavy metals into the environment, contributing to pollution and resource wastage.

5.3.5.2 Mitigation Measures

- ❖ Non-hazardous waste, including food residues, plastics, and fabric cutting scraps, will be collected separately using designated waste bins for each type of waste.
- ❖ Fabric cutting scraps are reused as additional fuel for boilers, while other non-hazardous waste will be temporarily stored at a designated solid waste disposal site. Ash from boiler fuel will be disposed of in a landfill within the project site.
- ❖ Hazardous waste, such as fluorescent light bulbs, batteries, and used oil, will be collected separately and stored in a secure hazardous waste storage area until disposal through an authorized hazardous waste handler.
- ❖ Sharp waste, including needles and knives, will be collected in dedicated containers to ensure safe handling and disposed of responsibly.
- ❖ Small number of E-wastes, such as damaged electronic devices, will be disposed in compliance with local laws and regulations.
- ❖ The amount and type of waste generated will be regularly monitored to maintain the capacity of temporary waste storage area.

5.3.6 Odor

5.3.6.1 Impact Assessment

Odor emissions from kitchens and boilers can generate in the surrounding areas. Additionally, unpleasant odor can generate from toilets, drainage channels, the temporary waste disposal site, and septic tanks may further impact the well-being and productivity of workers.

5.3.6.2 Mitigation Measures

- ❖ Ventilation system will be ensured in kitchens and boilers to minimize odor emission.
- ❖ Regular cleaning and maintenance of toilets and septic tanks are carried out to prevent odor build-up.
- ❖ Drainage systems are also regularly maintained to avoid blockages and the accumulation of organic matter that could lead to odors.
- ❖ An effective waste management system will be implemented at the factory, ensuring proper handling and disposal of waste to minimize odor nuisances.
- ❖ Staff will be educated on proper waste disposal and cleanliness to reduce potential sources of odor.
- ❖ Personal Protective Equipment (PPE), such as masks, will be provided to workers operating near boilers to enhance their safety.

5.3.7 Occupational Health and Safety

5.3.7.1 Impact Assessment

During operation phase, the following potential impacts on occupational health and safety can be occurred.

- ❖ Physical injuries can cause from sharp tools like scissors, needles, and knives and prolonged sitting or standing during sewing and cutting processes.
- ❖ Noise from sewing machines and other equipment can lead to auditory discomfort.
- ❖ Workers may experience heat exposure due to hot weather.

5.3.7.2 Mitigation Measures

- ❖ First aid kit and a clinic staffed with a nurse are provided to ensure immediate medical assistance for the workers.
- ❖ Proper ventilation systems are installed to reduce heat and minimize dust particles in the workspace.
- ❖ PPE, such as gloves, masks, and earplugs, is provided for the workers based on their specific needs and work environments.
- ❖ Danger signboards are displayed at key locations to warn workers and visitors of potential hazards.

5.3.8 Traffic Congestion

5.3.8.1 Impact Assessment

Traffic congestion may occur around the garment factory due to increased movement of workers, delivery vehicles, and raw material transportation during peak hours. The influx of vehicles, including trucks, employee transport, and visitor cars, can lead to delays, reduced accessibility, and potential conflicts with local traffic.

5.3.8.2 Mitigation Measures

- ❖ Adequate on-site parking will be provided to prevent vehicles from blocking public roads.

- ❖ Deliveries and pickups will be scheduled during off-peak hours to minimize congestion.
- ❖ Traffic conditions will be regularly monitored around the factory and make adjustments to traffic management strategies as needed.

5.3.9 Creation of Employment Opportunities

5.3.9.1 Impact Assessment

The operation of the garment factory creates significant employment opportunities for local and regional communities. Local residents will benefit from jobs aligned with their skills and abilities, reducing unemployment and improving their standard of living. Additionally, the factory will offer training programs conducted by experienced managers, experts, and technicians, enhancing the skills and competencies of employees. This will enable workers to take on more advanced roles, further contributing to their career development. The boost in regional employment will also support economic growth, reducing migration pressures and fostering community stability.

5.3.9.2 Enhancement Activities for Positive Impact

To maximize the positive impacts of employment opportunities created during the operation phase, the Project Proponent will implement the following enhancement activities.

- ❖ Regular training sessions and workshops will be organized to upgrade the skills of employees, ensuring they can adapt to evolving industry needs.
- ❖ Hiring from local communities will be prioritize to promote inclusivity and equitable access to job opportunities.
- ❖ Awareness campaigns will be conducted to inform local communities about available job opportunities and encourage applications.
- ❖ A safe, inclusive, and supportive workplace culture will be provided to maximize employee engagement and productivity.

6.0 ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

6.1 Environmental Management and Monitoring Sub-Plans

The EMP for Garment factory has been prepared to address potential issues based upon discussion with factory management, workers, local community's view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. The following sub-management and monitoring plans are described in this Chapter.

- ❖ Air Pollution Management and Monitoring Sub-Plans
- ❖ Noise Pollution Management and Monitoring Sub-Plans
- ❖ Water Contamination Management and Monitoring Sub-Plans
- ❖ Soil Contamination Management and Monitoring Sub-Plans
- ❖ Solid Waste Management and Monitoring Sub-Plans
- ❖ Occupational Health and Safety Management and Monitoring Sub-Plans
- ❖ Fire Hazards Management Plan and Monitoring Sub-Plans
- ❖ Emergency Response & Disaster Management Plan

6.2 Air Pollution Management and Monitoring Sub-Plans

6.1.1 Objectives

The main objectives of air pollution management and monitoring are to minimize the adverse impact to air quality caused by stack gas emission from generators, boilers and vehicles and to comply with relevant government laws and regulations.

6.1.2 Legal Requirements

Air pollution management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with National Environmental Quality Emission Guidelines (NEQEG, 2015)
- ❖ To comply with the Boiler Law (2015)
- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with Environmental Conservation Law (2012) and Environmental Conservation Rules (2014).

6.1.3 Implementation Schedules

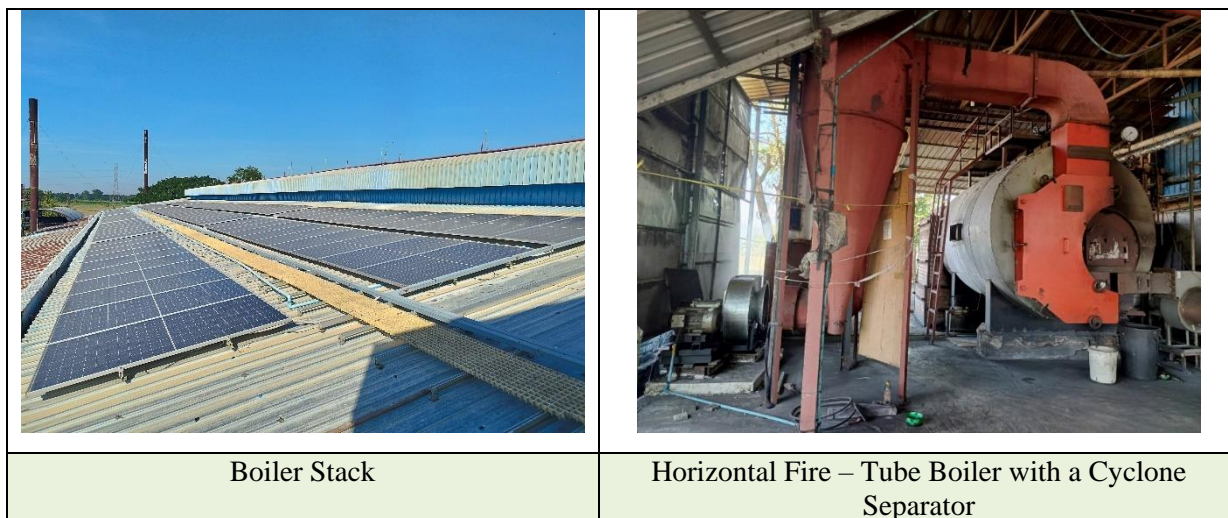
Air pollution management measures will be implemented throughout the entire lifespan of the factory to minimize emissions and maintain air quality. Regular air pollution monitoring will be conducted twice a year during the operational phase and once during the decommissioning phase to ensure compliance with environmental standards and address any arising issues promptly.

6.1.4 Air Pollution Management Actions

During operation phase, the following air pollution management actions will be performed.

- ❖ To mitigate particulate matter emissions from boilers, cyclone separator and smoke box are installed to capture solid particles before the smoke is emitted into the environment through the chimney.
- ❖ Adequate stack height is installed for both boilers to ensure effective dispersion of pollutants and it helps minimize the impact of emissions on surrounding environments and communities by ensuring pollutants are dispersed at a safe distance from the ground level.
- ❖ Generators and vehicles will be regularly maintained to ensure efficient fuel combustion and reduce emissions of gaseous pollutants.
- ❖ To reduce generator emissions, solar panels have been installed at the factory as a renewable energy source.
- ❖ Open burning of waste will be strictly prohibited within the factory premises.
- ❖ Water will be sprayed in areas with significant dust emissions to effectively suppress and minimize airborne particles.

The stack, cyclone and smoke box installed at the boilers are shown in Figure 6.1.



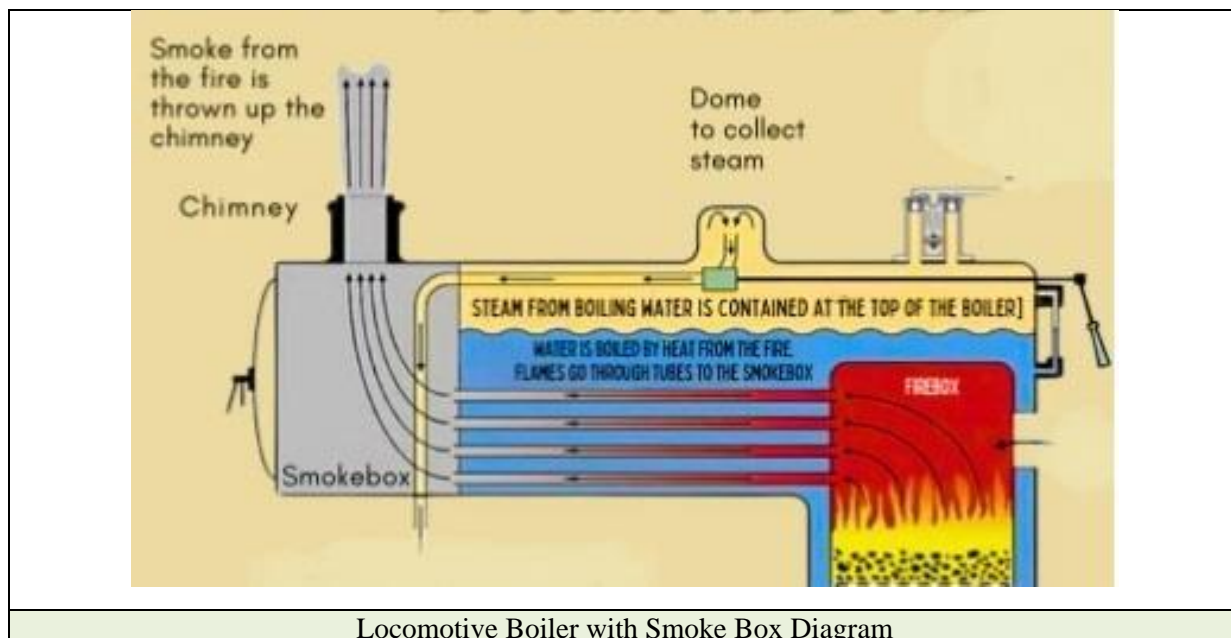


Figure 6.1 Boilers Stack and Smoke Capture System

During decommissioning phase, the following management actions will be performed.

- ❖ Water will be regularly sprayed on unpaved roads, construction sites, and material stockpiles to suppress dust generation.
- ❖ Soil and debris will be covered during storage and transport to prevent particles from becoming airborne.
- ❖ Vehicles and equipment will be regularly maintained to ensure efficient fuel combustion and reduce emissions of gaseous pollutants, such as NO_x and CO.

6.1.5 Air Pollution Monitoring Sub-Plan

Indoor air quality, ambient air quality and stack emission will be monitored twice a year during operation phase. Only ambient air quality will be measured one time during decommission phase. The coordinates of ambient air quality monitoring location are 18°4'33.53"N and 95°43'29.17"E, as shown in Figure 6.2. The ambient and workplace air quality parameters are SO₂, NO₂, PM_{2.5}, PM₁₀ and O₃. Moreover, the parameters of stack emission are O₂, CO, CO₂, NO and SO₂. The coordinates of air quality monitoring are as follows;

- ❖ Ambient Air Quality Monitoring Location: 18°4'33.53"N and 95°43'29.17"E
- ❖ Workplace Air Quality: Monitoring Location: 18° 4'35.29"N and 95°43'27.61"E
- ❖ Boiler Stack Emission Monitoring Location: 18° 4' 34.15"N and 95°43'26.99"E
- ❖ Generator Stack Emission Monitoring Location: 18° 4' 32.71"N and 95°43'27.56"E

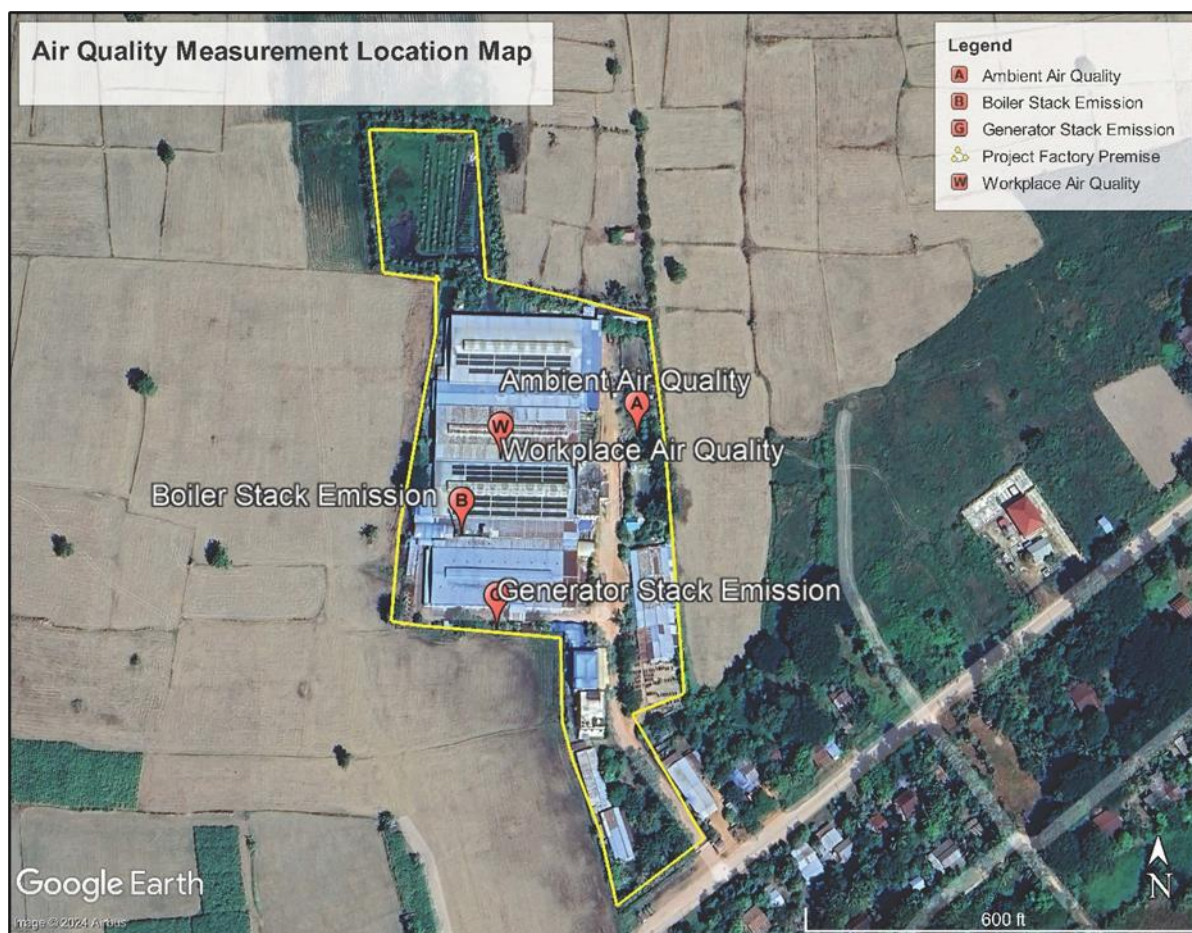


Figure 6.2 Air Quality Monitoring Locations

6.1.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of air pollution management and monitoring sub-plans are shown in Table 6.1.

Table 6.1 Projected Budgets and Responsibilities for Air Quality

Projected budgets for air pollution management actions	❖ Approximately 500,000 kyats/ year
Projected budgets for air quality monitoring plan per one time	<ul style="list-style-type: none"> ❖ 900,000 MMK (Ambient Air Quality) ❖ 400,000 MMK (Boiler Stack emission) ❖ 400,000 MMK (Generator Stack emission) ❖ 500,000 MMK (Workplace Air Quality) ❖ 2,200,000 MMK (Total cost per one time during operation phase) ❖ 900,000 MMK (total cost during decommissioning phase)
Responsibilities	<ul style="list-style-type: none"> ❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned air pollution management action plans ❖ Factory managing director will make a contract with a third-party organization for air quality monitoring twice a year, and decide to upgrade air quality control system if necessary.

6.2 Noise Management and Monitoring Sub-Plans

6.2.1 Objectives

The main objectives of air pollution management and monitoring are to avoid nuisance noise to nearby residents generated from generator & other vibrating machineries and to comply with Noise Standard described in NEQEG (2015).

6.2.2 Legal Requirements

Noise pollution management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with National Environmental Quality Emission Guidelines (NEQEG, 2015)
- ❖ To comply with EIA Procedure (2015)

6.2.3 Implementation Schedules

Noise pollution management measures will be implemented throughout the entire lifespan of the factory to minimize noise levels. Regular noise levels monitoring will be conducted twice a year during the operational phase and once during the decommissioning phase to ensure compliance with noise standards of NEQEG (2015).

6.2.4 Noise Pollution Management Actions

During operation phase, the following noise pollution management actions will be performed.

- ❖ Soundproof enclosures around DG sets are installed to reduce sound propagation.
- ❖ To reduce noise from the generator and promote sustainability, solar panels have been installed at the factory to provide a renewable energy alternative.
- ❖ Vehicles and equipment will be regularly maintained to minimize noise from faulty components.
- ❖ Earplugs will be provided for workers if necessary.
- ❖ Around the factory premise, numerous trees have been planted to create a buffer zone for noise reduction. This natural barrier helps to absorb and dissipate sound waves, reducing the impact of noise pollution on the surrounding environment and nearby communities. The list of the tree is described in Section 6.13.

During decommissioning phase, the following noise pollution management actions will be conducted.

- ❖ Noisy operations will be limited to daytime hours to reduce disturbances during sensitive periods.
- ❖ Vehicles, machinery and equipment will be regularly maintained to prevent excess noise due to malfunctioning components.
- ❖ Nearby communities will be notified about upcoming noisy activities and expected timelines.
- ❖ Regular noise level monitoring will be conducted to ensure compliance with regulatory standards.

6.2.5 Noise Pollution Monitoring Sub-Plan

Noise levels in the workplace and the surrounding environment will be monitored twice a year during the operation phase and once during the decommissioning phase. The coordinates and location for noise level monitoring are the same as those for ambient air quality monitoring, as both measurements are conducted at the same location. The workplace noise levels monitoring locations are shown in below figure.



6.2.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of noise pollution management and monitoring sub-plans are shown in Table 6.2.

Table 6.2 Projected Budgets and Responsibilities for Noise Levels

Projected budgets for noise pollution management actions	❖ Approximately 300,000 kyats/ year
Projected budgets for noise quality monitoring plan per one time	<ul style="list-style-type: none"> ❖ 100,000 MMK (Ambient Noise Level) ❖ 200,000 MMK (Workplace Noise Levels) ❖ 300,000 MMK (Total cost per one time during operation phase) ❖ 100,000 MMK (Total cost of ambient noise level during decommissioning phase)
Responsibilities	<ul style="list-style-type: none"> ❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned noise pollution management action plans ❖ Factory managing director will make a contract with a third-party organization for noise level monitoring twice a year during operation phase, and decide to upgrade noise pollution if necessary.

6.3 Water Contamination Management and Monitoring Sub-Plans

6.3.1 Objectives

The main objectives of water contamination management and monitoring are to minimize adverse impacts on water quality of nearby waterbodies caused by project activities such as domestic wastewater discharge and runoff, and to ensure compliance with relevant government laws and regulations.

6.3.2 Legal Requirements

Water contamination management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with National Environmental Quality Emission Guidelines (NEQEG, 2015)
- ❖ To comply with National Drinking Water Quality Standards (2019)
- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with Environmental Conservation Law (2012) and Environmental Conservation Rules (2014).
- ❖ To comply with Conservation of Water Resource and River Law (2006) and Conservation of Water Resource and River Rules (2013)
- ❖ To comply with Underground Water Act (1930)

6.3.3 Implementation Schedules

Water contamination management measures will be implemented throughout the entire lifespan of the factory to minimize water quality degradation of nearby waterbodies. Regular water quality monitoring will be conducted twice a year during the operational phase and once during the decommissioning phase to ensure compliance with effluent standards of NEQEG (2015).

6.3.4 Water Contamination Management Actions

During operation phase, the following water contamination management actions will be performed.

- ❖ Proper drainage system was installed in the factory compound and drains will be cleaned regularly in order to prevent clogging the drainage system.
- ❖ Domestic wastewater and boiler blowdown water are discharged through drains and natural sedimentation pond.
- ❖ Used oil will be collected and disposed of through authorized hazardous waste handlers to avoid seepage into the environment.
- ❖ Periodic water quality monitoring including boiler blowdown water, wastewater, and groundwater, will be conducted.
- ❖ The drain and natural sedimentation pond at the factory are shown in Figure 6.3



Figure 6.3 Drain and Natural Sedimentation Pond

During decommissioning phase, the following water contamination management actions will be conducted.

- ❖ Fuels will be stored in designated areas and checked regularly.
- ❖ Portable sanitation systems will be provided and maintained regularly for worker facilities.
- ❖ Proper drainage system will be constructed and drains will be cleaned to ensure effective drainage.
- ❖ Wastewater from washing bins and workers' kitchens will be treated with a sedimentation pond.
- ❖ Construction wastes will be disposed properly.

6.3.5 Water Quality Monitoring Sub-Plan

Effluent discharge and groundwater qualities will be monitored twice a year during operation phase and one time during decommission phase. The coordinates of water quality monitoring location are shown in Table 6.3 and Figure 6.4. The wastewater and boiler blowdown parameters are pH, Temperature, Colour, TSS, Ammonia, BOD₅, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria. In addition, the parameters for tube well quality measurement are pH, Colour, Turbidity, TDS, Hardness, Chloride, Nitrite, Arsenic, Iron, Lead, Manganese, Sulfate and Total coliform count.

Table 6.3 Locations of Water Sampling Points

No.	Sampling Points	Description	Geographic Information
1.	WSP-1	Tube Well Water	18° 4'32.81"N 95°43'27.23"E
2.	WSP-2	Wastewater Outlet	18° 4'37.96"N 95°43'26.76"E
3.	WSP-3	Boiler Blowdown Water	18° 4'34.45"N 95°43'26.33"E



Figure 6.4 Water Sampling Locations

6.3.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of water contamination management and monitoring sub-plans are shown in Table 6.4.

Table 6.4 Projected Budgets and Responsibilities for Water Contamination

Projected budgets for water contamination management actions	❖ Approximately 300,000 kyats/ year
Projected budgets for water contamination monitoring plan per one time	<ul style="list-style-type: none"> ❖ 300,000 MMK (Wastewater Quality) ❖ 250,000 MMK (Tube Well Water Quality) ❖ 300,000 MMK (Boiler Blowdown water Quality) ❖ 850,000 MMK (Total cost per one time during operation phase) ❖ 600,000 MMK (Total cost of water quality monitoring during decommissioning phase)
Responsibilities	<ul style="list-style-type: none"> ❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned water contamination management action plans ❖ Factory managing director will make a contract with a third-party organization for water quality monitoring twice a year during operation phase.

6.4 Soil Contamination Management and Monitoring Sub-Plans

6.4.1 Objectives

The main objectives of soil contamination management and monitoring are to minimize adverse impacts on soil quality caused by spills, leaks, or improper disposal of used oils, used batteries, fluorescent light bulbs, and other wastes, and to ensure compliance with relevant government laws and regulations.

6.4.2 Legal Requirements

Soil contamination management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with Environmental Conservation Law (2012) and Environmental Conservation Rules (2014).

6.4.3 Implementation Schedules

Soil contamination management measures will be implemented throughout the entire lifespan of the factory to minimize soil quality degradation. Regular soil quality monitoring will be conducted twice a year during the operational phase and once during the decommissioning phase.

6.4.4 Soil Contamination Management Action Sub-Plans

To protect soil quality, the factory will establish a solid waste management system that includes segregation, recycling, and disposal of waste in line with local laws and regulations. Regular maintenance of vehicles and machinery will be conducted to prevent oil leaks. Periodic soil quality monitoring will be conducted to detect and address any contamination promptly. Additionally, hazardous waste such as fluorescent light bulb, used batteries and spent oil will be stored separately with other waste and disposed in line with local laws and regulations.

6.4.5 Soil Quality Monitoring Sub-Plans

Soil quality will be monitored twice a year during operation phase and one time during decommission phase. The coordinates of soil quality monitoring location are 18° 4' 37.61" N and 95° 43' 26.14" E, as shown in Figure 6.5. The soil quality measurement parameters are Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH, Total Alkalinity and Total Iron.



Figure 6.5 Soil Sampling Location

6.4.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of soil contamination management and monitoring sub-plans are shown in Table 6.5.

Table 6.5 Projected Budgets and Responsibilities for Soil Contamination

Projected budgets for soil contamination management actions	❖ Include in Solid Waste Management System
Projected budgets for water contamination monitoring plan per one time	❖ 420,000 MMK (Total cost per one time during operation phase) ❖ 420,000 MMK (Total cost during decommissioning phase)
Responsibilities	❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned soil contamination management action plans ❖ Factory managing director will make a contract with a third-party organization for soil quality monitoring twice a year during operation phase.

6.5 Solid Waste Management and Monitoring Sub-Plans

6.5.1 Objectives

The main objectives of solid waste management and monitoring are to minimize waste generation by developing strategies for managing and disposing of all waste in a sustainable manner and to comply with government waste management policy.

6.5.2 Legal Requirements

Solid waste management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with Environmental Conservation Law (2012) and Environmental Conservation Rules (2014).
- ❖ Bago City Development Law (2016) and Bago City Development Rule (2014)

6.5.3 Implementation Schedules

Solid waste management measures will be implemented throughout the entire lifespan of the factory to minimize solid waste generation and manage the solid waste effectively. The amount, types and management of solid waste monitoring report will be submitted twice a year during the operational phase and once during the decommissioning phase to ECD.

6.5.4 Solid Waste Management Action Sub-Plans

During operation phase, the following solid waste management actions will be performed.

- ❖ Non-hazardous waste, including food residues, plastics, and fabric cutting scraps, will be collected separately using designated waste bins for each type of waste.
- ❖ Fabric cutting scraps are reused as additional fuel for boilers, while other non-hazardous waste will be temporarily stored at a designated solid waste disposal site. Ash from boiler fuel will be disposed of in a landfill within the project site.
- ❖ Hazardous waste, such as fluorescent light bulbs, batteries, and used oil, will be collected separately and stored in a secure hazardous waste storage area until disposal through an authorized hazardous waste handler.
- ❖ Sharp waste, including needles and knives, will be collected in dedicated containers to ensure safe handling and disposed of responsibly.
- ❖ Small number of E-wastes, such as damaged electronic devices, will be disposed in compliance with local laws and regulations.
- ❖ The amount and type of waste generated will be regularly monitored to maintain the capacity of temporary waste storage area.
- ❖ The solid waste collection bins are shown in Figure 6.6.





Figure 6.6 Solid Waste Collection Bins

During decommissioning phase, the following solid waste management actions will be performed.

- ❖ Fuels will be stored in designated areas and checked regularly in order to prevent leakage of fuel and oil to the soil.
- ❖ Proper solid waste management system for various types of waste including hazardous waste will be implemented in line with local laws and regulations during construction and decommissioning phases.
- ❖ Regular inspection of temporary waste storage areas will be conducted to prevent leachate leakage.
- ❖ Domestic wastewater will be discharged properly by installing effective drainage system.

6.5.5 Solid Waste Monitoring Sub-Plans

The amount and types of solid waste will be monitored monthly during operation phase and decommission phase. This regular monitoring will help ensure proper waste management practices are implemented and environmental compliance is maintained.

6.5.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of solid waste management and monitoring sub-plans are shown in Table 6.6.

Table 6.6 Projected Budgets and Responsibilities for Solid Waste Management

Projected budgets for solid waste management actions	❖ Approximately 300,000 MMK/year
Projected budgets for solid waste monitoring plan	❖ Record Keeping Cost 120,000 MMK/year
Responsibilities	<ul style="list-style-type: none"> ❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned solid waste management action plans

6.6 Occupational Health and Safety Management and Monitoring Sub-Plans

6.6.1 Objectives

The objectives of Occupational Health and Safety Management and Monitoring Sub-Plans are as follows;

- ❖ To ensure the health, safety, and well-being of all employees and contractors involved in the project.
- ❖ To identify, assess, and mitigate occupational hazards and risks associated with project activities.
- ❖ To comply with relevant government regulations, industry standards, and international best practices for workplace safety.
- ❖ To promote a safety-first culture through regular training, awareness programs, and emergency preparedness drills.
- ❖ To continuously monitor and evaluate safety performance to identify areas for improvement and prevent accidents or incidents.

6.6.2 Legal Requirements

Occupational Health and Safety management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with Myanmar Public Health Law (1972)
- ❖ To comply with Occupational Safety and Health Law (2019)
- ❖ To comply with the Road Safety and Motor Vehicle Management Law (2020)
- ❖ To comply with the Road Safety and Motor Vehicle Management Rules (2022)

6.6.3 Implementation Schedules





Occupational health and safety management measures will be implemented throughout the entire lifespan of the factory to ensure the safety and well-being of all employees and contractors. Regular monitoring and inspections of workplace safety conditions will be conducted to identify and mitigate potential hazards.

6.6.4 Occupational Health and Safety Management Action Sub-Plans

During operation phase, the following occupational health and safety management actions will be performed.

- ❖ First aid kit and a clinic staffed with a nurse are provided to ensure immediate medical assistance for the workers. The community health worker training completion certificate is shown in *Appendix I*.
- ❖ Proper ventilation systems such as industrial exhaust fans and air conditioners or air coolers are installed to reduce heat and minimize dust particles in the workspace.
- ❖ PPE, such as gloves, masks, and earplugs, is provided for the workers based on their specific needs and work environments.

- ❖ Danger signboards are displayed at key locations to warn workers and visitors of potential hazards. Incidents/ accidents cases will be recorded and reported monthly to Managing Director.
- ❖ The photos of occupational health and safety management actions during operation phase are shown in Figure 6.7.

	
<p>Factory Clinic</p>	<p>First Aid Kit</p>
	
<p>Air cooler at the meeting hall</p>	<p>Industrial Exhaust/Ventilation Fan</p>
	
<p>Air Conditioner at the Office Building</p>	<p>Rooftop Fan</p>

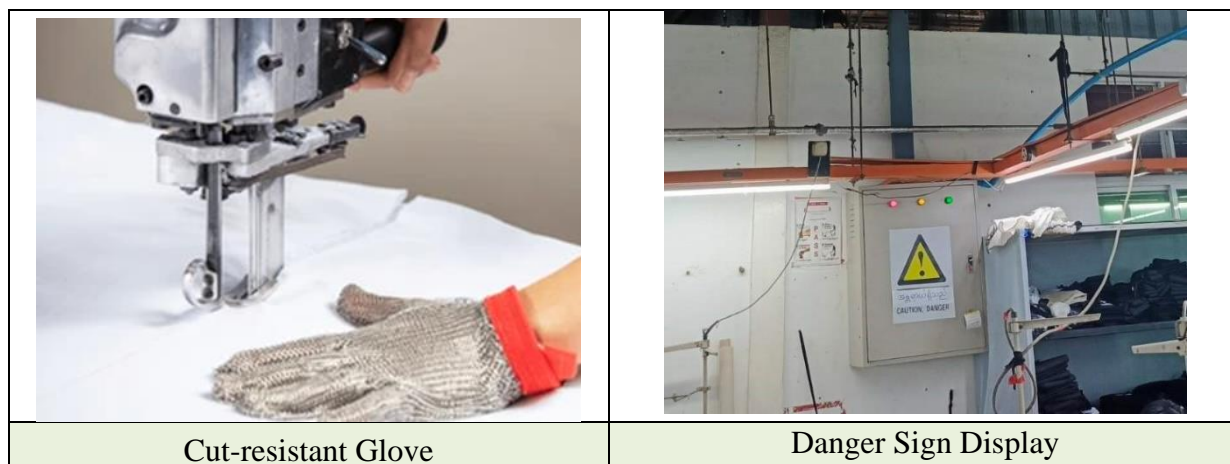


Figure 6.7 Occupational Health and Safety Management Actions

During decommissioning phase, the following occupational health and safety management actions will be performed.

- ❖ A safety policy will be established by the Project Proponent or construction contractor for implementation at the construction site.
- ❖ A safety plan will be developed by the Project Proponent or contractor to ensure the protection of construction workers.
- ❖ Danger signs will be displayed at the slippery floors, wet muddy surface, areas with ongoing excavation to alert and caution the workers.
- ❖ Personal Protective Equipment (PPE) such as safety helmets, face masks, gloves, safety glasses, and earplugs will be provided to the workers based on their nature of work.
- ❖ First aid kits will be readily available at the construction site.
- ❖ Safety awareness training will be conducted to educate workers on safety guidelines and practices.
- ❖ Safety supervisors will be assigned to monitor and enforce safety protocols on-site.
- ❖ Incentive programs will reward workers who comply with safety practices.
- ❖ Penalties will be imposed on workers who fail to adhere to safety procedures.
- ❖ A health and safety matrix will be prepared to track and manage safety performance effectively.
- ❖ Incidents/accidents will be recorded and monitor at the construction site.

6.6.5 Occupational Health and Safety Monitoring Sub-Plans

The occupational health and safety of workers will be monitored regularly during both the operational and decommissioning phases. This includes periodic assessments of workplace hazards and adherence to safety protocols. Regular monitoring will ensure compliance with occupational health and safety standards, minimize workplace accidents, and promote the well-being of all workers. Monitoring reports will be prepared and submitted to Managing Director of the factory for review, ensuring that identified issues are addressed promptly and necessary corrective actions are implemented to maintain a safe and healthy work environment.

6.6.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of occupational health and safety management and monitoring sub-plans are shown in Table 6.7.

Table 6.7 Projected Budgets and Responsibilities for Occupational Health and Safety Management

Projected budgets for occupational health and safety management actions	❖ Approximately 500,000 MMK/year
Projected budgets for occupational health and safety monitoring plan	❖ Record Keeping Cost 120,000 MMK/year
Responsibilities	<ul style="list-style-type: none"> ❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned occupational health and safety management action plans

6.7 Fire Hazards Management and Monitoring Sub-Plans

6.7.1 Objectives

The main objectives of fire hazards management and monitoring are to minimize the risk of fire incidents caused by project activities through proper safety measures, regular inspections, and maintenance of fire safety equipment, and to ensure compliance with relevant government laws and regulations to safeguard lives, property, and the environment.

6.7.2 Legal Requirements

Fire hazards management and monitoring are required to comply with the following laws and regulations.

- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with the Myanmar Fire Brigade Law (2015)
- ❖ To comply with the Myanmar Fire Brigade Rules (2015)
- ❖ To comply with Occupational Safety and Health Law (2019)

6.7.3 Implementation Schedules

Fire hazard management measures will be implemented throughout the entire lifespan of the factory to ensure the safety of employees, contractors, and property. Monitoring, inspections, and maintenance of fire safety equipment and systems will be conducted annually, in collaboration with the local fire service department, to promptly identify and address potential fire risks. Fire safety training and emergency preparedness drills will also be carried out to enhance response capabilities.

6.7.4 Fire Hazards Management Action Sub-Plans

6.7.4.1 Firefighting System

The factory has planned, designed and constructed fixed firefighting and emergency fire management installations systematically. The adequate number of fire extinguishers, hose reels, and fire alarm are installed in all buildings and 15,000 gallons of water is stored for firefighting purpose. Emergency exit way sign is also designed and shown clearly. Moreover, it has set up emergency fire management organization and process for emergency firefighting system has been developed. The firefighting equipment list are shown in Table 6.8 and the photos of firefighting equipment and firefighting system installation are shown in Figure 6.8. The fire inspection certificates issued by Aye Mya Tharyar Village’s firefighting service department is shown in *Appendix G*.

Table 6.8 Firefighting Equipment List

Firefighting Equipment	Description	Quantity
Fire extinguisher	DCP 3kg	60
	DCP 35 kg	2
	DCP 35 kg	3
Fire Hose Reel	3 inches water pipe	8
Fire Hydrant	-	25
Fire Sprinkler	Outside the factory	15
	Inside the factory	Planning to install



Fire Extinguisher



Exit Way



Fire Pump System



Fire Hose and Fire Hydrant



Fire Extinguisher and Fire Hose Reel



Fire Alarm



Fire Exit



Fire Alarm



Firefighting Pool

Figure 6.8 Emergency Firefighting System and Exit Way

6.7.4.2 Fire/Explosion Response

All attempts to respond to an emergency should at all times ensure personal safety and only be attempted if within the capabilities of the individual. Upon discovering a fire, the first responder should:

- ❖ Alert and evacuate nearby personnel located near the affected area.
- ❖ Immediately notify (address of incident and nearest cross street, state and any other relevant information).
- ❖ Shutdown plant as per shutdown procedure, if safe.
- ❖ Isolate the power source and ignition sources, if safe.
- ❖ Attempt to control and extinguish the fire (if safe and you are trained to do so).
- ❖ Raise the alarm and proceed with evacuation if necessary.
- ❖ Ensure the safety and well-being of personnel and attend to the injured.
- ❖ Secure the scene and assist external emergency services.

6.7.4.3 Fire Fighting and Protection Measures

- ❖ In every section of the factory, there will be provided and kept in readiness adequate equipment for firefighting and protection.
- ❖ Each item of firefighting equipment will be inspected and tested at appropriate intervals by a competent person. The date of the last inspection shall be entered in a logbook kept for that purpose.
- ❖ All the personnel employed in the installation will be instructed on the use of firefighting equipment.

- ❖ Instruction to personnel in case of fire will be clearly and concisely expressed in writing and prominently displayed on the site.
- ❖ "NO SMOKING" signs will be conspicuously displayed at strategic locations in the factory and was highlighted in the case of identification in dull bright.
- ❖ Whenever a fire or any accident occurs in the installation, notify the nearest fire station.

The Figure 6.9 illustrates the color coding of fire extinguishers (so it should be printed in color) and can be used as a guideline for Fire Extinguisher selection. Additionally, the application guidelines of fire extinguishers (both Myanmar and English Versions) are displayed at the public area of the factory as shown in Figure 6.10.











<i>Symbols found on fire extinguishers & what they mean</i>		 Water	 Foam spray	 ABC powder	 Carbon dioxide	 Wet chemical
Wood, paper & textiles 		✓	✓	✓	✗	✓
Flammable liquids 		✗	✓	✓	✓	✗
Flammable gases 		✗	✗	✓	✗	✗
Electrical contact 		✗	✗	✓	✓	✗
Cooking oils & fats 		✗	✗	✗	✗	✓

Figure 6.9 Five Types of Fire Extinguishers and their Usages



Figure 6.10 Usage Guidelines of Fire Extinguishers

6.7.4.4 Emergency Evacuation Routes

The emergency evacuation routes of the factory are shown in Figure 6.11.

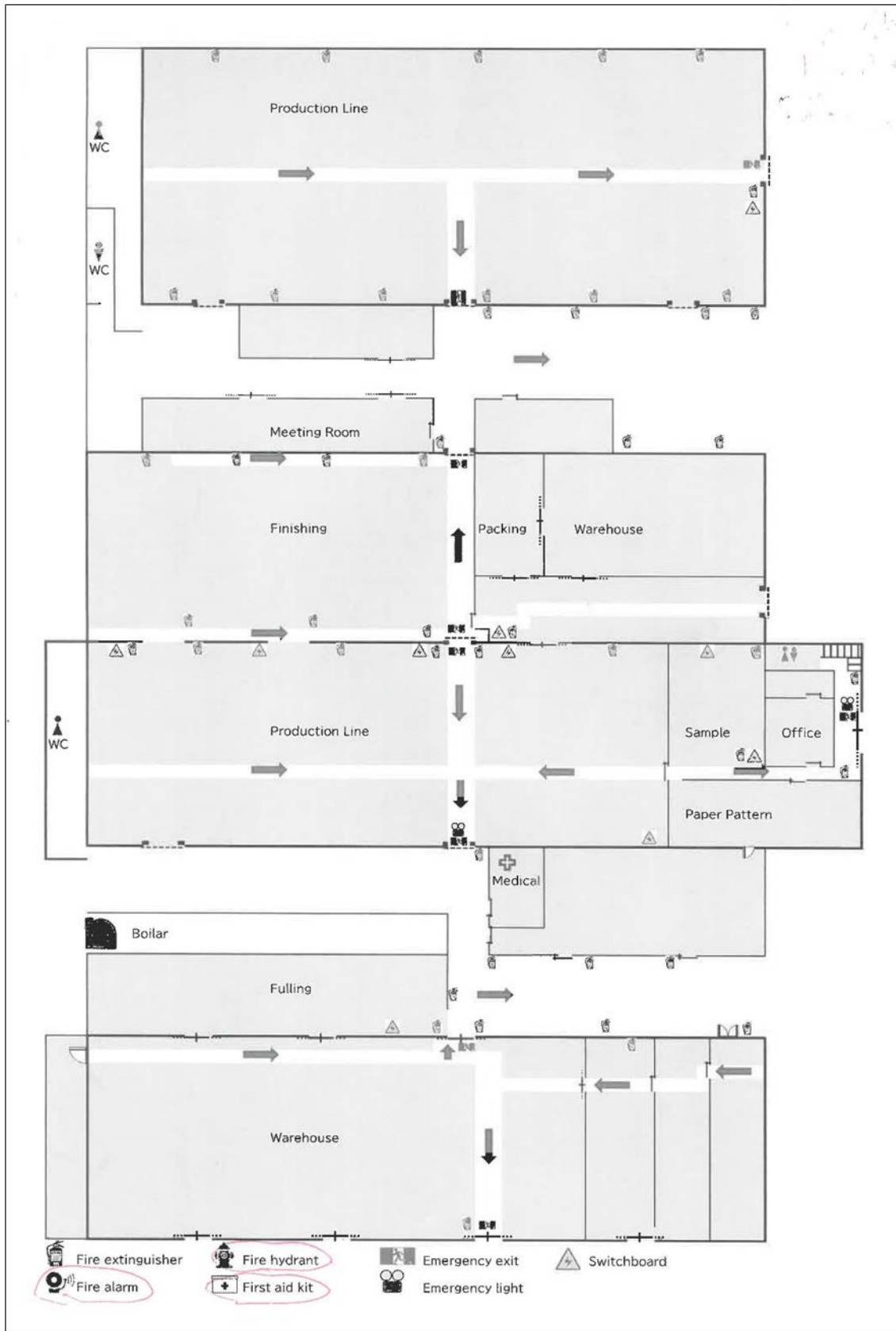


Figure 6.11 Emergency Evacuation Routes of the Buildings

6.7.5 Fire Hazards Monitoring Sub-Plans

Fire hazards will be monitored regularly by connecting with local fire service department during both the operational and decommissioning phases. This includes periodic inspections of fire safety equipment, evacuation routes, and adherence to fire safety protocols. Regular monitoring will ensure compliance with fire safety standards, minimize fire risks, and protect the safety of all workers and assets. Monitoring reports will be prepared and submitted to the Managing Director of the factory for review, ensuring that identified fire risks are addressed promptly and necessary corrective actions are implemented to maintain a safe working environment.

6.7.6 Projected Budgets and Responsibilities

The project budgets and responsibilities of occupational health and safety management and monitoring sub-plans are shown in Table 6.9.

Table 6.9 Projected Budgets and Responsibilities for Fire Hazards Management

Projected budgets for fire hazards management actions	❖ Approximately 500,000 MMK/year
Projected budgets for fire hazards monitoring plan	❖ Firefighting equipment and hazards inspection cost 300,000 MMK/year
Responsibilities	<ul style="list-style-type: none"> ❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned fire hazards management action plans

6.8 Emergency Response and Disaster Management and Monitoring Sub-Plans**6.8.1 Objectives**

The objectives of Emergency Response and Disaster Management Sub-Plans are as follows;

- ❖ To safeguard human life, property, and the environment by effectively responding to emergencies and minimizing potential impacts.
- ❖ To identify, assess, and prepare for potential emergency and disaster scenarios associated with project activities.
- ❖ To establish clear roles, responsibilities, and communication protocols for effective coordination during emergencies.

6.8.2 Legal Requirements

Emergency response and disaster management plans are required to comply with the following laws and regulations.

- ❖ To comply with EIA Procedure (2015)
- ❖ To comply with Natural Disaster Management Law (2013)

6.8.3 Implementation Schedules

Emergency response and disaster management measures will be implemented throughout the entire lifespan of the factory to ensure the safety of employees, contractors, and property. Emergency preparedness drills, response training, and awareness programs will be carried out periodically to enhance readiness and ensure effective coordination during emergencies.

6.8.4 Emergency Response and Disaster Management Sub-Plans

According to Section 4.3, the project location is situated in a region characterized by high flood hazard, low cyclone risk, low landslide probability, and moderate seismic activity. To address these risks, the following management actions will be implemented.

6.8.4.1 Flood Hazard Management

- ❖ Ensuring proper drainage systems and regular clearance of drains to mitigate flood risks.
- ❖ Developing and implementing a flood response plan, including evacuation procedures and emergency supplies such as first aid kit, drinking water and food.
- ❖ Regularly monitor weather forecasts and river levels to issue timely warnings.
- ❖ Contact information of nearby hospitals, police station and fire service department will be displayed at the public area of the factory.

6.8.4.2 Cyclone Risk Management

- ❖ Maintain communication systems for early warning and coordination with local disaster management authorities.
- ❖ Providing training to employees in cyclone response protocols before, during and after cyclone.

6.8.4.3 Landslide Risk Management

- ❖ Implementing soil erosion control measure, such as tree planting
- ❖ Providing training to employees in landslide response protocols before, during and after landslide.

6.8.4.4 Seismic Risk Management

- ❖ Providing training to employees in earthquake response protocols before, during and after earthquake, including evacuation drill and “Do’s and Don’ts” instructions to ensure preparedness and safety.
- ❖ Providing emergency supplies such as first aid kit, drinking water and food.

6.8.5 Emergency Response and Disaster Management Monitoring Sub-Plans

Emergency response and disaster management will be monitored regularly in collaboration with local emergency services and relevant authorities during both the operational and decommissioning phases. This includes periodic inspections of emergency response equipment, evacuation plans, and adherence to disaster preparedness protocols. Regular monitoring will ensure compliance with emergency management standards,

minimize risks, and protect the safety of all workers and assets. Monitoring reports will be prepared and submitted to the Managing Director of the factory for review, ensuring that identified risks are promptly addressed and corrective actions are implemented to maintain a safe and resilient working environment.

6.8.6 Projected Budgets and Responsibilities

The projected budgets and responsibilities for emergency response and disaster management sub-plans are shown in Table 6.10.

Table 6.10 Projected Budgets and Responsibilities for Emergency Response and Disaster Management

Projected budgets for emergency response and disaster management actions	❖ Approximately 500,000 MMK/year
Projected budgets for emergency response and disaster management monitoring plan	❖ Include in firefighting plan and occupational health and safety plan ❖ Approximately 300,000 MMK/ year for providing training cost
Responsibilities	❖ Management of the factory ❖ Environmental Management Team - Total implementation of above-mentioned emergency response and disaster management action plans

6.9 Environmental Management Team (EMT)

The Project Proponent organizes the following environmental management teams to manage air pollution, noise pollution, water contamination, soil contamination, solid waste generation, occupational health and safety, fire hazards management, and emergency response and disaster management plan. There are three teams: Health and Safety Team, Emergency Response Team, and Environmental Management Team. The detailed information of the teams and team members including role and responsibilities are shown in Table 6.11.

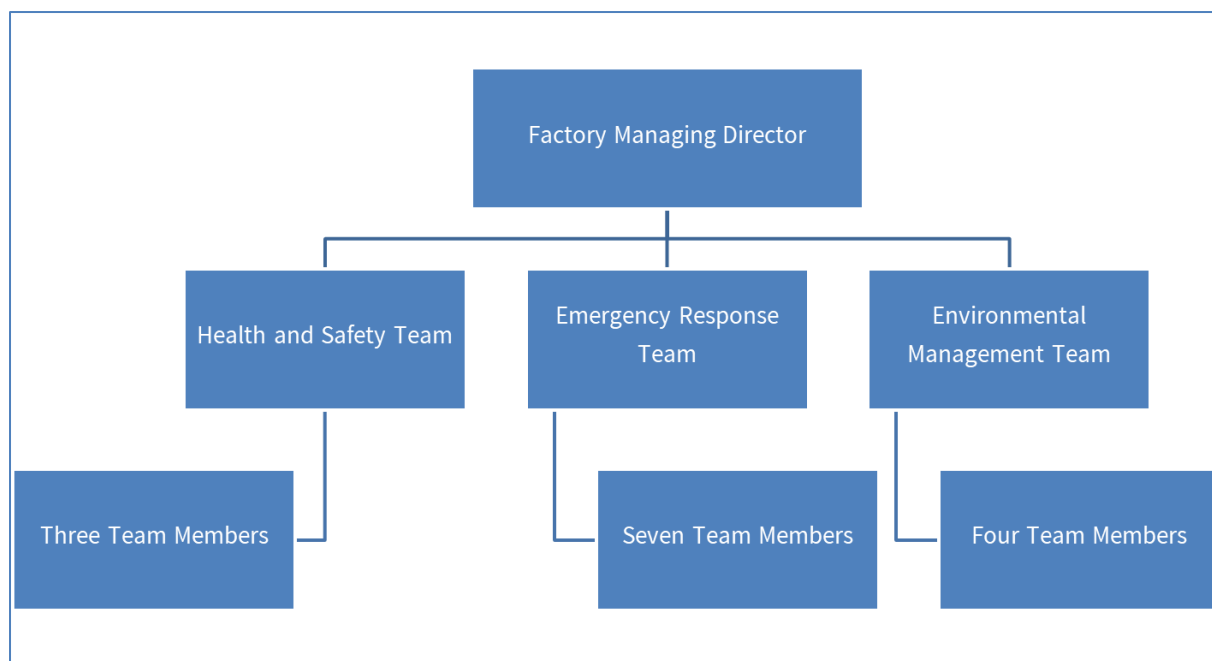


Figure 6.12 Environmental Management Team

Table 6.11 Environmental Management Team and their Responsibilities

No.	Member Name	Duty	Position	Responsibilities	Address and Contact No.
Environmental Management Team					
1.	U Sein Toe	Team Leader	Managing Director	❖ Review all environmental management actions ❖ Make decision on contracting with a third-party organization for environmental monitoring	No. (16), Aung Mingalar Street, Tadaagyi Ward, North Okklapa Township, Yangon Ph - 095181932
2.	U Thet Htut Than	Team Member	General Manager	Air Pollution Management	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09791636108
3.	U Lin Zarni Zaw	Team Member	Office Assistant	Waste and Wastewater Management	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09650950501
4.	Daw Soe Thandar Lwin	Team Member	Office Assistant	Noise Management	89, Plot-a, Ayeyar Road, Ayemyatharyar,

					Okpho Ph - 09650950501
Emergency Response Team					
1.	U Thet Htut Than	Team Leader	General Manager	<ul style="list-style-type: none"> ❖ Managing and mitigating emergencies within the factory ❖ Evacuation Coordination ❖ Public Relations ❖ Firefighting Team Leader 	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09791636108
2.	U Kyaw Lin	Team Member	Security	Firefighting	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09445686236
3.	U Zaw Naing	Team Member	Security	Firefighting	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09423719749
4.	Daw Soe Thandar Lwin	Team Member	Office Assistant	Record Keeping and Reporting	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09650950501
5.	Daw Khine Wai Mon	Team Member	Nurse	First Aid Kit and Medical treatment before transferring to nearby hospitals	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09650950501
6.	U Zin Min Aung	Team Member	Mechanic	Evacuation Coordination, Search and Rescue	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09650950501
7.	U Kyaw Myo Naing	Team Member	Office Assistant	Evacuation Coordination, Search and Rescue	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho

					Ph - 09650950501
Occupational Health and Safety					
1.	U Sein Toe	HSE Leader	Managing Director	Oversees the team and ensures alignment with occupational health and safety practices	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 095181932
2	Daw Soe Thandar Lwin	HSE Officer	Office Assistant	Ensure environmental efforts align with workplace safety.	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09650950501
3	Daw Khine Wai Mon	Medical Nurse	Nurse	<ul style="list-style-type: none"> ❖ Provides first aid and basic medical assistance to affected individuals. ❖ Ensure injured persons are transported to medical facilities promptly. 	89, Plot-a, Ayeyar Road, Ayemyatharyar, Okpho Ph - 09650950501

6.10 Overall Environmental Monitoring Plan

Environmental monitoring involves measurement of relevant parameters to distinguish the anticipated changes. Monitoring aims at determining the effectiveness of actions to improve environmental quality. Monitoring of set standards is a major problem in Myanmar because the authorities do not have the facilities to execute the monitoring function properly.

Table 6.12 Environmental Monitoring Plan

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
Operation Phase					
1.	Air Quality	Ambient air quality (SO ₂ , NO ₂ , PM _{2.5} , PM ₁₀ and O ₃)	Biannually	EMT will contact a third-party organization	Factory Premise (18°4'33.53"N and 95°43'29.17"E)
		Stack combustion gas (O ₂ , CO, CO ₂ , NO and SO ₂)	Biannually	EMT will contact a third-party organization	Boiler Stack (18° 4' 34.15"N and 95°43'26.99"E) Generator Stack (18° 4' 32.71"N and 95°43'27.56"E)

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
		Workplace air quality (SO ₂ , NO ₂ , PM _{2.5} , PM ₁₀ and O ₃)	Biannually	EMT will contact a third-party organization	Sewing Area (18° 4'35.29"N and 95°43'27.61"E)
2.	Noise Level	Ambient noise level in decibel	Biannually	EMT will contact a third-party organization	Factory Premise (18°4'33.53"N and 95°43'29.17"E)
		Workplace noise level in decibel	Biannually	EMT will contact a third-party organization	Workplace (Sewing Area, QC Area, Between Hand Sewing Line and Cutting Area, Cutting Area)
3.	Water Quality	Tube Well Water (pH, Colour, Turbidity, TDS, Hardness, Chloride, Nitrite, Arsenic, Iron, Lead, Manganese, Sulfate and Total coliform count)	Biannually	EMT will contact a third-party organization	Tube well water (18° 4'32.81"N 95°43'27.23"E)
		Wastewater Outlet (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	Biannually	EMT will contact a third-party organization	Wastewater Outlet (18° 4'37.96"N 95°43'26.76"E)

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
		Boiler blowdown water (pH, Temperature, Colour, TSS, Ammonia, BOD5, COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	Biannually	EMT will contact a third-party organization	Boiler blowdown water (18° 4'34.45"N, 95°43'26.33"E)
4.	Soil Quality	Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH, Total Alkalinity and Total Iron	Biannually	EMT will contact a third-party organization	18° 4' 33" N and 95° 43' 26.14" E
5.	Solid Waste Management	Amount and Types of waste including non-hazardous waste and hazardous waste	Monthly	Environmental Management Team	Workplace and Factory Premise
6.	Occupational Health and Safety	Incidents/ accidents Record Keeping, PPE and First Aid Kit	Monthly	Occupational Health and Safety Team	Workplace and Factory Premise
7.	Fire Hazards	Firefighting equipment condition	Monthly	Firefighting Team	Workplace and Factory Premise

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
8.	Emergency Response and Disaster Management	Emergency response equipment	Monthly	Emergency Response Team	Workplace and Factory Premise
Decommissioning Phase					
1.	Air Quality	Ambient air quality (NO ₂ , PM ₁₀ , PM _{2.5} , SO ₂ , NH ₃ , CO ₂ , CO, Temperature, VOC, O ₃ , O ₂ , wind speed and wind direction)	Once	Contractor for Demolition	A Suitable Point on Site
2.	Water Quality	Ground water quality (Aluminium, arsenic, chloride, cyanide, manganese, pH, sulphate, total alkalinity as CaCO ₃ , TDS, total hardness as CaCO ₃ , total iron, turbidity)	Once	Contractor for Demolition	Water Tank for Site Use
		Wastewater quality (pH, Temperature, Colour, TSS, Ammonia, BOD ₅ , COD, Total Phosphorous, Cadmium, Copper, Zinc, Nickel, Chromium (Hexavalent), Sulfide, Phenol, Oil & Grease, Total Nitrogen, and Total Coliform Bacteria)	Once	Contractor for Demolition	Drain in front of the Site
3.	Noise Level	Noise level in	Once	Contractor for	A Suitable

No.	Monitoring Components	Parameters/ Implementation	Monitoring Frequency	Responsibilities	Location
		decibel		Demolition	Point on Site
4.	Soil Quality	Aluminum, Arsenic, Chloride, Copper, Cyanide, Extractable Acidity, Manganese, P-Alkalinity, pH, Total Alkalinity and Total Iron	Once	Contractor for Demolition	A Suitable Point on Site
5.	Solid Waste Generation	Amount and Types of waste including non-hazardous waste and hazardous waste	Monthly	Contractor for Demolition	Temporary Solid Waste Site
6.	Occupational Health and Safety	Incidents/ accidents Record Keeping, PPE and First Aid Kit	Monthly	Contractor for Demolition	Demolition Site

6.11 Overall Budget for Implementation of the EMP

The project is entering the operational phase during which this EMP report was prepared. Therefore, the estimated EMP budget primarily focuses on the operational phase. The project will conduct impact monitoring throughout the operational phase. The following table outlines the estimated annual expenditures for implementing the Environmental Management Plan during the operation and decommissioning phases. These costs are subject to change based on situational requirements. Additionally, the Project Proponent will perform impact monitoring during both the operational and final stages. The table also presents the estimated costs for environmental management and monitoring associated with the proposed project. At present, the Project Proponent does not have a dedicated bank account for Environmental Conservation and Prevention Funding. However, a new account will be established for this purpose in the future. The Project Proponent commits to increase the budget if the allocated funds are deemed insufficient.

Table 6.13 Annual Estimated Cost of Basic Environmental Management and Monitoring

No.	Description	Locations	No. of locations	Recommended monitoring frequency	Rate (MMK/ measurement)	Total Annual Amount (MMK)
Operation Phase						
1.	Air Quality Monitoring	Ambient air quality	1	2 time /year	900,000	1,800,000
		Stack combustion gas (boiler and generator)	2	2 times /year	400,000	1,600,000
		Workplace air quality	1	2 times /year	900,000	1,800,000
	Air quality management	Factory Premise	-	Yearly	-	500,000
2.	Water Quality Monitoring	Tube Well Water	1	2 times /year	250,000	500,000
		Discharged wastewater	1	2 times /year	300,000	600,000
		Boiler Blowdown Water	1	2 times /year	300,000	600,000
	Water Quality Management	Factory Premise	-	Yearly	-	300,000
3.	Noise Level Monitoring	Work place	4	2 times /year	50,000	400,000
		Ambient noise	1	2 time /year	100,000	200,000
	Noise Level Management	Factory Premise	-	Yearly	-	300,000
4.	Soil Quality Monitoring	Near temporary solid waste disposal	1	2 times /year	420,000	840,000
5.	Miscellaneous					
	Solid waste disposal				Lump sum per year	420,000
	Occupational Health and Safety				Lump sum per year	620,000
	Firefighting Equipment				Lump sum per year	800,000
	Emergency Response and Disaster Management				Lump sum per year	800,000

No.	Description	Locations	No. of locations	Recommended monitoring frequency	Rate (MMK/ measurement)	Total Annual Amount (MMK)
Sub Total						12,080,000
Decommissioning Phase						
1.	Ambient Air Quality Monitoring		1	Once	900,000	900,000
	Air quality management	Included in demolition contract				
2.	Water Quality Monitoring		1	Once	300,000	300,000
	Water quality management	Included in demolition contract				
3.	Noise Level Monitoring		1	Once	50,000	50,000
	Noise Level Management	Included in demolition contract				
4.	Soil Quality Monitoring		1	Once	420,000	420,000
	Soil quality management	Included in demolition contract				
5.	Miscellaneous					
	Dispose the solid waste by monitoring				Lump sum	700,000
	Sign board on safety				Lump sum	300,000
	Emergency safety measures				Lump sum	500,000
	Fire safety measures				Lump sum	500,000
Sub Total						3,670,000

6.12 Capacity Development and Training

Enhancing the capacity of factory officers is critical to raising awareness about cleaner production practices and the importance of compliance with local legislation. The training program begins with a comprehensive needs assessment, engaging factory owners, management, supervisors, trade union representatives, and workers to identify the unique priorities and requirements of each facility. The HR training modules cover essential topics such as defining clear roles and responsibilities, implementing support networks like buddy systems, and establishing formal, accessible communication and feedback mechanisms. This approach ensures that the training is tailored to address specific challenges while fostering a culture of accountability and continuous improvement.

6.12.1 Environmental Training and Technical Assistance

An environmental and social training and Technical Assistance (TA) program should be implemented to enhance the company's capacity to effectively execute the Environmental Management Plan (EMP) and to foster improved environmental management practices. This program aims to increase overall environmental and social awareness among staff.

6.12.2 Fire Drills

Fire drills are a critical component of workplace safety in factories, ensuring that employees are prepared to respond effectively in the event of a fire emergency. These drills simulate real-life scenarios, allowing workers to practice evacuation procedures, locate emergency exits, and use firefighting equipment when necessary. Regular fire drills also help

identify potential hazards or weaknesses in the emergency response plan, enabling management to address them proactively. By fostering a culture of preparedness and safety, fire drills not only protect lives but also minimize risks to property and ensure compliance with safety regulations. In addition, the fire inspection will be conducted on January 14th, 2025, and the notification letter from fire service department is shown in Figure 6.13. The fire brigade team including non-employees are formed as shown in Table 6.14. The specialized firefighting team training completion certificates are shown in Figure 6.14. The fire drill activities provided at the factory are shown in Figure 6.15.

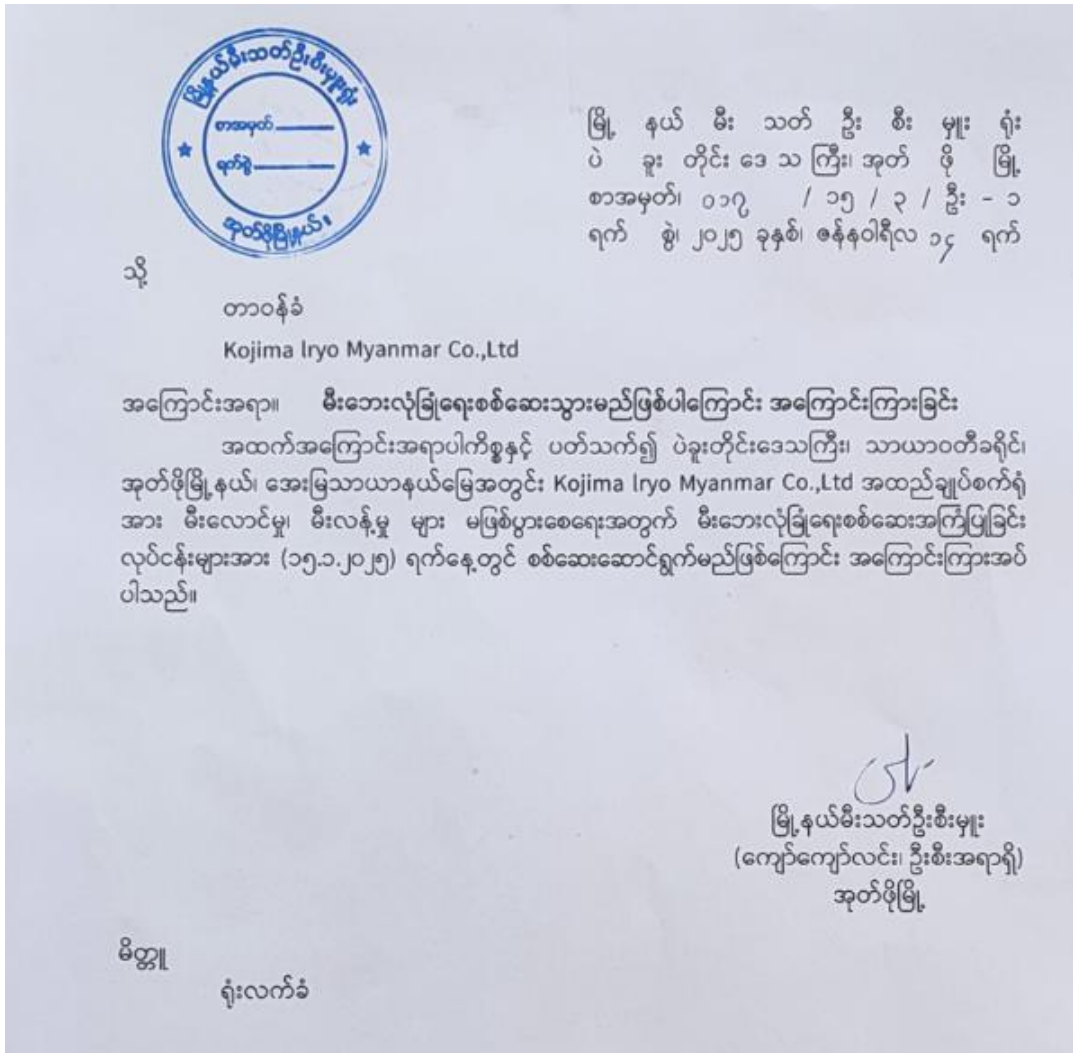


Figure 6.13 Notification Letter from Fire Service Department

Table 6.14 Member List of Fire Brigade Team

No.	Member Name	Position/Duty
1.	U Thet Htut Than	Leader
2.	U Min Thu Than	Leader
3.	U Maung Soe	Leader
4.	U Myint	Leader
5.	U Hla Myo Win	Member
6.	U Tun Tun Win	Member
7.	U Tun Zaw	Member

No.	Member Name	Position/Duty
8.	U Maung Maung Kyaw	Member
9.	U Phyo Wai Yan	Member
10.	U Pyae Phyo Oo	Member
11.	U Pyae Sone Aung	Member
12.	U Htay Hlaing Oo	Member
13.	U Kaung San Thein	Member
14.	U Yan Lin Aung	Member
15.	U Min Thet Naing	Member
16.	U Hein Min Htet	Member
17.	U Min Zaw Oo	Member
18.	U Ye Min Ko	Member
19.	U Yan Naing Soe	Member
20.	U Kyaw Myo Naing	Member
21.	U Myint Maung	Member
22.	U Thet Paing Soe	Member
23.	U Thaw Zin Phyo	Member
24.	U Zaw Naing	Member
25.	U Kyaw Zin Htet	Member
26.	U Maung Ko Gyi	Member
27.	U Zaw Myo Win	Member
28.	U Hlaing Nyi Nyi Aung	Member
29.	U Hla Myint	Member
30.	U Myat Min Thu	Member
31.	U Zin Min Paing	Member
32.	U Kyaw Kyaw	Member
33.	U Kyaw Min Tun	Member
34.	U Wai Yan Htoo Maung	Member
35.	U Kyaw Lwin	Member





Figure 6.14 Firefighting Training Certificates



Figure 6.15 Fire Drill Activities

6.13 Greenbelt Development Program

Within the factory premise, trees are planted as part of greenbelt development program. The trees planted at the factory premise are shown in Figure 6.16 and the list of planted trees, as of December 2024, is shown in Table 6.15.



Figure 6.16 Planted Trees within the Factory Premise

Table 6.15 List of Planted Trees

No.	Name	High (Feet)	Numbers
1.	Terminalia Catappa (Indian Almond)	15	9
2.	Terminalia Catappa (Indian Almond)	30	6
3.	Mangifera indica (Mango)	20	9
4.	Tectona (Teak)	20	6
5.	Padauk	20	14
6.	Spanish Cherry	10	3
7.	Psidium (Guava)	10	1
8.	Artocarpus heterophyllus (Jack Tree)	10	1
9.	Margosa (Nim Tree)	15	1
10.	Albizia Lebbeck (Lebbek Tree)	20	1
11.	Jujube	10	1
12.	Mangifera indica (Mango)	10	39
13.	Padauk	20	9
14.	Terminalia Catappa (Indian Almond)	10	16
15.	Morinda	10	1
16.	Artocarpus heterophyllus (Jack Tree)	7	1
17.	Psidium (Guava)	10	2

18.	Margosa (Nim Tree)	7	5
19.	Spanish Cherry	10	4
20.	Annona Squamosa (Sugar Apple)	7	3
21.	Lemon	5	1
22.	Pomelo	10	1
23.	Terminalia Catappa (Indian Almond)	15	4
24.	Mangifera indica (Mango)	10	3
25.	Psidium (Guava)	10	2
26.	Moringa Oleifera (Horseradish Tree)	10	2
27.	Tamarindus indica	7	4
28.	Artocarpus heterophyllus (Jack Tree)	7	2
29.	Padauk	15	1
30.	Albizia Lebbeck (Lebbek Tree)	15	1
31.	Artocarpus heterophyllus (Jack Tree)	7	2
32.	Mangifera indica (Mango)	7	1
33.	Psidium (Guava)	7	1
34.	Margosa (Nim Tree)	7	1
35.	Tamarindus indica	10	1
Total			159


6.14 Corporate Social Responsibilities (CSR)

The Project Proponent will implement Corporate Social Responsibility (CSR) Plan together with Environmental Management Plan (EMP) through the project lifespan. The objective of this plan is to create social welfare of factory workers and local community, and to prove that the establishment of the proposed factory is beneficial for not only the project owner but also for the local community. The Project Proponent has a plan to contribute 2% of net profit for the corporate social responsibility fund. The CSR fund will be distributed as Table 6.16 and the records of CSR activities are shown in Figure 6.17. The annual CSR donation implemented by the proposed project is shown Table 6.17.

Table 6.16 CSR Plan

No.	Sectors	Percentage
1.	Education	20%
2	Health	20%
3.	Social Development	20%
4.	Protection of Environment	20%
5.	Regional Development	20%

**ပြည်ထောင်စုဝန်ကြီးဌာန
စီးပွားရေးနှင့်
ရင်းနှီးမြှုပ်နှံရေးဝန်ကြီးဌာန**



ဂုဏ်ပြုမှတ်တမ်းလွှာ

ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ စုတ်ရိမြို့နယ်၊ သက်ဦးစီးဌာနတွင်
လိုအပ်လျှင်ရှိစေကာ တစ္ဆေစီ ဝယ်ယူရန်အတွက်
Kojima Iryo Myanmar Co./Ltd မှ
အလှူငွေ ၁ သိန်း ကျပ် (ဂဏန်းပြန် ၁၀၀၀၀၀ /)
ထည့်ဝင်လှူဒါန်းမှုအပေါ် စီးပွားရေးဝန်ကြီးဌာနကိုယ်စား
မှတ်တမ်းတင်ရက်ပြုအပ်ပါသည်။

မြို့နယ်စီးပွားရေးမှူး
(မျိုးကျော်အောင်၊ ခု-စီးပွားရေးဝန်ကြီးဌာန)
အုတ်ရိမြို့

ရက်စွဲ ၂၀၂၃ ခုနှစ်၊ ဇူလိုင်လ (၂၀) ရက်

သာယာဝတီခရိုင် အစိုးရ၊ အကယ် အရေး၊ အတီး
ပြိုင်ပွဲ ကျင်းပရေးဦးစီးကော်မတီ
ဂုဏ်ပြုမှတ်တမ်းလွှာ

ပဲခူးတိုင်းဒေသကြီးအစိုးရအဖွဲ့မှ ကြီးပွားရေးဝန်ကြီးဌာန (၂၀) ကြိမ်မြောက်
ပြန်မာတိုင်းရင်းသားတို့၏ နှိုးရာယဉ်ကျေးမှု အဆို၊ အက၊ အရေး၊ အတီး
ပြိုင်ပွဲတွင် ဝင်ရောက်ယှဉ်ပြိုင်မည့် သာယာဝတီခရိုင် အဆို၊ အက၊ အရေး၊
အတီးအဖွဲ့ ဝင်များသို့ ပြည်နယ် / တိုင်းဒေသကြီး အဆင့်ဆိုင်ရာ အဆို၊
.. အက၊ အရေး .. မှ ဝင်ရောက်ယှဉ်ပြိုင်ရန်အတွက်
ဦး/အော်၊ နိန် ခို .. မှ ငွေကျပ် ၁၅၀၀၀၀၀ / နှစ် .. ပံ့ပိုးကူညီသည့်အတွက်
သာယာဝတီခရိုင် ပြိုင်ပွဲကျင်းပရေးဦးစီးကော်မတီမှ ဂုဏ်ပြုမှတ်တမ်းတင်
အပ်ပါသည်။



ဥ ဇ ၆
ပြိုင်ပွဲကျင်းပရေးဦးစီးကော်မတီ
သာယာဝတီမြို့

ရက်စွဲ ၂၀၂၂ ခုနှစ်၊ ဩဂုတ်လ ၁၅ ရက်

သေရဲပြုစုရန် ချီးမြှုပ်နှံမှုအပ်နှံခြင်း

ပဲခူးတိုင်းဒေသကြီး (အရှေ့ဘက်ပိုင်း)၊ သာယာဝတီခရိုင်၊
အုတ်ရိမြို့နယ်၊ အေးမြသာယာမြို့နယ်
အလှူရှင် **JMKS မိသားစု** တို့မှ
အေးမြသာယာမြို့၊ ပြည်သူ့ဆေးရုံအတွက် လိုအပ်သော
**ပိတ်ပင်ချိတ်ဆွဲရန်အတွက် သေရဲပြုစုရန် - သရုပ်ပုံ /
(ဟုတ် - စာမိန် - သေရဲပြုစုရန်အတွက်) ကို**
ပေးအပ်လှူဒါန်းသည့်အတွက်
ဤမှတ်တမ်းလွှာဖြင့် လိုက်လံလုပ်လုပ်
ဂုဏ်ပြု မှတ်တမ်းတင် အပ်ပါသည်။

သေရဲပြုစုရန်အတွက်
၂၀၂၃ ခုနှစ်၊ ဩဂုတ်လ (၁၅) ရက်

“ပြည်လုံးချမ်းသာအေး” လေတီထောက်ပြတ်ကြို




ဂုဏ်ပြုမှတ်တမ်းလွှာ

ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ရိမြို့နယ်၊ အေးမြသာယာမြို့၊
သာယာဝတီခရိုင်တွင် ဘုန်းတော်ကြီးကျောင်းအတွင်း တည်ထောင်ရေးအဖွဲ့
“ပြည်လုံးချမ်းသာအေး” အတွက်
လိုအပ်သည့် သေရဲပြုစုရန် အတွက် ချီးမြှုပ်နှံမှု ပေးအပ်ခြင်း
အလှူရှင် **JMKS မိသားစု** မှ ပေးအပ်သည့်
သေရဲပြုစုရန် အတွက် ချီးမြှုပ်နှံမှု ပေးအပ်ခြင်း
ဤမှတ်တမ်းလွှာဖြင့် လိုက်လံလုပ်လုပ်
ဂုဏ်ပြု မှတ်တမ်းတင် အပ်ပါသည်။

၂၀၂၃ ခုနှစ်၊ ဩဂုတ်လ (၁၅) ရက်



Figure 6.17 KIMCL's CSR Records

Table 6.17 CSR Donation List

No.	Year	Donation Description	Amount (Myanmar Kyats)
1.	2019	Education, Health, Workers' well fare, Social and Regional Development	3,864,220
2.	2020	Education, Health, Workers' well fare, Social and Regional Development	6,492,860
3.	2021	Education, Health, Workers' well fare, Social and Regional Development	2,106,300
4.	2022	Education, Health, Workers' well fare, Social and Regional Development	4,325,500
5.	2023	Education, Health, Workers' well fare, Fire Service, Social and Regional Development	17,236,200
6.	2024	Education, Health, Workers' well fare, Disaster (flood and fire)	61,769,300

7.0 PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

KIMCL will implement the manufacturing of garment under CMP basis at Holding No. (89), Plot No.1, Aye Mya Tharyar Village (KA), Aye Mya Tharyar Village Tract, Okpho Township, Bago Region, Republic of the Union of Myanmar, on the area of 4.92 acres.

GMES has been responsible for preparing EMP report for the project. As part of this procedure, public participation involved not only meetings with nearest local residents but also discussion with factory employees.

7.1 Methodology and Approach

The public consultation meeting was conducted following methodology and approach, as outlined below.

- ❖ Stakeholder Identification (All relevant stakeholders including local communities, government agencies, and other interested parties).
- ❖ Venue Selection (The meeting hall of the building was selected as the venue for public consultation meeting. Necessary resources such as projectors, seating arrangement and transportation for participants in need, were provided.)
- ❖ Agenda Development (An agenda allowing sufficient time for presentations, discussions, and feedback collection was created.)
- ❖ Notification and Invitation (Invitation letters with clear details about the purpose, date, time, and venue were sent to participants one week prior to the meeting.)
- ❖ Project Information Disclosure (EMP information of the Proposed Project was presented using Myanmar language.)
- ❖ Discuss with relevant stakeholders and request feedback from the participants.

7.2 Summary of Meeting with the Factory Employees

Before the public consultation meeting, the discussion meeting survey with the factory employees were conducted for the health and safety of workers concerned with drinking water system, sanitation system, noise level, cleaning around and inside the factory, reducing amount of dust, light intensity, ventilation system and social work situation. 53 people participated with their opinions written in their suggestion sheets. The discussion meeting with factory employees is shown in Figure 7.1. The summary of suggestions and responses of survey are shown in in Table 7.1. Attendance lists and suggestion sheets of factory workers are attached in *Appendix G*.



Figure 7.1 Recorded Photos taken from Meeting with Factory Employees

Table 7.1 Suggestions of Employees and Responses of Factory In-charge

No.	Description	Remark by Employee	Responses of Factory In-charge
1.	Personal Protection Equipment (PPE)	All persons mentioned that adequate PPE are provided.	Cutting resistant metal gloves and face masks are provided.
2.	Drinking Water	All persons mentioned that purified drinking water is provided.	Approximately 50 – 70 numbers of 20-Liter purified drinking water bottles are purchased daily from local market and provided to the employees.
3.	Sanitation System	All persons mentioned that the sanitation system is good with enough toilets.	A total of five janitors cleans the toilets daily.
4.	Cleanliness	All persons mentioned that the handwashing basins are clean and sufficient.	Twelve handwashing basins with adequate water and soap are provided.
5.	Workplace noise level	Out of 53 employees, seven mentioned that there is slight noise. Others don't experience workplace noise.	The department near the generator room experiences slight noise. The original soundproof system will be activated during the generator operation.
6.	Odor	Out of 53 employees, seven mentioned that there is slight workplace odor and smoke. Others don't experience workplace odor and smoke.	Additional exhaust fans will be installed and air circulation system will be improved.
7.	Light intensity	All persons mentioned	Adequate 4ft-LED lights are

		that the workplace light intensity is enough.	provided to all departments and are repaired or replaced if broken.
8.	Workplace Dust	Out of 53 employees, seven mentioned that there is some workplace dust. Others don't experience workplace dust.	During strong winds from all four directions outside the factory, some dust particles from the surrounding fields may enter. Sufficient openable and closable windows will be installed, and temporary protective barriers will be set up in necessary areas as a preventive measure.
9.	Ventilation system	Out of 53, two mentioned that the ventilation system is good while the others mentioned that the ventilation system is moderately good.	Additional exhaust fans will be installed and ventilation system will be improved.
10.	Social relation of employees with each other	All persons mentioned that there is good social relation of employees with each other.	Regular meetings and discussions are held with representatives freely chosen by each department to allow them to present their challenges and provide solutions continuously. Additionally, a communication system has been established in the factory to enable consultation at any time during regular hours, ensuring timely resolution of issues.

7.2 Summary of Public Consultations and Activities Undertaken

The public consultation meeting was held in the meeting hall of the Proposed Project's office building on December 5, 2024. The agenda of the meeting is shown in Table 7.2. A total of 40 participants attended at the meeting. The attendance list is shown in **Appendix L** and the written suggestion forms are shown in **Appendix M**. Although all the relevant stakeholders were invited, some government agencies were unable to attend due to unforeseen circumstances.

Table 7.2 Agenda of the Meeting

No.	Agenda Description	Time
1.	Opening Section	12:30 PM – 12:35 PM
2.	Presentation of Project Information by Project Proponent	12:35 PM – 1:00 PM
3.	Presentation of EMP Preparation, including impact assessment, mitigation measures, EMP plans and monitoring plans by GMES Co., Ltd.	1:00 PM – 2:10 PM

4.	Discussion with Participants	2:10 PM – 2:45 PM
5.	Closing Remarks	2:45 PM – 3:00 PM

There are two ways of discussion, one way is participants can involve themselves in public consultation meeting and another way is by writing suggestions on distributed suggestion form. Meeting attendees were encouraged to ask questions and give comments during and after the presentation. Comment forms were available at each meeting for attendees to write comments at the time of the meeting. The main points of discussion, questions and answers were mentioned in Table 7.3. Additionally, the written suggestions are summarized in Table 7.4.

Table 7.3 Suggestion from Public Consultation Meeting

No	Comments/Suggestions	Response
1	<p>U Sein Win – Local Community</p> <ul style="list-style-type: none"> ❖ He is grateful for CSR plan conducted by the Project Proponent. ❖ The implementation of the factory contributes to the development of Ayemyatharyar village. 	<p>U Kyaw Soe Win – Managing Director of GMES Co., Ltd.</p> <ul style="list-style-type: none"> ❖ Appreciation speech for the information.
2	<p>Daw Su Myat Thandar Phway – Assistant Director of Tharyarwady District ECD</p> <p>Questions</p> <ul style="list-style-type: none"> ❖ What health care plans are in place for workers operating in areas with noise and dust, such as near boilers? ❖ Since light tubes are used to provide lighting in the workplace, how can the workplace temperature be controlled during hot seasons, what measures are in place to ensure the health and safety of employees working in high-temperature areas? ❖ How are boiler blowdown water and wastewater from workers discharge of? ❖ Since rice husk is used as fuel for the boiler, how are the emissions such as odor, particulate matters, and ash from the boilers managed? Is the height of the chimney compliant with the standards set by the government? ❖ Are there any plans developing for fire hazards prevention and natural disaster risk prevention? ❖ What measures are doing for reducing noise from power 	<p>U Sein Toe – Managing Director of KIMCL</p> <p>Answers</p> <ul style="list-style-type: none"> ❖ Face masks are provided for the workers operating near boilers. ❖ Boiler blowdown water is discharged to sedimentation pond through the concrete drain. ❖ The quality of effluent discharge water will be monitored and reported to ECD. ❖ The main source of noise is from the generators. There is no significant noise from the factory operation processes. ❖ There might be some dust at the workplace. The dust level at the workplace will be measured by the third-party and reported to ECD. ❖ To control the workplace temperature during hot season, the sprinklers are installed on the roof outside the building to spray water over the exterior areas. Additionally, exhaust fans at the wall and rooftop fans are installed at the factory for indoor air quality and ventilation system.

<p>generators?</p> <ul style="list-style-type: none"> ❖ How to manage the dust emission from the factory workers transportation. ❖ How do you dispose boiler ash? <p>Suggestions</p> <ul style="list-style-type: none"> ❖ To follow the laws and regulations of all relevant departments including ECD ❖ To attach all valid permits and certificates that have not yet expired yet from all relevant departments ❖ After the approval of the EMP, an ECC valid for five years will be issued to the Project Proponent. After five years, the ECC must be renewed. If the Project Proponent fails to submit the environmental monitoring report as required, the ECC will not be renewed, and the project proponent will need to restart the EMP process from the beginning. ❖ Environmental quality must monitor according to the environmental baseline data. ❖ The records must be maintained for CSR activities, demonstrations and training sections from relevant departments, maintenance of equipment, and providing health support to employees. Those records must be submitted together as part of the documentation. ❖ Danger warning signs must be installed in hazardous areas within the factory to alert and caution individuals. ❖ To display the contact information of relevant departments, such as fire service departments, hospitals in a place is easily visible to employees during emergencies. ❖ To plan more trees in the factory premise if necessary. ❖ To ensure smooth water flow, take measures to prevent blockages in the waterways. ❖ To take measures to suppress dust caused by employees' daily 	<ul style="list-style-type: none"> ❖ The domestic wastewater will be discharged to the sedimentation pond through concrete drains. The effluent discharge quality will be monitored and reported to ECD. ❖ Due to a lack of knowledge regarding waste management, we addressed the issue within the factory using our own methods at the appropriate time. However, we will follow the guidelines accordingly in the future. Additionally, we will connect with local municipal development and dispose the waste in line with local regulations. ❖ Regarding the noise from the generator, as the generator is equipped with a noise suppression system, closing the soundproof door while operating it will significantly reduce the noise level. ❖ We are in the process of obtaining the Fire Fighting Certificate - FFC from the Fire Service Department. We have completed the installation of the firefighting system, except the fire sprinklers inside the factory. We are now in the final stage of meeting the requirements to receive the FFC. Moreover, the inspectors from both Fire Service Department of Ayemyatharyar and Okpho come to the factory and check the firefighting equipment condition and the number of firefighting equipment yearly. If the firefighting equipment condition is not good, they replace with the new one. The emergency team including firefighting are organized for fire hazards and other natural disasters. There are approximately 30 members for the team including external workers. ❖ The factory surroundings, which originally had dirt roads, have been paved with concrete to reduce dust generation. Regular water sprinkling is also being carried out as part of maintenance. ❖ Previously, the ash from boiler was
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	<p>commutes.</p> <ul style="list-style-type: none"> ❖ To dispose the waste properly according to the type of waste. ❖ To provide the earplugs to workers who work in noisy areas. ❖ To add mitigation measures for climate change in this EMP report. ❖ To comply with Section (14) and (15) of Environmental Conservation Law. ❖ According to Section (32) of Environmental Conservation Law, whoever violates any prohibition contained in the rules, notifications, orders, directives and procedures issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year, or with fine, or with both. ❖ To prepare the EMP report in line with Article (63) (8) of EIA Procedure. ❖ If the production process is expanded, it must be reported to the ECD. ❖ To monitor the environmental quality and compare with NEQEG. If the environmental quality was exceeded the guidelines, the mitigation measures plan must be developed. ❖ According to Article (46) (i), Licensing Procedure, Third-party must ensure the completion of assigned EMP preparation successfully. 	<p>disposed as landfill within the factory compound. We will connect with municipal development department and dispose according to laws and regulations. The slip will be kept and recorded.</p>
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Table 7.4 Excerpts of Suggestion Letters from Public Consultation Meeting

No.	Participants	Suggestions and Discussions
1	U Shine Lin Aung	<ul style="list-style-type: none"> • To strictly comply with the laws, regulations, procedures, orders, directives, and guidelines of the Environmental Conservation Department.
2	Daw Moh Moh Aung	<ul style="list-style-type: none"> • The presentation of EMP preparation of KIMCL is good. • Suggestion request from employees, form (7), providing employee cards, signing employment agreement

		between employer and employee after 30 days of employment, and health care were performed by the Project Proponent.
3	Daw Aye Aye Myat	<ul style="list-style-type: none"> • We need job opportunities for Ayemyatharyar.
4	Daw San San Naing	<ul style="list-style-type: none"> • To provide more job opportunities for local.
5	U Min Zaw Oo	<ul style="list-style-type: none"> • To donate in social, health and educational sectors.
6	U Zaw Naing	<ul style="list-style-type: none"> • To take strict measures to ensure the safety of all factory employees and prevent any vehicle-related accidents.
7	Daw San San Aye	<ul style="list-style-type: none"> • It is good to have this factory for social development in our local areas.
8	Daw Win Win Soe	<ul style="list-style-type: none"> • To provide more job opportunities for local.
9	Daw Si Si Than	<ul style="list-style-type: none"> • To take preventive measures to manage and mitigate vehicle accidents effectively.
10	Daw Moe Moe	<ul style="list-style-type: none"> • To take strict measures to prevent vehicle accidents.
11	Daw Thin Thin	<ul style="list-style-type: none"> • To provide more job opportunities for local.
12	U Win Sein	<ul style="list-style-type: none"> • I appreciate that the factory provides job for locals.
13	U Nyum Thein	<ul style="list-style-type: none"> • I appreciate that the factory employs over 1,000 employees. • To provide more job opportunities for local.
14	Daw Tin Moe Khine	<ul style="list-style-type: none"> • To provide more job opportunities for the people near the factory premise.
15	Daw Win Sandar	<ul style="list-style-type: none"> • It is good to creating meeting with public.







Figure 7.2 Recorded Photos taken from Public Disclosure Meeting

8.0 CONCLUSION

The EMP for KIMCL emphasizes the essential environmental management measures required to establish an environmentally friendly workplace. This EMP has been prepared in accordance with the requirements of the proponent and as mandated by MONREC for the garment manufacturing industry. The key environmental issues identified in the EMP allow factory management to take appropriate mitigation steps to address adverse environmental impacts. Necessary measures to mitigate impacts on various environmental parameters, including air quality, water quality, soil quality, solid waste and noise levels, have been outlined in this plan. KIMCL has already implemented all necessary measures to mitigate adverse environmental, health, and safety impacts, ensuring compliance with the National Environmental Quality Standards. Additionally, the plant contributes positively to employment during the operational phase, indirectly supporting national economic growth through foreign investment. This report provides an outline of the EMP, detailing measures to mitigate or enhance impacts arising during the plant's operational phase.

8.1 Recommendation

The recommendations are as follows;

- ❖ All environmental management measures detailed in this report, along with any additional environmental management commitments, must be implemented throughout the entire operational life of the factory.
- ❖ Solid waste should be disposed of in accordance with applicable rules and regulations.
- ❖ Workers should receive proper training, and it must be ensured that they use appropriate PPE during factory operations.

LIST OF APPENDICES

APPENDIX (A) KIMCL’S COMPANY REGISTRATION, MIC PERMIT AND LETTER FROM
ECD..... I

APPENDIX (B) ORGANIZATION’S COMPANY REGISTRATION AND LICENSEXVII

APPENDIX (C) CERTIFICATE OF EXPORTER/IMPORTER REGISTRATIONXXVIII

APPENDIX (D) PRIVATE INDUSTRIAL REGISTRATION CERTIFICATE.....XXX

APPENDIX (E) ELECTRICAL SAFETY CERTIFICATES.....XXXV

APPENDIX (F) GROUND WATER EXTRACTION PERMIT..... XLII

APPENDIX (G) HAZARDOUS BUSINESS LICENSE..... XLIII

APPENDIX (H) FIRE INSPECTION CERTIFICATES XLV

APPENDIX (I) COMMUNITY HEALTH WORKER TRAINING COMPLETION CERTIFICATELII

APPENDIX (J) ENVIRONMENTAL QUALITY RESULTS LIII

APPENDIX (K) SUGGESTIONS FROM STAFFS LX

APPENDIX (L) ATTENDANCE LIST FROM PUBLIC CONSULTATION MEETINGLXXIV

APPENDIX (M) SUGGESTION LETTERS FROM PUBLIC CONSULTATION MEETING LXXV

APPENDIX (A)

KIMCL'S COMPANY REGISTRATION, MIC PERMIT AND LETTER FROM ECD

KIMCL's Company Registration



ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်
Certificate of Incorporation

ကိုရိုမ အိုင်ရို မြန်မာ ကုမ္ပဏီလီမိတက်
KOJIMA IRYO MYANMAR COMPANY LIMITED
Company Registration No. 117325229

မြန်မာနိုင်ငံကုမ္ပဏီများအက်ဥပဒေ ၁၉၁၄ ခုနှစ် အရ
ကိုရိုမ အိုင်ရို မြန်မာ ကုမ္ပဏီလီမိတက်
အား ၂၀၁၅ ခုနှစ် ဧပြီလ ၂ ရက်နေ့တွင်
အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ
အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့် ပြုလိုက်သည်။

This is to certify that
KOJIMA IRYO MYANMAR COMPANY LIMITED
was incorporated under the Myanmar Companies Act 1914 on 2 April
2015 as a Private Company Limited by Shares.



ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ
Registrar of Companies
ရင်းနှီးမြုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန
Directorate of Investment and Company Administration



Former Registration No. 16FC/2015-2016(YGN)


KIMCL's MIC Permit (Myanmar Version)

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
 မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်
 ခွင့်ပြုမိန့်






ခွင့်ပြုမိန့်အမှတ် ၉၁၂/၂၀၁၅ ၂၀၁၅ ခုနှစ် မတ်လ ၁၇ ရက်
 ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု ဥပဒေပုဒ်မ ၁၃၊ ပုဒ်မခွဲ(ခ)
 အရ ဤခွင့်ပြုမိန့်ကို မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်က ထုတ်ပေးလိုက်သည် -

- (က) ရင်းနှီးမြှုပ်နှံသူ/ကမကထပြုသူအမည် MR. TAKASHI ISHIGURO
- (ခ) နိုင်ငံသား JAPANESE
- (ဂ) နေရပ်လိပ်စာ NO.684, AWANONISHI 5-CHOME, GIFU-SHI, JAPAN
- (ဃ) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ KOJIMA IRYO CO., LTD. , NO.684, AWANONISHI 5-CHOME, GIFU-SHI, JAPAN
- (င) ဖွဲ့စည်းရာအရပ် JAPAN
- (စ) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အထည်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်း
- (ဆ) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) ဦးပိုင်အမှတ်-၈၉၊ ကွင်းအမှတ်-၁၊ အေးမြ သာယာ(က)၊ အေးမြသာယာကျေးရွာအုပ်စု၊ အုတ်ဖိုမြို့နယ်၊ သာယာဝတီခရိုင်၊ ပဲခူးတိုင်း ဒေသကြီး
- (ဇ) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၁.၀၂ သန်း
- (ဈ) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ ခွင့်ပြုမိန့် ရရှိသည့်နေ့မှ (၂) နှစ်အတွင်း
- (ည) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) ကျပ် ၁,၂၀၀ သန်း (အမေရိကန်ဒေါ်လာ ၁.၀၂ သန်း အပါအဝင်)
- (ဋ) တည်ဆောက်မှုကာလ ၁၂ လ
- (ဌ) ရင်းနှီးမြှုပ်နှံမှုခွင့်ပြုသည့် သက်တမ်း ၃၀ နှစ်
- (ဍ) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ဖက်စပ်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
- (ဎ) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည်
 KOJIMA IRYO MYANMAR COMPANY LIMITED


 ဥက္ကဋ္ဌ
 မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

KIMCL's MIC Permit (English Version)

	<p>THE REPUBLIC OF THE UNION OF MYANMAR The Myanmar Investment Commission PERMIT</p>	
Permit No. <u>912/2015</u>	Date <u>17th</u> March 2015	
<p>This Permit is issued by the Myanmar Investment Commission according to the section 13, sub-section (b) of the Republic of the Union of Myanmar Foreign Investment Law-</p>		
(a) Name of Investor/Promoter	<u>MR. TAKASHI ISHIGURO</u>	
(b) Citizenship	<u>JAPANESE</u>	
(c) Address	<u>NO.684, AWANONISHI 5-CHOME, GIFU-SHI, JAPAN</u>	
(d) Name and Address of Principal Organization	<u>KOJIMA IRYO CO., LTD. , NO.684, AWANONISHI 5-CHOME, GIFU-SHI, JAPAN</u>	
(e) Place of incorporation	<u>JAPAN</u>	
(f) Type of investment business	<u>MANUFACTURING OF GARMENTS ON CMP BASIS</u>	
(g) Place(s) at which investment is permitted	<u>HOLDING NO. 89, PLOT NO. 1, AYE MYA THARYAR (KA), AYE MYA THARYAR VILLAGE TRACT, OAK PHO TOWNSHIP, THARYARWADY DISTRICT, BAGO REGION</u>	
(h) Amount of Foreign Capital	<u>US\$ 1.02 MILLION</u>	
(i) Period for Foreign Capital brought in	<u>WITHIN TWO YEAR FROM THE DATE OF ISSUANCE OF MIC PERMIT</u>	
(j) Total amount of capital (Kyat)	<u>KYAT 1,200 MILLION (INCLUDING US\$ 1.02 MILLION)</u>	
(k) Construction period	<u>12 MONTHS</u>	
(l) Validity of investment permit	<u>30 YEARS</u>	
(m) Form of investment	<u>JOINT VENTURE</u>	
(n) Name of Company incorporated in Myanmar	<u>KOJIMA IRYO MYANMAR COMPANY LIMITED</u>	
	 Chairman The Myanmar Investment Commission	

Amendment on MIC Permit as of April 2016 (English Version)

Form (2)
Annexe-1

607- G
29.4.2016

THE REPUBLIC OF THE UNION OF MYANMAR
MYANMAR INVESTMENT COMMISSION

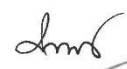
Amendment on Permit No. 912/2015 dated 17th March, 2015

The Myanmar Investment Commission had approved that the amount of foreign capital of Kojima Iryo Myanmar Company Limited be increased from US\$ 1.02 million to US\$ 1.15 million, total amount of capital be increased from Kyat 1200 US\$ (including US\$ 1.02 million) million to Kyat 1349.313 million (including US \$ 1.15 million) and also its construction period to be amended from 12 (twelve) months to 18(eighteen) months.

(h) Amount of Foreign Capital US\$ 1.15 MILLION

(j) Total amount of capital (Kyat) KYAT 1349.313 MILLION
(INCLUDING US\$ 1.15 MILLION)

(k) Construction period 18 MONTHS (W.E.F 17-3-2015 to 16-9-2016)


(Aung Naing Oo)
Director General

Date: 29 April 2016
Location: Yangon

Amendment on MIC Permit as of May 2024 (Myanmar Version)

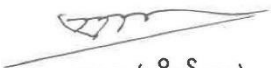


ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

၂၀၁၅ ခုနှစ်၊ မတ်လ ၁၇ ရက်စွဲပါ ခွင့်ပြုမိန့်အမှတ် (၉၁၂/၂၀၁၅) တွင် ပြင်ဆင်ချက်

၂၀၂၄ ခုနှစ်၊ မေလ ၆ ရက်နေ့တွင် ကျင်းပပြုလုပ်ခဲ့သော မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု
ကော်မရှင်၏ (၅/၂၀၂၄) ကြိမ်မြောက် အစည်းအဝေးဆုံးဖြတ်ချက်အရ CMP စနစ်ဖြင့် အထည်
အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်း ဆောင်ရွက်လျက်ရှိသော Kojima Iryo Myanmar Company
Limited ၏ စုစုပေါင်းမတည်ငွေရင်းပမာဏအား ကျပ် ၁,၃၄၉.၃၁၃ သန်း (အမေရိကန်ဒေါ်လာ
၁.၁၅ သန်းအပါအဝင်) မှ ကျပ် ၁,၉၅၁.၅၅၂ သန်း (အမေရိကန်ဒေါ်လာ ၁.၁၅ သန်းအပါအဝင်) သို့
လည်းကောင်း တိုးမြှင့်ပြင်ဆင်လိုက်သည်။

- (ဇ) နိုင်ငံခြားမတည်ငွေရင်းပမာဏ အမေရိကန်ဒေါ်လာ ၁.၁၅ သန်း
- (ည) စုစုပေါင်းမတည်ငွေရင်းပမာဏ(ကျပ်) ကျပ် ၁,၉၅၁.၅၅၂ သန်း
(အမေရိကန်ဒေါ်လာ ၁.၁၅ သန်းအပါအဝင်)


ဥက္ကဋ္ဌ (ကိုယ်စား)
(သန့်စင်လွင်၊ အတွင်းရေးမှူး)

ရက်စွဲ၊ ၂၀၂၄ ခုနှစ်၊ မေလ ၃၇ ရက်
နေရာ၊ ရန်ကုန်မြို့

Amendment on MIC Permit as of May 2024 (English Version)



THE REPUBLIC OF THE UNION OF MYANMAR

Myanmar Investment Commission

Amendment on Permit No. 912/2015 dated 17th March 2015

The Myanmar Investment Commission, at its meeting 5/2024 held on 6th May 2024, approved the total amount of capital of Kojima Iryo Myanmar Company Limited which is carrying out manufacturing of garments on CMP basis be increased from Kyat 1,349.313 million (including US\$ 1.15 million) to Kyat 1,951.552 million (including US\$ 1.15 million).

(h) Amount of Foreign Capital	US\$ 1.15 MILLION
(j) Total amount of capital (Kyat)	KYAT 1,951.552 MILLION
(INCLUDING US\$ 1.15 MILLION)	

mat sin lwin

for Chairman

(Thant Sin Lwin, Secretary)

Date : 21 May 2024

Location: Yangon





CONFIDENTIAL

THE REPUBLIC OF THE UNION OF MYANMAR

MYANMAR INVESTMENT COMMISSION

No. 1, Thitsar Road, Yankin Township, Yangon

Tel: 95-1-658128

Our ref: MIC-3/FI-1125/2024 (202)

Fax: 95-1-658141

Date : 31 May 2024

Subject: Decision of the Myanmar Investment Commission for amendment of total amount of capital, the share ratio and the permitted investment area of Kojima Iryo Myanmar Company Limited

Reference: Kojima Iryo Myanmar Company Limited's Letter dated 15th May 2024

1. The Myanmar Investment Commission, at its meeting 5/2024 held on 6th March 2024, approved the total amount of capital of Kojima Iryo Myanmar Company Limited which is carrying out manufacturing of garments on CMP basis be increased from Kyat 1,349.313 million (Kyat one thousand, three hundred and forty nine million and three hundred and thirteen thousand including US\$ 1.15 million) to Kyat 1,951.552 million (Kyat one thousand, nine hundred and fifty one million and five hundred and fifty two thousand including US\$ 1.15 million) and the share ratio be changed from Kojima Iryo Myanmar Company Limited (85 %) from Japan and JMKS Company Limited (15 %) from the Republic of the Union of Myanmar to Kojima Iryo Myanmar Company Limited (70 %) from Japan and JMKS Company Limited (30 %) from the Republic of the Union of Myanmar.
2. In addition, the permitted investment area of Kojima Iryo Myanmar Company Limited which is carrying out manufacturing of garments on CMP basis be increased from 3 acres (12,140.57 square metres) to 4.92 acres (19,910.55 square metres) of Holding No. 89, Plot No. 1, Aye Mya Tharyar (Ka), Aye Mya Tharyar Village Tract, Oak Pho Township, Tharyarwady District, Bago Region.
3. Kojima Iryo Myanmar Company Limited shall have to sign the land Lease Agreement with U Sein Toe (Lessor). After signing the agreement, five (5) copies shall have to be forwarded to the Commission.

CONFIDENTIAL

CONFIDENTIAL

2

4. The annual rent for the land shall be US\$ 21,901.60 (United States Dollar twenty one thousand nine hundred one and sixty cents only) calculated at the rate of US\$ 1.1 (United States Dollar one and one cent only) per square metre per year of the land measuring 4.92 acres (19,910.55 square metres).

5. Hence, the share ratio be amended to Kojima Iryo Myanmar Company Limited (70 %) from Japan and JMKS Company Limited (30 %) from the Republic of the Union of Myanmar as a joint venture investment and the total amount of capital and the permitted investment area are hereby amended to Kyat 1,951.552 million (Kyat one thousand, nine hundred and fifty-one million and five hundred and fifty two thousand including US\$ 1.15 million), and 4.92 acres (19,910.53 square metres) on the Permit No. 912/2015 dated 17-3-2015.

6. It is also notified that Kojima Iryo Myanmar Company Limited shall have to abide by all terms and conditions stated in the Commission's Letters No. DICA-3/FI-1125/2015 (399-a) dated 17-3-2015, DICA-3/FI-1125/2016 (607-G) dated 29-4-2016.

Thant Sin Lwin
3/5-29
for Chairman
(Thant Sin Lwin, Secretary)

Kojima Iryo Myanmar Company Limited

- cc:
1. Ministry of Home Affairs
 2. Ministry of Planning and Finance
 3. State Administration Council Chairman's Office Ministry 1
 4. State Administration Council Chairman's Office Ministry 2
 5. State Administration Council Chairman's Office Ministry 3
 6. State Administration Council Chairman's Office Ministry 4
 7. Ministry of Investment and Foreign Economic Relations
 8. Ministry of Natural Resources and Environmental Conservation

CONFIDENTIAL

CONFIDENTIAL

3

9. Ministry of Industry
10. Ministry of Immigration and Population
11. Ministry of Labour
12. Ministry of Commerce
13. Central Bank of Myanmar
14. Chairman, CMP Enterprise Supervision Committee
15. The Office of Bago Region Government
16. Bago Region Investment Committee
17. Director General, National Archives Department
18. Director General, Internal Revenue Department
19. Director General, Customs Department
20. Director General, Directorate of Investment and Company Administration
21. Director General, Department of Environmental Conservation
22. Director General, Directorate of Industrial Supervision and Inspection
23. Director General, Department of Immigration
24. Director General, Directorate of Labour
25. Director General, Department of Trade
26. Bago Region Office, Directorate of Investment and Company Administration

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LETTERS FROM ECD



ပတ် ဝန်းကျင် ထိန်း သိမ်း ရေး ဦး စီး ဌာ န
ညွှန် ကြား ရေး မှူး ရုံး
ပဲ ခူး တိုင်း ဒေ သ ကြီး၊ ပဲ ခူး မြို့
စာအမှတ်၊ ပဲခူး/ အီးအိုင်အေ (၂၅၇၁/၂၀၂၄)
ရက်စွဲ၊ ၂၀၂၄ ခုနှစ်၊ အောက်တိုဘာလ ၂၂ ရက်

တာဝန်ခံ
Kojima Iryo Myanmar Co., Ltd.
အုတ်ဖိုမြို့နယ်၊ သာယာဝတီခရိုင်

အကြောင်းအရာ။ Kojima Iryo Myanmar Co., Ltd. နှင့် JMKS Co., Ltd. တို့၏ ပတ်ဝန်းကျင် ဆိုင်ရာ ဆန်းစစ်ခြင်းအစီရင်ခံစာများနှင့်ပတ်သက်၍ သဘောထားမှတ်ချက် ပြန်ကြားခြင်း

- ရည် ညွှန်း ချက်။ (၁) Kojima Iryo Myanmar Co., Ltd. ၏ ၁၅-၈-၂၀၂၄ ရက်စွဲပါတင်ပြစာ
- (၂) ညွှန်ကြားရေးမှူးရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ပဲခူးတိုင်း ဒေသကြီး၏ ၉-၉-၂၀၂၄ ရက်စွဲပါစာအမှတ်၊ ပဲခူး/ အီးအိုင်အေ (၂၈၉၀/ ၂၀၂၄)
- (၃) ညွှန်ကြားရေးမှူးချုပ်ရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ နေပြည်တော်၏ ၄-၁၀-၂၀၂၄ ရက်စွဲပါစာအမှတ်၊ EIA-၁/၆/သဘောထား (၄၅၃၇/ ၂၀၂၄)

၁။ အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေးရွာအုပ်စု၊ အေးမြသာယာကျေးရွာ (က)၊ ကွင်းအမှတ် (၁)၊ ဦးပိုင်အမှတ် (၈၉)၊ မြေဧရိယာ (၁.၉၂) ဧကပေါ်တွင် အကောင်အထည်ဖော်ဆောင်ရွက်နေသည့် JMKS Co., Ltd. ၏ Fixed Assets များအား Kojima Iryo Myanmar Co., Ltd. သို့ ထည့်ဝင်ကာ ရင်းနှီးမြှုပ်နှံမှုမမာဏ တိုးမြှင့်ခြင်း နှင့် ကုမ္ပဏီနှစ်ခု ပေါင်းစည်းပြီးဖြစ်ပါသဖြင့် Kojima Iryo Myanmar Co., Ltd. အမည်ဖြင့်သာ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား ရေးဆွဲခွင့်ပြုပါရန် လုပ်ငန်းရှင်မှ ရည်ညွှန်း (၁) ပါစာဖြင့် တင်ပြလာမှုအပေါ် ပဲခူးတိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ မြေပြင်ကွင်းဆင်းစစ်ဆေး၍ ဦးစီးရုံးချုပ်သို့ ရည်ညွှန်း (၂) ပါစာဖြင့် ဆက်လက်ပေးပို့တင်ပြခဲ့ပါသည်။

၂။ အဆိုပါ JMKS Co., Ltd. အတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာရေးဆွဲဆောင်ရွက်ရန်နှင့် Kojima Iryo Myanmar Co., Ltd. အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ရေးဆွဲဆောင်ရွက်ရန် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ သဘောထားမှတ်ချက်ပြန်ကြားထားသော်လည်း ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းဆိုင်ရာ မည်သည့်ဆန်းစစ်ခြင်းမျှ ဦးစီးရုံးချုပ်သို့ တင်ပြထား


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ခြင်းမရှိသေးသည်ကို စိစစ်တွေ့ရှိကြောင်းနှင့် JMKS Co., Ltd. သည် မြန်မာနိုင်ငံရင်းနှီးမြုပ်နှံမှု ကော်မရှင်၏ ခွင့်ပြုမိန့် (မူရင်း) အား ပြန်လည်အပ်နှံပြီးဖြစ်ခြင်းကြောင့်လည်းကောင်း၊ Fixed Assets များအား Kojima Iryo Myanmar Co., Ltd. သို့ ထည့်ဝင်ကာ ရင်းနှီးမြုပ်နှံမှုပမာဏ တိုးမြှင့်ဆောင်ရွက် ရန် မြန်မာနိုင်ငံရင်းနှီးမြုပ်နှံမှုကော်မရှင်မှ ခွင့်ပြုမိန့်ရရှိထားပြီး ဖြစ်ခြင်းကြောင့်လည်းကောင်း Kojima Iryo Myanmar Co., Ltd. မှ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေး ရွာအုပ်စု၊ အေးမြသာယာကျေးရွာ (က)၊ ကွင်းအမှတ် (၁)၊ ဦးပိုင်အမှတ် (၈၉)၊ မြေဧရိယာ (၄.၉၂) ဧက တွင် ဆောင်ရွက်လျက်ရှိသည့် CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်ငန်းနှင့်ပတ်သက်၍ အောက်ဖော်ပြပါ အတိုင်း လုပ်ငန်းရှင်သို့ ဆက်လက်ပြန်ကြားနိုင်ရန် ဦးစီးရုံးချုပ်မှ ရည်ညွှန်း (၃) ပါစာဖြင့် အကြောင်း ကြားလာပါသည်-

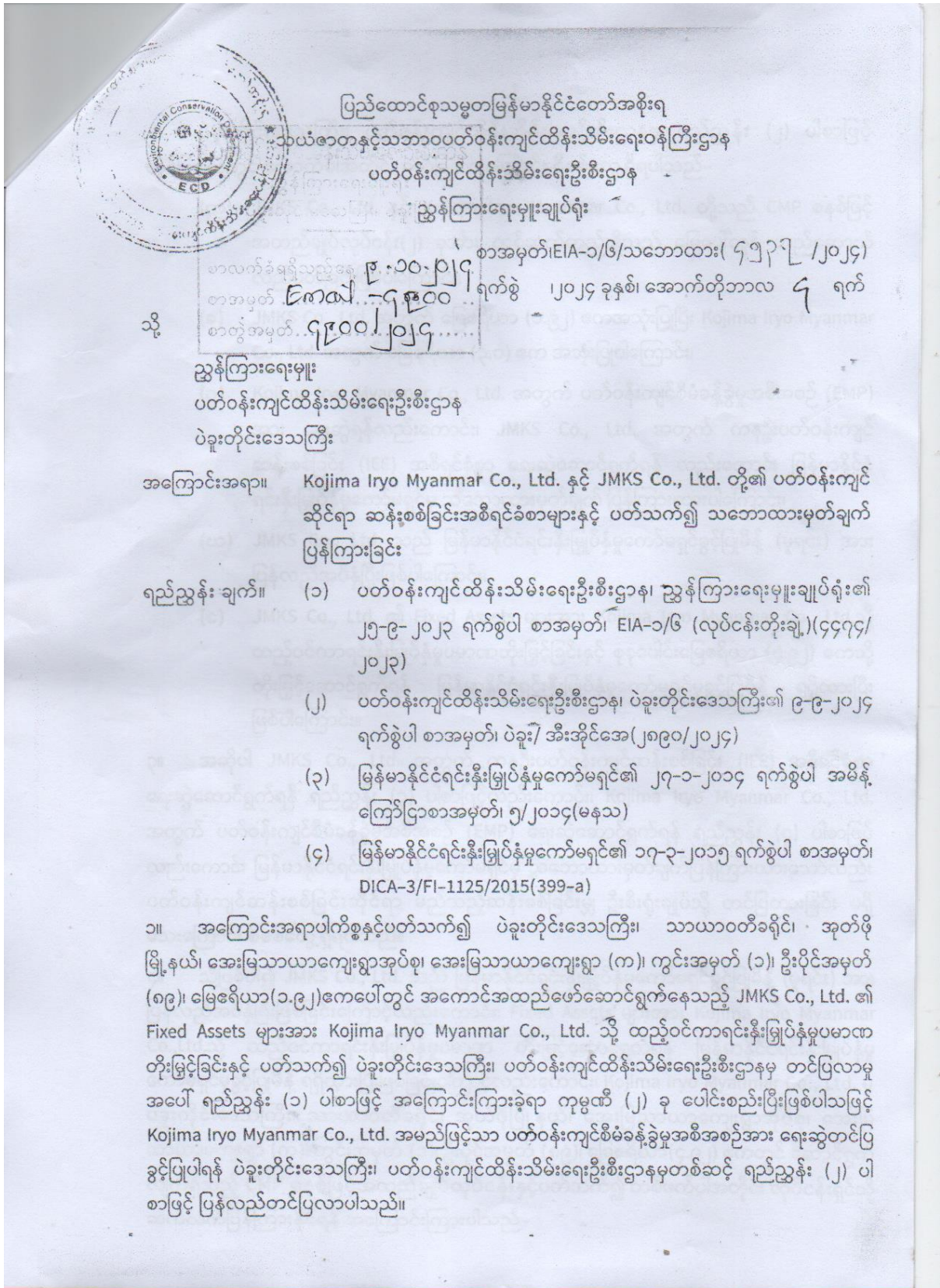
- (က) Kojima Iryo Myanmar Co., Ltd. ၏ CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်ငန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ရေးဆွဲပြုစုရန်၊
- (ခ) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၇၆ အရ “စီမံကိန်း အဆိုပြုသူသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ရေးဆွဲခြင်းကို မိမိကိုယ်တိုင်သော် လည်းကောင်း၊ အပိုဒ် ၁၈ နှင့်အညီ လုပ်ငန်းလိုင်စင်ရယူထားသော ပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းကို အပ်၍သော်လည်းကောင်း” ဆောင်ရွက်ရန်နှင့် လုပ်ငန်းလိုင်စင်ရယူ ထားသော ပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းဖြင့် ဆောင်ရွက်မည်ဆိုပါက လုပ်ငန်းလိုင်စင် ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၅၀ အရ လေ့လာဆန်းစစ်ရေးအဖွဲ့တွင် အကြံပေး ပုဂ္ဂိုလ် သို့မဟုတ် တွဲဖက်အကြံပေးပုဂ္ဂိုလ် အနည်းဆုံး နှစ်ဦးဖြင့် ဆောင်ရွက်ရန်၊
- (ဂ) လုပ်ငန်းရှင်ကိုယ်တိုင် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ကို ရေးသားပြုစုမည် ဆိုပါက စီမံကိန်းအဆိုပြုသူကိုယ်တိုင် ရေးသားပြုစုထားကြောင်း ကတိကဝတ် လက်မှတ် ရေးထိုးဖော်ပြချက်၊ အစီရင်ခံစာ ရေးသားပြုစုသူ၏ ကိုယ်ရေးအချက်အလက်များ၊ ကုမ္ပဏီ ဝန်ထမ်းဖြစ်ကြောင်း ထောက်ခံချက်၊ သက်ဆိုင်ရာအထောက်အထားများ၊ ဌာနတွင်း EMP/ IEE အစီရင်ခံစာများ စိစစ်သုံးသပ်ရေးအစည်းအဝေးတွင် ကိုယ်တိုင်လာရောက် ရှင်းလင်းမည်ဖြစ်ကြောင်း သိရှိဝန်ခံချက်၊ အဆိုပါအချက်အလက်များနှင့်အတူ (EMP) ကို တင်ပြရန်၊
- (ဃ) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၆၃ (ဇ)၊ ၇၆၊ ၇၇ တို့နှင့်အညီ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာနသို့ ၃၁-၁-၂၀၂၅ ရက်နေ့မတိုင်မီ တင်ပြအတည်ပြုချက်ရယူ ရန်။

၃။ သို့ဖြစ်ပါ၍ Kojima Iryo Myanmar Co., Ltd. နှင့် JMKS Co., Ltd. တို့၏ ပတ်ဝန်းကျင်ဆိုင်ရာ ဆန်းစစ်ခြင်းအစီရင်ခံစာများနှင့်ပတ်သက်၍ JMKS Co., Ltd. သည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်၏ ခွင့်ပြုမိန့် (မူရင်း) အား ပြန်လည်အပ်နှံပြီး ဖြစ်ခြင်းကြောင့်လည်းကောင်း၊ Fixed Assets များအား Kojima Iryo Myanmar Co., Ltd. သို့ ထည့်ဝင်ကာ ရင်းနှီးမြှုပ်နှံမှုပမာဏ တိုးမြှင့်ဆောင်ရွက်ရန် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ ခွင့်ပြုမိန့်ရရှိထားပြီး ဖြစ်ခြင်းကြောင့်လည်းကောင်း Kojima Iryo Myanmar Co., Ltd. ၏ CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်ငန်းအနေဖြင့် အထက်အပိုဒ် (၂)၊ (က)၊ (ခ)၊ (ဂ) နှင့် (ဃ) ပါ လိုက်နာဆောင်ရွက်ရမည့်အချက်များအတိုင်း လိုက်နာဆောင်ရွက်၍ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အစီရင်ခံစာကို ၃၁-၁-၂၀၂၅ ရက်နေ့မတိုင်မီ ပဲခူးတိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှတစ်ဆင့် သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာနသို့ တင်ပြအတည်ပြုချက်ရယူသွားရန် အကြောင်းကြားပါသည်။

ပူးတွဲ - ညွှန်ကြားရေးမှူးချုပ်ရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ နေပြည်တော်၏ အကြောင်းပြန်ကြားစာ (၁) စုံ


(အောင်သူဟန်)
ဒုတိယညွှန်ကြားရေးမှူး
ပဲခူးတိုင်းဒေသကြီး၊ ခေတ္တတာဝန်ခံ

မိတ္တူကို
လက်ထောက်ညွှန်ကြားရေးမှူး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ (ကြပ်မတ်ဆောင်ရွက်နိုင်ပါ
သာယာဝတီခရိုင် ရန်)၊
ရုံးလက်ခံ
မျှောစာတွဲ



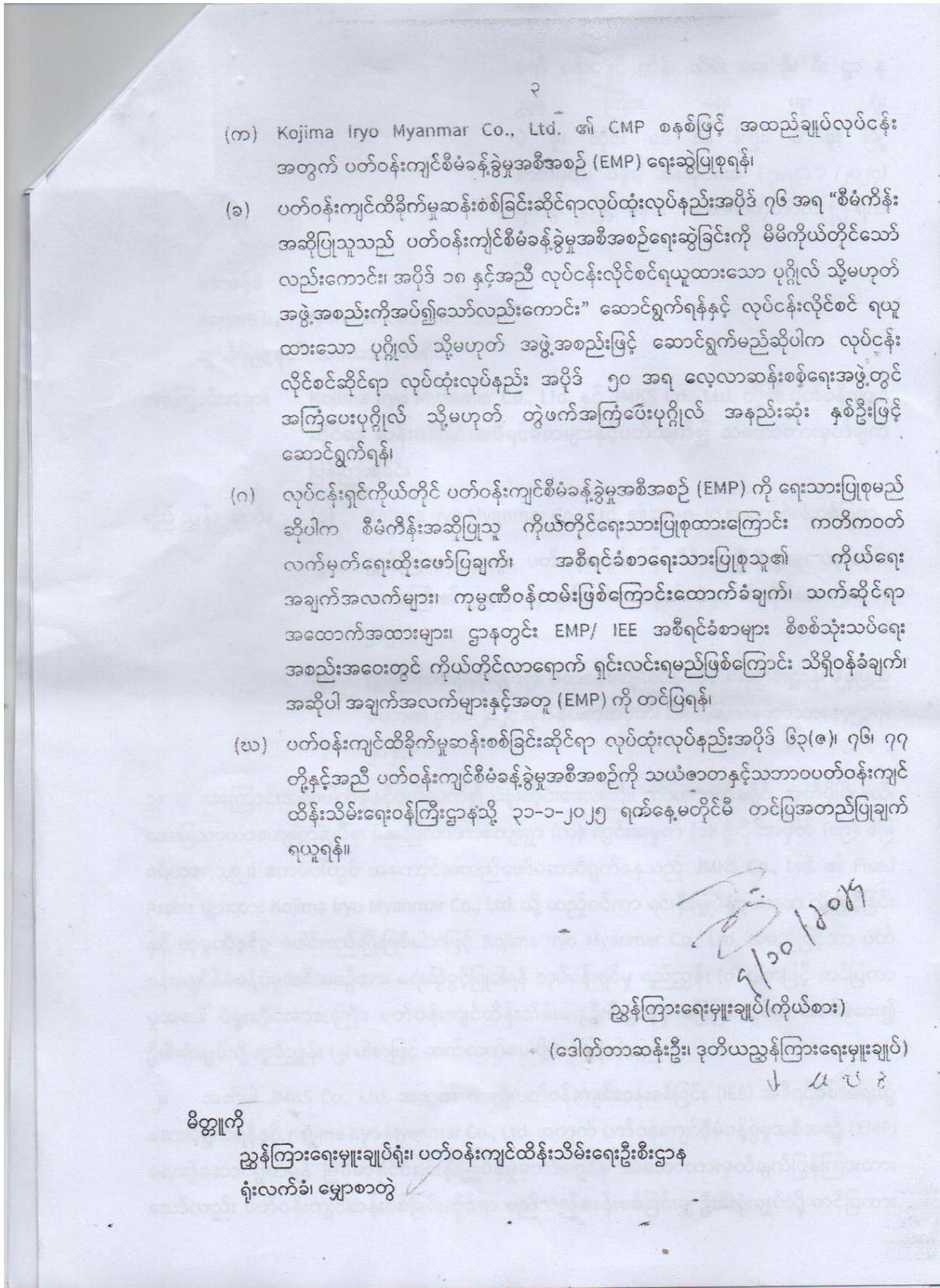
J

၂။ ပဲခူးတိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ရည်ညွှန်း (၂) ပါစာဖြင့် တင်ပြချက်တွင် အောက်ပါအတိုင်း ဖော်ပြထားကြောင်း စိစစ်တွေ့ရှိရပါသည်-

- (က) JMKS Co., Ltd. နှင့် Kojima Iryo Myanmar Co., Ltd. တို့သည် CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်ငန်း(၂) ခုအား တစ်ဆက်တည်းရှိသည့် မြေပေါ်တွင် တည်ဆောက် လည်ပတ်ခြင်းဖြစ်ပါကြောင်း၊
- (ခ) JMKS Co., Ltd. အတွက် မြေဧရိယာ (၁.၉၂) ဧကအသုံးပြုပြီး Kojima Iryo Myanmar Co., Ltd. အတွက် မြေဧရိယာ (၃.၀) ဧက အသုံးပြုပါကြောင်း၊
- (ဂ) Kojima Iryo Myanmar Co., Ltd. အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အား ရေးဆွဲရန်လည်းကောင်း၊ JMKS Co., Ltd. အတွက် ကနဦးပတ်ဝန်းကျင် ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာ ရေးဆွဲဆောင်ရွက်ရန် လည်းကောင်း၊ မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ သဘောထားမှတ်ချက် ပြန်ကြားထားပါကြောင်း၊
- (ဃ) JMKS Co., Ltd. သည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်ခွင့်ပြုမိန့် (မူရင်း) အား ပြန်လည်အပ်နှံပြီးဖြစ်ပါကြောင်း၊
- (င) JMKS Co., Ltd. ၏ Fixed Assets များအား Kojima Iryo Myanmar Co., Ltd. သို့ ထည့်ဝင်ကာရင်းနှီးမြှုပ်နှံမှုပမာဏတိုးမြှင့်ခြင်းနှင့် စုစုပေါင်းမြေဧရိယာ (၄.၉၂) ဧကသို့ တိုးမြှင့်ဆောင်ရွက်ရန် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှခွင့်ပြုမိန့် ရရှိထားပြီး ဖြစ်ပါကြောင်း။

၃။ အဆိုပါ JMKS Co., Ltd. အတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာ ရေးဆွဲဆောင်ရွက်ရန် ရည်ညွှန်း (၃) ပါစာဖြင့်လည်းကောင်း၊ Kojima Iryo Myanmar Co., Ltd. အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ရေးဆွဲဆောင်ရွက်ရန် ရည်ညွှန်း (၄) ပါစာဖြင့် လည်းကောင်း၊ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ သဘောထားမှတ်ချက်ပြန်ကြားထားသော်လည်း ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းဆိုင်ရာ မည်သည့်ဆန်းစစ်ခြင်းမျှ ဦးစီးရုံးချုပ်သို့ တင်ပြထားခြင်း မရှိ သေးကြောင်း စိစစ်တွေ့ရှိရပါသည်။

၄။ သို့ဖြစ်ပါ၍ JMKS Co., Ltd. သည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်ခွင့်ပြုမိန့် (မူရင်း) အား ပြန်လည်အပ်နှံပြီးဖြစ်ခြင်းကြောင့်လည်းကောင်း၊ Fixed Assets များအား Kojima Iryo Myanmar Co.,Ltd.သို့ ထည့်ဝင်ကာရင်းနှီးမြှုပ်နှံမှုပမာဏ တိုးမြှင့်ဆောင်ရွက်ရန် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်မှခွင့်ပြုမိန့် ရရှိထားပြီးဖြစ်ခြင်းကြောင့်လည်းကောင်း၊ Kojima Iryo Myanmar Co., Ltd. မှ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေးရွာအုပ်စု၊ အေးမြ သာယာကျေးရွာ (က)၊ ကွင်းအမှတ် (၁)၊ ဦးပိုင်အမှတ် (၈၉)၊ မြေဧရိယာ(၄.၉၂) ဧကတွင် ဆောင်ရွက် လျက်ရှိသည့် CMP စနစ်ဖြင့်အထည်ချုပ်လုပ်ငန်းနှင့်ပတ်သက်၍ တစ်ဖက်ပါအတိုင်း လုပ်ငန်းရှင်သို့ ဆက်လက်ပြန်ကြားနိုင်ရန် အကြောင်းကြားပါသည်-



APPENDIX (B)

ORGANIZATION'S COMPANY REGISTRATION AND LICENSE




ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်
Certificate of Incorporation

စိမ်းလန်းမြန်မာ ပတ်ဝန်းကျင်ဆိုင်ရာ ဝန်ဆောင်မှု ကုမ္ပဏီလီမိတက်
GREEN MYANMAR ENVIRONMENTAL SERVICES COMPANY LIMITED
Company Registration No. 110299931

မြန်မာနိုင်ငံကုမ္ပဏီများအက်ဥပဒေ ၁၉၁၄ ခုနှစ် အရ
စိမ်းလန်းမြန်မာ ပတ်ဝန်းကျင်ဆိုင်ရာ ဝန်ဆောင်မှု ကုမ္ပဏီလီမိတက်
အား ၂၀၁၂ ခုနှစ် အောက်တိုဘာလ ၃ ရက်နေ့တွင်
အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ
အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့် ပြုလိုက်သည်။

This is to certify that
GREEN MYANMAR ENVIRONMENTAL SERVICES COMPANY LIMITED
was incorporated under the Myanmar Companies Act 1914 on 3 October
2012 as a Private Company Limited by Shares.





ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ
Registrar of Companies
ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန
Directorate of Investment and Company Administration

Former Registration No. 2744/2012-2013

Organization License (Page -1)



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ

The Government of the Republic of the Union of Myanmar

သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန

Ministry of Natural Resources and Environmental Conservation

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

Environmental Conservation Department

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ငန်းလိုင်စင် (အဖွဲ့အစည်း)

Environmental Impact Assessment License (Organization)



Green Myanmar Environmental Services Co.,Ltd ၊ ကုမ္ပဏီမှတ်ပုံတင်အမှတ်-၁၁၀၂၉၉၉၃၁ အား အကြံပေးအဖွဲ့အမျိုးအစား(ခ) အဖြစ် လုပ်ကိုင်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ငန်းလိုင်စင်ကို ကနဦးပတ်ဝန်းကျင် ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းလုပ်ငန်း လိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့်အညီ ဤဝန်ကြီးဌာန၏ အတည်ပြုချက်ဖြင့် ထုတ်ပေးလိုက်သည်။

It is here by issued Green Myanmar Environmental Services Co.,Ltd ၊ Registration No. 110299931 has fulfilled the requirements for obtaining an Environmental Impact Assessment License to conduct as a Consulting Organization Type(B) under the Licensing Procedure for the Third Persons or Organizations Undertaking Initial Environmental Examination and Environmental Impact Assessment, approved by the Ministry of Natural Resources and Environmental Conservation.

လိုင်စင်နံပါတ် License Number	: EIA-CO(B)006/2024
ထုတ်ပေးသည့် ရက်စွဲ Date of Issue	: 30-9-2024
ကုန်ဆုံးသည့် ရက်စွဲ Date of Expiry	: 29-9-2027






(သိန်းတိုး)

ညွှန်ကြားရေးမှူးချုပ်

Organization License (Page - 2)

စည်းကမ်းချက်များ

၁။ ဤလုပ်ငန်းလိုင်စင်ကိုင်ဆောင်ထားသူသည်-

- (က) လုပ်ငန်းလိုင်စင်မိတ္တူကို လုပ်ငန်းခွင်တွင် အများမြင်သာအောင် ချိတ်ဆွဲ၍ မူရင်းကို လုံခြုံစွာထိန်းသိမ်းထားရှိရမည်။
- (ခ) လုပ်ငန်းလိုင်စင်ကို ပြင်ဆင်ခြင်းနှင့် ပျက်ဆီးခြင်း၊ လုပ်ငန်းလိုင်စင်မူရင်း သို့မဟုတ် မိတ္တူကို မသက်ဆိုင်သူ တစ်ဦးဦးအား အခကြေးငွေဖြင့်ငှားရမ်းခြင်း၊ အမည်ခံအသုံးပြုစေခြင်းနှင့်တစ်ဆင့်လွှဲပြောင်းကိုင်ဆောင်စေခြင်း မပြုရ။
- (ဂ) လုပ်ငန်းလိုင်စင်ပါအချက်များကို ပြုပြင်ပြောင်းလဲရန် လိုအပ်ပါက ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ ကြိုတင် တင်ပြလျှောက်ထားရမည်။
- (ဃ) လုပ်ငန်းလိုင်စင် ပျက်စီးခြင်း၊ ပျောက်ဆုံးခြင်း ဖြစ်ပွားပါက ၇ ရက်အတွင်း ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ အကျိုးအကြောင်းခိုင်လုံစွာ ဖော်ပြ၍ တင်ပြလျှောက်ထားရမည်။
- (င) လုပ်ငန်းလိုင်စင်ကို သတ်မှတ်သည့် စည်းကမ်းဘောင်အတွင်း လုပ်ငန်းလုပ်ကိုင်ခွင့် အငြင်းပွားမှုများနှင့်စပ်လျဉ်း၍ တာဝန်ယူဖြေရှင်းရမည်။ ယင်းသို့ဖြေရှင်းနိုင်ခြင်းမရှိပါက လုပ်ငန်းလုပ်ကိုင်ခွင့်ရပ်ဆိုင်းခြင်း သို့မဟုတ် ပယ်ဖျက်ခြင်း ခံရမည်။
- (စ) လုပ်ငန်းလိုင်စင်တွင် ခွင့်ပြုထားသည့် ကျွမ်းကျင်မှုနယ်ပယ်များအတွက်သာ တာဝန်ယူ လေ့လာဆန်းစစ်ရေးဆွဲရမည်။
- (ဆ) အဖွဲ့အစည်းဖြစ်လျှင် အဖွဲ့အစည်းတွင် ဒါရိုက်တာဘုတ်အဖွဲ့ (Board of Director) ၊ အကြံပေးပုဂ္ဂိုလ်၊ အထောက်အကူပြုအဖွဲ့ဝင်များ ပြောင်းလဲမှုတစ်စုံတစ်ရာ ရှိပါက ပြောင်းလဲသည့် နေ့ရက်မှစ၍ ရက်ပေါင်း ၉၀ အတွင်း တည်ဆဲဥပဒေများနှင့်အညီ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ အချိန်မီ အကြောင်းကြားရမည်။
- (ဇ) အကြံပေးအဖွဲ့အမျိုးအစား (က) သို့မဟုတ် (ခ) တွင် အဓိကအကြံပေးပုဂ္ဂိုလ်အဖြစ် ဆောင်ရွက်နေသော အကြံပေးပုဂ္ဂိုလ် သို့မဟုတ် တွဲဖက်အကြံပေးပုဂ္ဂိုလ်ဖြစ်ပါက အခြားအကြံပေးအဖွဲ့အစည်းတွင် အဓိကအကြံပေးပုဂ္ဂိုလ်အဖြစ် ဖြစ်စေ၊ အဓိကမဟုတ်သော အကြံပေးပုဂ္ဂိုလ်အဖြစ် ဖြစ်စေ ပါဝင်ဆောင်ရွက်ခြင်း မပြုရ။
- (ဈ) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ၊ နည်းဥပဒေများ၊ အမိန့်၊ ညွှန်ကြားချက်နှင့် လုပ်ထုံးလုပ်နည်းများကိုလည်းကောင်း၊ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းမှုဆန်းစစ်ခြင်းပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းများလုပ်ငန်းလိုင်စင်ဆိုင်ရာလုပ်ထုံးလုပ်နည်း အပိုဒ် ၃၃ ပါ စည်းကမ်းချက်များကိုလည်းကောင်း၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနက အခါအားလျော်စွာ သတ်မှတ်သည့် စည်းကမ်းချက်များကိုလည်းကောင်း လိုက်နာရမည်။

၂။ လုပ်ငန်းလိုင်စင်သက်တမ်းတိုးခြင်းနှင့် စပ်လျဉ်း၍-

- (က) လုပ်ငန်းလိုင်စင်လုပ်ထုံးလုပ်နည်းတွင် သတ်မှတ်ထားသည့်အတိုင်း လုပ်ငန်းလိုင်စင် သက်တမ်းမကုန်ဆုံးမီ သုံးလ ကြိုတင်၍ မပျက်မကွက် လိုင်စင် သက်တမ်းတိုးရမည်။
- (ခ) လုပ်ငန်းလိုင်စင်သက်တမ်းတိုးရန် လျှောက်ထားခြင်း၊ လိုင်စင်ထုတ်ယူခြင်းကို ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ လူကိုယ်တိုင် သို့မဟုတ် အဖွဲ့အစည်းတာဝန်ခံကိုယ်တိုင် လာရောက် ဆောင်ရွက်ရမည်။
- (ဂ) လုပ်ငန်းလိုင်စင်သက်တမ်းတိုးပြီး လိုင်စင်အသစ်ထုတ်ယူရာတွင် လက်ဝယ်ရှိမူရင်းလိုင်စင်ကို ပြန်လည်အပ်နှံရမည်။

၃။ လုပ်ငန်းလိုင်စင်ရရှိသူသည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနက ခွင့်ပြုထားသော ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အမျိုးအစားမှအပ အခြားဆန်းစစ်ခြင်းအမျိုးအစားကို လေ့လာဆန်းစစ်ရေးဆွဲဆောင်ရွက်ခြင်း မပြုရ။

၄။ လုပ်ငန်းလိုင်စင်ရရှိသူသည် မြန်မာနိုင်ငံ၏ တည်ဆဲဥပဒေတစ်ရပ်ရပ်ကို ဖောက်ဖျက်ကြောင်း သို့မဟုတ် ဆန်းစစ်ခြင်း လုပ်ငန်းများဆောင်ရွက်ရာတွင် သိသာထင်ရှားသော မှားယွင်းမှုများ ပါရှိနေပြီး သတ်မှတ်စံချိန်စံညွှန်း သို့မဟုတ် ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဥပဒေ၊ နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းမှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းတို့အရ စိစစ်သုံးသပ်ပြီး ကနဦးသဘောထားမှတ်ချက်နှင့်အညီ ပြန်လည်ပြင်ဆင်ခြင်း မရှိကြောင်း ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ သတ်မှတ် ဆုံးဖြတ်ခြင်းခံရလျှင် လုပ်ငန်းလိုင်စင် ရပ်ဆိုင်းခြင်း သို့မဟုတ် ပယ်ဖျက်ခြင်း ခံရမည်။

၅။ လုပ်ငန်းလိုင်စင်ရရှိသော အဖွဲ့အစည်းသည် သက်ဆိုင်ရာစီမံကိန်းအတွက် လေ့လာဆန်းစစ်ရေးဆွဲဆောင်ရွက်ရန် တတိယအဖွဲ့အစည်းအတည်ပြုချက်ရယူရာ၌ မိမိအဖွဲ့အစည်းတွင် ပါဝင်သည့် အကြံပေးပုဂ္ဂိုလ်၊ တွဲဖက်အကြံပေးပုဂ္ဂိုလ် များ၏ အမည်စာရင်းမှအပ အခြားပုဂ္ဂိုလ်များ၏ အမည်စာရင်းများကို တင်ပြခွင့်မရှိရ။

၆။ လုပ်ငန်းလိုင်စင်ရရှိသောအဖွဲ့အစည်းသည် မိမိအဖွဲ့အစည်းက လက်လှမ်းမမီသော ကျွမ်းကျင်မှုနယ်ပယ်များအတွက် လေ့လာ ဆန်းစစ်ရေးဆွဲဆောင်ရွက်နိုင်ရန် လုပ်ငန်းလိုင်စင်ရရှိပြီးဖြစ်သည့် တစ်သီး ပုဂ္ဂလိကလုပ်ကိုင်သူ (Freelancer) အကြံပေးပုဂ္ဂိုလ် သို့မဟုတ် တွဲဖက်အကြံပေးပုဂ္ဂိုလ်ကို သက်ဆိုင်ရာစီမံကိန်းအတွက်သာ ငှားရမ်းဆောင်ရွက်ရမည်။

Organization License (Page - 3)

Green Myanmar Environmental Srevices Co.,Ltd

လိုင်စင်နံပါတ် License Number : EIA-CO(B)006/2024

အဖွဲ့အစည်းက လေ့လာဆန်းစစ်ခွင့်ရှိသော စီမံကိန်းလုပ်ငန်းအုပ်စုများ

စဉ်	လုပ်ငန်းလိုင်စင်ဆိုင်ရာလုပ်ထုံးလုပ်နည်း ပုံစံ (ခ) ပါ စီမံကိန်းလုပ်ငန်းအုပ်စုများ	မှတ်ချက်
၁။	အကြံပေးအဖွဲ့အမျိုးအစား(ခ)အတွက် လုပ်ငန်းလိုင်စင်သာခွင့်ပြုသော်လည်း ကျွမ်းကျင်မှု နယ်ပယ်များလိုအပ်သည့်အတွက် လေ့လာဆန်းစစ်ခွင့်ရှိသည့် စီမံကိန်းလုပ်ငန်းအုပ်စုများမရှိသေးပါ။	

Green Myanmar Environmental Srevices Co.,Ltd

လိုင်စင်နံပါတ် License Number : EIA-CO(B)006/2024

Eligible Categories of Projects to be conducted by the Organization

Sr. No.	Categories of Projects as per Form B of Licensing Procedure	Note
1.	Although the license for the Consulting Organization Type(B) is allowed, there are no project groups that have the right to conduct for the requirement of expertise areas.	

Organization License (Page - 4)

Green Myanmar Environmental Services Co.,Ltd

လိုင်စင်နံပါတ် License Number : EIA-CO(B)006/2024

(က) အဓိကအကြံပေးပုဂ္ဂိုလ်များ

စဉ်	အမည်	လုပ်ငန်းလိုင်စင်အမှတ်	မှတ်ချက်
၁	J	၃	၆

(က) အကြံပေးပုဂ္ဂိုလ်

၁	ဦးကျော်နိုင်ဦး	EIA - C 052/2024	
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(ခ) တွဲဖက်အကြံပေးပုဂ္ဂိုလ်

၁	ဦးစိန်သောင်းဦး	EIA - AC 045/2023	
J	ဦးကျော်စိုးဝင်း	EIA - AC 046/2023	
၃	ဦးမျိုးမြင့်	EIA - AC 047/2023	
၄	ဒေါ်ခင်ရွှေဌေး	EIA - AC 100/2024	
၅	ဦးကြည်ဟန်တို	EIA - AC 048/2023	
၆	ဦးစော်ဝင်းမြင့်	EIA - AC 063/2023	

(ခ) အဓိကမဟုတ်သော အကြံပေးပုဂ္ဂိုလ်များ

စဉ်	အမည်	လုပ်ငန်းလိုင်စင်အမှတ်	မှတ်ချက်
၁	J	၃	၆

(က) အကြံပေးပုဂ္ဂိုလ်

၁	မရှိပါ	-	
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(ခ) တွဲဖက်အကြံပေးပုဂ္ဂိုလ်

၁	ဦးခင်အောင်	EIA - AC 099/2024	
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Personal Consultant License 1




ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
 The Government of the Republic of the Union of Myanmar
 သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
 Ministry of Natural Resources and Environmental Conservation
 ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
 Environmental Conservation Department
 ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန (ပုဂ္ဂိုလ်)
Environmental Impact Assessment License (Individual)

ဦးကျော်စိုးဝင်း၊ ၁၂/ဥကတ(နိုင်)၀၃၈၄၅၃ အား တွဲဖက်အကြံပေးပုဂ္ဂိုလ် အဖြစ် လုပ်ကိုင်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ လုပ်ငန်းလိုင်စင်ကို ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ အတည်ပြုချက်ဖြင့် ထုတ်ပေးလိုက်သည်။
 It is hereby issued that U Kyaw Soe Win, 12/OuKaTa(N)038453 has fulfilled the requirements for obtaining an Environmental Impact Assessment License to conduct as an Associate Consultant under the Licensing Procedure for the Third Persons or Organizations Undertaking Initial Environmental Examination and Environmental Impact Assessment, approved by the Ministry of Natural Resources and Environmental Conservation.

လေ့လာဆန်းစစ်ခွင့်ရှိသည့် ကျွမ်းကျင်မှုနယ်ပယ်များမှာ အောက်ပါအတိုင်းဖြစ်သည်။
 The areas of expertise, eligible to be conducted, are as follows:

1. လူမှုရေးဆိုင်ရာ လေ့လာခြင်းနှင့် သရုပ်ခွဲဆန်းစစ်ခြင်း (Social Study and Analysis)
- 2.
- 3.
- 4.
- 5.

လိုင်စင်နံပါတ် License Number	: EIA-AC 046/2023
ထုတ်ပေးသည့် ရက်စွဲ Date of Issue	: 1-12-2023
ကုန်ဆုံးသည့် ရက်စွဲ Date of Expiry	: 30-11-2026






(သိန်းတိုး)
 ဩန်ကြားရေးမှူးချုပ်



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
The Government of the Republic of the Union of Myanmar
သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
Ministry of Natural Resources and Environmental Conservation
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
Environmental Conservation Department
ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ငန်းလိုင်စင် (ပုဂ္ဂိုလ်)
Environmental Impact Assessment License (Individual)

ဒေါ်ခင်ရွှေဌေး၊ ၁၂/သယံက(နိုင်)၀၀၈၈၀၈ အား တွဲဖက်အကြံပေးပုဂ္ဂိုလ် အဖြစ် လုပ်ကိုင်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ငန်းလိုင်စင်ကို ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း ပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်း လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့်အညီ ဤဝန်ကြီး ဌာန၏ အတည်ပြုချက်ဖြင့် ထုတ်ပေးလိုက်သည်။

It is hereby issued that Daw Khin Shwe Htay, 12/ThaGaKa(N)008808 has fulfilled the requirements for obtaining an Environmental Impact Assessment License to conduct as an **Associate Consultant** under the Licensing Procedure for the Third Persons or Organizations Undertaking Initial Environmental Examination and Environmental Impact Assessment, approved by the Ministry of Natural Resources and Environmental Conservation.

လေ့လာဆန်းစစ်ခွင့်ရှိသည့် ကျွမ်းကျင်မှုနယ်ပယ်များမှာ အောက်ပါအတိုင်းဖြစ်သည်-
The areas of expertise, eligible to be conducted, are as follows:

1. စွန့်ပစ်အစိုင်အခဲနှင့် ဘေးအန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲခြင်း (Solid Waste and Hazardous Waste Management)
- 2.
- 3.
- 4.
- 5.

လိုင်စင်နံပါတ် License Number : EIA-AC 100/2024
ထုတ်ပေးသည့် ရက်စွဲ Date of Issue : 31-5-2024
ကုန်ဆုံးသည့် ရက်စွဲ Date of Expiry : 30-5-2027






(သိန်းတိုး)

ညွှန်ကြားရေးမှူးချုပ်

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
The Government of the Republic of the Union of Myanmar
သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
Ministry of Natural Resources and Environmental Conservation
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
Environmental Conservation Department
ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ငန်းလိုင်စင် (ပုဂ္ဂိုလ်)
Environmental Impact Assessment License (Individual)

ဦးကြည်ဟန်ဘို ၊ ၁၂/ဒဂုံ(နိုင်)၀၂၂၂၃၁ အား တွဲဖက်အကြံပေးပုဂ္ဂိုလ် အဖြစ် လုပ်ကိုင်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ငန်းလိုင်စင်ကို ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်း လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့် အညီ ဤဝန်ကြီးဌာန၏ အတည်ပြုချက်ဖြင့် ထုတ်ပေးလိုက်သည်။
It is hereby issued that U Kyi Han Bo, 12/DaGaMa(N)022231 has fulfilled the requirements for obtaining an Environmental Impact Assessment License to conduct as an Associate Consultant under the Licensing Procedure for the Third Persons or Organizations Undertaking Initial Environmental Examination and Environmental Impact Assessment, approved by the Ministry of Natural Resources and Environmental Conservation.

လေ့လာဆန်းစစ်ခွင့်ရှိသည့် ကျွမ်းကျင်မှုနယ်ပယ်များမှာ အောက်ပါအတိုင်းဖြစ်သည်။
The areas of expertise, eligible to be conducted, are as follows:

1. ဆူညံသံနှင့် တုန်ခါမှု (Noise and Vibration)
- 2.
- 3.
- 4.
- 5.

လိုင်စင်နံပါတ် License Number : EIA-AC 048/2023
ထုတ်ပေးသည့် ရက်စွဲ Date of Issue : 1-12-2023
ကုန်ဆုံးသည့် ရက်စွဲ Date of Expiry : 30-11-2026

(သိန်းတိုး)
ညွှန်ကြားရေးမှူးချုပ်

CURRICULUM VITAE



Personal Data

Name	Aung Ko Min
Contact Address / Email	No.779 (B), Phugyi St, (20) Quarter, South Dagon, Yangon aungkomin_gmes@gmail.com
Contact Number	09-456700327
Date of Birth	2.4.1995
Nationality	Myanmar
Sex	Male
Marital Status	Marriage
N.R.C No	12/DAGATA (N) 061751

Educational Qualifications

Bachelor Degree of Chemical Engineer	Technological University (Thanlyin 2012 – 2018)
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Training

Water & Wastewater Treatment System Course in Myanmar Engineering Society (MES)	<ul style="list-style-type: none">➤ Knowledge Sharing of Water & Wastewater Treatment System➤ The Knowledge of how to maintain the aerobic & Anaerobic wastewater treatment system of Grand Royal Co., Ltd➤ Knowledge Sharing & Visiting of Incineration Plant how to produce electricity from waste
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ပညာရေးဝန်ကြီးဌာန
Ministry of Education



နည်းပညာတက္ကသိုလ် (သန်လျင်)
Technological University (Thanlyin)

အင်ဂျင်နီယာဘွဲ့
Bachelor of Engineering

နည်းပညာတက္ကသိုလ် (သန်လျင်) မှ အောင်မြင်ခဲ့သော
ဦး ဦး မြင့်၏ သား/အမီး ဇော်ငွေ ချောင်း ကို ခပ်း အား
အင်ဂျင်နီယာဘွဲ့ (..... ဓာတု.....) ကို
အပ်နှံခြင်းဆိုင်ရာလိုင်စင်သည်၊ **November 2018**

Upon successful completion of the studies at

Technological University (Thanlyin)

The degree of Bachelor of Engineering (..... Chemical.....)

is awarded to

Mg Aung Ko Min son/daughter of U Soe Myint.....

နိုင်ငံသားစိစစ်ရေးကတ်ပြားအမှတ် (Citizenship Scrutiny Card No.) 12/20/06/06 (Waing) 061751

ဘွဲ့ရမှတ်ပုံတင်အမှတ် (Graduate Registration Card No.) 011986



[Handwritten Signature]

မှတ်တမ်းထိန်း
Registrar

Date 5.2.2019
5 February 2019

[Handwritten Signature]
ပါမောက္ခချုပ်
Rector

APPENDIX (C)

CERTIFICATE OF EXPORTER/IMPORTER REGISTRATION

048335



The Government of The Republic of the Union of Myanmar
Ministry of Commerce
Department of Trade

CERTIFICATE OF EXPORTER/IMPORTER REGISTRATION

1. Enterprise Name (မြန်မာ/အင်္ဂလိပ်) KOJIMA IRYO MYANMAR COMPANY LIMITED. 2. Registration No: 117325229(23-04-15)

3. Registration Term: FIVE YEAR

4. Start Date : 02-04-2020

5. End Date : 01-04-2025

6. Address : (မြန်မာ/အင်္ဂလိပ်) No.869, Room A-3, Mahabawga Street, Ward No.8, Mayangone Township, Yangon Region, Myanmar

7. Business Registration No : 117325229(02-04-2015)

8. Type of Business : Sole Proprietorship(တစ်ဦးတည်းပိုင်) Partnership(အစုအစည်း)
 Limited Company(လီမိတက်ကုမ္ပဏီ)(Myanmar/Foreign)
 Co-operative Society(သမဝါယမအသင်း)
 Others(Please specify)အခြား(ဖော်ပြရန်) သင်း/ဖွဲ့မှတ်တမ်းပါလုပ်ငန်း()မျိုး ဆောင်ရွက်ခွင့်ရှိသည်။

9. Type of Service : New Extension

10. Contact No : 09-5181932 Telephone No. Fax No. e-mail kojimairyomyanmar@gmail.com

11. Remarks : Form Of Permit No.16FC/2015-2016(YGN)(2-4-2015) and MIC No.912/2015(17-3-2015)

12. Terms and Conditions : စည်းကမ်းချက်များ
 I hereby register the above mentioned enterprise as Exporter/Importer subject to the following terms and conditions: (အောက်ဖော်ပြပါစည်းကမ်းချက်များဖြင့် ဖွဲ့ကုန်သွင်းကုန် လုပ်ငန်းရှင်အဖြစ် မှတ်တမ်းတင်ခွင့်ပြုသည်)
 (a) Line of goods permitted - all items except prohibited and restricted items.
 နှင့်ပြုလုပ်ကုန်ပစ္စည်းအမျိုးအမည် - တားမြစ်ကုန်သတ်ထားသော ကုန်ပစ္စည်းအမယ်များမှလွဲ၍ ကျန်ကုန်ပစ္စည်းများအားလုံး
 (b) The enterprise must abide by the Export/Import rules and Regulations prescribed for the registered Exporters/Importers. (လုပ်ငန်းရှင်သည် မှတ်ပုံတင် ဖွဲ့ကုန်သွင်းကုန်လုပ်ငန်းရှင်အဖြစ်မှတ်ပုံတင်သူများ လိုက်နာရမည့်စည်းကမ်းချက်များကို လိုက်နာရမည်)



Stamp



30.3.2020

For Director General

ဝင်းဝင်းစမ်း လက်ထောက်ညွှန်ကြားရေးမှူး

EIREGEX0320209EIREGEX12130012

Extension on Certificate of Exporter/Importer Registration



The Government of The Republic of the Union of Myanmar
Ministry of Commerce
Department of Trade

CERTIFICATE OF EXPORTER/IMPORTER REGISTRATION

1. Enterprise Name: KOJIMA IRYO MYANMAR COMPANY LIMITED.
2. Registration No: 117325229(23/04/2015)
3. Registration Term: Five Year
4. Start Date: 02/04/2025
5. End Date: 01/04/2030
6. Address: No.869, Room A-3, Mahabawga Street, Ward No.8, Mayangone Township,
Yangon Region, MYANMAR 11061
7. Business Registration No : 117325229(02/04/2015)
8. Type of Business : Industry/Production/Manufacturing (Joint Venture)
9. Type of Service : Extension
10. Contact No : +95-9-5181932 kojimairyomyanmar@gmail.com
Telephone No. Fax No. E-mail

11. Remarks : -

12. Terms and Conditions :

I hereby register the above mentioned enterprise as Exporter/Importer subject to the following terms and conditions:

- (a) Line of goods permitted - all items except prohibited and restricted items.
- (b) The enterprise must abide by the Export/Import rules and Regulations prescribed for the registered Exporters/Importers.



Daw Cho Thet Mu
(Director)

OEPTK-02508-2024

APPENDIX (D)

PRIVATE INDUSTRIAL REGISTRATION CERTIFICATE



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
 စက်မှုဝန်ကြီးဌာန
 စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန
 ပုဂ္ဂလိကစက်မှုလုပ်ငန်းမှတ်ပုံတင်လက်မှတ်

စက်မှုမှတ်ပုံတင်အမှတ် ၀၁/ကြီး/၇၇၇ ရက်စွဲ ၂၀. ၁၂. ၂၀၁၆
 လုပ်ငန်းအရွယ်အစား အကြီးစား ပြည်ထောင်စုနယ်မြေ/တိုင်းဒေသကြီး/ပြည်နယ် ပဲခူး
 အောက်ပါလုပ်ငန်းသည် ပုဂ္ဂလိကစက်မှုလုပ်ငန်း ဥပဒေ ပုဒ်မ ၇ ပုဒ်မခွဲ (ဝ)အရ မှတ်ပုံတင်ပြီး
 ဖြစ်ပါသည်။
 ၁။ လုပ်ငန်းအမည် KOJIMA IRYO MYANMAR CO., LTD CMP စနစ်ဖြင့်အထည်ချုပ်လုပ်ငန်း
 ၂။ လုပ်ငန်းအမျိုးအမည် ဝတ်ဆင်ရေးလုပ်ငန်း
 ၃။ အဓိကကုန်ချောပစ္စည်းအမျိုးအမည် Ladies Wear (Jacket, Skirt, Pant, Blouse, Coat)

 ၄။ တည်နေရာလိပ်စာ ဦးပိုင်အမှတ်(၈၉)၊ ကွင်းအမှတ်(၁)၊ အေးမြသာယာ(က)၊ အေးမြသာယာကျေးရွာ
 အုပ်စု၊ အုတ်ဖိုမြို့နယ်၊ သာယာဝတီခရိုင်

 ၅။ ပိုင်ဆိုင်မှုအမျိုးအစား ကုမ္ပဏီပိုင်
 ၆။ လုပ်ငန်းရှင်အမည် ဦးစိန်တိုး(ဒါရိုက်တာ)
 ၇။ ကိုင်ဆောင်သည့်မှတ်ပုံတင်အမှတ် ၁၂/၃ကမ(နိုင်)၀၂၅၉၈၈
 ၈။ ရင်းနှီးမြုပ်နှံမှုတန်ဖိုး(ကျပ်) ၁၆၉. ၇၀ သန်း+USD ၁၀၀၂၃၀ တည်ထောင်သည့်ခုနှစ် ၂၀၁၆
 ၉။ အသုံးပြုသည့်အားအမျိုးအစား လျှပ်စစ် မြင်းကောင်ရေ ၄၂၉ HP
 ၁၀။ အလုပ်သမားဦးရေ ၅၇ ဦး
 ၁၁။ မှတ်ပုံတင်သက်တမ်းကုန်ဆုံးသည့်နေ့ရက် ၃၀. ၁၂. ၂၀၁၇



(Signature)
 အေးအေးဝင်း
 ညွှန်ကြားရေးမှူးချုပ်

လုပ်ငန်းရှင်များလိုက်နာရန်စည်းကမ်းချက်များ

- ၁။ ဤမှတ်ပုံတင်လက်မှတ်ကို အများမြင်သာသည့်နေရာတွင် ချိတ်ဆွဲထားရမည်။
- ၂။ ဤမှတ်ပုံတင်လက်မှတ်ကို မသက်ဆိုင်သူအား လွှဲအပ်ခြင်း သို့မဟုတ် လွှဲပြောင်းပေးခြင်းမပြုရ။
- ၃။ ဤမှတ်ပုံတင်လက်မှတ်ပါ အချက်အလက်များကို ပြင်ဆင်ခြင်း သို့မဟုတ် ဖြည့်စွက်ခြင်းမပြုရ။
- ၄။ ဤမှတ်ပုံတင်လက်မှတ် ပျောက်ဆုံးလျှင် မှတ်ပုံတင်လက်မှတ်မိတ္တူကို ထုတ်ပေးရန် ပြည်ထောင်စုနယ်မြေ သို့မဟုတ် တိုင်းဒေသကြီး သို့မဟုတ် ပြည်နယ်ဦးစီးဌာနမှူးထံ ခိုင်လုံသော အထောက်အထားနှင့်အတူ လျှောက်ထားရမည်။
- ၅။ မှတ်ပုံတင်လက်မှတ်ပျက်စီးလျှင် သို့မဟုတ် မထင်မရှားဖြစ်လျှင် သို့မဟုတ် မှတ်ပုံတင်လက်မှတ် ပါ အချက်အလက်များ ပြောင်းလဲရန်လိုအပ်လျှင် ပြည်ထောင်စုနယ်မြေ သို့မဟုတ် တိုင်းဒေသကြီး သို့မဟုတ် ပြည်နယ်ဦးစီးဌာနမှူးထံ မှတ်ပုံတင်လက်မှတ်နှင့် ပူးတွဲတင်ပြလျှောက်ထားရမည်။
- ၆။ ဤမှတ်ပုံတင်လက်မှတ်ကို စက်မှုလုပ်ငန်းနှင့်စပ်လျဉ်းသည့်ကိစ္စမှအပ မည်သည့်ကိစ္စတွင်မျှ အသုံးမပြုရ။
- ၇။ မှတ်ပုံတင်သက်တမ်းကုန်ဆုံးမီ သက်တမ်းတိုးမြှင့်ပေးရန် လျှောက်ထားရာတွင် ဤမှတ်ပုံတင် လက်မှတ်ကို ပူးတွဲတင်ပြရမည်။
- ၈။ သက်တမ်းကုန်ဆုံးပြီး ရက်ပေါင်း (၆၀)အတွင်း သက်တမ်းတိုးမြှင့်လျှောက်ထားပါက သတ်မှတ်သည့် ဒဏ်ကြေးကို ပေးဆောင်ရမည်။
- ၉။ သက်တမ်းတိုးမြှင့်ရန် လျှောက်ထားခြင်းမရှိပါက မှတ်ပုံတင်ပျက်ပြယ်ပြီးဖြစ်သည်။

မှတ်ပုံတင်သက်တမ်းတိုးမြှင့်ခြင်း

စဉ်	ချလန်အမှတ်/ရက်စွဲ	မှတ်ပုံတင်သက်တမ်းကုန်ဆုံးမည့်နေ့ရက်	ခွင့်ပြုသူလက်မှတ်
၁.	၂၂/၁၉.၁၂.၂၀၁၇	၃၁ - ၁၂ - ၂၀၁၈	
၂.	၁၁၄/၁၄.၁၂.၂၀၁၈	၃၁ - ၁၂ - ၂၀၁၉	
၃.	၃၂/၁၇.၁၂.၂၀၁၉	၃၁ - ၁၂ - ၂၀၂၀	
၄.	၃၂/၁၁.၀၂.၂၀၂၀	၃၀.၁၂.၂၀၂၁	
၅.	၃၂/၆.၀၂.၂၀၂၁	၃၀.၁၂.၂၀၂၂	
၆.	၂၉/၇.၀၂.၂၀၂၂	၃၀.၁၂.၂၀၂၃	
၇.	၉၉/၁၈.၁၂.၂၀၂၃	၃၁ - ၁၂ - ၂၀၂၄	
၈.	၁၄၇/၁၈.၁၂.၂၀၂၄	၃၁ - ၁၂ - ၂၀၂၅	

**CERTIFICATE OF MEMBERSHIP OF THE REPUBLIC OF THE
 UNION OF MYANMAR FEDERATION OF CHAMBERS OF
 COMMERCE AND INDUSTRY**

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံ
 ကုန်သည်များနှင့်စက်မှုလက်မှုလုပ်ငန်းရှင်များအသင်းချုပ်
The Republic of The Union of Myanmar Federation of Chambers of Commerce and Industry
 No.(29), Min Ye' Kyaw Swar Road, Lanmadaw Township, Yangon, Myanmar.
Established In1919




**အသင်းဝင်လက်မှတ်
 Certificate of Membership**

Membership No. & Date
30725 (30-4-2015)

အောက်ဖော်ပြပါနိုင်ငံခြားကုမ္ပဏီ သည်ဤကုန်သည်စက်မှုအသင်းချုပ်တွင် ၂၀၁၅ ခုနှစ်၊ ဧပြီလ (၃၀) ရက်နေ့မှစ၍ အသင်းဝင်တစ်ဦး ဖြစ်ပါကြောင်း။
 The under - mentioned **Foreign Company** is a member of the UMFCCI with effect from **30725 (30-4-2015)**

အသင်းဝင်အမည်နှင့် လိပ်စာ **ကိုဂျီမအိုင်ရီမြန်မာကုမ္ပဏီလီမိတက်**
 အမှတ်(၈၆၉)၊ အခန်းအမှတ်(အေ-၃)၊ မဟာဘောဂလမ်း၊ (၈)ရပ်ကွက်၊
 မရမ်းကုန်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

Member's Name & Address **Kojima Iryo Myanmar Company Limited**
 No.(869), Room No.(A-3), Mahabawga Street, Ward No.(8),
 Mayangone Township, Yangon Region.

လုပ်ငန်းမှတ်ပုံတင်အမှတ်နှင့်ရက်စွဲ **၁၁၇၃၂၅၂၉(၂.၄.၂၀၁၅)**

Business Registration No. and Date **117325229 (2.4.2015)**

Tel 09-5181932 Fax - e-mail -


Secretary General
 Signature of Member (or) Representative
 Name & NRC No. **Mr. Takashi Ishiguro (P.P.No. MS6944527)**
 Designation **Managing Director**


President

Extended Period	Extended Registration No.	Authorized Signature
(1) From 1-1-2018 to 31-12-2021	(01597)	 Joint Secretary General
(2) From to		

37507

အချက်အလက်ပြောင်းလဲမှုရှိပါက သတင်းပို့၍ အသင်းဝင်လက်မှတ်အသစ် လဲလှယ်ထုတ်ယူပါရန်၊ ပလတ်စတစ်မလောင်းရန်။

**CERTIFICATE OF MEMBERSHIP OF THE REPUBLIC OF THE
UNION OF MYANMAR FEDERATION OF CHAMBERS OF
COMMERCE AND INDUSTRY**

မြန်မာနိုင်ငံအထည်ချုပ်လုပ်ငန်းရှင်များအသင်း
MYANMAR GARMENT MANUFACTURERS ASSOCIATION

၂၉၊ မင်းရဲကျော်စွာလမ်း၊ လမ်းမတော်မြို့နယ်၊ ရန်ကုန်မြို့။



အသင်းဝင်လက်မှတ်
(၂၀၁၆ ခုနှစ်)

U Sein Toe (Kojima Iryo Myanmar Co., Ltd.)

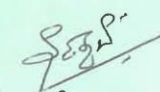
အမျိုးသားမှတ်ပုံတင်အမှတ်..... 12/Ou Ka Ma(Ng)025988 သည်

မြန်မာနိုင်ငံအထည်ချုပ်လုပ်ငန်းရှင်များအသင်းတွင် ၁၃.....၁၃.၇.၀ ခုနှစ်၊ တော်သလင်း..... လ၊

.....လပြည့်ကျော်၄ရက် (၂၀.....၂၀.....) ခုနှစ်၊ စက်တင်ဘာ..... လ၊.....၂၃..... ရက်နေ့)


အသင်းဝင်အမှတ်၄၆၃..... ဖြင့် မြန်မာနိုင်ငံအထည်ချုပ်လုပ်ငန်းရှင်များအသင်း၏


အသင်းသားတစ်ဦး ဖြစ်ပါကြောင်း။



အတွင်းရေးမှူး



ဥက္ကဋ္ဌ

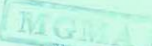
.....
အသင်းသား(သို့မဟုတ်)
၎င်းကိုယ်စားလှယ်၏
နမူနာလက်မှတ်


1st Jan 2017 မှ 31st Dec 2017 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  6. 8. 2018


1st January 2018 မှ 31st December 2018 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  16.8.19

1st January 2019 မှ 31st December 2019 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  16.8.19.

1st January 2020 မှ 31st Dec 2020 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  25/8/20

1st January 2021 မှ 31st Dec 2021 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  28/10/21

1st January 2022 မှ 31st Dec 2022 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  10/2/22

1st January 2023 မှ 31st Dec 2023 အထိ သက်တမ်း: တစ်နှစ်: မြို့:  7/3/23

APPENDIX (E)
ELECTRICAL SAFETY CERTIFICATES

ပုံစံအရင်းအမြစ်များကို အသုံးပြုရာတွင် အသုံးပြုရန် ဖော်ပြထားပါသည်။

စက်မှုဝန်ကြီးဌာန
 ပဲခူးတိုင်းဒေသကြီးစက်မှုကြီးကြပ်ရေးနှင့် စစ်ဆေးရေးဦးစီးဌာန
 လျှပ်စစ်-စစ်ဆေးရေး

စာအမှတ်.....
 ရက်စွဲ.....
 အကွက်အမှတ်(၉)၊ သမိန်ဗရမ်းလမ်း၊ (၆)ရပ်ကွက်၊ ဥဿာမြို့သစ်၊ ပဲခူးမြို့။
 လျှပ်စစ်ဓာတ်အားအသုံးပြုခြင်းဆိုင်ရာအန္တရာယ်ကင်းရှင်းကြောင်းလက်မှတ်
 လက်မှတ်အမှတ်စဉ် EI/BR အဖ-၁၉

၂၀၁၄ ခုနှစ် လျှပ်စစ်ဥပဒေပုဒ်မ ၃၂(ဃ)တွင် ပြဋ္ဌာန်းချက်အရ လျှပ်စစ်ဓာတ်အားအသုံးပြုခြင်း လုပ်ငန်းကို စစ်ဆေးရာတွင် လျှပ်စစ်ဥပဒေဆိုင်ရာလုပ်ထုံးလုပ်နည်းများနှင့် ကိုက်ညီကြောင်း စစ်ဆေးတွေ့ရှိရသဖြင့် အောက်ဖော်ပြပါနေရာဒေသ၌ လျှပ်စစ်ဓာတ်အားအသုံးပြုခြင်းလုပ်ငန်းကို အန္တရာယ်ကင်းရှင်းကြောင်းလက်မှတ် ထုတ်ပေးလိုက်သည်-

၁။ လျှပ်စစ်ဓာတ်အားအသုံးပြုခြင်း

(က) သတ်မှတ်မိုးအား	၄၀၀ / ၂၃၀ ဗို့
(ခ) လုပ်ငန်းအမျိုးအမည်	‘Kojima Iryo Myanmar’ အထည်ချုပ်စက်ရုံ
(ဂ) ခွင့်ပြုဝန်အား	429 HP + 338 HP

၂။ နေရာဒေသ

ဦးစိန်တိုး

အမှတ်(၈၉)၊ ကွင်း(၁)ဧရာလမ်း၊ အေးမြသာယာကျေးရွာ၊ အုတ်ဖိုမြို့နယ်။

၃။ လက်မှတ်ထုတ်ပေးသည့်ရက် ၁၆ . ၂ . ၂၀၂၄

၄။ လက်မှတ်ကုန်ဆုံးသည့်ရက် ၁၅ . ၂ . ၂၀၂၅

(ကျောဘက်တွင် ဖော်ပြထားသောစည်းကမ်းချက်များကိုလိုက်နာရပါမည်။)

မှတ်ချက်။ 11/0.4 kV 400 kVA ဓာတ်အားခွဲရုံ နှင့် 11/0.4 kV 315 kVA
 ဓာတ်အားခွဲရုံတို့ဖြင့် ဓာတ်အားရယူသုံးစွဲပါသည်။
 ပြုပြင်ရန်ကိစ္စရပ်များလိုက်နာဆောင်ရွက်ရန်။

စစ်ဆေးရေးမှူး
 ပဲခူးတိုင်းဒေသကြီး လျှပ်စစ်စစ်ဆေးရေး

လျှပ်စစ်အန္တရာယ် ကင်းရှင်းရေးအတွက်
လိုက်နာဆောင်ရွက်ရမည့် စည်းကမ်းချက်များ

- ၁။ ဝါယာကြိုးပျော့များကိုရှည်လျားစွာသွယ်တန်းအသုံးမပြုရ။
- ၂။ လျှပ်စစ်သုံးပစ္စည်းကိရိယာများကိုစနစ်တကျ အသုံးပြုရန်။
- ၃။ အဆောက်အဦပြင်ပအလင်းရောင်နှင့်လုံခြုံရေးမီးများကို သီးခြားပတ်လမ်းဖြင့် ထိန်းချုပ်အသုံးပြုရန်။
- ၄။ လျှပ်ထုတ်စက်(Gen: Set) များကို ပြည့်စုံသော ကာကွယ်မှုစနစ်နှင့် လိုင်းပြောင်းခလုတ်(Change Over Switch) တပ်ဆင်အသုံးပြုရန်။
- ၅။ အကာအကွယ်ပြုမြေဓာတ်ချစနစ် တပ်ဆင်၍ လျှပ်စစ်သုံးကိရိယာများ၏ ကိုယ်ထည်နှင့်ဆက်သွယ်ရန် ၊ အဆောက်အဦအတွက် မိုးကြိုးလွှဲစနစ်တပ်ဆင်ရန်။
- ၆။ လုပ်ငန်းပြီးဆုံးသည့်အခါတိုင်း လျှပ်စစ်သုံးစက်ကိရိယာများအား ဓာတ်အားအဆင့်ဆင့်ဖြတ်တောက်ရန်နှင့်စစ်ဆေးရန်။
- ၇။ လျှပ်စစ်အန္တရာယ်ကင်းရှင်းကြောင်းလက်မှတ်ပါ အမည်နှင့်လုပ်ငန်းများသည် ပိုင်ဆိုင်မှုဆိုင်ရာ အထောက်အထားအဖြစ်အကျုံးမဝင်စေရ။
- ၈။ လျှပ်စစ်အန္တရာယ်ကင်းရှင်းကြောင်းလက်မှတ်ကိုမရိုးမဖြောင့်သောနည်းဖြင့် အသုံးပြုပါက ပြစ်မှုဆိုင်ရာဥပဒေအရအရေးယူခြင်းခံရမည်။
- ၉။ လျှပ်စစ်ဆက်သွယ်တပ်ဆင်မှုများနှင့် ပြုပြင်မှုများကို လျှပ်စစ်ကျွမ်းကျင်မှုဆိုင်ရာလက်မှတ်ရရှိသူများဖြင့်သာ ဆောင်ရွက်ရန်။
- ၁၀။ ခွင့်ပြုသက်တမ်းကုန်ဆုံးရက်မတိုင်မီ တစ်လကြိုတင်၍ သက်တမ်းတိုးရန် လျှောက်ထားရမည်။






ပဲခူး တိုင်း ဒေသကြီး စက်မှုကြီးကြပ်ရေး
နှင့် စစ်ဆေးရေးဦးစီးဌာန
ပဲခူးမြို့။

စာအမှတ်၊၀၅၁၅(၇)၀၁၈/၀၁၈/၀၁၈/၂၃/၂၀၂၄(၇၅၀)
ရက်စွဲ ၂၀၂၄ ခုနှစ် ၊ မတ်လ ၆ ရက်

အကြောင်းအရာ။ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ဖိုမြို့နယ်၊ အမှတ်(၈၉)၊ ကွင်း(၁)၊ ဧရာ
လမ်း၊ အေးမြသာယာကျေးရွာရှိ 'Kojima Iryo Myanmar' အထည်ချုပ်စက်ရုံ
တွင် တပ်ဆင်ထားသည့် ၄၀၀/၂၃၀ ဗို့၊ ၃၀၀ ကေဗီအေ ဒီဇယ်အင်ဂျင်လျှပ်ထုတ်စက်
(၁) လုံး ဖြင့် လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းနှင့်အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်
လက်မှတ်သက်တမ်းတိုးမြှင့်ပေးခြင်းကိစ္စ။

ရည်ညွှန်းချက်။ ဦးသန်းထွဋ်သန်း(HR Manager) 'Kojima Iryo Myanmar' အထည်ချုပ်စက်ရုံ၏
(၉.၂.၂၀၂၄)ရက်စွဲပါ လျှောက်ထားချက်အရ


အထက်အကြောင်းအရာပါ ကိစ္စနှင့်စပ်လျဉ်း၍ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊ အုတ်ဖိုမြို့နယ်၊
အမှတ်(၈၉)၊ ကွင်း(၁)၊ ဧရာလမ်း၊ အေးမြသာယာကျေးရွာရှိ 'Kojima Iryo Myanmar' အထည်ချုပ်
စက်ရုံတွင် တပ်ဆင်ထားသည့် ၄၀၀/၂၃၀ ဗို့၊ ၃၀၀ ကေဗီအေ ဒီဇယ်အင်ဂျင်လျှပ်ထုတ်စက် (၁) လုံးဖြင့်
လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းနှင့်အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ်ကို ၂၀၂၄ ခုနှစ် ၊ မတ်လ
(၆) ရက်နေ့မှစတင်၍ ဆက်လက်သုံးစွဲခွင့်ပြုကြောင်း သက်တမ်းတိုးမြှင့်ထုတ်ပေးလိုက်သည်။


တိုင်းဒေသကြီးဦးစီးဌာနမှူး (ရုံးအတွက်)
ထွန်းအောင်ကျော်- ဒုတိယညွှန်ကြားရေးမှူး
ပဲခူးတိုင်းဒေသကြီး လျှပ်စစ်စစ်ဆေးရေး

ဦးစိန်တိုး
'Kojima Iryo Myanmar' အထည်ချုပ်စက်ရုံ
အမှတ်(၈၉)၊ ကွင်း(၁)၊ ဧရာလမ်း၊ အေးမြသာယာကျေးရွာ၊
အုတ်ဖိုမြို့နယ်။

- မိတ္တူကို-
- ညွှန်ကြားရေးမှူး၊ လျှပ်စစ်စစ်ဆေးရေးဌာန၊ စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန၊
 - ရုံးလက်ခံ၊
 - မျှောစာထွဲ။

D/(2021-2022)/Gen(Old)



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
စက်မှုဝန်ကြီးဌာန
စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန
(လျှပ်စစ်စစ်ဆေးရေး)

လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းနှင့်အသုံးပြုခြင်းလုပ်ငန်းမှတ်ပုံတင်လက်မှတ်

အမှတ်စဉ်၊ ၀၉၁/၂၀၁၉

၁။ ၂၀၁၄ ခုနှစ် လျှပ်စစ်ဥပဒေပုဒ်မ ၃၂ (င) နှင့် တည်ဆဲဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများအရ ပဲခူးမြို့နယ်၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေးရွာရှိ 'Kojima Iryo Myanmar' အထည်ချုပ်စက်ရုံတွင် တပ်ဆင်ပြီးဖြစ်သော ၄၀၀/၂၃၀ ဗို့ ၃၀၀ ကေဗီအေ ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက်တစ်လုံးအား အောက်ဖော်ပြပါနယ်မြေဒေသအတွင်း မှတ်ပုံတင်လက်မှတ်တွင်ပါရှိသော စည်းကမ်းချက်များနှင့်အညီ ၂၀၂၄ ခုနှစ်၊ မတ်လ (၆)ရက်နေ့မှ စတင်၍ လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းနှင့် အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ်ကို သက်တမ်းတိုးမြှင့် ထုတ်ပေးလိုက်သည်။

(က) ခွင့်ပြုသည့်နယ်မြေဒေသ	- 'Kojima Iryo Myanmar'
	- အထည်ချုပ်စက်ရုံ
	- အမှတ်(၈၉)၊ ကွင်း(၁)၊ ဧရာလမ်း၊ အေးမြသာယာကျေးရွာ၊
မြို့နယ်	- အုတ်ဖိုမြို့နယ်။
တိုင်းဒေသကြီး	- ပဲခူးတိုင်းဒေသကြီး
(ခ) အများဆုံးထုတ်လုပ်သည့် ဓာတ်အားပမာဏ	- 300 kVA (AKSA)
(ဂ) သတ်မှတ်ဗို့အား	- 400/230V
(ဃ) လျှပ်ထုတ်စက်နံပါတ်	- X14C 114616
(င) အင်ဂျင်အမျိုးအစား	- C.I.D1L (NTA 855-G1A)
(စ) အင်ဂျင်မြင်းကောင်ရေ	- 390 HP (Chong Cummins Engine)
(ဆ) အင်ဂျင်နံပါတ်	- 41205291


၂။ ဓာတ်အားထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းတို့အတွက် အသုံးပြုသော လျှပ်စစ်ပစ္စည်းကိရိယာ တည်ဆောက်မှုဆိုင်ရာ နည်းစနစ်များသည် လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများပါ ပြဋ္ဌာန်းချက်များအရ ဖြစ်ရမည့်အပြင် စစ်ဆေးရေးမှူး၏ စစ်ဆေးစမ်းသပ်ခြင်းကို ခံယူရပါမည်။

၃။ လျှပ်စစ်ဥပဒေဆိုင်ရာလုပ်ထုံးလုပ်နည်းပါပြဋ္ဌာန်းချက်များကိုတိကျစွာလိုက်နာဆောင်ရွက်ရမည်။


၄။ လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများနှင့် ဤလက်မှတ်တွင်ပါရှိသော အကြောင်းအရာများကို လိုက်နာခြင်းမရှိပါက ထုတ်ပေးသောလက်မှတ်ကို ပြန်လည်ရုပ်သိမ်းမည်။

၅။ ဤမှတ်ပုံတင်လက်မှတ်သက်တမ်းသည် ခွင့်ပြုသည့်နေ့မှစတင်၍ (၄) နှစ် အချိန်ကာလအတွင်းသာ အကျိုးသက်ရောက်စေရမည်-

စတင်ခွင့်ပြုသည့်နေ့	- ၆ - ၃ - ၂၀၂၄
ကုန်ဆုံးသည့်နေ့	- ၅ - ၃ - ၂၀၂၅



လျှပ်စစ်စစ်ဆေးရေးမှူးချုပ် (ရန်ကင်း)
 ထွန်းအောင်ကျော်-စစ်ဆေးရေးမှူး
 ပဲခူးတိုင်းဒေသကြီးလျှပ်စစ်စစ်ဆေးရေး



စက်မှုဝန်ကြီးဌာန
ပဲခူးတိုင်းဒေသကြီး စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန
လျှပ်စစ်စစ်ဆေးရေး
ပဲခူးမြို့
အန္တရာယ်ကင်းရှင်းကြောင်းလက်မှတ်
(လျှပ်ထုတ်စက်)

၁။ အမှတ်စဉ် E.I.B.R.(G) ၀၉၂/၂၀၂၃ ရက်စွဲ ၁၆.၂.၂၀၂၄.....

၂။ အမည် ဦးစိန်တိုး နိုင်ငံသားစိစစ်ရေးကော်မရှင်အမှတ် ၁၂/၂၀၂၄(နိုင်)၀၂၅၉၈၈
 အမှတ်(၈၉)၊ ကွင်း(၁)၊ ဧရာလမ်း၊ အေးမြသာယာကျေးရွာ၊ အုတ်ဖိုမြို့နယ်။

နေရပ်လိပ်စာ

၃။ ပြည်နယ်/တိုင်းဒေသကြီး ပဲခူး မြို့နယ် အုတ်ဖို

၄။ ပြုလုပ်သူအမည် POWER LINK နေရပ် CHINA


၅။ လုပ်ငန်းအမျိုးအစား "Kojima Iryo Myanmar" အထည်ချုပ်စက်ရုံ

လက်မှတ်ထုတ်ပေးသည့်ရက် ၁၆.၂.၂၀၂၄.....


လက်မှတ်ကုန်ဆုံးသည့်ရက် ၁၅.၂.၂၀၂၅.....

ပင်မလည်စက်				လျှပ်ထုတ်စက်			
အမျိုးအစား	မြင်းကောင်ရေ	အပတ်ရေ/မိနစ်	အမြင့်ပေ	ကေဗီအေ	ဗို့	စွမ်းအားကိန်း	အပတ်ရေ/မိနစ်
ဒီဇယ်	340 kW	1500 r.p.m	-	375 kVA	400/230 V	0.8	1500 r.p.m
ဓာတ်ဆီ							
ရေအား							

မှတ်ချက်။


စစ်ဆေးရေးမှူး
ပဲခူးတိုင်းဒေသကြီးလျှပ်စစ်စစ်ဆေးရေး

ပဲခူးတိုင်းဒေသကြီး၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေးရွာ၊ ဧရာလမ်း၊ ကွင်း(၁)၊ အမှတ်(၈၉) ရှိ 'KOJIMA IRYO' အထည်ချုပ်စက်ရုံတွင် တပ်ဆင်ထားသည့် ၄၀၀/၂၃၀ ဗို့ ၃၇၅ ကေစီအေ ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက်ဖြင့် လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းနှင့် အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ် ထုတ်ပေးခြင်း။




တိုင်း ဒေသ ကြီး ဦး စီး ဌာန မှူး ရုံး
ပဲ ခူး တိုင်း ဒေ သ ကြီး စက်မှု ကြီး ကြပ် ရေး
နှင့် စစ် ဆေး ရေး ဦး စီး ဌာန
(လျှပ်စစ်စစ်ဆေးရေး)၊ ပဲခူးမြို့
စာအမှတ် ၊ ၁၅၁၅(၇)ပခစ/ပခစ/၂၃/၂၀၂၃ (၁၅၆၄)
ရက်စွဲ ၊ ၂၀၂၃ ခုနှစ်၊ မေ လ ၃၀ ရက်

အကြောင်းအရာ။ ပဲခူးတိုင်းဒေသကြီး၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေးရွာ၊ ဧရာလမ်း၊ ကွင်း(၁)၊ အမှတ်(၈၉) ရှိ KOJIMA IRYO အထည်ချုပ်စက်ရုံတွင် တပ်ဆင်ထားသည့် ၄၀၀/၂၃၀ ဗို့ ၃၇၅ ကေစီအေ ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက်ဖြင့် လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းနှင့် အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ် ထုတ်ပေးခြင်း။

ရည်ညွှန်းချက်။ ဦးစိန်တိုး၊ 'KOJIMA IRYO' အထည်ချုပ်စက်ရုံ၏ (၁၄၃.၂၀၂၃) ရက်စွဲပါ လျှောက်ထားချက်အရ

အထက်အကြောင်းအရာပါ ကိစ္စနှင့်စပ်လျဉ်း၍ ပဲခူးတိုင်းဒေသကြီး၊ အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာ ကျေးရွာ၊ ဧရာလမ်း၊ ကွင်း(၁)၊ အမှတ်(၈၉) ရှိ 'KOJIMA IRYO' အထည်ချုပ်စက်ရုံတွင် တပ်ဆင်ထား သည့် ၄၀၀/၂၃၀ ဗို့ ၃၇၅ ကေစီအေ ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက်ဖြင့် ၂၀၂၃ ခုနှစ်၊ မေ လ(၃၀) ရက် နေ့မှ စတင်၍ လျှပ်စစ်ဓာတ်အားထုတ်လုပ်သုံးစွဲနိုင်ရေးအတွက် လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းနှင့်အသုံးပြု ခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ် (တစ်) စောင်ကို ထုတ်ပေးလိုက်သည်။


 ထွန်းအောင်ကျော်
 စစ်ဆေးရေးမှူး
 ပဲခူးတိုင်းဒေသကြီး လျှပ်စစ်စစ်ဆေးရေး


✓ ဦးစိန်တိုး
'KOJIMA IRYO' အထည်ချုပ်လုပ်ငန်း၊
အမှတ်(၈၉)၊ ကွင်း(၁)၊ ဧရာလမ်း၊
အေးမြသာယာကျေးရွာ၊ အုတ်ဖိုမြို့နယ်။

မိတ္တူကို -

- ညွှန်ကြားရေးမှူး၊ လျှပ်စစ်စစ်ဆေးရေးဌာန၊ စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန၊
- ဦးစီးဌာနမှူး၊ ပဲခူးတိုင်းဒေသကြီး စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန၊
- ရုံးလက်ခံ / မျှောစာတွဲ။

D/(2021-2022)/Gen(New)

Green Myanmar Environmental Services Co., Ltd. XL



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
စက်မှုဝန်ကြီးဌာန
စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန
(လျှပ်စစ်စစ်ဆေးရေး)

အမှတ်စဉ်၊ ၀၉၂/၂၀၂၃

၁။ ၂၀၁၄ ခုနှစ် လျှပ်စစ်ဥပဒေပုဒ်မ ၃၂(င) နှင့်တည်ဆဲဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများအရ ပဲခူးတိုင်းဒေသကြီး၊ အုတ်ဖိုမြို့နယ်၊ 'KOJIMA IRYO' အထည်ချုပ်စက်ရုံတွင် တပ်ဆင်ထားသည့် ၄၀၀/၂၃၀ ဗို့ ၃၇၅ ကေဗီအေ ဒီဇယ်အင်ဂျင်လျှပ်ထုတ်စက်အား အောက်ဖော်ပြပါ နယ်မြေဒေသအတွင်း မှတ်ပုံတင်လက်မှတ်တွင်ပါရှိသော စည်းကမ်းချက်များနှင့်အညီ ၂၀၂၃ ခုနှစ် ၊ မေလ (၃၁) ရက် နေ့မှ စတင်၍ လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းနှင့် အသုံးပြုခြင်းဆိုင်ရာမှတ်ပုံတင်လက်မှတ်ကို ထုတ်ပေးလိုက်သည်။

(က) ခွင့်ပြုသည့်နယ်မြေဒေသ	- 'KOJIMA IRYO' အထည်ချုပ်စက်ရုံ၊ အမှတ်(၈၉)၊ကွင်း(၁)၊ဧရာလမ်း၊ အေးမြသာယာကျေးရွာ၊ အုတ်ဖိုမြို့နယ်။
မြို့နယ်	- အုတ်ဖိုမြို့နယ်။
တိုင်းဒေသကြီး	- ပဲခူးတိုင်းဒေသကြီး
(ခ) အများဆုံးထုတ်လုပ်သည့် ဓာတ်အားပမာဏ	- 375 kVA
(ဂ) သတ်မှတ်ဗို့အား	- 400/230 V
(ဃ) လျှပ်ထုတ်စက်နံပါတ်	- PL 8706/7
(င) အင်ဂျင်အမျိုးအစား	- PLK3RP920N2-E2-630-600(Cummins)
(စ) အင်ဂျင်မြင်းကောင်ရေ	- 340 kW
(ဆ) အင်ဂျင်နံပါတ်	- 1000025896


၂။ ဓာတ်အားထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းတို့အတွက် အသုံးပြုသော လျှပ်စစ်ပစ္စည်းကိရိယာ တည်ဆောက်မှုဆိုင်ရာနည်းစနစ်များသည် လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများပါ ပြဋ္ဌာန်းချက်များအရ ဖြစ်ရမည့်အပြင် စစ်ဆေးရေးမှူး၏ စစ်ဆေးစမ်းသပ်ခြင်းကို ခံယူရပါမည်။

၃။ လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းပါ ပြဋ္ဌာန်းချက်များကို တိကျစွာလိုက်နာဆောင်ရွက်ရမည်။

၄။ လျှပ်စစ်ဥပဒေဆိုင်ရာလုပ်ထုံးလုပ်နည်းများနှင့် ဤလက်မှတ်တွင်ပါရှိသောကြောင်းအရာများကို လိုက်နာခြင်းမရှိပါက ထုတ်ပေးသောလက်မှတ်ကို ပြန်လည်ရုပ်သိမ်းမည်။

၅။ ဤမှတ်ပုံတင်လက်မှတ်သက်တမ်းသည် ခွင့်ပြုသည့်နေ့မှစတင်၍ (၄) နှစ် အချိန်ကာလအတွင်းသာ အကျိုးသက်ရောက်စေရမည်-

စတင်ခွင့်ပြုသည့်နေ့	- ၃၀ - ၅ - ၂၀၂၃
ကုန်ဆုံးသည့်နေ့	- ၂၉ - ၅ - ၂၀၂၇



လျှပ်စစ်စစ်ဆေးရေးမှူးချုပ် (ရန်ကင်း)
 ထွန်းအောင်ကျော်-စစ်ဆေးရေးမှူး
 ပဲခူးတိုင်းဒေသကြီးလျှပ်စစ်စစ်ဆေးရေး

APPENDIX (F)

GROUND WATER EXTRACTION PERMIT



မြို့ နယ် စည် ပင် သာ ယာ ရေး အဖွဲ့
အုတ် ဖို မြို့
စာအမှတ်၊ ၁၂၂ / ဆ-၇ / အဖ-၁(၀၀၂)
ရက်စွဲ၊ ၂၀၂၄ ခုနှစ်၊ ဒီဇင်ဘာ လ ၁၃ ရက်

ဦးသက်ထွဋ်သန်း

မန်နေဂျာ

Kojima Iryo Myanmar Co;Ltd

အေးမြသာယာကျေးရွာ၊အေးမြသာယာကျေးရွာအုပ်စု

အုတ်ဖိုမြို့


အကြောင်းအရာ ။

မြေအောက်ရေသုံးစွဲခွင့်ပြုကြောင်းပြန်ကြားခြင်း

ရည်ညွှန်းချက် ။

(၉-၁၂-၂၀၂၄)ရက်စွဲပါ ဦးသက်ထွဋ်သန်း၏ မြေအောက်ရေသုံးစွဲခွင့်
ပြုမိန့်တင်ပြတောင်းခံစာ

အကြောင်းအရာပါကိစ္စနှင့် ပတ်သက်၍ အုတ်ဖိုမြို့နယ်၊အေးမြသာယာကျေးရွာအုပ်စု၊
အေးမြသာယာကျေးရွာ(က)၊ကွင်းအမှတ်(၁)၊ဧရာလမ်း၊ ဦးပိုင်အမှတ် (၈၉) တွင်MIC ခွင့်ပြုမိန့်
အမှတ်(912/2015) ဖြင့် လုပ်ငန်းဆောင်ရွက်လည်ပတ်နေသော Kojima Iryo Myanmar Co;Ltd
စက်ရုံဧရိယာအတွင်းတွင်စက်ရေတွင်းများတူးဖော်ပြီး မြေအောက်ရေ အသုံးပြုလိုပါသဖြင့် ခွင့်ပြုပေး
နိုင်ရန်လျှောက်ထားလာခြင်းအပေါ်စက်ရုံလုပ်ငန်းသုံးအတွက်သာအသုံးပြုရန်၊သဘာဝ ပတ်ဝန်းကျင်
အနှောင့်အယှက်မဖြစ်ပေါ်စေရန်၊သန့်ရှင်းသောသောက်သုံးရေနှင့်စက်ရုံအတွင်းသီးသန့်အသုံးပြုစေ
ရန်နှင့်တူးဖော်သည့်စက်ရေတွင်းမှရေကိုစီးပွားဖြစ်ထုတ်လုပ်ရောင်းချမှုမရှိစေရေးကန့်သတ်ချက်များ
နှင့်အညီ တူးဖော်ခွင့်ပြုကြောင်း အကြောင်းကြားပါသည်။


13 12 2024
အမှုဆောင်အရာရှိ

(ဖြိုးဝေအောင်ဦးစီးအရာရှိ)

မိတ္တူကို

ရုံးလက်ခံ

မျှောစာတွဲ

APPENDIX (G)

HAZARDOUS BUSINESS LICENSE

အုတ်ဖိုမြို့နယ် စည်ပင်သာယာရေးဌာန
ဘေးအန္တရာယ်လုပ်ငန်းမျှင်စင်

မှတ်ပုံတင်စာရင်းနံပါတ် _____ ၁၂ _____
 လိုင်စင်အမှတ်နှင့်ခုနှစ် 0000037





ပဲခူးတိုင်းဒေသကြီး စည်ပင်သာယာရေးဥပဒေပုဒ်မ ၁၃၊ ပုဒ်မခွဲ (၃)၊ ပုဒ်မ (၂၄) ပုဒ်မခွဲ (၁) နှင့် ပုဒ်မ (၇၁) ပုဒ်မခွဲ (က) (ခ)၊ ပုဒ်မ (၇၃) ပုဒ်မခွဲ (၁) တို့အရ ပြုလုပ်ထားသည့် အုတ်ဖိုမြို့နယ် စည်ပင်သာယာရေး နယ်နိမိတ်အတွင်း အများပြည်သူများအား အန္တရာယ်ရှိစေနိုင်သော သို့မဟုတ် ပတ်ဝန်းကျင်ကို ထိခိုက်စေနိုင်သော အလုပ်အကိုင်နှင့် ကူးသန်းရောင်းဝယ်ရေးလုပ်ငန်းများ လုပ်ကိုင်ခြင်းဆိုင်ရာ စည်းမျဉ်းသတ်မှတ်ရန် စည်းကမ်းများအရ ထုတ်ပေးသည့်လိုင်စင် -

(က) လိုင်စင်ရရှိသူအမည်	ဦးစိန်ကို
(ခ) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်	၁၂/၃၅၅၆ (နိုင်) ၀၅၅၉၈၈
(ဂ) နေရပ်လိပ်စာ	အထည်ချုပ်စက်ရုံ Kojima Iryo - Myanmar Co., Ltd
(ဃ) လုပ်ကိုင်ခွင့်ပြုသည့်လုပ်ငန်းအမျိုးအစား	အေးမြသာယာ၊ ဖုန်းလမ်း
(င) လုပ်ငန်းလုပ်ကိုင်သည့်နေရာအကျယ်အဝန်း၊ ဥပစာပိုင်နက်အဆောက်အအုံတည်နေရာ (အဆောက်အအုံပိုင်နက်ဥပစာအကြောင်း အရာဖော်ပြချက် အခန်းနံပါတ်)	_____
(စ) ခွင့်ပြုသည့်အချိန်ကာလအပိုင်းအခြား	(၁-၄-၂၀၂၄) မှ (၃၁-၃-၂၀၂၅)
(ဆ) လိုင်စင်ခ/ငွေသွင်းချလန်အမှတ်နှင့်ရက်စွဲ	၂၀၀၀၀၀/ ၃-၄-၂၀၂၄
(ဇ) လိုင်စင်ထုတ်ပေးသည့်ရက်စွဲ	၃-၄-၂၀၂၄
(ဈ) လိုင်စင်ကုန်ဆုံးသည့်ရက်	၂၀၂၅ ခုနှစ်၊ မတ်လ၊ ၃၁ ရက်


 အမှုဆောင်အရာရှိ
 မြို့နယ်စည်ပင်သာယာရေးဌာန
 အုတ်ဖိုမြို့

မှတ်ချက်။ ဤလုပ်ငန်းလိုင်စင်ကတ်ပြားကို အဆောက်အအုံပိုင်နက်ဥပစာ၌ ထင်ရှားပြင်သာသည့် နေရာတွင် ချိတ်ဆွဲထားရှိရမည်။


စည်းကမ်းချက်များ

- ၁။ မိမိလုပ်ငန်းအတွက် ပတ်ဝန်းကျင်ထိခိုက်မှုမရှိစေရ။
- ၂။ မိမိလုပ်ငန်းမှထွက်ရှိသော အမှိုက်နှင့်အညစ်အကြေးများအား မိမိအစီအစဉ်ဖြင့် သိမ်းဆည်းဆောင်ရွက်ရမည်။ လိုအပ်ပါက မြို့နယ်စည်ပင်သာယာရေးအဖွဲ့သို့ ဆက်သွယ်၍ အမှိုက်သိမ်းယာဉ်ငှားရမ်းအသုံးပြုနိုင်သည်။
- ၃။ အဖွဲ့မှအခါအားလျော်စွာ ထုတ်ပြန်သည့် အမိန့်နှင့်ညွှန်ကြားချက်များကို လိုက်နာဆောင်ရွက်ရမည်။
- ၄။ မိမိလုပ်ငန်းအတွက် လုပ်ငန်းဆောင်ရွက်ခွင့် လိုင်စင်ရရှိရေးအား ဘဏ္ဍာရေးနှစ် မတိုင်မီ တင်ပြလျှောက်ထားဆောင်ရွက်ရမည်။
- ၅။ အဖွဲ့မှ မိမိလုပ်ငန်းအတွက် လုပ်ငန်းလိုင်စင်ရယူဆောင်ရွက်ခြင်းမရှိဘဲ လုပ်ငန်းဆောင်ရွက်ခွင့် မရှိရ။
- ၆။ လုပ်ငန်းလိုင်စင်အား အဆင့်ဆင့်လွှဲပြောင်းခြင်းမပြုရ။
- ၇။ သက်ဆိုင်ရာ ကျန်းမာရေးအရာရှိ မီးသတ်ဦးစီးဌာနတို့မှ အခါအားလျော်စွာ စစ်ဆေးခြင်းခံရမည်။
- ၈။ မိမိလုပ်ငန်းအတွက် သတ်မှတ်ထားသော စည်းကမ်းချက်များကို လိုက်နာဆောင်ရွက်မှု မရှိပါက လိုင်စင်ပိတ်သိမ်းခြင်းခံရမည်။
- ၉။ ဤလိုင်စင်အား လူအများမြင်တွေ့နိုင်သောနေရာတွင် မှန်ဘောင်သွင်း ချိတ်ဆွဲထားရမည်။
- ၁၀။ လုပ်ငန်းဆက်လက်လုပ်ကိုင်ပါက လိုင်စင်သက်တမ်းမကုန်ဆုံးမီ (၁)လကြိုတင်လျှောက်ထားရမည်။

APPENDIX (H)

FIRE INSPECTION CERTIFICATES

၂. ၈၁၆




သို့
မန်နေဂျာ
JMKS အထည်ချုပ်စက်ရုံ
အေးမြသာယာ။

နယ် မြေ မီး သတ် စ ခန်း
အုတ် ဖို မြို့ နယ် ၊ အေး မြ သာ ယာ
စာအမှတ်၊ ၀၁၄ / ၂၀ / ၁၀ / ဦး - ၁
ရက်စွဲ၊ ၂၀၂၃ ခုနှစ်၊ ဇန်နဝါရီလ (၁၀)ရက်

အကြောင်းအရာ။ ။ စက်ရုံ ၊ အလုပ်ရုံ၊ သိုလှောင်ရုံများ မီးဘေးလုံခြုံရေး စစ်ဆေးသွားမည်ဖြစ်ကြောင်း
အကြောင်းကြားခြင်း။

၁။ အထက်အကြောင်းအရာပါကိစ္စနှင့် ပတ်သက်၍ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊
အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာကျေးရွာအုပ်စုတွင် တည်ရှိသော JMKS အထည်ချုပ်စက်ရုံ၌ မီးလန့်မှု၊
မီးလောင်မှုများ မဖြစ်ပွား မပေါ်ပေါက်စေရေးအတွက် နယ်မြေစခန်းတာဝန်ခံ၊ လက်ထောက်မီးသတ်ဦးစီးမှူး၊
ဦးစိုးခိုင်လင်း ဦးဆောင်သော မီးဘေးလုံခြုံရေး စစ်ဆေးရေးအဖွဲ့သည် (၁၀ .၁ .၂၀၂၃)ရက်နေ့
နေ့လည်(၁:၀၀)နာရီအချိန်တွင် လူကြီးမင်း၏ JMKS အထည်ချုပ်စက်ရုံတွင် မီးဘေးလုံခြုံရေး
စစ်ဆေးအကြံပြုခြင်းလုပ်ငန်းများအား လာရောက်ဆောင်ရွက်မည်ဖြစ်ပါသည်။

၂။ သို့ဖြစ်ပါ၍ JMKS အထည်ချုပ်စက်ရုံရှိ သီးသန့်မီးသတ်တပ်ဖွဲ့ဝင်များနှင့် မီးဘေးကြိုတင်ကာကွယ်
ရေး ပစ္စည်းများ ကြိုတင်ပြင်ဆင်ထားရန် ညှိနှိုင်းအကြောင်းကြားအပ်ပါသည်။


 နယ်မြေမီးသတ်စခန်းတာဝန်ခံ
 (စိုးခိုင်လင်း၊ လက်ထောက်မီးသတ်ဦးစီးမှူး)
 အေးမြသာယာ

မိတ္တူကို -

- အုပ်ချုပ်ရေးမှူးရုံး၊ အေးမြသာယာကျေးရွာအုပ်စု၊ အုတ်ဖိုမြို့နယ်။
- ရဲစခန်းမှူး ၊ အေးမြသာယာနယ်မြေရဲစခန်း၊ အုတ်ဖိုမြို့နယ်။
- လျှပ်စစ်မှူး၊ လျှပ်စစ်ဓါတ်အားဖြန့်ဖြူးရေးလုပ်ငန်း၊ အုတ်ဖိုမြို့နယ်။
- အရန်မီးသတ်တပ်ခွဲမှူး၊ အေးမြသာယာကျေးရွာအုပ်စု၊ အုတ်ဖိုမြို့နယ်။
- ရုံးလက်ခံ။

မှတ်ချက်။ မီးသတ်စခန်းမှ စစ်ဆေးသည့်အချိန်တွင် JMKS နာမည်ဖြင့် ဖြစ်နေသော်လည်း မြေကေ ၄.၉၂ ပေါ်ရှိ အဆောက်အဦအားလုံးကို စစ်ဆေးခဲ့ခြင်းဖြစ်ပြီး နောက် တစ်ကြိမ် စစ်ဆေးခြင်း ပြုလုပ်ပါက Kojima Iryo Myanmar Company Limited နာမည်ဖြင့် စစ်ဆေးသည့် စာရွက်စာတမ်းများတွင် Update ပြုလုပ်ဖော်ပြသွားပါမည်။

မီးဘေးကြိုတင်ကာကွယ်ရေးစစ်ဆေးခြင်းပုံစံ

ခေတ်မီအထပ်မြင့် တိုက်တာ/တည်းခိုခန်း	မြို့နယ်၊ အုတ်ဖိုမြို့နယ်
စားသောက်ဆိုင်/ အရောင်းပြခန်း	စစ်ဆေးသည့်နေ့၊ ၁၀ . ၁ . ၂၀၂၃
ဈေးဆိုင်ကြီးများ/ အထည်ချုပ်စက်ရုံ	အချိန်၊ နေ့၊ ည (၁ : ၀၀) နာရီ

ပိုင်ရှင်/ စီမံခန့်ခွဲသူ/ တာဝန်ခံ၊	ဦးကျော်သက် (စတင်ရှင်)	
တည်နေရာ၊	စေး၊ မြသောယာကျေးရွာ၊ ၂ နေရာမြို့နယ်	
စကားပြောကြေးနန်းအမှတ်၊	၀၉ - ၇၉၁၆၃၆၁၇၈	
စစ်ဆေးသည့်အဖွဲ့၊	စီးဘေးအန္တရာယ် စစ်ဆေးရေးအဖွဲ့	
အမည်	ရာထူး	တာဝန်
(၁) ဦးစိုးဦးဇော်	ဗဟို/စီမံခန့်ခွဲရေးမှူး	နယ်မြေ စီမံခန့်ခွဲရေးတာဝန်
(၂) ဦးခင်အောင်	ဦးစိုးလှိုင်	စီးဘေးအန္တရာယ် စစ်ဆေးရေးတာဝန်
(၃) ဦးမြင့်ကျော်	ဦးစိုးဦး	စီးဘေးအန္တရာယ် စစ်ဆေးရေးတာဝန်
(၄) ဦးကျော်ကျော်	ဦးစိုးဦး	စီးဘေးအန္တရာယ် စစ်ဆေးရေးတာဝန်
(၅) ဦးကျော်ကျော်	ဦးစိုးဦး	စီးဘေးအန္တရာယ် စစ်ဆေးရေးတာဝန်

၁။ အဆောက်အဦဆောက်လုပ်ခြင်း

(BUILD CONSTRUCTION)

- (က) အမျိုးအစား (TYPES) JMK5 အထည်ချုပ်စက်ရုံ
- (ခ) အသုံးပြုပုံ (FUNCTION) စတင်ရှင်
- (ဂ) ထွက်ပေါက်/ဝင်ပေါက်/
အရေးပေါ်ထွက်ပေါက် (၁၀) ပေါက်
(၁၀) ပေါက်
- (ဃ) မီးအာမခံထားခြင်း ရှိ/မရှိ မရှိ
- (င) အကျယ်အဝန်း/ အတိုင်းအတာ မြေဧရိယာ (၄.၉၈) ဧက
- (စ) မီးပြန်ပွားမှု ကာကွယ်နိုင်ခြင်း ရှိ/မရှိ ရှိ
- (ဆ) မီးသတ်ကားအလွယ်တကူ ရှိ
ဝင်/ထွက်နိုင်မှု ရှိ/ မရှိ

-၂-	
၂။ အအေးပေးစနစ် (ရှိ/မရှိ) (AIR CONDITION SYSTEM)	ရှိ
(က) အရွယ်အစား	(၄၂)ပေ-ပတ်လည်
(ခ) အမျိုးအစား	ယန်က(၃၆၅)ရပ်
၃။ လျှပ်စစ်သွယ်တန်းမှု (ELECTRICITY)	ရှိ
(က) သုံးစွဲပို့အား (ပါဝါမီတာ ရှိ/မရှိ)	ကောင်း
(ခ) ဝါယာကြိုးသွယ်တန်းမှု ကောင်း/မကောင်း	
(ဂ) မီးခလုတ်တပ်ဆင်အသုံးပြုခြင်းစနစ်ကျမှု ရှိ/ မရှိ	ရှိ
(ဃ) ယာယီမီးကြိုးသွယ်တန်းမှုရှိ/ မရှိ	မရှိ
(င) အရေးပေါ်မီးအားပေးစက် ရှိ/ မရှိ	330 HP မီးစက် (၁)ရပ်
၄။ မီးသတ်ပစ္စည်းကိရိယာများ (FIRE EQUIP- MENT AND APPLIENCES)	
(က) မီးသတ်စင်အရေအတွက် ရှိ/ မရှိ	(၁)ခု
(ခ) မီးသတ်ဆေးဘူးအမျိုးအစား အရေအတွက် (EXTINGUISHER)	DCCP 3kg (၆၀)ရပ်၊ DCP 35kg (၂)ရပ်၊ DCP 35kg - (၃)ရပ်
(ဂ) အရေးပေါ်မီးသတ်ပိုက် (HOSE REEL)	၃-ပတ်မိုက် (၁)ပိုက်
(ဃ) မီးသတ်စက်(အပေါ့စားစက်)	4 Hp မော်တော်စက် (၁)ရပ်
(င) မီးလန့်အချက်ပေးကိရိယာ ရှိ/ မရှိ (FIRE ALARM SYSTEM)	ရှိ
(စ) မီးစုံစမ်းအချက်ပေးကိရိယာ ရှိ/ မရှိ (DETECTORS)	မရှိ
(ဆ) အသေဟပ်ဆင်ထားသော မီးသတ်ပစ္စည်း ကိရိယာ SPRINKLERS DRENCHERS OTHERS	
၅။ ရေရရှိရေး (WATER SUPPLY)	
(က) အဝီစိငွင်း ရှိ/မရှိ အရွယ်အစား	၂၀၀၀မ (၅၂)တွဲ၊ ၂၀၀၀မ (၁)ရပ်

၃။	(ခ) (OVER HEAD TANK)	၃၀၀၀ ဂါလံ (၁၂) ခု
	(ဂ) ရေတွင်း/ရေကန်	၂၂၅၀ ဂါလံ ရေကန် (၁) ကန်
	(ဃ) မြေတွင်း/ရေပိုက်	၇၂၅၀ ဂါလံ ရေကန် (၁) ကန် ၅၅၅၀ ဂါလံ ရေကန် (၁) ကန်
	(င) အရေးပေါ်ရေစုပ်စက် ရှိ/မရှိ	ရှိ
	(စ) မီးငြိမ်းသတ်ရန် ရေကန် ရှိ/မရှိ	ရှိ
	ရေဂါလံအရေအတွက်	၂၁၅၀၀
၆။	ဆက်သွယ်ရေး (COMMUNICATION)	
	(က) စကားပြောကြေးနန်း (အတွင်း/အပြင်)	ရှိ
	(ခ) မီးလန့်အချက်ပေးခြင်း ရှိ/မရှိ	ရှိ
	(ဂ) ဆက်သွယ်ရေး ရှိ/မရှိ	ရှိ
	(ဃ) သယ်ယူပို့ဆောင်ရေး ရှိ/မရှိ	ရှိ
	(င) ဌာနချင်းညှိနှိုင်းဆက်သွယ်မှု ရှိ/မရှိ	ရှိ
	(စ) အနီးဆုံးဆက်သွယ်နိုင်သောမီးသတ်စခန်း	နောင်ပြုစီစဉ်မည်ဖြစ်သော စခန်း
၇။	ပတ်ဝန်းကျင်မီးဘေးအန္တရာယ်စိုးရိမ်မှု ရှိ/မရှိ	မရှိ
	(က) ပတ်ဝန်းကျင်အခြေအနေ	ကောင်း
	(ခ) အဆောက်အဦဆက်သွယ်မှု	ဘေးပတ်လည် ယာယီကွင်းများရှိ
၈။	အကြံပြုချက်များ	
	(က) လျှပ်စစ်ကြေးနန်း	အောက် ၃၈.၄၂ Breaker အား အထွေ box ဝယ်ယူမည်
	(ခ) NFB Breaker	များစွာအသုံးပြုထားပါသဖြင့် အထွေပြား ပြုပြင်မည်
	(ဂ) မှန်ကန်စေရန် လိုအပ်ပါက အစားထိုးပေးမည်ဖြစ်ပြီး အပူပေးစက် ပြင်မည်	
	(ဃ) Body Feath	မှတစ်ဆင့် ဝယ်ယူအသုံးပြုမည်
	(င) Vinyl	အသုံးပြုရန် ရှိသည့် ပုံစံဖြင့် ပြန်လည်အသုံးပြုမည်
	(စ) အခြားအကြံပြုချက်များ	မရှိ

- (ဆ) ဇာ/က မီးဘတ်ဂျီစီ များ ။ * ကနူးပေါ့၊ မီးငြိမ်းသောက်ရေး ကိစ္စကပ်ထားရှိသော...
- (ဇ) ... မီးသတ်ရေးပျက်ပျက်များ (Hose - Rush) များကား အေးကြောင့်ခြင်း၊ လျှပ်စစ်
- (ဈ) ... ထပ်မံတပ်ဆင်ခြင်း များ ပြုလုပ်ထားရန် ။ မီးငြိမ်းသောက်ရေး ကိစ္စကပ်ထားရှိသော
- (ည) ... ကရမ်းစား ဧရိယာအောက်အောက်များ ကား ပြင်ဆင်ထိန်းသိမ်းရေးနှင့် အသက်တက်ပုံ ကပ်မိကပ်မိရန်
- (ဋ) ... မြို့နယ်အစိုးရ ကား စနစ်တကျ ကြီးကြပ်ရန် ။ မြို့နယ်အစိုးရ ကိုယ်စားပြုသူများက
- (ဌ) ... မီးရှင်းရေးအားဖြင့် (Emergency Exit Sign) များ ထပ်ထားရန် ။ မီးသတ်ရေး
- (ဍ) ... များကား သန့်ရှင်းရေးဖြင့် (Pressure) ကျေရာသော မီးသတ်ရေးအား များကား
- (ဎ) ... Fire - ပြုပြင်ရန် ။ အသက်တက်က ကို စနစ်တကျ ကြည့်ရှုပေး ပေးရန် ။
- (ဏ) ... ကနူးပေါ့မီးငြိမ်းသောက်ရေး ကိစ္စကပ်ထားရှိသော ရေကန် များ ကား ရေအပြည့် ပြည့်စုံစေရန်
- (တ) ... မီးသတ်ဂျီစီများ၏ မှန်ကန်စွာ များကား မြစ်ကန်အားရေများထွင်း ချိတ်ဖွဲ့ထားရန်

၉။ တာဝန်ခံ၏ ဝန်ခံကတိပြုချက်

အထက်ပါ ညွှန်ကြားချက်များအား သိရှိပါကြောင်းနှင့် လိုက်နာဆောင်ရွက်မည်ဖြစ်ပါမည်။
 ဝန်ခံကတိပြု လက်မှတ်ရေးထိုးပါသည်။

တာဝန်ခံ/မန်နေဂျာ/ပိုင်ရှင်
 အမည်၊
 လုပ်ငန်း/ ဌာန၊
 နေရပ်၊

Shawnt
 ...ဦးကိုသတ်
 ...JMKS ကော့ညီညွတ်စေ
 ...စားမြောစာယာကုမ္ပဏီလီမိတက်
 ...ရတနာမြို့နယ်

စစ်ဆေးသူများထိုးမြဲလက်မှတ်

- (၁) အမည် ဦးစိုးနိုင်စော..... ရာထူး ...လ/ဝေ...ဦးစိုးဖြူ..... လက်မှတ် *[Signature]*
- (၂) အမည် ဦးခင်စောစို..... ရာထူး ...မြို့နယ်ကျွတ်ခပ်မြို့..... လက်မှတ် *[Signature]*
- (၃) အမည် ဦးကျော်ဖွင့်..... ရာထူး ...နရောင်တင်ရွာမြို့..... လက်မှတ် *[Signature]*
- (၄) အမည် ဦးစောထွန်းစို..... ရာထူး ...တင်ကြပ်မြို့..... လက်မှတ် *[Signature]*
- (၅) အမည် ...ဝေဖြူ..... ရာထူး ...တင်ကြပ်..... လက်မှတ် *[Signature]*




မြို့ နယ် မီး သတ် ဦး စီး များ ရုံး
ပဲ ခူး တိုင်း ဒေ သ ကြီး၊ အုတ် ဖို မြို့
စာအမှတ်၊ ၀၁၇ / ၁၅ / ၃ / ဦး - ၁
ရက် စွဲ၊ ၂၀၂၅ ခုနှစ်၊ ဇန်နဝါရီလ ၁၄ ရက်

သို့

တာဝန်ခံ
Kojima Iryo Myanmar Co.,Ltd

အကြောင်းအရာ။ မီးဘေးလုံခြုံရေးစစ်ဆေးသွားမည်ဖြစ်ပါကြောင်း အကြောင်းကြားခြင်း
အထက်အကြောင်းအရာပါကိစ္စနှင့် ပတ်သက်၍ ပဲခူးတိုင်းဒေသကြီး၊ သာယာဝတီခရိုင်၊
အုတ်ဖိုမြို့နယ်၊ အေးမြသာယာနယ်မြေအတွင်း Kojima Iryo Myanmar Co.,Ltd အထည်ချုပ်စက်ရုံ
အား မီးလောင်မှု၊ မီးလန့်မှု များ မဖြစ်ပွားစေရေးအတွက် မီးဘေးလုံခြုံရေးစစ်ဆေးအကြံပြုခြင်း
လုပ်ငန်းများအား (၁၅.၁.၂၀၂၅) ရက်နေ့တွင် စစ်ဆေးဆောင်ရွက်မည်ဖြစ်ကြောင်း အကြောင်းကြားအပ်
ပါသည်။


မြို့နယ်မီးသတ်ဦးစီးမှူး
(ကျော်ကျော်လင်း၊ ဦးစီးအရာရှိ)
အုတ်ဖိုမြို့

မိတ္တူ
ရုံးလက်ခံ

01/15/2025 11:17

APPENDIX (I)

COMMUNITY HEALTH WORKER TRAINING COMPLETION
CERTIFICATE

လူထုကျန်းမာရေးလုပ်သားသင်တန်းဆင်းလက်မှတ်




ပဲခူးတိုင်း(အနောက်ပိုင်း)၊ ပြည်ခရိုင်၊ ပေါက်ခေါင်းမြို့နယ်
 -----ဥ-သု-ဇ်-ကု-န်း-----ရပ်ကွက်/ကျေးရွာနေ အဖ ဦး-----ထွန်း-----စိန်-----၏
 သား/သမီးဖြစ်သူ မောင်/မ -----ခိုင်-ဆု-မွန်-----သည်၊ ပေါက်ခေါင်းမြို့နယ်
 ကျန်းမာရေးဦးစီးဌာနတွင် ဖွင့်လှစ်သော ၂၀၀၉-ခုနှစ်၊ လူထုကျန်းမာရေးလုပ်သား
 သင်တန်းအား အဆင့် က/ခ/ဂီ (စာတွေ့ ၊ လက်တွေ့)ဖြင့် ပြီးမြောက်အောင်မြင်စွာ
 တက်ရောက်ခဲ့ပါသောကြောင့် ဤသင်တန်းဆင်းလက်မှတ်အား ပေးအပ်ချီးမြှင့်လိုက်ပါ
 သည်။



ဒေါက်တာမြင့်သိန်းထွန်း
(အတွင်းရေးမှူး)
မြို့နယ်ကျန်းမာရေးကြီးကြပ်မှုကော်မတီ
ပေါက်ခေါင်းမြို့



ဦးထွန်းကျော်ကျော်
(ဥက္ကဋ္ဌ)
မြို့နယ်ကျန်းမာရေးကြီးကြပ်မှုကော်မတီ
ပေါက်ခေါင်းမြို့

၂၀၀၉-ခုနှစ်၊ ဇွန်လ (၁၈)ရက်။


APPENDIX (J)

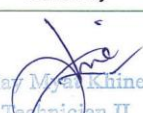
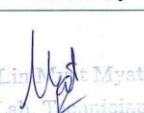
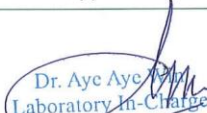
ENVIRONMENTAL QUALITY RESULTS

Water Quality Results

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-24-03959		Date: December 17, 2024			
Client Information		Sample Information			
Client Name	: Kojima Iryo Myanmar Co., Ltd	Sample ID	: 12170		
Organization	: -	Sample Name	: Tube Well		
Client ID	: -	Sample Type / Source	: -		
Registration Date & Time	: 10.12.2024	Sampling Date & Time	: 6.12.2024		
Contact	: 09-785221416	Sample Location	: အုတ်ဖိုမြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး		
Email	: -	Latitude	: -		
Testing Purpose	: -	Longitude	: -		
Testing Results					
This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service. This report shall not be reproduced except in full, without written approval of the laboratory					
Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	pH ¹	7.6	S.U	6.5 – 8.5 ^c	Normal
2	Colour ³	321	HU	≤15 ^c	Above the Limit
3	Turbidity ³	503	FAU	≤5 ^c	Turbid
4	TDS ⁴	565	mg/L	≤1000 ^c	Normal
5	Hardness ³	5	mg/L	≤500 ^c	Normal
6	Chloride ³	28.4	mg/L	≤250 ^c	Normal
7	Nitrite ³	0.211	mg/L	≤1 ^b	Normal
8	Arsenic ⁸	0.005	mg/L	≤0.05 ^d	Normal
9	Iron ⁷	0.32	mg/L	≤1 ^c	Normal
10	Lead ⁷	ND	mg/L	≤0.01 ^c	LOD=0.1 mg/L
11	Manganese ³	0.24	mg/L	≤0.4 ^c	Normal
12	Sulfate ³	82	mg/L	≤ 250 ^c	Normal
"ND" = Not Detected		"LOD" = Lower limit of detection		" - " = No Reference Standard	
Tested by		Checked by		Approved by	
 Daw May Myat Khine Lab. Technician II Ecological Laboratory ALARM		 Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM		 Dr. Aye Aye Laboratory In-Charge EcoLab ALARM	
No.237, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon. Tel: 09-407496078, Email: aelab.2022@gmail.com					



ပတ်ဝန်းကျင်ရေးရာဓာတ်ခွဲခန်း
Ecological Laboratory



စိမ်းလန်းအိမ်ခြံမြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.Tel: - 09-407496078

စာအမှတ်/Reference Number: EL (M)-R / 1566

နေ့စွဲ/Date: 23th December, 2024

ဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာ/Laboratory Analysis Report

နမူနာရာဇဝင် /Sample Profile

နမူနာအမည် /Sample Name	Tube Well	နမူနာအမှတ် / Sample ID	1566	
နေရာ (မြို့နယ်) Location (Township)	အုတ်ဖို မြို့နယ် ပဲခူးတိုင်း	လတ္တီတွဒ် Latitude		
နေရာ (တိုင်း/ပြည်နယ်) Location (Region/State)	ပဲခူးတိုင်း	လောင်ဂျီတွဒ် Longitude		
ပေးပို့သူအမည် /Sender Name	Kojima IRYO Myanmar Co., Ltd	နမူနာကောက်ယူချိန် (နေ့၊ နာရီ) Sampling Time (Date, Time)	6.12.2024	
အဖွဲ့အစည်း /Organisation	Ma Hsu Pyae Hla Naing	နမူနာရောက်ရှိချိန် (နေ့၊ နာရီ) Arriving Time (Date, Time)	10.12.2024	
ဆက်သွယ်ရန် /Contact	09785221416			

(This laboratory analysis report is based solely on the sample submitted by the customer)

(ဤဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာသည် ပေးပို့သူမှပို့ဆောင်ခဲ့သည့်နမူနာကိုသာအခြေခံထားပါသည်။)

Analysis Results/စမ်းသပ်ချက်အဖြေ

စဉ် Sr.	အရည်အသွေးညွှန်းကိန်း Quality Parameter	ရလဒ် အဖြေ Results	နည်းစဉ် Method	စံသတ်မှတ်ချက် Drinking Standard	မှတ်ချက် Remarks
1	Total plate count (CFU/ml)		Total plate count method	0	
2	Total coliform count (MPN/100 ml) (Presumption test)	4	Most Probable Number method	0	
3	Total faecal coliform count (MPN/100ml) (Presumption test)	0	Most Probable Number method	0	
4	Total coliform count (CFU/ml) (Confirm test)		Eosin Methyl blue agar plate test	0	
5	Complete test for coliform bacteria		Gram staining test	-	
6	Total coliform count (CFU/ml)		Plate count method	0	
7	Total <i>E.coli</i> count (CFU/ml)		Plate count method	0	

Note: The target sample needs to test some additional tests to confirm total coliform and total faecal coliform.

စမ်းသပ်ပြီး
Tested by

May Myat Nyein
Research Assistant
ALARM

စစ်ဆေးပြီး
Checked by

May Zaw
Research Assistant
ALARM

တာဝန်ခံ
Approved by

Dr. Aye Aye Win
Laboratory In-Charge
Ecological Laboratory
ALARM

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-24-03948 **Date: December 17, 2024**

Client Information		Sample Information	
Client Name	: Kojima Iryo Myanmar Co., Ltd	Sample ID	: 12168
Organization	: -	Sample Name	: Waste Water(Outlet)
Client ID	: -	Sample Type / Source	: -
Registration Date & Time	: 10.12.2024	Sampling Date & Time	: 6.12.2024
Contact	: 09-785221416	Sample Location	: အုတ်ဖိုမြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး
Email	: -	Latitude	: -
Testing Purpose	: -	Longitude	: -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	pH ¹	7.8	S.U	6.0 - 9.0 ^d	Normal
2	Temperature ²	27.2	°C	±3 ^{*d}	-
3	Colour ³	237	HU	-	-
4	TSS ³	183	mg/L	≤50 ^d	Above the Limit
5	Ammonia ³	15.3	mg/L	≤ 10 ^d	Above the Limit
6	BOD ₅ ⁶	125	mg/L	≤ 50 ^d	Above the Limit
7	COD ³	370	mg/L	≤ 250 ^d	Above the Limit
8	Total Phosphorous ³	1.8	mg/L	≤2 ^d	Normal
9	Cadmium ⁷	ND	mg/L	≤ 0.1 ^d	LOD=0.01 mg/L
10	Copper ⁷	ND	mg/L	≤ 0.5 ^d	LOD=0.02 mg/L
11	Zinc ³	0.02	mg/L	≤ 2 ^d	Normal
12	Nickel ³	0.15	mg/L	≤ 0.5 ^d	Normal
13	Chromium (Hexavalent) ³	0.098	mg/L	≤ 0.1	Normal
14	Sulfide ³	0.317	mg/L	≤ 1 ^d	Normal
15	Phenol ³	<0.1	mg/L	≤ 0.5 ^d	Normal
16	Oil & Grease ⁹	6	mg/L	≤ 10 ^d	Normal
17	Total Nitrogen ³	18.6	mg/L	-	-

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by	Checked by	Approved by
 Daw May Myat Khine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM

No.237, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.

Tel: 09-407496078, Email: aelab.2022@gmail.com



ပတ်ဝန်းကျင်ရေးရာဓာတ်ခွဲခန်း Ecological Laboratory



စိမ်းလန်းအိမ်ခြံမြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.Tel: - 09-407496078

စာအမှတ်/Reference Number: EL (M)-R / 1564

နေ့စွဲ/Date: 23th December, 2024

ဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာ/Laboratory Analysis Report

နမူနာရာဇဝင် /Sample Profile

နမူနာအမည် /Sample Name	Waste Water Outlet	နမူနာအမှတ် / Sample ID	1564	
နေရာ (မြို့နယ်) Location (Township)	အုတ်ဖို မြို့နယ် ပဲခူးတိုင်း	လတ္တီတွဒ် Latitude		
နေရာ (တိုင်း/ပြည်နယ်) Location (Region/State)	ပဲခူးတိုင်း	လောင်ဂျီတွဒ် Longitude		
ပေးပို့သူအမည် /Sender Name	Kojima IRYO Myanmar Co., Ltd	နမူနာကောက်ယူချိန် (နေ့၊ နာရီ) Sampling Time (Date, Time)	6.12.2024	
အဖွဲ့အစည်း /Organisation	Ma Hsu Pyae Hla Naing	နမူနာရောက်ရှိချိန် (နေ့၊ နာရီ) Arriving Time (Date, Time)	10.12.2024	
ဆက်သွယ်ရန် /Contact	09785221416			

(This laboratory analysis report is based solely on the sample submitted by the customer)

(ဤဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာသည် ပေးပို့သူမှပို့ဆောင်ခဲ့သည့်နမူနာကိုသာအခြေခံထားပါသည်။)

Analysis Results/စမ်းသပ်ချက်အဖြေ

စဉ် Sr.	အရည်အသွေးညွှန်းကိန်း Quality Parameter	ရလဒ် အဖြေ Results	နည်းစဉ် Method	Wastewater Discharges Guideline Value*	မှတ်ချက် Remarks
1	Total plate count (CFU/ml)		Total plate count method	-	
2	Total coliform count (MPN/100 ml) (Presumption test)	>1100	Most Probable Number method	400	
3	Total faecal coliform count (MPN/100ml) (Presumption test)		Most Probable Number method	-	
4	Total coliform count (CFU/ml) (Confirm test)		Eosin Methyl blue agar plate test	-	
5	Complete test for coliform bacteria		Gram staining test	-	
6	Total coliform count (CFU/ml)		Plate count method	-	
7	Total <i>E.coli</i> count (CFU/ml)		Plate count method	-	

Note: The target sample needs to test some additional tests to confirm total coliform and total faecal coliform.

စမ်းသပ်ပြီး
Tested by

May Myat Nyein
Research Assistant
ALARM

စစ်ဆေးပြီး
Checked by

May Zaw
Research Assistant
ALARM

တာဝန်ခံ
Approved by

Approved by

Dr. Aye Aye Win
Laboratory In-Charge
Ecological Laboratory
ALARM

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-24-03949 **Date: December 17, 2024**

Client Information		Sample Information	
Client Name	: Kojima Iryo Myanmar Co., Ltd	Sample ID	: 12169
Organization	: -	Sample Name	: Boiler Blowdown
Client ID	: -	Sample Type / Source	: -
Registration Date & Time	: 10.12.2024	Sampling Date & Time	: 6.12.2024
Contact	: 09-785221416	Sample Location	: အုတ်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး
Email	: -	Latitude	: -
Testing Purpose	: -	Longitude	: -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	pH ¹	8.3	S.U	6.0 – 9.0 ^d	Normal
2	Temperature ²	27.4	°C	±3 ^{*d}	-
3	Colour ³	178	HU	-	-
4	TSS ³	167	mg/L	≤50 ^d	Above the Limit
5	Ammonia ³	0.54	mg/L	≤ 10 ^d	Normal
6	BOD ₅ ⁶	15	mg/L	≤ 50 ^d	Normal
7	COD ³	29	mg/L	≤ 250 ^d	Normal
8	Total Phosphorous ³	1.2	mg/L	≤2 ^d	Normal
9	Cadmium ⁷	ND	mg/L	≤ 0.1 ^d	LOD=0.01 mg/L
10	Copper ⁷	0.13	mg/L	≤ 0.5 ^d	Normal
11	Zinc ³	<0.02	mg/L	≤ 2 ^d	Normal
12	Nickel ³	1.32	mg/L	≤ 0.5 ^d	Above the Limit
13	Chromium (Hexavalent) ³	0.084	mg/L	≤ 0.1	Normal
14	Sulfide ³	0.303	mg/L	≤ 1 ^d	Normal
15	Phenol ³	<0.1	mg/L	≤ 0.5 ^d	Normal
16	Oil & Grease ⁹	5	mg/L	≤ 10 ^d	Normal
17	Total Nitrogen ³	3.2	mg/L	-	-

“ND” = Not Detected

“LOD” = Lower limit of detection

“ - ” = No Reference Standard

Tested by	Checked by	Approved by
 Daw My Myat Khine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM

No.237, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



ပတ်ဝန်းကျင်ရေးရာဓာတ်ခွဲခန်း
Ecological Laboratory



စိမ်းလန်းအိမ်ခြံမြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.Tel: - 09-407496078

စာအမှတ်/Reference Number: EL (M)-R / 1565

နေ့စွဲ/Date: 23th December, 2024

ဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာ/Laboratory Analysis Report

နမူနာရာဇဝင် /Sample Profile

နမူနာအမည် /Sample Name	Boiler Blowdown	နမူနာအမှတ် / Sample ID	1565
နေရာ (မြို့နယ်) Location (Township)	အုတ်ဖို မြို့နယ် ပဲခူးတိုင်း	လတ္တီတွဒ် Latitude	
နေရာ (တိုင်း/ပြည်နယ်) Location (Region/State)	ပဲခူးတိုင်း	လောင်ဂျီတွဒ် Longitude	
ပေးပို့သူအမည် /Sender Name	Kojima IRYO Myanmar Co., Ltd	နမူနာကောက်ယူချိန် (နေ့၊ နာရီ) Sampling Time (Date, Time)	6.12.2024
အဖွဲ့အစည်း /Organisation	Ma Hsu Pyae Hla Naing	နမူနာရောက်ရှိချိန် (နေ့၊ နာရီ) Arriving Time (Date, Time)	10.12.2024
ဆက်သွယ်ရန် /Contact	09785221416		

(This laboratory analysis report is based solely on the sample submitted by the customer)

(ဤဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာသည် ပေးပို့သူမှပို့ဆောင်ခဲ့သည့်နမူနာကိုသာအခြေခံထားပါသည်။)

Analysis Results/စမ်းသပ်ချက်အဖြေ

စဉ် Sr.	အရည်အသွေးညွှန်းကိန်း Quality Parameter	ရလဒ် အဖြေ Results	နည်းစဉ် Method	စံသတ်မှတ်ချက် Drinking Standard	မှတ်ချက် Remarks
1	Total plate count (CFU/ml)		Total plate count method	0	
2	Total coliform count (MPN/100 ml) (Presumption test)	1100	Most Probable Number method	0	
3	Total faecal coliform count (MPN/100ml) (Presumption test)		Most Probable Number method	0	
4	Total coliform count (CFU/ml) (Confirm test)		Eosin Methyl blue agar plate test	0	
5	Complete test for coliform bacteria		Gram staining test	-	
6	Total coliform count (CFU/ml)		Plate count method	0	
7	Total <i>E.coli</i> count (CFU/ml)		Plate count method	0	

Note: The target sample needs to test some additional tests to confirm total coliform and total faecal coliform.

စမ်းသပ်ပြီး
Tested by

May Myat Nyein
Research Assistant
ALARM

စစ်ဆေးပြီး
Checked by

May Zaw
Research Assistant
ALARM

တာဝန်ခံ
Approved by

Dr. Aye Aye Win
Laboratory In-Charge
Ecological Laboratory
ALARM

SOIL QUALITY RESULT



Green Myanmar
Environmental Services Co., Ltd

No.115, Kanaung Min Thar Gyi Road, Industrial Zone (1), Hlaing Thar Yar Industrial City,
 Yangon, Myanmar
 Tel: 09 897 978 296, 09-5081451 E-mail: gmescompany@gmail.com, info@gmes-mm.com

Project Name: Kojima Iryo Myanmar Co., Ltd.
Sampling Location: Insein

Sample ID: SS1
Latitude: 18°4' 33.00"N
Longitude: 96° 43' 26.14"E

Date of Collection: 6.12.2024
Date of Arrival at Lab: 6.12.2024
Date of Issue of Results: 24.12.2024

Laboratory Analysis Results of Soil

Sr. No.	Parameters	Unit	Analysis Value	Minimum Measurement Range of Methods
1.	Aluminum	mg/kg soil	0.06	0.05 mg/kg soil
2.	Arsenic	mg/kg soil	0.03	0.025 mg/kg soil
3.	Chloride	g/kg soil	0.07	0.025 mg/kg soil
4.	Copper	mg/kg soil	<2.5	2.5 mg/kg soil
5.	Cyanide	mg/kg soil	<0.05	0.05 mg/kg soil
6.	Extractable Acidity	cmol/kg soil	4.7	0.25 cmol/kg soil
7.	Manganese	mg/kg soil	<1	1 mg/kg soil
8.	P - Alkalinity	mmol/l extract	0	0.2 mmol/l extract
9.	pH		5.7	0.1
10.	Total Alkalinity	mmol/l extract	4.1	0.2 mmol/l extract
11.	Total Iron	mg/kg soil	0.5	0.5 mg/kg soil

Analyzed By	Checked By	Approved By
Ma Hsu Pyae Hla Naing Lab Technician (Laboratory)	U Myo Min Ko Lab Supervisor (Laboratory)	U Tun Lin Kyaw In-Charge (Laboratory)

