EXECUTIVE SUMMARY

The project is new investment for manufacturing of High Quality Garment by contract Manufacturing Process (CMP) Basis Company from Korea. The project is issued by the Yangon Region Investment Committee (YRIC) on 18 December 2012 with the Endorsement No (533/2012). YRIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation MONREC on the proposed project and had approved the proposal for investment in Manufacturing of garment on CMP basis under the name of Garment & Process Global Co., Ltd as a solely owned foreign investment from Korea.

According to the Myanmar Environmental Conservation Law 2012, it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry to Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD) said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements. Therefore, Garment & Process Global Co., Ltd commissioned Green Environmental, Health, Safety & Social Consultancy Company Limited (Green EHSS Co.,Ltd) for EMP report study. The specific objectives of this study area

Identify the major impacts that are may arise from the activities of the proposed project on natural environmental and socio-economic environment of the project area
Describe the mitigation measures to minimize these impacts
Prepare and implement Environmental Management Plan for the project
Make sure that EMP is developed sufficiently and sound for the proposed project and
Corporate Social Responsibility Plan (CSR Plan) plays an essential part for the improvement of the social welfare of community as well as development of the region.

The proposed project aims to manufacturing of garments under CMP basis and 100% export to foreign country.

The main purpose of this EMP report is to obey the rule and regulation of local and International Environmental Protection programs and harmonize with the environmental and describes the responsible person and his responsibility.

Policy, Legal and Institutional Framework

National laws and Regulations, International Guidelines are referred for Environmental Management Plan of the proposed project.

1. The Constitution Law, 2008
2. The Environmental Conservation Law, 2012
3. The Environmental Conservation Law, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline 2015
6. National Myanmar Environmental Policy 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017

10. Myanmar Insurance Law, 1993
11. Payment of Wages Law 2016
12. Payment of Wages Law 1936
13. The Law on Standardization 2014
14. Yangon City Development Committee Law 2018
15. The Amended law of factories Act 1951 (2016)
16. The Private Industrial Enterprise Law
17. The Export and Import Law 2012
18. The Prevention of Hazard from Chemical and Related Substances Law 2013
19. The Underground Water Act
20. Myanmar Fire Brigade Law 2015
21. Fire Safety Procedure
22. The Electricity Law 2014
23. Boiler Law 2015
24. Labor Dispute Settlement Law 2012
25. The Law Amending the Settlement of Labor Dispute Law 2019
26. The Social Security Law 2012
27. The Employment and Skill Development 2013
28. The Worker's Compensation Act 1923
29. The Leave and Holidays Act 1951 Partially Reused In 2014
30. The Minimum Wage Law 2013
31. Public Health Law 1972
32. Prevention and Control Of Communicable Disease Law 1995 Amendment 2011
33. Occupational Safety and Health Law 2019
34. The Law On Standardization
35. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ 2018
36. The Motor Vehicles Law 2015
37. The Conservation of Water Resources and River Law 2006
38. The Commercial Tax Law 1990 Amended 2014
39. The Natural Disaster Management Law 2013

Project description

Type of proposed business	Manufacturing of garments on CMP basis
Type of investment	100% foreign investment
Name of company	Garment & Process Global Co., Ltd
Land lease year	30 years extendable by 5 years periods
Total land area	1.549 acres
Building Area	200 ft x 156 ft of two stories building (Factory)
Type of land	Industrial Land
Address of proposed project	No.(42/106), Cherry Street, Shwe Pyi Thar Industrial Zone(1), Shwe Pyi Thar Township, Yangon Region

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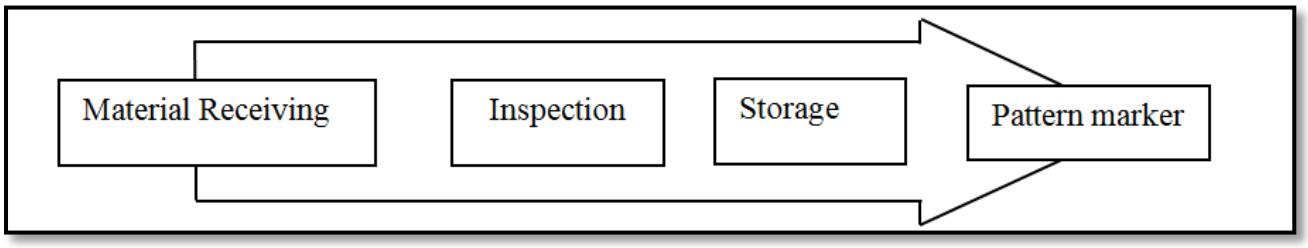
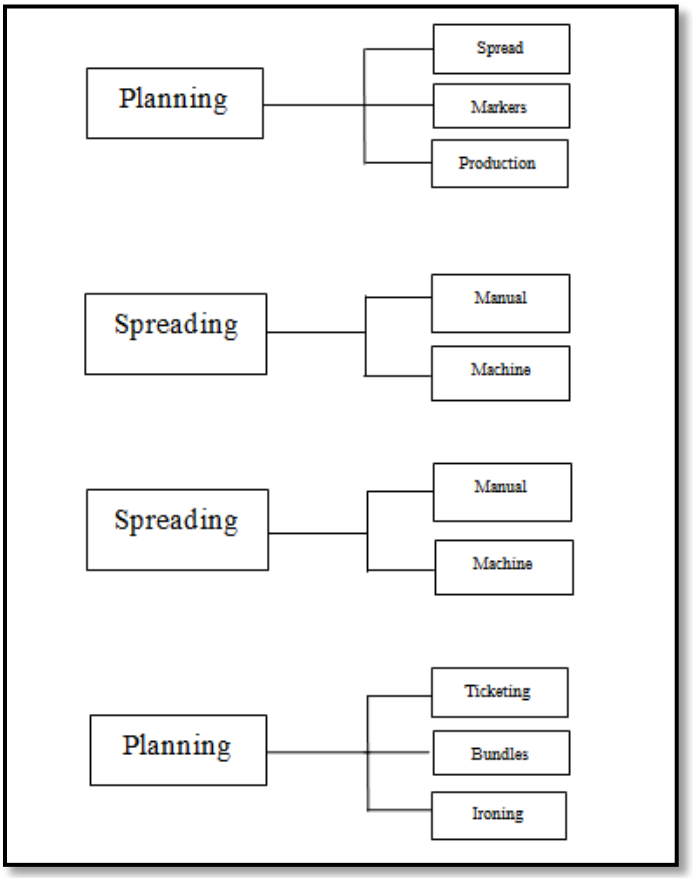
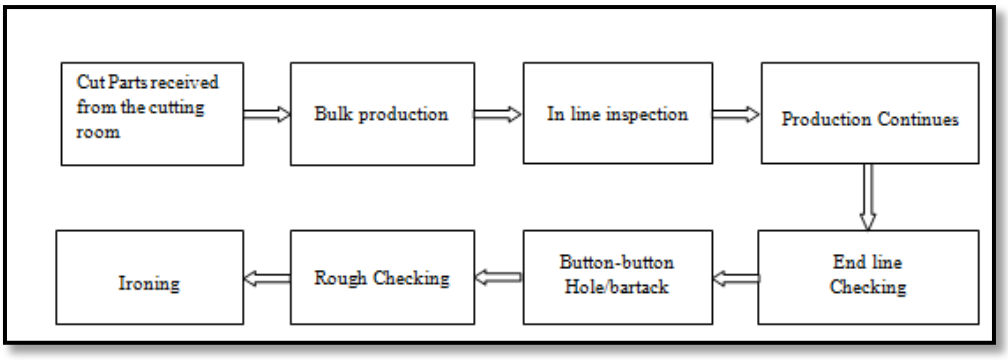
The proposed project is located at Yangon region. The total area of project site is 1.549 acres at 16.951321 N and 96.085725 E. Main structure is designed into production area for one building. Generator room, canteen are separated by main factory building structure. The factory layout plan which is also can be seen in this report. Production is requiring of work force 1064 local employees and 1 foreigner for first year operation to 10 years operation. The main product of the Garment & Process Global Co., Ltd factory is garments. The utilities for proposed factory include fuel oil for emergency used generator and water for domestic use.



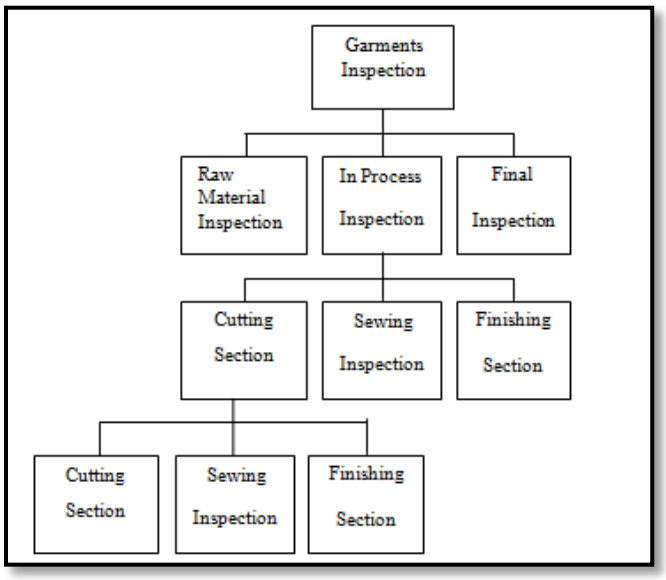
Process Flow for Material Receiving



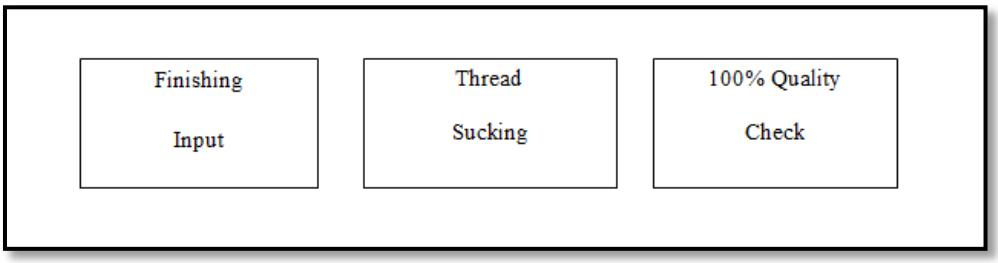
Process Flow for Cutting



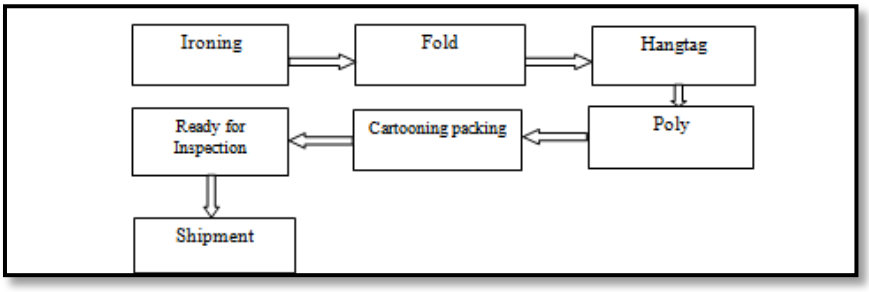
Process Flow for Sewing



Process Flow for Inspection



Process Flow for Finishing



Process Flow for Shipping

Brief Description of Surrounding Environment

Primary data and secondary data collections are very imported to assess environmental impacts. Primary data collections (environmental quality measurements and monitoring) play and important role for conducting EMP. Therefore, Green Environmental, Health, Safety & Social Consultancy Company Limited (Green EHSS Co., Ltd) conducted air quality, temperature and humidity, noise level measurement and light pollution measurement on 19 August 2022 and compared with the National Environmental Quality (Emission) Guidelines and described how to reduce the impact and how to maintain the pollutions also described the weather conditions, rainfalls and socio-economic component of the proposed project.

Potential Environmental Impact and Mitigation Measure

Possible effects such as impacts on environmental resources, ecological resources, human and waste disposal due to construction, operation and decommissioning processes. Potential impacts for the proposed projects are normally differentiated into three categories, viz, construction phase, operation phase and decommissioning phase. The budget in environmental monitoring program is estimated to be **3,000 USD** for operation phase.

The relative important of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline project. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible they are excluded from further analysis. Once the significance of the impact is established as more than negligible, it is described and additional, specific mitigation measures may be proposed to allow optimal integration of the project into the environment.

Table 1 Environmental and Social Risk Assessment

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Construction Phase; It is not assessed in this phase because of construction is already completed during EMP preparation.							
Operation Phase							
Air Pollution	Dust and GHGs emission from vehicles used for transporting raw materials and final products Particulate matters emission from the activities of production process Emission of smoke from (rice briquettes) and kitchen Emission from emergency diesel generator	3	4	2	4	36	Moderate
Water Pollution	Sewage disposed of from the toilets Oil spill and grease leaks from transporting vehicles and machinery equipment used in	*2	4	2	3	24	Low

	operation phase						
Soil contamination	Accidental spillage of oil used by vehicles operating	1	4	1	2	12	Very low
Noise pollution	Generating noise from the production machinery Noise from the generating of the emergency generators	3	4	1	4	32	Moderate
Fire Hazard	Poor electrical installations Waste disposed area Raw materials storage	3	4	2	3	27	Moderate
Solid waste	Residual pieces of fabric scarps from the production lines Waste from packaging materials Waste from kitchen, dormitory and office	3	4	1	4	32	Moderate
Liquid waste	Septic system and sewage Domestic liquid waste disposal from office, kitchen and dormitory	2	4	2	4	32	Moderate
Hazardous waste	Engine oil leaks, spill at diesel storage and during fuel refueling Used oil and lubricant discharged from the maintenance of vehicles and machines	2	4	1	2	14	Very low
Occupational health and safety (accidents, injuries)	Accidental cases cause by operating machines Electricity and emergency diesel generators. Unloading, mixing, cutting, pressing and packaging activities. Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate
Social-economic condition	Job opportunities for local people	-	-	-	-	-	Positive impact
Decommissioning Phase							
Air pollution	Decommissioning of buildings and related materials	3	1	1	4	20	Low
Water pollution	Sewage from decommissioning workers Demolition machinery equipment	3	1	1	3	15	Low

Soil contamination	Decommissioning of buildings and related materials Air of demolished materials	3	1	1	3	15	Low
Noise pollution	Decommission activities Transportation of demolished materials	3	1	1	3	15	Low
Waste disposal	Sewage system Demolished debris such as bricks concrete materials	3	1	1	3	12	Very Low
Hazardous waste	Used lubricants from decommissioning vehicles and machines	3	1	1	3	12	Very Low
Occupational health and safety (accidents, injuries)	Decommission activities Transportation of demolished materials	3	1	2	3	18	Low
Social-economic condition	Temporary job opportunities for local people	-	-	-	-	-	Positive impact

According to the result of analysis, it can be concluded that most of the project activities have low significance on environment, in all phases. Project activities that can produce solid waste and liquid waste are moderate significance. Moreover, project activities that emit dust and GHGs and accidental cases are moderately significant. Fire hazard potential of the proposed project and noise pollution are highly significant. However, this can be prevented or mitigated a by using the following mitigation measures.

Environment Management Program

The proposed project of environmental management plan which have to make the Environmental Management System (EMS). In that plan, it includes not only reducing to the environmental and social-economic impact but also includes the environmental management plan and the monitoring plan. In this EMP to implement the health, safety and occupational for the industry they need to create a team and to must be implemented that. The EMP for Garment & Process Global Co., Ltd 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 environmental issues that require environmental management plans based upon the potential impacts activities by for Garment & Process Global Co., Ltd is as follows:

1. Air Emissions Management
2. Noise Pollution Management
3. Waste Management Plan
4. Solid Waste Management Plan
5. Natural Environmental Management
6. Social Environmental Management
7. Occupational Health and Safety Management

8. Emergency Response Plan
9. Environmental Monitoring and Reporting
10. Corporate Social Responsible (CSR) Plan
11. Budget Plan
12. Grievance Redress Mechanism

Public Consulting

Under the Environmental Monitoring Plan, the project owner must monitor environmental quality, noise, wastewater quality and safety. Records should be carefully archived and submitted to the relevant authorities for reviewing the results of monitoring air quality measurements, water quality measurements and noise measurements. Public consultation and information disclosure the preparation of Environmental Management Plan (EMP) will be conducted face to face by the Green EHSS Co.,Ltd together with Garment & Process Global Co., Ltd, on the background and production process of the project and the production process.

Conclusion & Recommendation

In conclusion, the environmental management practices, procedures and responsibilities are defined here in to get full compliance with the existing environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar. All the feed backs, desired and needs of local public recorded in public consultation meetings are well addressed and incorporated in formulation of EMP. It has been figured out that the proposed caps factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts would be immense benefit to the local community and national development as well.

This is recommended that

All appropriate environmental management measure detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory

Solid waste and liquid wastes need to dispose according to YCDC rules and regulation

Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.

Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.

Keep full records of environmental management activities and present to annual independent third party environment audit.

Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this EMP report. Once concerned authorities approve EMP, effective

implementation of EMP by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Union of Myanmar.

အကျဉ်းချုပ်အစီရင်ခံစာ

အဆိုပြုလုပ်ငန်းသည် CMP စနစ်ဖြင့်အဝတ်အထည်ချုပ်လုပ်ခြင်းလုပ်ငန်း အတွက် ရင်းနှီးမြှုပ်နှံသောကုမ္ပဏီဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၂ခုနှစ်၊ ဒီဇင်ဘာလ၊ (၁၈)ရက်နေ့တွင် (အတည်ပြုမိန့်အမှတ် ရကတ-၅၃၃/၂၀၁၂)၊ ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်းကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

ထိုကြောင့် မြန်မာနိုင်ငံပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ ၂၀၁၂ အရပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် EMP ပြုလုပ်ရန်လိုအပ်ကြောင်း ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ရန်ကုန်တိုင်းဒေသကြီးမှသဘောထားမှတ်ချက်ရရှိပြီးဖြစ်ပါသည်။ ထိုကြောင့် EMPအစီရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Green Environmental, Health, Safety & Social Consultancy Company Limited မှတာဝန်ယူရေးဆွဲခဲ့ပါသည်။

EMP အစီအစဉ်တွင် Garment & Process Global Co., Ltd ၏ CMP စနစ်ဖြင့် အဝတ်အထည်ချုပ်လုပ်ခြင်း လုပ်ငန်းစီမံကိန်းအတွက် Green Environmental, Health, Safety & Social Consultancy Company Limited မှရေးသားပြုစုထားသောပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာ ဖြစ်သည်။ အဆိုပါလေ့လာဆန်းစစ်ခြင်း၏ရည်ရွယ်ချက်များမှာ-

- သဘာဝပတ်ဝန်းကျင်နှင့်လူမှုပတ်ဝန်းကျင်အပေါ်စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ထိခိုက်မှုများကိုလေ့လာရန်။
- ထိုထိခိုက်မှုများကို လျှော့ချနိုင်ရန်လျှော့နည်းစေမည့်နည်းလမ်းများကိုဖော်ပြရန်။
- စီမံကိန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာလုပ်ဆောင်ရာတွင် လုံလောက်မှု ရှိစေရန်။
- ဒေသခံများ၏လူမှုရေးသက်သာချောင်ချိမှုများတိုးမြှင့်ရန်နှင့်ဒေသတွင်းဖွံ့ဖြိုးတိုးတက်မှုများအတွက်မရှိမဖြစ်အရေးပါသောလူမှုစီးပွားတာဝန်ယူမှုအစီအစဉ်အားအကောင်အထည်ဖော်ရန်တို့ဖြစ်ပါသည်။

အဆိုပြုထားသောစီမံကိန်း၏ရည်ရွယ်ချက်သည်CMPစနစ်(ဖြတ်၊လုပ်၊ထုတ်)စနစ်ကိုအသုံးပြု၍ အဝတ်အထည်အမျိုးမျိုးကိုထုတ်လုပ်ပြီး နိုင်ငံခြားသို့ ၁၀၀% တင်ပို့ရန်ဖြစ်သည်။

ဥပဒေနှင့်မူဝါဒဆိုင်ရာအချက်အလက်များ

EMP ရေးဆွဲခြင်း၏ရည်ရွယ်ချက်မှာ နိုင်ငံတော်နှင့်နိုင်ငံတကာမှချမှတ်ထားသောပတ်ဝန်းကျင်ထိန်းသိမ်းရေး အစီအစဉ်များ၊ စည်းမျဉ်းစည်းကမ်းများ၊ ဥပဒေနှင့်နည်းဥပဒေများကို လိုက်နာပြီး ပတ်ဝန်းကျင်နှင့်လိုက်ရောညီထွေရှိသော ထိခိုက်မှုလျှော့ချရေးအစီအစဉ်များ ပြုလုပ်ရန်ဖြစ်ပါသည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အစီရင်ခံစာရေးသားပြုစုသူများ၏ ကျွမ်းကျင်မှုနယ်ပယ်ဆိုင်ရာဖော်ပြချက်များကို ရေးသားဖော်ပြထားပါသည်။ ဥပဒေနှင့်နည်းဥပဒေအခန်းတွင် MONREC မှထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု)လမ်းညွှန်ချက်များအပြင် စက်ရုံနှင့်ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့်ဥပဒေနှင့်နည်းဥပဒေများ၊ ဒေသတွင်းသို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့်လူမှုပတ်ဝန်းကျင် ဆိုင်ရာမူဝါဒများ၊ ဆက်စပ်နေသည့်နိုင်ငံတကာသဘော တူညီချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။ စက်ရုံအတွင်းလိုက်နာဆောင်ရွက်ရမည့် စည်းမျဉ်းစည်းကမ်းများ၊ လုပ်ငန်းခွင် အန္တရာယ်ကင်းရှင်းရေးနှင့်ကျန်းမာရေးဆိုင်ရာ အခြေခံစည်းမျဉ်း စည်းကမ်းများလည်းထည့်သွင်းဖော်ပြထားပါသည်။ Garment & Process Global Co., Ltd ၏ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာကတိကဝတ်များအပြင် ပတ်ဝန်းကျင်ထိခိုက်မှုလျှော့ချရေး မူဝါဒများကိုလည်း ထည့်သွင်းဖော်ပြထားပါသည်။

1. The Constitution Law, 2008
2. The Environmental Conservation Law, 2012
3. The Environmental Conservation Law, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline 2015
6. National Myanmar Environmental Policy 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law 2016
12. Payment of Wages Law 1936
13. The Law on Standardization 2014

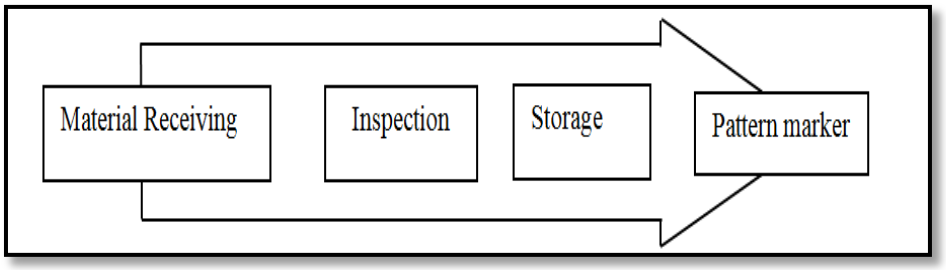
14. Yangon City Development Committee Law 2018
15. The Amended law of factories Act 1951 (2016)
16. The Private Industrial Enterprise Law
17. The Export and Import Law 2012
18. The Prevention of Hazard from Chemical and Related Substances Law 2013
19. The Underground Water Act
20. Myanmar Fire Brigade Law 2015
21. Fire Safety Procedure
22. The Electricity Law 2014
23. Boiler Law 2015
24. Labor Dispute Settlement Law 2012
25. The Law Amending the Settlement of Labor Dispute Law 2019
26. The Social Security Law 2012
27. The Employment and Skill Development 2013
28. The Worker's Compensation Act 1923
29. The Leave and Holidays Act 1951 Partially Reused In 2014
30. The Minimum Wage Law 2013
31. Public Health Law 1972
32. Prevention and Control Of Communicable Disease Law 1995 Amendment 2011
33. Occupational Safety and Health Law 2019
34. The Law On Standardization
35. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ 2018
36. The Motor Vehicles Law 2015
37. The Conservation of Water Resources and River Law 2006
38. The Commercial Tax Law 1990 Amended 2014
39. The Natural Disaster Management Law 2013

အဆိုပြုထားသောစီမံကိန်း	အဝတ်အထည်ချုပ်လုပ်ခြင်းလုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှုပုံစံ	၁၀၀% နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှု
ကုမ္ပဏီအမည်	Garment & Process Global Co., Ltd
အဆိုပြုရင်းနှီးမြှုပ်နှံမှုကာလ	၃၀ နှစ် (၅ နှစ်တစ်ကြိမ် သက်တမ်းတိုး)
စုစုပေါင်းမြေကွက်ဧရိယာ	၁.၅၉၄ ဧက
မြေနေရာပုံစံ	စက်မှုဇုန်မြေ
စီမံကိန်းတည်နေရာ	အမှတ် (၄၂/၁၀၆)၊ ချယ်ရီလမ်း၊ ရွှေပြည်သာစက်မှုဇုန် (၁)၊ ရွှေပြည်သာမြို့နယ်၊ရန်ကုန်တိုင်း
ဖုန်းနံပါတ်	၀၉-၂၆၃၂၅၆၀၇

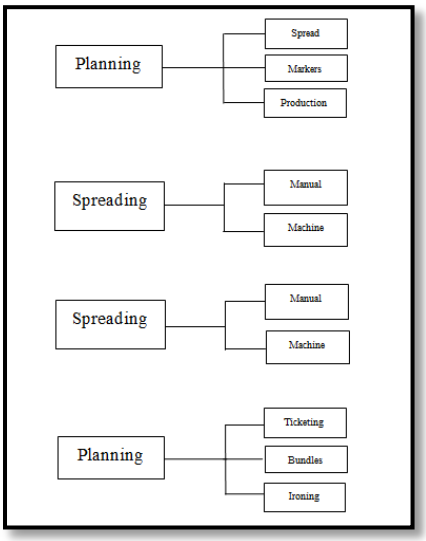
အဆိုပြုလုပ်ငန်းအတွက် တည်နေရာနှင့်စက်ရုံအတွင်းပါရှိသည့် ရုံးခန်းအဆောင်များ၊ စား သောက်ဆောင်၊ စတိုအခန်း၊ပြုပြင်ထိန်းသိမ်းရေးအခန်း၊ မီးဖိုချောင်အစရှိသည့်တို့ကိုသီးခြား

ဖော်ပြထားပါသည်။ ထို့အပြင်ထုတ်လုပ်မှုနည်းလမ်းများ၊ လိုအပ်သည့်ကုန်ကြမ်းများ၊နှစ်စဉ်ထွက်ကုန်များနှင့်စက်ပစ္စည်းများအားဖော်ပြထားပါသည်။ အဆိုပြုလုပ်ငန်းအတွက်လိုအပ်သည့်စွမ်းအင်နှင့်အသုံးပြုသည့်ပမာဏများကိုလည်းထည့်သွင်းဖော်ပြထားပါသည်။ကျန်လုပ်ငန်းသုံးယာဉ်နှင့်ရုံးသုံးပစ္စည်းများကိုပြည်တွင်းမှဝယ်ယူအသုံးပြုပါသည်။

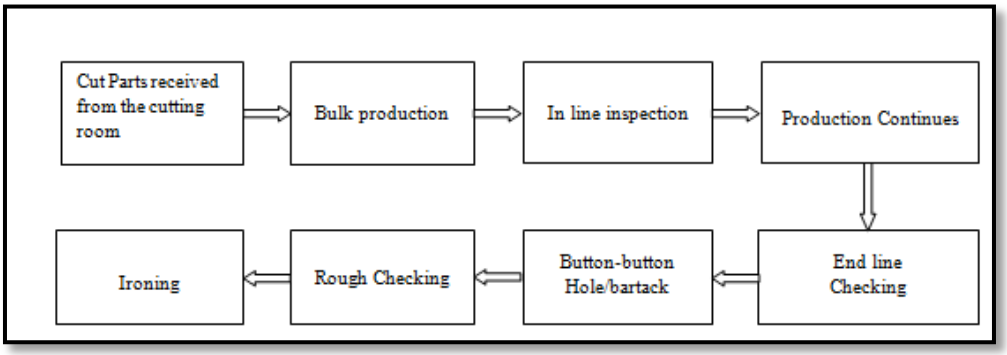
နိုင်ငံသား(ပြည်တွင်း) လုပ်သား(၁၀၆၄)ဦးနှင့် နိုင်ငံခြားသား(၁)ဦးဖြင့် ဆောင်ရွက်သွားမည်ဖြစ်သည်။ ကုန်ထုတ်လုပ်ခြင်းလုပ်ငန်းမှာ Automatic Machine နှင့်လူစွမ်းအားကို အသုံးပြုသော လုပ်ငန်းမျိုးဖြစ်ပါသည်။ ထုတ်လုပ်ပုံအဆင့်ဆင့်ကို အောက်ဖော်ပြပါပုံပြဇယားတွင် ဖော်ပြထားပါသည်။



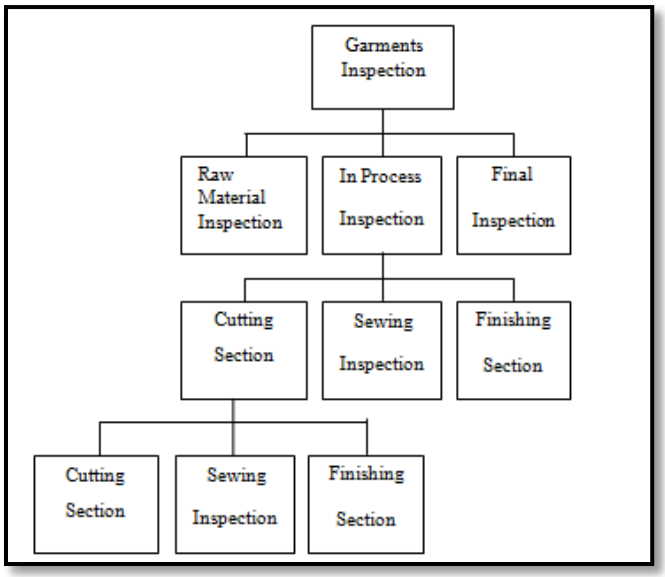
ကုန်ကြမ်းပစ္စည်းရရှိမှုအဆင့်ဆင့်



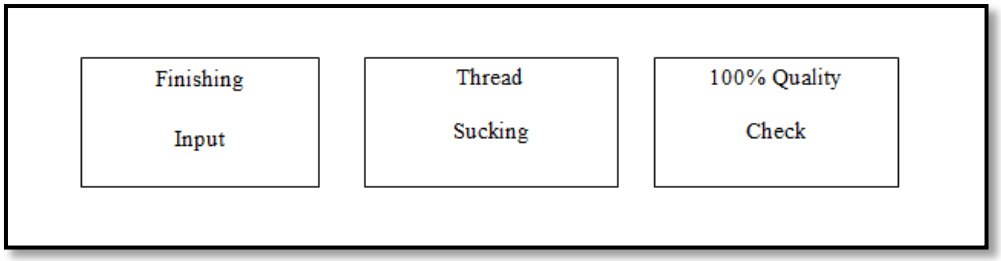
ဝိတ်ဖြတ်လုပ်ငန်းအဆင့်ဆင့်



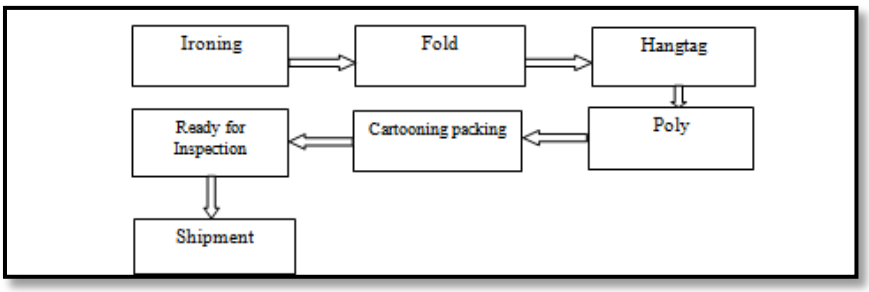
အထည်ချုပ်လုပ်မှုအဆင့်ဆင့်



အထည်စစ်ဆေးမှုအဆင့်ဆင့်



ကုန်ချောဌာနလုပ်ငန်းအဆင့်ဆင့်



အထည်တင်ပို့မှုလုပ်ငန်းအဆင့်ဆင့်

အနီးပတ်ဝန်းကျင်အခြေအနေ

ကနဦးစစ်တမ်းကောက်ယူခြင်းနှင့်ဒေသဆိုင်ရာမှ အချက်အလက်များရယူခြင်းသည် အလွန်အရေးကြီးပါသည်။ ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာခြင်းကဲ့သို့သောကနဦးစစ်တမ်း ကောက်ယူခြင်းသည်ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာတွင်အရေးပါသောအခန်းအဖြစ်တည်ရှိနေသည်။ ထို့အတွက်စီမံကိန်းသို့ကွင်းဆင်းလေ့လာမှုများကို ၁၉-၈-၂၀၂၂ ရက်နေ့တွင်လက်တွေ့ကွင်းဆင်းလေ့လာခဲ့ပြီး လိုအပ်သည့်လေအရည်အသွေး၊ ဆူညံမှု၊အလင်း၊အပူချိန်နှင့်စိုထိုင်းမှု အစရှိသည့်အချက်အလက်များကိုရယူခဲ့ပါသည်။ ကွင်းဆင်းလေ့လာထားသည့်အချက်အလက်များကို သက်ဆိုင်ရာခေါင်းစဉ်အလိုက် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး ထုတ်လွှတ်မှု

လမ်းညွှန်ချက်များနှင့်နှိုင်းယှဉ်၍ဖော်ပြထားပါသည်။ ထိုနည်းတူလျှော့ချရမည့်နည်းလမ်းများကိုလည်းထည့်သွင်းဖော်ပြထားပါသည်။ စီမံကိန်းတည်ရှိရာဒေသရှိ ရာသီဥတု၊မိုးရေချိန်၊ လူမှုစီးပွားရေးဆိုင်ရာ အချက်အလက်များကိုလည်း ဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျှော့ချရေးအစီအစဉ်

စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ပတ်ဝန်းကျင်ဆိုင်ရာအရင်းအမြစ်များ၊ ဂေဟဆိုင်ရာအရင်းအမြစ်များ၊ လူ့စွမ်းအားအရင်းအမြစ်များနှင့် စွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ခြင်းစသည့်ဖြစ်လာနိုင်သည့် ထိခိုက်မှုများကိုခွဲခြားသတ်မှတ်ပြီး ၎င်းတို့၏ရလဒ်များကို ထိခိုက်မှုဆန်းစစ်သည့်နည်းလမ်းများကိုအသုံးပြု၍သတ်မှတ်ခဲ့ပါသည်။ စီမံကိန်းအားထိခိုက်မှုများကိုအပိုင်း(၃)ပိုင်းခွဲ၍သတ်မှတ်ထားပါသည်။ အမျိုးအစားမှာတည်ဆောက်သည့်ကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလနှင့် လုပ်ငန်းဖျက်သိမ်းမည့်ကာလများဖြစ်ပါသည်။ ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ပါးစေရေးနည်းလမ်းများကိုလည်းထည့်သွင်းဖော်ပြထားပါသည်။ စီမံကိန်းလည်ပတ်စဉ်ကာလအတွက် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်ကို အကောင်အထည်ဖော်ဆောင်ရွက်ရန် အသုံးစရိတ်ရန်ပုံငွေကို တစ်နှစ်လျှင် အမေရိကန်ဒေါ်လာ၃၀၀၀ခန့် လျာထားပါသည်။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျှော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာလ။ ။ ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော်ကြောင့် ဤကာလကို ထည့်သွင်းမစဉ်းစားပါ။			
လုပ်ငန်းလည်ပတ်ခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• သယ်ယူပို့ဆောင်ရေးသုံးမော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုန်နှင့်ဖန်လုံအိမ်ခေတ်ငွေ့ထွက်ခြင်း • လုပ်ငန်းခွင်အတွင်းဖုန်မှုန်ထွက်ခြင်း • မီးဖိုတို့မှမီးခိုးထွက်ခြင်း • အရေးပေါ်သုံးမီးစက်မှစွန့်ထုတ်အိုးအငွေ့ထွက်ခြင်း	အသင့်တင့်	• မီးစက်တို့တွင်မီးခိုးခေါင်းတိုင်တပ်ဆင်ခြင်းဖြင့်အခိုးအငွေ့ကြောင့်ပတ်ဝန်းကျင်ထိခိုက်မှုကိုလျှော့ချခြင်း • စက်ရုံအတွင်းနှင့်အနီးအနားတွင်သစ်ပင်ပန်းမံစိုက်ပျိုးခြင်းဖြင့်ကာဗွန်ထွက်ရှိမှုကိုလျှော့ချပေးခြင်း • NOx ထွက်ရှိမှုနည်းသောနည်းပညာမြင့်စက်ပစ္စည်း

			များသုံးခြင်း • စက်ပစ္စည်းများကိုပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း
ရေ	• မိလ္လာစွန့်ထုတ်ရေ • စက်ပစ္စည်းများ၊မော်တော်ယာဉ်များမှဆီယို ဖိတ်ကျခြင်း	အနည်းငယ်	• လက်ရှိရေဆိုးစွန့်ပစ်မှုပုံစံဖြစ်သော မိလ္လာစနစ်ကိုပုံမှန်စစ်ဆေးပေးခြင်း • မိလ္လာကန်နှင့်မိလ္လာစနစ်ကိုလူဦးရေနှင့်ရရန်သင့်တင့်သည့်ပမာဏရှိရန်စီစဉ်ထားခြင်း • ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း • စက်ပစ္စည်းများကိုပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း
မြေဆီလွှာညစ်ညမ်းမှု	• မတော်တဆ စက်ပစ္စည်းများ၊မော်တော်ယာဉ်များမှဆီယိုဖိတ်ကျခြင်း	အလွန်နည်း	• စက်ပစ္စည်းများကိုပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း • မတော်တဆမှုမဖြစ်စေရန်ထိန်းသိမ်းခြင်း
ဆူညံသံ	• မီးစက်၊လေမှုတ်စက်နှင့်မော်တော်ယာဉ်အသုံးပြုမှုကြောင့်ပတ်ဝန်းကျင်ဆူညံမှု	အသင့်တင့်	• ဆူညံသံထွက်သောနေရာများကို အကာအကွယ်ဖြင့်ထားရှိခြင်း • စက်ပစ္စည်းများကိုပုံမှန်ပြုပြင်ပေးခြင်း
မီးဘေးအန္တရာယ်	• ကုန်ကြမ်းသိုလှောင်မှုနှင့်လျှပ်စစ်သုံးစွဲမှုပေါ်လျော့ခြင်း	အသင့်တင့်	• ကုန်ကြမ်းများအားသီးသန့်ထားရှိခြင်း • လျှပ်စစ်သုံးစွဲမှုများအားစနစ်တကျအသုံးပြုစေခြင်း
စွန့်ပစ်အမှိုက်	• ထုတ်လုပ်ရာတွင် ကျန်ရှိသောပိတ်စအပိုင်းအစများ၊မီးဖိုချောင်နှင့်ရုံးတွင်းစွန်ပစ်ပစ္စည်းများ	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန်နှင့်စွန့်ပစ်ရန်အဖြစ်သတ်မှတ်ပြီးသီးခြားစွန့်ပစ်စေခြင်း

စွန့်ပစ်အရည်	• နေအိမ်၊စားသောက် ဆောင် တို့မှစွန့်ထုတ်ရေမိလ္လာကန် စနစ်	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန် လည်သုံးစွဲရန်နှင့် စွန့်ပစ် ရန်အဖြစ်သတ်မှတ်ပြီးသီး ခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိ အမှိုက်	• စက်များမှဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များ ပြုပြင်ထိန်းသိမ်းမှုမှ ထွက်ရှိသည့်အမှိုက်များ	အလွန်နည်း	• စက်သုံးဆီများအား စနစ် တကျအသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့်အန္တရာယ်ရှိပစ္စည်းများ အားစနစ်တကျထားရှိစေ ခြင်း
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအ တွက်အလုပ်အကိုင်အခွင့် အလမ်းများရရှိစေခြင်း	အသင့်တင့်	
လုပ်ငန်းဝိတ်သိမ်းခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• အဆောက်အဦများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူ မှုများ	အနည်းငယ်	• NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြှင့်စက် ပစ္စည်းများသုံးခြင်း၊ • စက်ပစ္စည်းများကိုပုံမှန် ထိန်းသိမ်းပေးခြင်း၊
ရေ	• ဖြိုချပစ္စည်းများနှင့်မိလ္လာ ဖျက်ဆီးမှုများ	အနည်းငယ်	• ပုံမှန်သန့်ရှင်းရေးပြုလုပ် ပေးခြင်း၊ • စက်ပစ္စည်းများကိုပုံမှန် ပြုပြင်ထိန်းသိမ်းပေးခြင်း
မြေဆီလွှာညစ် ညမ်းမှု	• အဆောက်အဦနှင့်ဆက် စပ်ပစ္စည်းများ • ဖြိုချပစ္စည်းများသယ်ယူ မှုများ	အနည်းငယ်	• မတော်တဆမှုမဖြစ်စေရန် ထိန်းသိမ်းခြင်း
အမှိုက်စွန့်ပစ်မှု	• အဆောက်အဦများ • ဖြိုချပစ္စည်းများသယ်ယူ မှုများ	အလွန်နည်း	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန်နှင့် စွန့် ပစ်ရန်အဖြစ်သတ်မှတ်ပြီး သီးခြားစွန့်ပစ်စေ ခြင်း

အန္တရာယ်ရှိအမှိုက်	• စက်များမှဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များ ပြုပြင်ထိန်းသိမ်းမှုမှ ထွက်ရှိသည့်အမှိုက်များ • ဖြိုချပစ္စည်းများသယ်ယူမှုများ	အလွန်နည်း	• စက်သုံးဆီများအား စနစ်တကျအသုံးပြုစေခြင်း၊ စနစ် တကျသိုလှောင်ခြင်းနှင့်အန္တရာယ်ရှိပစ္စည်းများအားစနစ် တကျထားရှိစေခြင်း
မတော်တဆထိခိုက်မှုများ	• အဆောက်အဦများဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တဆမှုမဖြစ်စေရန် ထိန်းသိမ်းခြင်း
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက်အလုပ်အကိုင်		

အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအတွက် Environmental Management System (EMS)စက်ဝိုင်းဖြင့်အစီအစဉ်တကျပြုလုပ်သွားမည်ဖြစ်ပါသည်။ အစီအစဉ်တွင်စက်ရုံကြောင့် ဖြစ်ပေါ်စေနိုင်သောပတ်ဝန်းကျင်နှင့်လူမှုဘဝအပေါ်ဆိုးကျိုးသက်ရောက်မှုများကို လျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့်စောင့်ကြပ်ကြည့်ရှုရေးအစရှိသည့် အစီအစဉ်များပါဝင်ပါသည်။ ၎င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက်စက်ရုံတွင်ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့်ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီးလျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့်စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်ပါသည်။ အဆိုပါစက်ရုံ၏ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သောပတ်ဝန်းကျင် အဖြစ်အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာဆိုးကျိုး သက်ရောက်မှုများကိုလျှော့နည်းစေရန်စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့် အစီအစဉ်များကိုအောက်ပါအတိုင်းပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားမှုပြုလုပ်ထားပါသည်။

၁။ ထုတ်လွှတ်အခိုးအငွေ့စီမံခန့်ခွဲမှုစီမံချက်
၂။ ဆူညံသံစီမံခန့်ခွဲမှုစီမံချက်
၃။ ရေအရည်အသွေးစီမံခန့်ခွဲမှုစီမံချက်
၄။ အစိုင်အခဲစွန့်ပစ်ပစ္စည်းစီမံခန့်ခွဲမှု
၅။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

၆။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၇။ လူမှုအကျိုးတူပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

၈။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်အတွက် ငွေကြေးလျာထားမှု

၉။ မကျေနပ်မှုဖြေရှင်းခြင်းနည်းလမ်း

အဆိုပြုလုပ်ငန်း၏ လူထုအကျိုးပြုပူးပေါင်းပါဝင်မှုများအဖြစ် အကျိုးအမြတ်၏ ၂%ကို ကျန်းမာရေး၊ ပညာရေးနှင့်နယ်ပယ်ဖွံ့ဖြိုးတိုးတက်ရေးများတွင်ထည့်ဝင်လှူဒါန်းသွားမည်ဖြစ်ပါသည်။အဆိုပြုလုပ်ငန်း၏ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုရေးလုပ်ဆောင်ရမည့်လုပ်ငန်းစဉ်များနှင့်ဖြေရှင်းရမည့်နည်းလမ်းများကိုလည်း ထည့်သွင်းဖော်ပြထားပါသည်။

သက်ဆိုင်သူများနှင့်တွေ့ဆုံဆွေးနွေးခြင်း

ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်အရစီမံကိန်းပိုင်ရှင်သည်ဝန်းကျင်လေထုအရည်အသွေး၊ဆူညံသံ၊စွန့်ထုတ်ရေအရည်အသွေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးတို့ကို စောင့်ကြပ်ကြည့် ရှုရမည် ဖြစ်သည်။ စောင့် ကြပ် ကြည့် ရှု၍ရရှိ လာသော လေထု တို င်းတာ ရရှိ မှု များ၊ ရေအရည် အသွေးတိုင်းတာရရှိမှုများနှင့် ဆူညံသံတိုင်းတာရရှိမှု ရလဒ်များကိုပြန်လည်စိစစ်စစ်ဆေးနိုင်ရေးအတွက်မှတ်တမ်းများကို ဖိုင်များဖြင့်သေချာစွာ သိမ်းဆည်းထိန်းသိမ်းထားရန်လိုအပ်ပြီး သက်ဆိုင်ရာတာဝန်ရှိဌာနများသို့ တင်ပြအစီရင်ခံရမည် ဖြစ်ပါသည်။ အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်းနှင့်သတင်းအချက်အလက်များ ထုတ်ဖော်တင်ပြခြင်း ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် Environmental Management Plans (EMP) ကိုပြင်ဆင်ရေးဆွဲရာတွင်အကြံပေးအဖွဲ့ Green EHSS သည် Garment & Process Global Co., Ltd စက်ရုံရှိ တာဝန်ရှိသူများနှင့်အတူ စက်ရုံစီမံကိန်း၏နောက်ခံအကြောင်းအရာနှင့် ကုန်ထုတ်လုပ်သည့် လုပ်ငန်းစဉ်များကို စက်မှုဇုန်ဥက္ကဋ္ဌနှင့်အနီးရှိ ရပ်ကွက်အုပ်ချုပ်ရေးမှူးတို့နှင့် တွေ့ဆုံကာ Face to Face Meeting ပြုလုပ်သွားမည်ဖြစ်ပါသည်။

နိဂုံးချုပ်

နိဂုံးချုပ်အားဖြင့်ယခုစီမံကိန်းသည် ဆောက်လုပ်ရေးကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလနှင့်လုပ်ငန်းဖျက်သိမ်းသည့် ကာလသုံးခုလုံးတွင် ဒေသခံပြည်သူများကို အလုပ်အကိုင်အခွင့်အလမ်းများဖန်တီးပေးနိုင်သည်။ ကာလသုံးခုလုံးတွင်ဖြစ်ပေါ်လာနိုင်သော ထိခိုက်မှုများကို လျှော့ချနိုင်မည့်နည်းလမ်းများနှင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား အကောင်အထည်

ဖော်ခြင်းဖြင့်လျှော့ချနိုင်သည်။ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်အား စီမံကိန်း၏ ပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေးကို စောင့်ကြပ်ကြည့်ရှုရန်မဖြစ်မနေအကောင်အထည်ဖော်ပေးရမည်။ စီမံကိန်းအကောင်အထည်ဖော်သူသည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ယခုအစီရင်ခံစာအားစစ်ဆေးပြီးနောက် ပြန်လည်ပေးပို့လာသော သဘောထားမှတ်ချက်နှင့် အကြံပြုချက်များကိုလိုက်နာရမည်။ ထို့ပြင် စီမံကိန်းအကောင်အထည်ဖော်သူသည်မြန်မာနိုင်ငံ၏ ပတ်ဝန်းကျင်နှင့်သက်ဆိုင်သောမူဝါဒများ၊ ဥပဒေများ၊သတ်မှတ်ချက်များကိုလိုက်နာရန်လိုအပ်ပါသည်။

1. INTRODUCTION

Environmental Management Plan is required for ensuring sustainable development. It should not affect the surrounding environmental adversely. The management plan presented in this chapter needs to be implemented by the proposed expansion of Garment & Process Global Co., Ltd. The Environmental Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the industry specific control measures, the proposed industry should adopt following guidelines. The specific objectives of this study are

- Identify the major impacts that are may arise from the activities of the proposed project on natural environmental and socio-economic environment of the project area
- Describe the mitigation measures to minimize these impacts
- Prepare and implement Environmental Management Plan for the project
- Make sure that EMP is developed sufficiently and sound for the proposed project and
- Corporate Social Responsibility Plan (CSR Plan) plays an essential part for the improvement of the social welfare of community as well as development of the region.

1.1 Project Background

The project is new investment for manufacturing of garments on CMP Basis Company from Chinese. The Yangon Region Investment Committee issues the project on 18th December 2012 with the Endorsement No 533/2012. YRIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing of various kinds of garments on CMP Basis under the name of Garment & Process Global Co., Ltd.

According to the Myanmar Environmental Conservation Law 2012, it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD) said project requires an Environmental Management Plan (EMP) to meet the Environmental assessment requirements. Therefore, Garment & Process Global Co., Ltd commissioned Green Environmental, Health, Safety & Social Consultancy Company Limited (Green EHSS Co.,Ltd) for EMP report study.

1.1.1 Project Proponent Profile

This is the information of project proponent from the MIC's registration that is describing in below Table 1-1 and 1-2.

Table 1.1 Information of Investor

Investor Name	Mrs. Hyun Jung Noh
Nationality	Korea
Passport Number	M42323432

Table 1.2 Director List

Name of Shareholder	Citizenship
Ms.Dong Dong Zhang	Chinese
Representative by: Mrs. Hyun Jung Noh (M42323432)	Korea

1.1.2 Investment Plan and Salient Features of the Project

The estimated authorized capital investment is USD 524,701.69 (table 1.3). Organization chart of Garment & Process Global Co., Ltd is presented in Figure 1.1.

Table 1.3 Salient Features of the Project

Type of Proposed Business	Manufacturing of Garment
Type of Investment	100 % Foreign Investment
Capital Investment	USD 524,701.69
Type of Land	Industrial Land
Type of Land area	1.549 acres
Land Lease Year	30 Years
Operation Start Date	22.6.2009
Address	No.(42/106), Cherry Street, Shwe Pyi Thar Industrial Zone(1), Shwe Pyi Thar Township, Yangon Region
Contact Phone	09263256007

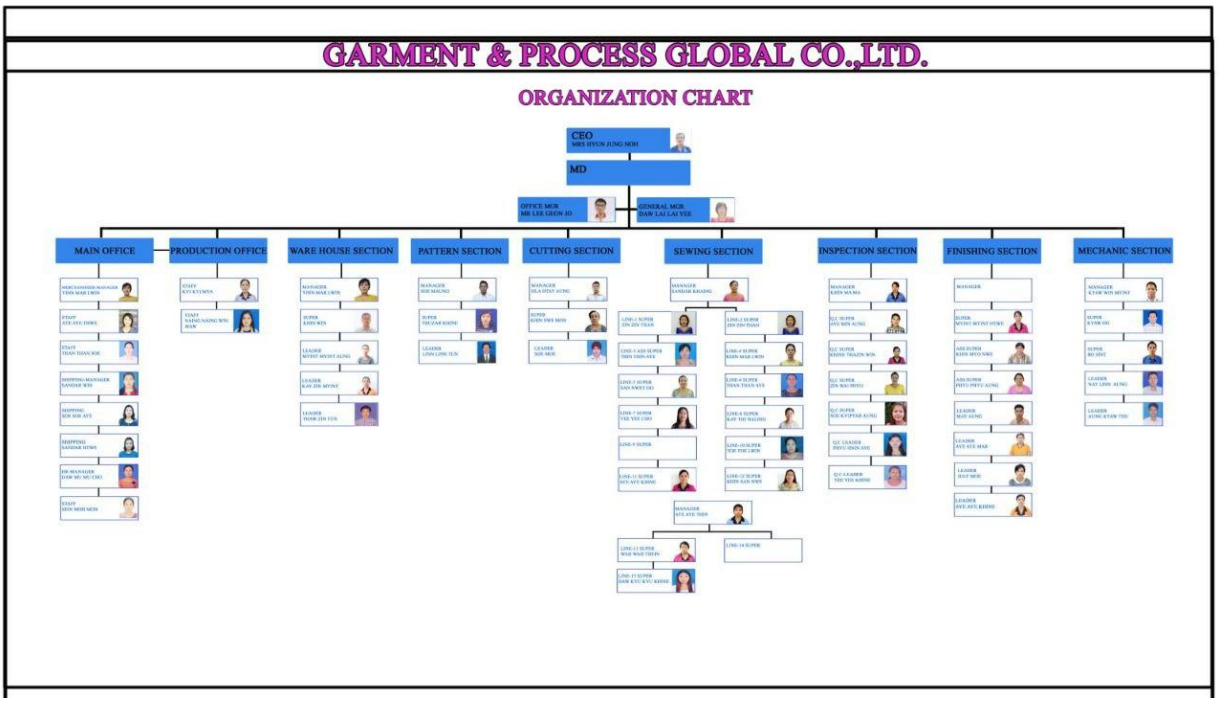


Figure 1-1 Organization chart of Garment & Process Global Co., Ltd

1.2 Environmental Consultant Profile

Green Environmental, Health, Safety & Social Consultancy Company Limited (Green EHSS Co.,Ltd) prepares the EMP for the proposed project. The field studies were carried out by Green Environmental, Health, Safety & Social Consultancy Company Limited (Green EHSS Co.,Ltd) experiences in conducting environmental assessments for various types of projects in Myanmar. The Green Environmental, Health, Safety & Social Consultancy Company Limited (Green EHSS Co.,Ltd) team conducted field survey, assessment activities and prepared the report. A reconnaissance study was performed on the proposed project site and baseline environmental data were also collected from possible sources using the appropriate measuring devices. Data interpretation and analysis were made based in those collected data for the present and potential future conditions. Suitable measures were proposed for the impacts to be mitigated to reduce to acceptable ones. The environmental study was carried out by the study team and the following is a summary of team member's responsibilities during the study period.

Table 1.4 Members of EMP Study Team

No	Name	Designation	Academic and Professional Qualifications	Years of Experience
1	Catherine Soe Soe Aung	Team Leader, Sr. Environmentalist Certified Environmental Professional, Canada Approved Risk Consultant, MOM, Singapore ADB's Consultant Management	Master in Environmental Engineering, National University of Singapore Master in Zoology, YU Bachelor in Zoology, YU	25
2	Dr. May Thin Swe	Department Head Jivitadanan Sangha Hospital	M.B.B.S(Yangon)	30
3	Dr.Theingi Ye Myint	Waste Management and Water Quality Specialist	PhD(YU) Master in Environmental Engineering, NUS Master in Industrial Chemistry, YU Bachelor in Industrial Chemistry, YTU	5
4	Dr. Nyo Nyo Lwin	Biodiversity Specialist, Fauna Team Leader	PhD(YU) Master in Zoology, YU Bachelor in Zoology, YU	15
5	Dr. Thet Thet Mar Win	Biodiversity Specialist, Flora Team Leader	PhD(YU) Master in Botany, YU Bachelor in Botany, YU	15
6	U San Aye	Mapping and GIS Specialist	Bachelor in Maths, Diploma in Mapping, Japan	40

7	Dr. Pwint Thu Aye	Aquatic and Marie Biologist	PhD(YU) Master in Zoology, YU Bachelor in Zoology, YU	6
8	Daw Swe Swe Aung	Social Impact Assessment Specialist	Master in Geography, YU Bachelor in Geography, YU Diploma in GIS, Communication Skill for Business, Singapore Polytechnic	18
9	Daw Mi Mi Soe	Social Impact Assessment Specialist	Master in Public Administration Bachelor in Chemistry Diploma in Computer Science Post-Graduate Diploma In Applied Psychology	24

2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section provides a brief summary of relevant national environmental legislations established by the MONREC and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

2.1 Myanmar Regulatory Framework

Myanmar has 24 ministries under the office of the President as of May 2016. The leading ministries in-charge of environmental and social considerations is the Environmental Conservation Department (ECD) of the MONREC that was reorganized Ministry of Environmental Conservation and Forestry (MOECAF) in April 2016.

2.1.1 Laws and Regulations Related to Environmental and Social Considerations

Requirements related to environmental and social impact management for development projects are described in Table 2-1

Table 2-1 List of Myanmar's Law Relating to Environmental Management

Law and Regulation	Description
National Environmental Policy of Myanmar, (Notification No.26/94 dated 5 December 1994)	To achieve harmony and balance between socioeconomic, natural resources and environment through the integration of environmental considerations into the development process enhancing the quality of the life of all citizens.
Constitution 2008	
Section 37 (a)	The Union is the ultimate owner of all lands and all natural resources above and below the ground, above and beneath the water and in atmosphere in the Union.
Section 37 (b)	The Union shall permit citizen rights of property, right of inheritance, right of private initiative and patent in accord with the laws.
Section 372	The Union guarantees the right to ownership, the use of property and the night to private invention and patent in the conducting of business if it is not contrary to the provisions of this Constitution and the existing laws.
Sec.45	The Union shall protect and conserve natural environment.
Sec.390 (a) (b) (c) (d)	Every citizen has the duty to assist the Union in preserving and safeguarding the cultural heritage, conserving the environment, striving for the development of human resources and protecting and preserving the public property.
Environmental Conservation Law, 30 March 2012	
Objectives	To contract a healthy and clean environmental and to conserve natural and cultural heritage for the benefit of present and future generations, to maintain the sustainable development through effective management of natural resources and to enable to promote international , regional and bilateral cooperation in the matters of environmental conservation.
Section 3	© 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; (d) to reclaim ecosystems as may be possible which are starting to degenerate and disappear; © to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially.
Provision of Duties and Powers relating to the Environmental Conservation of the Ministry Section 7	(c) To specify categories and classes of hazardous waste 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 signification at present or in the long run on the environment; © 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; (j) 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; (m) To lay down and carry out a system of EIA and SIA as to whether or not a project or activity to be undertake by any Government department, organization or person may cause a significant impact on the environment; (o) 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.
Chapter VI Environmental Quality Standards Section10	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; © underground water quality standards; (d) atmospheric quality standards; © 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 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 stipulate environmental quality standards.
Section 15	The owner or occupier of any business, material or palace 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.

Section 16	A person or organization operating business in the industrial estate or business in the SEZ or category of business stipulated by the Ministry: (a) is responsible to carry out by contribution the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste; (b) shall contribute the stipulated users' charges or management fee for the environmental conservation according to the relevant industrial estate, SEZ and business organization; © shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.
Section 24	The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition include in prior permission, stipulated by the ministry or not.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 24	The project proponent has to abide by the stipulations included in the rules, regulation, by law, order, notification and procedure which are issued by said law.
Environmental Conservation Rules, 2014	
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to Scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rule 61	The ministry may approve and reply on the EIA report or IEE or EMP with the guidance of the Committee.
Sub rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Environmental Impact Assessment Procedure (December 2015)	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph 102. The project proponent has to support after consulting with effected persons by project relevant government organization, government department and other related persons to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under sub-paragraph (b) of paragraph 102. The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover, the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws,

	rules, this procedure EMP and all conditions, under paragraph 103. The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104. The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105. The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106. The project proponent has to submit, as soon as possible, the failures of his or her responsibility other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107. The project proponent has to submit the monitoring report dually or prescribed time by Ministry in line with the schedule of EMP, under paragraph 108. The project proponent has to prepare the monitoring report in accord with the rule 109. The project proponent has to show this monitoring report in public palace such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy or this report by email or other way which agreed with the asked person, to any asked person or organization, under paragraph 110. The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work place to this project in any time, under paragraph 113. The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirement related to social or environment or caused to it, under paragraph 115. The project proponent has to allow inspector to inspect the contractor and sub0contractor who implement on behalf of project, under paragraph 117.
Screening: Section 23	a) The project proponent shall submit the Project Proposal to the Ministry for Screening b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment. c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1= Categorization of Economic Activities for Assessment Purposes', taking into account Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry:

	i) An EIA Type Project, or ii) An IEE Type Project, or iii) A Non IEE or EIA Type, and therefore not required to
National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)	
Objectives	To provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharge from various sources in order to prevent pollution for purpose of protection of human and ecosystem health.
National Environmental Policy of Myanmar (2019)	
National Environmental Policy Vision & Mission	Vision A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar. Mission To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all policies, laws, regulation, plans, strategic, programs and projects in Myanmar.
Foreign Investment Law, 2012	
Section 8	(a) To support the primary objectives of the national economic development plan, and for business that cannot yet be run by the State and citizens or businesses that have insufficient funds and technology. (b) Development of employment activities (l) Protection and conservation of the environment. (q) Appearing the required modern services for the Unions and citizens.
Section 17	(a) To abide by the existing laws of the Republic of the Union of Myanmar. (b) To carry out the business by forming a company under the existing laws of Myanmar by the investor. (h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business. (k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant enterprises, departments or organizations in accord with the contract.
Foreign Investment Law, 2013	
Rule 54	The promoter or investor shall. (a) comply with Environmental Protection Law in dealing with environmental protection matters related to the business; (b) shall carry out socially responsible investment in the interest of the Union and its people; (c) shall co-operate with authorities for occasional or mandatory inspection; (d) shall exercise due diligence to be in conformity and harmony with norms and standards prescribed by relevant Union Ministry in conducting construction of factories, workshop, buildings and other activities; (e) shall enforce Safety and Health

Myanmar Investment Rules 2017	
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment.
Rule 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment.
Rule 206	The project proponent has to submit the passport, export evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law.
Myanmar Insurance Law 1993	Section 15- If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person. Section 16 – The project proponent has to ensure insurance to compensate for general damages because the project may cause damages to the environment and injury to the public.
Payment of Wages Law 2016	
Section 3 & 4	The project proponent has to pay the wages in accord with section 1 and 4 of said law
Section 5	The project proponent has to submit with the agreements of employees & reasonable ground to the department if it is difficult to pay because of force majeure included in a natural disaster.
Section 7-13	The project proponent has to abide by the provisions of section 7 to 13 in the chapter (3) in respect of deduction from wages,
Section 14	The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours.
Payment of Wages Law 1936	
Section 3	Every employer shall be responsible for the payment of all wages required to be paid under this Act to persons employed by him and in case of persons employed.
Section 6	Wages to be paid in current coin or currency notes.
Section 9	Deductions for absence from duty
The Law on Standardizations 2014	
The objectives of the law are as follows a) to enable to determine Myanmar Standards; b) to enable to support export promotion by enhancing quality of production organizations and their products, production processes and services; c) to enable to protect the consumers and users by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards; d) to enable to support protection of environment related to products, production processes and services from impact, and conservation of natural resources; e) to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment; f) to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade. g) to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.	

Yangon City Development Committed Law 2018	
Section 317	The proponent shall not block the natural river channel, change the course and disrupt the water channel, filling with soil within the city boundaries without the consent of the Committee.
Section 318	The project proponent shall not construct buildings, factories and industries without sewage, toilet, septic tanks and wastewater treatment system.
Section 322	The project proponent is not allowed to make activities that will produce noise pollution, water pollution, air pollution and soil pollution to impact the environment within the city's boundaries.
The Amended Law for Factories Act, 1951 (2016)	
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exists, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
Basic Principle: Section 3	Private Industrial Enterprise shall be conducted in accordance with the following basic principles:- (a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise; (b) to acquire modern technical know-how for raising the efficiency of industrial enterprises and to established the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market; (d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises; (e) to cause opening up of more employment opportunities; (f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution; (g) to cause the use of energy in the most economical manner.
The Export and Import Law (2012)	
Objectives	The objectives of this law are as follow: a) To enable to implement the economic principles of the State successfully. b) To enable to lay down the policies relating to export and import that supports the development of the state. c) To cause the policies relating to export and import of the State and activities are to be in conformity with the national trade standards. d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.
Prohibitions: Section 5	No persons shall export or import restricted, prohibited and banned

	goods.
Prohibitions: Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Prohibitions: Section 5	A person who obtained any license shall not violate the conditions contained in the license.

The prevention of Hazard from Chemical and Related Substances Law, 2013

This law was enacted with the objectives of:
a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances;
b. To supervise systemically in performing the chemical and related substances business with permission for being safety;
c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically;
d. To perform the sustainable development for the occupational safety, health and environment conservation.
Regarding the chemical management and storage, currently, regulations governing chemical management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.

Underground Water Act

The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to converse and protect underground sources of water supply in the Union of Burma. This act prohibits sinking of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township officer or sub-divisional officer had power to close a license tube after exercising jurisdiction over the local area concerned and the expense of such closure shall be recovered from the owner of the tube as if it were an arrear of land revenue.

Myanmar Fire Brigade Law (2015)

The Pyidaungsu Hluttaw enacted this law by Law No 11/2015 on the date of 17th march 2015 with the following objectives.
(a)to take precautionary and preventive measures and loss of state own property, private property, cultural heritage and the live and property of public due to fire and other natural disasters
(b)to organize fire brigade systemically and to train the fire brigade
(c)to prevent from fire and to conduct release work when fire disaster, natural disaster, epidemic disease or any kind of certain danger occurs
(d)to educate, organize and inside extensively so as to achieve public corporation
(e)to participate if in need for national security, peace for the citizens and law and order

Section 8 Fire safety Procedures

Rule 17	The relevant Government Department or organization shall for the purpose of precaution and prevention obtain the approval of the Fire force Department before granting permission for the following cases. a. Constructing three-storied and above buildings market and condominium buildings b. Operating hotel, motel, guest house enterprise c. Constructing factory, workshop storage facilities and warehouse d. Operating business expose to fire hazard by using in inflammable materials or explosive materials e. Producing and selling fire-extinguishing apparatuses f. Doing transport business, public utility vehicles train, airplane,

	helicopter, vessel, ship. Tonkin tug
Rule 18	The relevant government department or organization shall obtain the opinion of the fire services department for the purpose of fire precaution and prevention when laying down plans for construction for town, village and downtown or village development plans
The Electricity law 2014	
In 2014, the new electricity law a comprehensive piece of legislation covering licensing a new regulatory commission, standards, inspection, tariff and restrictions replaced the electricity law of 1984. The electricity law divides projects into small (up to 10 MW), medium (between 10 MW to 30 MW) and large (upwards of 30MW), the states and regions can issues permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the electricity law and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines in accordance with existing laws.	
Boiler Law 2015	
Chapter 2 Objective	The objectives of this law are as follows: (a)To obtain boilers in compliance with Myanmar Standards or International Standards (b)To prevent the country and citizens from hazards caused by boiler accidents (c)To use boilers sin compliance with Myanmar Standards or International Standards within the factory (d)To develop boiler technology and to produce experts capable of manufacturing, handling, repair and maintenance of boilers (e)To optimize the use of boilers through effective utilization of fuel energy (f)To reduce the environmental, social and health impacts through long-lasting use of boilers.
Chapter 3 4.Within the permission of the Ministry, the inspector general can:	(a)Notify the inspection methods and instructions according to the national or international standards for safe operations of boilers in line with this law, procedures and instructions (b)Only the results obtained from the prescribed boiler standards and inspection methods will be approved
Chapter 4 Boiler Registration	5.Anybody who would like to use a boiler in any kind of business should be registered 6.Boiler should be manufactured according to Myanmar Standards or International Standards 7.Those who would like to apply for boiler registration according to Section 5 should apply to the inspector with the application, documents and vouchers related to boiler 8.If the application regarding registration of boiler according to Section 7, the Registration officer should conduct necessary inspection and submit results of the findings to the inspector General. 9.The inspector general should assess and inspect the submission of the Registration Officer according to Section 8 and could allow or reject for registration of the boiler 10.The inspector general shall define boiler size according to heated surface area in accordance with adopted procedures

Chapter 13 Prohibitions	59.According to Section 21, nobody must alter, change, deface, deform or make embossed registration unnoticeable illegitimately 60.Nobody is allowed to repair a boiler without boiler repair certificate 61.Nobody is allowed to maintain a boiler without boiler maintenance certificate 62.Nobody must after safety relief value in order to exceed the allowable pressure due to his consent or direction given by the owner 63.Nobody must manufacture boilers against Section 25, Subsection 25(a) and (b) enacted
Labor Dispute Settlement Law 28 March 2012 replacing 1929 Version	
The Pyidaungsu Hluttaw hereby enacts this law 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 setting the dispute of employer and worker justly.	
The Social Security Law 2012	
The Social Security Law enacted in 2012 was amended the social Security Act in 1954. It stipulates the formation and implementation of social security systems	
Section 53(a)	The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment
Labor Dispute Settlement Law 28 March 2012 replacing 1929 Version	
This law enacted 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 setting the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall from the workplace coordinating committee consisting of the representatives of workers and the representatives of employer.	
Section 23	A party, employer or worker may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of such body in accord body in accord with stipulated manners may apply to the competent court in person or by the legal representative
Section 24	The relevant Conciliation Body shall respect of the collective dispute known or received by the complaint of either party, employer or worker in respect of the dispute information sent by the Minister or The Region or State Government or any other means carry out as follows(a)Conciliating so as to be settled within three days not including the official holidays from the day of knowing or receipt of such dispute (b)Concluding mutual agreement if the settlement is reached in Conciliating under sub-section (a) before the Conciliation Body.
Section 25	The Conciliation Body shall refer the collective dispute which does not reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute
Section 38	No employer shall fail to negotiate and coordinate in respect of the compliant within the prescribed period without sufficient cause.
Section 39	No employer shall after the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the

	dispute before Arbitration Body or Tribunal to affect the interest of such workers immediately.
Section 46	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, discussion by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.
Section 46	Any Employer who violates ant prohibition contained in Section 38 and 39 shall on conviction be punished with a fine for a minimum of one-lakh kyats.
The Employment and Skill Development (2013)	
This law enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by setting the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Section 14	Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
The Worker's Compensation Act 1923	It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment such as carpal tunnel syndrome.
The payment of Wages Act 1936	The payment of Wages Act defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday and allows legal action against delayed payment or un-agreeable deduction.
The Leave and Holidays Act 1951 partially revised in 2014	This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leaved and maternity leave.
The Minimum Wage Law 2013	The minimum wage law passed in March 2013 was replaced the 1949 Minimum Wage Act. The Law provides a framework for minimum wage determination the presidential office establishing a tripartite minimum wage committee shall decide minimum wage with industrial variation based on a survey on living costs of workers possibly every two years. This also stipulates equal payment.
Public Health Law 1972	**Chapter 2 Prevention of Public Health**
Objectives	To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. This law focuses as follows The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law. The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law. The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.

Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
Chapter 2 Prevention	4. When a Principal Epidemic Disease of a Modifiable Disease occurs; Immunization and other necessary measures shall be undertaken by the Department of Health in order to control the spread thereof; The public shall abide by measures undertaken by the Department of Health under sub-section (a).
Chapter 4 Environmental Sanitation	For prevention of the outbreak of Communicable Disease and effective control of Communicable Disease when it occurs, the public shall under the supervision and guidance of the Health Officer of the relevant area, undertaken the responsibility of carrying out the following environmental sanitation measures; Indoor, outdoor sanitation or inside the fence outside the fence sanitation; Well, ponds and drainage sanitation; Proper disposal refuse and destruction therof by fire; Construction and use of sanitary latrines Other necessary environmental sanitation measures
Occupational Safety and Health Law 2019	
Purpose	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards
Section 26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.
Section 26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters and signboards.
Section 30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the propose of safety and health.
Section 30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section 30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/her acts or omissions at work.
The law on Standardization	
Objectives	The objectives of this law are as follow as To enable to determine Myanmar Standard To enable to support export promotion by enhancing quality of production organizations and their product, production processes and services To enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard and safe from health hazards To enable to support protection of environment related to products, production process and services from import and conservation of natural resources To enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and

	those which are not safe and endangered to the environment To support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade To facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme
Chapter 7 Taking action by Committee No 19	The committee may if it is found out that holder of certificate of certification violate any term or condition contained in the relevant recommendation, pass any of the following administrative order. Warning Suspending the certificate of certification for limited period cancelling the certificate of certification
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သောသတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ ၂၀၁၈	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သောဝတ္ထုပစ္စည်းများကိုစနစ်တကျပြုလုပ်ခြင်း၊တင်သွင်းခြင်း၊သယ်ယူခြင်း၊သိုလှောင်ခြင်းနှင့်သုံးစွဲခြင်းတို့ ပြုနိုင်ရန်၊ ယမ်းဘီလူးနှင့်ဆက်စပ်သုံးပစ္စည်းများအသုံးပြုသည့်လုပ်ငန်းခွင်ဘေးအန္တရာယ်ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊ လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဝတ္ထုပစ္စည်းများပြုလုပ်သုံးစွဲမှု များကို စနစ်တကျကြီးကြပ်နိုင်ရန်၊
အခန်း ၇ တားမြစ်ချက်များ အမှတ် ၁၈	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှစစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်း မပြုရ။
အမှတ် ၁၉ ခ	ပုဒ်မ၈ အရ ကာကွယ်ရေးဦးစီးဌာန ကောင်စီအမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဝတ္ထုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။
အမှတ် ၁၉ ဂ	ဤဥပဒေအရ ထုတ်ပြန်ထားသည့်နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့်ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်းမရှိစေရ၊
The Motor Vehicles Law 2015	
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles The project proponent has to promise to abide by the nearly all provisions of said law and rules, especially the provisions related to air pollution, noise pollution and life safety
The Conservation of Water Resources and Rivers Law 2006	
Aims	The aims of this law are as follows, (a)to conserve protect the water resources and rivers system for beneficial utilization by the public (b)to smooth and safety waterways navigation along economy through improving water resources and river system (c) to contribute to the development of state economy through

	improving water resources and river system (d) to protect environmental impact
Chapter (5) Prohibitions No 8	No person shall (a)carry put any act or channel shifting with the aim to ruin the water resources and rivers and creeks (b)cause the wastage of water resources willfully
No 10	No person shall anchor the vessels where vessels are prohibited from anchoring in the rivers and creeks
No 11 (a)	No person shall dispose of engine oil, chemicals, poisonous material and other materials which any cause environmental damage, or dispose of explosive from the bank or from a vessel which is plying, vessel which has berthed, anchored, standard or sunk.
No 12	No person shall carry out growing garden, digging, filling, silt trapping, closing pond, dyke building or erecting spur in the river-creek boundary, bank boundary and waterfront boundary without the permission of the relevant government department and organization
No 15	No person shall carry out the construction of switch back, dockyard, wet dockyard, water tight dockyard, building of jetty, pier, landing stage or vessel landing drainage in the river-creek boundary and water front boundary without the permission of the Directorate.
The Commercial Tax Law 1990 Amended 2014	
Chapter 5 Registration and Intimation of Commencement of Enterprise 11 (b)	Any person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimidation on the commencement of the operations such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly payment of Tax and Sending of Three-Monthly Return 12(a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
12(b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if three is cause to consider that he has taxable proceed of sale or receipt from service within a year.
12(c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may based on the information received, estimate and claim the tax payable or the additional tax payable.
12 (e)	The tax payable on goods imported under sub-section (c) of section 4 of the law shall be collected together with the customs duties by the Customs Department in accord with the manner of collecting customs duties.
The Natural Disaster Management Law 2013	The objectives of this Law are as follow: (a) to implement natural disaster management programmes systematically and expeditiously in order to reduce disaster risks (b) to form the National Committee and Local Bodies in order to implement natural disaster management programmes systematically and expeditiously (c) to coordinate with domestic and foreign government departments and

	organizations, social organizations, other non-government organizations or international organizations and foreign regional organizations in carrying out natural disaster management activities (d) to conserve and restore the environment affected by natural disasters (e) to provide health, education, social and livelihood programmes in order to bring about better living conditions for victims

2.2 International Guidelines

According to the Environmental Conservation Law, MOECAF shall set standards of environmental qualities as agreed by the Union Government and the Environmental Conservation Committee to provide the basis for regulation and control of noise, air emissions and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.

The project environmental management plan during construction and operation needs to comply with Myanmar national Environmental Quality (Emission) Guidelines (2015) and the others as appropriate. Guidelines for parameter relevant to the project are as shown in Table 2.2, Table 2.3 and Table 2.4 as follows.

Table 2.2 National Guidelines for Air Quality

Parameter	**Averaging Period**	**Guidelines Value µg/m^3**
Nitrogen dioxide	1 year 1 hour	40 200
Ozone	8 hour daily maximum	100
Particulate matter PM_{10}[a]	1 year 24 hour	20 50
Particulate matter $PM_{2.5}$[b]	1 year 24 hour	10 25
Sulphur dioxide	24 hour 10 minute	40 500

[a] Particular matter 10 micrometer or less in diameter
[b] Particular matter 2.5 micrometer or less in diameter

Table 2.3 National Guidelines on Noise Level

Receptor	**One Hour LAeq (dBA)[a]**	
	Daytime 07:00-22:00 (10:00-22:00 for Public holidays)	**Nighttime 22:00-07:00 (22:00-10:00 for Public holidays)**
Residential, Institutional, educational	55	45
Industrial, commercial	70	70

[a] Equivalent continuous sound level in decibels

Table 2.4 National Guidelines National Guidelines on Wastewater for Metal, Plastic and Rubber Products Manufacturing (Effluent Levels)

Parameter	Unit	Guideline Value
5-day Biochemical oxygen demand	mg/l	30
Absorbable organic halogens	mg/l	1
Ammonia	mg/l	10
Cadmium	mg/l	0.02
Chemical oxygen demand	mg/l	160
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Cobalt	mg/l	0.5
Color	m^{-1}	7 (436 nm[a], yellow) 5 (525 nm, red) 3 (620 nm, blue)
Copper	mg/l	0.5
Nickel	mg/I	0.5
Oil and grease	mg/I	10
Pesticides	mg/I	0.05-10[b]
pH	S.U.[a]	6-9
Phenols	mg/I	0.5
Sulfide	mg/I	1
Temperature increase	c	<3[b]
Total coliform bacteria	100 ml	400
Total nitrogen	mg/I	10
Total phosphorus	mg/I	2
Total suspended solids	mg/I	50
Tin	mg/l	2
Total nitrogen	mg/l	15
Total phosphorus	mg/I	5
Zinc	mg/I	2

[a] Standard unit

[b] At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters form the point of discharge.

2.3 Commitment of Garment & Process Global Co., Ltd

Garment & Process Global Co., Ltd has made the commitments and responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of MONREC in which to conduct an EMP which describe the measure to be taken for preventing, mitigation and monitoring significant environment impacts resulting from the implementation and operation of proposed project or business or activity has to be prepared and submitted and to perform activities in accordance with this EMP and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures.

- Monitoring the factory area operations according to EMP and Environmental Monitoring Plan (EMP)
- Submitting environmental monitoring reports to ECD
- Planning and implementation of CSR activities
- To set up welfare plan such as staff medical checkup, training program and Public talk for getting knowledge, risk prevention, bonus and social security service
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees

3. PROJECT DESCRIPTION

3.1 Location Proposed Project

The proposed project is located at 16.951321 N and 96.085725 E in No.(42/106), Cherry Street, Shwe Pyi Thar Industrial Zone(1), Shwe Pyi Thar Township, Yangon Region. The location map if the proposed project site is shown in Figure 3-1.

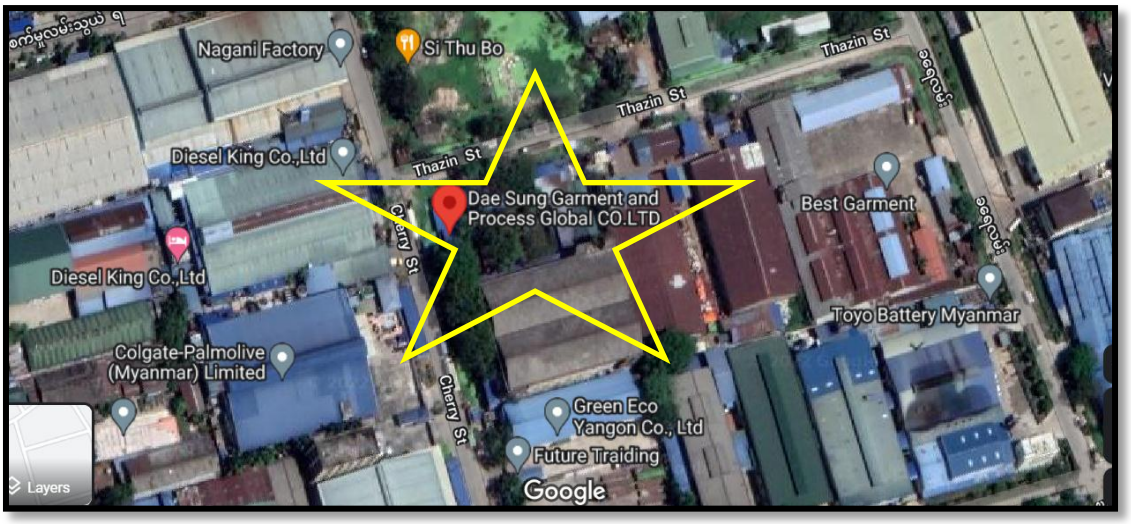


Figure 3-1 Location (Satellite) Map of the Factory

3.2 Objectives of Proposed Project

The objective of Garment & Process Global Co., Ltd is to manufacture various kinds Lady Down Jacket, Man Down Jacket, Pant for 100% export CMP basis and to offer our clients the best required quality garments in the required qualities at the precise time.

3.2.1 Site Description of Project Site

The total land area is 1.549 acres and builds main factory buildings, warehouse, kitchen, canteen, maintenance house, QC department, sewing department and iron department for production building. Generator room and water treatment plant are separated by main factory building structure.

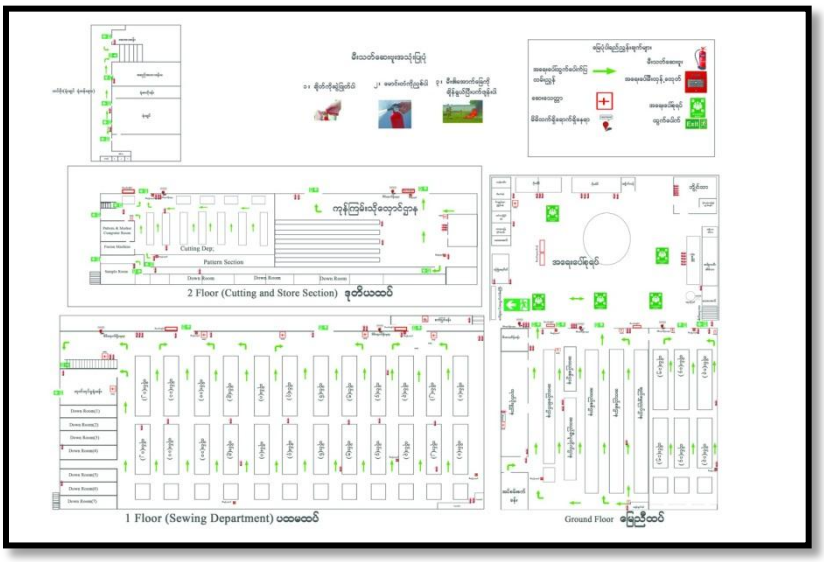


Figure 3-2 Factory Layout Plan

3.3 Salient Features of the Factory

The salient features of the company are mentioned below.

Name of Company	:	Garment & Process Global Co., Ltd
Address	:	No.(42/106), Cherry Street, Shwe Pyi Thar Industrial Zone(1), Shwe Pyi Thar Township, Yangon Region, Myanmar
Type of Business	:	Manufacturing of garments on CMP basis
Name of Principal Organization	:	Garment & Process Global Co., Ltd
Type of Investment	:	100% Foreign Investment
Total amount of Capital	:	USD 524,701.69
System of Sales	:	100% Export
Type of Land	:	Industrial Zone
Contact Phone	:	09263256007
Email Address	:	Seinmohmoh5@gmail.com

3.4 Annual Raw Materials Requirement

The main raw materials are fabric, which are imported from China and products are exported to Spanish and Germany. Annually raw materials require for product is described in Table (3.1).

Table 3.1 Annul Raw Material List

Annual Raw Material list and norm

Sr No	Particulars	AU	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10
	Raw Material (Qty)											
1	Fabric	Yard (000)	4,392	4,639	4,920	4,920	4,920	4,920	4,920	4,920	4,920	4,920
2	Interling	Yard (000)	1,242	1,297	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380
3	Button	Pcs (000)	12,060	12,780	13,560	13,560	13,560	13,560	13,560	13,560	13,560	13,560
4	Zipper	Pcs (000)	2,640	2,772	13,560	13,560	13,560	13,560	13,560	13,560	13,560	13,560
5	Thread	Yard (000)	225,600	238,200	252,600	252,600	252,600	252,600	252,600	252,600	252,600	252,600
6	Label	Pcs (000)	7,380	7,812	8,280	8,280	8,280	8,280	8,280	8,280	8,280	8,280

GARMENT & PROCESS GLOBAL COMPANY LIMITED

Material Requirement

Sr No	Particular	Fabric (Yards)	Interling (Yards)	Button (Pcs)	Zipper (Pcs)	Thread (Yard)	Label (Nos)
1	Jackets	2.80	2.30	5.00	3.00	150.00	3.00
2	Shirt	1.50		7.00		70.00	3.00
3	Pants	1.50		3.00	1.00	80.00	3.00

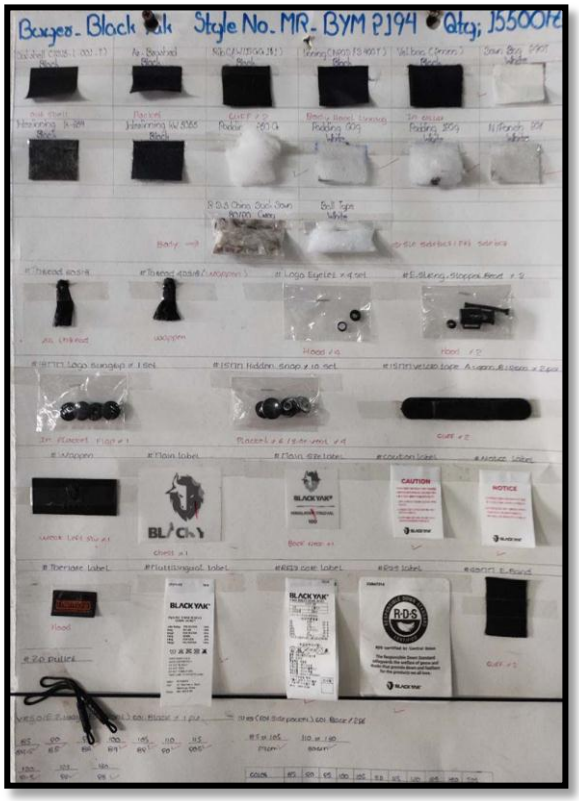
Company Name - Garment & Process Global Co.,ltd

Contact Name & Phone No. FC

2022 ခုနှစ်ဖန်နဝါရီလအတွက် KG စာရင်းနှင့် အထည်အရေအတွက် စာရင်းပေးပို့ခြင်း

IMPORT ရက်စွဲ။ ။

စဉ်	MGMA Registration No./Date	ID No./ Date	MOC License No/ Date	ထုတ်လုပ်မည့် ပစ္စည်းအမျိုးအစား	အထည်အရေအတွက်	USD Amount ID	KG (Gross Weight)
1		3221110(03.01.2022)	1727(21.12.2020)	MEN JUMPER		1138.14	785.00
2		3226450(03.01.2022)	1851(24.12.2020)	MEN'S DOWN JUMPER	35000	105502.30	5670.87
3		3233560(03.01.2022)	1176(18.01.2021)	MEN'S DOWN JUMPER	35000	87280.40	4264.47
4		3423300(05.01.2022)	1176(18.01.2021)	MEN'S DOWN JUMPER		269073.00	26389.48
5		3616350(07.01.2022)	1727(21.12.2020)	MEN JUMPER		275294.80	13205.41
6		4584120(18.01.2022)	1851(24.12.2020)	MEN'S DOWN JUMPER		205.95	366.04
7		5248750(25.01.2022)	1176(18.01.2021)	MEN'S DOWN JUMPER		42.64	7.30
8		5249230(25.01.2022)	1727(21.12.2020)	MEN JUMPER		82.59	42.30
9		5250150(25.01.2022)	1851(24.12.2020)	MEN'S DOWN JUMPER	98000	141.35	44.50
10		5873150(31.01.2022)	1176(18.01.2021)	MEN'S DOWN JUMPER		361.84	168.00
						739123.02	50943.37



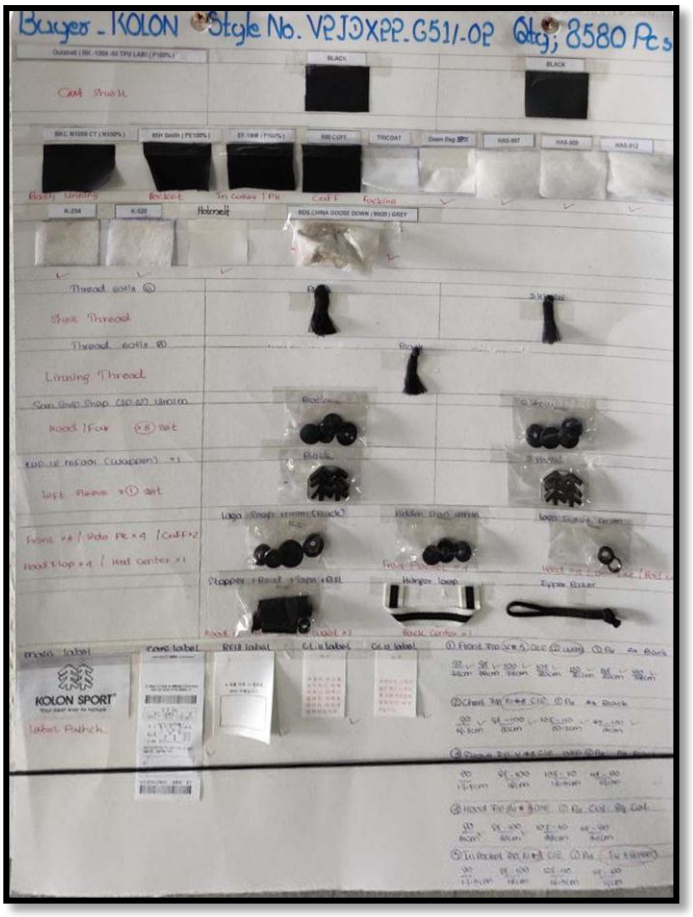


Figure 3-3 Raw Material Photo

3.5 Machinery and Equipment

There are 8 lines of operation and each line has 45 sewing machines. Lists of machinery and equipment required for the Garment & Process Global Co., Ltd is following in Table 3.2.Raw materials are imported from China and Korea and products are exported to Korea and Europe.

Table 3-2 Lists of Machinery

MACHINERY & EQUIPMENTS (To Be Imported)

Sr No	Description	Qty	Price US$	Total US$
1	Double needle lockstitch machine	10	400	4,000
2	Interlock Machine	20	600	12,000
3	Overlock Machine	2	650	1,300
4	Squee Machine	1	650	650
5	Button Hole Machine	2	1,200	2,400
6	Button Attach Machine	3	650	1,950
7	Hand Knife	10	150	1,500
8	Kansai Machine	3	450	1,350
9	King Machine	1	450	450
10	Band Knife Machine	2	1,400	2,800
	Total	**54**		**28,400**

MACHINERY & EQUIPMENT (LOCAL PURCHASE)

Sr No	Description	Qty	Price US$	Total US$
1	Single Needle Machine	683	160	109,280
2	Two Needle Machine	52	210	10,920
3	Bartack Machine	3	1,350	4,050
4	Tacking Machine	2	1,250	2,500
5	Double Needle lockstitch Machine	11	700	7,700
6	Interlock Machine	49	500	24,500
7	Overlock Machine	2	650	1,300
8	Squee Machine	1	750	750
9	Button Hole Machine	7	950	6,650
10	Button Attach Machine	3	600	1,800
11	Knife Machine	59	400	23,600
12	Hand Knife	5	500	2,500
13	Kansai Machine	3	450	1,350
14	King Machine	1	450	450
15	Band Knife Machine	2	1,250	2,500
16	Snap Machine	29	250	7,250
17	QQ Auto Machine	1	950	950
18	QQ Normal Machine	1	650	650
19	Iron & iron Table	130	60	7,800
20	Generator 375 KVA	1	25,000	25,000
21	Generator 250 KVA	1	17,500	17,500
22	Boiler	3	5,000	15,000
	Total	**1049**		**274,000**

GARMENT & PROCESS GLOBAL COMPANY LIMITED

TOTAL ASSET LIST

MACHINERIES & EQUIPMENT

Sr No	Particulars	Qty	Unit Price In Kyat	Value in Kyat
1	Double Needle Sewing Machine	32	1,000,000	32,000,000
2	Single Needle Machine	256	75,000	19,200,000
3	Bartacking Machine	2	2,900,000	5,800,000
4	Single Needle Lockstich Machine	2	1,100,000	2,200,000
5	Double Needle Lockstich Machine	2	1,150,000	2,300,000
6	Overlock Machine	13	800,000	10,400,000
7	Interlock Machine	30	700,000	21,000,000
8	Button Attack Machine	3	800,000	2,400,000
9	Snap Machine	1	200,000	200,000
10	Knife Machine	15	120,000	1,800,000
11	Auto Bartack Machine	7	250,000	1,750,000
12	Tacking Machine	2	200,000	400,000
13	Squee Machine	5	180,000	900,000
14	Button Hole Machine	1	100,000	100,000
15	King Machine	2	120,000	240,000
	Total	**373**		**100,690,000**

Figure 3.4 Photos of Machine

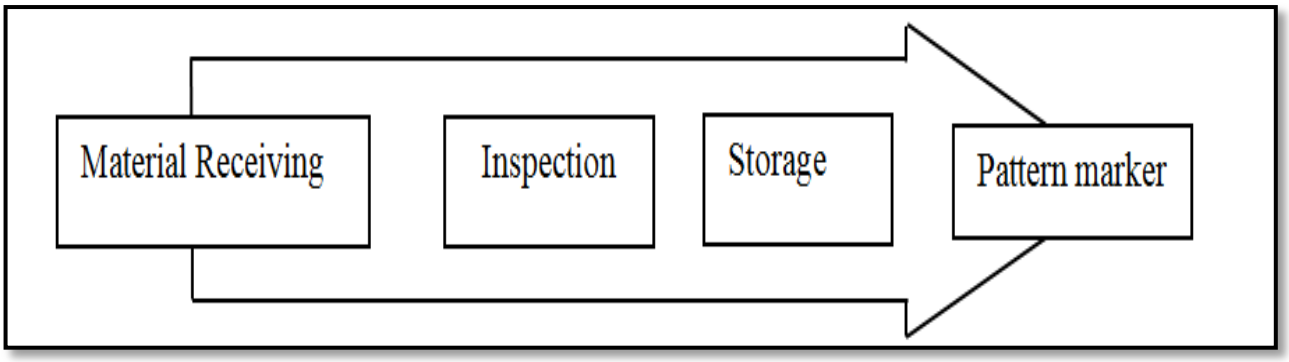
3.6 Production Activity

Garment manufacturing is an assembly-oriented activity with a great range of raw materials, product types, production volumes, supply chains, retail markets and associated technologies. There are six main processes in the operation phase of the project. They are as follows;

1. Material Receiving
2. Cutting
3. Sewing and Ironing
4. Inspection
5. Finishing
6. Packing and Shipping

Material Receiving

Raw material received are inspected to ensure receive the right material in the right quantity and in the right quality as well and then storage in the proper condition. Garment & Process Global Co., Ltd has a warehouse to store fabric between arrival and manufacturing. Garment & Process Global Co., Ltd's production starts with a proper warehouse. It receives fabric from oversea textile manufacturers in large bolts with cardboard or plastic center tubes. The fabric warehouse is well organized and clean. Materials are stores according to customer orders and production requirements. Rolls of fabric placed on the shelf make them suitable for production.



Process Flow of Material Receiving

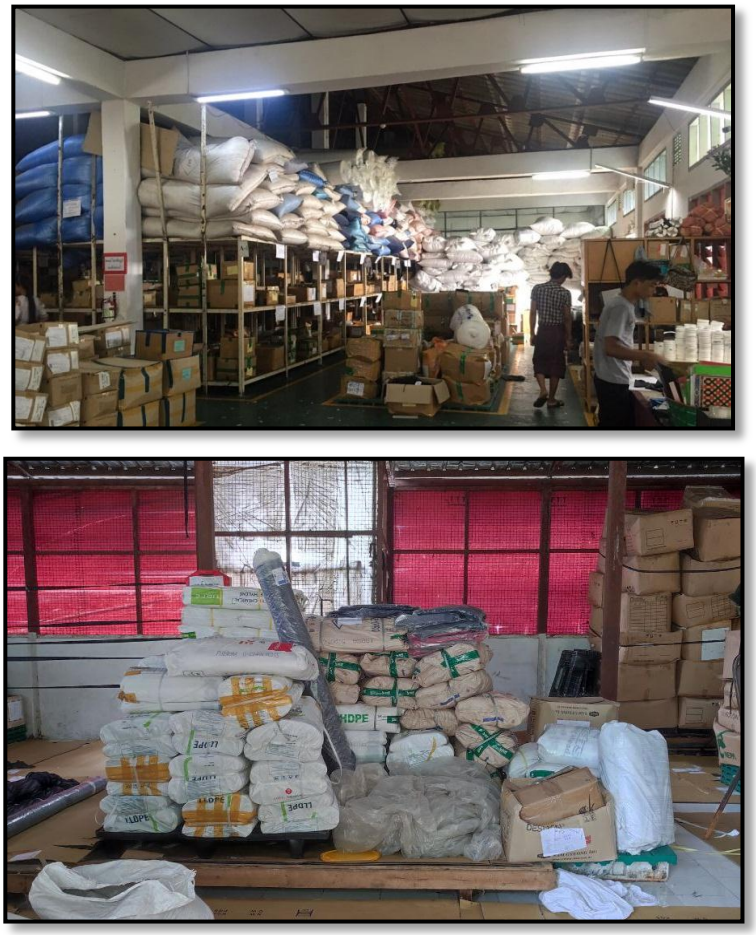
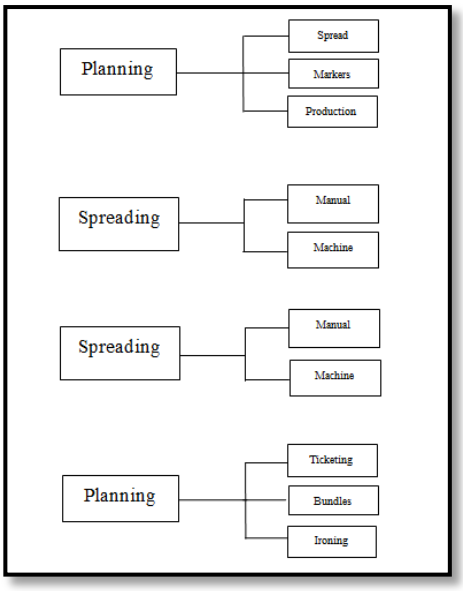


Figure 3-5 Photos of Material Receiving

Cutting

Cutting department receives raw material from warehouse. Fabric is spread in lay from to cut the fabric properly. Fabric spreading and cutting process area done by using manual method. Cutting parts are sort out or make bundling and ironed to send these easily into the next process.

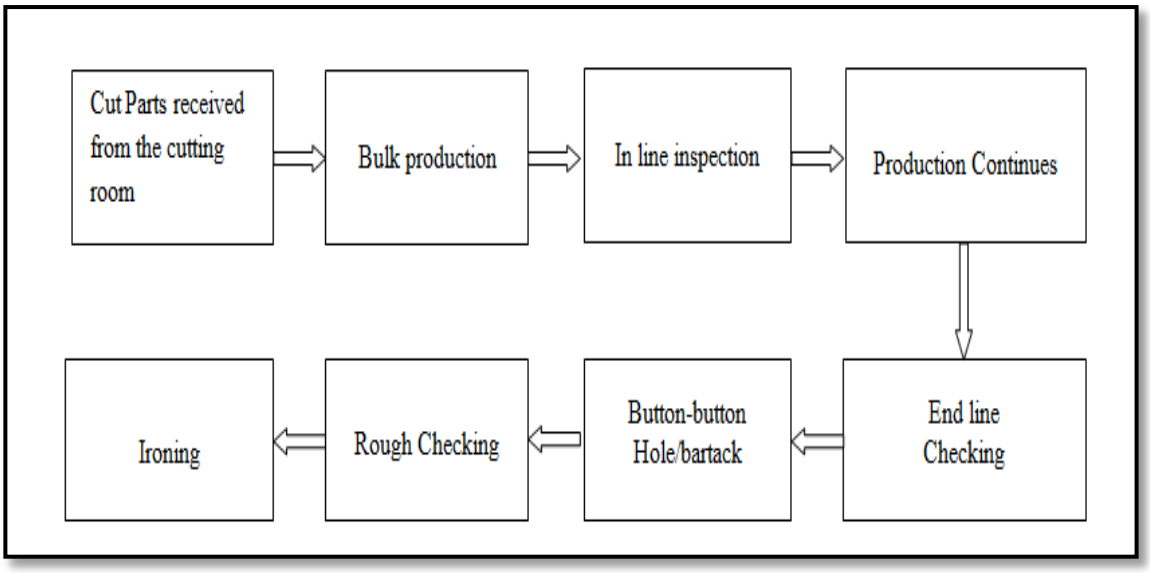


Process Flow for Cutting

Figure 3.6 Photos of Cutting Section

Sewing and Ironing

Sewing department includes 8 production lines with 360 machines. Sewing machine operators receive a bundle of cut fabric and repeatedly sew the same portion of the garment, passing that completed portion to the next operator. The sewing department takes in cut pieces according to their daily sewing capacity. The factory utilizes quality equipment. Stored machines are covered to protect them and oiled to prevent rust formation and, thus, keep them operation and ready for use at any given time. There are approximately finished 35,000 garments one month and 50943.37 kg raw materials one month.



Process Flow for Sewing

Figure 3-7 Photos of Sewing Section

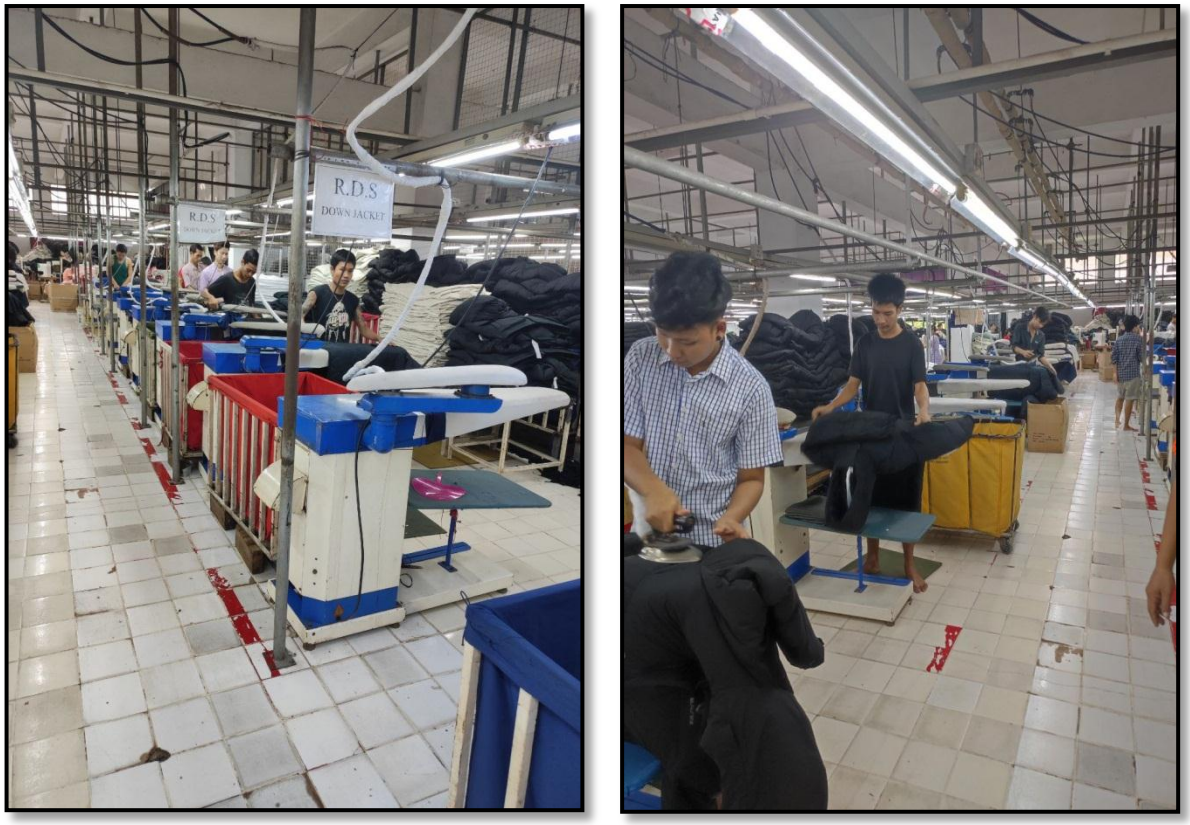
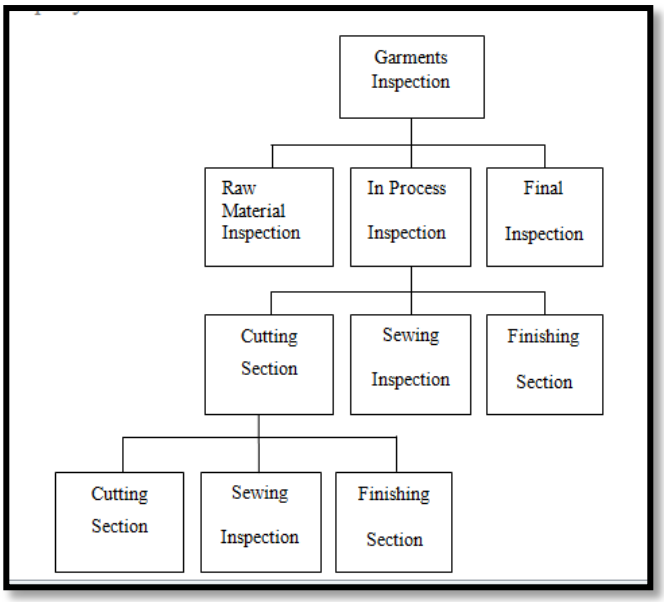


Figure 3-8 Photos of Ironing Section

Inspection

The quality of garments depends on proper inspection of every step of garment production. For maintaining the required quality level needs to check every step of garment production. This procedure is known as garments. In garments industry, there are three stages of garment inspection. The steps of garment inspection are as below.

1. Raw Material Inspection
2. In Process Inspection
3. Final Inspection

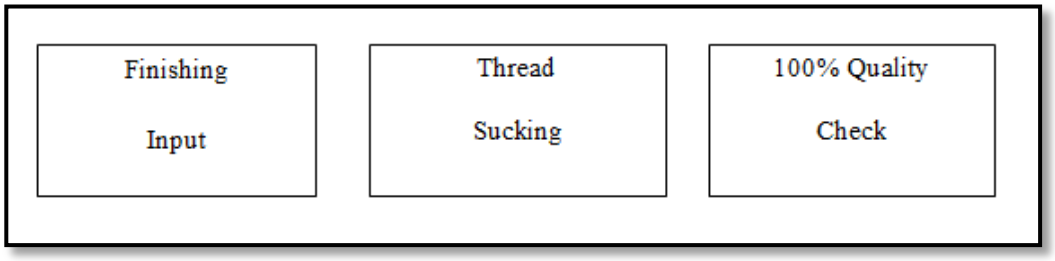


Process Flow for Inspection

Figure 3-9 Photos of Inspection Section

Finishing

Garments are treated by stream also required finishing should be completed here. This process is done by using manual method. Finally, the complete garments are inspected here according to the buyer's specification. Final inspection is done by manual method.

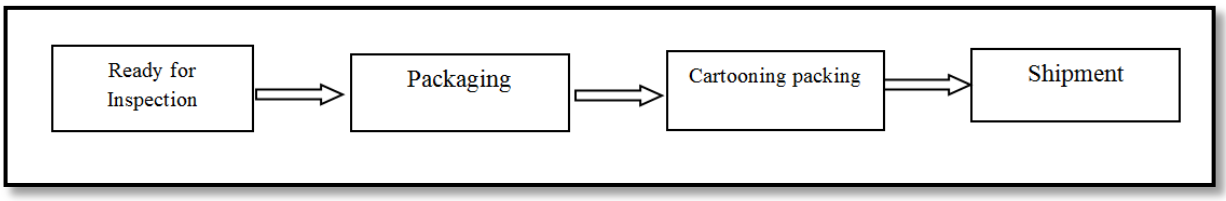


Process Flow for Finishing

Figure 3-10 Photos of Finishing Products

Packing and Shipping

After ironing process, garments are ready to next step of packing. The finished garments are folded in a specific dimension. The folded garments are bagged to keep the garments dust, dirt and other impurities free and to send the garments safely. Complete garments are packed here by using buyers instructed poly bag. 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. There are packs approximately 13 or 20 garments at each carton box and approximately used 1500 carton boxes one month. There is no waste of carton box.



Process flow for Shipping

Figure 3-11 Photos of Packing Section

3.7 Resource Requirement

3.7.1 Human Resource of Requirement

Garment & Process Global Co., Ltd composes of well-trained staffs and local people from nearby Shwe Pyi Thar Township as well as foreign experts. During the project assessment process 1064 employees are local people. Local employment is the main socio-economic benefit that the project can directly bring to people living in the community nearest to the factory.

Table 3.3 List of Local and Foreign Employee

No	Type of Employee	Total
1	Local Employees	1064
2	Foreigner	1
	Total	1065

3.7.2 Working Hour

Normally, there are twenty-six (26) working days per month and 312 working days per year.

Monday to Friday	:	Working time	7:30 am to 11:30 am
		Lunch Time	11:30 am to 12:00 pm
		Working time	12:00 pm to 4:00 pm
		Over Time (if required)	
Saturday	:	Working time	7:30 am to 11:30 am
		Over Time (if required)	12:00 am to 4:30 pm
Sunday	:	OFF	

3.8 Products and Production Activity

The products of Garment & Process Global Co., Ltd are Lady Down Jacket, Man Down Jacket, Pant. Annual production capacity is 250.00 Doz per year.

Table 3-4 Production Tables

GARMENT & PROCESS GLOBAL COMPANY LIMITED
PRODUCTION & SALE STATEMENT

Sr No	Particulars	AU	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10
	TOTAL PRODUCATION		**205.00**	**217.00**	**230.00**	**230.00**	**230.00**	**230.00**	**230.00**	**230.00**	**230.00**	**230.00**
1	**Production / Sale (Qty)**											
1	Jacket	Doz(000)	45.00	47.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
2	Shirt	Doz(000)	75.00	80.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00
3	Pant	Doz(000)	85.00	90.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00

GARMENT & PROCESS GLOBAL COMPANY LIMITED
Sales Statement

Sr No	Particulars	Unit	Year									
			Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10
A	**CMP System**											
	(a) Quantity											
1	Jackets	Doz (000)	45.00	47.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
2	Shirt	Doz (000)	75.00	80.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00
3	Pants	Doz (000)	85.00	90.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
	(b) CMP Charges											
1	Jackets	US$ / doz	14.00	14.00	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
2	Shirt	US$ / doz	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
3	Pants	US$ / doz	9.50	9.50	10.00	10.50	10.50	10.50	10.50	10.50	10.50	10.50
	(c) Value (a x											

	b)											
1	Jackets	US$ 000	630.00	658.00	725.00	725.00	725.00	725.00	725.00	725.00	725.00	725.00
2	Shirt	US$ 000	720.00	768.00	816.00	816.00	816.00	816.00	816.00	816.00	816.00	816.00
3	Pants	US$ 000	807.50	855.00	950.00	997.50	997.50	997.50	997.50	997.50	997.50	997.50
	CMP Export Value in US$	US$ 000	**2157.50**	**2281.00**	**2491.00**	**2538.50**	**2538.50**	**2538.50**	**2538.50**	**2538.50**	**2538.50**	**2538.50**

GARMENT & PROCESS GLOBAL COMPANY LIMITED
DIRECT OVERHEAD EXPENSES

Sr No	Particular	Yr.1	Yr.2	Yr.3	Yr.4	Yr.5 To Yr.10
1	Electricity	65.00	70.00	75.00	75.00	75.00
2	Repair & Maintenance	40.00	45.00	50.00	50.00	50.00
3	Water Consumption	20.00	20.00	20.00	20.00	20.00
4	Rental-Land & Building	34.48	34.48	34.48	34.48	34.48
5	Insurance	20.00	20.00	20.00	20.00	20.00
6	Petrol, Oil & Lubricant	80.00	85.00	90.00	90.00	90.00
7	Miscellaneous	40.00	45.00	50.00	50.00	50.00
	CASH PAYMENT	**299.48**	**319.48**	**339.48**	**339.48**	**339.48**
	Non – Cash					
	Depreciation	30.24	30.24	30.24	30.24	30.24
	TOTAL	**329.72**	**349.72**	**369.72**	**369.72**	**369.72**

3.8.1 Sale System

Sale system is 100% Export CMP basis.

3.9 Project Facilities

3.9.1 Electricity

The project use electricity supply from Yangon Electricity Supply Corporation (YESC) by using 500 KVA Transformer. Two generators 375 KVA and 250 KVA are installed to ensure continuous power supply to the factory. This generator is designed to support all the facilities of the factory and it is placed in the generator room. Monthly fuel requirement is 250 gallons (diesel).Monthly electricity requirement is 25,696 units. (August 2022 Data)

Garment & Process Global Co., Ltd practices energy saving methods by using LED tube and installs electrical switch boards for each department. Apart from specially designated equipment all staff switches off all electrical equipment when not in use or when not using for any prolongers periods.

Figure 3-12 Photos of Transformer and Generator

3.9.2 Water Supply

The production water sources are form on- site tube wells. The factory gets water from the two tube well located in the factory compound. After pumping the groundwater, the water is stored in the ground storage tank and then pumped into the overhead water tank. Factory has one overhead tank for purified water, one overhead tank is for general water and two tanks for fire. Two overhead tanks are 10" diameter around and 20" diameter. Factory uses for water ventilation cooling system. Figure 3-12 is described by water storage tank and drinking water supply for Garment & Process Global Co., Ltd.

Domestic wastewater generated by maximum amount of 1065 persons with assumption rate 106.5 m^3/day (31950 m^3/month and 332,280 m^3/year) was calculated based on domestic wastewater generated rate of 0.1m^3/person/day. This water will be released in operation hour discharge to septic tank or factory drainage.

Figure 3-13 Photos of Water Supply

3.9.3 Boiler

The steam boiler is installed in the room. Electric boiler is used for fabric shrinkage machine by providing humidity and heat and for ironing section. Garment & Process Global Co., Ltd has a plan to install the water reusing system for boiler to practicing the energy and water conservation. The boiler fuel is cutting thread and 27269.55 kg per month. The boiler high is 40 ft.

Figure 3-14 Photos of Electric Boiler for Ironing Section and its fuel

3.9.4 Drainage

In the factory compound, there are drainage systems for storms water and domestic system. The existing drainage system includes internal and external drainage system. Both

drainage systems are provided with proper concrete. The water from the project is discharged to industrial drainage system located in front of the factory.

Figure 3-15 Photos of Drainage System

3.9.5 Garbage Tank

A storage room for factory normal waste is installed in front of the building, Fabric waste, domestic waste from office and canteen are collected first at the garbage room. The factory practices waste segregation system. Pieces of fabric waste are sold from the company. Domestic waste from office and canteen are disposed every other day to YCDC waste dumping site by third party collector. As it is a garment factory, no hazardous waste is produced. YCDC collect the waste 3 times in a month.

The number of staff and workers required in the day shift for the factory is maximum 1065 persons during operation. Solid waste generated from maximum amount of operations and office staffs with assumption of waste generation rate at 532.5 kg/day was calculated based on solid waste generation rate of 0.5 kg/person/day1.

Figure 3-16 Photos of Garbage Room

3.9.6 Ventilation

All habitable inner spaces shall be provided with natural ventilation or mechanical ventilation. Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors in the office room. The operating mechanism for openings shall be provided with ready access so that the openings are readily controlled by the building occupants. The factory has good ventilation due to the height of the ceiling.

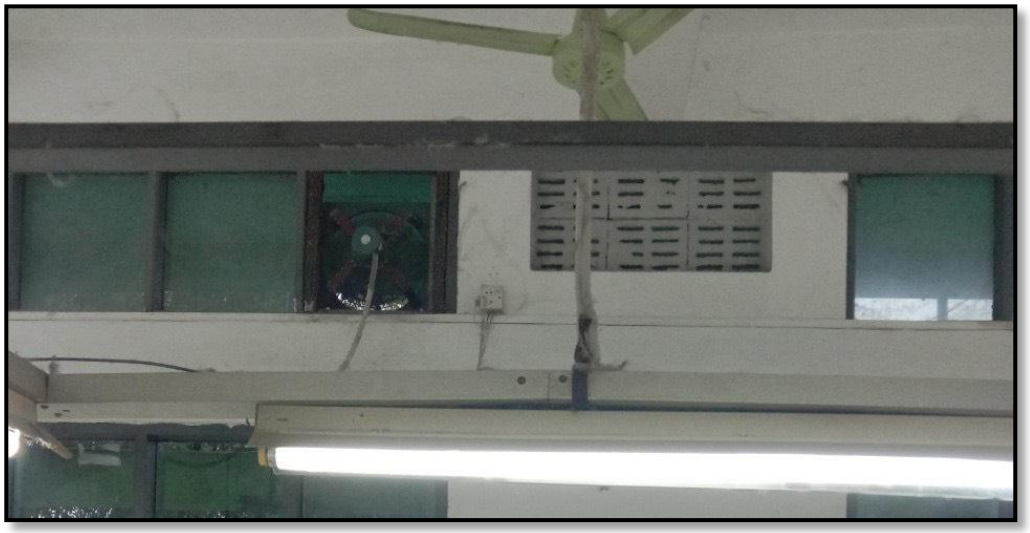


Figure 3-17 Photos of Ventilation

4. BASELINE ENVIRONMENTAL QUALITY

The following section provides a description of the baseline environmental quality. Mitigation measures for the environmental impact are described in Section 7.0.

4.1 Physical Environment around the Project

4.1.1 Topography

The surrounding terrain is mostly flat land, the elevation approximately ranges from +14 ft (4.26 m) to +26 ft (7.9m) . The ground elevation around the factory approximately ranges from +20 ft (6.0 m) to +23 ft (7.0m). The counter map of the area shows most gentle relief. The soil type of Shwe Pyi Thar Township is Meadow and Meadow alluvial soil.

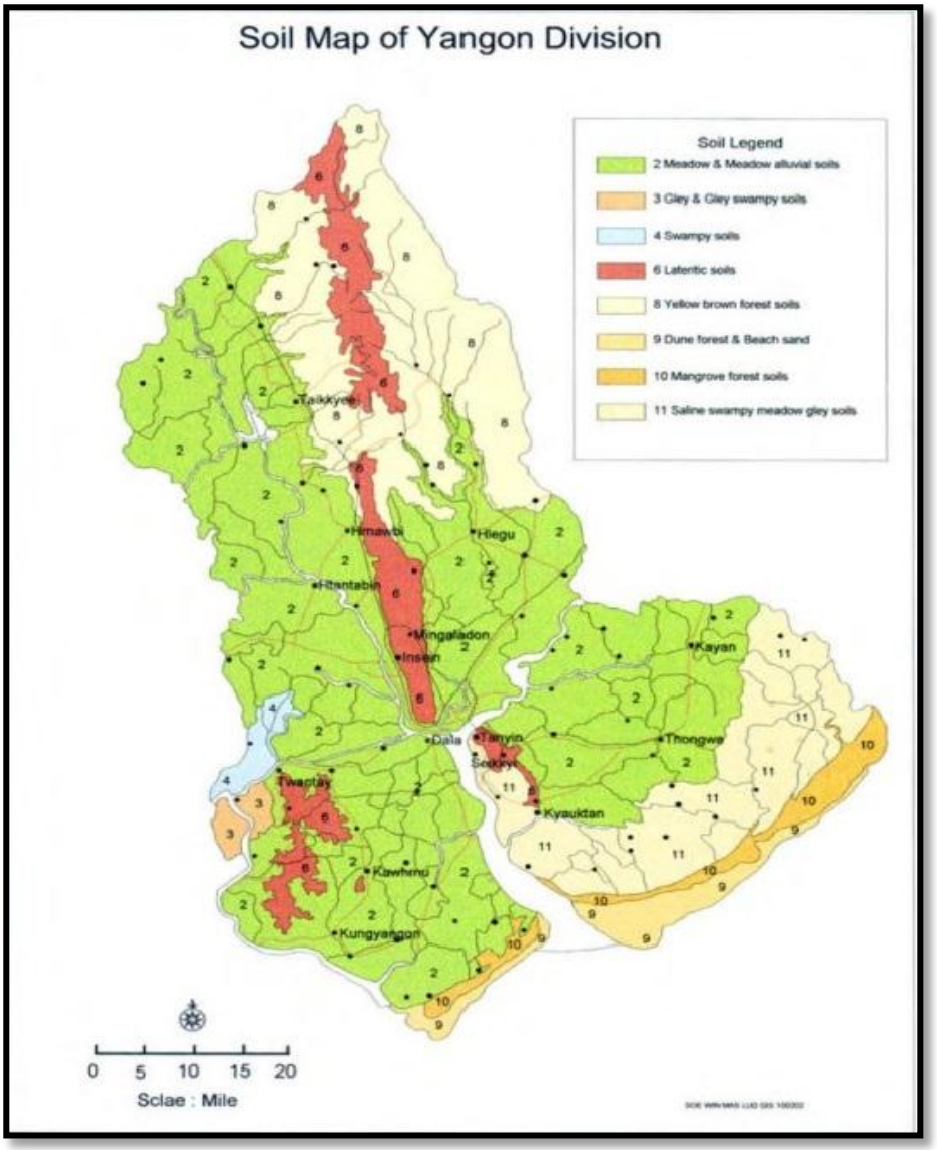


Figure 4-1 Soil Map of Yangon Region

4.1.2 Climate

Climate in Shwe Pyi Thar Township can be characterized by climate of Yangon. Yangon has a tropical monsoon climate under the Koppen climate classification system. The city features a lengthy rainy season from May through October where a substantial amount of rainfall is

received and a dry season from November through April where little rainfall is seen. It's primarily due to the heavy precipitation received during the rainy season that Yangon falls under the tropical monsoon climate category. During the course of the year, average temperatures show little variance with average maximum ranging from 29º to 36º C (84º to 97º F) and average lows ranging from 18º to 25º C (64º to 77º F). Average annual rainfall in Yangon is approximately 2,900 mm.

4.1.3 Water Body

The nearest creek is the Hlaing River which is little closed the project vicinity and Hlaing River is 11 km west ward direction of the project site. The nearest protected areas is Hlaw Gar Park which is located 500 m North West of the factory.

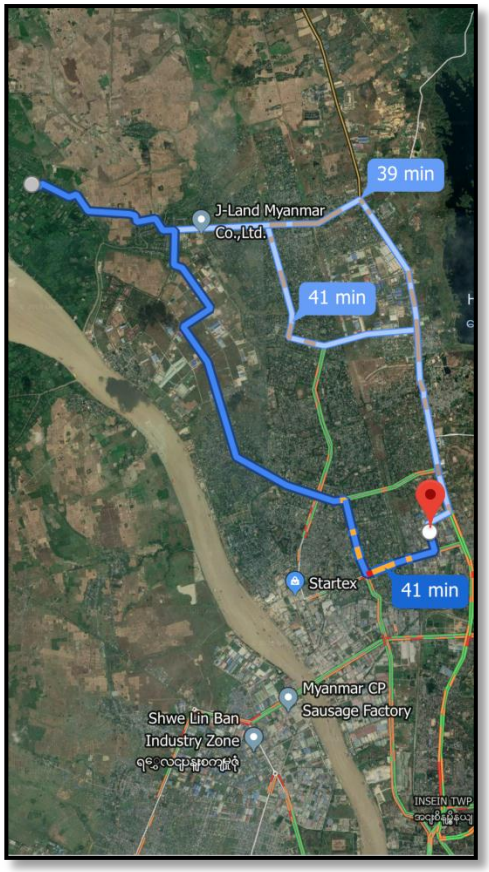


Figure 4-2 Project Location and the Nearest Creeks

4.1.4 Land Use

The total area is approximately 1.549 acres. Garment & Process Global Co., Ltd is situated in Shwe Pyi Thar Industrial Zone (1) and current land use is industrial land use. Being situated in industry zone the nearby land use is industrial land use and factories are situated in the area with moderate density. The existing land use around the project site is as follows:

East : Coolgate Factory
West : Godzilla Mosquito Medication Warehouse

4.1.5 Archaeological Land and Cultural Resources

There is no archaeological site or recreational area within the project vicinity. Consequently non impacts to cultural heritage are anticipated.

4.2 Baseline Environmental Monitoring of the Project

4.2.1 AIR QUALITY

Before starting this industrial zone, there were no baseline data for dust and greenhouse gas pollution.

Air quality is composed of dust and gas emission of ambient air. Gas emissions which can reduce ambient air quality are Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Carbon Monoxide (CO), Carbon Dioxide (CO_2) and Ozone (O_3).

Sulphur Dioxide (SO_2) is generated from combustion of fuels such as oil and coal, and as by-product from some chemical production or wastewater treatment processes. On-road and off- road vehicles are also emission source of SO2. The emission can be controlled by implementation of manufacturer recommended engine maintenance program, good driving practices, installing and maintaining emissions control devices, and implementing a regular vehicle maintenance and repair program.

Nitrogen Oxides (NO_x) in the ambient air consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O). NO is formed by chemical reaction of NO and Ozone. The main sources of NO2 are combustion of fuel and on-road and off-road vehicles. The gas emission can be monitored by combustion modification, flue gas recirculation, water/steam injection and the same measures for SO_2 reduction.

Carbon Monoxide (CO) and Carbon dioxide (CO_2) have the same emission sources and mitigation measures for SO_2 and NO_2.

The **PM** concentrations in the air are related to weather conditions such as wind speed and directions, humidly, rainfall, temperature and pressure. The pollution sources of PM are combustion of fossil fuels, numerous manufacturing processes of industries, transport and open storage of soil materials, vehicular movement, from exposed soil surfaces.

Air emission from point sources such as ventilation exhaust systems, boiler and smoking units should be released through good engineering practiced-designed stacks. Smoke is also anticipated to occur from time to time because of the diesel generator used within the manufacturing process.

The values of air quality parameters were much below the permissible maximum values prescribed in the Ambient Air Quality Standard of National Environmental Quality (Emission) Guidelines as shown in Table 4.1. These values shall be applied by all

project ensure that air emission conform to good practice. The consultant conducted the air measurement in the factory area for future reference.

Table 4.1 Air Quality Sampling and Standards

Parameter	Averaging Period	Guideline Value µg/m^3
Nitrogen Dioxide	1 year 1 Hour	400 200
Ozone	8 hours daily maximum	100
Particular matter PM_{10}[a]	1 year 24 Hour	20 50
Particular matter $PM_{2.5}$[b]	1 year 24 Hour	10 25
Sulphur Dioxide (SO_2)	1 Hour 10 minute	20 500

[a] Particular matter 10 micrometer or less in diameter
[b]Particular matter 2.5 micrometer or less in diameter
Source: National Environmental Quality (Emission) Guideline for Myanmar 2015 Dec 29

4.2.1.1 AIR MONITORING RESULTS

Air quality measurement was conducted during the site visit on 19-8-2022. The air monitoring survey was carried out by using HAZ-SCANNER EPAS portable direct-reading perimeter air station from USA. The air quality monitoring was monitored inside the factory compound. The measured latitude and longitude points are 16.9513136 N, 96.0953689 E. The air quality monitoring results are shown in Table 4.2. The mitigation measures for some parameters that are exceeded than standards are described in the **CHAPTER 7**.

Table 4.2 Result of Air Quality Monitoring at Compound

No	Pollutant	Average Concentration	Limits/Guideline Value/ Standards
1	Carbon Dioxide (CO_2)	340 ppm	345 ppm (WHO)
2	Carbon Monoxide (CO)	540 ppb (0.540 ppm)	9 ppm (8-Hr) (Air NEPM) 25 ppm (1-Hr) (WHO)
3	Nitrogen Dioxide (NO_2)	35 ppb (60 µg/m^3)	200 µg/m^3 (1- hour) (MONREC) 40 µg/m^3 (1-year) (MONREC)
4	PM_{10} (Sensor A)	68 µg/m^3	50 µg/m^3 (24- hour) (MONREC) 20 µg/m^3 (1- year) (MONREC)
5	$PM_{2.5}$ (Sensor B)	60 µg/m^3	25 µg/m^3 (24- hour) (MONREC) 10 (µg/m^3) (1- year) (MONREC)

6	Sulfur Dioxide (SO_2)	7 ppb (13 µg/m^3)	20 µg/m^3 (24-hour) (MONREC) 500 µg/m^3 (10-minute) (MONREC)
7	Humidity/ Temperature	55 %/30 °C	

The measured values of SO_2, CO_2, NO_2 and CO are within the range of the National Air Quality Guidelines Values. The remaining measured values of parameters such as $PM_{2.5}$ and PM_{10} are higher than the National Air Quality Guidelines. It can be concluded that the air quality parameters within the factory need to mitigate proper control.

4.2.2 NOISE

Excessive noise produced from any source is considered as negative impact on human health and environment. Therefore the consultant conducted the noise measurement inside and outside of the building. In order to assess the noise levels from the potential noise sources, the noise levels are measured at potential sources by using a digital noise level meter, 5T436355.

The main sources of noise during the operation period are from maintenance of engineering department and from the production activities and functions. Therefore the objectives of acoustic environment management during operation period are to decrease the noise level, adopt the measures such as sound insulation, sound absorption, and any buffer system etc. so as to reduce the impact on the surrounding environment. Technology used in the operation process should be continuously improved and replaced with an advanced technology. The sound level of production line shall be kept as low as possible.

MONREC has issued National Environmental Quality (Emission) Guidelines to provide the basis for regulation and control of noise level. Noise impact should not exceed the levels presented in Table 4.3.

Table 4.3 Noise Level Standard

Receptor	**One Hour LAeq (dBA)[a]**	
	Daytime 07:00-22:00 (10:00-22:00 for Public holidays)	**Nighttime 22:00-07:00 (22:00-10:00 for Public holidays)**
Residential, Institutional, educational	55	45
Industrial, commercial	70	70

[a] Equivalent continuous sound level in decibels

4.2.2.1 NOISE MONITORING RESULTS

Baseline noise quality was measured during the site on 19-8-2022 at potential sources by using a digital sound level meter, CEM DT-805. Operation noise is one of the issues for the

workers. Therefore, the consultant conducted the noise measurement in the factory compound and work place for the future reference.

The factory is related to industrial and commercial item and so 70 dB(A) is defined for both day and night. As a result, noise levels at sewing lines, ironing section and transformer are over the standard value but noise levels chemical store, spare parts store, product storage area and factory outside area are below the standard value, it can be concluded that the noise levels are acceptable for environment. However, it can be affected on employees and workers for occupational health and safety in the production area. However, personal protective equipment covering provision of noise impact measures should be provided for some employees, workers. All of the monitoring results of noise are shown in Table 4.4. The mitigation measures for noise pollution that are exceeded than standards are described in the **CHAPTER 7**.

Table 4.4 Monitoring Measurement of Noise (dBA)

No	Location	Min (dBA)	Max (dBA)	Standard Value (dBA) (MONREC) Industrial Inceptor
1	Warehouse	59	64.5	70
2	Cutting	72	70	70
3	Sewing Line 1	68	72.4	70
4	Sewing Line 2	74	79.7	70
5	QC	67	69.7	70
6	Ironing	70	73	70
7	Packaging	67.9	70.2	70
8	Transformer	70	72	70

4.2.3 LIGHTING AND TEMPERATURE

Light providing is important for the factory work place. Therefore, the consultant conducted the light (illuminances) measurement at the factory for future reference.

Baseline temperature and light quality was measured on 10-8-2022 and monitored the data together with International Finance Corporation (General Environmental Health and Safety Guideline) standards are shown in Table 4.5 and Table 4.6.

According to the monitoring data of light intensity, most of the production facilities are sufficient in lighting. Therefore, in the insufficient lighting area requires installing additional lighting equipment.

According to the monitoring data of temperature, some production facilities areas are not met with International Finance Corporation Standard Guidelines. The mitigation measure for exceeding standards is described in the **CHAPTER 7.**

Table 4.5 Monitoring Measurement of Temperature (°C)

No	Location	Measure Value(°C)	IFC Standard Value (°C)	Remark
1	Warehouse	26	30	Normal
2	Cutting	30	30	Normal
3	Sewing Line 1	32	30	High
4	Sewing Line 2	33	30	High
5	QC	31	30	High
6	Ironing	36	30	High
7	Packaging	31	30	High
8	Generator	30	30	Normal

Table 4.6 Monitoring Results of Light (lux)

No	Location	Measured Value (lux)	Light Intensity (lux)	Remark
1	Warehouse	295	500	Low
2	Cutting	646	500	High
3	Sewing Line 1	752	500	High
4	Sewing Line 2	650	500	Low
5	QC	720	500	High
6	Ironing	353	500	Low
7	Packaging	600	500	High
8	Generator	500	500	Normal

4.2.4 WATER QULITY

4.2.4.1GROUND WATER QUALITY

Water supply during operation is extracted from the tube well water. Domestic wastewater from the office staff, bathrooms and toilets are disposed through the factory compound to industrial zone drainage system.

The baseline data on ground water quality was collected from a tube well located in the factory compound. The baseline data of ground water quality is shown in Appendix(H). According to the result, all parameter are within the standard guidelines.

4.24.2 Wastewater

Water quality is one of the key factors affecting the environment and human health. The water quality of the surrounding water environment can be affected by the discharged wastewater from factories. According to the manufacturing nature of garment industry, the water consumption is not too much for manufacturing process. The main sources of wastewater is produced from personnel domestic uses for toilet facilities, canteen etc. Wastewater discharged from all utilities is passed through the internal drainage channels to industrial drainage channel. Sanitary sewage is disposed into the septic tanks. In order to present contamination to the underground water, frequent cleaning and pumping out of septic tank are done. The final wastes are disposed to water and Sanitary Department of YCDC.

4.3 SOLID WASTE

The textile industry between natural fibers such as wool, silk, linen, cotton and hemp and man- made ones, the most common of which are synthetic fibers (polyamide, acrylic) made from petrochemicals. These cheap and easy-care fibers are becoming the textile industry's miracle solution. However, their manufacture creates pollution and they are hard to recycle (with nylon taking 30 to 40 years to decompose).

If solid waste is not managed properly it can impose great danger to the environment & community which is poorly disposed waste paper & especially plastic waste can block drainage empty chemical drums & containers if not disposed properly can pollute soil & water of the receiving environment odour emanating from degradable waste especially kitchen waste can pollute local ambient air poorly managed and disposed kitchen waste can attract dieses vectors decomposing kitchen waste can pollute local ambient condition poorly managed electrical, mechanical and chemical waste can pollute soil, water and air etc.

Some of the components of waste have beneficial value and can be recycled once correctly recovered. Proper management of waste can be reduced the negative impacts on environment and society.

Garment & Process Global Co., Ltd develops a comprehensive waste control and management system for production process Garment & Process Global Co., Ltd provides sufficient trash bins within production areas and waste bins are kept at various locations in offices and outsides building.

The principle of reduce, reuse and recycle is applied in managing factory’s solid waste. The management will be done with the waste hierarchy approach whereby the first aim is to reduce the amount of waste generated through factory process and waste generated by the on-site personnel, general office supplies; engineering equipment, food and associated waste are included.

Garment & Process Global Co., Ltd applies waste reducing practices by paying careful attention during planning, storing fabric raw material, cutting, sewing and ironing in order to reduce rework and rejected parts.

Some fabric cuts are reused as cleaning rags for floor cleaning, window glass cleaning and so on. Therefore Garment & Process Global Co., Ltd performs the waste reusing management.

Garment & Process Global Co., Ltd applies textile recycling management for factory's solid waste. Textile recycling is the methods of reusing. Housekeep persons collect fabric waste from waste bins daily and send these to recycling storage area. Every bit and cut pieces of

clothes are packed systemically and disposed to YCDC waste dumping site transported by factory's car once a month.

The ash from burnt by boiler will be recycled for trees and vegetation inside the factory and in the public space. Some of them are sent to the gardener to use as ingredient for fertilizer.

Hazardous solid waste includes contaminated soils, which could potentially be encountered on-site due to previous land use activities, or small amount of machinery maintenance materials, such as oily rags, used oil filters, used oils spent chemicals such as bleaching materials, solvent-based paint, flammable solvents and caustic cleaners, spent batteries, ballets and fluorescent high intensity discharge lamps. All hazardous wastes should be handling in a way that meets the requirements of the hazardous waste section of the Environmental Management Plan and hazardous waste should not be disposed of with general waste. All hazardous wastes shall be disposed of by recycling and burial in accordance with YCDC guideline.

Other **non-hazardous solid** wastes include office, kitchen and dormitory wastes. Waste from canteen and dormitory and sanitary wastes from office are disposed of at bins. In order to prevent contamination to the underground water, frequent cleaning and pumping out of septic tank are done.

For disposing some domestic waste such as plastic bags, plastic water bottles, papers, broken glasses, packing paper and putrid foods and other wastes from factory. They are transported by factory's car to destined YCDC waste dumping site once a week and corporate with Industrial Area Management Committee and City Development Committee. Disposing is made under guidance of these respective authorities. In order to present contamination to the underground water, frequent cleaning and pumping out of septic tank are done. The final wastes are disposed by water and Sanitary Department of YCDC.

In general, environmental impacts from disposing of production and domestic wastes are considerably low as most of textile wastes are reused and recycled.

4.4 BIOLOGICAL ENVIRONMENT

From the environment impact point of view, biological resources are not relevant to the Garment & Process Global Co., Ltd as it is located in the Industrial Zone. In addition, within the factory area, there are no forests, wildlife, wetlands and protected area. The existing conditions of Ecological Resources are shown in following Table 4.7.

4.5 Flora

Garment & Process Global Co., Ltdis located within an industrial zone where human activity has altered the flora leaving scattered herbs and shrubs. The remnants of the natural vegetation of the site and its environs are a few scattered trees and shrubs maintained by the various occupants.

4.6 Fauna

Garment & Process Global Co., Ltd is located within an industrial zone where human activities have altered the natural habitat for animals over the years.

Table 4.7 Existing Condition of Ecological Resources

Ecological Resources	Existing Condition
Fisheries, aquatic biology	The nearest river is Hlaing River. Fresh water fish species are residing in the river.

Wildlife	Non existence
Forests	Non existence
Rare or endangered species	Non existence
Protect areas	The nearest protected areas is Hlaw Gar Park which is located 500 m North West of the factory.

4.7 SOCIO-ECONOMIC ENVIRONMENT

Shwe Pyi Thar Industrial Zone(1) is within Shwe Pyi Thar Township. Shwe Pyi Thar Township has a total area of 66.718 km^2 and a total population of 343,526 comprising 164,264 male and 179,262 female. The township has 43 primary schools, 10 middle schools, 4 high schools and 1 university.

CHAPTER 5
POTENTIAL ENVIRONMENTAL IMPACT ASSESSMENT

5.1. SUMMARY OF ENVIRONAMETNAL, SOCIAL AND HEALTH IMPACT ASSESSMENT

This chapter provides an assessment of potential impact arising from the factory. The factory operation would create potential environmental issues and proper management is pertinent to minimize the environmental impacts. The impacts specific to the project operation phase will be (a) Air pollution, (b) Solid Waste, (c) Safety. With timely and proper implementation of this EMP and application of appropriate mitigation measures, most if not all the potential negative impacts can be prevented or minimized. The social outcomes of the factory are expected to be positive by creating employment opportunity. The methodological approach used for the project impact assessment is adapted from the impact assessment methods recommended by the Canadian Environmental Assessment Agency (1990), by the World Bank (1991) and by the International Finance Corporation (Dec 1998).

5.2. METHODOLOGIACL OF ASSESSMENT

The assessment includes description of how an environmental effect will occur or how the factory will interact with the environment, the mitigation and environmental protection measures proposed to reduce or eliminate the environmental effect and the characterization of the residual environmental effect of the factory. This would comprise an assessment into the Probability. Extend and duration of the anticipated potential positive or negative impact. These three qualifiers are grouped under one synthesis indicator, the significant of the impact. Figure 5.1 schematically presents the basic process leading to evaluate the significant of the potential impact.

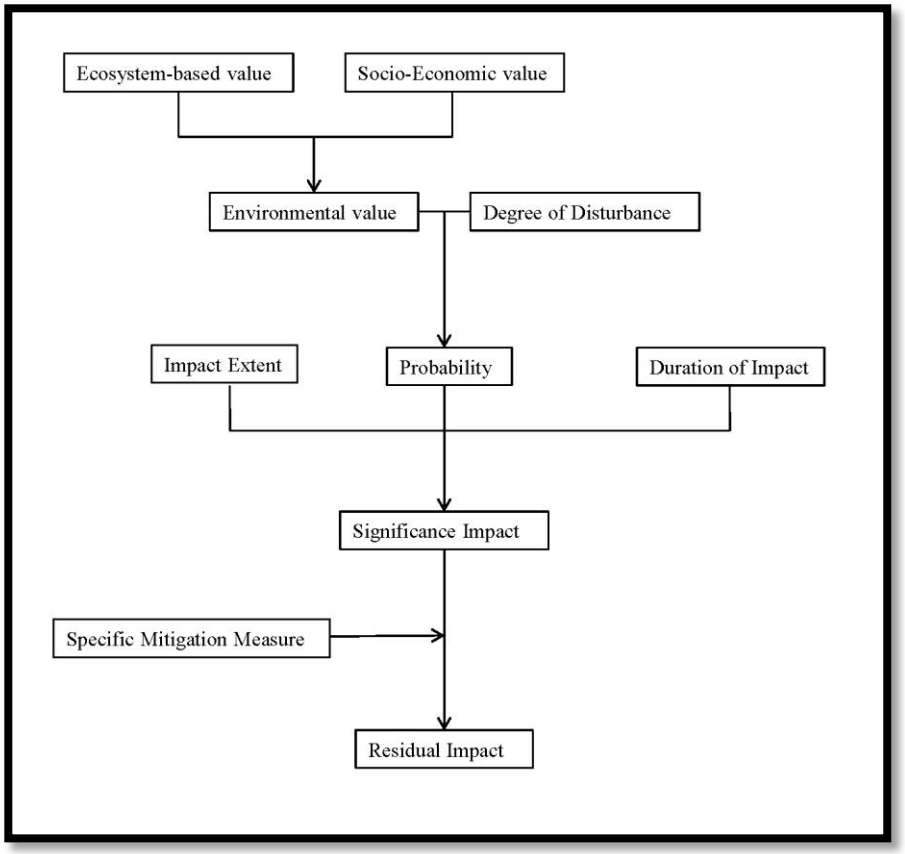


Figure 5.1 Impact Evaluation methodologies

5.2.1. Environmental Value

The environmental value of a component is the synthesis of its ecosystem based value and social value.

Ecosystem based value: express the relative importance of a compound to the ecosystem as measured by its function or role. It integrates other notions as representativeness, patterns of use, diversity/rare/unique characteristics. This value is the result of judgment of specialists based on a systematic analysis of the characteristics of the environmental component. It can have considered as

- **High:** when the component is of major interest of its ecosystem-based function, biodiversity or exceptional qualities and there is a consensus in the scientific community that it should be conserved or protected
- **Medium:** when the component is of strong interest and recognized qualities and there is concern, although not consensus, for its conservation or protection.
- **Low:** when the component holds little interest, has few notable qualities and there is little concern for its conservation or protection.

Social value: express the relative importance attributed to the component by the public, the various level of government or any other legislative or regulatory authority. The social value indicates the popular or political desire or will to conserve the integrity or the original character of a component is accorded or by the concern of the local or regional public for the component. The social value evaluation is based on information gathered during various public consultations in the study zone. It can consider as:

- **High:** when the component is the object of legislative or regulatory measures (conservation parks, etc.) or is essential to human activities (e.g. potable water)
- **Medium:** when the component is valued or used by a significant portion of the concerned population but is not legally protected.
- **Low:** when the component is of little concern or is not used by the population.

The environmental value integrates the ecosystem-based value and the social value as shown in Table 5.1.

Table 5.1 Grid for Determining Environmental Value

Social Value	Ecosystem based value		
	High	**Medium**	**Low**
High	High	High	High
Medium	High	Medium	Medium
Low	High	Medium	Low

5.2.2. Degree of Disturbance

The degree of disturbance for a component defines the scope of the changes that affect the component given its sensitivity to factory. The changes for a given component may be negative or positive and the effect on the environmental component may be direct or indirect. The cumulative, synergetic or delayed impacts, beyond the simple relation of cause and effect, could amplify the degree of disturbance of an environmental component when the environment is especially fragile. The four levels of degree of disturbances are:

- **High:** when an impact affects the continued viability of the environmental component, strongly and irreversible impairs the component or restricts its use in a significant way.
- **Medium:** when an impact changes wither by reducing or increasing, the quality or use of the environmental component affected without however compromising its integrity,
- **Low:** when an impact affects the quality use or integrity of the environmental component in a way that is barely perceptible.

5.2.3. Probability of the Impact

The probability of the impact expresses the relative importance of consequences attributable to a change in an environmental component. The intensity of the impact is an integration of the component's environmental value can be either positive or negative. The probability of the impact results from the degrees of disturbance with the environmental value as shown in Table 5.2.

Table 5.2 Grid for Determining Intensity of an Impact

Degree of Disturbance	Ecosystem based value		
	High	**Medium**	**Low**
High	High Probable	Probable	Improbable
Medium	Probable	Probable	Very Improbable
Low	Improbable	Very Improbable	Very Improbable

5.2.4. Extent of the Impact

The extent of the impact expresses the spatial influence of the effects produced by an intervention on the environment. This refers to either a distance or an area over which a component will undergo changes. It could also refer to the portion of the population that will be affected by the changes. The three levels of extent of the impact on the geographical scope of the project as the outline are:

1. National: when an impact affects a large geographic area or some of components located a significant distance from the project area
2. Regional: when an impact affects a region of area or a number of components located a significant distance from the project area
3. Local: when the impact affects a relatively within near or at a limited distance from the project site
4. Site-specific: when the impact affects only a very restricted area in the proximity of the project site.

5.2.5. Duration of the Impact

The duration of the impact describes the period of time during which a component undergoes changes due to the impact, is not necessarily equivalent to the period of time during which the direct source of impact is active. It must also take into consideration the frequency when the impact is intermittent. It is characterized as:

1. (Life of operation) when the effects are experienced continuously for the life of the facility or even beyond if the effect is irreversible
2. (6-15) when the effects are experienced prolonged period of time but less than the duration of the life of the operation
3. (2-5 years) when the effects are experienced over a relatively longed period of time during construction
4. (0-1 year) when the effects are experienced over a limited period, generally corresponding to the start-up period.

5.2.6. Significance of the Impact

The relative importance of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline data of factory. For example, if the factory states as general mitigation measures those forests will be protected whenever near water courses the impact analysis assumes that all forests will be untouched wherever there will be activities near water courses. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible they are excluded from further analysis.

Once the significance of the impact is established as more than negligible, it is described and additional, specific mitigation measure may be proposed to allow optimal integration of the factory into the environment.

In order to assess the likely significant environmental and social impacts, potential environmental and social impacts of the project were preliminary identified based on the factory description and overall environmental and social conditions in and around the project area. The impacts of pollution, natural environmental and social environment, health and safety, emergency risk and others were classified as A to D in accordance with the following criteria, assuming no specific measures toward the impacts are taken.

5. A^-: Significant negative impact A^+: Significant positive impact
6. B^-: Some negative impact B^+: Some positive impact
7. C: Impacts are not clear, need more investigation
8. D: No impact or impacts are negligible, on further study required

The impact assessment and its scale from the interaction among the probability, extend and duration of the impact as shown in following Table 5.3.

Table 5.3 Evaluation of Impact Assessment

	1	2	3	4
Probability	Very Probable	Probable	Improbable	Very Improbable
Extend	National	Regional	Local	Site-specific
Duration	Life of operation	6-15 years	2-5 years	0-1 years
Significant	A	B	C	D

5.3. POTENTIAL IMPACT DURING OPERATION PHASE

Garment & Process Global Co., Ltd operates with maximum of 526 workers to process the factory operation. Not all of the impacts during the operation phases are affected directly to local communities, but some environmental impacts are primarily related to the factory in which resource utilization is an issue that should be seen from a sustainable development perspective, combustion of fossil fuel, greenhouse emission and occupational health and safety for employees working at the factory.

5.3.1. Summary of Environmental and Social Risks Assessment

The Environmental risk assessment has been developed through assessing Severity/ Magnitude of the impact(s), Occurrence/Probability of the impact(s) and existing control measures. After monitoring and investigation, the factory and its surrounding, the consultant establishes the potential environmental impacts specific to the factory operation phase. Table 5.4 provides summary of the potential environmental impacts and social risks during the operation phase of the factory. Additionally, the consultant presents about sources of potential environmental impacts briefly such as air emission, noise, wastewater, solid waste, health and safety at the work and socio-economic impacts.

Table 5.4 Summary of Environmental and Social Risk Assessment

No.	Potential Environmental Impacts	Operation	Impact	Remark
1	Air Pollution	√	Low	The main air pollution source includes the emission from operation of generator, boilers; it is expected to be low with mitigation.
2	Wastewater	√	Low	The main water pollution sources include the discharges of domestic wastewater from factory operation activities; it is expected to be low with mitigation.
3	Noise	√	Low	Any manufacturing facility is known to generate a certain amount of noise and vibration. Although it may result from proximity to noisy machinery. The potential impact is considered to be low because the generators are located at isolated places and other production activities with mitigation. Noise emission may occur from demolition activities for the decommission phase.
4	Solid Waste	√	Low	The impact is considered to be low with proper management of solid waste. To implement 3R for fabric waste to be low impact. Recyclable wastes are sold to recycling contractors. Domestic waste from workers only.
5	Health and safety	√	Low	Lack of good safety practices and health education will cause accidents and injuries for workers.
6	Soil Contamination	√	Low	The main soil contamination sources include spills of fuel and lubricant, leakage oil, diesel; it is expected to be low with mitigations.
7	Ground Subsidence	√	Low	Ground subsidence may not occur from the factory's consumption of groundwater.
8	Offensive Odor	√	Low	There is odor from production activities; it is expected to be low with mitigations.
9	Bottom Sediment	√	Low	The significance impact is considered to be low, as the factory shall not discharge the waste into the river and apply proper management of final disposing.
10	Protected Area	√	NA	There is no protected area in the project area.
11	Flora/Fauna and Ecosystem	√	Low	Ecology impacts is considered to be low or almost nil, as the factory, being amidst the

				already established industrial zone, was already devoid of any Biotopes, either Flora or Fauna or Ecosystem Values since the advent of the zone.
12	Topography and geology	√	Low	Topography and geology impacts are considered to be low or almost nil, as the factory is situated on the flat plain.
13	Involuntary Resettlement	√	NA	No physical resettlement is necessary.
14	Local conflict of Interests	√	Low	The factory is located in the designed industrial zones. The factory complies with laws and relevant internal guidelines.
15	Gender	√	Low	Employment condition will meet national laws and international standards. There shall be no discrimination on the basis of gender.
16	Ethnic minorities and indigenous peoples	√	NA	There are no indigenous people in the factory area.
17	Poor	√	+H	Positive impact for operation phase. It is expected to accept and to be employed in the project's activities with high hopes for improvement in neighborhood would bring higher living standard and education status.
18	Living and livelihood	√	+H	Job opportunities and business development should be considered as a positive economic impact for regional or national development. It is considered to be significant positive impact for local people.
19	Cultural heritage	√	Low	The factory is located in the Industrial Zone. There are no historical and cultural monuments located nearby the factory area.
20	Landscape	√	+Low	Landscape is expected to be low impact without mitigation and becoming positive impact as the factory applies management on greening.
21	Working Conditions (including occupational safety)	√	Low	The significance assigned to this impact for the operation phase is considered to be low without mitigation but low with mitigation by proper training on handling and the well-equipped factory.
22	Global Warming	√	Low	Minimization of GHGS emission by operation activities.

NA Not Applicable
+ Positive impact

5.4. ENVIRONMENTAL IMPACT ASSESSMENT AND MITIGATION MEASURES DURING OPERATION

5.4.1. Impact on Air Quality and Mitigation Measures

5.4.1.1. Impact on Air Quality

The potential impacts on air quality are exhaust gas emission from diesel generator, and dust emission from housekeeping. These activities may also generate particulate matters PM_{10}, $PM_{2.5}$, SO_2, NO_2, Co, Co_2 and dust. However, these anticipated impacts are in manageable limits to control the air pollution with relevant mitigation measures and the factory will be managed by using their HSE guidelines.

Through main electricity source for the factory is the national grid line, soundproof diesel generator will be set-up in case of electricity shortages. Therefore, 375 kVA and 250 KVA of standby generator will be used for both operation and administration appliances.

Greenhouse gas (GHG) emission can be increased due to the vehicular movements, generator usages and other refrigerants appliances.

5.4.1.2. Mitigation Measures for Air Pollution

The following mitigation measures for reducing emissions from operation phase:

- Adequate ventilation system must be provided as per industrial guidelines for the proper dispersion of air pollutants.
- Regular maintenance of generator, boilers and other machineries to reduce gas emission.

5.4.2. Impact on Noise Pollution and Mitigation Measures

5.4.2.1. Impact on Noise Pollution

The major sources of noise impact activities are the operation of generator and machineries from production processes. Therefore, it could be affected on employees and workers for occupational health and safety in the production area. However, personal protective equipment covering provision of noise impact measures will be provided for some employees, workers. According to the noise results of measurement, the noise sources from operation areas are slightly above the noise level of 70 dBA of NEQ (emission) guideline. Therefore, it could be on employees and workers for occupational health and safety during operation.

5.4.2.2. Mitigation Measures for Noise Pollution

The following mitigation measures for reducing noise levels in the operation phase:

- Low noise equipment should be used where possible.
- All preventive measures such as regular operation and maintenance of machineries should be carried out and enclosures will be provided to abate noise levels at source.
- Noisy equipment should not be permitted during night hours as much as possible.
- Install noise controls (insulator, silencer) for diesel generators.

5.4.3. Impact on Water Quality and Mitigation Measures

5.4.3.1. Impact on Water Quality

Wastewater generated from only domestic use operation. Therefore, factory does not produce wastewater during its operation.

5.4.3.2. Mitigation Measures for Water Pollution

The mitigation measures for water pollution in the operation phase are:

- Provide adequate drainage system such as designated storm water drains to discharge the surface water to industrial drainage system for discharging domestic wastewater and storm/surface water to avoid clogging and maintain the drainage system regularly
- Regular maintenance of the drainage system.
- Regular cleaning and checking.

5.4.4. Impact on Soil Pollution and Mitigation Measures

5.4.4.1. Impact on Soil Pollution

During the operation phase, wastes generated from production are fabric waste, clipping waste and packaging materials etc. Solid waste generated from people's daily lives activities such as canteen, office, toilet etc. Hazardous wastes generated from production activities are small amount of machinery maintenance materials such as oily rags, used oil filters, used oils, spent batteries, ballets and fluorescent high intensity discharge lamps, various types of leakage and spillage of waste oils, diesel fuel and grease etc.

5.4.4.2. Mitigation Measures for Soil Pollution

All of the production wastes are separated and stored in isolated place at waste yard. Domestic wastes are collected by designated garbage bins and then sent to the temporary storage waste yard in the factory area. Garment & Process Global Co., Ltd also has as agreement services with YCDC for waste disposal facilities to collect the production waste and domestic waste. Appropriate recycling methods are in practice to dispose of the wastes in the environmental friendly manner.

The mitigation measures for soil pollution in the operation phase are:

- Apply 3Rs management (Reduce, Reuse and Recycle).
- Segregate and store the wastes at each isolated storage place.
- Maintain and clean the dustbins and disposal containers monthly.
- Remove the wastes from on-site at regular intervals.

5.4.5. Odor

Operators and workers are the most sensitive receptors to the offensive odor. Odor is usually generated at temporary waste yard.

5.4.5.1. Mitigation Measures for Odor Dispersion

The mitigation measures for odor dispersion in the operation phase are:

- Installation of efficient ventilation system
- Workers wear masks when needed

5.4.6. Impact on Natural Environment

Shwe Pyi Thar Industrial Zone (1) is already implemented to industrial land. Therefore, the factory operation does not affect to flora/fauna and ecosystem, protected area and other natural condition of surrounding environment.

5.4.6.1. Impact on Socio-economic

The factory is the long-term investment in the industrial sector. Most of the impacts of the factory operation on socio-economic may be positive. Operation of factory creates job opportunities to local people. Subsequently, socio-economic standards of local people are increased and eventually it may lead more to the economic growth at local and regional level.

5.4.6.2. Impact on Social Infrastructure and Service

During the operation phase, the impact on social infrastructure and service is in terms of local community scale and traffic congestion. Accessibility to social infrastructure and service such as school, hospital and shop may be affected by the presence of distribution/transportation vehicles because of the transportation route would use to access road.

5.4.6.3. Impact on Cultural Heritage/Asset

During the operation and closing phases, there is not affected to local cultural heritage in this area by the factory because Shwe Pyi Thar Industrial Zone (1) is already implemented for industrial land area.

5.4.7. Impact on Occupational Health and Safety

During the operation phase, employees and workers will be endangered particularly by accidental spillage and leakage of oil/ fuel and operation of boiler. Other potential hazards for workers and employees while handling and activities of sewing and cutting. Noise from the operation of machineries, equipment and generators may also affect workers and employees who are working in the production areas.

Moreover, physical hazards such as accidental slip, trip and fall may cause coeducationally. For electrical hazards, technicians and workers my expose to electrical hazards due to the presence of electrical throughout the whole factory production facilities.

Carelessness of workers during operation activities of production might cause injuries. The dangerous and hazardous areas existed at the factory area during operation. Another main impact on operation staffs are improper air ventilation

5.4.7.1. Mitigation Measures for Occupational Health and Safety

The recommended mitigation measures for occupational health and safety are:

- Ensure physical segregation of work and personal facilities to maintain worker personal hygiene.
- Provide own clinic and a doctor/nurse.
- Eliminate all flammable substances, liquids, vapors and unnecessary combustible materials from chemical storage area and oil tank environment.
- Provide sufficient first aid kits and emergency medical boxes in the work place.
- Consider work rotation strategies to reduce occupational exposure to impacts.
- Regular inspections and take preventive measures for prevention of electric shock hazards.
- Provide sufficient lighting for workers for safe working and reducing optical problems.
- Installation of fire extinguishers at every factory buildings.
- Provide sufficient personal protective equipment (caps, gloves, earplugs or earmuffs etc.) for every worker or employees who may need to use them.
- Ensure that the personal protective equipment is in good condition.
- Manage to all persons make full and proper use of personal protective equipment provided.
- Provide instruction and training in the proper use and care of any specific protective equipment where necessary.
- Provide regular trainings of first aid training, safety training, firefighting training or other essential trainings for machinery handling for workers.

Monitoring should be designed and implemented by accredited professionals, as part of an occupational health and safety-monitoring program. Facilities should also maintain a record of occupational accidents and diseases. Garment & Process Global Co., Ltd should try to reduce the number of accidents among workers (whether directly employed) to a rate of zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities.

5.4.7.2. Risks for Infectious Diseases

Impact on the risks for infectious diseases such as Hepatitis B/C, Tuberculosis, Dengue, Malaria, etc. which might be occurred during the operation and closing phases.

5.4.7.3. First Aid Guidelines and Facilities

A well-organized and proper first aid system is implanted to provide immediate first aid to anyone who is injured in the workplace and had conducted the first aid training by Myanmar Red Cross Society. Adequate number of first-aid kits are listed and made available at all workplace and contacts of medical providers, hospitals will be notified. The following are some of the contents in a sample first-aid kit:

- Bandage
- Adhesive Tape
- Antiseptic wipe
- Burn dressing and treatment items
- Cold pack
- CPR barrier
- Sterile wound dressings
- Sterile eye coverings
- Scissors, tweezers, compress

5.4.8. Emergency Risk

5.4.8.1. Flood risk/Fire risk/Earthquake

Flood risk, which might be, occur heavy rain, high tide and cyclone during raining season.

Potential fire hazard can be from bad electrical connections, handling carelessly processing activities, oil/fuel spill, and smoking cigarettes. Fires in factories can spread quickly and deadly for the people working in the factory.

Potential of earthquake can be collapsed factory building and structure.

5.4.8.2. Mitigation Measures for Fire Hazard

Garment & Process Global Co., Ltd has provided fire extinguishers, fire hose reels and fire hydrants around the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. The emergency contact number of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases. In addition, Garment & Process Global Co Ltd has planned plans to provide trainings on firefighting annually for the workers by a professional or otherwise by sending to training courses.

5.4.7.2. Global Warming

Greenhouse gas (GHG) emission can be increased due to the vehicular movements and use/release of CFC substances (refrigerants for air conditioning units).

6. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

Public consultation and information disclosure ensures that communities and stakeholders are part and parcel of the proposed developments and in so doing assure the sustainable use of resources. Public consultations form a useful component for gathering, understanding and establishing likely impacts of projects determining community and individual preferences and selecting alternatives.

Garment & Process Global Co., Ltd provides an opportunity to all the stakeholders and communities in the surrounding area to raise issues and concerns pertaining to the factory. The engagement activities using varied techniques are as follows:

a) Neighboring community/stakeholders can directly inform their township/ward to the Garment & Process Global Co., Ltd Office.
b) They can give their suggestions to the factory through the township/ward administration office or industrial zone office.

The using techniques for aforementioned description, Green EHSS have organized meetings Garment & Process Global Co., Ltd. The objectives of the meeting were to collect up-to-date and precise information on the project activities. The outcome of the meeting will help in the assessment of the anticipated impacts.

Garment & Process Global Co., Ltd is situated in Shwe Pyi Thar Industrial Zone (1). Green EHSS has conducted stakeholder engagement with local residents near Shwe Pyi Thar Industrial Zone (1) to inform the local administration on the project, to collect the views and to obtain the input into the impact and mitigation measures to be included in the EMPs.

6.1 Engagement Techniques

Garment & Process Global Co., Ltd has implemented a comprehensive range of engagement activities using varied techniques to ensure that the project effectively involves stakeholders. The using techniques for aforementioned discussions, meetings and survey are showed in following table.

Table 6.1 Engagement Methods and Techniques

Engagement Technique	Description
Company Address Factory Address	Garment & Process Global Co., Ltd provides company location and factory location in Yangon. This is relevant in easily way of accessibility for all kinds of stakeholders.
Hot Line Number	Garment & Process Global Co., Ltd operates a hot line number which is available during business hours. Phone 09-263256007
Pamphlet	Garment & Process Global Co., Ltd will produce pamphlet available in community meetings for general information related with factory activities, environmental management, safety, community development and public involvement.
Booklet	Garment & Process Global Co., Ltd will produce booklets to provide the community with project related activities including machine used, product value and their services. Booklets are available in community meetings for the

	provision of information with pictures and photographs.
Face to Face Meeting	Garment & Process Global Co., Ltd does not engage directly with a range of stakeholders as required. In particular, Garment & Process Global Co., Ltd has an ongoing engagement with local authority persons, and community organizations.
Questionnaires and Surveys	Garment & Process Global Co., Ltd house hold survey in the vicinity of the factory location to evaluate the effectiveness of engagement mechanisms and gain an understanding of community perception interests and issues.
Public Meeting	Garment & Process Global Co., Ltd will conduct public meeting to generate more in depth information around issues and concerns raised by stakeholders. These are giving stakeholders on opportunity to directly obtain information and ask questions concerned with the project

6.2 Responses and Additional Comments by Respondent

Consultation with communities affected by the project as well as the focus groups with local government and ward leaders highlighted the most important issues. Several of these issues directly related to the factory activities and facilities during operation.

The results of public consultation and socio-economic survey show that the respondents were positive on the project for the operation of Garment & Process Global Co., Ltd.

Community level consultation revealed that there were no complain from the surrounding area on Garment & Process Global Co., Ltd.

The consultation and household survey revealed that unemployment and the poverty that accompanies. It is the key concern amongst communities in the vicinity of the project site. Over 60% of respondents have revealed that priority for employment opportunity is to be given to local residents. They also advised to maintain the environment and to support the community and social development process.

7. ENVIRONMENTAL MANAGEMENT PLAN

According to the outcomes from the Environmental and Social Impact Analysis, Environmental Management Plans are addressed to mitigate the potential impacts. The EMP generally takes account of the following crucial management plans.

1) Air Emissions Management
2) Noise Pollution Management
3) Water Management
4) Solid Waste Management
5) Natural Environmental Management
6) Social Environmental Management
7) Occupational Health and Safety Management
8) Emergency Response Plan
9) Environmental Monitoring and Reporting
10) Corporate Social Responsible (CSR) Plan
11) Budget Plan
12) Grievance Redress Mechanism

7.1 Objective of Environmental Management Plan

An environmental management system (EMS) is a framework that helps an organization achieves its environmental goals through consistent review, evaluation and improvement of its environmental performance. The assumption is that his consistent review and evaluation will identify opportunities for improving and implementing the environmental performance of the organization. The EMS itself does not dictate a level of environmental performance that must be achieved each organization's EMS is tailored to its own individual objectives and targets.

An EMS encourages an organization to continuously improve its environmental performance. The system follows a repeating cycle. The organization first commits to an environmental policy then uses its policy as a basis for establishing a plan which sets objectives and targets for improving environmental performance. The next step is implementation. After that, the organization evaluates its environmental performance to see whether the objectives and targets are being met. If targets are not being met, corrective action is taken. The results of this evaluation are then reviewed by top management to see if the EMS is working. Management revisits the environmental policy and sets new targets in a revised plan. The company then implements the revised plan. The cycle repeats and continuous improvement occurs.

Commitment and Policy - top management commits to environmental improvement and establishes the organization's environmental policy. The policy is the foundation of the EMS.

Planning - An organization first identifies environmental aspects of its operations. Environmental aspects are those items such as air pollutants or hazardous waste that can have negative impacts on people and the environmental. An organization then determines which aspects are significant by choosing criteria considered most important by the organization. For example, an organization may choose worker health and safety, environmental

compliance and cost as its criteria. Once significant environmental aspects are determined an organization sets objectives and targets. An objective is an overall environmental goal (eg. minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (eg- reduce use of chemical X by 25% by September 1998). The final part of the planning stage is devising an action plan for meeting the targets. This includes designating responsibilities establishing a schedule and outlining clearly defined steps to meet the targets.

Implementation - An organization follows through with the action plan using the necessary resources (human, financial etc.). An important component is employee training and awareness for all employees. Other steps in the implementation stage include documentation, following operating procedures and setting up internal and external communication lines. For fire training, attendant in one year 40 persons.

Evaluation - a company monitors its operations to evaluate whether targets are being met. Of not, the company takes corrective action.

Review - Top management reviews the results of the evaluation to see if the EMS is working. Management determines whether the original environmental policy is consistent with the organization's values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

7.2 Environmental Policy

Garment & Process Global Co., Ltd describe its environmental policy as follows:

Garment & Process Global Co., Ltd shall be responsible for the protection as well as perseveration of environment in and around the area of the project site.;

- Garment & Process Global Co., Ltd shall be able to control pollution of air, water and not to cause environment degradation and
- Garment & Process Global Co., Ltd) will comply with any applicable environmental protection laws and regulations of the Republic of the Union of Myanmar.

7.3 Health Policy

Garment & Process Global Co., Ltd always comply with all health and safety legislation.

Garment & Process Global Co., Ltd will establish and implement the Occupational, Health and Safety Management.

Garment & Process Global Co., Ltd help the workers by providing them with a workplace health services and medical care and workplace safety.

Garment & Process Global Co., Ltd aims for continual improvement of its health and safety management system.

The FIRST AID KITS and emergency medical boxes are supplied sufficiently in all work sites for minor cuts or ailment. Garment & Process Global Co., Ltd will send the injured employee to the nearest Private Clinic/ Hospital with factory transportation at no cost. Some employees who hold social security cards, on their request or consent are sent

to SOCIAL SECURITY CLINIC nearby the factory's transport arrangement. The Factory arranges plenty of safety drinking water, at no cost, to all workers at all time.

7.4 Description of Responsibilities for Implementation

Garment & Process Global Co., Ltd is responsibility for implementation environmental monitoring plan for the operation phase of the project. Emergency Response Team (ERT), Environmental Management Team (EMT) and management plan and monitoring plan of the proposed project.

I. Emergency Response Team (ERT)

ERT shall comprise:

a) U Kyaw Min (Boiler)
b) U Kyaw Phyo Wai (EP)
c) U Soe Moe (Cutting)
d) U Thaw Zin Tun (Store)
e) U Nyo Maung (Cutting)
f) U Chan Thar (Finishing)
g) U Sai Khan Aung (Pattern)

The ERT should be on call in case of safety problem that occurs during off-hours/ or Security shall contact the Township Fire Department immediately.

The team members shall have knowledge of or can be trained in responding to emergencies such as emergency plan, firefighting, precautions.

Responsibilities of ERT

Incident Controller	• Commands and control the ERT to response to an emergency. • Communicates with authorities eg. Police/ Township Fire Department in the event of an emergency. • Ensure emergency plan are reviewed regularly and ERT are appropriately trained and equipped to carry out their assigned task. • Crowd control and monitor overall headcount at the Assembly Area. • Initiate drill exercises and post exercise review with ERT on an annual basis.
Officer-in-charge at Assembly Area	• Conduct head count of all staff, consultants and workers • Consolidate the headcount list from wardens • Report evacuation status such as any missing person to the Incident Controller
Fire Fighters	• To be trained in firefighting and assist in firefighting at no personal risk.
Wardens	• Area combing, to ensure all staff and workers leave the workplace promptly

	during an evacuation • Direct staff and workers to the Assembly Area • Conduct headcount for their workers at the assembly Area.
First Aiders	• Successfully completed first aid training. To render first aid to any injured during any emergency. • Standby at the Assembly area with first aid kit during a mass evacuation.

II. Environmental Management Team (EMT)

EMT Shall comprise:

1. U Kyaw Min (Boiler)
2. U Kyaw Phyo Wai (EP)
3. U Soe Moe (Cutting)
4. U Thaw Zin Tun (Store)
5. U Nyo Maung (Cutting)
6. U Chan Thar (Finishing)
7. U Sai Khan Aung (Pattern)

The responsibilities of EMT are to implement the pollution control (water quality, air quality and noise impact, etc) mitigation measure and monitoring program.

III. Report Supported Team (RST)

RST shall comprise:

1) U Kyaw Min (Boiler)
2) U Kyaw Phyo Wai (EP)
3) U Soe Moe (Cutting)
4) U Thaw Zin Tun (Store)
5) U Nyo Maung (Cutting)
6) U Chan Thar (Finishing)
7) U Sai Khan Aung (Pattern)

The responsibilities of RST are to record of the monitoring results in files, to develop the monitoring report with related documents and to report submission to local Environmental Conservation Department (ECD), through the Garment & Process Global Co., Ltd.

7.5 Environmental Impact and Mitigation Measures

After evaluating the environment impacts of Garment & Process Global Co., Ltd, Green EHSS has identified environmental risks and prepared mitigation measures to protect the environmental and comply with Myanmar environmental legislation. Environmental impacts and mitigation measures are divided into two phases, operation phase and decommissioning phase. Construction phase of the plant is completed.

7.5.1 Air Emission Management

Potential environmental impact and mitigation measures for air emission management are shown in Table 7.1.

Table 7.1 Environmental Impact and Mitigation Measures (Air Pollution) during Operation Phase

Environmental Impact	Mitigation Measures
Dust	
• Dust from loading and unloading raw materials	• Installation of sufficient exhaust fan ventilation units. • Regular change the ventilation filters. • Heating, ventilation and air condition systems must be cleaned and maintained regularly.
• Dust particles generated from fabrics and threads from cutting and sewing to packing operations.	• More comprehensive cleaning should be carried out as often as necessary. This cleaning should also include walls, ceiling, storage racks and other areas where dust accumulates. • Scrap materials must clean up daily often enough to prevent them from collecting on floors, tabletops in aisle ways or other area.
• Dust from floor cleaning and housekeeping in factory operation	• Spraying water on the floor before sweeping will avoid dust remaining air bone. More effective protective methods of controlling dust include using a vacuum cleaner or a wet mop. • Provide personal protective equipment at the work place such as dust masks of respirators and caps if necessary.
Exhaust Emission (Greenhouse Gas)	
• Vehicle Movement	• Use of vehicles having efficient engines and exhaust system. • Implementing a regular vehicle maintenance and repair program. • Environmental air pollution (especially dust emission) caused by the transportation activities will focus on reducing it as much as possible. • Environmental noise pollution caused by the transportation activities will focus on reducing it as much as possible. • Noise pollution operations, maintenance of machine always monitoring.
• Air Emission generated from diesel generators • Air emission generated from diesel generators	• Installation of filters for generator and remove any PM • Proper ventilation of equipment and machines. • Use of masking agents and efficient ventilation system in factory.
• Using air conditioner in office building • Cooking activities from dormitory	• Putting indoor potted factory for air refreshment of office. • Increasing roadside plantations make localized air pollution reduced due to the blocking effect of foliage and through

	photosynthesis.
• Use of solvents	• Volatile liquids (solvents, thinner, flux and varnish) must be stored in a covered container and kept cool to prevent evaporation into the environment. • Maintain adequate ventilation and hygiene to reduce the generation of odor. • Prohibition of smoking in any working area.

Decommissioning Phase

Negative impacts on ambient air quality such as dust particles emissions could be expected due to demolition works during the decommission phase of the factory after the lifespan of the project. This nuisance will be temporary in nature and is hot expected to affect the surrounding environment since the factory is located within an industrial zone.

7.5.2 Noise Pollution Management

Permanent hearing loss may be caused by a number of things including disease, aging, sudden loud noise or long-term exposure to loud noise. Factory must identify workers who work increase with noise levels that are higher than 85 decibels. These workers must wear hearing protection and be trained on the proper use of hearing protection and the health and safety risks of not wearing hearing protection. Noise output on new equipment should be evaluated and engineered controls used to reduce noise. Factory should conduct noise hazard evaluations each year to identify any areas where noise levels exceed 85 decibels. Where noise levels are higher than 85 decibels, factories should use rubber padding to reduce machine vibration install sound barriers and sound insulation. Noise levels should not exceed a 140 db peak sound pressure at any time and factory should install noise curtains, sound absorbing and enclosures. Potential environmental impacts and mitigation measures for noise management are shown in Table 7.2

Table 7.2 Environmental Impact and Mitigation Measures (Noise) during Operation

Environmental Impacts	Mitigation Measures
Noise	
• Noise generated from diesel generators	• Use of noise enclosure for diesel generator. • Proper maintenance of generator and engineered noise controls (sound absorption material) • Provide adequate ear protection (ear plus or muffs) to workers working in the excessive noise areas (exceed 85 decibels)
• Cutting machine, sewing machine	• Regular maintenance of the machines to reduce noise emission. • Proper maintenance of exhaust fan
• Running exhaust fan	• Use of international modernized machines which generate low noise levels.
• Noise generated from pumps, motors and	• All preventive measures such as regular

compressor.	operation and maintenance of pumps, motors and compressor should be carried out. • Provide adequate ear protection (ear plugs of muffs) to workers working in the excessive noise areas (exceed 85 decibels) and organize full time wearing of ear plugs

Decommissioning Phase

After the lifespan of the project, decommissioning the factory can also affect noise level. Temporary noise barriers and occupational preventive measure should be applied in this phase. Workers employing in high noise areas should be worked on shifts and hearing protective wear such as earplugs, earmuffs, etc. should be provided. Sensitization of truck drivers to switch off vehicle engines while loading materials avoid running of vehicle engines or hooting especially.

7.5.3 Water Management

There is no discharging of process wastewater. The drainage system is periodically cleared so as to ensure adequate storm water flow. The domestic sewage and storm water will be discharged to the municipal sewage channel existing in front of the factory and only sanitary wastewater to the ground tank in the factory compound.

Potential environmental impact and mitigation measures for ground water, and waste water management are shown in Table 7.3.

Table 7.3 Environmental Impact and Mitigation Measures (Water) during Operation Phase

Environmental Impacts	Mitigation Measures
Ground Water	
• Ground water depletion	• Water consumption could not affect to the ground water as a major ingredient
• Water use of employees and staff	• All factory staff should turn on water taps only when heeded and should not allow water to run continuously • Any leakage should be promptly reported to engineering department as soon as possible • The engineering department staff should maintain all water piped taps, storage tanks and water consumption equipment
Waste Water	
• Domestic waste water	• Regular cleaning and checking.
• Surface water contamination by oil/fuel leakage from vehicles and diesel generator	• Ensure the factory compound with well spread with concrete for traffic • Immediate clean for leakage and spillage. • Use oil spill clean-up materials.
• Sanitation Wastewater	• All sewers should be disposed of through septic tanks.

	• Discharge periodically by contacting Engineering Department (Water and Sanitary) from YCDC.

Decommissioning Phase

Surface water and ground water contamination may result from various activities during decommission phase. These activities can include wastewater generated from workers and staff and oil and grease leakage from machines and vehicles. Sedimentation/ siltation of drainage or waterway may also result from unconfined stockpiles of soil and other materials. These activities shall be reduced by avoiding earth work in rainy season and discharging wastewater into existing sewage line. Suitable facilities or portable toilets must be provided to prevent discharging sanitary waste to the ground.

7.5.4 Solid Waste Management

Systematic management of solid waste is of importance as mismanagement of the waste will lead critical occupational hazard including fire hazard. Project proponent should segregate the wastes into reusable wastes, hazardous wastes and domestic wastes.

Garment & Process Global Co., Ltd will establish and implement comprehensive waste management plan to ensure segregation, handling, storage and disposal of hazardous and nonhazardous waste in safe and environmental friendly manner. Store wastes are separately and be sure they are properly labeled to make it easier to reuse or recycle them. The factory applies 3R management.

- **Reduce:** Reduce waste and increase yield with careful layout procedures. Increasing yield from raw materials and decreasing the number of rejected parts will reduce the amount of textile waste generated at the factory. Reduce waste by keeping raw materials protected from the elements. Garment & Process Global Co., Ltd will pay careful attention during planning, storing fabric raw materials, cutting, sewing and ironing to reduce rework and rejected parts. Keep tools sharp and in good operating order to reduce reject parts. Keep cutting machinery in good operating order. Fabric scarp is unavoidable but careful layout and good work practices will reduce the waste quantity.
- **Reuse:** The goal is to reduce disposal needs. Company has a plan to install the water reusing system for boiler to practicing the energy and water conservation. Some fabric cuts are reused as cleaning rags for floor cleaning, window glass cleaning and so on.
- **Recycle:** Keep textile wastes clean and segregated by type to enhance recycling opportunities. The garment factory procedures solid wastes mainly comprised of linen cuts. These wastes are valuable for recycle in places such as stuffing for pillow and doll. Company installs the garbage area for recycle waste. The ash from burnt wood by boiler will be recycled as fertilizer for trees and vegetation inside the factory and in the public space. Some of them are sent to the gardener to use as ingredient for fertilizer.

Systematic management of solid waste is of importance as mismanagement of the waste will lead critical occupation hazard including fire hazard. Waste generation from the whole production process is as follows.

(a) Receiving Process	-	Packing Waste
(b) Marking	-	Paper Waste
(c) Cutting	-	Linen Cuts
(d) Sewing	-	Linen Cuts, Thread Cuts
(e) Button Stitching	-	Metal Waste, Thread Cuts
(f) Tag and Code	-	Paper Waste, Thread Cuts, Packing Material
(g) Needle check	-	Metal Waste
(h) Packing	-	Packing Waste

There is no hazardous waste caused by the production activities of the factory. While garment factories do not create large quantities of hazardous waste, it is important that any amount of hazardous waste be management properly to avoid contaminating the environment. Hazardous wastes that are disposed of improperly can pollute the air, land, groundwater and waterways, harming the environment and threatening community health. The purpose of solid waste management is to describe how factory may properly manage hazardous wastes and non-hazardous waste. Potential environmental impact and mitigation measures for solid waste management are shown in table 7.4

Table 7.4 Environmental Impact and Mitigation Measures (Solid Waste) during Operation Phase

Environmental Impacts	Mitigation Measures
Non-Hazardous Waste	
• Textile waste • Pieces from cutting. • Packing materials.	• Cleaning continuous and regularly. • Provision of adequate containers to avoid loss to the floor. • Apply 3Rs management (Reduce, Reuse and Recycle) • Reduce waste by keeping raw materials protected from the elements. • Pay careful attention during planning, storing fabric raw material, cutting, sewing and ironing to reduce rework and rejected parts. • Keep tools sharp and in good operating order to reduce reject parts • Careful layout and good work practices to reduce the waste quantity. • Reuse the fabric cuts as cleaning rags for floor cleaning, widow glass cleaning and so on.

	• Reuse the packing material. • Fabric cuts should be packed in bags and stacking waste bags systemically. • Sold the fabric waste to recycler. • Properly collected at as dedicated storage area and suitable disposed of YCDC.
• Office wastes such as paper scraps, used copier cartridges, paper boxes and plastic bags. • Domestic wastes such as food waste, plastic bags, plastic water bottles, etc.	• Reuse waste if applicable. • Waste should be disposed in bins and segregated by types of waste. • Sufficient waste bins will be provided within the factory premises.
• Waste disposal	• Wastes are removed from on-site at regular intervals to prevent release to the environment. • Final disposal of Non-hazardous waste to YCDC or industrial estate allocated dumping sites.
Hazardous-Waste	
• Bleaching materials, solvent based paint, flammable solvents. • Small amount of machinery maintenance materials such as oily rags, used oil filters and used oils as well as spill cleanup materials • Electric tubes used cartridges • Waste of electric and electronic equipment and etc.	• Factory must determine the types and amount of hazardous wastes resulting from production and business activities. • Hazardous waste must be contained to prevent it from blowing away and from leaching into surface or groundwater. • Keeping hazardous waste container with clearly marked Hazardous Waste. • Hazardous waste should be stored in assigned areas with secondary containment (a container or physical structure that surrounds the primary container and serves to hold any liquids that may leak from the primary container). • Assigned hazardous waste storage areas should be located indoors, if possible (outdoor areas should be completely enclosed such as a shed). • A signboard is put outside the storage area marked (Hazardous Waste Storage Area or Danger) • Locked the storage area to prevent unauthorized individuals from entering. • Workers who handle hazardous waste should be trained to avoid personal injury, prevent spills and release and to

	make sure these wastes are disposed of safety. • Hazardous waste will be handed over to agencies authorized by YCDC monthly. • Spent oils and other hazardous things directly discharge into the water body of public drainage system is prohibited.
• Soil pollution by hazardous	• Factory makes take steps to reduce hazardous waste (by using non-hazardous materials such as citrus based solvents and non-toxic cleaners). • Never use waste oil or other contaminants on dirt roads as dust suppressant or weed killer.

Decommissioning Phase

Contamination and degradation of soil can be caused during the decommissioning phase. All unused or surplus building materials can be sold to other who needs it. Solid waste can be also used in the land level adjustments in the landfill area. Organic waste and construction debris should be properly collected at a dedicated storage area and suitably disposed of at YCDC.

7.6 Natural Environmental Impact and Mitigation Measures

Small trees are planted in the factory compound and they will help keep the factory cool. They make the natural environ improved for fauna and flora. Trees, bushes, grass and flowers help to reduce the harmful effects of the sun's radiation and hot winds. They also form a natural "Filter" preventing dust from penetrating inside the factory. Garment & Process Global Co., Ltd will keep the enterprise premises green by planting trees and flowers. Potential environmental management is shown in Table 7.5.

Table 7.5 Environmental Impact and Mitigation Measures (Natural Environment) during Operation Phase

Environmental Impact	Mitigation Measures
Flora and Fauna	
• Loss of fauna and flora species	• Keep the enterprise premises green by planting trees and flowers • Maintenance of trees, vegetation, lawn inside the factory and in the public space such as road and other spaces. • Depending on the free space of factory location, will planting the tree.
• Fire	• Develop employee awareness • Avoid work at the site • Use explosion proof electrical equipment • Have a good training program • Eliminate the usage of flammable material

	• Store flammable and combustible materials properly • Keep a minimum inventory of flammable and combustible materials as low as possible • Have a perfect maintenance program • Make sure the grounding system works well • Avoid electrical overload • Get a recommendation from fire safety specialists • Perform fire safety patrol daily • Prohibit smoking at the site • Dispose of waste properly • Keep fire hydrant and a fire extinguisher in good condition and in place
• Cyclone and Flood	• Build an emergency kit and make communications plan. • Avoid building in a flood plan • Elevate the furnace, water heater and electric panel • Consider installing check valves to prevent flood water from backing up into the drains of factory • If feasible, construct barriers to stop floodwater from entering the building and seal walls in basements with waterproofing compounds
• Chemical spill and leakages	• One major component of prevention simply knows the safety information for every liquid on premises. This information is available on the material safety data sheet (MSDS) that comes with such products. • Store flammable liquids properly • Control all ignition sources • Provide personal protective equipment.
• Equipment Mal functioning	• Establish a maintenance schedule when repairs and up keep take place on machines at regular intervals, these efforts can significantly improve the equipment reliability of these systems • Eliminate potential defects • Utilize equipment monitoring
• Mechanical and structural failure	• Awareness • Cleaning and housekeeping • Maintenance

7.7 Social Environmental Impact and Mitigation Measures

Potential environmental impact and mitigation measures for social environmental management are shown in Table 7.6.

Table 7.6 Environmental Impact and Mitigation Measures (Social Environment) during Operation Phase

Environmental Impacts	Mitigation Measures
Population Influx	
• Increase pressure on existing social infrastructures and services including health, food, shelter, water and recreational facilities.	• Use of local labor force. • Providing own health care facilities such as a doctor/nurse and own clinic. • Provision of ferry service for workers from remote area.
Beneficial Impacts	
• Employment opportunity to local people	• Maximize the use of local labour • Maximize public participation about project related activities

Decommissioning Phase

Loss of jobs of the employees may occur during decommissioning phase and it may reduce by taking responsibility on gradual reducing or transferring of work force.

7.8 Occupational Health and Safety Management

Primary OHS issues related to Garment & Process Global Co., Ltd are: overweight lifting at receiving raw materials and transporting products; hazard for injury from cutting machines and sewing needles; injure by heat at ironing section; ergonomic injury from prolong standing or sitting; and noise impact for workers at boiler section.

Garment & Process Global Co., Ltd has developed occupational health and safety plan to promote a safe working environment at the factory.

Table 7.7 Occupational Health and Safety Plan

Environmental Impacts	**Mitigation Measures**
Physical Injuries	
• Accidents	• Keep stairs, aisles and exits clear. • Safety signboards. • Provide adequate passageways for efficient and safe movement of materials. • The first aid kits and emergency medical boxes are supplied sufficiently. • Providing own clinic and a doctor/nurse. • Sent to private clinic or social security clinic near by the factory's transport arrangement if required. • Nearest hospital location maps and phone numbers in the factory.
• Overweight lifting	• Using necessary lifting and carrying aid and machinery.
• Cut fingers in the cutting room	• Using metal hand gloves for cutting machine operators

• Ergonomic injury from prolong standing or sitting	• Providing necessary seats at appropriate places.
Light	
• Activities of the workers in the operation sector are dependent on the good quality light.	• Provide good quality light source in the workplace. • Lights are positioned in the correct place. • Switch of the light when not in use. • Adequate lighting near any potential hazards such as steps, ramps, etc and outside the factory for security at night.
Temperature	
• Heat exposure	• Use of local exhaust ventilation systems in hot spots such as the ironing section to directly remove the heat.
• Dry room	• Reduce working period in the drying room. • Providing sufficient drinking water near to the drying room. • To educate workers to report to supervisor immediately when they feel heat exhaustion like dizziness, tiredness and sweating.
Health	
• Drinking • Sanitation • Risks infectious disease such as AIDS/HIV	• Providing purified drinking water for all workers. • The toilets are provided with enough water and deodorants. • Prevention of spreading out • Training of workers.
Working conditions	
• Traffic safety • Safety measure	• Improve the driving skills and requiring licensing of drivers. • Fire extinguisher signs and check list. • Clear evacuation escape route, signs. • Providing appropriate supervision to the workers. • Teach workers to troubleshoot common machine problems.

Decommissioning Phase

During decommissioning phase, health and safety impacts can result from working at height and electric shock hazards. Site fencing and safety signatures should be done in this phase. Personal protective equipment (PPE) such as safety harness for working at height, safety gloves, helmet, goggles, ear muffs, etc. should be provided.

Figure 7-1 Photo of Factory Clinic

7.9 Emergency Response Plan

Garment & Process Global Co., Ltd has planned, designed and constructed with fixed firefighting installations systematically. Garment & Process Global Co., Ltd has prepared an emergency response plan in order to prevent consequences of natural disasters such as fire,

floods and earthquakes and man-made errors (e.g. electricity shock, fire hazards). Emergency response plan describes the requirements for planning and preparing to protect workers in the event of an emergency.

Garment & Process Global Co., Ltd installs the Firefighting System and Equipment as follows:

Firefighting System and Equipment

1) Water for firefighting is used from two ground tanks(14000 gallons) in the compound.
2) Installation of 101 fire extinguishers and 6 of firehorse (25 kg = 1 and 3kg and 2kg)
3) Fire alarm system is installed in the building.
4) Installation of fire detectors and audio system in the factory.
5) Exit and evacuation indicating signs are fixed in whole area.
6) Musters in the factory compound with clear marking.
7) Display access to emergency services.
8) "NO SMOKING" signs shall be conspicuously displayed at strategic locations in the factory.
9) Factories must have procedures to prepare for possible emergencies such as fire, extinguishers, hurricanes, and chemical spills.
10) Factories must have an emergency evacuation plan and evacuation routes must be posted in each work area.
11) Factories must hold emergency evacuation drills often enough that workers know the drill procedure and consider it routine.
12) Factories must have a fire prevention plan.


3F-18


1F-41
1F-40
1F-39


Export Container
Checking List

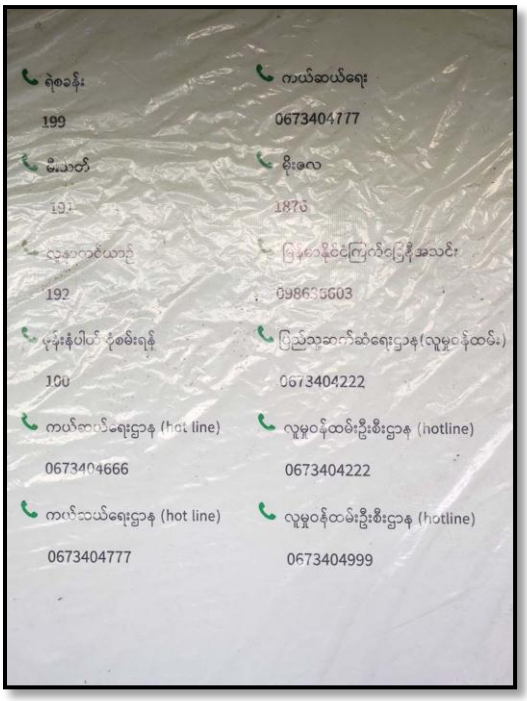


Figure 7-2 Photo of Extinguisher, Exit and Water Tank

7.9.1 Fire Prevention Plans

A small spark of fire may result into loss of properties and the damage by fire may produce high economic losses. This type if losses can be avoided by preventing and controlling the fire instantly for which Emergency Response Team is established.

ERT shall comprise:

1) U Kyaw Min (Boiler)
2) U Kyaw Phyo Wai (EP)
3) U Soe Moe (Cutting)
4) U Thaw Zin Tun (Store)
5) U Nyo Maung (Cutting)
6) U Chan Thar (Finishing)
7) U Sai Khan Aung (Pattern)

The team members shall have knowledge of or can be trained in responding to emergencies such as emergency plan, firefighting, precautions. The ERT should be on call in case of safety problem that occurs during off-hours/ or Security shall contact the Township Fire Department immediately.

Responsibilities of ERT

Incident Controller	• Commands and control the ERT to response to an emergency. • Communicates with authorities eg. Police/ Township Fire Department in the event of an emergency. • Ensure emergency plan are reviewed regularly and ERT are appropriately trained and equipped to carry out their assigned task. • Crowd control and monitor overall headcount at the Assembly Area. • Initiate drill exercises and post exercise review with ERT on an annual basis.
Officer-in-charge at Assembly Area	• Conduct head count of all staff, consultants and workers. • Consolidate and headcount list from wardens. • Report evacuation status such as any missing person to the Incident Controller
Fire Fighters	• To be trained in firefighting, and assist in firefighting at no personal risk.
Wardens	• Area combing, to ensure all staff and workers leave the workplace promptly during an evacuation. • Direct staff and workers to the Assembly Area. • Conduct headcount for their workers at the Assembly Area.

Fire Aiders	• Successfully completed first aid training, To render first aid to any injured during any emergency. • Standby at the Assembly Area with first aid kit during a mass evacuation.

Hazard Assessment

- Factories should consider all the types of emergencies that may occur at their location (eg. Fire, chemical spill, earthquake, typhoon, etc) and include them in emergency preparedness procedures.
- Fire and explosion hazards can exist in almost any work area. Potential hazards include:
  a) Improper operation or maintenance of gas-fired equipment
  b) Improper storage or use of flammable liquids.
  c) Smoking in prohibited areas
  d) Accumulation of trash
  e) Hot work (welding, soldering, any use of open flame of torch) operations without proper controls.

Hazard Controls

- Factories should have rules and procedures to make sure that exits are kept clear, are properly and clearly marked, and allow workers to quickly and safety leave the factory in an emergency.
- Fire extinguishers should match the potential fire hazard and should be located within 15 m (50ft) of flammable liquids and 23 m (75ft) of every worker.
- Fire extinguishers should have maintenance tags attached to them to indicate the date they were last checked and serviced. Ensure that workers how to use fire extinguishers in the immediate area.

Rules to Follow

- Electrical lines must be checked not to leave without switching off when working hours is over or when there is blackout.
- All the fuel and diesel are to be kept and stored, away from fire prone facilities and equipped with specific fire extinguishers for emergency use.
- Flammable by-products or wastes are to be kept at a specific site.
- Smoking is strictly restricted except in a specific smoking area defined.
- Matches must not be used near the machines.
- Establish a firm rule that any repair or maintenance work on powered machines should only be down when the power is turned off and the switch is locked in the off position.
- Be certain that the electrical power can be shut off immediately in case of emergency.

Emergency Contact list

Emergency Contact list consisting contact nos. of authorities, hospital, clinic, ERT personnel shall be prepared and displayed at the factory. The list shall be reviewed at least once a year or as and when there is change in personnel or change in contact number.

The contact no. for local authorities below shall be included in the list:

- Township Fire Department – fires, explosions, ambulance
- Police – local emergencies, life threatening situation
- Nearest Hospital – medical emergencies
- Local clinic or on-site doctor/nurse – medical emergencies
- Ambulance Number – medical emergencies

Drills

Factories should have emergency evacuation procedures that require all workers and managers to participate in drills. During a drill, workers and managers should leave the building, go to an assigned location (assembly area) and remain there until a signal is given to return to the factory. The focus should be on orderly evacuation, rather than on speed. Awareness talk for protection will be held and workers will be sent to trainings administered by Fire Bridge. The following exercise shall be conducted at least once a year for the ERT or otherwise stated:

- Fire Fighting
- Evacuation Drill for all personnel at the factory

Evacuation Maps

Up-to-date evacuation maps will be prepared and posted in numerous site locations. These maps shall show the exists, fire extinguishers, first aid box and designated assembly area.

Fire Extinguisher

A portable fire extinguisher is a "first aid" device and is very effective when used while the fire is small. The use of a fire extinguisher that matches the class of fire, by a person who is well trained, can save both lives and property. Portable fire extinguishers should be installed in workplaces regardless of other firefighting measures. The successful performance of a fire extinguisher in a fire situation largely depends on its proper selection, inspection, maintenance and distribution.

Classification of fires and Selection of Extinguishers

- Extinguishers should be selected according to the potential fire hazard, the construction and occupancy of facilities, the hazard to be protected and other factors pertinent to the situation.
- Use water from nearby tap water if the fire is caused by burning of wood, paper, plastics, textile and trash.
- Dry Powder extinguisher (blue) can be used for most types of fire such as those involving burning of wood, paper, plastics, textile, trash, chemical, flammable liquid and electrical fires.
- Carbon dioxide extinguisher (black) I sonly suitable for flammable liquids and electrical fires only. It is not suitable for use in indoor/enclosed environment.

Location and Marking of Extinguishers

Extinguishers should be conspicuously located and readily accessible for immediate use in the event of fire. They should be located along normal paths of travel and egress.

Extinguishers should be clearly visible. In locations where visual obstruction cannot be completely avoided, directional arrows will be provided to indicate the location of extinguishers and the arrows will be marked with the extinguisher classification.

If extinguishers intended for different classes of fire are located together, they should be conspicuously marked to ensure that the proper class extinguisher selection is made at the time of a fire. Extinguisher classification markings should be located on the front of the shell above or below the extinguishers nameplate. Markings should be of a size and form to be legible from a distance of 1 meter (about 3 feet).

Condition

Portable extinguishers should be maintained in a fully charged and operable condition. They should be kept in their assigned locations at all times when not being use. When extinguishers are removed for maintenance or testing a fully changed and operable replacement unit should be provided.

Monitoring and Distribution of Extinguishers

Extinguishers should be on hangers, brackets and in cabinets or on shelves. Extinguishers mounted in cabinets or wall recesses or set on shelves should be placed so that the extinguisher operating instructions face outward. The location of such extinguishers will be made clear by marking the cabinet or wall recess in a contrasting color which will distinguish it from the normal décor.

Extinguishers should be distributed in such a way that the amount of time needed to travel to their location and back to the fire does not allow the fire to get out of control. The travel distance for Class A and Class D extinguishers should not exceed 23 meters (75 feet). The maximum travel distance for Class B extinguishers is 15 meter (50 feet) because flammable liquid fires can get out of control faster that Class A fires. There is no maximum travel distance specified patterns for Class C extinguishers but they should be distributed on the basis of appropriate patterns for Class A and B hazards.

Fire Safety Inspections & Housekeeping

- Observe worksite safety and housekeeping issues and should specifically address proper storage of chemicals and supplies unobstructed access to fire extinguishers and emergency evacuation routes.
- Determine if an emergency evacuation plan is present in work areas and if personnel are familiar with the plan.
- Conduct monthly fire safety inspection of the facility. That includes valve inspections flow test of the riser’s audible and visual alarm activation, emergency lighting, general order and housekeeping.
- Checking that combustible materials are removed daily, that flammable liquids are stored safety that spills kits are intact at specific locations and that electrical equipment is in good repair

Outside Assembly Points

- Outside assembly points will be marked and all site personnel instructed where to assemble in the event of an emergency.
- An assembly area must be assigned outside the factory so that evacuated workers can be accounted for in an emergency.

First Aider and First Aid Facilities

Trained first aider(s) shall be appointed and for each shift.

In the event of Fire & Explosion (Fire Emergency Procedures)

a) If you discover a fire

- Activate the nearest fire alarm.
- Otherwise, he shall evacuate and alert all personnel in the area and notify the IC/Dy IC/Supervisor.
- The person who discover can attempt to extinguish any incipient fire with the available firefighting equipment and without personnel risk.

b) Fight the fire ONLY if:

- The fire department has been notified of the fire and
- The fire is small and confined to its area of origin and
- You have a way put and can fight the fire with your back to the exit and
- You have the paper extinguisher, in good working order and have been trained and know how to use it.
- If you are not sure of your ability or the fire extinguishers' capacity to contain the fire leave the area.

c) If you hear a fire alarm:

- Evacuate the area and close doors as you leave.
- Leave the building and move away from exits and out of the way of emergency operations.
- Assemble in an assigned area outside the building.
- Supervisors and coordinators should account for all workers in their area to determine that all personnel have evacuated.
- All workers should remain outside until given the signal or announcement that it is safe to re-enter.

d) If you hear a fire alarm:

- Learn at least two escape routes and emergency exits from your area.
- Learn to activate a fire alarm.
- Learn to recognize alarm sounds.
- Take an active part in fire evacuation drills.

e) Evacuation

- When the alarms sounds, all personnel not assigned to emergency duties will immediately proceed to the nearest SAFE exit. Leave the building and move directly to the nearest assembly area.

- Do not stop to pick up personnel items.
- All personnel should refrain from smoking during the evacuation.
- All personnel should be at least sixty meters (60mm) or two hundred feet (200 ft) away from the building.
- Be familiar with exit routes, assembly areas and evacuation maps.
- Report to assembly area coordinator if evacuation from other than your normally assigned location also report to assembly area coordinator if co-worker is missing.
- Treat all alarms as if there is an emergency situation. Factory will evacuate for all alarms.

f) Power Failure

- In the event of a power failure remain in your work area. Wait for instruction from your coordinator, supervisor or shift leader.
- Stop and park all moving equipment immediately for the duration of the power failure.

7.9.2 Management for Electrical Safety

Accidental contact with electric current may result in electric socks, contact burns and even death if proper protective measures are not taken. Wiring and electrical systems such as sockets, panels, motors, fuse boxes and transformers that are not section is to help reduce threats to workers, equipment and building from electrical shock or electrical fires.

Requirements

- Factories must contain wiring and electrical systems in safe condition.
- All workers who work with high-tension, live electricity must be trained on its hazards and the control measures that must be taken. Written records must be kept of this training.
- All electrical equipment must be properly grounded.
- Permanent and stationary equipment must have hard-wired electrical connections only.

Hazard Assessment

- Perform regular inspections of equipment and electrical installations to make sure they are in good working condition and do not present electric shock or fire hazards.
- Identify each piece of equipment manufacture to obtain appropriate electrical or mechanical hazards to maintenance workers. Contact the equipment manufacture to obtain appropriate electrical safety information if necessary.
- Prepare a written procedure for de-energizing and locking and tagging each machine out before performing any maintenance on it.

Hazard Control

- Grounding is an electrical connection to earth. A ground wire carries electrical current to earth when there is a leak in a circuit. Use building ground for all 120V AC outlets, motor grounds, etc. Never use the neutral circuit wire as the electrical ground.
- A ground Fault Circuit Interrupter is an electrical breaker that protects against an accidental short or overload of an electrical circuit. This device trips, cutting off electrical current at the slightest indication of an electrical short. Ground Fault Circuit Interrupters

should be used in area where there is moisture or humidity is high (for example outlets close to water hose line, water faucets, etc)

- Regularly test and maintain electrical panels, tighten electrical connections and test electrical motors at full load (maximum electrical current or amperage) to identify loose connections that may create a fire hazard.
- Use adequate wire size and connectors according to current load for temporary electrical connections.
- Undersized wire or loose connectors are most common causes for wire overheating that may lead to fire hazards.
- Temporary installations should be kept only for a length of time specified by the work. Label and identify electrical panels as to the type of voltage (480V/220V; 240V/ 120V). Label each circuit breaker.
- Electrical panels should always be closed and locked. Key for electrical panels should be kept in a centralized area and made available only to authorized personnel.
- Make sure there is easy access ((approximately 1 meter or 3 feet) to electrical panels and transformers. Do not allow electrical panels or transformers to be blocked by equipment or stored materials and keep flammable or combustible materials away.
- To reduce the risk of electrical shock, cap or otherwise close any openings left in electrical enclosures (electrical panels, boxes, etc.) from removed electric piping, circuit breakers, etc.)
- Before using portable cord and plug connected equipment and extension cords on any shift inspect them for defects such as loose parts, deformed and missing pins or damage to the outer jacket or insulation. Do not allow the use of damaged or defective equipment or cords. Such items should be repaired (if possible) or discarded.
- Avoid hanging electric extension cords from the ceiling if possible. If these are to be used, make sure to have a strain-relief mesh or similar device to prevent stain on the outlet or damage to the extension cord.

7.10 Summary of Environmental and Social Management Plan

Table 7.8 Environmental and Social Management Plan for Operation Phase

Environmental & Social Aspect	Impact	Actions on Prevention	Time Frame	Responsible Person
Natural Environment				
Global warming potential	Emission of gaseous substance	• Proper ventilation of equipment and machines. • Use of vehicles having efficient engines and exhaust system. • Implementing a regular vehicle maintenance and repair program. • Admixture must be stored in a covered container and kept cool to prevent evaporation into	The whole operation period	EMT

		the environment.		
	Dust Nuisance	• The entire factory compound traversed by vehicles should be paved with a hard, impervious material. • More comprehensive cleaning should be carried out as often as necessary. • Use dust control (spraying water) on the road. • Silos should be equipped with a high level sensor alarm and an automatic delivery shutdown switch to prevent overfilling. • Provide PPE against dust (i.e Mask)	The whole operation period	EMT
Acoustic Impact	Noise at territory and beyond the bounds of the enterprise	• Proper maintenance of generator and installation of engineered noise controls (sound absorption material if necessary). • Ensuring an adequate buffer is kept between the plant and neighbors (buffer distances > 100 meters) • All preventive measures such as regular operation and maintenance of pumps, motors and compressor	The whole operation period	EMT

		should be carried out.		
Water Environment				
Water Pollution	Storm water Drainage System	• Develop proper drainage systems for storm water and domestic waste water.	The whole operation period	EMT
	Sanitation waste water	• Discharge periodically by contacting Engineering Department (Water and Sanitation) from YCDC	The whole operation period	EMT
Solid Waste				
Concrete waste	Formation and allocation of waste	• Careful matching of orders with production. • Reuse returned concrete for other purposes where practical. • Use good housekeeping practices to clean up spills of cement and concrete as soon as possible.	The whole operation period	EMT
Domestic Waste	Littering/polluting with solid waste	• Segregate the wastes into reusable wastes, hazardous wastes and domestic wastes. • Awareness campaign for workers education on the waste segregated system. • Improve notice sign and awareness display board (non-smoking, no dumping signs). • Reuse waste if applicable. • Wastes are removed from on-site at	The whole operation period	EMT

		regular intervals to prevent release to the environment.		
Hazardous waste	Pollution of air, land, ground water and waterways	• Use good housekeeping practices to clean up spills of cement and concrete as soon as possible. • Hazardous waste must be contained to prevent it from blowing away and from leaching into surface or ground water. • Take adequate precautions to ensure that diesel fuel, oil, grease and other transportable materials do not enter surface and ground water courses. • Suitable spill response equipment (such as spill trays and spill kits) should be available to catch the fluid, contain and • collect small spills. • Installation of fire extinguisher near storage of hazardous waste.	The whole operation period	EMT
Chemical				
Handling storage and use of chemicals	Pollution of air, land, ground water and waterways	• Purchase the least toxic or hazardous product available • Keep containers tightly closed when not in use.	The whole operation period	EMT

		• Marked prominently as "Chemical Storage Area" • Obtaining material safety data sheet (MSDS) • Display warning signage at storage area. • Installation of fire extinguisher at storage area.		
Ecological Resources				
Change in terrestrial	Impacts on biodiversity	• Keep the enterprise premises green by planting trees and flowers. • In order to avoid the loss of ecological valuable, factory species should be practiced conservation methods as long term conservation.	The whole operation period	EMT
Social Environment				
Social Sector	Population pressure	• Use of Labour Force. • Provision of ferry service for workers from remote area.	The whole operation period	EMT
Socio-Economic	Employment opportunity to local people	• Informing of local population on existing vacancies. • Maximum possible involvement of local labour force in view of qualifying requirements.	The whole operation period	EMT
	Enhancement of technical skill	• Providing skill enhancement training. • Additional knowledge in waste	The whole operation period	EMT

		management, material handling and general application of environmental, health and social precautionary measures. • Local people involved in the project will find easier to find jobs in similar nature of projects as a skilled labour.		
Health and Safety				
Awareness on HIV/AIDS and STD	Spread to the community	• All workers will be adequately trained in basic sanitation and health care issues (e.g how to avoid transmission of sexually transmitted diseases such as HIV/AIDS).	The whole operation period	EMT
Occupation Health and Safety	Dangerous and unhealthy working conditions	• Provision of personnel with primary healthcare. • Placing at the factory of information and warning signs and fences. • Conformity of working places to OT requirements • Application of personal protective equipment. • Ensure labour law and factory law is strictly followed.	The whole operation period	EMT
	Dust	• Rinse eyes with water if they come into contact with cement dust and consult a	The whole operation period	EMT

		physician. • Implement PPE usage for eye protection. • Use soap and water to wash off dust to avoid skin damage. • Wear a dust mask to minimize inhalation of cement dust.		
	Exposure to cement/concrete	• Wash contaminated skin areas with cold, running water as soon as possible. • Divers should be trained to avoid direct contact with concrete during and removal of hardened concrete process and correct operation of truck mixers including maintenance and cleaning.	The whole operation period	EMT
	Poor Ergonomic	• Use hand trucks or forklifts when possible. • Truck drivers should be informed about ergonomic risk factors.	The whole operation period	EMT
	Slips, Trips and Falls	• Do not walk or work under overhead loads • Stack and store materials properly to limit the risks of falling objects. • Keep floor clear to avoid slipping and tripping hazards.	The whole operation period	EMT

	Vibration and Radiation	• Arrange implementation of frequent (hourly) rest breaks for drivers exposed to extensive their previous whole body vibration. • Regulate the truck drivers' daily work schedule considering their previous shifts.	The whole operation period	EMT
	Confined Spaces	• Guard against heat stress when cleaning truck mixer drums. • Ventilation should be used during mixer drum cleaning. • Wear appropriate protective equipment to avoid silica exposure when removing concrete residues from inside truck mixer drums.	The whole operation period	EMT
	Vehicle Safety	• Be sure that trucks and other vehicles are in good working order, including audible backup warning signals, before operating them. • Avoid overloading hoists, cranes and forklifts. • Sufficient parking areas with traffic signage should be established.	The whole operation period	EMT
	Electricity	• Electrical	The whole operation	EMT

		installation and all equipment are inspected according to a planned schedule and staff report any concerns to shift manager who will take appropriate action.	period	

Table 7.9 Environmental and Social Management Plan for Decommissioning Phase

Environmental & Social Aspect	Impact	Actions on Prevention	Time Frame	Responsible Person
Natural Environment				
Air/Dust	Chronic respiratory disease and eye complication	• All vehicle used are inspected and done regular maintenance. • Restriction of transport speed on roads. • Installation of temporary cover. • Set up dust barriers at strategic locations: Dust nets will be provided around the demolition area. • Practice dust management techniques, including watering down dust. • Provide PPE against dust (i.e Mask)	Through-out decommi-ssioning phase	Contractor Site Engineer Technician
Noise	Long/short term noise nuisance and hearing loss	• Schedule noisy activities during day time period. • Ensure machinery is well maintained to reduce noise generating. • Switching off installation and equipment when they are not used. • Minimization of	Through-out decommi-ssioning phase	Contractor Site Engineer Technician

		work during evening/night time. • Provide PPE such as noise defenders, ear plugs and war muffs to the workers in high noise area.		
Water Environment				
Water Pollution	Contamination of surface and under ground water resources	• Ensure sewage system is functional during demolition to prevent pollution of nearby underground and surface water sources. • Proper demolition of the sewage system to prevent pollution by contents into the environment and ground water.	Through-out decommi-ssioning phase	Contractor Site Engineer Technician
Waste				
Solid Waste	Pollution of water, air and soil	• Enforce segregation of waste at the source to encourage reuse and recycling. • To store waste temporary in containers in case of large dimension it is possible to store wastes with water proof cover. • Disposal of solid waste in compliance with local government policy. • Usable infrastructures will be hand over to the township authorities for future community use.	Through-out decommi-ssioning phase	Contractor Site Engineer Technician

Social Environment				
Interaction with public	Safety	• Informing of public on demolition process	Through-out decommi-ssioning phase	Contractor Site Engineer Technician
Health and Safety				
Occupational Health and Safety	Incidents and accidents leading to serious injury or fatalities	• Placing at the site of information and warning signs and fences. • Ensure provision of appropriate PPE for staff such as o Ear muffs for ear protection, o Helmets for head protection, o Dust masks for dust protection for all project works, o Goggles with good visibility for eye protection, o Overalls and dust coats to protect the skin, o Safety shoes for protection of the feet, o Gloves of different types according to specific works in relation to puncture resistance; sharps resistance: cut resistance; flexibility; abrasion resistance; grip.	Through-out decommi-ssioning phase	Contractor Site Engineer Technician
Emergency	Fires and explosions at the site	• Storage of inflammable and explosive substance and		

		materials at closed warehouses or fenced sites. • Regular territory clearing. • Availability of necessary means for five prevention and provision of operative access to them.		

7.11 Environmental Monitoring Plan

A chemical or process industry in general produces solid, liquid and gaseous wastes which are discharged to the environment. The waste product may contain pollutants which may harm environment. It is the responsibility of the industries to prevent or minimize the discharges of waste products by adopting suitable control measures in the factory. The effectiveness of such measures is ascertained by systematic monitoring of discharges at factory level and at receiving level.

Environmental monitoring is a very important aspect of environmental management during construction, operation and decommissioning stages of the project to safeguard the environment.

The scope of the Environmental Monitoring Plan shall include;

- To identify and resolve environmental issues and other functions that may arise during the construction and operational phases;
- To implement water quality, air quality and noise impact monitoring plan during the operational phase;
- To check and quantity the environmental performance and recommend and implement remedial actions;
- To conduct regular reviews of monitored data as the basis for assessing compliance with defined criteria and to ensure that necessary mitigation measures are identified, designed and implemented; and
- To asses and interpret all environmental monitoring data to ascertain whether environmental control measures and practices are functioning in accordance to specifications.

The objective of environmental monitoring is to systematically collect environmental data and support information needed for evaluation of the environmental performance. The frequency and methods of data collection must ensure that the data obtained are reliable and meaningful, i.e. they will adequately reflect the project environmental performance. A proposed environmental monitoring program must be practical, relevant and cost effective.

The project proponent will also be responsible for the implementation of monitoring, summarization monitoring results, and submission of monitoring report to the Ministry of

Natural Resources and Environmental Conservation (NONREC) periodically through the local Environmental Conservation Department (ECD).

7.11.1 Environmental Monitoring Plan for Operation Phase and Decommission Phase

The EMP cell members responsible may conduct daily, weekly or monthly general inspections of the project area and facilities. The objectives are to identify non-compliances to EMP. Table 7.10 is provided the environmental monitoring schedule for Garment & Process Global Co., Ltd. The factory submits monitoring report to the Ministry not less frequently than every six months as provided in a schedule in the EMP.

Table 7.10 Environmental Monitoring Schedule for Garment & Process Global Co., Ltd

Environmental issues	Parameter	Recommended monitoring frequency	Area to be monitored	Responsible Section
Air quality	Stack & ambient air emission (CO2, CO, SO2, NOx, PM2.5, PM10)	Biannually in operation phase	Within the factory area	Responsible officer of Garment & Process Global Co., Ltd
Water quality	-Effluent wastewater -Wastewater quality (pH, DO, BOD, COD, TDS, Temp)	-Daily in-house check -Biannually check by third party	Final discharge point of factory drainage	Responsible officer of Garment & Process Global Co., Ltd
Noise	Noise level in decibel	Biannually	Operation area	Responsible officer of Garment & Process Global Co., Ltd
Waste management	-Garbage collection cleaning - Maintenance	-Daily -Daily	-Temporary storage sites of proposed factory -Record disposed frequency	Responsible officer of Garment & Process Global Co., Ltd
Energy consumption	Liters of Diesel/fossil fuel for the generator	-Monthly monitoring of energy use -Daily monitoring of fuel use	Generator house and fuel storage area	Responsible officer of Garment & Process Global Co., Ltd
Water consumption	-All water taps shut off when not use -Power to unused equipment shut off at the distribution panel	-Daily -Daily	Water distribution area	Responsible officer of Garment & Process Global Co., Ltd

Emergency response equipment	-Extinguisher's position -Water hydrants -Firemen switch testing -Servicing fire extinguishers -Review records of accident -OHS training	-Daily -Daily -Monthly -Quarterly -Quarterly -Biannually		Responsible officer of Garment & Process Global Co., Ltd
Decommissioning Phase				
Air quality	PM2.5,PM10	One time during this phase	One point in the production area	Garment & Process Global Co., Ltd
Water quality	pH, DO, BOD, COD, TDS, Temp, Oil and Grease, Chlorine, Arsenic	One time during this phase	Final discharge point of factory drainage	Garment & Process Global Co., Ltd
Noise	Noise level in decibel (dBA)	One time during this phase	One point in the demolishing area	Garment & Process Global Co., Ltd
Rehabilitation	Recovering and revegetation		All decommissioning area	Garment & Process Global Co., Ltd

Table 7.11 Environmental Monitoring Schedule for Garment & Process Global Co., Ltd

No	Item	Frequency/ Times	Cost (USD)
1	Air quality	Twice per year	1000 per year
2	Water quality	Once per year	100 per year
3	Noise	Twice per year	300 per year
4	Waste Management	Four times per month	100 per month
5	Emergency response equipment	Once per year	500 per year
Decommissioning Phase			
1	Air quality	One time during this phase	500
2	Water quality	One time during this phase	300
3	Noise	One time during this phase	100

7.12 Corporate Social Responsibility (CSR) Plan

The CSR activities have the objective to uplift quality of life and gain favorable relations from all communities in the operation area. The CSR program for Garment & Process Global Co., Ltd textile printing factory consists of three main sectors. Health, Education and Community Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

Garment & Process Global Co., Ltd will contribute 2% of our Net Profit to social welfare activities what will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as providing necessary healthcare such

as medical checkup and giving proper medical knowledge about deceases and its prevention. Part of our CSR activity such as donations will also contribute to public school around our factory table 7.12.

Table 7.12 CSR Plan at Garment & Process Global Co., Ltd

No	Particle	Contribution
1	Public School	0.5%
2	Non- profit training	1
3	Employees healthcare	0.5%

7.12.1 Public School

We will contribute 0.5% of our net profit to the public school near the factory to be a part of creating the better community. We will also work together with the school to understand more about the needs and we will also ensure that our contributions will be used in the most effective and efficient way for the society.

7.12.2 Non-Profit Training

We will contribute 1% of our net profit for the trainings of our employees. Our trainings include job-related trainings, Language trainings and safety trainings. The main objectives of our trainings are that we want our garment with their work but also measures and occupational health employees to be not only become more productive and more qualified.

7.12.3 Healthcare

One of our main concerns is the well-being of our employees. We will contribute 0.5% of our net profit for the healthcare which includes medical checkup for the employees and providing health education to our workers.

7.13 Budget Plan for Environmental Management and Monitoring

This section describes the budget plans for the environmental management and environmental monitoring by the project proponent. On the other hand, Garment & Process Global Co., Ltd will take necessary environmental mitigation measures and its expenses for the environmental management not only at the construction and operation phases but also at the closing phase in accordance with their responsibility for the studies of recommendation.

The following table shows the expenditures for the implementation of environmental management plan for operation phase annually. Estimation cost for EMP implementation is presented in Table 7.13.

Table 7.13 Cost Estimation for EMP Implementation

No	Item	Frequency/Times	Cost (USD)
Mitigation plan			
1	Maintenance of air ventilation system	Once per year	200 per year
2	Grass plantation within the area of	Once per three month	100 per three month

	factory compound		
3	Solid waste disposal	Four times per month	100 per month
4	Purchase of personal protective equipment (PPE)	Twice per year	200 per half a year
5	Medical checkup and health insurances	Once per year	200 per year
Emergency preparedness			
1	Fire extinguisher	Once per year	200 per year
2	Fire alarm system		
3	First aid fits		
Monitoring Plan			
1	Air quality	Twice per year	1000 per year
2	Water quality	Once per year	100 per year
3	Noise	Twice per year	300 per year
4	Emergency response equipment	Once per year	500 per year

7.14 Grievance Redress Mechanism (GRM)

People who live near the project area or stakeholders can complain about the problems and impacts that they suffer, they can complain through Grievance Committee which includes the responsible persons of Garment & Process Global Co., Ltd representative from Industrial Zone(1) and representative from general administration department (Shwe Pyi Thar Township). Small issues will be solved at the Grievance Committee stage and other unsolved problems will be submitted to higher responsible authorities and finally the responsible person decided by the court in legal terms.

7.15 Reporting Monitoring Results

Results of air quality and noise level monitoring, and analysis of water quality will be recorded in files to check and audit. Monitoring will be carried out strictly as required by the related national regulations and the monitoring results of required parameters should be reported to local authorities and local ECD.

Report Supported Team is responsible for recording of the monitoring results in files, developing the monitoring report with related documents and to report submission to local Environmental Conservation Department **(ECD)**, through the Garment & Process Global Co., Ltd

8. EMPLOYEE WELFARE PALN

Garment & Process Global Co., Ltd is always proactive to provide a peace and harmony workplace for all of its employees. Employee Welfare Plan of Garment & Process Global Co., Ltd is as follows.

Staff Transportation

Garment & Process Global Co., Ltd has a plan of staff transportation. It provides ferry for coming to factory and going to home. It is free cost to whom they take the ferry of factory.

Hostel

There is no hostel for all staff.

Rest breaks

Garment & Process Global Co., Ltd Factory provides a longer break for lunch for 30 minutes.

Dining area

A large eating place with sufficient tables and chairs is arranged for all employees to rest and relax in time of need. The workers can eat their own packed lunch. It is situated away from the workstation to avoid any contact with dirt, dust or dangerous substances used during the work process.

Drinking water

Drinking water is essential for all workers. A water purifier is installed and the factory arranges plenty of safe drinking water, at no cost, to all workers at all time.

Health facilities

Garment & Process Global Co., Ltd helps the workers by providing them with a workplace medical facility, such as a small clinic where treatment can be given for occupational injuries. A qualified nurse is hired by the company so that in emergency cases employees could be promptly free of change.

The FIRST AID KITS and emergency medical boxes are supplied sufficiently in all work sites for minor cuts or ailment. The names and location of responsible person for first aid are put on a notice board and everyone knows the procedures for obtaining medical assistance.

Garment & Process Global Co., Ltd will send the injured employee to the nearest Private Clinic/ Hospital with factory transportation at no cost. Some employees who hold social security cards, on their request or consent, are sent to SOCIAL SECURITY CLINIC nearby the factory's transport arrangement.

In addition, Garment & Process Global Co., Ltd arranges for the employees to have a chance of medical check-ups by medical officers from government worker hospital.

Ready for Emergency

Garment & Process Global Co., Ltd Factory establish the Emergency Response Team and proper preventive measures are installed for all employees

Sanitary facilities

Appropriate sanitation facilities are installed in the factory and regular disinfection work carried out. Toilets are provided separately; 5 for men and 47 for women. The toilets are provided with enough water and deodorants. If necessary, some kind of antiseptic liquid will be sprayed.

Social Activities

The factory usually organizes Water Festival celebration triennially.

Other supported facilities

The factory provides parking place for bicycle and motorcycle for all workers.

Overtime fees

It is given on hourly basis at the rate following the existing Labor law of the country.

Bonus

Annual leave bonus is paid. Besides annual leave bonus, efficiency bonuses are paid based on their performance.

9. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Garment & Process Global Co., Ltd is located at No.(42/106), Cherry Street, Shwe Pyi Thar Industrial Zone(1), Shwe Pyi Thar Township, Yangon Region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An EMP has been carried out for the factory according to the according to the requirement of the proponent as it has been made for garment manufacturing factory.

Thus, the factory management can take proper mitigation steps against adverse environmental impacts by following this EMP. The necessary measure to mitigate impact regarding different environmental parameter such as air, water, waste, noise has been proposed in this EMP.

However, all necessary implementation measures to mitigate adverse to environmental, health and safety impacts have already been taken to meet National Environmental Quality (Emission) Guideline (2015). On the other, the factory has positive impacts project area. Further, this will indirectly help in boosting up the national economic condition through foreign investment. An outline of EMP has been given in the present report to mitigate enhance the impacts which occurs during operation phase of the factory.

The effective implementation of the mitigation measures proposed will ensure towards good environmental management within the proposed garment factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

Appendix (A) Fire Training






Appendix (B) First aid Training

Appendix (C) Photos of Factory

Appendix (D) Photo Records of Air Monitoring at the Factory

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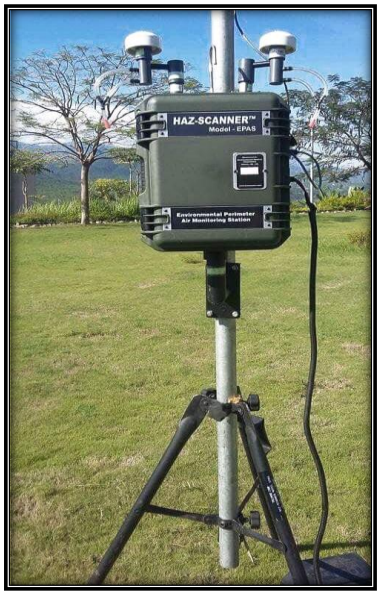


Appendix (E) CSR Photos

Appendix (F) Company Permit Letters

Form 42

The Myanmar Investment Commission

PERMIT

Republic of the Union of Myanmar
Myanmar Investment Commission
Sr. No. 12432-K
Dated 18-12-2012

Permit No. 533/ 2012

Date 18 December, 2012

The Myanmar Investment Commission issues this Permit under Section 10 of the Union of Myanmar Foreign Investment Law -

(a) Name of Promoter MR. SEONG JAE HO

(b) Citizenship KOREAN

(c) Address NO.24, 45th ROAD, HUKKYORO, BOSOODONG 3 GA, JOONGGU BUSAN, REPUBLIC OF KOREA

(d) Name and Address of principal -

(e) Place of incorporation -

(f) Type of business in which investment is to be made MANUFACTURING OF GARMENT ON CMP BASIS

(g) Place(s) at which investment is permitted PLOT NO. 42/106, CHERRY STREET, SHWE PYI THAR INDUSTRIAL ZONE 1, SHWE PYI THAR TOWNSHIP, YANGON REGION

(h) Amount of foreign capital US $ 0.524 MILLION

(i) Period for bringing in foreign capital WITHIN THREE YEARS AFTER MIC APPROVAL

(j) Total amount of capital (Kyat) EQUIVALENT IN KYAT OF US $ 0.524 MILLION

(k) Permitted duration of investment 30 YEARS

(l) Name of the economic organization to be formed in Myanmar GARMENT & PROCESS GLOBAL COMPANY LIMITED

Chairman
The Myanmar Investment Commission

မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်
ခွင့်ပြုမိန့်

ခွင့်ပြုမိန့်အမှတ် ၅၃၃ / ၂၀၁၂ ၂၀၁၂ ခုနှစ် ဒီဇင်ဘာလ ၁၇ ရက်

ပြည်ထောင်စု မြန်မာနိုင်ငံတော် နိုင်ငံခြား ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ ပုဒ်မ (၁၀) အရ ဤခွင့်ပြုမိန့်ကို မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်က ထုတ်ပေးလိုက်သည်-

(က) ကမကထပြုသူ၏အမည် MR. SEONG JAE HO

(ခ) မည်သည့် နိုင်ငံသား KOREAN

(ဂ) နေရပ်လိပ်စာ NO.24, 45th ROAD, HUKKYORO, BOSOODONG 3 GA, JOONGGU BUSAN, REPUBLIC OF KOREA

(ဃ) ပင်မအဖွဲ့အစည်းအမည်နှင့် လိပ်စာ -

(င) ဖွဲ့စည်းရာအရပ် -

(စ) ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်မည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အထည်ချုပ်လုပ်ခြင်း လုပ်ငန်း

(ဆ) ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်ခွင့်ပြုသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ် ၄၂/၁၀၆၊ ချယ်ရီလမ်း၊ ရွှေပြည်သာစက်မှုဇုန်(၁)၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

(ဇ) နိုင်ငံခြားမတည်ငွေရင်း အမေရိကန်ဒေါ်လာ ၀.၅၂၄ သန်း

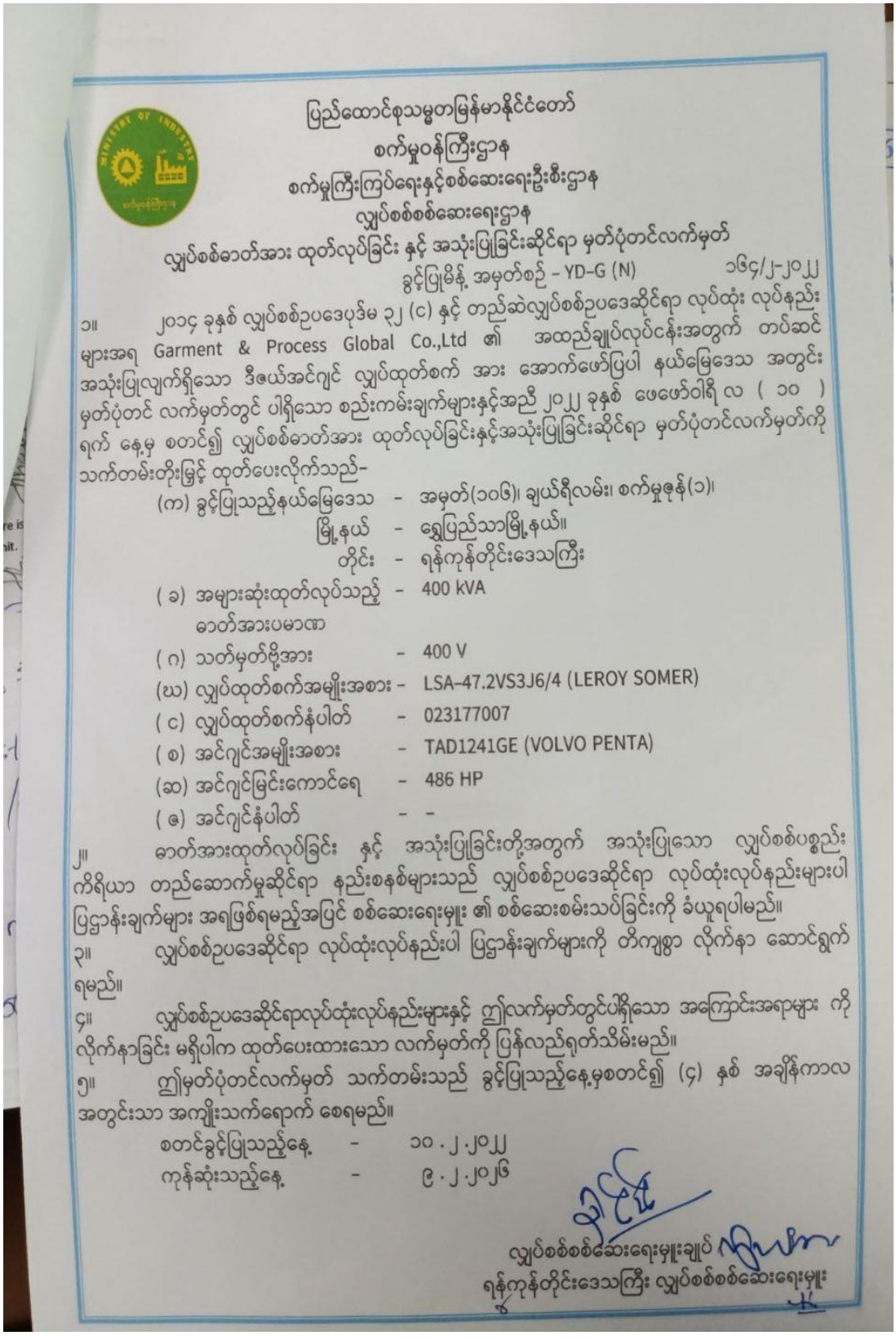
(ဈ) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ ကော်မရှင်ခွင့်ပြုမိန့် ရရှိပြီး (၃)နှစ် အတွင်း

(ည) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန် ဒေါ်လာ ၀.၅၂၄ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(ဋ) ရင်းနှီးမြှုပ်နှံခွင့်ပြုသည့် သက်တမ်း ၃၀ နှစ်

(ဌ) မြန်မာနိုင်ငံတွင်ဖွဲ့စည်းမည့်စီးပွားရေးအဖွဲ့အစည်းအမည် GARMENT & PROCESS GLOBAL COMPANY LIMITED

ဥက္ကဋ္ဌ
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်



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ခွင့်ပြုမိန့် အမှတ်စဉ် - YD-G (N) ၁၆၄/၂-၂၀၂၂

၁။ ၂၀၁၄ ခုနှစ် လျှပ်စစ်ဥပဒေပုဒ်မ ၃၂ (c) နှင့် တည်ဆဲလျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံး လုပ်နည်းများအရ Garment & Process Global Co.,Ltd ၏ အထည်ချုပ်လုပ်ငန်းအတွက် တပ်ဆင်အသုံးပြုလျက်ရှိသော ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက် အား အောက်ဖော်ပြပါ နယ်မြေဒေသ အတွင်း မှတ်ပုံတင် လက်မှတ်တွင် ပါရှိသော စည်းကမ်းချက်များနှင့်အညီ ၂၀၂၂ ခုနှစ် ဖေဖော်ဝါရီ လ (၁၀) ရက် နေ့မှ စတင်၍ လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းနှင့်အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ်ကို သက်တမ်းတိုးမြှင့် ထုတ်ပေးလိုက်သည်-

(က) ခွင့်ပြုသည့်နယ်မြေဒေသ - အမှတ်(၁၀၆)၊ ချယ်ရီလမ်း၊ စက်မှုဇုန်(၁)၊
မြို့နယ် - ရွှေပြည်သာမြို့နယ်။
တိုင်း - ရန်ကုန်တိုင်းဒေသကြီး
(ခ) အများဆုံးထုတ်လုပ်သည့် ဓာတ်အားပမာဏ - 400 kVA
(ဂ) သတ်မှတ်ဗို့အား - 400 V
(ဃ) လျှပ်ထုတ်စက်အမျိုးအစား - LSA-47.2VS3J6/4 (LEROY SOMER)
(c) လျှပ်ထုတ်စက်နံပါတ် - 023177007
(စ) အင်ဂျင်အမျိုးအစား - TAD1241GE (VOLVO PENTA)
(ဆ) အင်ဂျင်မြင်းကောင်ရေ - 486 HP
(ဇ) အင်ဂျင်နံပါတ် - -

၂။ ဓာတ်အားထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းတို့အတွက် အသုံးပြုသော လျှပ်စစ်ပစ္စည်းကိရိယာ တည်ဆောက်မှုဆိုင်ရာ နည်းစနစ်များသည် လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများပါ ပြဋ္ဌာန်းချက်များ အရဖြစ်ရမည့်အပြင် စစ်ဆေးရေးမှူး ၏ စစ်ဆေးစမ်းသပ်ခြင်းကို ခံယူရပါမည်။

၃။ လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းပါ ပြဋ္ဌာန်းချက်များကို တိကျစွာ လိုက်နာ ဆောင်ရွက်ရမည်။

၄။ လျှပ်စစ်ဥပဒေဆိုင်ရာလုပ်ထုံးလုပ်နည်းများနှင့် ဤလက်မှတ်တွင်ပါရှိသော အကြောင်းအရာများ ကို လိုက်နာခြင်း မရှိပါက ထုတ်ပေးထားသော လက်မှတ်ကို ပြန်လည်ရုတ်သိမ်းမည်။

၅။ ဤမှတ်ပုံတင်လက်မှတ် သက်တမ်းသည် ခွင့်ပြုသည့်နေ့မှစတင်၍ (၄) နှစ် အချိန်ကာလ အတွင်းသာ အကျိုးသက်ရောက် စေရမည်။

စတင်ခွင့်ပြုသည့်နေ့ - ၁၀ . ၂ .၂၀၂၂
ကုန်ဆုံးသည့်နေ့ - ၉ . ၂ .၂၀၂၆

လျှပ်စစ်စစ်ဆေးရေးမှူးချုပ်
ရန်ကုန်တိုင်းဒေသကြီး လျှပ်စစ်စစ်ဆေးရေးမှူး

တာအမှတ် ....
ရက်စွဲ ....
ရန်ကုန်တိုင်းဒေသကြီး

ဘွိုင်လာယာယီအသုံးပြုခွင့်လက်မှတ်

{ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၆ အပိုဒ်ခွဲ (ဆ) }

စာအမှတ် ၇၈ / ၂၀၂၁-၂၂ / ဘဂလ / ယ၁-၃(က)

......Mr. Seong Jae Ho, Garment & Process Global Co., Ltd. အထည်ချုပ်လုပ်ငန်း.............

......အမှတ် (၄၂/၁၀၆), မြောင်ဂီလမ်း, ရုံ(၁), ရွှေလင်ပန်းစက်မှုဇုန်, လှိုင်သာယာမြို့နယ်, ရန်ကုန်တိုင်းဒေသကြီး..........

....

....အား...

....ကုမ္ပဏီ၊.. နိုင်ငံမှ

ထုတ်လုပ်သည့်ဘွိုင်လာအမှတ်...ပါသော

သို့မဟုတ်ဘွိုင်လာမှတ်ပုံတင်အမှတ် မ.စ. ၆၄၃၇..........ဖြစ်သော [illegible]......ဘွိုင်လာကို

ခွင့်ပြုဖိအား....0.7 MPa..........ဖြင့်လက်မှတ်ထုတ်ပေးသည့်နေ့မှ (၆)လ အသုံးပြုခွင့်ရှိသည်။

ယင်းကာလအပိုင်းအခြားကျော်လွန်သည့်အခါ ထုတ်ပေးထားသည့် ဤယာယီအသုံးပြုခွင့်လက်မှတ်

ပျက်ပြယ်စေရမည်။

(signature)
(အောင်ကျော်ဝေ)
ဘွိုင်လာစစ်ဆေးရေးမှူး
ဦးစီးမှူး
(ဘွိုင်လာစစ်ဆေးရေး)
ရန်ကုန်တိုင်းဒေသကြီး

(signature)
ဒုတိယညွှန်ကြားရေးမှူး
(ဘွိုင်လာစစ်ဆေးရေး)
ရန်ကုန်တိုင်းဒေသကြီး

ရက်စွဲ။ ...၁၆...၄...၂၀၂၂.........

မှတ်ချက်။ ။ ဘွိုင်လာဥပဒေပုဒ်မ ၁၅ပါ ပြဋ္ဌာန်းထားသည့် သက်ဆိုင်ရာအစိုးရဌာနအဖွဲ့အစည်းက
လိုအပ်၍ တောင်းဆိုသည့်အခါ ဤလက်မှတ်ကို တင်ပြရမည်။

ပုံစံ(၉)

MOPFI	ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော် စီမံကိန်း၊ ဘဏ္ဍာရေးနှင့် စက်မှုဝန်ကြီးဌာန စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန ဘွိုင်လာကိုင်တွယ်ထိန်းသိမ်းသူလက်မှတ်	ဘွိုင်လာဥပဒေ ပုဒ်မ ၅၀

ဘွိုင်လာကိုင်တွယ်ထိန်းသိမ်းသူအမှတ် ဘက/ ၇က/၄၃၉ /၂၀၁၇ အဆင့် (၃)

မှတ်ပုံတင်သည့်ရက်စွဲ ၂၇.၂.၂၀၁၇

အမည် ဦးဉာဏ်တင်ထွန်း

အဘအမည် ဦးစံရွှေ

နိုင်ငံသားစိစစ်ရေးကတ်ပြားအမှတ် ၁၄/ဓနဖ(နိုင်) ၀၅၀၉၇၁

အသက်(မွေးသက္ကရာဇ်) ၄၇ နှစ် (၁၇.၂.၁၉၇၃)

ပညာအရည်အချင်း B.A (History)

တက်ရောက်ခဲ့သည့်ဘွိုင်လာသင်တန်းနှင့် ရရှိခဲ့သည့်အဆင့် ၁/၂၀၁၇ ဘ‌ာဗန္ဓ အတက်

ကိုင်တွယ်ထိန်းသိမ်းခွင့်ရှိသည့်ဘွိုင်လာ ၁၀ တန်/နာရီ အထိ

နေရပ်လိပ်စာ အမှတ်(၅၂/၁)၊ ပဒ္မမြာလမ်း၊ (၅)ရပ်ကွက် ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

လက်မှတ်ထုတ်ပေးသည့်ရက်စွဲ၊ ၂၇.၂.၂၀၂၀

သက်တမ်းကုန်ဆုံးမည့်ရက်စွဲ၊ ၂၆.၂.၂၀၂၃

(ကျော်ဇင်ဦး)
ဘွိုင်လာစစ်ဆေးရေးမှူးချုပ်

ဘွိုင်လာဥပဒေပုဒ်မ ၂၉၊ ပုဒ်မခွဲ(ခ)အရ
ဘွိုင်လာကိုင်တွယ်ထိန်းသိမ်းသူက လိုက်နာရမည့်စည်းကမ်းချက်များ

၁။ ဘွိုင်လာကိုင်တွယ်ထိန်းသိမ်းသူသည် ယာယီအသုံးပြုခွင့်လက်မှတ်နှင့် အသုံးပြုခွင့်လက်မှတ် မရရှိသေးသည့် မည်သည့်ဘွိုင်လာကိုမျှ ကိုင်တွယ်ထိန်းသိမ်းခြင်း မပြုရ။

၂။ စစ်ဆေးရေးမှူးချုပ်က ဘွိုင်လာအမျိုးအစားနှင့် ရေနွေးငွေ့သုံးစွဲမှု အနေအထားပေါ်မူတည်၍ သတ်မှတ်ပေးသည့်ဘွိုင်လာကိုသာ ကိုင်တွယ်ထိန်းသိမ်းရမည်။

၃။ ဘွိုင်လာအသုံးပြုခွင့်လက်မှတ် သက်တမ်းမကုန်ဆုံးမီ ပိုင်ရှင်အား ကြိုတင်အသိပေးရမည်။

၄။ ဘွိုင်လာအားသတ်မှတ်သည့်ရက်တွင် စစ်ဆေးခံနိုင်ရန်အတွက် ဘွိုင်လာနှင့် ဘွိုင်လာအစိတ်အပိုင်းများ အားလုံး သန့်ရှင်းဆေးကြောထားနိုင်ရန် ပိုင်ရှင်အား အသိပေးရမည်။

၅။ ခွင့်ပြုဖိအားထက်ကျော်လွန်စေရန် အန္တရာယ်ကင်းဖိအားထိန်းအဆို့ရှင်ကို မိမိဆန္ဒအလျောက်ဖြစ်စေ၊ ပိုင်ရှင်မှတာဝန်ပေးအပ်ချက်အရဖြစ်စေ ပြုပြင်ခြင်း၊ ပြောင်းလဲခြင်း မပြုလုပ်ရ။

၆။ ဘွိုင်လာအသုံးပြုနေစဉ် မည်သည့်အကြောင်းနှင့်မျှ ဘွိုင်လာအနီးမှ ထွက်ခွာသွားခြင်း မပြုရ။

၇။ ဘွိုင်လာတွင်မတော်တဆထိခိုက်မှု တစုံတရာဖြစ်ပွားခဲ့ပါက သက်ဆိုင်ရာစစ်ဆေးရေးမှူးထံ အမြန်ဆုံးအကြောင်းကြားနိုင်ရန် ပိုင်ရှင်အားအသိပေးရမည်။

၈။ မတော်တဆထိခိုက်မှု တစုံတရာဖြစ်ပေါ်နိုင်မည့် အခြေအနေနှင့်ကြုံတွေ့ပါက မည်သို့ဆောင်ရွက်ရမည်ကိုသိရှိနားလည်ပြီး ကြိုတင်ပြင်ဆင်ထားရမည်။

၉။ တာဝန်ခံမှုအတွင်း ထိုက်သင့်သည့်အာရုံစိုက်မှုရှိရမည်ဖြစ်ပြီး မူးယစ်ဆေးဝါးနှင့် အရက်သေစာသောက်စားမူးယစ်ခြင်း မပြုလုပ်ရ။

၁၀။ ဘွိုင်လာကိုင်တွယ်ထိန်းသိမ်းသူလက်မှတ်သက်တမ်း မကုန်ဆုံးမီ ရက်(၃၀)အတွင်း ကြိုတင်၍ သက်တမ်းတိုးမြှင့်ရန် သက်ဆိုင်ရာစစ်ဆေးရေးမှူးထံ လျှောက်ထားရမည်။ယင်းသို့လျှောက်ထားခြင်းမရှိပါက လက်မှတ်သက်တမ်း ပျက်ပြယ်ပြီးဖြစ်သည်ဟု မှတ်ယူရမည်။

၁၁။ သက်တမ်းပျက်ပြယ်သည့် ဘွိုင်လာကိုင်တွယ်ထိန်းသိမ်းသူလက်မှတ်ကို သက်ဆိုင်ရာစစ်ဆေးရေးမှူးထံ ပြန်လည်အပ်နှံရမည်။

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ

စက်မှုဝန်ကြီးဌာန

စက်မှုကြီးကြပ်ရေးနှင့် စစ်ဆေးရေးဦးစီးဌာန

ပုဂ္ဂလိကစက်မှုလုပ်ငန်း မှတ်ပုံတင်လက်မှတ်

စက်မှုမှတ်ပုံတင်အမှတ် ---- ရက/ကြီး/၃၆၀၅ ---- ရက်စွဲ ---- ၁၄-၁-၂၀၁၄

လုပ်ငန်းအရွယ်အစား ---- အကြီး စ၁း ---- တိုင်းဒေသကြီး/ပြည်နယ် ---- ရန်ကုန်

အောက်ပါလုပ်ငန်းသည် ပုဂ္ဂလိကစက်မှုလုပ်ငန်းဥပဒေ ပုဒ်မ ၇ ပုဒ်မခွဲ (က) အရ မှတ်ပုံတင်ပြီးဖြစ်ပါသည်။ Garment & Process Global CO.,Ltd(CMP စနစ်)

၁။ လုပ်ငန်းအမည် ---- အထည်ချုပ်လုပ်ငန်း

၂။ လုပ်ငန်းအမျိုးအမည် ---- ဝတ်ဆင်ရေး လုပ်ငန်း

၃။ အဓိကကုန်ချောပစ္စည်းအမျိုးအမည် ---- Jacket/ Shirt / Pant

၄။ တည်နေရာလိပ်စာ ---- အမှတ် ၄၂/၁၀၆ ချယ်ရီလမ်း ၊ စက်မှုဇုန်(၁)
ရွှေပြည်သာမြို့နယ်

၅။ ပိုင်ဆိုင်မှုအမျိုးအစား ---- နိုင်ငံခြား ကုမ္ပဏီ

၆။ လုပ်ငန်းရှင်အမည် ---- Mr.Seong Jae Ho (M.D)

၇။ ကိုင်ဆောင်သည့်မှတ်ပုံတင်အမှတ် ---- P P No -HD 4008995

၈။ ရင်းနှီးမြှုပ်နှံမှုတန်ဖိုး (ကျပ်) ---- ၁၀၇.၈၆သန်း+ US$ 0.269 Million ---- တည်ထောင်သည့်ခုနှစ် ---- ၂၀၁၂

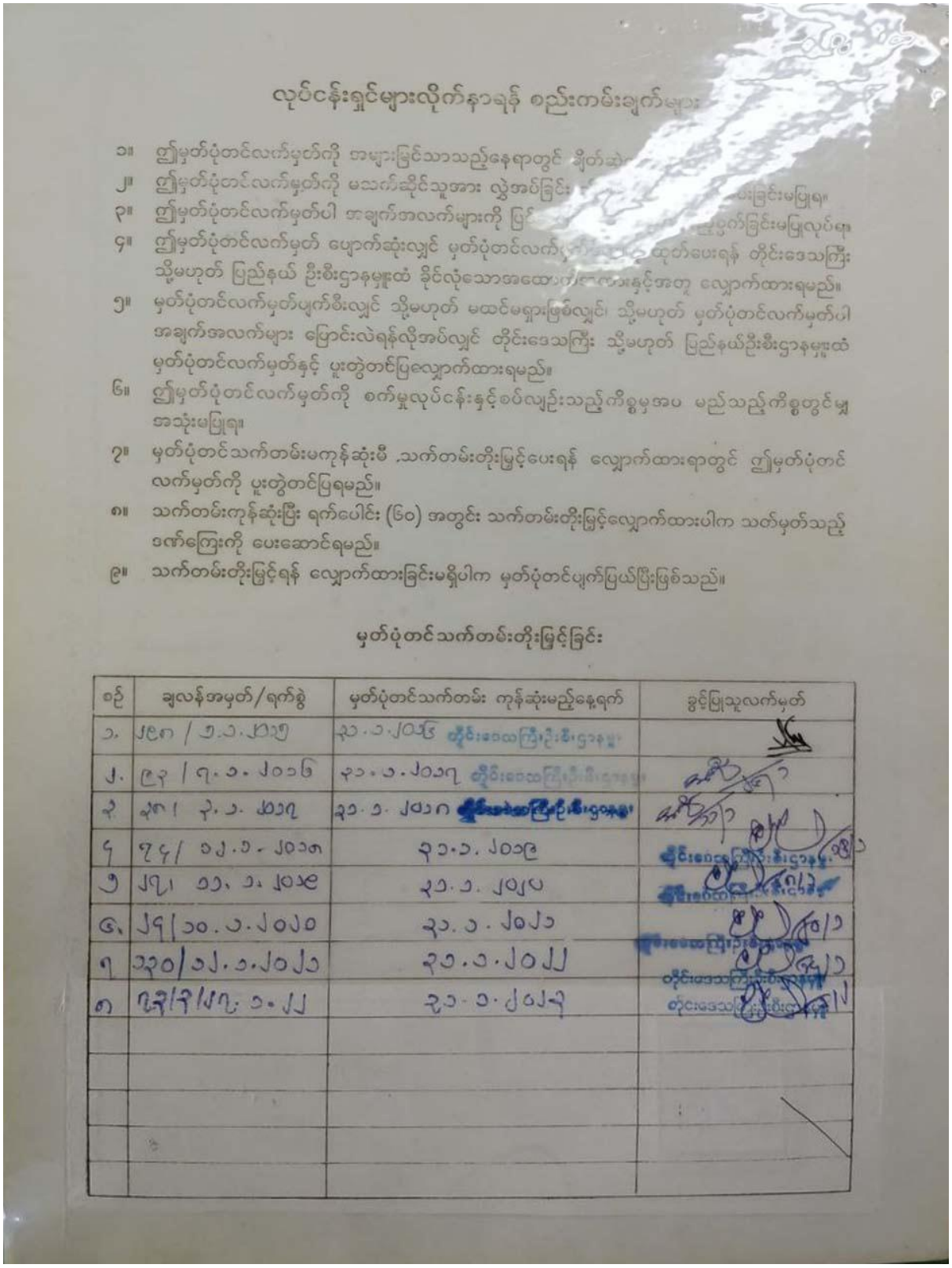
၉။ အသုံးပြုသည့်အားအမျိုးအစား ---- ထရန်စဖော်မာ၁/သွပ်ထုတ်စက် ---- မြင်းကောင်ရေ ---- ၄၆၂.၅အိပ်ရှ်ပီ/ ၂၅၀ ကေဗွီအေ+၃၇၅ ကေဗွီအေ

၁၀။ အလုပ်သမားဦးရေ ---- ၁၇၈၄

၁၁။ မှတ်ပုံတင်သက်တမ်းကုန်ဆုံးသည့်နေ့ရက် ---- ၃၁-၁-၂၀၁၅

ဝိုး ဗိုင်

ညွှန်ကြားရေးမှူးချုပ်

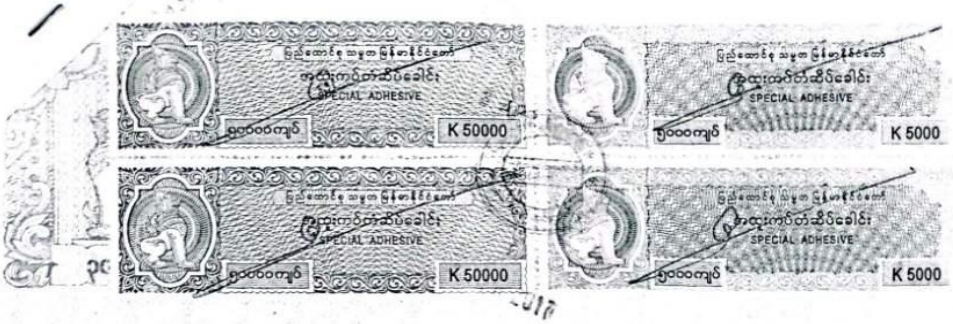


လုပ်ငန်းရှင်များလိုက်နာရန် စည်းကမ်းချက်များ

၁။ ဤမှတ်ပုံတင်လက်မှတ်ကို အများပြင်သာသည့်နေရာတွင် ချိတ်ဆွဲ
၂။ ဤမှတ်ပုံတင်လက်မှတ်ကို မသက်ဆိုင်သူအား လွှဲအပ်ခြင်း
၃။ ဤမှတ်ပုံတင်လက်မှတ်ပါ အချက်အလက်များကို ပြင်
၄။ ဤမှတ်ပုံတင်လက်မှတ် ပျောက်ဆုံးလျှင် မှတ်ပုံတင်လက်
သို့မဟုတ် ပြည်နယ် ဦးစီးဌာနမှူးထံ ခိုင်လုံသောအထောက်
၅။ မှတ်ပုံတင်လက်မှတ်ပျက်စီးလျှင် သို့မဟုတ် မထင်မရှားဖြစ်လျှင်၊ သို့မဟုတ် မှတ်ပုံတင်လက်မှတ်ပါ
အချက်အလက်များ ပြောင်းလဲရန်လိုအပ်လျှင် တိုင်းဒေသကြီး သို့မဟုတ် ပြည်နယ်ဦးစီးဌာနမှူးထံ
မှတ်ပုံတင်လက်မှတ်နှင့် ပူးတွဲတင်ပြလျှောက်ထားရမည်။
၆။ ဤမှတ်ပုံတင်လက်မှတ်ကို စက်မှုလုပ်ငန်းနှင့်စပ်လျဉ်းသည့်ကိစ္စမှအပ မည်သည့်ကိစ္စတွင်မျှ
အသုံးမပြုရ။
၇။ မှတ်ပုံတင်သက်တမ်းမကုန်ဆုံးမီ သက်တမ်းတိုးမြှင့်ပေးရန် လျှောက်ထားရာတွင် ဤမှတ်ပုံတင်
လက်မှတ်ကို ပူးတွဲတင်ပြရမည်။
၈။ သက်တမ်းကုန်ဆုံးပြီး ရက်ပေါင်း (၆၀) အတွင်း သက်တမ်းတိုးမြှင့်လျှောက်ထားပါက သတ်မှတ်သည့်
ဒဏ်ကြေးကို ပေးဆောင်ရမည်။
၉။ သက်တမ်းတိုးမြှင့်ရန် လျှောက်ထားခြင်းမရှိပါက မှတ်ပုံတင်ပျက်ပြယ်ပြီးဖြစ်သည်။

မှတ်ပုံတင်သက်တမ်းတိုးမြှင့်ခြင်း

စဉ်	ချေလန်အမှတ်/ရက်စွဲ	မှတ်ပုံတင်သက်တမ်း ကုန်ဆုံးမည့်နေ့ရက်	ဖွင့်ပြုသူလက်မှတ်
၁.	၂၉၈ / ၁၁.၁.၂၀၁၅	၃၁.၁.၂၀၁၆	
၂.	၉၃ / ၇.၁.၂၀၁၆	၃၁.၁.၂၀၁၇	
၃	၃၈၊ ၃.၁. ၂၀၁၇	၃၁.၁.၂၀၁၈	
၄	၇၄/ ၁၂.၁.၂၀၁၈	၃၁.၁.၂၀၁၉	
၅	၂၇၊ ၁၁.၁.၂၀၁၉	၃၁.၁.၂၀၂၀	
၆.	၂၄/ ၁၀.၁.၂၀၂၀	၃၁.၁.၂၀၂၁	
၇	၁၃၀/ ၁၂.၁.၂၀၂၁	၃၁.၁.၂၀၂၂	
၈	၇၃/၃/၂၇.၁.၂၂	၃၁.၁.၂၀၂၃	



"မြေနှင့် စက်ရုံအဆောက်အအုံ ငှားရမ်းခြင်း သဘောတူကတိစာချုပ်"

ဤမြေနှင့်အဆောက်အအုံငှားရမ်းခြင်းသဘောတူစာချုပ် ၂၀၁၇ပြည့်နှစ်၊ ဧပြီလ (၃)ရက်နေ့တွင် မြေတိုင်းအမှတ်(၄၂)၊ မြေကွက်အမှတ်(၁၀၆)၊ ချယ်ရီလမ်း၊ ရွှေပြည်သာစက်မှုဇုန်(၁)၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင်နေထိုင်သူ (နောင်တွင် ''အငှားချထားသူ''ဟု ခေါ်တွင်စေရမည်။ ယင်းစကားရပ်တွင် ၎င်း၏ ဆက်ခံသူများနှင့် ဥပဒေအရ ခွင့်ပြုထားသည့် လွှဲအပ်ခြင်းခံရသူများ ပါဝင်သည်) ဦးအောင်မြင့် (၁၂/ကတတ(နိုင်)၀၂၈၀၉၉) + ဦး၀ဏ္ဏရဲအောင် (၁၂/ကတတ(နိုင်)၀၃၁၃၆၁) တစ်ဖက်နှင့်

မြည်ထောင်စုမြန်မာနိုင်ငံကုမ္ပဏီများအက်ဥပဒေအရ ဖွဲ့စည်းသည့် G & P Gloal Co.,Ltd မှ အစည်းအဝေးဆုံးဖြတ်ချက်၏ လွှဲအပ်မှုဖြင့် ကိုယ်စားပြုသူ ဒေါက်တာ ခေါ်လဲ့လဲ့ရီ (၁၂/ဥကမ(နိုင်)၀၁၁၇၂၀)၊ အမှတ်(၅၂/၁၃၆)၊ စက္ကူဝတ်(၅)လမ်း၊ မြောက်ဥက္ကလာပမြို့နယ်၊ ရန်ကုန်မြို့ (နောင်တွင် ''အငှားချထားခြင်းခံရသူ''ဟု ခေါ်တွင်စေရမည်။ ယင်းစကားရပ်တွင် ၎င်း၏ ဆက်ခံသူများနှင့် ဥပဒေအရ ခွင့်ပြုထားသည့် လွှဲအပ်ခြင်းခံရသူများပါဝင်သည်)မှ အခြားတစ်ဖက်တို့သည် အောက်ပါအတိုင်း မြေငှားရမ်းခြင်းသဘောတူစာချုပ်ကို ချုပ်ဆိုကြပါသည်။

၁။ ရည်ရွယ်ချက်

၁-၁ ဤမြေငှားရမ်းခြင်းသဘောတူစာချုပ်တွင် ''အငှားချထားခြင်းခံရသူ''သည် မြည်ထောင်စုမြန်မာနိုင်ငံတော်အတွင်း အထည်ချုပ်လုပ်ငန်းလုပ်ကိုင်ဆောင်ရွက်ရန်ဆန္ဒဖြင့် ရန်ကုန်မြို့၊ မြေတိုင်းအမှတ်(၄၂)၊ မြေကွက်အမှတ်(၁၀၆)၊ ချယ်ရီလမ်း၊ ရွှေပြည်သာ စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိသော ''အငှားချထားသူ''ပိုင် (၁.၅၄၉)ဧကကျယ်ဝန်းသော ပူးတွဲမြေပုံပါ မြေနေရာနှင့် ယင်းမြေနေရာပေါ်ရှိ ဧရ (၂၀၀ × ၁၅၀)၊ (၃)ထပ်စက်ရုံ၊ ရုံးခန်းနှင့် ဗုန်း-ဖိ၁၀၅၃ဖိကို ငှားရမ်းခြင်းဖြစ်ပါသည်။

ဤမြေနှင့် အဆောက်အအုံသည် ''အငှားချထားသူ''မှ လက်ဝယ်ရရှိပြီး တရားဝင်ပိုင်ဆိုင်ထားရှိကြောင်း တာဝန်ယူအာမခံပါသည်။ သို့ဖြစ်ပါ၍ ဤမြေနှင့် အဆောက်အအုံငှားရမ်းခြင်းနှင့်ပတ်သက်၍ အောက်ပါသဘောတူညီချက်များကို နှစ်ဦးနှစ်ဖက်မြဲလုပ်ကြပါသည်။

ဤစာချုပ်၏သက်တမ်းမှာ (၁.၅.၂၀၁၅) မှ (၃၀.၄.၂၀၁၈)အထိ (၃)နှစ်ပြည့်သည့်နေ့တွင် ပျက်ပြယ်ရပ်စဲကြောင်း ကတိပြုပါသည်။ ငှားရမ်းခကို တစ်လကြိုတင်၍ ပေးသွင်းရပါမည်။ စာချုပ်ပြည့်သည့် (၃၀.၄.၂၀၁၈)တွင် စာချုပ်ပျက်ပြယ်ရပ်စဲမည်။

၂။ ငှားရမ်းခ

၂-၁။ ''အငှားချထားသူ''သည် အငှားချထားမည့်မြေနေရာကို လွှဲပြောင်းငှားရမ်းပေးရန်နှင့် ''အငှားချထားခြင်းခံရသူ''သည် ၎င်းမြေနေရာကို ဤငှားရမ်းခြင်းသဘောတူစာချုပ်အရ မြေနှင့်အဆောက်အအုံ (နောင်တွင် ''အငှားချထား မည့်နေရာ''ဟု ခေါ်တွင်စေမည်ကို သုံးစွဲနိုင်သော အခွင့်အရေးနှင့်အတူ ဤမြေငှားရမ်းခြင်းသဘောတူစာချုပ်ကို ၂၀၁၇ခုနှစ်၊ မေလ(၁)ရက်နေ့မှ စတင်ပြီး (၁)နှစ်ကာလအထိ ဖြစ်ပါသည်။

၂-၂။ ဤမြေနှင့်အဆောက်အအုံငှားရမ်းခြင်းသဘောတူစာချုပ်ချုပ်ဆိုသည့်နေ့မှစတင်ပြီး လုပ်ငန်းများကို အကောက်အထည်ဖော်ဆောင်ရွက်မည်ဖြစ်ပါသည်။ ငှားရမ်းခကို (၁.၅.၂၀၁၅ မှ ၃၀.၄.၂၀၁၈)ထိ တစ်လလျှင် ငွေကျပ် ၂,၀၀၀,၀၀၀/- (နှစ်ဆယ်သိန်းတိတိ)နှုန်းဖြင့် တစ်နှစ်လျှင် ငွေကျပ် ၂၄,၀၀၀,၀၀၀/- (နှစ်ရာလေးဆယ်သိန်းတိတိ)ကို သတ်မှတ် လက်ခံသဘောတူညီသဖြင့် ငှားရမ်းရန် သဘောတူညီပါသည်။

၃။ **အဌားချထားခြင်းခံရသူများ၏ တာဝန်များ**

(က) ဌားရမ်းသည့်ကာလများအတွက် ဌားရမ်းခများကို သတ်မှတ်သတ်မှတ်ထားသောနေ့ရက်တွင် ပေးရမည့်အပြင် သက်ဆိုင်ရာအာဏာပိုင်များသို့ ပေးဆောင်ရမည့်ဝန်ဆောင်မှုခွင့်ဝပ်လျှင်းသော အခကြေးငွေများကိုလည်း အမြဲမှန်မှန် ပေးဆောင် ရမည်။

(ခ) အဌားချထားသော မြေနှင့်အဆောက်အအုံကို ထပ်ဆင့်ဌားရမ်းခြင်း၊ လွှဲပြောင်းခြင်း၊ တစ်ဆင့်စိတ်ပိုင်းဌားရမ်းလွှဲပြောင်းခြင်း၊ ခွဲဝေတ်ရောင်းချခြင်း၊ ပေါင်နှံခြင်းစသည်တို့ကို လုံးဝဆောင်ရွက်ခြင်းမပြုလုပ်ရပါ။

(ဂ) အဌားချထားသော မြေနှင့်အဆောက်အအုံတွင် လုပ်ငန်းများအကောင်အထည်ဖော်ဆောင်ရွက်ရာ၌ ပြည်ထောင်စု မြန်မာနိုင်ငံတော်၏ တရားဝင်တည်ဆဲဥပဒေများနှင့်အညီ ကိုက်ညီမှုရှိအောင် ဆောင်ရွက်ရမည်။

(ဃ) စည်ပင်သာယာအခွန်အပါအဝင် ရေခွန်၊ မီးခွန်၊ ဂုံကြေး၊ လမ်းခွန်၊ ဖုန်းခွန်၊ အမြတ်ခွန်နှင့် အလားတူလုပ်ငန်း သဘောအရ ပေးဆောင်ရန်ရှိသော အခွန်အကောက်များအားလုံးကို ပေးဆောင်ရမည်။

(င) အဌားချထားသော မြေပေါ်ရှိ အဆောက်အအုံများနှင့် လုပ်ငန်းအတွက် မီးအာမခံနှင့် အခြားလိုအပ်သော အာမခံများကို မြန်မာအာမခံဥပဒေများနှင့်အညီ ထားရှိရမည်။ မြေနှင့်စက်ရုံအတွက် ရရှိမည့်အာမခံငွေကို အဌားချထားသူမှ ရရှိပါမည်။

(စ) အဌားချထားခြင်းခံရသူသည် မိမိလုပ်ငန်းမှ စွန့်ပစ်ပစ္စည်းကြောင့် ပတ်ဝန်းကျင်ရှိမြေနေရာ ရေနှင့် လေထုညစ်ညမ်းမှုများမှ ကာကွယ်ရေးအတွက် ပုံမှန်သန့်ရှင်းရေးကို တာဝန်ယူပါမည်။

(ဆ) နိုင်ငံတော်၏ တရားဥပဒေနှင့်ညှိပွန်းသော မည်သည့်လုပ်ငန်းကိုမျှ မလုပ်ဆောင်ရန်အတွက် တာဝန်ယူပါသည်။

(ဇ) မြေနှင့်အဆောက်အအုံသန့်ရှင်းစွာ ထားရှိရမည်ဖြစ်ပြီး ပျက်စီးသောအပိုင်းများကို အမြန်ဆုံးပြုပြင်ရမည်ဖြစ်ပါသည်။

၄။ **အဌားချထားသူ၏ တာဝန်များ**

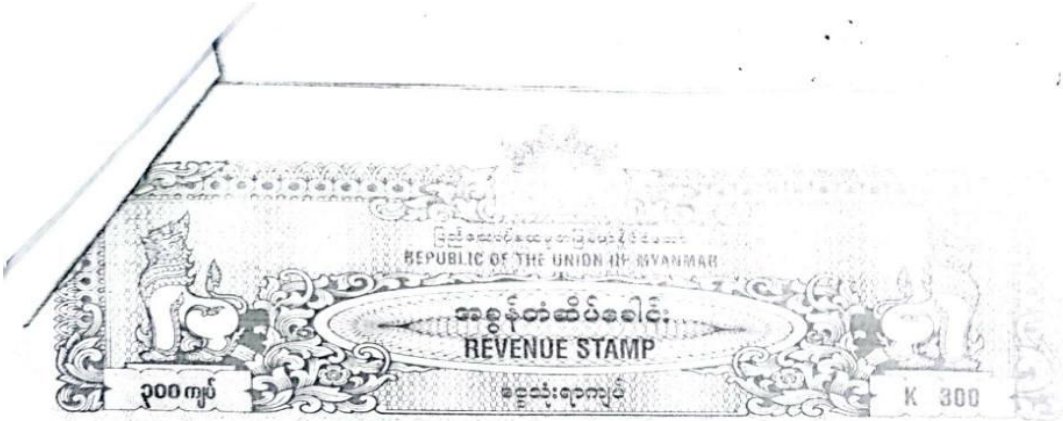
(က) အဌားချထားခြင်းခံရသူအနေဖြင့် ဌားရမ်းခများကို ပေးဆောင်နေသည့်ဌားရမ်းကာလအတွင်း အဌားချထားသော မြေနှင့် အကျိုးဝင်သည့်နေရာများနှင့် အဆောက်အအုံကို ပြိမ်းချမ်းစွာအေးဆေးစွာနှင့် အနှောင့်အယှက်ကင်းစွာတို့ဖြင့် အသုံးပြု ဆောင်ရွက်ပိုင်ခွင့်ရှိစေရမည်ဖြစ်ပြီး ဌားရမ်းသည့်ကာလအတွင်း အဌားချထားသူ၏ သဘောဆန္ဒအရ တစ်ဦးဦး၏ ဝင်ရောက်နှောက်ယှက် ခြင်း၊ လုပ်ငန်းအား ထိခိုက်စေခြင်းမရှိစေရ။ အဌားချထားသူ၏နှောက်ယှက်မှုကြောင့် ထိခိုက်နစ်နာခြင်းမရှိစေရန် တာဝန်ယူပါသည်။

(ခ) အဌားချထားသူသည် အဌားချထားသော မြေနှင့်ပတ်သက်သည့် မြေခွန်ကိုပေးဆောင်ရမည်။ အခြားအခွန်အစများ အားလုံးအတွက် တာဝန်မရှိစေပါ။

(ဂ) အဌားချထားသူမှ ဌားရမ်းခယူပြီးနောက် မြေနှင့်အဆောက်အအုံကို အဌားချထားခြင်းခံရသူသို့ လက်ရောက် လွှဲပြောင်းပေးအပ်ပြီးဖြစ်၍ လက်ရှိထားစီမံခန့်ခွဲပိုင်ခွင့်ရှိသည်။

၅။ **မြန်လည်လွှဲပြောင်းပေးအပ်ခြင်း**

၅-၁။ ဌားရမ်းသည့်ကာလများအတွင်း အဌားချထားသော မြေနေရာနှင့် အဆောက်အအုံကို အဌားချထားခြင်းခံရသူမှ ကောင်းမွန်စွာထိန်းသိမ်းရမည်။ အကယ်၍ အဌားချထားသော မြေပေါ်တွင် အဆောက်အအုံဆောက်လုပ်လိုပါက အဌားချထားသူ၏ ကြိုတင်ခွင့်ပြုချက်ဖြင့် မိမိကုန်ကျစရိတ်ဖြင့် ဆောက်လုပ်နိုင်သည်။ ဌားရမ်းကာလကုန်ဆုံးသော အခါတွင်ဖြစ်စေ (သို့မဟုတ်)ထပ်မံ တိုးချဲ့ဌားရမ်းခြင်းကာလ)ကုန်ဆုံးသောအခါတွင်ဖြစ်စေ(သို့မဟုတ်)



လုပ်ငန်းရပ်စဲ သည့်အခါတွင်ဖြစ်စေ၊ ယင်းမြေနေရာနှင့်မြေပေါ်ရှိ အဆောက်အအုံများအားလုံးကို အဝိုးစားနားများမပါဘဲ အငှားချထားသူထံသို့ ကောင်းမွန်စွာ ပြန်လည်လွှဲပြောင်းပေးရမည်ဖြစ်ပါသည်။ ငှားရမ်းကာပြည့်၍ ပြန်လည်အပ်နှံ သည့်အခါ ပျက်စီးမှုများကို ပြန်လည်ပြုပြင်ပေးရ မည်ဖြစ်ပါသည်။ အငှားချထားခံရသူမှ တပ်ဆင်ထားသော ထရန်စဖော်မာ၊ ဂျင်နရေတာများနှင့်ဝိုင်ယာကြိုးများကို ပြန်လည် ဖြုတ်ယူနိုင်သည်။ နဂိုရှိပြီးသားပါဝါဒီဇာကို ပြန်လည် တပ်ဆင်ရမည်။ ငှားရမ်းကာလမပြည့်မီ (၄)လ အလိုတွင် ကြိုတင်စ ပေါ်ငွေတစ်လစာကို ပေးသွင်းထားရပါမည်။

၆။ **ငှားရမ်းခတိုးမြှင့်ခြင်း**

၆–၁။ အငှားချထားသူနှင့် အငှားချထားခြင်းခံရသူတို့သည် ငှားရမ်းခြင်းစတင်အတည်ဖြစ်သည့်နေ့မှစတင်၍ တစ်နှစ်လျှင် တစ်ကြိမ်၊ ငှားရမ်းခနှုန်းထားများကို ပြုခဲ့သောနှစ်ကာလ၏ ငှားရမ်းခနှုန်းများထက် (၅)%)မှ (၁၀%)ထက်မပိုစေဘဲ ငှားရမ်းခကို တိုးမြှင့် ခြင်းကို ပြန်လည်ပြင်ဆင်သတ်မှတ်ပိုင်ခွင့်ရှိစေရမည်။

၇။ **ငှားရမ်းခြင်း၏သက်တမ်း**

၇–၁။ ဤမြေနှင့် အဆောက်အအုံငှားရမ်းခြင်း သဘောတူစာချုပ်အရ ငှားရမ်းခြင်း၏ သက်တမ်းမှာ ငှားရမ်းခြင်းသဘောတူစာချုပ် လက်မှတ်ရေးထိုးသည့်ရက်မှစ၍ (၁) နှစ်ပြစ်ပြီး ထိုသက်တမ်းကုန်ဆုံးပါက ပြီးဆုံးမည်ဖြစ်ပါသည်။ အကယ်၍ ဆက်လက်တိုးမြှင့် ငှားရမ်းလိုပါက သက်တမ်းတိုးမြှင့်လိုခြင်း ရှိ/မရှိ ကို (၆)လ ကြိုတင်၍ ညှိနှိုင်းကြရန် နှစ်ဖက်သဘောတူညီကြပါသည်။

၈။ **မလွှဲရှောင်နိုင်သည့် ဖြစ်ရပ်များ**

၈–၁။ မလွန်ဆန်နိုင်သည့် သဘာဝအန္တရာယ်များဖြစ်သည့် ရေကြီးခြင်း၊ မီးလောင်ခြင်း၊ လေမုန်တိုင်း ကျရောက်ခြင်း၊ စစ်မက်ဖြစ်ပွားခြင်း၊ မြေငလျင်တုန်ခြင်း၊ ရန်သူပျံသန်းပါး (သို့မဟုတ်) မည်သည့်ဘက်ကမျှ ကြိုးစားအားထုတ်ဆောင်ရွက်မှုဖြင့် တားဆီးမရနိုင် သော ဖြစ်ရပ်များကြောင့် တစ်ဖက်ဖက်မှ စာချုပ်ပါတာဝန်များကို ထမ်းဆောင်ရန် ပျက်ကွက်ပါက အဆိုပါမလွှဲမရှောင်နိုင်သည့် ဖြစ်ရပ်များ ပေါ်ပေါက်ကြောင်းကို ဖြစ်ပေါ်သည့်အချိန်မှ (၃)လအတွင်း အခြား တစ်ဖက်သို့တပြင့် အကြောင်းကြားရမည်။ အခြားတစ်ဖက်ကလည်း မလွန်ဆန်နိုင်သည့် ဖြစ်ရပ်ပေါ်ပေါက်ကြောင်း လက်ခံပါက စာချုပ်ချုပ်သူ နှစ်ဦးနှစ်ဖက်စလုံးတွင် မည်သည့်တာဝန်မျှမရှိစေရ။ မလွန်ဆန် နိုင်သည့်ဖြစ်ရပ် ပေါ်ပေါက်သည့်ကိစ္စကို နှစ်ဦးနှစ်ဖက်ညှိနှိုင်းရန် သဘောတူကြပါသည်။

၉။ **စာချုပ်ရပ်စဲခြင်း**

၉–၁။ ဤသဘောတူစာချုပ်ကို အောက်ပါအခြေအနေတစ်ရပ်ရပ် ပေါ်ပေါက်လာပါက ရပ်စဲခြင်းပြုလုပ်နိုင်သည်။

(က) လုပ်ငန်းတွင်ကြီးမားစွာ (၆)လထိ နိုင်ငံနှင့်အဝှန်း ဆက်တိုက်အရှုံးပေါ်ပေါက်နေခြင်း။

(ခ) မြေနေရာနှင့် အဆောက်အအုံငှားရမ်းခြင်း၊ သဘောတူစာချုပ်တွင်ပါဝင်သော တစ်ဖက်ဖက်မှစာချုပ်ပါတာဝန်များကို တစ်ဖက်ဖက်မှဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း။

(ဂ) ကြိုတင်မမျှော်မှန်းနိုင်သည့်အပြင် တားဆီးခြင်းမပြုနိုင်သော မလွှဲမရှောင်နိုင်သည့် ဖြစ်ရပ်များကြောက်လန့်အထက်ပိုပိုပေါ်ပေါက်လာခြင်း။

(ဃ) မြေနှင့်အဆောက်အအုံစာချုပ်၏ မူလရည်မှန်းချက်များကို အကောင်အထည်ဖော်နိုင်စွမ်းမရှိခြင်း။ အငှားချထားခံရသူ၏ ပျက်ကွက်မှု၊ တာဝန်မဲ့မှုကြောင့် ဖြစ်ပေါ်လျှင်ပေးထားသောငွေကို ပြန်အပ်းမည်မဟုတ်ကြောင်း ကတိပြုကြပါသည်။

၉-၂။ သို့သော်ငြားလည်း အဌားချထားခြင်းခံရသူများသည် လုပ်ငန်းများဆောင်ရွက်နိုင်ရန်နှင့် ပြန်လည်တည်ထောင်မှုပြုလုပ်နိုင်ရန် အတွက် ဤသဘောတူစာချုပ်ပါ ၎င်း၏အခွင့်အရေးများကို ခြွင်းချက်ဖြင့်သက်သာ ခွင့်ရရှိစေရန် ညှိနှိုင်းနိုင်သည်။ ဤသဘောတူ စာချုပ်တွင် ပါရှိသောပြန်ဌာန်းချက်များနှင့်အညီ နှစ်ဦးနှစ်ဖက်လုံးတို့သည် သဘောတူစာချုပ်ကို ရပ်စဲလိုပါကရပ်စဲလိုကြောင်း အကြောင်းကြားစာကို အခြာတစ်ဖက်ထံသို့ (၃) လကြိုတင်၍ ပေးပို့အသိပေးရမည်။

၁၀။ **အနုညာတစီရင်ဆုံးဖြတ်ခြင်း**

၁၀-၁။ အကယ်၍ ဤမြေနေရာနှင့် အဆောက်အအုံဌားရမ်းခြင်း စာချုပ်ပါအချက်အလက်များနှင့် ပတ်သက်ပြီးအကောင်အထည်ဖော်ဆောင်ရွက်ရာတွင်ဖြစ်စေ၊ အဓိပ္ပာယ်လွဲမှားမှုကြောင့်ဖြစ်စေ၊ အငြင်းပွားမှုများပေါ်ပေါက်လာပါက စာချုပ်တွင်လက်မှတ်ရေးထိုး ထားသည့် နှစ်ဦးနှစ်ဖက်လုံးမှ ညှိနှိုင်းဆွေးနွေးခြင်းဖြင့် အငြင်းပွားမှုများကို ပြေလည်ငြိမ်းအေးစေနိုင်သည်။ နှစ်ဦးနှစ်ဖက်အကြေအလည် ညှိနှိုင်းဆွေးနွေး၍ မရရှိခဲ့ပါက မြန်မာနိုင်ငံအတွင်း၌ သက်ဆိုင်ရာအဖွဲ့အစည်း၏ ပြန်ပြေပြူဆုံးဖြတ်မှုများကို နာခံကြရန်နှင့် ပြည်ထောင်စု မြန်မာနိုင်ငံတော်၏ တရားဥပဒေနှင့်အညီ ဆုံးဖြတ်မှုကိုလိုက်နာရန် နှစ်ဖက်သဘောတူကြပါသည်။

၁၁။ **ကြိုတင်စည်းကမ်းသတ်မှတ်ချက်များ**

၁၁-၁။ ဤမြေနေရာနှင့် အဆောက်အအုံဌားရမ်းခြင်း သဘောတူစာချုပ်ပါလုပ်ငန်းဆောင်ရွက်ချက်များကို အကောင်အထည်ဖော်ဆောင်ရွက်မှုများအတွက် သက်ဆိုင်ရာအစိုးရ၊ ဌာနဆိုင်ရာအဖွဲ့အစည်းများ၏ ခွင့်ပြုသဘောတူညီချက်နှင့်အညီ ဥပဒေဘောင်အတွင်းမှ ဆောင်ရွက်နိုင်ခွင့်ရှိကြမည်ဖြစ်ပါသည်။

၁၁-၂ ဤဌားရမ်းခြင်းသဘောတူစာချုပ်ကို မြန်မာနိုင်ငံရင်းနှီးမှုကော်မရှင်၏ သဘောတူခွင့်ပြုချက်ရရှိရန်အတွက် တင်ပြအသုံးပြုဆောင် ရွက်နိုင်ခွင့်ရရှိမည်ဖြစ်ပါသည်။

၁၂။ **ကိုယ်စားပြုခြင်းနှင့်အာမခံချက်၊**

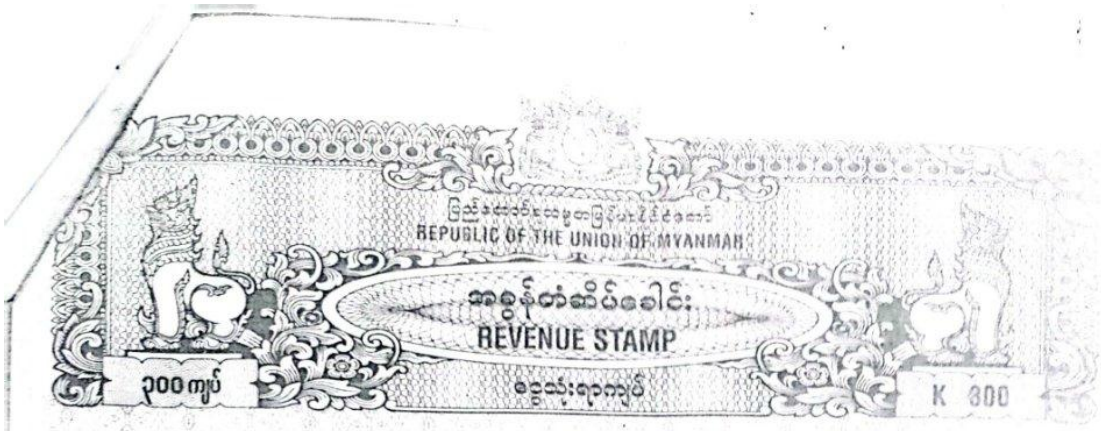
၁၂-၁။ ဤမြေနေရာနှင့် အဆောက်အအုံဌားရမ်းခြင်းသဘောတူစာချုပ်ကို ပါဝင်ချုပ်ဆိုကြသူ နှစ်ဦးနှစ်ဖက်လုံးတို့သည် သဘောတူ စာချုပ်ချုပ်ဆိုနိုင်ရန်အတွက် သက်ဆိုင်ရာဥပဒေနှင့်အညီ ဥပဒေအရလုပ်ပိုင်ခွင့် အခွင့်အာဏာနှင့် စီးပွားရေးအရ ခိုင်မာတောင့်တင်းမှုရှိသော သူများဖြစ်ကြောင်းအာမခံပါသည်။

၁၃။ **အဌားချထားသောမြေပုံ၊**

၁၃-၁ ဤမြေနေရာနှင့် အဆောက်အအုံဌားရမ်းခြင်းသဘောတူစာချုပ်အရ အဌားချထားမည့်ဦးအောင်မြင့်ပိုင် ရန်ကုန်မြို့ ရွှေပြည်သာမြို့နယ်၊ ရွှေပြည်သာစက်မှုဇုန်၊ ချယ်ရီလမ်း၊ မြေတိုင်းအမှတ် (၄၂)၊ မြေကွက်အမှတ် (၁၀၆) ရှိ (၁.၅၄၉) ဧကကျယ်ဝန်းသော မြေနေရာပြပုံကို နောက်ဆက်တွဲ (ခ) တွင်ပူးတွဲဖော်ပြပါသည်။

၁၄။ **တွင်းထွက်ပစ္စည်းများနှင့် သယံဇာတပစ္စည်းများ**

၁၄-၁။ ဤသဘောတူစာချုပ်အရ ဌားရမ်းမှုပြုလုပ်ထားသော မြေနေရာတွင် မည်သည့်အချိန်၌မဆို ထွက်ပေါ်လာသော ဓါတ်သတ္တုများ၊ သဘာဝတွင်းထွက်သယံဇာတပစ္စည်းများ၊ ကျောက်မျက်ရတနာများ၊ ကြေးနီ၊ ရေနံနှင့်အခြားသောတူးဖော်ရရှိလာမည့် သဘာဝအရင်းအမြစ်များအားလုံးသည် အဌားချထားသူနှင့် သက်ဆိုင်ပေမြေးအဌားချထားသူအနေနှင့် သက်ဆိုင်ရာဌာနသို့ အကြောင်း ကြားတင်ပြရမည်ဖြစ်ပါသည်။



၁၅။ ပတ်ဝန်ကျင်ညစ်ညြမ်းမှု ထိန်းသိမ်းကာကွယ်ခြင်း။

၁၅-၁။ အဌားချထားခြင်းခံရသူသည် မိမိလုပ်ငန်းမှ စွန့်ပစ်ပစ္စည်းကြောင့် ပတ်ဝန်ကျင်ရှိ မြေနေရာ၊ ရေနှင့်လေထုညစ်ညြမ်းမှုနှင့် မီးအန္တရာယ်များမှ ကာကွယ်ရေးအတွက် လိုအပ်သော အစီအမံများနှင့် သန့်ရှင်းရေးကို ပြုလုပ်ထားရှိရန် တာဝန်ယူပါသည်။

၁၆။ စာချုပ်အကျိုးသက်ရောက်မှု

၁၆-၁။ ဤမြေနေရာ အဆောက်အအုံဌားရမ်းခြင်း သဘောတူစာချုပ်သည် နှစ်ဦးနှစ်ဖက်စလုံးမှ လက်ခံသဘောတူညီကြပြီး လက်မှတ်ရေးထိုးသည့် နေ့ရက်မှ စတင်၍ တရားဝင်အကျိုးသက်ရောက်မှု ဖြစ်စေရမည်။

ဤသဘောတူစာချုပ်ကို ၂၀၁၇ ခုနှစ်၊ ဧပြီလ (၃) ရက်နေ့တွင် နှစ်ဦးနှစ်ဖက်စလုံးမှ မိမိတို့နားလည်သိရှိကြသည်ဖြစ်၍ လွတ်လပ်သော သဘောဆန္ဒအရ လက်မှတ်ရေးထိုးကာ စာချုပ်ချုပ်ဆိုကြပါသည်။

အဌားချထားသူ | **အဌားချထားခြင်းခံရသူ**

ဦးအောင်မြင့်
၁၂/ကတတ(နိုင်)၀၂၀၀၉၉
အမှတ်(၂၉၅)၊ ဗိုလ်ဆွန်ပက်လမ်း၊
ပန်းဘဲတန်းမြို့နယ်၊ ရန်ကုန်မြို့။

+

ဦးဝဏ္ဏရဲအောင်
၁၂/ကတတ(နိုင်)၀၃၁၃၆၁
အမှတ်(၂၉၅)၊ ဗိုလ်ဆွန်ပက်လမ်း၊
ပန်းဘဲတန်းမြို့နယ်၊ ရန်ကုန်မြို့။

G &P Global Co., Ltd ၏ (တိုယ်စား) ဒါရိုက်တာ
ဒေါ်လဲ့လဲ့ရီ
၁၂/ဥကမ(နိုင်)၀၁၁၇၂၀
အမှတ်(၈၂ -၁၃၆)၊ စက္ကဝတ် (၅)လမ်း
မြောက်ဥက္ကလာပမြို့နယ်၊ ရန်ကုန်မြို့။

အသိသက်သေများ

၁။ အမည် ဦးခင်မောင်လှ
မှတ်ပုံတင် ၁၂/သဃက (နိုင်)၁၂၄၅၅၈
နေရပ် အမှတ်(၆)၊ သုခလမ်း၊ ခ-ရပ်ကွက်၊
သဃ်နိုးကျွန်းမြို့နယ်၊ ရန်ကုန်မြို့။

၂။ အမည် ဒေါ်မူမူချို
မှတ်ပုံတင် ၁၄/ခနဝ(နိုင်)၁၀၆၀၀၃၃
နေရပ် မြစန္ဒာ (၂)လမ်း၊ မြသီတာရပ်ကွက်
မင်္ဂလာဒုံမြို့နယ်၊ ရန်ကုန်မြို့။

Appendix (H) Water Result (Hach Master(USA) Model No-DR900)2

Advanced Medical & Diagnostics Trading Ltd.

Yangon Office : No. 20-A Ywar Lae Lane, Za-North Ward, Thingangyun Township, Yangon.
01-571656, 01-565797, 09-443176248, 09-443112672
Mandalay Office : No. MA 28, 59th street, Between 41st and 42nd street, Ye` Mon Taung Ward, Mahar Aung Myay Township, Mandalay.
02-2848201,02-2848202, 02-2848203, 02-2848204
Email : amd@amdmyanmar.com
Website : www.amdmyanmar.com

WATER ANALYTICAL RESULT

Form No: Amd-WTQ-07 (Rev: 0)

Client : Garment & Process Global Co.,Ltd

Type of Sample : Production Water

Date of Received : 22.08.2022

Date of analysis : 22.08.2022

Date of Issued : 29.08.2022

Sr.	Item	Result	Unit	WHO Standard
1.	Turbidity	8.6	NTU	5 NTU
2.	pH	6.88	pH unit	6.5 ~ 8.5
3.	Total Dissolved Solids	113	mg/L	1000 mg/L
4.	Conductivity	225	µS/cm	N/A
5.	Iron	0.8	mg/L	0.3 mg/L
6.	Total Hardness	120	mg/L as $CaCO_3$	500 mg/L
7.	Total Alkalinity	84	mg/L as $CaCO_3$	N/A
8.	Chloride	10	mg/L	250 mg/L
9.	Manganese	0.023	mg/L	0.1 mg/L

Remark: : Results valid for the received sample only.

Tested By
Signature :
Name : Nyo Nyo Lwin
Position : Laboratory Technician

Approved By
Signature :
Name : Win Pyae Pyae Aung
Position : Laboratory In-charge

Page 1 of 1

Advanced Medical & Diagnostics Trading Ltd.

Yangon Office : No. 20-A Ywar Lae Lane, Za-North Ward, Thingangyun Township, Yangon.
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02-2848201,02-2848202, 02-2848203, 02-2848204
Email : amd@amdmyanmar.com
Website : www.amdmyanmar.com

WASTE WATER ANALYTICAL RESULT

Form No: AMD-WTQ-08 (Rev: 0)

Client : Garment & Process Global Co.,Ltd

Type of Sample : Factory Outlet

Date of Received : 22.08.2022

Date of analysis : 22.08.2022

Date of Issued : 29.08.2022

Sr.	Item	Result	YCDC Target range
1.	Dissolved Oxygen	1.7	> 1 ppm
2.	Biochemical Oxygen Demand (BOD_5) (5days at 20°C) (mg/L)	18.6	20-60 ppm
3.	Chemical Oxygen Demand (COD) (Adaptation of the USEPA 410.4 approved method) (mg/L)	28	< 200 ppm
4.	pH effluent water	7.23	6<pH<9.6
5.	Total suspended solids (TSS)	25	< 500 ppm
6.	Nitrate (NO_3^-N)	0.3	N/A

Remark: : Results valid for the received sample only.

Tested By
Signature :
Name : Nyo Nyo Lwin
Position : Laboratory Technician

Approved By
Signature :
Name : Win Pyae Pyae Aung
Position : Laboratory In Charge

Page 1 of 1

Appendix (I) Consultant Company Registration Permit Letter

REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
(ကြားကာလအကြိုပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 00023 Date 01 JUL 2017

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the organization under Environmental Impact Assessment Procedure, Notification No. 616/2015.
(ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၅၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို အဖွဲ့အစည်းအား ထုတ်ပေးလိုက်သည်။)

(a)	Name of Organization (အဖွဲ့အစည်းအမည်)	Green EHSS Consultancy Co., Ltd.
(b)	Name of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ အမည်)	Daw Catherine Soe Soe Aung
(c)	Citizenship of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ နိုင်ငံသား)	Myanmar
(d)	Identity Card /Passport Numberof the representative person in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်)	12/ KaMaYa (N) 030356
(e)	Address of organization (ဆက်သွယ်ရန်လိပ်စာ)	140(B), Sayar San Road, Bahan Township, Yangon catherine@greenehss.com , 09425353553
(f)	Type of Consultancy (အကြိုပေးလုပ်ကိုင်မှုအမျိုးအစား)	Organization
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

EXTENSION
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
For Director General
(Soe Naing, Director)
Environmental Conservation Department

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Air Pollution Control
2. Ground water and Hydrology
3. Noise and Vibration
4. Meteorology, Modeling for Air Quality
5. Risk Assessment and Hazard Management
6. Socio-Economy
7. Water Pollution Control
8. Waste Management

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား (၁-၁-၂၀၂၀) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၀) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
Soe Naing 2.2.2020
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်နေ့မှ (၃၁.၁၂.၂၀၁၉) ရက်နေ့အထိ (၉)လသက်တမ်း တိုးမြှင့်သည်။
Soe Naing 6.6.2019
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား(၁-၁-၂၀၂၁)ရက်နေ့မှ(၃၀-၆-၂၀၂၁) ရက်နေ့အထိ (၆)လသက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား(၁-၇-၂၀၂၁)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၁) ရက်နေ့အထိ (၆)လသက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား(၁-၁-၂၀၂၂)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၂) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10080 Date 07 JUL 2017

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို လူပုဂ္ဂိုလ်အားထုတ်ပေးလိုက်သည်။)

(a)	Name of Consultant (အကြံပေးပုဂ္ဂိုလ်အမည်)	Daw Catherine Soe Soe Aung
(b)	Citizenship (နိုင်ငံသား)	Myanmar
(c)	Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်)	12/ Ka Ma Ya (N) 030356
(d)	Address (ဆက်သွယ်ရန်လိပ်စာ)	140 (B), Sayar San Road, Bahan Township, Yangon, Myanmar catherine@greenehss.com , 09 425353553
(e)	Organization (အဖွဲ့အစည်း)	Green EHSS Consultancy Co., Ltd.
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Person
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁-၃-၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်သက်တမ်း တိုးမြှင့်သည်။
17.10.2018
For Director General
(Soe Naing, Director)
Environmental Conservation Department

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Air Pollution Control

2. Meteorology, Modeling for Air Quality

3. Noise and Vibration

4. Risk Assessment and Hazard Management

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား (၁-၁-၂၀၂၀) ရက်စွဲမှ (၃၁-၁၂-၂၀၂၀) ရက်နေ့အထိ ထပ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
5.2.2020
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်စွဲမှ (၃၁-၁၂-၂၀၁၉) ရက်နေ့အထိ (၉)လသက်တမ်း တိုးမြှင့်သည်။
6.6.2019
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား (၁-၁-၂၀၂၁) ရက်စွဲမှ (၃၀-၆-၂၀၂၁) ရက်နေ့အထိ (၆)လသက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား (၁-၇-၂၀၂၁) ရက်စွဲမှ (၃၁-၁၂-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား (၁-၁-၂၀၂၂) ရက်စွဲမှ (၃၁-၁၂-၂၀၂၂) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10082 Date 11 JUL 2017

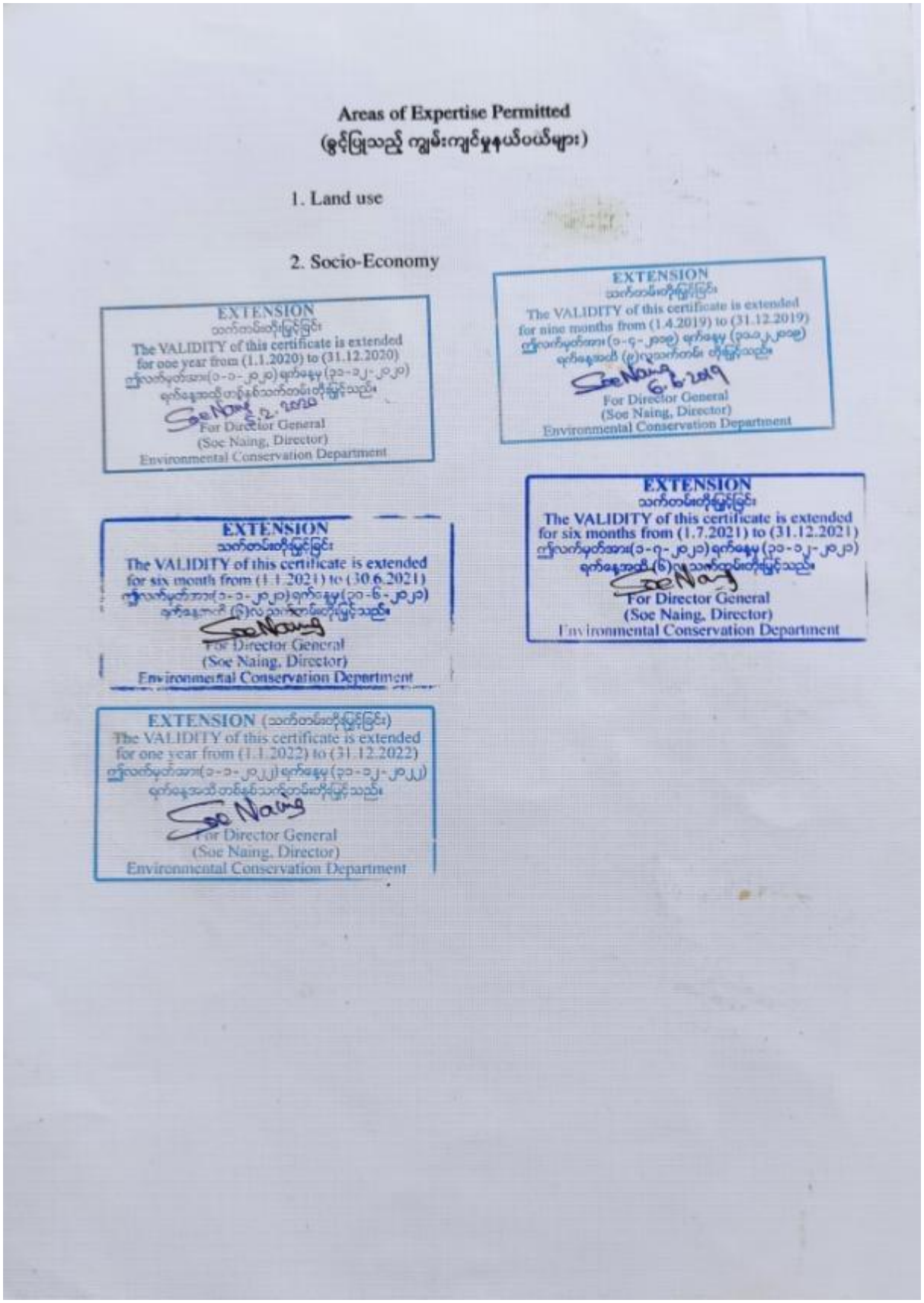
The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၅၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို လူပုဂ္ဂိုလ်အားထုတ်ပေးလိုက်သည်။)

(a)	Name of Consultant (အကြံပေးပုဂ္ဂိုလ်အမည်)	Dr. Theingi Ye Myint
(b)	Citizenship (နိုင်ငံသား)	Myanmar
(c)	Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်)	7/ Tha Ka Na (N) 000559
(d)	Address (ဆက်သွယ်ရန်လိပ်စာ)	No. C-3, Kabaraye Villa Residence, Mayangone Township, Yangon tgym559@gmail.com 095095555
(e)	Organization (အဖွဲ့အစည်း)	Yangon Technological University
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Person
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁-၃-၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်သက်တမ်း တိုးမြှင့်သည်။
Seal Director General
(Soe Naing, Director)
Environmental Conservation Department

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation



Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Land use

2. Socio-Economy

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား (၁-၁-၂၀၂၀) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၀) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးပြုပြင်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်နေ့မှ (၃၁-၁၂-၂၀၁၉) ရက်နေ့အထိ (၉)လသက်တမ်း တိုးပြုပြင်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား (၁-၁-၂၀၂၁) ရက်နေ့မှ (၃၀-၆-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးပြုပြင်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား (၁-၇-၂၀၂၁) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးပြုပြင်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးပြုခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား (၁-၁-၂၀၂၂) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၂) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးပြုသည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10081 Date 01 JUN 2017

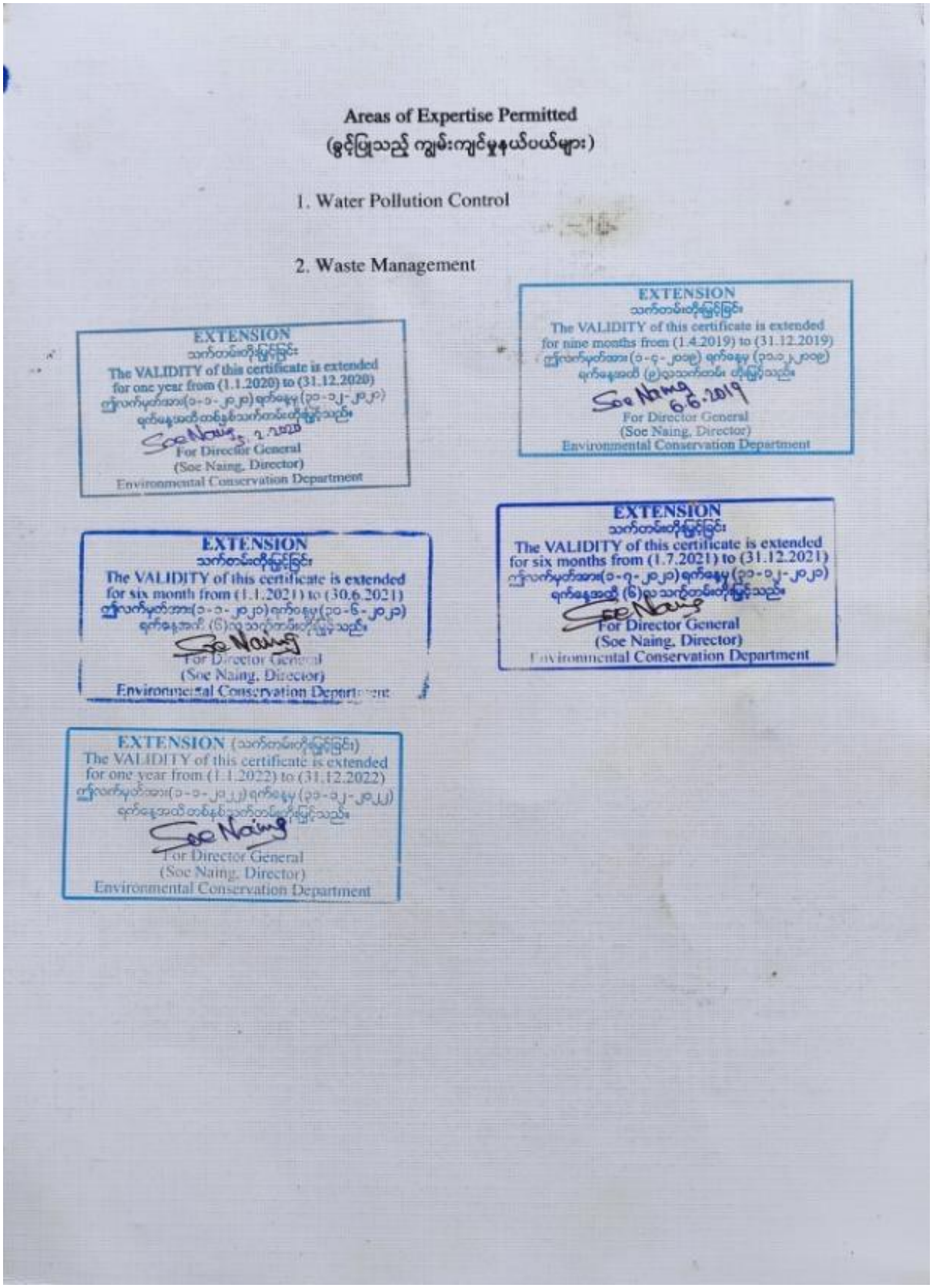
The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို လူပုဂ္ဂိုလ်အားထုတ်ပေးလိုက်သည်။)

(a)	Name of Consultant (အကြံပေးပုဂ္ဂိုလ်အမည်)	Daw Swe Swe Aung
(b)	Citizenship (နိုင်ငံသား)	Myanmar
(c)	Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်)	12/ Ka Ma Ya (N) 031573
(d)	Address (ဆက်သွယ်ရန်လိပ်စာ)	No. 140, Second Floor, Saya San Road, Bahan Township, Yangon, Myanmar. masweaung@gmail.com info@greenehss.com , 09 973276261
(e)	Organization (အဖွဲ့အစည်း)	Associate EIA Consultant
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Person
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁-၃-၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
17.10.2018
For Director General
(Soe Naing, Director)
Environmental Conservation Department

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation



Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Water Pollution Control

2. Waste Management

EXTENSION
သက်တမ်းတိုးချဲ့ခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား (၁-၁-၂၀၂၀) ရက်စွဲမှ (၃၁-၁၂-၂၀၂၀) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးချဲ့ပေးသည်။
Soe Naing 5.2.2020
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးချဲ့ခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်စွဲမှ (၃၁.၁၂.၂၀၁၉) ရက်နေ့အထိ (၉)လသက်တမ်း တိုးချဲ့ပေးသည်။
Soe Naing 6.6.2019
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးချဲ့ခြင်း
The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား (၁-၁-၂၀၂၁) ရက်စွဲမှ (၃၀-၆-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးချဲ့ပေးသည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးချဲ့ခြင်း
The VALIDITY of this certificate is extended for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား (၁-၇-၂၀၂၁) ရက်စွဲမှ (၃၁-၁၂-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးချဲ့ပေးသည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးချဲ့ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား (၁-၁-၂၀၂၂) ရက်စွဲမှ (၃၁-၁၂-၂၀၂၂) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးချဲ့ပေးသည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department