ASIA LINK (MYANMAR) FASHION COMPANY LIMITED

Environmental Management Plan

Manufacturing of Brassier, Underwear and Swimwear on CMP Basis

Prepared by

Myanwei Environmental Solutions Co., Ltd.

04-Apr-23

MYANWEI
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Commitment and Acknowledgement

Environmental Management Plan (EMP) describes the environmental condition of a project, including potential impact, formulation of mitigation measures and preparation of institutional requirements and environmental monitoring. This EMP report was prepared using information from the following:

- Meeting with Project Proponent,
- The experience of EMP team and
- Information solicited from baseline data

Myanwei Consulting Company Limited has prepared this report with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking into account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

We strongly commit that this report was prepared in compliance with Myanmar Environmental Laws and Regulations.

Asia Link (Myanmar) Fashion Co.,Ltd.

Plot No.85,Myay Taing Block No.51,Thadukan Industrial Zone,Shwe Pyi Thar Township,Yangon.

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Commitment of Project Proponent

Myanwei Consulting Company Limited has prepared this project report on Environmental Management Plan (EMP). Asia Link (Myanmar) Fashion Company Limited, as proponent of this project, do hereby solemnly affirm and declare that:

- The project particulars in this report are correct and true to the best of my knowledge
- The report is prepared by complying with all Myanmar laws, rules and regulations and Environmental Conservation Law (2012)
- Legal and other obligations are incorporated in the designs, procedures and project controls,

Asia Link (Myanmar) Fashion Company Limited Manufacturing of Brassier, Underwear and Swimwear on CMP Basis is located at Plot No. (85), Myay Taing Block No. (51), Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon region. Do hereby solemnly affirm and declare that I fully understand and undertake to operate the project strictly in accordance with the said conditions and commitments in this EMP.

Mr. Yang Jianwu
Promoter
Asia Link (Myanmar) Fashion Co., Ltd.

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Abbreviation

1. CEMP = Construction Environmental Management Plan
2. CMP = Contract Manufacturing Process
3. CSR = Corporate Social Responsibility
4. ECC = Environmental Compliance Certificate
5. ECD = Environmental Conservation Department
6. EIA = Environmental Impact Assessment
7. EMoP = Environmental Monitoring Plan
8. EMP = Environmental Management Plan
9. GIIP = Good International Industry Practices
10. HSE = Health, Safety and Environment
11. IEE = Initial Environmental Examination
12. IFC = International Finance Corporation
13. NEQG = National Environmental Quality (Emission) Guidelines
14. MIC = Myanmar Investment Commission
15. MOECAF = Ministry of Environmental Conservation and Forestry
16. MONREC = Ministry of Natural Resources and Environmental Conservation
17. OEMP = Operation Environmental Management Plan
18. OSHA = Occupational Safety and Health Administration
19. PPE = Personal Protective Equipment
20. WHO = World Health Organization
21. YCDC = Yangon City Development Committee
22. YESB = Yangon City Electricity Supply Board

အစီရင်ခံစာအကျဉ်းချုပ်

နိဒါန်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်ရေရည်ဖွံ့ဖြိုးတိုးတက်ရန် သေချာဖို့အပ်ပါသည်။ အဆိုပြုလုပ်ငန်းသည် CMP စနစ်ဖြင့် အမျိုးသမီးဝတ်ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံ ချုပ်လုပ်ခြင်းလုပ်ငန်းအတွက် ရင်နှီးမြှုပ်နှံသော ကုမ္ပဏီဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၉ခုနှစ်၊ မတ်လ၊ ၁၂ ရက်နေ့တွင် (ထောက်ခံချက်အမှတ် ၁၇၀/၂၀၁၉)ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

ထို့ကြောင့် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၁၉ ခုနှစ်၊ မေလ၊ ၁၇ ရက်နေ့တွင် (စာအမှတ်၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၇၉၇/၂၀၁၉) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Consulting Company Limited မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

EMP အစီအစဉ်တွင် Asia Link (Myanmar) Fashion Company Limited ၏ CMP စနစ်ဖြင့် အမျိုးသမီးဝတ်ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံ ထုတ်လုပ်ခြင်းစီမံကိန်းအတွက် Myanwei Consulting Company Limited မှ ရေးသားပြုစုထားသော ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာဖြစ်သည်။ အဆိုပါ လေ့လာဆန်းစစ်ခြင်း၏ ရည်ရွယ်ချက်များမှာ-

- ✓ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားပတ်ဝန်းကျင်အပေါ် စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ထိခိုက်မှုများကိုလေ့လာရန်။
- ✓ ထိုထိခိုက်မှုများကို လျော့ချနိုင်ရန် လျော့နည်းစေမည့်နည်းလမ်းများကို ဖော်ပြရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ပြင်ဆင်ရန်နှင့် အကောင်အထည်ဖော်ရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ လုပ်ဆောင်ရာတွင် လုံလောက်မှုရှိစေရန်။
- ✓ ဒေသခံများ၏ လူမှုရေးသက်သာချောင်ချိမှုများ တိုးမြှင့်ရန်နှင့် ဒေသတွင်း ဖွံ့ဖြိုးတိုးတက်မှုများအတွက် မရှိမဖြစ်အရေးပါသော လူမှုစီးပွားတာဝန်ယူမှုအစီအစဉ်အား အကောင်အထည်ဖော်ရန်တို့ဖြစ်ပါတယ်။

အဆိုပြုထားသော စီမံကိန်း၏ ရည်ရွယ်ချက်သည် CMP စနစ် (ဖြတ်-လုပ်-ထုတ်) စနစ်ကို အသုံးပြု၍ အဝတ်အထည်အမျိုးမျိုးကို ထုတ်လုပ်ပီး နိုင်ငံခြားသို့ ၁၀၀ % တင်ပို့ရန်ဖြစ်ပါသည်။

ဥပဒေနှင် မူဝါဒဆိုင်ရာ အချက်အလက်များ

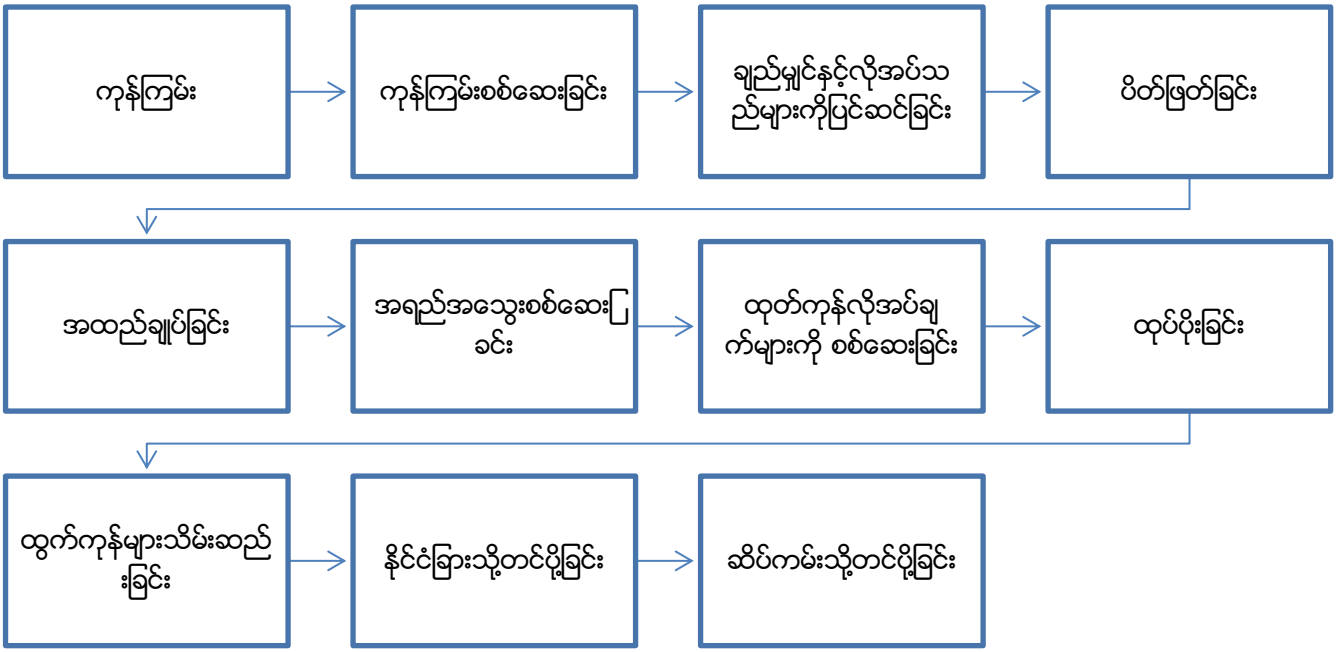
EMP ရေးဆွဲရခြင်း၏ရည်ရွယ်ချက်မှာ နိုင်ငံတော်နှင့် နိုင်ငံတကာမှ ချမှတ်ထားသော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ်များ၊ စည်းမျဉ်းစည်းကမ်းများ၊ ဥပဒေနှင့် နည်းဥပဒေများကို လိုက်နာပြီး ပတ်ဝန်းကျင်နှင့်လိုက်ရောညီထွေရှိသော ထိခိုက်မှုလျော့ချရေး အစီအစဉ်များပြုလုပ်ရန်ဖြစ်ပါသည်။ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာရေးသားပြုစုသူများ၏ ကျွမ်းကျင်မှုနယ်ပယ်ဆိုင်ရာ ဖော်ပြချက်များကို ရေးသားဖော်ပြထားပါသည်။ ဥပဒေနှင့် နည်းဥပဒေ အခန်းတွင် MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များအပြင် စက်ရုံနှင့်ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာသဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။ စက်ရုံအတွင်းလိုက်နာဆောင်ရွက်ရမည့် စည်းမျဉ်းစည်းကမ်းများ၊ လုပ်ငန်းခွင် အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ အခြေခံစည်းမျဉ်းစည်း ကမ်းများလည်း ထည့်သွင်းဖော်ပြထားပါသည်။ Asia Link (Myanmar) Fashion Company Limited ၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ ကတိကဝတ်များအပြင် ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ချရေး မူဝါဒများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

စီမံကိန်းဆိုင်ရာအချက်အလက်

အဆိုပြုထားသော စီမံကိန်း	အမျိုးသမီးဝတ်ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံ ချုပ်လုပ်ခြင်း
ရင်းနှီးမြုပ်နှံမှုပုံစံ	၁၀၀ % နိုင်ငံခြားသားရင်းနှီးမြုပ်နှံမှု
ကုမ္ပဏီအမည်	Asia Link (Myanmar) Fashion Company Limited
အဆိုပြုရင်းနှီးမြုပ်နှံမှုကာလ	နှစ် ၃၀
စုစုပေါင်းမြေကွပ်ဧရိယာ	၂.၂၈ ဧက (၉,၂၂၆.၈၃၃ စတုရန်းမီတာ)
မြေနေရာပုံစံ	စက်မှုဇုန်မြေ
တည်ဆောက်မှုကာလ	၁ နှစ် နှင့် ၆ လ
စီမံကိန်း တည်နေရာ	မြေကွက်အမှတ် ၈၅၊ မြေတိုင်းရပ်ကွက်အမှတ် ၅၁၊ သာဓုကန် စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
ဆက်သွယ်ရန် ဖုန်းနံပါတ်	၀၉-၉၇၁၇၈၁၁၁၁

အဆိုပြုလုပ်ငန်းသည် ရန်ကုန်တိုင်းဒေသကြီးတွင်တည်ရှိပြီး စုစုပေါင်းမြေဧကမှာ ၂.၂၈ ဧကဖြစ်ပါသည်။ စက်ရုံတွင် အဆောင်များ၊ စားသောက်ဆောင်၊ စတို၊ ပြုပြင်ထိမ်းသေးရေးအခန်း၊ မီးဖိုချောင် အစရှိသည်တို့ပါရှိပါသည်။

ထုတ်လုပ်မှုအတွက်လိုအပ်သောကုန်ကြမ်းများကို ကိုရီးယား၊ တရုတ်နှင့်ဂျပန်နိုင်ငံတို့မှ တင်သွင်းပြီး ထုတ်ကုန်များမှာ အမျိုးသမီးဝတ် ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံအမျိုးမျိုးတို့ဖြစ်ပါသည်။ အဆိုပြုလုပ်ငန်းအတွက် လိုအပ်သောလျှပ်စစ်ကို ရန်ကုန်လျှပ်စစ်ဓါတ်အားပေးရေးအဖွဲ့ (YESB) မှ ရယူဆောင်ရွက်သွားမည်ဖြစ်ပြီး လျှပ်စစ်မီးပြတ်တောက်ချိန်တွင်အသုံးပြုရန်အတွက် ဂျင်နရေတာ များလည်းထားရှိပါသည်။ သုံးရေအတွက် စက်ရုံအတွင်းရှိ ရေတွင်းမှ ရယူသုံးစွဲပါသည်။ စက်ရုံမှထွက်ရှိသော စွန့်ပစ်ပစ္စည်းများမှာ အဝတ်စများ၊ ပလတ်စတစ်အိတ်များ၊ ကတ်ထူပူးခွံများ၊ စက္ကူများနှင့် စားဖိုဆောင်/ ဝန်ထမ်းဆောင်များမှထွက်ရှိသော စွန့်ပစ်ပစ္စည်းတို့ဖြစ်ပါသည်။



လုပ်ငန်းမှ ပထမနှစ်မှ ၁၀ နှစ်အတွင်း အထည်ရေ (၇,၀၀၀,၀၀၀) မှ (၇,၇၀၀,၀၀၀)အထိ တိုးမြှင့်ထုတ်လုပ်သွားမည်ဖြစ်သည်။ နိုင်ငံခြားသားလုပ်သား (၂၀)ဦး နှင့် နိုင်ငံသား (ပြည်တွင်း)လုပ်သား (၈၄၈) ဦးဖြင့် ဆောင်ရွက်သွားမည်ဖြစ်သည်။

အနီးပတ်ဝန်းကျင် အခြေအနေ

ကနဦးစစ်တမ်းကောက်ယူခြင်းနှင့် ဒေသဆိုင်ရာမှအချက်အလက်များရယူခြင်းသည် အလွန်အရေးကြီးပါသည်။ ပတ်ဝန်းကျင်အရည်အသွေး တိုင်းတာခြင်းကဲ့သို့သော ကနဦးစစ်တမ်းကောက်ယူခြင်းသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာတွင် အရေးပါသောအခန်းအဖြစ် တည်ရှိနေသည်။ ထို့အတွက် စီမံကိန်းဒေသသို့ ကွင်းဆင်းလေ့လာမှုများကို ၁၉ ရက်၊ ဩဂုတ်လ၊ ၂၀၁၉ တွင်လက်တွေ့ကွင်းဆင်းလေ့လာခဲ့ပီးလိုအပ်သည့် လေအရည်အသွေး၊ ဆူညံမှု၊ အပူချိန်နှင့် စိုထိုင်းမှု အစရှိသည့် အချက်အလက်များကို ရယူခဲ့ပါသည်။ ကွင်းဆင်းလေ့လာထားသည် အချက်အလက်များကို သက်ဆိုင်ရာခေါင်းစဉ်အလိုက် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။ ၈ ရက်၊ ဇူလိုင်၊ ၂၀၁၉ ခုနှစ်တွင် မြေအောက်ရေအရည်အသွေးအား ကောက်ယူ၍ တိုင်းတာခဲ့ပြီး ကမ္ဘာ့ကျန်းမာရေးအဖွဲ့၏ သောက်သုံးရေဆိုင်ရာစံချိန်စံညွှန်းနှင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။

အမျိုးအစား	တိုင်းတာမှု
လေအရည်အသွေး	PM_{10}, $PM_{2.5}$, O_3, SO_2, NO_2, CO_2
ဆူညံသံ	Indoor sound level (LAeq)
မြေအောက်ရေအရည်အသွေး	pH, Colour, Turbidity, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Total Alkalinity, Phenolphthalein Alkalinity, Carbonate, Iron, Chloride, Sodium Chloride, Sulphate, Total Solids, Suspended Solids, Dissolved Solids, Manganese, Phosphate, Phenolphthalein Acidity, Methyl Orange Acidity and Salinity.

တိုင်းတာမှု ရလဒ်များအရ Sulfur dioxide (SO2), Ozone (O3), Nitrogen dioxide (NO2), Carbon dioxide (CO2), PM10 နှင့် PM 2.5 သည် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ လမ်းညွှန်ချက်များ၏ သတ်မှတ် စံချိန်၊ စံညွှန်းများအောက်တွင်ရှိသည်ကို တွေ့ရှိရပါသည်။ ကုန်ထုတ်လုပ်မှု ဇရိယာရှိ အသံဆူညံမှုသည်လည်း အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ လမ်းညွှန်ချက်များ၏ သတ်မှတ် စံချိန်၊ စံညွှန်းများ အတွင်းရှိသည်ကို တွေ့ရှိရပါသည်။ လုပ်ငန်းခွင်အတွင်းအလင်းရောင်ရရှိမှု အခြေအနေသည်လည်း သတ်မှတ် စံချိန်၊ စံညွှန်းများအောက်တွင်ရှိသည်ကို တွေ့ရှိခဲ့ရပါသည်။ မြေအောက်ရေအရည်အသွေးများသည်လည်း ကမ္ဘာ့ကျန်းမာရေးအဖွဲ့၏ သောက်သုံးရေဆိုင်ရာ သတ်မှတ် စံချိန်၊ စံညွှန်း များအောက်တွင်ရှိသည်ကို တွေ့ရှိခဲ့ရပါသည်။

လူမှုစီးပွားအခြေအနေ၊ ရုပ်ပတ်ဝန်းကျင်နှင့် ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုအခြေအနေစသည့် ရွှေပြည်သာမြို့နယ်ဆိုင်ရာ အစိုးရဌာနမှ တင်ပြထားသည့် အချက်အလက်များမှ ရယူ၍ ထည့်သွင်းထားပါသည်။ ၂၀၁၇ခုနှစ် စစ်တမ်းအရ လိုင်သာယာမြို့နယ်၏ လူဦးရေမှာ ၂၇၂၇၂၁ ဖြစ်ပါသည်။

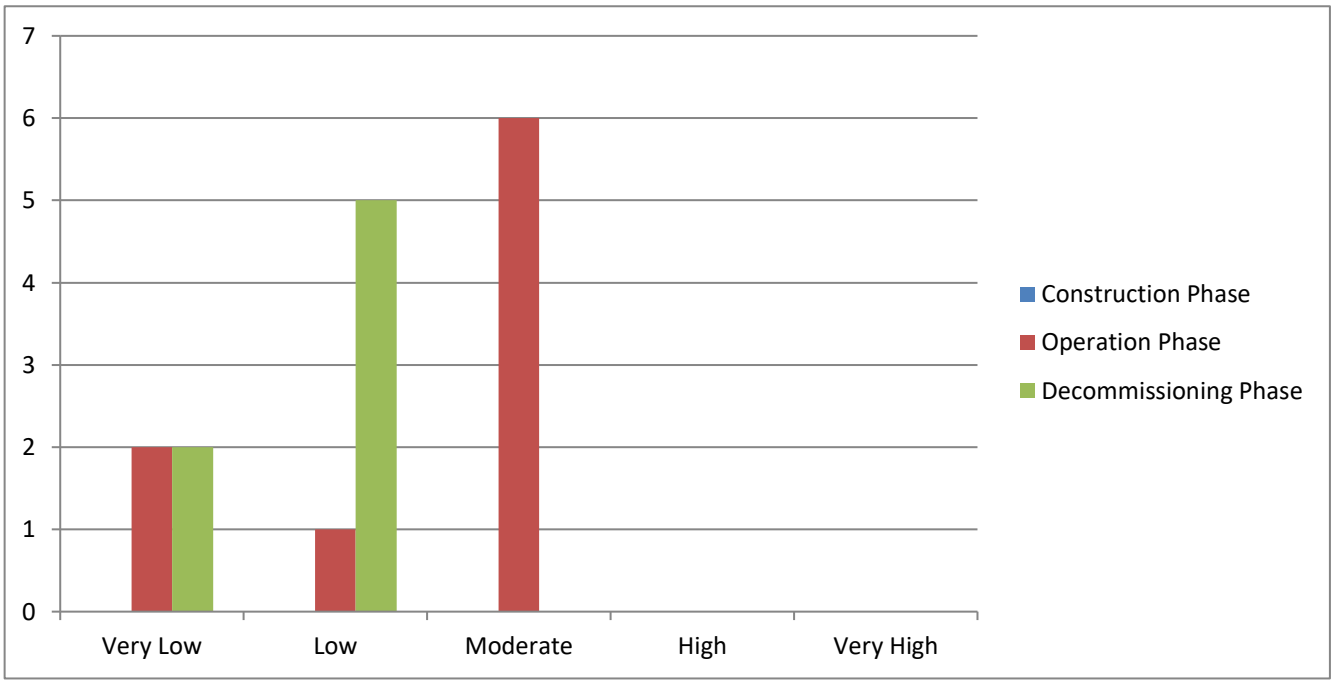
ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေး အစီအစဉ်

စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ပတ်ဂန်းကျင်ဆိုင်ရာအရင်းအမြစ်များ၊ ဂေဟဆိုင်ရာ အရင်းအမြစ်များ၊ လူ့စွမ်းအားအရင်းအမြစ်များနှင့် စွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ခြင်း စသည့်ဖြစ်လာနိုင်သည့်ထိခိုက်မှုများကို ခွဲခြားသတ်မှတ်ပြီး ၎င်းတို့၏ ရလဒ်များကို ထိခိုက်မှုဆန်းစစ်သည့် နည်းလမ်းများကို အသုံးပြု၍ သတ်မှတ်ခဲ့ပါသည်။ စီမံကိန်းအား ထိခိုက်မှုများကို အပိုင်းသုံးပိုင်းခွဲ၍ သတ်မှတ်ထားသည်။ အမျိုးအစားမှာ တည်ဆောက်သည့်ကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလ နှင့် လုပ်ငန်းဖျက်သိမ်းသည့်ကာလများ ဖြစ်ပါသည်။ ပတ်ဂန်းကျင်ထိခိုက်မှု လျော့ပါးစေရေး နည်းလမ်းများကိုလဲထည့်သွင်းဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာလ။ ။ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော်ကြောင့် ဤကာလကိုထည့်သွင်း မဆင်းစားတော့ပါ။			
လုပ်ငန်းလည်ပတ်ခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့်	အသင့်တင့်	• ဘွိုင်လာနှင့်မီးစက် တို့တွင် မီးခိုးခေါင်းတိုင် တပ်ဆင်ခြင်းဖြင့်

	ဖုန်မှုံနှင့် ဖန်လုံအိမ်ဓါတ်ငွေ့ထွက်ခြင်း • လုပ်ငန်းခွင်အတွင်းဖုန်မှုံထွက်ခြင်း • မီးဖိုမှ မီးခိုးထွက်ခြင်း • အရေးပေါ်သုံးမီးစက်မှာ စွန့်ထုတ်အခိုးအငွေ့ ထွက်ခြင်း		အခိုးအ ငွေ့ကြောင့် ပတ်ဝန်းကျင်ထိခိုက်မှုကို လျော့ချခြင်း၊ • စက်ရုံအတွင်းနှင့် အနီး အနားတွင် သစ်ပင်ပန်းမံ စိုက်ပျိုးခြင်းဖြင့် carbon ထွက်ရှိမှုကို လျော့ချပေးခြင်း၊ • NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြင့် စက်ပစ္စည်း များသုံးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• မိလ္လာစွန့်ထုတ်ရေ • စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အနည်းငယ်	• လက်ရှိရေဆိုးစွန့်ပစ်မှုပုံစံဖြစ်သော မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပေးခြင်း၊ • မိလ္လာကန်နှင့် မိလ္လာ စနစ်ကို လူဦးရေနှင့် သင့်တင့်သည့် ပမာဏ ရှိရန် စီစဉ်ထားခြင်း၊ • ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အလွန်နည်း	• စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။ • မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
ဆူညံသံ	• မီးစက်၊ လေမှုတ်စက် နှင့် မော်တော် ယာဉ် အသုံးပြုမှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု	အသင့်တင့်	• ဆူညံသံထွက်သောနေရာများကို အကာအကွယ် ဖြင့်ထားရှိခြင်း • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ပေးခြင်း
မီးဘေးအန္တရာယ်	• ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲ ပေါ်လျော့မှု	အသင့်တင့်	• ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း • လျှပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း
စွန့်ပစ်အမှိုက်	• ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ပိတ်စ အပိုင်းအစများ။ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
စွန့်ပစ်အရည်	• နေအိမ်၊ စားသောက်ဆောင် တို့မှစွန့်ထုပ်ရေ။ မိလ္လာကန်စနစ်	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိမ်း	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့်

	သိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ		အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက် အလုပ်အကိုင်အခွင့်အလမ်းများ ရရှိစေခြင်း		
လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြင့် စက်ပစ္စည်း များသုံးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• ဖြိုချပစ္စည်းများနှင့် မိလ္လာဖျက်ဆီးမှုများ	အနည်းငယ်	• ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• အဆောက်အဦးနှင့် ဆက်စပ်ပစ္စည်းများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
အမှိုက်စွန့်ပစ်မှု	• အဆောက်အဦးများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်း သိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
မတော်တဆ ထိခိုက်မှုများ	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက်အ လုပ်အကိုင် ခေတ္တရရှိခြင်း		



ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်

အဆိုပြုလုပ်ငန်း၏ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် Plan-Do-Check-Act (P D C A) စက်ဝိုင်းဖြင့် အစီစဉ်တကျ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ အစီအစဉ်တွင် စက်ရုံကြောင့် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၄င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် သည် စက်ရုံတွင် ကျန်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်ပါသည်။ အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင် အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်းပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားမှု ပြုလုပ်ထားပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၅။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

၆။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၇။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

၈။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် ငွေကြေးလျာထားမှု

၉။ မကြေနပ်မှု ဖြေရှင်းခြင်း နည်းလမ်း

အဆိုပြုလုပ်ငန်း၏ လူထုအကျိုးတူပူးပေါင်းပါဝင်မှုများအဖြစ် အကျိုးအမြတ်၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်ပယ်ဖွံ့ဖြိုးတိုးတက်ရေးများတွင် ထည့်ဝင်လှူတန်းသွားမည်ဖြစ်ပါသည်။ အဆိုပြုလုပ်ငန်း၏ ပတ်ဂန်းကျင်စောင့်ကြပ်ကြည့်ရှု့ရေးလုပ်ဆောင်ရမည့် လုပ်ငန်းစဉ်များနှင့် ဖြေရှင်းရမည့်နည်းလမ်းများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်း

အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်းအစီအစဉ်ကို ၃၀ ရက်၊ အောက်တိုဘာလ၊ ၂၀၁၉ ခုနှစ်တွင် သာဓုကန်စက်မှုဇုန်၊ အစည်းအဝေးခန်းမတွင်ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲ အစည်းဝေးတွင် သက်ဆိုင်ရာ အစိုးရအဖွဲ့ရုံး၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှုကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကိုပါ ထည့်သွင်းဖော်ပြထားပါသည်။

နိဂုံး

နိဂုံးချုပ်အားဖြင့် ယခုစီမံကိန်းသည် ဆောက်လုပ်ရေးကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလနှင့် လုပ်ငန်းဖျက်သိမ်းသည့် ကာလသုံးခုလုံးတွင် ဒေသခံပြည်သူများကိုအလုပ်အကိုင် အခွင့်အလမ်းများ ဖန်တီးပေးနိုင်သည်။ ကာလသုံးခုလုံးတွင် ဖြစ်ပေါ်လာနိုင်သော ထိခိုက်မှုများကို လျော့ချနိုင်မည့် နည်းလမ်းများနှင့် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား အကောင်အထည်ဖော်ခြင်းဖြင့် လျော့ချနိုင်သည်။ ပတ်ဂန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်အား စီမံကိန်း၏ ပတ်ဂန်းကျင်ဆိုင်ရာ အရည်အသွေးကို စောင့်ကြပ်ကြည့်ရှုရန် မဖြစ်မနေ အကောင်အထည်ဖော်ပေးရမည်။ စီမံကိန်းကောင်အထည်ဖော်သူသည် ပတ်ဂန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ယခုအစီရင်ခံစာအား စစ်ဆေးပီးနောက် ပြန်လည်ပေးပို့လာသော သဘောထားမှတ်ချက်နှင့် အကြံပြုချက်များကိုလိုက်နာရမည်။ ထို့ပြင် စီမံကိန်းအကောင်အထည်ဖော်သူသည် မြန်မာနိုင်ငံ၏ ပတ်ဂန်းကျင်နှင့် သက်ဆိုင်သောမူဂါဒများ၊ ဥပဒေများ၊ နည်းဥပဒေများ၊ သတ်မှတ်ချက်များကို လိုက်နာရန်လိုအပ်ပါသည်။

EXECUTIVE SUMMARY

Introduction

Environment Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented in this chapter needs to be implemented by the proposed expansion of Asia Link (Myanmar) Fashion Company Limited. The Environment 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 project is new investment for manufacturing of High Quality Garment by Contract Manufacturing Process (CMP) basic company from China. The project is issued by the Yangon Region Investment Committee (YRIC) on 12 March 2019 with the Endorsement No. (YGN- 170/2019). 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 Asia Link (Myanmar) Fashion Company Limited.

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 of Notification No. Yaka- 1/3/4 (EIA) (797/2019) on 17 May 2019. Therefore, Asia Link (Myanmar) Fashion Company Limited commissioned Myanwei Consulting Company Limited for EMP report study. 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.

The proposed project aims to manufacturing sort of garment under CMP system 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 also describes the responsible person and his responsibility.

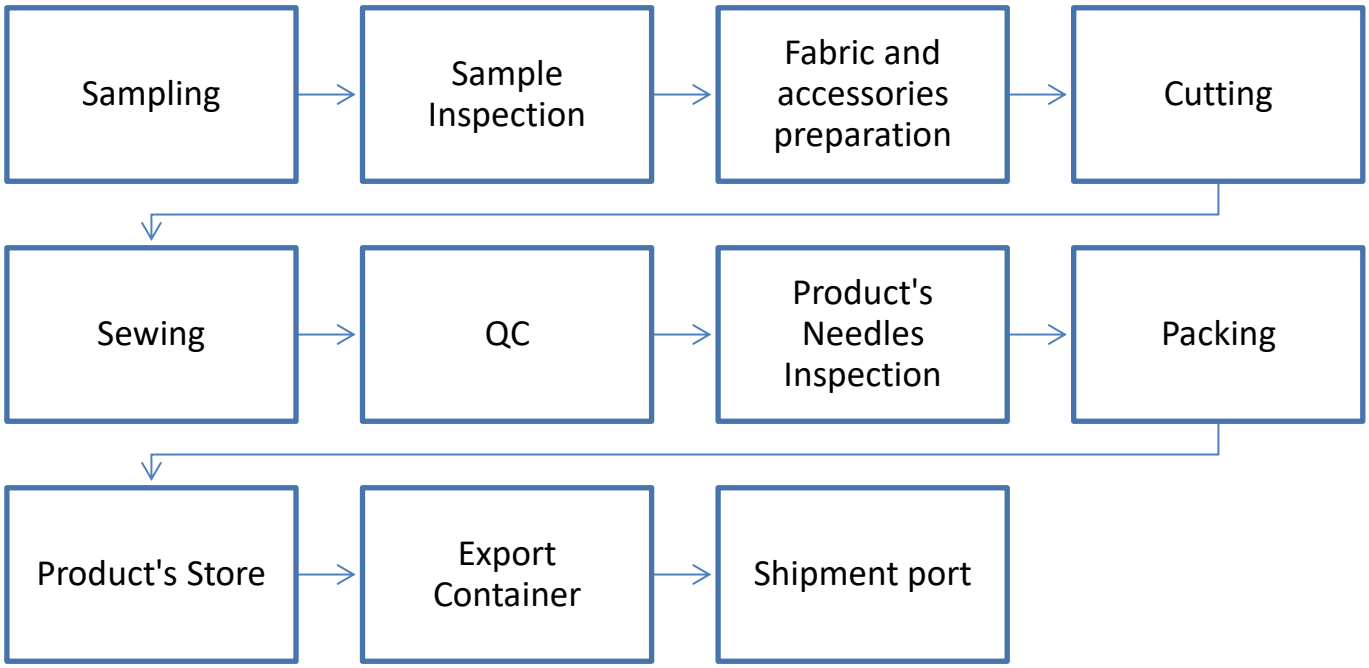
Policy, Legal and Institutional Framework

National Laws and Regulations, international guidelines are referred for Environmental Management Plan of the proposed project.

Project Description

Type of Proposed Business	Manufacturing of Brassier, Underwear and Swimwear on CMP basis
Type of investment	100% Foreign Investment
Name of Company	Asia Link (Myanmar) Fashion Company Limited
Land lease year	30 years
Total land area	2.28 acres (9,226.833 sq meter)
Type of land	Industrial Land
Construction Period	1 year and 6 months
Address of Proposed Project	Plot No. (85), Myay Taing Block No. (51), Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon region.
Contact Person	09-421016798

The proposed project is located at Yangon region. The total area of project site is 2.28 acres (9,226.833 square meters). Main structure is designed into production area for one building. Transformer room and generator room are separated by main factory building structure. The factory layout plan which is also can be seen in this report. The main raw materials are yarns, which are imported from Korea, China and Japan. The main products are Brassier, Underwear and Swimwear. The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for domestic use. Electric power is used for the purpose of to run the steam boiler and to provide lighting. The factory gets water from the tube wells inside the factory compound, and will get required electricity from Yangon City Electricity Supply Board (YESB). The waste generated from the garment factory are industrial wastes such as cloth scraps, plastic sheet, carton box and fabric paper; and domestic waste.



Production Process of Asia Link (Myanmar) Fashion Factory

Production rate of Asia Link (Myanmar) Fashion factory is produced between first year of operation and ten years operation as 7,000,000 to 7,700,000 pieces annually. It is require of work force (20) foreigners technician and (800) local employees for first year operation to 10 years operation.

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 an important role for conducting EMP. Therefore. Myanwei Consulting Company Limited conducted air quality, temperature and humidity and noise level measurement measurement on 19 August 2019 and compared with the National Environmental Quality (Emission) Guidelines. Ground water quality is analysed on 8 April 2019 and compared with WHO Guideline for Drinking Water Standard.

Item	Parameter
Air quality	PM_{10}, $PM_{2.5}$, O_3, SO_2, NO_2, CO_2
Noise level	Indoor sound level (LAeq)
Light Level	Industry light condition (Lux)
Ground water quality	pH, Colour, Turbidity, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Total Alkalinity, Phenolphthalein Alkalinity, Carbonate, Iron, Chloride, Sodium Chloride, Sulphate, Total Solids, Suspended Solids, Dissolved Solids, Manganese, Phosphate, Phenolphthalein Acidity, Methyl Orange Acidity and Salinity.

The contents of O_3, CO_2 and SO_2 concentration level are within the limit of NEQ (emission) guideline but particulate matter (PM_{10} & $PM_{2.5}$) and gases level of Nitrogen Dioxide (NO_2) are also within the National Environmental Quality (Emission) Guideline. Noise in the workshop area is acceptable when compared with National Environmental Quality (Emission) Guideline. The result of light measurement at operation area is good condition to the acceptable level of standard. The result of ground water quality is good condition to the acceptable level of WHO Guideline for Drinking Water Standard.

Moreover, secondary data collection of proposed project site area such as socio-economic condition, physical/ biological environment, weather data where be received from official township data was reference by Regional Data of Shwe Pyi Thar Township. The proposed project site is initiated into the industrial zone area. In 2017, the population of Shwe Pyi Thar Township 272,721 peoples.

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 main categories, viz, Construction phase, Operation phase and Decommissioning phase.

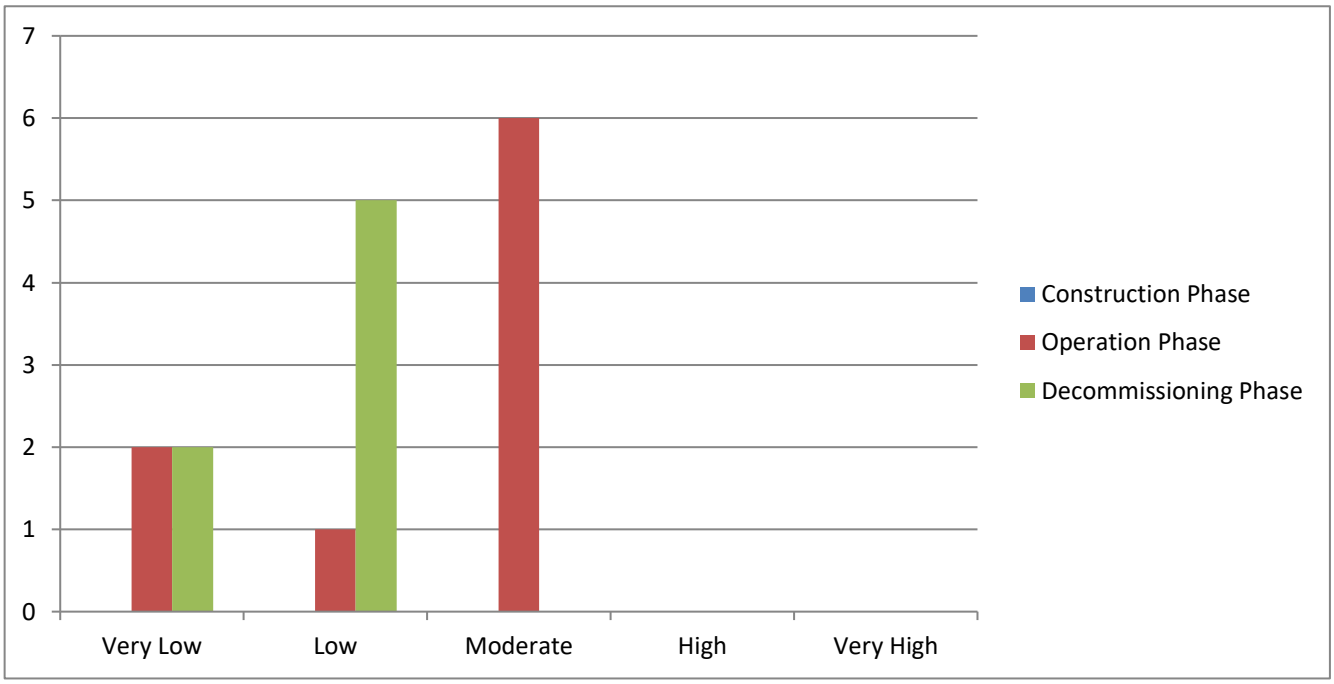
The relative importance of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline project. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible they are excluded from further analysis. 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.

Evaluation and Perdition of Significant Impacts

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 steam boiler (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 operation phase	2	4	2	3	24	Low
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	5	2	4	40	Moderate
Solid waste	• residual pieces of fabric scraps 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, spills 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

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Social-economic Condition	• Job opportunities for local people	-	-	-	-	-	Positive Impact
Decommissioning Phase							
Air pollution	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	4	20	Low
Water pollution	• Sewage form decommissioning workers • Demolition machinery equipment	3	1	1	3	15	Low
Soil Contamination	• Decommissioning of buildings and related materials • Transportation 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	2	1	1	3	12	Very Low
Hazardous waste	• Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Decommissioning 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. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project.



Impact significance of the proposed factory project

Environment Management Program

The proposed project of environmental management plan, which need to made the PDCA plan especially Plan-Do-Check-Act cycle. 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 Asia Link (Myanmar) Fashion Company Limited 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 of activities by for Asia Link (Myanmar) Fashion factory are as follows:

1. Air pollution/Dust Management plan
2. Water Consumption Management Plan
3. Wastewater Management Plan
4. Solid Waste Management plan
5. Noise Management
6. Emergency Response plan
7. Environmental Monitoring and Reporting
8. Corporate Social Responsible (CSR) Plan
9. Budget Plan
10. Grievance Redress Mechanism

Public Consulting

Public participation can be considered as the required element of the EMP process. In this study, various stakeholder‘s participation were made. On 30, October 2019, a public consultation and disclosure ceremony at Shwe Pyi Thar Zone (1), Zone Committee meeting room. In this ceremony, Sai

Thiha Maung presented EMP study and findings from Myanwei. After the presentation, the participants gave suggestions about the proposed project.

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 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.

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes 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 Republic of the Union of Myanmar.

1. INTRODUCTION

Environment Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented in this chapter needs to be implemented by the proposed expansion of Asia Link (Myanmar) Fashion Company Limited. The Environment 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.

1.1. AIM OF ENVIRONMENTAL MANAGEMENT PLAN

- Provide environmental management plan that minimize the environmental impact of the works and identify those responsible for its implementation.
- Define the monitoring program, which assess the implementation.

1.2. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

An Environment 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 this 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.

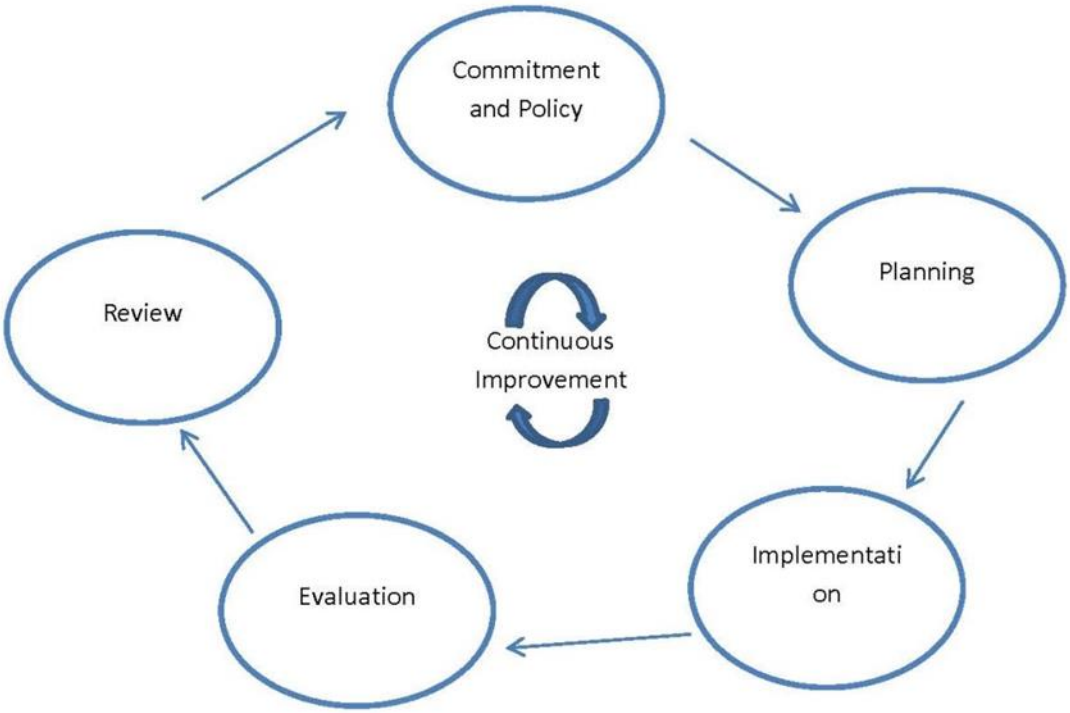


Figure 1-1 Continuous Improvement Circle

- **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 environment. 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 (e.g., minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (e.g., 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.
- **Evaluation** – A company monitors its operations to evaluate whether targets are being met. If 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.

1.2.1. Institutional Requirement

Asia Link (Myanmar) Fashion Co., Ltd. will manage the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and monitoring of EMP and Environmental Monitoring Plan (EMP) as well as coordination with local authorities and the nearby communities. The HSE Team also makes regular review of EMP to cover all potential impacts, amendments and modifications.

1.2.2. Responsibilities of the EMP

In order to ensure the sound development and effective implementation of the EMP, it will be necessary to identify and define the responsibilities. The environmental management practices, procedures, and responsibilities are defined herein to get full compliance with the existing environmental policy, laws, rules and regulations of the Republic of the Union of Myanmar. The following entities should be involved in the implementation of this EMP:

Asia Link (Myanmar) Fashion Co., Ltd.: The proponent will be charged with the responsibility for ensuring that the proposed development has been accomplished in an environmentally sound manner. This can be achieved by inclusion of environmental specifications in the tender specifications, selection of environmentally conscious contractors, and supervision to ensure that the objectives of this EMP are met. The implementation of Environmental Management Plan (EMP) process will prepare and follow up by appointed persons for health, safety, and environmental management under the instruction of management team of Asia Link (Myanmar) Fashion Co., Ltd. for EMP implementation facilities.

ECD (Yangon Region): The responsibility of ECD is to exercise general supervision and coordinating over all matters relating to the environment and to be instrumental in providing guidance for recognized regulatory frameworks.

Third-Party Environmental Consultant: The environmental consultant will have to ensure that the proposed EMP is up to date and is being followed properly by the proponent. Periodic audits of the EMP will have to be done to ensure that its performance is as expected, by comparing with operating standards so that any corrective actions can be taken.

1.2.3. Structure and Responsibilities for the EMP Development and Implementation

The HSE officer is responsible to the HSE components of the project and on matters relating to the implementation of the EMP throughout operation life. The S&E officer will have responsibilities that include:

- Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;
- Carry out a thorough initial site inspection of environmental controls prior to work commencement;
- Record and provide a written report to the General Manager and production team of non-conformances with the EMP and require the HR supervisor to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.

1.3. PROJECT BACKGROUND

The project is new investment for manufacturing of Brassier, Underwear and Swimwear on CMP Basis from China. The Yangon Region Investment Committee (YRIC) issues the project on 12 March 2019 with the Endorsement No. (YGN- 170/2019). The committee must issues the notification 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 Brassier, Underwear and Swimwear on CMP Basis under the name of Asia Link (Myanmar) Fashion Company Limited.

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 EMP to meet the environmental assessment requirements of Notification No. Yaka- 1/3/4 (EIA) (797/2019) on 17 May 2019. Therefore, Asia Link (Myanmar) Fashion commissioned Myanwei Consulting Company Limited for EMP report study.

1.3.1. Project Proponent Profile

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

Table 1-1 Information of Investor

Investor Name:	Mr. Yang Jianwu
ID No. :	G 56901305
Citizenship:	Chinese
Address of Registration office:	11th Villager Group, Taining Village, Sanxianhu Town, Nan County, Hunan Province, People's Republic of China.

1.3.2. Director List

Name of Shareholder	Citizenship	Share Percentage
Foshan BiaoMei Fashion Co., Ltd.	China	100 %
Representative By; Mr. Yang Jianwu Ms. Jiang Mingge	China China	

1.3.3. Investment Plan and Salient Features of the Project

The estimated authorized capital investment is 1.262 Million US Dollar (Table 1-2). Organization chart of Asia Link (Myanmar) Fashion Company Limited is presented in Figure 1-2.

Table 1-2 Salient features of the project

Type of Proposed Business	Manufacturing of Brassier, Underwear and Swimwear on CMP Basis
Type of investment	100% foreign investment

Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	2.28 acres (9,226.833 square meter)
Total building area	Office Building (140 x 120 square feet) Factory Building (120 x 300 square feet) Store Building (40 x 40 square feet) Two Concrete Buildings (20 x 20 square feet) and (25 x 35 square feet)
Land lease year	30 years
Construction period	1 year and 6 months
Operation starting date	30 year investment permit
Address	Plot No. (85), Myay Taing Block No. (51), Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon region.
Contact person	Daw Nin Nin Aung 09-971781111

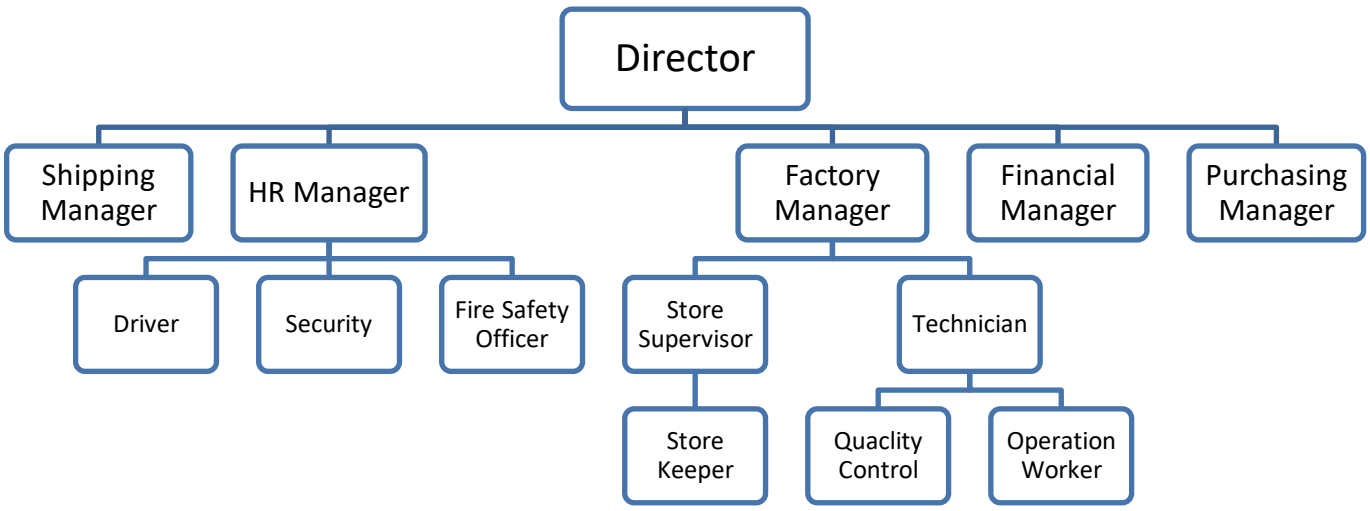


Figure 1-2 Organization chart of Asia Link (Myanmar) Fashion Company Limited

1.4. ENVIRONMENTAL CONSULTANT PROFILE

Myanwei Consulting Company Limited prepares the EMP for the proposed project. The field studies were carried out by Myanwei having experiences in conducting environmental assessments for various types of projects in Myanmar. The Myanwei 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 on 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 1-3 Member of EMP Study Team

Member List	Responsibility
Dr. Hein Lynn Aung (Director) M.B, B.S (Yangon), Master of Management from Australia	Health Impact Assessment, Mitigation and Monitoring Report Reviewing
Mr. Lin Htet Sein (Environmental Consultant) MSc (Regional Geology) BSc (Hons) Geology	Base Line data collecting management, Project description, legal assessment, impact assessment, mitigation measure, monitoring plan, report preparation and reviewing
Mr. Nyein Chan Siat Linn Myo (Fire Safety Manager) BSc Physics DMEI (Diploma in Mechanical Engineering) (UK) (INTI)	Industrial management assessment, fire safety training and management study
Mr. Sai Poeng Saing Kham (Member) B.A History	Report writing, secondary data study
Ms. Nan Htet Myintzu BSc (Hons) Geology	Report writing, secondary data study
Mr. Sai Thiha Maung BSc Geology	Baseline data monitoring, site surveying, Communication with stakeholder in project area
Mr. Kyaw Win Han (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Baseline data monitoring, site surveying Communication with stakeholder in project area
Mr. Aung Kyaw Moe (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Report writing, secondary data study
Mr. Saw Yan Naung (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Baseline data monitoring, site surveying, Communication with stakeholder in project area
Mr. Moe Kyaw (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Baseline data monitoring, site surveying, Communication with stakeholder in project area

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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 FRAMWORK

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 its 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 citizens rights of private 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 right 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.
Section 45	The Union shall protect and conserve natural environment.
Section 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 conversation.
Section 3	c) 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;

	(e) to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;
Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities; (b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment; (c) To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances; (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 undertaken 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; (c) underground water quality standards; (d) atmospheric quality standards; (e) noise and vibration standards; (f) emissions standards; (g) effluent standards; (h) solid wastes standards; (i) other environmental quality standards stipulated by the Union Government.
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.
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 contributing 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' charge s or management fees for the environmental conservation according to the relevant industrial estate, SEZ and business organization; (c) 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 29	The project proponent has to abide by the stipulations included in the rules, regulations, 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.
Rules 61	The Ministry may approve and reply on the EIA report o 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 (a) of 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 place 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 of this report, by email or other way which way 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 of project and other work-place related 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 requirements related to social or environment or caused to it, under paragraph 115. The project proponent has to allow inspector to inspect the contractor and sub-contractor 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 25 and the additional factors listed in 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 discharges from various sources in order to prevent pollution for purposes 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 polices, laws, regulation, plans, strategic, programmes and projects in Myanmar.
Foreign Investment Law, 2012	
Section 8	(a) To support the primary objectives of the national economic development plan, and for businesses 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 Union 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 Rule, 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, workshops, 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, expert 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 3 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
Yangon City Development Committee 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 exits, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
Basic Principles: Section 3	Private Industrial Enterprises 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 establish 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 follows: 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 international 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 systematically 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 environmental conservation. Regarding the chemical management and storage, currently, regulations governing chemicals 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 conserve 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 recoverable 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	
Rule17	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
Rule18	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 30 MW); the states and regions can issue 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 in compliance with Myanmar Standards or International Standards within the country (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. With the permission of the Ministry, the inspector general can:	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 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 alter safety relief valve 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.
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.	
Chapter II Objectives Section 3	The objectives of this Law are as follows: (a) to support the development of the State's economy through the development of production by causing to enjoy more security in social life and health care by the workers who are major productive force of the State by the collective guaranty of the employer, worker and the State; (b) to enjoy more security in social life and medical care by the public by effecting their insurance voluntarily; (c) to raise public confidence upon the social security scheme by providing benefits which are commensurate with the realities; (d) to have the right to draw back some of the contributions paid by the employers and the workers as savings, in accord with the stipulations; (e) to obtain the right to continued medical treatment, family assistance benefit, invalidity benefit, superannuation benefit, survivors' benefit, unemployment benefit, the right to residency and ownership of housing after retirement in addition to health care and pecuniary benefit for sickness, maternity, death, employment injury of the workers.
Chapter V Social Security System and Benefits Section 11	(a) The following establishments shall be applied with the provisions for compulsory registration for social security system and benefits contained in this Law if they employ minimum number of workers and above determined by the Ministry of Labour in co-ordination with the Social Security Board: (i) production industries doing business whether or not they utilize mechanical power or a certain kind of power, works of production, repairing or services, or engineering works, mills, warehouses, establishments; (ix) works carried out with foreign investment or citizen investment or joint ventured businesses; (b) Any establishment which is applied with the provisions of compulsory registration under sub-section (a) shall continue to be applied by this Law even though any of the following situations occurs if it continues to carry out such work: (i) carrying out work by employing under stipulated minimum number of workers but more than one worker; (ii) changing the employer or changing the type of business.
Social Security System Section 13	The Social Security Board shall manage and keep the following social security systems in accord with the stipulations that insured persons may enjoy social security benefits:

	(b) Family Assistance Insurance System: i) education allowance benefit for the children of insured persons who earn below the specified amount of income; ii) health care and aid benefit in time of natural disaster; iii) suitable benefit for dependent family members.
Section 15	(a) The following funds are included in the Social Security Fund: (i) health and social care fund; (ii) family assistance fund; (iii) invalidity benefit, superannuation pension benefit, and survivors' benefit fund; (iv) unemployment benefit fund; (v) other social security fund for social security system of compulsory registration and contribution specified by the Ministry of Labour, in co-ordination with the Social Security Board, according to clause (2) of subsection (e) of section 13; (vi) other social security fund specified as to which contribution may be paid after voluntary according to clause (2) of sub-section (e) of section 13; (vii) fund for Social Security Housing Plan;
Section 18	(b) The employer shall deduct contributions to be paid by worker from his remuneration and pay to the social security fund together with contribution to be paid by him. The employer shall also bear the expenses for such contribution.
Chapter VI Application to Employment Injury Benefit Insurance System, Employment Injury Benefit Fund and Benefits Section 45	The provisions contained in this Law relating to the employment injury benefit insurance system shall apply to the following workers: (a) workers at establishments which are applied to social security system who have registered compulsorily in accord with sub-section (a)of section 16 and contributed to the social security funds contained in clauses (1), (3), (4) and (5) of sub-section (a) of section 15; (b) workers specified as being applied to provisions of compulsory registration for employment injury benefit insurance system by notification of the Ministry of Labour, in co-ordination with the Social Security Board with the approval of the Union Government.
Section 48	(a) The employer shall effect insurance by registering for employment injury benefit insurance system contained in section 45 at the relevant township social security office and pay contribution to employment injury benefit fund in accord with stipulations in order that workers applied to provisions of compulsory registration may obtain the employment injury benefits; (b) The employers may effect insurance by registering voluntarily for insurance of the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system, by paying stipulated contribution to employment injury benefit insurance fund; (c) When registering to effect insurance for employment injury benefit in accord with sub-sections (a) and (b), the worker shall submit medical certificate.
Section 49	Non-application to the Workmen's Compensation Act (a) The employers and insured persons of establishments where the employer had registered compulsorily in accordance with sub-section (a) of section 48 or where the employer had registered voluntarily in accord with sub-section (b) of section 48 who have paid contribution to employment injury benefit fund shall not apply to the

	provisions contained in the Workmen's Compensation Act as regards the employment injury benefit; (b) The insured persons who has effected insurance for employment injury benefit in accord with sub-sections (a) and (b) of section 48 shall be entitled only to the employment injury insurance benefits contained in this Law.
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;
Section 75	The employer of establishments applied by this Law: (a) shall prepare and keep the following records and lists correctly and submit to the relevant township social security office in accord with the stipulations: i) records and lists of workers' daily attendance; ii) records of appointing new worker, employing worker by changing of work, suspension from work, dismissal from work and resignation from work; iii) records of promotion and paying remuneration; iv) records and lists of employers, managers, and administrators; and records of changes of them; (b) shall inform the relevant township social security office if the following matters arise: i) change in number of workers and address of establishment; ii) change of employer, change of business, suspension from work, and termination of work; iii) employment injury, employment death, and occupational diseases; (c) shall produce work records and lists on requirement of inspection team or official assigned duty under this Law by the Social Security Head Office and various Regional Social Security Offices.
The Labour Organization Law (2011)	
Chapter V Rights and Responsibilities of the Labour Organization Section 17	The labour organizations shall have the right to carry out freely in drawing up their constitution and rules, in electing their representatives, in organizing their administration and activities or in formulating their programmes. The Labour Organizations have the right to negotiate and settle with the employer if the workers are unable to obtain and enjoy the rights of the workers contained in the labour laws and to submit demands to the employer and claim in accord with the relevant law if the agreement cannot be reached.
Section 18	The labour organization has the right to demand the relevant employer to re-appoint a worker if such worker is dismissed by the employer and if there is cause to believe that the reasons of such dismissal were based on labour organization membership or activities, or were not in conformity with the labour laws.
Section 19	The labour organizations have the right to send representatives to the Conciliation Body in settling a dispute between the employer and the worker. Similarly, they have the right to send representatives to the Conciliation Tribunals formed with the representatives from the various levels of labour organizations.
Section 20	In discussing with the Government, the employer and the complaining workers in respect of worker’s rights or interests contained in the labour

	laws, the representatives of the labour organization also have the right to participate and discuss.
Section 21	The labour organizations have the right to participate in solving the collective bargains of the workers in accord with the labour laws.
Section 22	The labour organizations shall carry out peacefully in carrying out holding of meetings, going on strike and carrying out other collective activities in accord with their procedures, regulations, by-laws and any directives prescribed by the relevant Labour Federation.
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
This law was 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 settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall form 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 with stipulated manners, may apply to the competent court in person or by the legal representative.
Section 24	The relevant Conciliation Body shall, in 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 complaint within the prescribed period without sufficient cause.
Section 39	No employer shall alter 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 the Arbitration Body or Tribunal, to affect the interest of such workers immediately.
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal f 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 any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.
The Leave and Holidays Rules (1951, partially revised in 2018)	
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 leave and maternity leave.	
Chapter (3) Leave Section 23	A worker has the right to take leave with respective wages or with respective salary according to the type of leave and designated period set-

	up by the law. However, workers are entitled to take earned leave with respective average wages or average salary.
Section 24	Workers have the right to take casual leave, medical leave or maternity leave within the probation period.
Section 25	For days in which a worker is not in the workplace after the end of a period of leave, such days shall not be counted as leave.
Section 26	If there are holidays just before or right after one's leave commences, these days cannot be counted as part of the leave period.
Section 27	Subjecting a worker to relocation, suspension of duty, reduction of salary or termination within their leave period is not allowed.
Chapter (4) Duties and Responsibilities of Worker Section 49	The worker (a) must ask for leave from the employer or the manager or from an authorized person with Form (1) within the normal working hours. (b) must report to the employer or to the manager or to an authorized person when the worker is back in the workplace after taking leave. € must inform employer or manager or authorized person, by phone or any other method, if the worker is unable to return to the workplace from their current location by the end of leave due to natural disaster or unforeseen happenings or accident occurring within the leave period.
Chapter (5) Duties and Responsibilities of an Employer Section 50	The employer (a) must provide the worker casual leave, medical leave and maternity leave with respective wages or salary. Moreover, must allow the worker earned leave with respective average wages or average salary. If the employer normally pays the cost of living, then the cost of living must also be included. (b) must provide the worker with earned leave starting from the day of entitlement within 12 months, with respective average wages or with average salary, and also must advance the entitled wage prior to the worker taking leave. € must announce the number of entitled earned leave calculations within three months starting from the last day of the 12-month period or entitled earned leave. In this way, workers can take leave by turns (alternatively). Moreover, to fix the eligibility period within which workers can take earned leave. (d) if the worker resigns or is terminated or in case of death, has to pay the respective wages/salary within two business/working days starting from the date of incidence. € has to pay the eligible wage/salary for earned leave to his/her official representative (if the worker is deceased). (f) has to pay for the respective earned leave period if there is a temporary or permanent shutdown. Has to allow eligible earned leave if the nature of work is less than twelve months. (g) is not allowed to suspend, to reduce the salary, to relocate or to terminate a worker due to the worker taking maternity leave or medical leave. (h) has to fill up Form (1), (2), (3), (4), (5) and (6) according to the law. These forms shall be easily accessible from the Inspector. The employer must maintain these documents for up to twelve months' period.

	(i) has to record the leave taken in Form (7) and submit to the Inspector not later than every seventh day of each month. (j) wants the worker to work on a gazette holiday, the employer must receive consent from the worker. The employer must submit Form (8) to the Inspector for approval.
The employment and skill development (2013)	
This law was 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 settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Section 5	The project proponent has to appoint employees with the contract in line with the provision of section 5 of said law.
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 Wage 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 leave 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 proponnent 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 Notifiable 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, undertake 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 o refuse and destruction thereof 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 purpose 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 follows: 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 impact, 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 violates 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 certificaion
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သောပတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ပတ္ထုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်၊ ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ်ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊ လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတတ်သော ပတ္ထုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ ကြီးကြပ်နိုင်ရန်။
အခန်း ၇ တားမြစ်ချက်များ အမှတ် ၁၈	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်းမပြုရ။
အမှတ် ၁၉ (ခ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းခွင် ပေါက်ကွဲစေတတ်သော ပတ္ထုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။
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 and protect the water resources and rivers system for beneficial utilization by the public; (b) to smooth and safety waterways navigation along rivers and creeks; (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 out any act or channel shifting with the aim to ruin the water resources and rivers and creeks. (b) cause the wastage of water resources wilfully.
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, chemical, poisonous material and other materials which may cause environmental damage, or dispose of

	explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.
No. 12	No person shall carry out growing of 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 switchback, dockyard, wet dockyard, water-tight dockyard, building of jetty, pier, landing stage or vessel landing by drainage in the river-creek boundary, bank boundary and waterfront 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 operation as 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 there 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 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
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.

2.2. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUIDELINES

As specified in the EIA Procedure, all projects are obliged to use, comply with and refer to applicable national guidelines or standards or international standards adopted by the Ministry. As specified in the EIA Procedure, following project approval a project shall commence implementation strictly in accordance with the project EMP and any additional requirements set out in the project ECC, which will encompass conditions relating to emissions. While these Guidelines generally apply to all projects subject to the EIA Procedure, it is the prerogative of the Ministry to decide how the Guidelines should be applied to existing projects as referred to in the EIA Procedure.

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 and vibration, air emissions and liquid

discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.

2.2.1. General Guidelines

General guidelines of related environmental impact guideline for proposed project are -

2.2.1.1. Air emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in concentrations that reach or exceed national ambient quality guidelines and standards, or in their absence current World Health Organization (WHO) Air Quality Guidelines1 for the most common pollutants as summarized below; and (ii) emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards (i.e. not exceeding 25 percent of the applicable air quality standards) to allow additional, future sustainable development in the same air shed. Industry-specific guidelines summarized hereinafter shall be applied by all projects to ensure that air emissions conform to good industry practice. Reference should be made to WHO's Air Quality Guidelines for Europe2 for air pollutants not included in the following **Error! Reference source not found.**.

Table 2-2 NEQG's Air Quality Guideline

Parameter	Averaging Period	Guideline Value
Nitrogen Dioxide	1-year 1-hour	40 200
Ozone	8-hour	100
Particulate Matter PM10[a]	1-year 24-hour	10 50
Particulate Matter PM2.5[b]	1-year 24-hour	10 25
Sulfur dioxide	24-hour 10-minute	20 500

[a] Particulate matter 10 micrometers or less in diameter

[b] Particulate matter 2.5 micrometers or less in diameter

2.2.1.2. Wastewater

Industry-specific guidelines apply during the operations phase of projects and cover direct or indirect discharge of wastewater to the environment. They are also applicable to industrial discharges to sanitary (domestic) sewers that discharge to the environment without any treatment. Wastewater generated from project operations includes process wastewater, wastewater from utility operations, runoff from process and storage areas, and miscellaneous activities including wastewater from laboratories, and equipment maintenance shops. Projects with the potential to generate process wastewater, sanitary sewage, or storm water should incorporate the necessary precautions to avoid, minimize, and control adverse impacts to human health, safety or the environment. Industry-specific guidelines summarized hereinafter shall be applied by all projects, where applicable, to ensure that effluent emissions conform to good industry practice.

For project types where industry-specific guidelines are not set out in these Guidelines, the following general guideline values, or as stipulated on a case-by-case basis, apply during project operations.

Table 2-3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (general application)[1]

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

[1] Pollution prevention and abatement handbook. 1998. Toward cleaner production. World Bank Group in collaboration with United Nations Environment Programme and the United Nations Industrial Development Organization.

2.2.1.3. Noise Levels

Noise prevention and mitigation measures should be taken by all projects where predicted or measured noise impacts from a project facility or operation exceed the applicable noise level guideline at the most sensitive point of reception. Noise impacts should not exceed the levels shown below, or result in a maximum increase in background levels of three decibels at the nearest receptor location off-site.

Table 2-4 NEQG's Noise Levels Guideline

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

a Equivalent continuous sound level in decibels

2.3. IFC EHS GUIDELINES

The EHS Guidelines[1] by International Finance Cooperation (IFC) are technical reference documents with general and industry–specific examples of Good International Industry practice (GIIP), as defined in IFC's Performance Standard 3: Resources Efficiency and Pollution Prevention. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology.

There are two kinds of guidelines, General EHS Guidelines and Industry Sector Guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors in the following section: (1) Environment, (2) Occupational Health and Safety, (3) Community Health and Safety and (4) Construction and Decommissioning. **Error! Reference source not found.**shows the contents of the section of Community Health and Safety.

Table 2-5 Community health and safety contents

Contents	Brief Description
Water Quality and Availability	Drinking water sources should at all times be protected so that they meet or exceed applicable national acceptability standards or in their absence the current edition of WHO Guidelines for Drinking-Water Quality. Project activities should not compromise the availability of water for personal hygiene needs and should take account of potential future increases in demand. The overall target should be the availability of 100 liters per person per day.
Structural Safety of Project Infrastructure	Reduction of potential hazards is best accomplished during the design phase when the structural design, layout and site modifications can be adapted more easily. The following issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project (1) inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure (2) incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire, and (3) application of locally regulated or internationally recognized building codes, standards and regulations, and mitigation measures.

Contents	Brief Description
Traffic Safety	Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents.
Transport of Hazardous Materials	Projects should have procedures in place that ensure compliance with local laws and international requirements applicable to the transport of hazardous materials.
Disease Prevention	Recommended interventions against the communicable diseases at the project level include (1) providing surveillance and active screening and treatment of workers, (2) preventing illness among workers in local communities by undertaking health awareness and education initiatives, training health workers in disease treatment and conducting immunization programs for workers, and (3) providing treatment through standard case management in on-site or community health care facilities.
Emergency preparedness and Response	All projects should have an Emergency preparedness and Response Plan that is commensurate with the risks of the facility and that includes the following basic elements: (1) Administration (policy, purpose, distribution, definitions, etc.) (2) Organization of emergency areas (command centers, medical stations, etc. (3) Roles and responsibilities, (4) Communication systems, (5) Emergency response procedures, (6) Emergency resources, (7) Training and updating, (8) Checklists (role and action list and equipment checklist), and (9) Business Continuity and Contingency.

Source: IFC, Environmental, Health, and Safety (EHS) Guidelines, General EHS Guidelines: Community Health and Safety (April 30.20070)

2.4. COMMITMENT OF ASIA LINK (MYANMAR) FASHION COMPANY LIMITED

Asia Link (Myanmar) Fashion Company Limited shall be 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 Natural Resources and Environmental Conservation (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. Asia Link (Myanmar) Fashion Company Limited shall be responsible for the environmental assessment of factory development as follows:

- 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

Asia Link (Myanmar) Fashion factory is located at Plot No. (85), Myay Taing Block No. (51), Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon region. Location map is as shown in Figure 3-1.

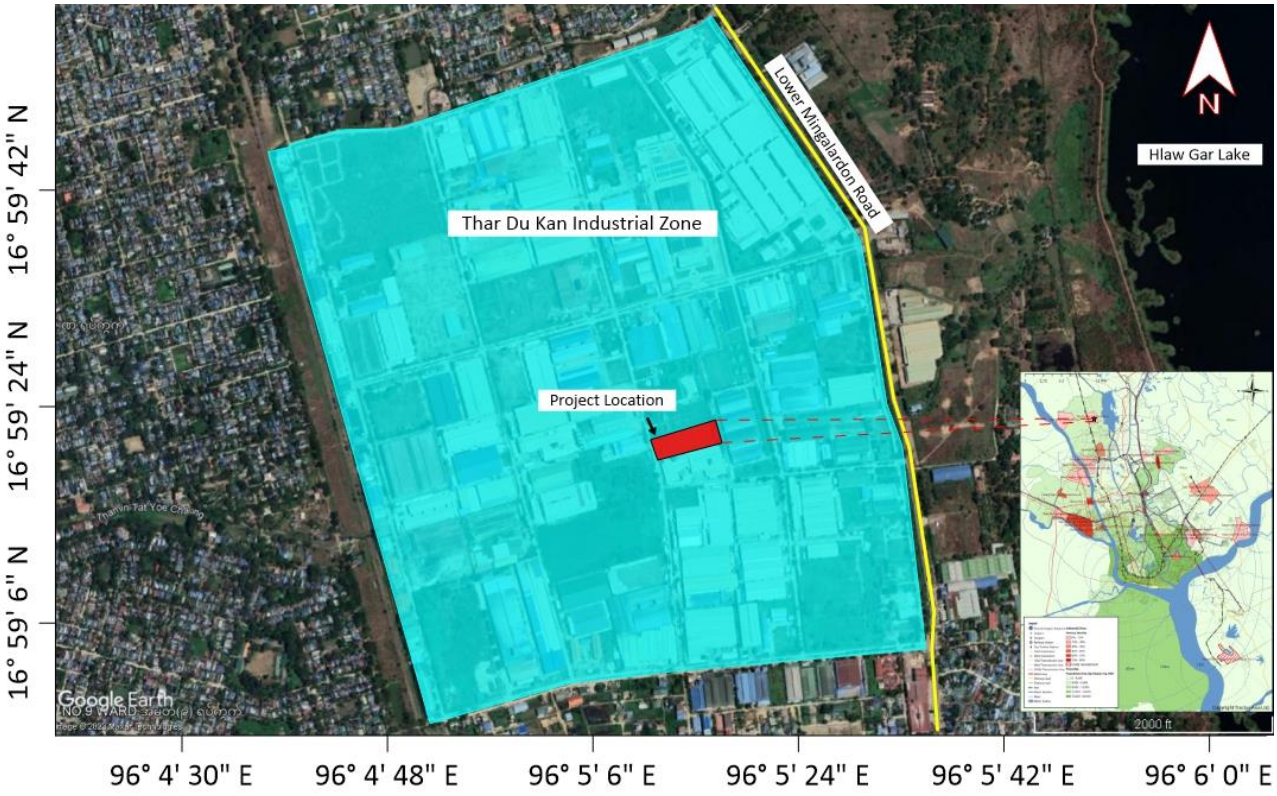


Figure 3-1 Location map

Figure 3-2 1 km radius

3.1. OBJECTIVES OF THE PROJECT

The proposed project intends to manufacture brassier, underwear and swimwear on CMP basic and to export 100% of the finished products. Raw materials will be supplied by Hua Xing Trading Holdings Limited located in People Republic of China. Hua Xing Trading Holdings Company Limited agrees to supply to ready make products and pay CMP charges to Asia Link (Myanmar) Fashion Company Limited.

3.1.1. Site Description of the project site

The total area of project site is 2.28 acres (9,226.833 square meters). There are four buildings: factory building (140 x 120 ft), two story building (40 x 40 ft), dining building (70 x 25 ft) and three-story building (83 x 20 ft). Main structure is designed into office area for one building and QC department, sewing department, cutting department and iron department for production building. Transformer room and generator room are separated by main factory building structure. The factory layout plan can be seen in Figure 3-4.

Figure 3-3 Factory layout map (Google source)

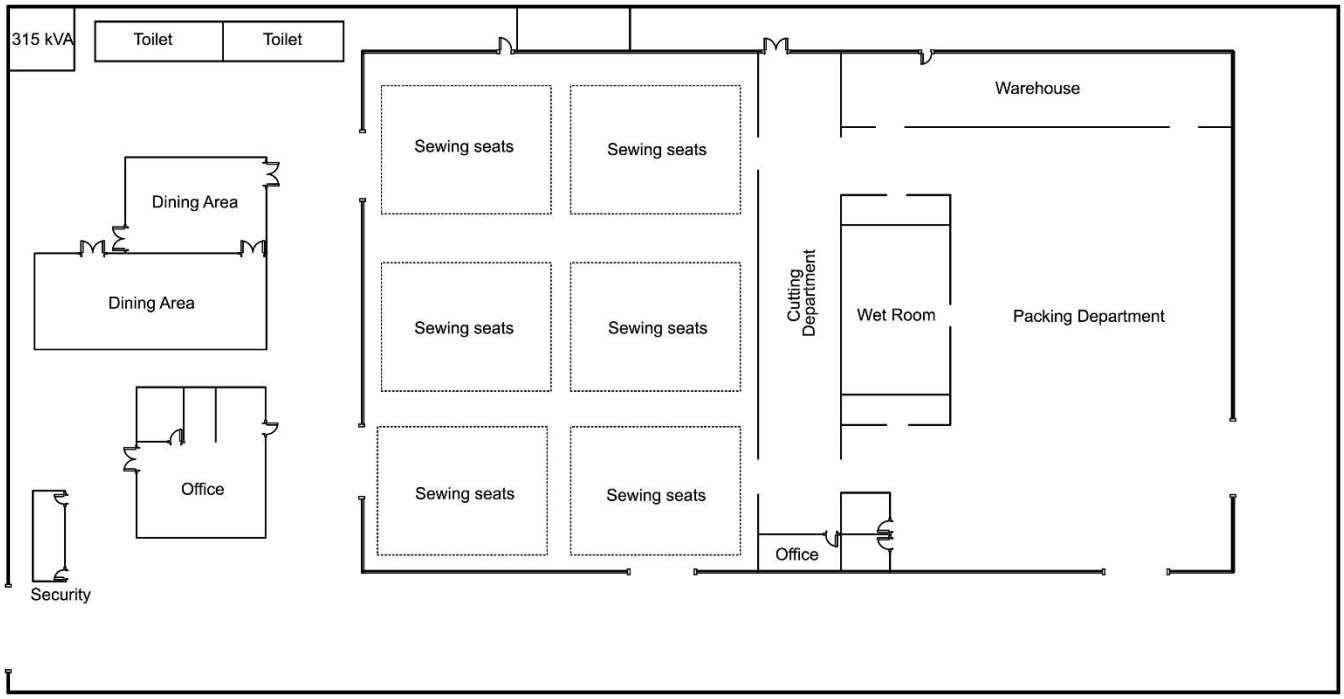


Figure 3-4 Factory layout drawing

3.1.2. Project Operation

Construction phase of the factory is started in February 2019 according to the YRIC's Endorsement. The operation phase of the factory is started from the last week of March 2020 and the

duration of project is 30 years. The Asia Link (Myanmar) Fashion Co., Ltd. will close the factory as their YRIC proposal.

Table 3-1 Asia Link (Myanmar) Fashion Co., Ltd.'s Project Life Span

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Infinity
Construction Phase	→	→											
Operation Phase		→	→	→	→	→	→	→	→	→	→	→	→

3.1.3. Production Process

The process flow diagram for Brassier, Underwear and Swimwear manufacturing is shown in Figure 3-5. The sewing was operated one and two-needle sewing machine after fabric cutting and checked by quality control supervisor on each sewing line. Sewing is carried out after cutting the fabric. After sewing, it reaches to the quality control section. Then the product is treated in finishing section. Then packing is completed and prior to shipping to its destinations.

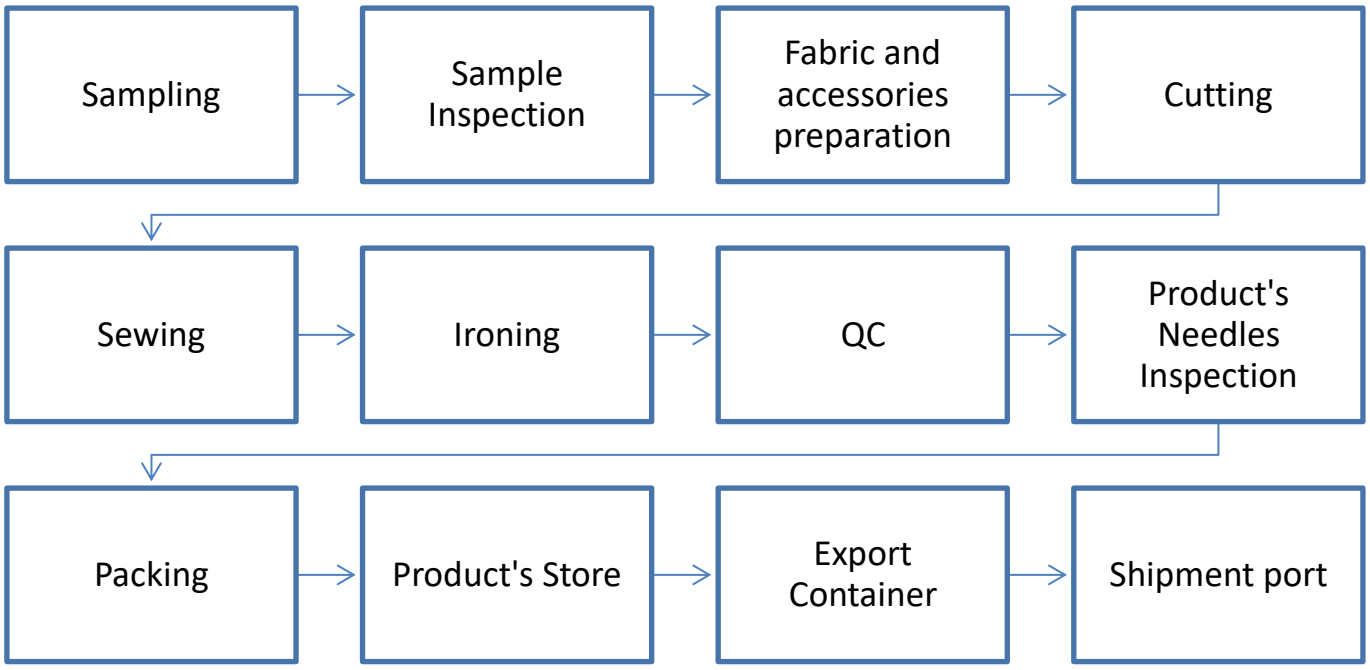


Figure 3-5 Process flow diagram of Asia Link (Myanmar) Fashion factory

3.1.4. Description of Production Process

The first stage in the manufacturing of Brassier, Underwear and Swimwear is the cutting and for that pattern, making is the base. Once the marker is made, pattern pieces must be cut out of the specified fabric.

The process of sewing involves fastening of fabrics, leather, furs or similar other flexible materials with the help of needle and threads. Stitching is the process of passing threaded needle in and out of a material to make a specific design pattern.

Ironing is a sheet metal forming process that uniformly thins the workplace in a specific area.

After completion of the ironing, quality control (QC) checks for any error. Quality control was done manually.

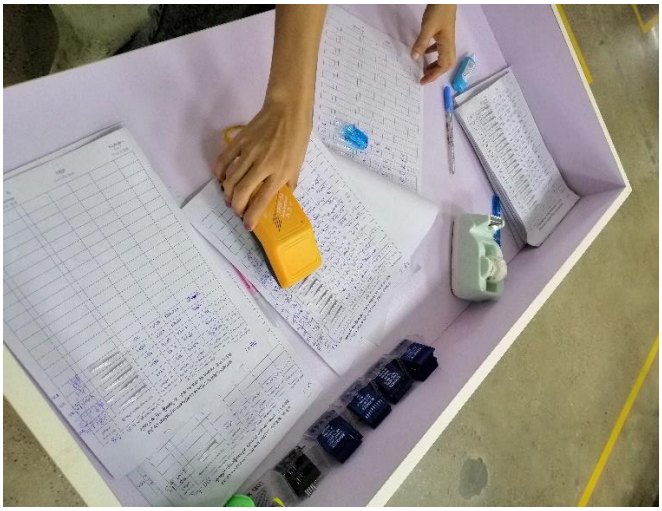
The QC passed units are sent to packing as a final production process. This step sends packed units for distribution to the customers. These packed units are sent to the countries per customer's specification. Packing process was done manually by manpower.

Accessories Store

Fabric Inspection Section

Cutting section

Sewing Section



Needle Checking section

Ironing section

Quality Checking Area

Packing Area

Figure 3-6 Production process photo of Asia Link (Myanmar) Fashion factory

3.1.5. **Products**

The products of Asia Link (Myanmar) Fashion factory are brassier, briefs, and swimwear. Table 3-2 is described in annual production rate.

Table 3-2 Annual production rate

No	Particulars	Unit	Year					
			1	2	3	4	5	6-10
I	**Production**	**(Pcs)**	**7,000,000**	**7,000,000**	**7,000,000**	**7,700,000**	**7,700,000**	**7,700,000**
1	Bra (IGUD123002)	Pcs	100,000	100,000	100,000	110,000	110,000	110,000
2	Bra (66240)	Pcs	500,000	500,000	500,000	550,000	550,000	550,000
3	Briefs (66301)	Pcs	500,000	500,000	500,000	550,000	550,000	550,000
4	Bra (66200)	Pcs	500,000	500,000	500,000	550,000	550,000	550,000

5	Briefs (66201)	Pcs	200,000	200,000	200,000	220,000	220,000	220,000
6	Swimwear (54855)	Pcs	700,000	700,000	700,000	770,000	770,000	770,000
7	Bra (54497)	Pcs	1,300,000	1,300,000	1,300,000	1,430,000	1,430,000	1,430,000
8	Briefs (54509)	Pcs	1,300,000	1,300,000	1,300,000	1,430,000	1,430,000	1,430,000
9	Briefs (54231)	Pcs	500,000	500,000	500,000	550,000	550,000	550,000
10	Bra (54230)	Pcs	500,000	500,000	500,000	550,000	550,000	550,000
11	Bra (4625A)	Pcs	300,000	300,000	300,000	330,000	330,000	330,000
12	Bra (3581C)	Pcs	200,000	200,000	200,000	220,000	220,000	220,000
13	Bra (5081C)	Pcs	200,000	200,000	200,000	220,000	220,000	220,000
14	Bra (ITOD123B02)	Pcs	100,000	100,000	100,000	110,000	110,000	110,000
15	Bra (IGUD123B03)	Pcs	100,000	100,000	100,000	110,000	110,000	110,000

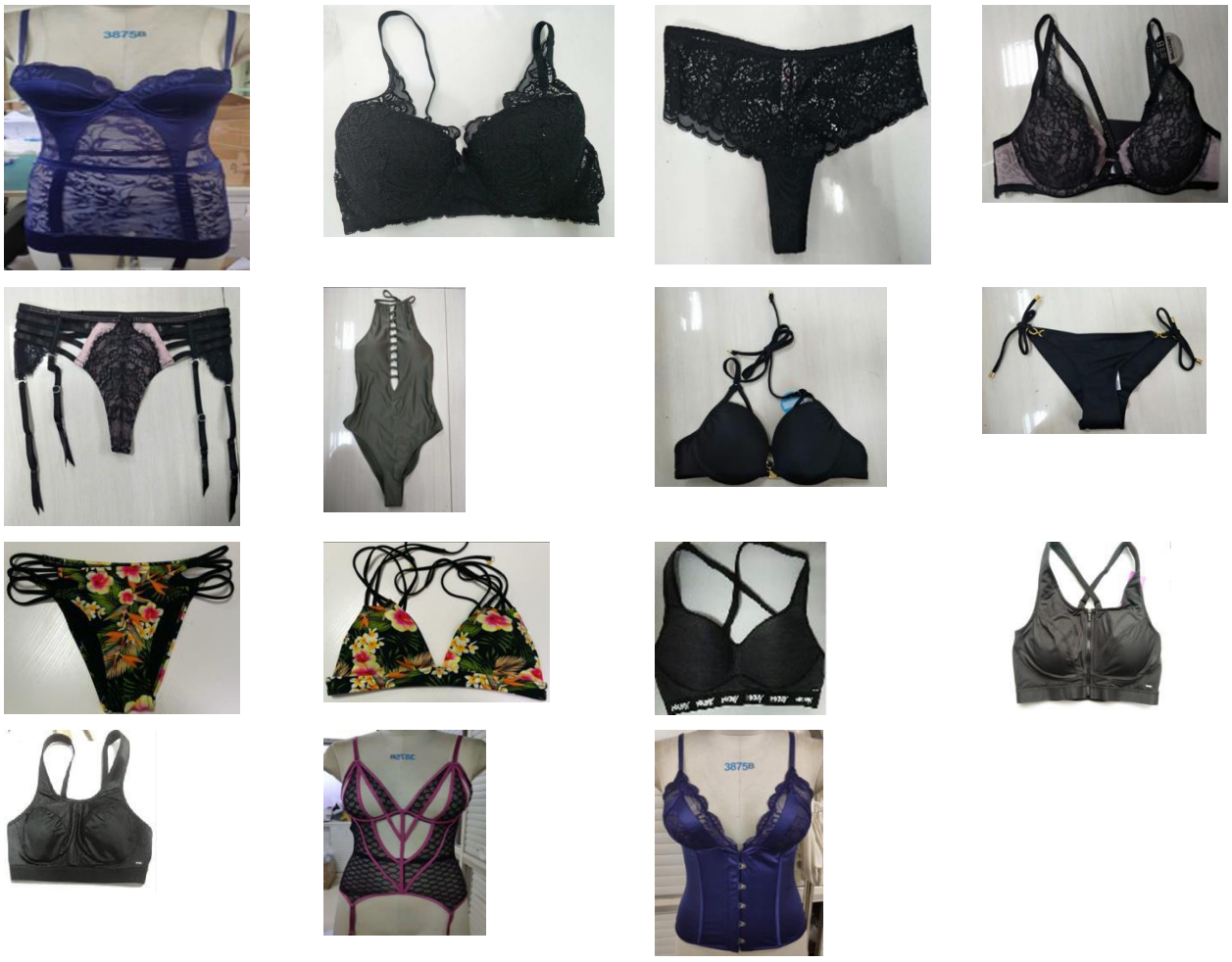


Figure 3-7 Product photo

Figure 3-8 Product storage photo

3.2. UTILITIES

The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for general uses. Electric power is used for the purpose of to run the machinery and to provide lighting.

3.2.1. Raw Material

The main Raw Materials are yarns, which are imported from Korea, China, Japan. Raw materials require for a piece of product is described in Table 3-3.

Table 3-3 List of Raw Material Requirement for 1 Pc (Norm)

No	Particular	HS Code	Unit	Swimwear	Bra (54497)	Bra (54509)	Briefs	Bra (54230)
1	Micro Fabric	5407	Meter	0.36	0.125	0.16	0.108	0.12
2	Cotton Cloth	5208	Meter	0.38	0.057	0.0405	0.0878	0.0608
3	Lace	5804	Meter					
4	Mould Cup	5804	Pair	1	1			1
5	Cotton Cushion	6304	Pair					
6	Sponge	3912	Meter					
7	Elastic 1	5806	Meter	0.45				
8	Elastic 2	5806	Meter	3.6	2.9	1.4	2.85	5.5
9	Elastic 3	5806	Meter					
10	Bra Straps	3926	Meter					
11	Clasp 1	9114	Pcs	9	3	0	0	0
12	Clasp 2	9114	Pcs					
13	Underwear Steel	6207	Pair		1			
14	Underwear Collar	6108	Pair		1	0	0	1
15	Mark	8443	Pcs	4	4	4	4	4
16	Thread	5204	Meter	155	95	80	102	140
17	Bow	6215	Pcs	0	0	0	0	0

No	Particular	HS Code	Unit	Swimwear	Bra (54497)	Bra (54509)	Briefs	Bra (54230)
18	Plastic Bone	3926	Pcs					
19	Hot Fix	3919	Pcs					
20	Ribbon	5806	Meter					
21	Metal Back Buckle	8308	Pcs		1	1	1	2
22	Metal Decorative Buttons	8308	Pcs		2	8		
23	Rubber Badge	4016	Pcs					
24	Zipper	9607	Pcs					

3.2.2. **Machinery and equipment**

Lists of machinery and equipment required for the Asia Link (Myanmar) Fashion factory is following in Table 3-4.

Table 3-4 List of machinery

No.	Machinery Name	Asset	Quantity
1	Single Needle Machine	Set	180
2	Double Needle Machine	Set	46
3	Dual Purpose Zig-Zag Stitching Machine	Set	66
4	Zig-Zag Stitching Machine	Set	56
5	Flat Seaming Machine	Set	60
6	Over lock Sewing Machine	Set	70
7	Barrack Machine	Set	30
8	Button Sewing Machine	Set	15
9	Computer Shrink Clamp	Set	60
10	Ultrasonic	Set	20
11	Soldering Iron	Set	100
12	Steel Band Conveyor	Set	10
13	Portable Cutter	Set	2
14	Auto Spreader	Set	1
15	Auto Cutting Machine	Set	1
16	Automatic Loosening	Set	1
17	Needle Detector	Set	2
18	Ironing Board	Set	3
19	Ironing Boiler	Set	3
20	Ironing Bench	Set	3
21	Wrapping Machine	Set	2

No.	Machinery Name	Asset	Quantity
22	Forklift	Set	2
23	CAD Printer	Set	1
24	Loose Cloth Rack	Set	60
25	Hand Pushing Ladder	Set	1
26	Air Compressor	Set	2
27	Pushcart	Pc	200
28	Generator 350KVA	Set	1
29	Generator 60KVA	Set	1
30	Barcode Printer	Set	1
31	Product Inspection Station	Set	80
32	Workbench	Set	40
33	Work Stool	Set	800
34	Stacking Basket	Set	700
35	Shelf	Set	30
36	Folding Shelf	Set	30
37	Heavy Shelf	Set	50
38	Machine Frame	Set	500
39	Cut Shoulder Strap	Set	1
40	Hot Cutting Machine	Set	5
41	Light Boxes	Set	1
42	Sealing Machine	Set	50
43	Hanging Rack	Set	200
44	Brush (Cleaning Machine)	Set	700
45	Car Hopper	Set	286

3.2.3. **Human Resource**

Human resource required by foreign experts/technicians and local persons for administrative and production process are about 868 persons during 10 years (Table 3-5). Currently there are total 420 employees. The working day of the factory is 296 per year. Working hour starts from 8:00 am to 5:00 pm. The lunch time is from 12:00 pm to 1:00 pm.

Table 3-5 Employment Schedule

No	Particular	Local	Foreign
1	Secretary	1	
2	Shipping Manager	1	
3	Human Resources Manager	1	2

4	Quality Control	35	
5	Store Keeper	10	
6	Driver	2	
7	Security Staff	4	
8	Cleaner	6	
9	Skilled and Semiskilled worker	60	
10	Unskilled Worker	724	
11	Translator	2	
12	Fire Safety Officer	2	
13	Factory Manager		1
14	Financial Manager		1
15	Store Supervisor		1
16	Purchasing Manager		1
17	Technician		16
Total		848	20

3.2.4. **Water**

Thar Du Kan industrial zone has no centralized water supply system and the factory gets water from the tube wells installed inside the factory compound. The depth of the tube well is 300 feet and the diameter of the tube is 6 inches. Groundwater from this tube well is pumped in the storage tanks for the factory and domestic use. The main water use in the proposed project is for domestic usage such as for personal washing, food preparation, and washing of utensils. Drinking water will be provided by outsource suppliers. Figure 3-9 is described by water storage tank and drinking water supply for Asia Link (Myanmar) Fashion factory.

Currently 420 employees are at day shift workers (8:00 am to 5:00 pm). Based on world average, the average daily domestic demands in commercial/industrial settings range between 20 (shift person) and 35 (living persons) gallons per day (gpd) per employee. Since the factory has a maximum of 420 workers, factory water needs ranged from 8,400 gallons per day, and the water required for boiler is about 10 gallons per day.

Figure 3-9 Overhead water storage tank and drinking water supply

3.2.5. Electricity and fuel requirement

The proposed project is waiting to get required electricity supply form Yangon City Electricity Supply Board (YESB). The Current source of energy are 315 transformer and 350 kVA generators is used for production and 60 kVA generator is used during the free time. Estimated electricity usage is about 60,000 kWh per month. Fuel requirement is about 600 liters per month.


Figure 3-10 Electricity facility and fuel storage photo

3.2.6. Electronic Steam boiler

Table 3-6 Specification of electrical steam boiler

Model	SLZ – 128A
Voltage	AC220V/380V
Boiler heating power	5KW
Motor rated power	0.8KW
Water pump rated power	1.1KW
Table heating temperature	80 x 100 ºC
Table heating method	Steam heating
Arm heating power	NO
Table top suction pressure	400-550Pa
Ironing arm suction pressure	200-400Pa
Table dimension (L*W)	1500*780/1200*780mm
Electricity consumption	2.8 to 3.0 degrees / hour


Figure 3-11 Electronic steam boiler

3.3. FACILITIES

3.3.1. Firefighting plan of proposed project

Asia Link (Myanmar) Fashion Co., Ltd has provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 25,000 gallons at the proposed area. The emergency contact numbers 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, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. The plan to install fire alarm system and fire-frightening system are mentioned in Figure 3-12.

Figure 3-12 Firefighting Management Photo

3.3.2. Toilet facilities

Currently toilet facilities have hygienic toilets already provided and categorized by gender, marked distinctly for men and women by signs and symbols. In addition, toilet areas will also be provided with water sinks, necessary toiletries, and hand washing soaps, hand drying facilities, and waste bins. Total numbers of toilet for male are 7 rooms and for female are 15 rooms.

Figure 3-13 Toilet facility photo

3.3.3. Liquid Waste Control Facility

Water discharge from the factory site will be treated by silts track tank before discharging. The factory plan has kitchen, canteen and toilet facilities attached in various buildings of the factory. In the kitchen, separated drainage lines are provided to flow wastewater from the activities washing and cooking, etc. And around the compound area of the project area, drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. The existing drainage at the project area can be seen in Figure 3-14. Besides, the factory plans to use separate wastewater channels, septic type toilet system. Liquid waste from the dining room, canteens and toilet facilities are collected in septic tanks which are attached with sewer treatment plant and the proponent will connect and cooperate with YCDC to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory have to maintain and clean regularly. Spillage and leakages of oil and grease should also be minimized.

Figure 3-14 Drainage System

3.4. GENERATION OF WASTE, EMISSION AND DISTURBANCES

3.4.1. Status of the Factory

Asia Link (Myanmar) Fashion Company Limited is using ground water for both industrial and household purpose, which is supplied by deep tube well. The factory also has generators for electricity generation. The fuel used in the industry is Diesel. The sanitary liquid waste of the factory is stored in septic tank.

The major pollution caused by the factory's operation are air pollution by generator's effluent gas emission, noise pollution created during the operation of generator and other machines.

Solid wastes (recycle waste) such as broken machine parts, paper box, fabric scraps, etc. are hand over to local waste buyer. Although the factory causes some pollution but also has a positive side and that is the factory has created employment for many people, due to this factory local community has built up daily.

3.4.2. Industrial Wastes

Wastes generated from the factory are cloth scraps of 50% from cutting section, 35% from sewing section and 15% from packing section. In addition, packing waste of plastic sheet, carton box and fabric paper tube are generated from cutting line and packing section. Total amount of waste about maximum 39 kg per day are generated from operation process. The wastes are stored in separate place and hand over to YCDC waste collector.

3.4.3. Human wastes

The number of staff and workers required in the day shift for the factory is maximum 420 persons during operation. Solid waste generated from maximum amount of operators and office staffs with assumption of waste generation rate at 163.8 kg/day was calculated based on solid waste generation rate of 0.39 kg/person/day2. The daily solid waste of workers hands over to YCDC waste collector to collect every day.

Domestic wastewater generated by maximum amount of 420 persons with assumption rate 42.0 m^3/day was calculated based on domestic wastewater generated rate of 0.1 m^3/person/day3. This water will be released in operation hour discharge to septic tank or factory drainage.

Figure 3-15 Solid waste disposal and wastewater discharge area

[2] The Yangon City solid waste generation rate as of 2012 is 0.39 kg per person per day (Pollution Control and Cleansing Department, Yangon City Development Committee, 2014).

[3] The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m3 per person per day (Metcalf & Eddy, 2004)

4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

The purpose of this Chapter is to predict how environmental and socio-economic conditions will affect because of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the project site, which established through desktop study research, site surveys, primary data collection and projections for future developments. Findings provide the current and future characteristics of the project site and the value and vulnerability of the key environmental and socio-economic resources and receptors. The following sections provide a description of the environmental and socio-economic aspects of the project.

4.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

The followings methodologies are used for Environmental Management Plan (EMP) for this report preparation;

- Onsite Measurements and Analysis – Baseline parameters such as Indoor temperature, humidity, operation light conditions, and noise and water quality of the project site during operation phase were measured onsite. The analyzed results are mentioned in this chapter.
- Secondary data collection of proposed project site area – Socio economic condition, physical/biological environment, and weather data are collected from official township data of Shwe Pyi Thar Township, Yangon Region.

4.2. ENVIRONMENTAL BASELINE STUDY

The field observation for determining the environmental baseline of the proposed project area was undertaken during construction period. The survey team consists of the senior consultant and environmental quality team. The baseline data collected regarding the environmental condition of the project area was conducted in the following section.

4.1. PHYSICAL COMPONENT

4.1.1. Topography

The proposed project area is situated Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

4.1.2. Geology

Alluvial deposits (Pliestocene to Recent), the non-marine fluvialtile sediments of Irrawady formation (Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene) underlie the Yangon area. Alluvial deposits are composed of gravel, clay, silts, sands and laterite which lie upon the eroded surface of the Irrawaddy formation at 3-4.6 m above mean sea level (MSL). The rock type in Yangon is mainly soft rocks, which consist of sandstone, shale, limestones and conglomerate. Geological map of Yangon Regional area is shown in Figure 4-1.

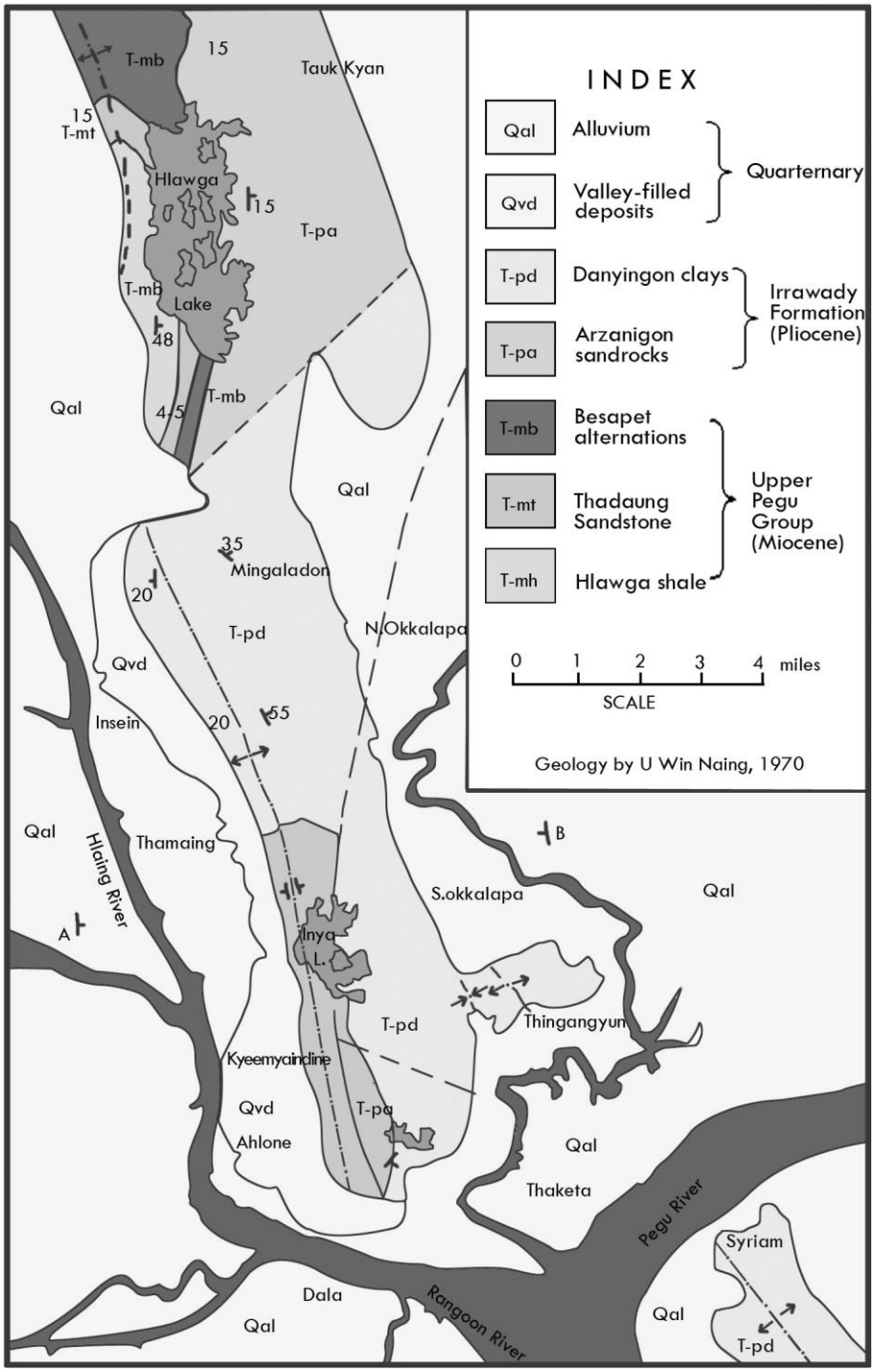


Figure 4-1 Geological Map of Yangon Region

4.1.3. Tectonics

Yangon is situated in the southern part of the Central Lowland which is one of the three major tectonic provinces of Myanmar. The Taungnio Range of the Gyophyu catchments area of Taikkyi District, north of Yangon, through the Thanlyin Ridge, south of Yangon forming a series of isolated hills probably resulted from the progressive deformation of the Upper Miocene rocks as the eastern continuation of the subduction or stretching and compression along the southern part of the Central Basin and regional uplifting of the Pegu Yoma (Aung Lwin 2012).

4.1.4. Soil

The underlying soil type at the Project Site and its surroundings is characterized as the Meadow and Meadow Alluvial Soil. Meadow Soil is soil, which occurs near the river plains exposed to occasional tidal floods, is non-carbonate and usually contains a large amount of salt. Both materials mainly comprise salty clay loam and neutral soil rich in plant nutrient. The upper layers (approximately 0 to 7 m) of the soil at the Project Site comprise largely of cohesive layers with traces of sand and gravel, followed by sand layers with low silt content and trace gravel from 7 to 35 m. The lower layers comprise denser silt layer with traces of sand and gravel from approximately 57 to 70 m. Standard Penetration Test (SPT) results obtained from testing at the Project Site indicate that the soil strength generally increases with depth. The STP results showed that the current soil quality could accommodate the construction of the Project.

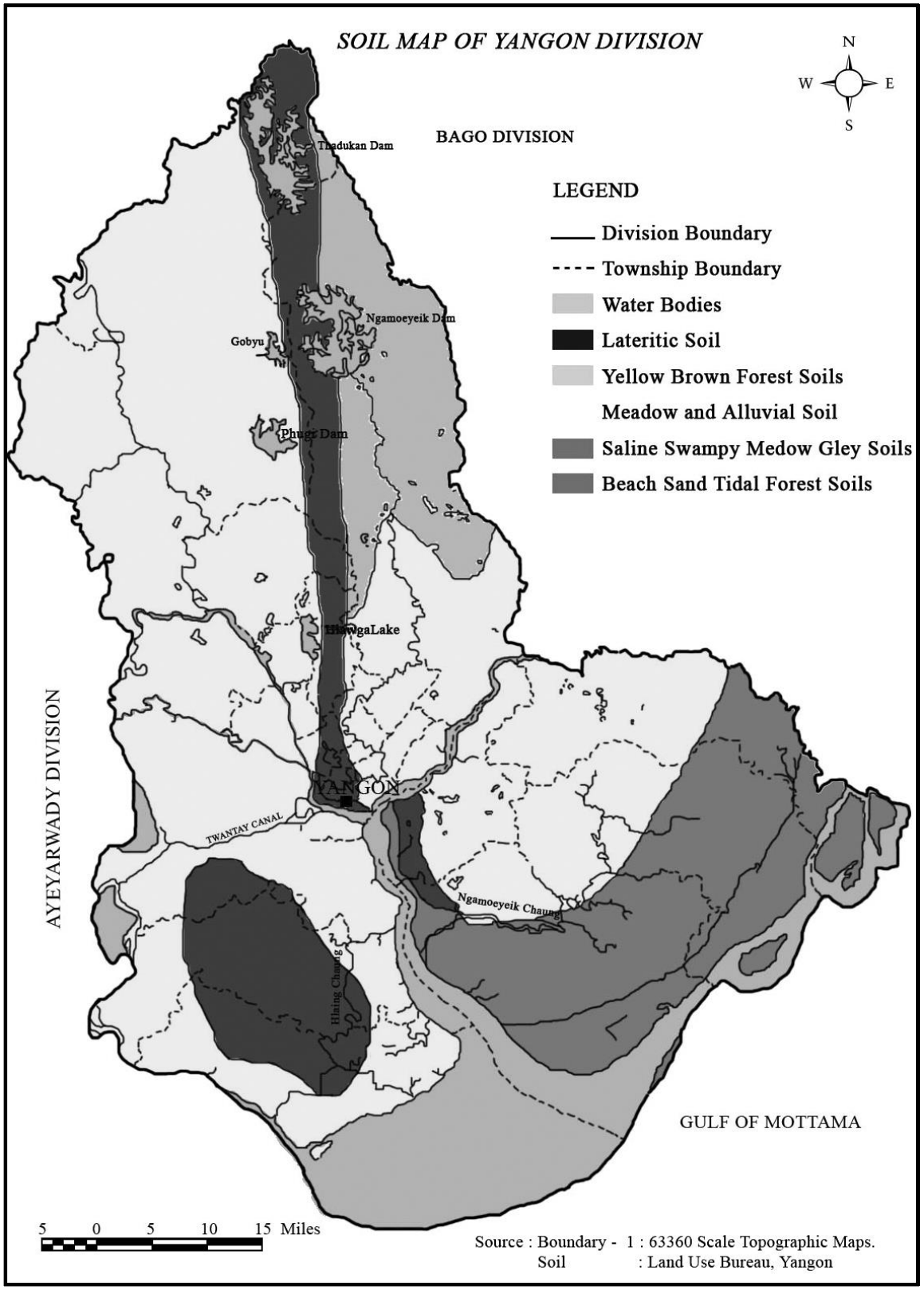


Figure 4-2 Soil map of Yangon (Source: Land use of Bureau of Yangon)

4.1.5. **Hydrogeology**

Yangon is rich in groundwater resources conserved by unconsolidated Tertiary-Quaternary deposits. In Yangon, groundwater is mostly extracted from Valley filled deposits and Ayeyarwady sandstones.

Groundwater: Groundwater availability is generally based on the distribution of permeable and relatively impermeable rocks. The nature of openings in the rocks determines permeability of rocks. Based on local geological considerations, potential groundwater source of Yangon can be roughly divided into two sub regions, namely the low potential area and high potential area. Low potential areas are areas with those rock units of Hlawga Shale, Thadugan Sandstones and Basepet Alternation of upper Pegu Group (Miocene epoch) and Danyingon Clays of Irrawaddy rocks. These rocks and formations are a dense, massive and consolidated nature and have impervious characteristic. High potential areas are underlain by Pliocene Series and recent Formations. High potential area covers approximately 85 percent of the Yangon city including Pabedan. Stand pipe piezometers were installed at a depth of up to 30 m from the existing ground level while a pumping well was installed upon completion of the soil investigation works. Based on the results recorded up to the 8th of December 2012, stabilized groundwater level was observed to range between 0.49 m MSL to -1.81 m MSL4.

Water Supply: The Yangon City Development Committee (YCDC) has an overall responsibility for the management and distribution of water for Yangon City. Presently, YCDC's water supply is obtained from two main sources: (1) reservoir (Hlawga, Gyobu, Pugyi and Ngameoyeik reservoirs) and, (2) groundwater from YCDC's tube wells. Water from these sources is utilized to varying degrees. Areas not supplied with water from the YCDC rely on shallow surface wells and private boreholes. Water supply for the Project Site will be obtained from onsite borewells for both construction and operations due to the poor reliability of municipal supply. Permitting is part of the Planning Consent Application currently underway. The boreholes will be provided and operated by the Developer.

Hydrology: The Project Site lies along the catchment of the Pazundaung River which flows east of the site in a southerly direction to converge into the Yangon River. The Yangon River (also known as the Rangoon River or Hlaing River) is formed by the confluence of the Pegu and Myitmaka rivers and flows into the Gulf of Martaban which is part of the larger Andaman Sea. The river flows along a 40 km stretch flowing from southern Myanmar as an outlet of the Ayeyarwady River into the Ayeyarwady delta. A small portion of the Bago River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Bago River joins the Yangon River and from there, flow towards the .southwestern direction into Andaman Sea.

4.1.6. **Climate and Meteorology**

Yangon has a tropical monsoon climate under the Koppen climate classification system. The city typically experiences a distinct rainy season from the month of May through to October when a substantial amount of precipitation occurs; and dry season, which commences from November and ends in April. During the course of a year, average temperatures show some variance with average highs ranging from 26 °C to 36 °C and average lows occurring between 18 °C and 25 °C. The hottest period is between February and May, with little or no rain. At the end of this season, generally from March to April, the average monthly temperature reaches the upper 30 °C. The average temperatures in Yangon range from 24 °C to 36 °C in April during the hot season and it ranges from 18 °C to 32 °C in January during the cooler season.

Rainfall and Relative Humidity: The climate of Myanmar follows a typical monsoon pattern. Historically, the average annual mean rainfall for Yangon is 2,681 mm with the annual average rainy days of 129.3 days. During the course of 2013, the Department of Meteorology and Hydrology (Myanmar) reported an annual precipitation of approximately 2700 mm. The month with the most precipitation was in July. The relative humidity was generally higher from May to October 2013. The dry season occurs from November to April. Based on the historical weather for the last twelve months in Yangon, no precipitation was observed in December 2012, February 2013 and March 2013. The least humid month of the last 12 months was February 2013 with an average daily low humidity of 34%, and the most humid month was September with an average daily high humidity of 80%.The proposed project is located at Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon Region. The climate condition of Shwe Pyi Thar Township is the dry season of area in which the project lies starts in December and ends in March. The raining season starts in June and ends in September and the cold season follow with the cooler, drier months of October to January. The highest temperature ranging 38°C and low range 30°C reference from Township Meteorology data, Regional Data of Shwe Pyi Thar Township. 2013 to 2017 Yearly data of rainfall and temperature is presented in Table 4-1. The weather condition during 19 August 2019 shows the average temperature of 29 °C while the average humidity is 83 percent Table 4-2.

Table 4-1 Annual rainfall and temperature

Year	Rainfall		Temperature	
	Raining day	Rainfall value	Summer season Max (°C)	Winter season Min (°C)
2013	107	87.78	34	30
2014	103	70.88	34	30
2015	107	84.91	34	30
2016	106	87.78	37	30
2017	107	85.89	38	30

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

Table 4-2 Relative humidity and temperature measure at factory

Date and Time	Description	Result value	Environmental parameter air station guideline
19 August 2019 (10:00 am to 4:00 pm)	Relative Humidity RH %	73.5 (%)	Present condition
	Temperature	32.24 °C	Present condition

Wind Speed and Direction. Based on 2013 data, it was reported that the month with the highest wind speed was April 2013 with an average wind speed of 3 m/s while the least windy month was December 2012 with an average wind speed of 1m/s. The highest sustained wind speed was 54 m/s, occurring on September 19, 2013 and the highest daily mean wind speed was 4 m/s, occurred on May 14, 2013.

Natural Hazards: Myanmar is exposed to multiple natural hazards including cyclones, earthquakes, floods and fire. It has been periodically exposed by natural disasters. The Yangon District is in the vicinity of the southern section of the Sagaing Fault which has not been active in the past 50 to 75 years indicating that the faults may be under accumulating stress increasing the potential for an earthquake to occur. The Sagaing Fault is the most prominent active fault in Myanmar trending roughly north to south. It has been the originator of a large proportion of destructive earthquakes in Myanmar.

The Project Site is also located in an earthquake zone and therefore the building construction design needs to cater for this hazard with adequate planning on emergency response procedures. Myanmar is exposed to cyclones and associated storm surges from the Bay of Bengal. Annually, there are approximately 10 tropical storms in the Bay of Bengal from April to December. Severe cyclones occur during the pre-monsoon period of April to May and post-monsoon period of October to December. The threat of flooding usually occurs in three waves each year: June, August and late September to October.

4.2. BASELINE ENVIRONMENTAL MONITORING

The baseline environmental quality at the Project Site and its immediate surroundings was established by groundwater, wastewater and ambient air quality samples; as well as noise measurements at immediate surrounding areas. The data is presented below.

4.2.1. Weather Condition

The weather condition during 19 August 2019 shows the average temperature of 29 °C while the average humidity is 83 % and its cloudy day. There were raining on the day between 10:00 am and 4:00 pm and the wind speed is 15 to 25 km/h SW direction.

4.2.2. Noise

The Noise level was measured by using Digital Sound Level Meter for working hours on 9, November 2019. The average noise level in the project site area (cutting line), which make noise from cutting fabrics with cutting machine is presented in Table 4-3 compared with NEQ guideline. However, according to the Noise source monitoring at operation area (cutting line) of noise level is slightly exceeding the acceptable level of National Environmental Quality (Emission) Guideline.

Table 4-3 Noise level measurement result

Date and Time	Location	GPS value	Result value	Guideline
19 August 2019 (8:00 am to 5:00 pm)	Operation area	16°59'20.3"N 96°05'13.5"E	72.88 dBA	70 dBA

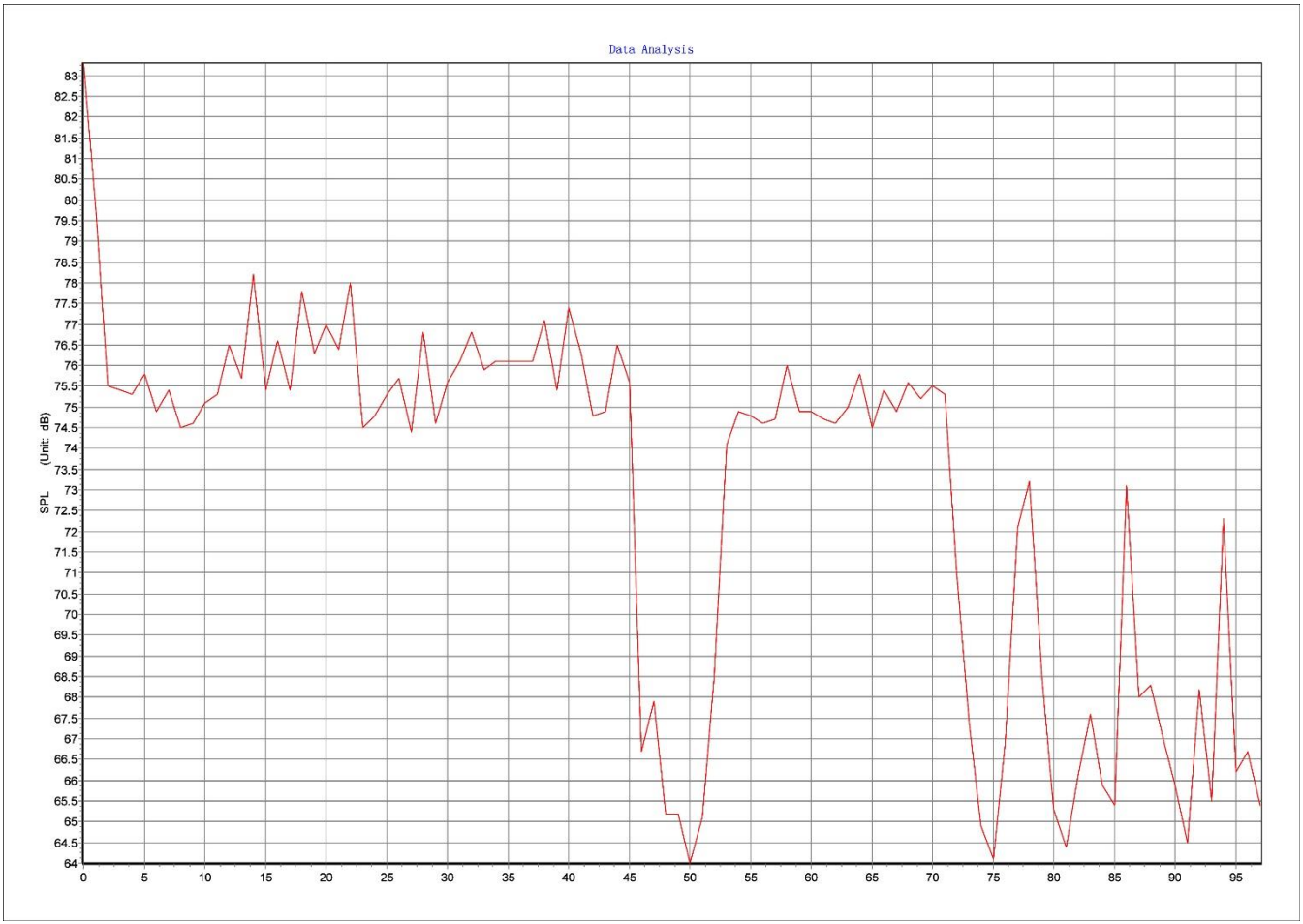


Figure 4-3 Noise level result graph

Figure 4-4 Sound level measurement photo

4.2.3. Light

Activities of the workers in the factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the factory is presented inFigure 4-5. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in garments factory is provided in **Error! Reference source not found.** .

Appropriate lighting is the need for every department, irrespective to the task being handled. Although, there are some areas where focus on maintaining proper illumination is very crucial in a garment factory, like the inspection points (on-floor and in stores), sampling, and the finishing section, as these areas are crucial for the quality of the production. The tasks involved in these areas require high levels of worker focus and accurate lighting to ensure lower errors and defects passing on to the next stage.

However, according to the result of light measurement at operation area (inside the production sector) is in good condition and at the acceptable level of standard.

Table 4-4 Recommended illumination and limiting glare index based on IES Code, 1968

Visual test	Illumination (lux)	Glare index
Casual seeing	100	28
Rough task with large detail	200	25-28
Ordinary task medium detail	400	25
Fairly severe task, small detail (e.g. drawing office, sewing)	600	19-22
Severe, prolonged task, very small detail (e.g. fine assembly, hand tailoring)	900	16-22
Very severe, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300 -2,000	13-16

Source: Koenigsberger, et al. 1975

Figure 4-5 Light quality measurement

Table 4-5 Result of light measurement in Asia Link (Myanmar) Fashion Factory

No	Date and Time	Location	Measure value (Lux)	Standard*
1	19 August 2019, (1:00 pm to 4:00 pm)	Warehouse	380	200-300
2		Cutting Section	709	500-1500
3		Sewing Section	1037.1	500-1500
4		Packing section	1158	500-1500

Lighting standards and codes usually provide recommended illuminance ratios between the task area and its surroundings (EN 12464-1 2002) (CIBSE 1997) (IESNA 2000, 676708).

4.2.4. Ground Water Quality

The baseline data on ground water quality were collected on 8 April, 2019 with respect to WHO Guidelines for Drinking Water Standard and Laboratory analysis results can be seen in Table 4-7 (**Appendix)** for groundwater. The water quality of the nearest water features, which are likely to be affected by the project, was studied with the aim of understanding, preventing and minimizing water pollutions in the public water sources so as to ensure human health and biodiversity. Water quality is one of the key factors affecting the environment and health. Analyzed results of groundwater result compare with Drinking water guideline,

The collected samples (ground water from treated water station at the factory) were tested at ISO Tech Laboratory.

Table 4-6 Coordinated point of water and wastewater collection point

Water Parameter	GPS Value	Location
Ground Water	16°59'21.64"N and 96°05'16.67"E	Within proposed site of Ground water tank

4.2.4.1. Ground water result

Table 4-7 Ground Water quality laboratory results

No	Parameter	Unit	Water result	Drinking standard
1	pH		7.5	6.5-8.5
2	Colour (True)	TCU	Nil	15 TCU
3	Turbidity	NTU	Nil	5 NTU
4	Conductivity	Micro S/cm	36	
5	Total Hardness	mg/l as $CaCO_3$	8	500 mg/l as $CaCO_3$
6	Calcium Hardness	mg/l as $CaCO_3$	6	
7	Magnesium Hardness	mg/l as $CaCO_3$	2	
8	Total Alkalinity	mg/l as $CaCO_3$	6	
9	Phenolphthalein Alkalinity	mg/l as $CaCO_3$	Nil	
10	Carbonate($CaCO_3$)	mg/l as $CaCO_3$	Nil	
11	Bicarbonate (HCO_3)	mg/l as $CaCO_3$	6	
12	Iron	mg/l	0.05	0.3 mg/l
13	Chloride (as CL)	mg/l	2	250 mg/l
14	Sodium Chloride (as NaCL)	mg/l	3	
15	Sulphate (as SO_4)	mg/l	Nil	500 mg/l
16	Total Solids	mg/l	19	1500 mg/l
17	Suspended Solids	mg/l	1	
18	Dissolved Solids	mg/l	18	1000 mg/l
19	Manganese	mg/l	Nil	0.05 mg/l
20	Phosphate	mg/l	Nil	
21	Phenolphthalein Acidity	mg/l	2	

22	Methyl Orange Acidity	mg/l	Nil	
23	Salinity	ppt	0.1	

NG= No guideline

4.2.5. Air Quality

To determine the existing baseline ambient air quality status within the project site on 19, August 2019, 8-hours of working period indoor air pollutants level, which include dust (PM_{10} and $PM_{2.5}$), and on 28 March 2023, outdoor air pollutants level were measured. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission) Guideline. The measurement location points are situated at latitude 16°59'20.3"N and longitude 96°05'13.5"E, and latitude 16°59'19.55"N and longitude 96° 5'14.18"E.

It was observed that the air quality of O_3, CO_2 and SO_2 concentration level are within the limit of NEQ (emission) guideline but particulate matter (PM_{10}, $PM_{2.5}$) and gases level of Nitrogen Dioxide (NO_2) are also within the National Environmental Quality (Emission) Guideline.

Table 4-6 Observed air quality results

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM_{10}	30.2	50	µg/m^3	NEQG	8 hrs
$PM_{2.5}$	8.3	25	µg/m^3	NEQG	8 hrs

NEQ = National Environmental Quality (Emission) Guideline

Figure 4-6 Observed outdoor air quality results

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM_{10}	12.3	50	µg/m^3	NEQG	8 hrs
$PM_{2.5}$	3.4	25	µg/m^3	NEQG	8 hrs
Ozone	60.5	100	µg/m^3	NEQG	8 hrs
Nitrogen dioxide	50	200	µg/m^3	NEQG	8 hrs
Sulfur dioxide	5	20	µg/m^3	NEQG	8 hrs
Carbon dioxide	1	NG	µg/m^3	-	

NG= No Guideline

Figure 4-7 Air quality measurement at the project site

4.2.6. Indoor Temperature and Humidity

The indoor temperature and humidity condition during 19, August 2019 shows the average temperature of 32.24 °C while the average humidity is 73.55 %.

Table 4-7 Relative humidity and temperature measure at Asia Link (Myanmar) Fashion factory

Date and Time	Description	Result value	Environmental parameter air station guideline
19 August 2019 (10:00 am to 4:00 pm)	Relative Humidity RH %	73.55 (%)	Present condition
	Temperature	32.24 °C	Present condition

Figure 4-6 Temperature and Humidity measurement in operation area of the factory

Figure 4-8 Monitoring Map

4.3. BIOLOGICAL COMPONENT

The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Thar Du Kan industrial zone. The Project Site is a built-environment and the species of flora surveyed at the site are native species uncommon to the Yangon area. There were no protected species or species of conservation value identified.

4.4. SOCIO-ECONOMIC COMPONENT

4.4.1. Population

Asia Link (Myanmar) Fashion factory is located across Shwe Pyi Thar Township in Yangon Region. In 2017, the population of Shwe Pyi Thar Township is about 272,721people as present in Table 4-8.

Table 4-8 Population of Males and Females at Shwe Pyi Thar Township (2017)

Item	Older 18 year			Younger 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	78,154	89,908	168,062	31,725	33,061	64,786	109,879	122,969	232,848
Rural	14,081	15,965	30,046	5,375	5,452	10,827	19,456	21,417	40,873
Total	92,235	105,873	198,108	37,100	38,513	75,613	129,335	144,386	272,721

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

4.4.2. Religion

The different kinds of religion present in Shwe Pyi Thar Township are shown in Table 4-9. More than 90% of the people living in the township are Buddhists.

Table 4-9 Religion in Shwe Pyi Thar Township (2017)

Township	Buddhist	Christian	Hindu	Muslim	other	Total
Shwe Pyi Thar	258,467	7,072	2,716	5,266	200	272,721

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

4.4.3. Local Economy

Among regional towns, Shwe Pyi Thar Township has a variety of businesses and services operating in the community with other businesses/services, based in the region. Most of the source of livelihood in the Township is employment of factory. Services and facilities available include:

- post office
- beauticians
- butcher
- hairdressers
- furniture and electrical store
- restaurants
- cafes
- shoe and clothing shops
- industrial services
- pharmacy

- veterinarian
- bus service
- gift stores
- music store
- pubs and bars
- florist

4.4.4. Public Infrastructure and Access

4.4.4.1. Communication and Transportation

Major transportation route in Shwe Pyi Thar Township are railway, port, and car road as presented in Table 4-10.

Table 4-10 Transportation route

Categories	Township		Miles
	From	to	
Railway (Yangon-Pyay railway)	Hlwaga	1 ward	4/2
Inland water way	18 ward	Hlwaga	4.2
Bus line (39, 40, 42, 44, 65, 69, 72, 73, 74, 77)	Hlwaga	Downtown area	
Car (No 4. Main road)	1 ward	Hlwaga	

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

4.4.4.2. Electricity

The electricity demand of Shwe Pyi Thar Township is higher and higher due to the normally increased in population and infrastructure.

4.4.4.3. Education

Location of major schools were situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S), basic education high school (B.E.H.S) and university, in the Shwe Pyi Thar Township. The name and the located village tract/ ward of schools are described in Table 4-11.

Table 4-11 List of major school in Shwe Pyi Thar Township

No.	Name of School	Location
1	Computer University Yangon	Kyaung Kone Village Tract
2	BEHS (1)	No 6. Ward
3	BEHS (2)	Hlawga Village Tract
4	BEHS (3)	No 8. Ward
5	BEHS (4)	ZeeKone Village Tract
6	BEMS (Branch) (2)	No 19. Ward
7	BEMS (Branch) (3)	No 5. Ward
8	BEMS (Branch) (4)	No 9. Ward
9	BEMS (Branch) (8)	No 23. Ward
10	BEPS (1)	Hlawga Village

No.	Name of School	Location
11	BEPS (5)	No 15. Ward
12	BEPS (6)	No 17. Ward
13	BEPS (7)	No 9. Ward
14	BEPS (9)	No 11. Ward
15	BEPS (10)	No 14. Ward

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

4.4.4.4. Health Status

The diseases of high prevalence reported in 2013 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2014 of Shwe Pyi Thar Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in **Error! Reference source not found.**2 and **Error! Reference source not found.**3.

Table 4-8 Common Diseases in the Shwe Pi Thar Township

Disease	Shwe Pyi Thar Township	
	Morbidity	Mortality
Malaria (Per 100000P)	3.2	-
ARI (Per 100000<5Children)	681	-
Diarrhea (Per 100000P)	126	-
TB (Sputum+) (Per 10000P)	152	-

Table 4-9 Lists of hospital in the Shwe Pyi Thar Township

Hospital Name	Beds/Services	Responsible
Township Hospital	25	Government

Source: Department of Administrative Shwe Pyi Thar Townships, Regional data (www.gad.gov.mm.com)

4.5. CULTURAL AND VISUAL COMPONENTS

Shwe Pyi Thar Township is growing into a busy and vibrant community. The population fluctuates; however, there has been steady growth over the last decade. It tends to be a stopover on a journey rather than a destination. It has a number of sites that are interesting; however, there is no main attraction. Visitors to the town are generally visiting for work, investment or family reasons.

5. ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

5.1. METHODOLOGY FOR THE ASSESSMENTS

The assessment of each impact is based on consideration of the magnitude, duration, spatial and frequency of activities, which are going to be carried out during three phases and characteristics of the project site. The assessment is qualitative and the significance of each impact is classified into 5 categories in overall.

The following methodology has been applied to assess the environmental impacts of the factory mainly on air, water, land, biodiversity, including human beings. Each source of impact has been assessed by four parameters, magnitude, duration, extent and probability and each assess point have 5 scales as mentioned in Table 5-1:

Table 5-1 Impact assessment parameters and its scale

Assessment	Scale				
	1	**2**	**3**	**4**	**5**
Magnitude (M)	Insignificant	small and will have no effect on working environment	Moderate and will result in minor changes on working environment	High and will result in significant changes on working environment	Very high and will result in permanent changes on working environment
Duration (D)	0 - 1 year	2 - 5 year	6 - 15 year	Life of operation	Post Closure
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite

Then, the Significant Point (SP) is calculated by following formula.

Significant Point (SP) = (Magnitude + Duration + Extent)* Probability

Impact Significance: Based on calculated significant point, impact significance can be categorized as follows:

Significant Point (SP)	Impact Significance
<15	Very Low
15-29	Low
30-44	Moderate
45-59	High
60	Very high

5.2. IMPACT IDENTIFICATIONS

The development of infrastructure for the proposed project likely to happen changes in the local environment in terms of physical, biological and socio-economic aspects along with the perspective on both positive and negative impacts. The potential environmental impacts brought by various activities of proposed factory project will be identified and judged by site surveying with checklist, meeting with client team, including plant manager and supervisor, representatives from the factory operators and assessing the environmental baseline information for operation and decommissioning phases along with its mitigation measure.

5.2.1. Positive Impact

During the project implementation, local people can get job opportunities in administrative sectors, office works, transportation sectors, skill and unskilled workers, etc. Due to the implementation of the project, there will be employment opportunities especially for workers from the local community. Employees will also improve more in their professional knowledge and skills. The net effect of job creation is the improvement of the livelihoods and living standards of the beneficiaries and poverty reduction, development of local people's livelihood. Cause of the proposed project is located in Thar Du Kan Industrial Zone, there may have business opportunities to local people. Local people can have a market by selling foods, snacks and drinks nearby the factory.

5.2.2. Negative Impact

The following Figure 5-1 briefly described the potential negative impacts of the proposed project. There are four main types of impacts; impact on environmental resources, impact on ecological resource, impact on human and impact of waste generation.

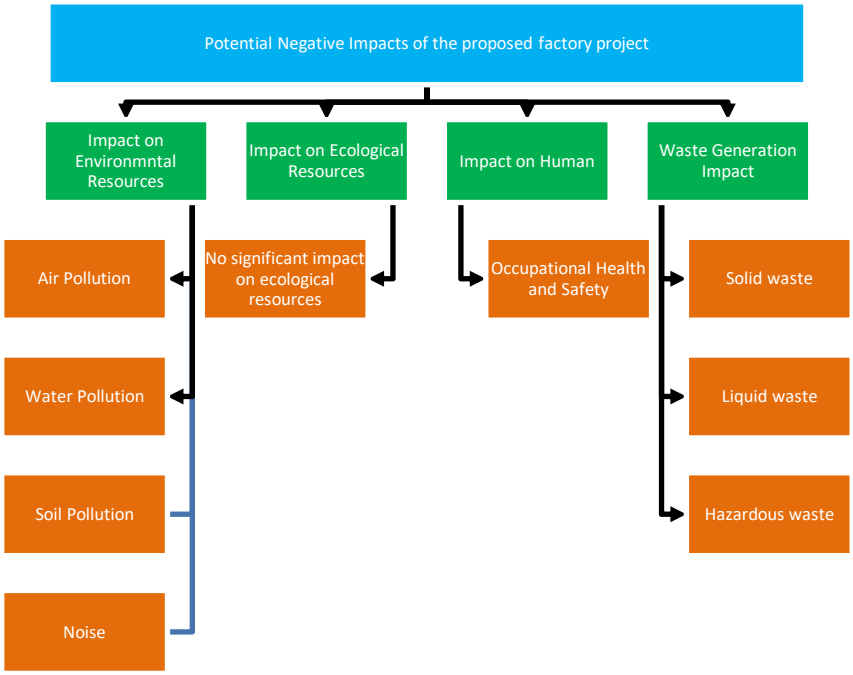


Figure 5-1 Potential negative impact affect from proposed factory project

5.3. IMPACT ON ENVIRONMENTAL RESOURCES

5.3.1. Impact on Air Quality

The project factory is already constructed during environmental assessment study and site visit. During construction phase, dust emission was addressed as potential environmental impact and is expected to be non-significant because the construction phase is a short-term affect. So, we are not assessed potential environmental impact during construction phase.

During the operation phase, there is no emission of smoke from the process of production. Particulate matters are generated during cutting and pressing the raw materials. But that particles amount is low. Dust particles, CO2 and SO2 would be emitted from the activities of loading, unloading and transportation of the raw materials and final product. Various activities as cooking from kitchen, using air conditioners in office building, storage of raw materials, vehicles movements, operating diesel generators and boiler combustion would also be a factor slightly affecting to air quality.

Though main electricity source for the factory is the national grid line, sound-proof diesel generators will be set-up in case of electricity shortages. So, 350 kVA, 60 kVA of standby generator will be used for both operation and administration appliances. The proposed project will use annually 1,660 gallons of diesel for vehicles such as transportation vehicle and emergency use of a generator. The following table shows the amount of CO_2 emission coming from the combustion of fuels.

Burning diesel or other fuels creates exhaust gasses. Diesel generators produce carbon dioxide (CO2), nitrogen oxide (NOx), and particulate matter. These generators and boiler release this into the atmosphere and substantially reduce air quality in the nearby regions. Every liter of fuel has 0.73 kg of pure carbon, 2.6 kg of carbon dioxide released per liter of diesel fuel.

Category of GHGs Assessment

Category	Range
Negligible	no GHG assessment necessary
Low	< 20 kt/y CO_2-equivalent per year
Medium-Low	20 – 100 kt CO_2- equivalent per year
Medium-High	100 kt – 1 Mt CO_2- equivalent per year
High	>1 Mt CO_2-e equivalent per year

Source: EBRD GHG Assessment Methodology, 2010

CO_2 Emission by the Uses of Fuel

No.	Type	Amount(gallon/year)	Equivalent CO2 emission (Kilotons)	Status
1	Diesel for generator	19,700	0.9131	Negligible

Furthermore, likewise the construction phase, negative impact on ambient air quality such as emissions of dust particles emission from the movement of vehicles used for carrying decommissioned materials and gaseous emission from these vehicles and machines can be expected during the decommissioning phase of the proposed project after its lifespan, 50 years.

5.3.2. Impact on Water Quality

During the construction period, water consumption is for implementation of the construction works and domestic water usage by construction workers. Surface water and ground water could be contaminated from the several activities of construction works such as mixing of the concrete, wetting of dry surfaces, washing of the equipment, etc. Moreover, oil spill from the vehicles and machinery can pollute water quality and can enter into the ground water and run into near river during the rainy season. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During operation phase of garment manufacturing factory, there is no water use for processing purpose. Tube well is the main source of raw water for factory waster use. The raw water is provided for the whole factory use of general office facilities such as canteen, toilets and kitchen. Moreover, sewage disposed from the employees, staffs, oils spill and grease leakage from transporting vehicles and machinery equipment used in operating the production of garment can seriously pollute the quality of underground water source. But the factory plans to use separate waste water channels, septic type toilet system and sewage treatment plants in accordance with YCDC guidelines to avoid potential contaminations and hazards by waste water and sewages. So, it can cause low impact to the water quality.

During the decommissioning phase, oil spill from the demolished vehicles and machinery can penetrate into the ground water quality. Water can also be contaminated by activities related with decommissioning works and waste disposed by workers.

5.3.3. Impact on Soil Quality

During the construction phase, the excavation works from the construction activities must be the major impact on soil. The soil is compacted by the vehicles and the solid waste disposal improperly by the workers can affect the soil quality. Oil spillage from the vehicles could be also polluted to the soil. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During the operational phase, there is no significant impact on soil quality due to garment manufacturing activities because concrete road facilities have been implemented at the whole project site area. However, there may be effect on soil if wastes from the operation period are disposed improperly.

During the decommissioning phase, transportation of decommissioning materials and transferred of heavy machinery may happen oil leakage and lubricants, and thus it can lead to impact on soil. Moreover, hazardous releases of materials or oil utilized in the infrastructure can contaminate the existing soil during the decommissioning phase.

5.3.4. Impact of Noise

During the construction phase, significant impact on noise and vibration to surrounding environment must be generated from the movements of vehicles, operating the machinery, excavation activities and transportation of equipment and construction materials by heavy trucks. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located in industrial zone and already finished the construction, the potential

impact on noise and vibration is not assessed and short-term affect must be caused the construction period is temporary.

During the operation phase, noise impact may be a significant impact for Garment production sectors. The significant sources of noise impact activities are the operation of various machinery and equipment listed in for sewing line, cutting line and the emergency used of generator, vehicles and automobile movements (short-term noise) will be noise impacts sources. According to the noise results of 8 hours continuously measurement, at the source of operation area inside the factory and within the factory area are slightly exceeding the noise level of 70 dB of NEQ (emission) guideline. Therefore, no obvious influence can be caused expected to environment.

During the decommissioning phase, the heavy vehicles, machineries and equipment used for decommissioning activities can affect the noise level and vibration of the area.

5.4. IMPACT ON ECOLOGICAL RESOURCES

The proposed project is located in the industrial zone. Therefore, there is no wildlife, forests, protected area, coastal resource or mangrove area and rare and endangered species are found around the project area. The nearest water body is Pan Hlaing River which is running south to north and later join into the Hlaing River in the east.

5.5. IMPACT ON HUMAN

5.5.1. Socio-economic

The proposed project is the long-term investment in the industrial sector. Most of the impacts of the proposed project on socio-economic environment may be positive. Implementation of proposed project may create temporary employment during construction and decommissioning phases and permanent jobs in the operation phase. Subsequently, socio-economic standards of local people will be increased and eventually it may lead to the economic growth at local and regional level.

5.5.2. Occupational Health and Safety

During the construction phase, significant accidents and injuries like electric shocks, falling from heights, chemical exposure, crushing injury, fire hazards can be occurred due to the construction activities including metal grinding and cutting, concrete work and welding the metals. Moreover, accidents and injuries to workers and local communities could be caused from heavy vehicles movement for the transport of construction materials and equipment. Small injuries due to slips, headache and sickness must be caused of the noise, air pollution and odor could also be affected to the workers and local people. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During the operation phase, using the machinery for production process can get injuries. Noise from the generating of the machine and generator may also affect the health of people working in the project area. Fire and explosion hazards are mainly cause from the storage of raw materials and poor management of waste disposal. The usage of fuel must carefully handle because spillage and leakage of oil and grease can cause ignition of fire. Domestic wastewater or grey water produced from canteen, kitchen and toilets will cause enormous breeding of mosquitos, which can lead to diseases like malaria and dengue fever, if not carefully managed.

During the decommissioning phase, activities related with decommissioning process can cause injuries and can affect the health of decommissioning workers

5.5.3. Waste Disposal

5.5.3.1. Solid Waste

During the construction and decommissioning phase, various kinds of solid wastes will be generated. These wastes will be collected and clean every day to avoid any undesirable working condition and environmental impacts. Based on their types (glass, metal, plastic, wood, cement residues, oil spills and paper based), these solid wastes will be collected separately in rubbish bins and regular and proper disposal will be done in accordance with YCDC guidelines.

In the operation phase, major solid wastes of the proposed garment factory may be generated form production lines, cutting and packaging. Factory shall use textile, thread and carton box as raw materials. The residual pieces of the fabric scraps from the production lines and cutting line used carton box, plastic sheet from the packaging are the main source of solid waste. In addition to factory solid waste, canteen, kitchen and dormitory will produce solid wastes mainly personal remnants, household wastes and food residues.

5.5.3.2. Liquid Waste

There may be expected no significant liquid waste from the construction and decommissioning phase. The main source of the liquid waste of these two phases may be from the sanitary wastewater.

During the operation phases, sanitary wastewater from the usage of toilet facilities, kitchen and canteens will be discharged as liquid waste. All of the liquid waste will be collected in septic tanks which are attached with proper sewage treatment tanks (as mentioned in factory site plan) and regular monitoring should be done in cooperation with YCDC and follow the YCDC guidelines for proper disposal.

5.6. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS

The relative importance 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 5-2 Evaluation and Perdition of Significant Impacts

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Construction Phase; It is not assessment in this phase, because of construction is already completed during EMP preparation.							
Operation Phase							

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
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 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 operation phase	2	4	2	3	24	Low
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	5	2	4	40	Moderate
Solid waste	• residual pieces of fabric scraps 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, spills 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

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
	• Transportation of demolished materials						
Water pollution	• Sewage form decommissioning workers • Demolition machinery equipment	3	1	1	3	15	Low
Soil Contamination	• Decommissioning of buildings and related materials • Transportation 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	2	1	1	3	12	Very Low
Hazardous waste	• Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Decommissioning 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. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project.

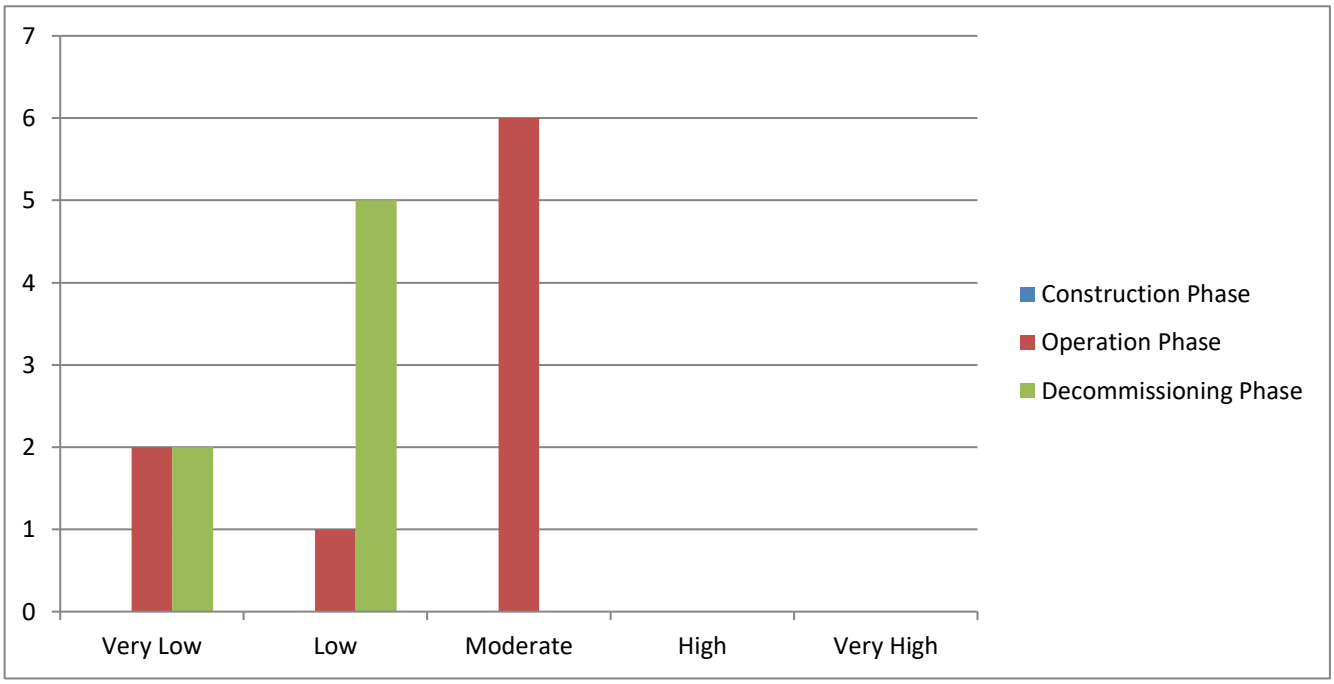


Figure 5-2 Impact significance of the proposed factory project

5.7. MITIGATION MEASURES OF IMPACT ON ENVIRONMENTAL RESOURCES

5.7.1. Recommended Air Impact Mitigation Measures

During the operation phases, ventilation system of the factory is enough for the workers cause the proponent has installed about 40 Moist Fan around the factory building. To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. Since the factory compound area is paved with concrete, dust emission from the movements of vehicles and cars is not significant. The project proponent must install good exhaust system at the kitchen to reduce adverse impacts of indoor air quality. The factory uses chimney for generator and steam boiler through which the flue gas is emitted for reducing the impact of stack emission on environment. Monitoring and check installed cyclones and ventilation system. Ensuring vehicles, compressor and generator are well maintained.

During the decommissioning phases, the impact on air quality can be controllable and reduced to minimum level and minimized dust emissions from material handling sources. Sprinkling water on the top soil can reduce dust emission from the demolishing activities. In the proposed project area, vehicle movements should be limit and maintain and check the vehicles and machineries regularly. Burning the demolished materials and residual wastes must not be allowed.


Figure 5-3 Moist fan and generator photo

5.7.2. Mitigation Measure of Impact on Water

During the operation phase, water discharge from the factory site will be treated by silts track tank before discharging. Water effluent levels should be within acceptable limit of the National Environmental Quality (Emissions) Guidelines values. The factory plan has canteen and toilet facilities attached in various buildings of the factory. And around the compound area of the project area, drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. The existing drainage at the project area can be seen in Figure 5-4. Besides, the factory plans to use separate wastewater channels, septic type toilet system. Wastewater from the dining room, canteens and toilet facilities are collected in septic tanks which are attached with sewer treatment plant and the proponent will connect and cooperate with YCDC every 3 months (depending on the number of employees) to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory have to maintain and clean regularly. Spillage and leakages of oil and grease should also be minimized.


Figure 5-4 Drainage and Septic tank in project area

During the decommissioning phases, appropriate sanitary facilities should be provided for demolishing workers. An accidental spill of fuel and oil should be avoided. Wastes generated from the demolishing activities should not be disposed directly into the drainage channels.

5.7.3. Mitigation Measure of Impact on Soil Contaminate

During the operation phase, the compound area of the factory area will be paved with concrete and hence, contamination due to the oil spillage at this area is insignificant. But refilling fuel must be done with great care for preventing spillage.

During the decommissioning phase, impact on soil can be mitigated by using modernized machineries, these machines would be maintained regularly and isolated maintenance area would be identified. Any accidental spills of fuel, oil or other hazardous waste must be avoided. Construction wastes and demolishing debris should be disposed properly.

5.7.4. Mitigation Measure of Impact on Noise

During the operation phase, all preventive measures such as regular operation and maintenance of pump motors and compressor should be carried out and enclosures will be provided to abate noise levels at source. Using modernized low noise machines should be used if possible. Noise equipment should not be permitted during night hours as much as possible. Used of Generator should be housed in a suitable acoustic enclosure. Noise impact to employees shall be minimized by providing earmuffs and ear plugs to those working near the noisy machines.

During the decommissioning phases, temporary noise pollution can be controlled by planning regular maintenance for decommissioning vehicles and machines. Moreover, construction and decommissioning activities should not be worked during nighttime.

5.8. MITIGATION MEASURES OF IMPACT ON HUMAN

5.8.1. Mitigation Measures on Fire Hazard

The project proponent has provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must

be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 25,000 gallons at the proposed area. The emergency contact numbers 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, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. The plan to install fire alarm system and fire-frightening system are mentioned in below.

Figure 5-5 Firefighting plan and Escape plan

5.8.2. Mitigation Measure for Occupational Health and Safety

The proposed project has a clinic and a nurse. Medicines and first aid kits are provided in this clinic. Moreover, these medicines and first aid are provided for emergency cases of workers. First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for workers. According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures. The project proponent must manage the drainage systems of the factory to prevent health risk of the workers.

The Occupational Safety and Health Administration (OSHA) have recommended permissible noise exposure limit for industrial workers, which is based on 90 dB (A) for 8 hours exposure a day with 5dB trading rates. The limits are mentioned in. According to OSHA, the maximum allowable noise level for workers is 90 dB (A) for 8 hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas, need to provide if actual noise level monitoring results are more than 90 dB (A) at the work site for working time hours for 8 hours.

Table 5-3 Permissible exposure of noise limits

Total Time of Exposure Per Day in Hours	Noise Level dB(A)
8	90
6	92
4	95
3	97
5	100
1	105
½	110
¼	115

5.8.3. 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 also conducted the first aid training by Myanmar Red Cross Society. Adequate number of first-aid kits are listed and made available at all workplaces and contacts of medical providers, hospitals will be notified. The followings 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

Figure 5-6 Factory Clinic

5.8.4. Mitigation Measure of Waste Generation

During the operation phase, the project proponent provides separate garbage bins at each building. The total number of garbage bins in the factory is about 25. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste houses: Non-hazardous Waste Production related house, Hazardous Waste Production related house, Non-Hazardous Waste Non-Production related house and Hazardous Waste Non-Production related house and final wastes will be disposed by using YCDC's service weekly.

Figure 5-7 Waste management

During the decommissioning phase, some of demolished solid wastes must be recycled and the other solid wastes should be stored in dedicated waste storage area in the project site and transferred to YCDC for final disposal.

6. ENVIRONMENTAL MANAGEMENT PLAN

6.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the P-D-C-A cycle (Figure 6-1). Environmental management consists of four related tasks as described below:

- Plan (P) - What need to be done

Mitigation measures for the potential environmental impacts of the factory such as air emission, noise, solid waste, wastewater and health and safety at work are described in this chapter. The Project Proponent will follow the plan for the mitigation measures according to the scheduled time.

- Do (D) - Implement the plan

The mitigation measures for the potential environmental impacts will be implemented appropriately by the Project Proponent as described in this chapter.

- Check (C) - Monitor and evaluate the results of implementation

The effectiveness of the mitigation measures will be monitored, evaluated and documented.

- Act (A) - Taking corrective actions to improve the results, if found inadequate

If nonconformities are noted with reference to the environmental monitoring benchmarks, corrective actions need to be planned to mitigate the existing environmental impacts.

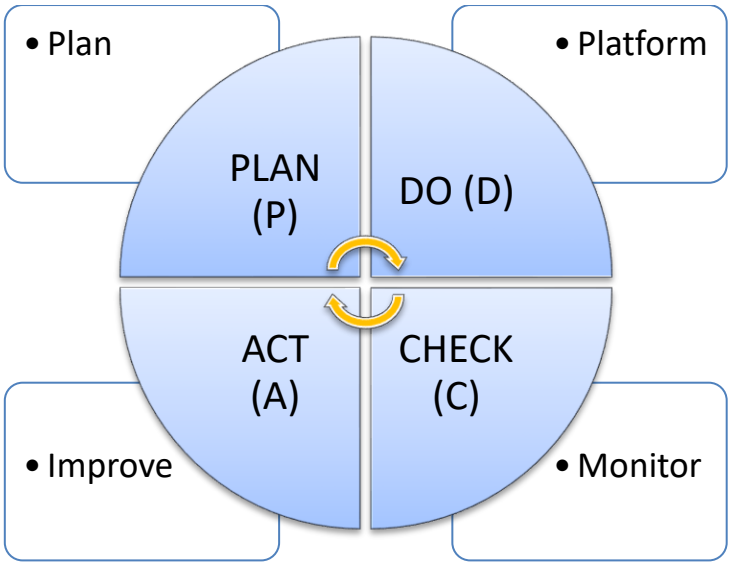


Figure 6-1 PDCA cycle

6.1.1. Institutional Requirement

Asia Link (Myanmar) Fashion Company Limited will manage the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and monitoring of EMP and Environmental Monitoring Plan (EMP) as well as coordination with local authorities and the nearby

communities. The HSE Team also makes regular review of EMP to cover all potential impacts, amendments and modifications.

6.1.2. Responsibilities of the EMP

In order to ensure the sound development and effective implementation of the EMP, it will be necessary to identify and define the responsibilities. The environmental management practices, procedures, and responsibilities are defined herein to get full compliance with the existing environmental policy, laws, rules and regulations of the Republic of the Union of Myanmar. The following entities should be involved in the implementation of this EMP:

Asia Link (Myanmar) Fashion Company Limited: The proponent will be charged with the responsibility for ensuring that the proposed development has been accomplished in an environmentally sound manner. This can be achieved by inclusion of environmental specifications in the tender specifications, selection of environmentally conscious contractors, and supervision to ensure that the objectives of this EMP are met. The implementation of Environmental Management Plan (EMP) process will prepare and follow up by appointed persons for health, safety, and environmental management under the instruction of management team of Asia Link (Myanmar) Fashion Company Limited for EMP implementation facilities.

ECD (Yangon Region): The responsibility of ECD is to exercise general supervision and coordinating over all matters relating to the environment and to be instrumental in providing guidance for recognized regulatory frameworks.

Third-Party Environmental Consultant: The environmental consultant will have to ensure that the proposed EMP is up to date and is being followed properly by the proponent. Periodic audits of the EMP will have to be done to ensure that its performance is as expected, by comparing with operating standards so that any corrective actions can be taken.

6.1.3. Structure and Responsibilities for the EMP Development and Implementation

The HSE officer is responsible to the HSE components of the project and on matters relating to the implementation of the EMP throughout operation life. The S&E officer will have responsibilities that include:

- Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;
- Carry out a thorough initial site inspection of environmental controls prior to work commencement;
- Record and provide a written report to the General manager and production team of non-conformances with the EMP and require the HR supervisor to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP;

The EMP for Asia Link (Myanmar) Fashion Company Limited 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 of activities by Asia Link (Myanmar) Fashion factory are as follows:

6.2. AIR POLLUTION/DUST MANAGEMENT PLAN

Objectives:	• To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement. • To comply with relevant government rules	
Relevant government law and rule	• National Environmental Quality (Emission) Guidelines (2015)	
Time Frame	• Entire life spans of proposed project operation	
Management Plan	• The factory has planted trees in its premises which reduce the carbon emission by the factory and minimize the air pollution • Periodic maintenance of generator is conducted • There is no open burning of waste materials at the site • Workers are provided mask during working in any dusty area	
Monitoring and Reporting	• Frequency	Biannually
	• Monitoring Point	Indoor and Outdoor of proposed project
	• Parameters	$PM_{2.5}$, PM_{10}, SO_2, NO_2, O_3
Estimated Cost	• 1000000 Kyats per year	
Responsibility	Management of the factory; • Head of maintenance-Total implementation of above of air pollution management plan • Production manager-Air quality in the production area is good enough • Manager -To hire organization/independent third party testing air quality • EHS officer-Monitor the hygiene of ambient air quality in surrounding of the factory	

6.3. NOISE MANAGEMENT PLAN

Objectives:	• To avoid nuisance noise to nearby residents generated from generator and other machineries. • To comply with noise standard of National Environmental Quality (Emission) Guideline
Relevant government law and rule	National Environmental Quality (Emission) Guidelines (2015)
Time Frame	Throughout the project life
Management Plan	• Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment. • A speed limit of 20 km/h has been imposed for vehicles on the transport route. • Provide sufficient personal protective equipment (PPE) at the work place • All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area. There are about 300 employees who have attended the training on wearing PPE in noisy area twice a year.

Monitoring and Reporting	• Frequency	Biannually
	• Monitoring Point	Two points in operation area (especially cutting and sewing)
	• Parameters	Sound Decibel
Estimated Cost	• 500000 Kyats per year	
Responsibility	Manager • To hire organization/independent third party testing noise level • Ensure that all workers use PPE during operation	

6.4. SOLID WASTE MANAGEMENT PLAN

Objectives:	• To minimize waste generation by developing strategies for the management and disposal of all waste in a manner that is sustainable and sensitive to the environment • To comply government waste management policy
Relevant government law and rule	National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	Entire life spans of proposed project
Management Plan	• The factory does not dispose any kind of solid waste on the factory premises or not dump in the surface water like local pond, canal or river, etc. • The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs, empty chemical container is stored another in separate place of storage area. About 273 kg per week are stored in two waste storage facilities and hand over to YCDC waste collector. • About 100 kg of recycle wastes per week like cloth scrap, carton box, plastic sheet, etc. are hand over to local buyer for reuse and waste-tracking record shall be kept. • The metal or glass waste of electric bulb is taken by the suppliers to recycle them. • The daily domestic waste of workers hands over to YCDC waste collector to collect every day. • Daily wastes are stored clearly labeled containers and in such a manner that all related personnel are provided proper training about the relevant issues. • Garbage collection staff must wear PPE to avoid injury.
Monitoring and Reporting	• Daily waste has to be collected and handover to YCDC waste collector • The inventory record of waste disposal will be maintained as proof for proper management as designed
Estimated Cost	• 50000 Kyats per month
Responsibility	Manager (HR) • Responsible for overall site cleanliness and waste management • Regular waste collection to minimize excessive waste storage

6.5. WASTEWATER MANAGEMENT PLAN

Objectives:	• Prevent pollution underlying groundwater sources	
Relevant government law and rule	• National Environmental Quality (Emission) Guidelines (2015)	
Time Frame	• Entire life spans of proposed project	
Management Plan	• Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity. • Regular check and maintain sewerage facility. • Clean the factory‘s drainage to avoid odor emission and to avoid the block of water flow weekly.	
Monitoring and Reporting	• Frequency	Biannually
	• Parameters	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	• Proper maintenance of drainage and sewerage system will be conducted periodically	
Estimated Cost	• 500000 Kyats per year	
Responsibility	• Manager -To hire organization/independent third party testing wastewater quality • EHS officer-Monitor the condition of factory’s drainage and sewerage system	

6.6. ENERGY MANAGEMENT PLAN

Objectives:	• The energy management is aimed at minimizing electricity use results from site equipment and working lighting • Comply with the standard of energy use
Relevant government law and rule	• National Energy Management Committee (Myanmar Energy Master Plan 2015)
Time Frame	• Once in a year throughout the factory life
Management Plan	• Installation of timers and thermostats to control heating and cooling • Energy saving light installed in different area of the factory for saving energy • Used of energy saving devices must be installed • Ensure that good housekeeping measures such as turning off equipment and lights when not in use
Monitoring & Reporting	• Conduct annual energy efficiency of adult to find out the scope for energy saving
Estimated cost	• Approximately 1000000 Kyats per year
Responsibility	Manager • To arrange energy audit technical personnel

	• To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises

6.7. WATER CONSUMPTION MANAGEMENT PLAN

Objectives:	• The water consumption management is aimed at minimizing ground water use
Relevant government law and rule	• The Underground Water Act (1930)
Time Frame	• Once in a year throughout the factory life
Management Plan	• Install water meter near water storage tank for internal control of water consumption. • All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption. • The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles. • Trees plantation surrounding the factory.
Monitoring & Reporting	• Daily visual inspections
Estimated Cost	• 500000 Kyats per year
Responsibility	Manager • Arrange audit on water usage controls environmental officer

6.8. EMERGENCY RESPONSE AND DISASTER MANAGEMENT PLAN

Objectives:	• Reduce the risk of accidents at the factory area
Relevant government law and rule	• The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)
Time Frame	• Entire life spans of the factory operation
Management Plan	• The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm • Provision and inspection of firefighting equipment and fire hydrant system in all the sections. There are 50 fire extinguishers and 3 fire hose reels. • A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers. • Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training. • Regular fire drill operation is conducted. • Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training.

	• Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals. • A medical team has been prepared for primary treatment (First Aid) • Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy. • Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management • Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety.
Monitoring & Reporting	Weekly check fire extinguishers and water hydrant in position Daily inspect that all fire exist are open • Servicing fire extinguisher and records accidents,
Estimated cost	• Approximately 1500000 Kyats per year
Responsibility	Manager and EHS officer • Arrange firefighting training after every 3 months • Responsible for fire control and response • Monitoring daily danger warning and bans

Figure 6-2 Emergency exit layout plan and warning signs

6.9. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

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 6-1 is provided the environmental monitoring schedule for Asia Link (Myanmar) Fashion factory. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

Table 6-1 Environmental monitoring schedule for Asia Link (Myanmar) Fashion Company Limited

Issues	Parameter	Frequency	Area to be monitored	Monitoring Cost	Responsible section
Operation Phase					
Air quality	PM2.5, PM10, O_3, SO_2, NO_2, CO_2	Biannually	One point in the production area (16°59'19.55"N and 96° 5'14.18"E)	500000 Kyats	Environmental Management Team, Asia Link (Myanmar) Fashion Company Limited
Noise	Noise level in decibel (dBA)	Biannually	Two points (point source in operation area and sensitive receptor) 16°59'20.3"N and 96°05'13.5"E	1000000 Kyats	Environmental Management Team, Asia Link (Myanmar) Fashion Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Regularly	Recycle house and waste house and at the factory office (16°59'20.3"N and 96°05'13.5"E)	1000000 Kyats	Environmental Management Team, Asia Link (Myanmar) Fashion Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory (16°59'20.3"N and 96°05'13.5"E)	500000 Kyats	Environmental Management Team, Asia Link (Myanmar) Fashion Company Limited
Light intensity	Illuminance	Biannually	At the production line (especially cutting and QC) (16°59'20.3"N and 96°05'13.5"E)	500000 Kyats	Environmental Management Team, Asia Link (Myanmar) Fashion Company Limited
Decommissioning Phase					
Air quality	PM2.5, PM10	One time during this phase	One point in the production area	500000 Kyats	Asia Link (Myanmar) Fashion Company Limited
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1000000 Kyats	Asia Link (Myanmar) Fashion Company Limited
Rehabilitation	Recovering and Revegetation		All decommissioning area		Asia Link (Myanmar) Fashion Company Limited

6.10. CAPACITY BUILDING AND TRAINING PLAN

The emergency preparedness is vital, as quick and correct response is necessary in case of emergency to reduce injuries, harm and other damage. Care should be given for during processing activities in order to prevent synthetic errors and accidental cases (e.g., electricity shock and fire hazards).

The emergency response plans should be established for handling all foreseeable emergencies in the workplace and must provide the following;

6.10.1. Assignment of Responsibilities

All senior staff such as a line/production manager or safety officer should be assigned to lead the emergency response team and charged with the duties of (1) assessing the emergency and taking necessary actions (2) overseeing the implementation of the emergency response plan (3) organizing regular drill (4) ensuring all emergency equipment is well maintained.

6.10.2. Emergency Procedures

Emergency procedures are operating instructions for employees to follow in emergency case

About work safety in the concerned processing, the management team should

a) Identify and list out all possible emergency situations in the workplace
b) Assess the effects and impacts of the emergency situations
c) Establish emergency response plans
d) Provide and maintain emergency equipment and other necessary resources
e) Ensure that staff are familiarized with the arrangements in case of emergencies by providing procedural instructions and employee training and organizing drills

6.10.3. Training for Emergencies

The type, amount and frequency of training varies, depending upon the task's employees are expected to perform. Although training must be provided to employees at least annually, safety meetings and drills should be conducted at more frequent intervals.

Regardless of the specific type of facility, training should include, though not be limited to the following;

- Hazard recognition and prevention (fire, explosion, etc.)
- Proper use of fire extinguishers
- Emergency reporting procedures
- Preventive maintenance
- Hazardous materials spill response
- First Aid

6.10.4. Fire Prevention and Protection

The fire prevention and protection program must address the following topics:

Prevention; policies, practices and procedures designed to keep the conditions necessary for a fire from coming together

- Hot work permits
- Lockout/tag out policies
- Design specifications for storage of flammable materials

Severity reduction; policies, practices and procedures designed to reduce the spared of fire and end the fire.

- Emergency plans
- Alarm systems
- Portable fire extinguishers
- Fire Protection Equipment

Cleanup; policies, practices and procedures designed to return the affected area to an operational level and reduce other losses created by improper cleanup

- First aid
- Removal of debris to an appropriate waste site
- Equipment and facility repair

6.10.5. Fire Protection Equipment

1. Explosion Suppression Systems: Explosion suppression systems should be used in unusually hazardous areas such as elevator legs, boots and head, or in areas such as bins, distributors and tanks.

2. Portable Fire Extinguishers: All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:
   - Correct type of extinguisher to use on different classes of fire
   - Proper techniques for use of the equipment to extinguish a fire
3. Standpipes and Hoses: All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.

4. Automatic Sprinkler Systems: Automatic sprinkler systems are recommended in areas containing combustible materials.

5. Fire Hydrants: All grain and feed mill facilities should have adequate public or private fire hydrants on site. Each fire hydrant should have an adequate water supply.

6.10.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

- Emergency escape routes must be clearly shown on floor plans and workplace maps
- Employers must know that their employees know the emergency escape routes
- Procedures for employees who must remain to operate critical equipment before evacuating
- Identification and assignment of personnel responsible for rescue or emergency medical aid

Fire Safety Plans should include the following information:

1. Procedure for reporting a fire or other emergency
2. Site plans indicating the following
   - The Occupancy assembly point
   - The locations of fire hydrants
   - The normal routes of fire department vehicles access
3. Floor Plans identifying the locations of the following
   - Exits
   - Primary evacuation routes
   - Secondary evacuation routes
   - Accessible egress routes

- Areas of refuge
- Exterior area for assisted rescue
- Manual fire alarm boxes
- Portable fire extinguishers
- Occupant-use hose stations
- Fire alarm annunciators and controls

The following American National Fire Fighting Association (NFFA) Standards must be following.

Table 6-2 American National Fire Fighting Association (NFFA) Standards

No.	Parameters	Proposed Capacity	Remark
1	Fire water flow	14 bars	
2	Deluging rate	12.0 liters/m2/min	
3	Foam rate	10.0 liters/m2/min	
4	Maximum water pressure	190 liters/min	For storage area

Emergency Evacuation Drill: An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency excavation procedures

Employee Training and Response Procedures: Employee shall be trained in the fire emergency procedure described in their fire evacuation and fire safety plans and training should be based on these plans;

Frequency: Employee shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation and at least annually thereafter. Records shall be kept and made available to the fire code official upon request.

Employee Training Program: Employee shall be trained in fire prevention, evacuation and fire safety in accordance with the following sections.

Fire Prevention Training - Employee shall be apprised of the fire hazards of the materials and processes to which they are exposed. Each employee shall be instructed in the proper procedures for preventing fires in the conduct of their assigned duties

Evacuation Training – Employees shall be familiarized with the fire alarm and evacuation signals, their assigned duties in the event of an alarm or emergency, evacuation routes, areas of refuge, exterior assembly areas and procedures for evacuation

Fire Safety Training – Employee assigned fire-fighting duties shall be train Toiled to know the locations and proper use of portable fire extinguishers or other manual fire-fighting equipment and the protective clothing or equipment required for its safe and proper use.

6.10.7. **Site Fire Control**

1. Alert other people through fire alarm
2. If small, control using an extinguisher
3. Contact fire brigade if not under immediate control
4. Attend to human life in immediate danger
5. For electrical fires turn off power before fighting

6. Once out of the building, stay out. Do not allow people to go back into the burning building to collect valuables. While evacuating the building, close doors (but do not lock) to slow down the spread of fire
7. Obey all instructions
8. Proceed to an emergency evacuation area (Muster Point)

6.10.8. Employee Information and Training

Employees must be informed about any operations in their work area where hazardous chemicals or materials are present. They must also be informed about the locations and availability of the hazard communication program, list of chemicals and SDSs. Employees must receive training on the following:

- Methods for detecting the presence or release of a hazardous chemical, such as monitoring devices and the visual
- appearance or odor of the chemical
- Physical and health hazards of chemicals in their work area
- How to protect themselves using work practices, emergency procedures and personal protective equipment
- How to interpret the information on the labels and MSDS of chemical materials

6.10.9. Health and Safety Training Plan for Worker

Health and Safety Training plan currently used and provided in Asia Link (Myanmar) Fashion Co., Ltd. to all employees and workers by trainings internally and externally. Specific trainings are recommended and conducted according to the health and safety guidelines to enhance worker's health and to prevent all potential risks and hazards might occur in the factory. All required trainings related to health and the respective departments propose safety or operational parts, top management makes decision and HR organizes and conducts the trainings.

Table 6-3 Training Plan Used in Asia Link (Myanmar) Fashion Co., Ltd.

No.	Health and Safety Guidelines	Training needs
1.	Management	General fire and emergency response plan, evacuation. All training materials and procedures covering health and safety for workers and employees
2.	Machine safety and noise management	Training for machine operations to all operators Use of PPE and proper use of any necessary protection Maintenance and Emergency procedures
3.	Environment safety	Understanding and training on recognition and maintenance not to affect environment
4.	Material storage and safety	Safety use of related devices and machines Use of necessary protections in working areas Sanitation work
5.	Fire Safety	Firefighting and evacuating training and practices Firefighting materials/ devices use
6.	First Aid	first aid / CPR/ AED training from providers (Outsource) training on hazard of pathogens

6.11. 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 Asia Link (Myanmar) Fashion Company Limited garment 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.

Asia Link (Myanmar) Fashion Company Limited will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as on job training to be more qualified, language (Chinese) training on weekends with experienced teachers and providing necessary healthcare such as medical checkups 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 6-4).

Table 6-4 CSR plan at Asia Link (Myanmar) Fashion Company Limited

No	Particle	Contribution	Estimated Cost
1	Public school	0.5%	2,000,000 Kyats
2	Non-profit training	1 %	3,500,000 Kyats
3	Employees healthcare	0.5%	2,000,000 Kyats

6.11.1. 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.

6.11.2. 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 objective of our trainings are that we want our garment with their work but also improving their other skills such as language and promoting knowledge about safety measures and occupational health employees to be not only become more productive and more qualified.

6.11.3. Healthcare

One of our main concern 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.

6.12. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain though Grievance Committee, which includes the responsible persons of Asia Link (Myanmar) Fashion Company Limited representative from Thar Du Kan Industrial Zone 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. The following diagram (**Error! Reference source not found.**) show steps of Grievance R edress Mechanism of Proposed Factory Project.

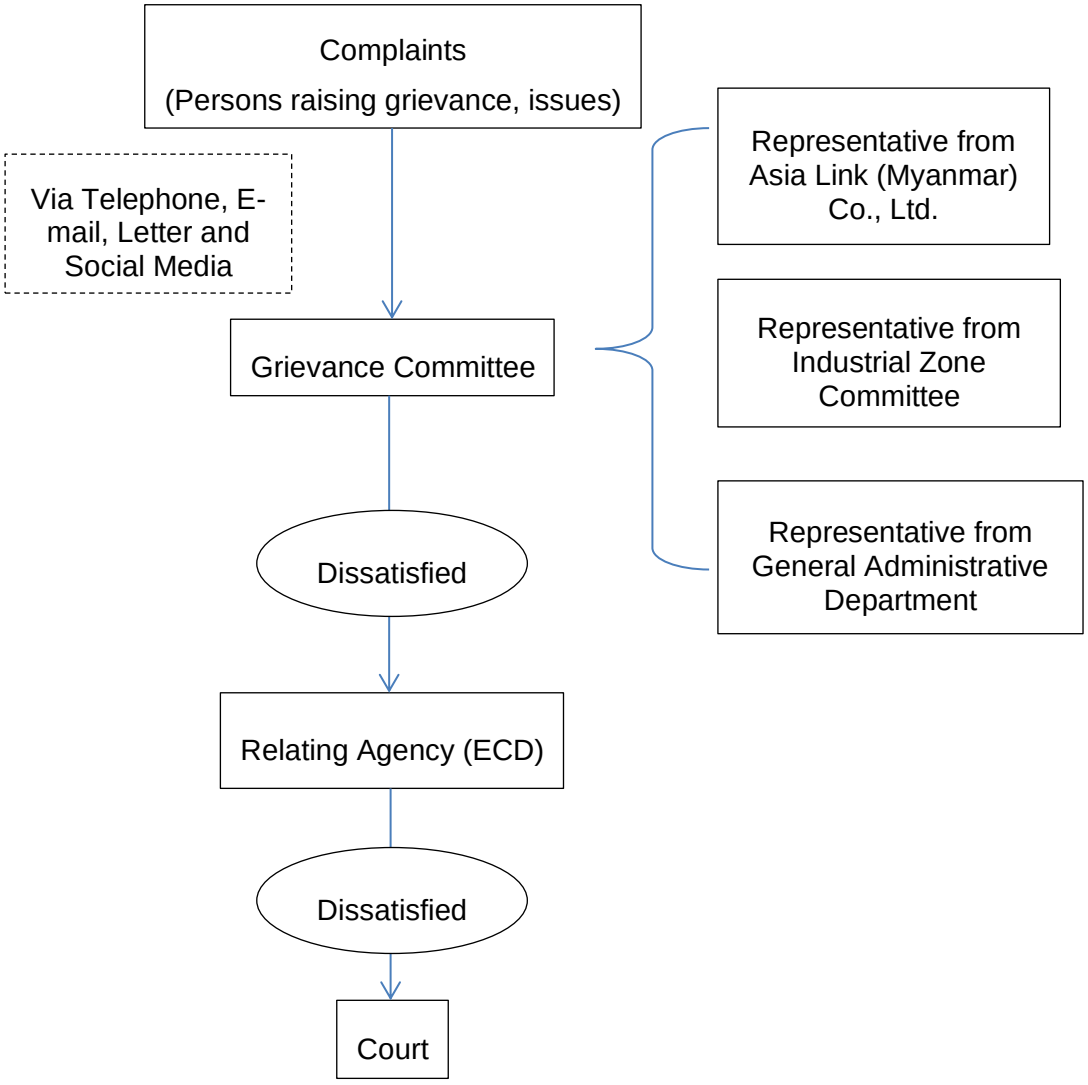


Figure 6-3 Grievance Redress Mechanism flow diagram

7. PUBLIC CONSULTATION

7.1. PUBLIC CONSULTATION PROCESS

This chapter presents results of public consultation and information disclosure conducted for the Asia Link (Myanmar) Fashion factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholder‘s participation were made.

Public consultation during preparation of EMP report was conducted on 4, September 2019, following the EIA procedure.

The project’s stakeholders in this category are key officials or representatives of the regional and local authorities who have direct responsibilities for the administration of the EMP process for environmental and social clearance and issuing operation permits for proposed development projects.

For this factory, relevant key offices at the national level are Environmental Conservation Department (ECD) and Industry Supervision and Inspection Department.

Relevant key office at the regional level is Yangon City Development Committee (YCDC), General Administrative Department, Fire Department, Factories and General Labor Law Inspection Department, Public Health Department, Industrial Supervision and Inspection Department.

Public consultation carried out after the presentation on the project, followed by questions, answers and discussion. Sai Thiha Maung presented EMP study and findings from Myanwei, after the presentation following question and answer section. Summary of public consultation meeting is presented Table 7-1 is shown the consultation meeting photo. There were 23 participants who joined the public consultation meeting. **(PCM attendant list and presentation power point slide are described in Appendix)**

Table 7-1 Summary of public consultation meeting

Time and Date	Wednesday, 30 October 2019 10:30 - 12:30
Venue	Thar Du Kan Industrial Zone, Zone Committee meeting room.
Agenda	• Presentation on the Background Information of Project, • Project Description, • Impact Assessment, Environmental Mitigation • Environmental Management Plan and Monitoring Plan • Received and Answer from feedback of participants

7.2. RECOMMEND SUGGESTION AND COMMENT

After the presentation, the floor opened for questions and answers. There is no question and comment for presentation and EMP draft report, because the project is sample manufacturing of Brassier, Underwear and Swimwear on CMP Basis. In addition, Shwe Pyi Thar Zone (1), Zone Committee Pre - Chairman advice to do the CSR plan and also advice adhere to the discipline of Zone Committee. ECD is also commended.

U Myo Thein, Shwe Pyi Thar Zone (1), Zone Committee

- He advice to do that the health care for employees and
- He also advice to do that the plant inside the proposed project and near proposed project.

U Myint Aung, Shwe Pyi Thar Zone (1), Zone Committee

- He suggested that the proposed project must adhere to the discipline of concerning zone committee
- He also suggested that to do the corporate social plan

Daw Myat Htet Khaing, Environmental Conservation Department;

- She mentioned the about of waste management
- She also suggested that to get a bail when they wasted with the YCDC and
- She also suggested that the monitoring plan to do regularly.

Asia Link (Myanmar) Fashion Company Limited replied that it will implement as the suggestion from the public consultation meeting for the development of environment and safety management.

Figure 7-1 Public consultation meeting

8. CONCLUSION & RECOMMENDATION

8.1. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Asia Link (Myanmar) Fashion factory is located at Plot No. (85), Myay Taing Block No. (51), Thar Du Kan Industrial Zone, 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 requirement of the proponent as it has been made for Brassier, Underwear and Swimwear 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 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 in terms of environmental in the operation phase. 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 project area. Furthermore, the environmental monitoring plan prepared as part of the EMP will provide adequate opportunities to address any residual impacts during the operation phase.

In conclusion, it has been figured out that, 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.

8.2. RECOMMENDATION

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes 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 Republic of the Union of Myanmar.

APPENDIX A

Company Document of Asia Link (Myanmar) Fashion Company Limited

Form (5-B)

THE REPUBLIC OF THE UNION OF MYANMAR
YANGON REGION INVESTMENT COMMITTEE
ENDORSEMENT

The Union Republic of Myanmar ★ Yangon Region Investment Committee ★ No. 215/9 Date 13.3.19

ment No. YGN – 170/2019 Date 12 March 2019

This endorsement is issued by Yangon Region Investment Committee according to the section 25, sub-section (d) of the Myanmar Investment Law-

(1) Name of Investor MR. YANG JIANWU

(2) Citizenship CHINESE

(3) Residence Address 11TH VILLAGER GROUP, TAINING VILLAGE, SANXIANHU TOWN, NAN COUNTY, HUNAN PROVINCE, PEOPLE'S REPUBLIC OF CHINA.

(4) Name and Address of Principal Organization FOSHAN BIAOMEI FASHION CO., LTD, NO.89, LIAN'AN AVENUE, YANBU COMPREHENSIVE, DALI TOWN, NANHAI DISTRICT, FOSHAN CITY, PEOPLE'S REPUBLIC OF CHINA.

(5) Place of Incorporation PEOPLE'S REPUBLIC OF CHINA.

(6) Type of business MANUFACTURING OF BRASSIER , UNDERWEAR AND SWIMWEAR ON CMP BASIS .

(7) Place(s) of investment Project PLOT NO.(85), MYAY TAING BLOCK NO. (51), THAR DU KAN INDUSTRIAL ZONE, SHWE PYI THAR TOWNSHIP, YANGON REGION.

(8) Amount of Foreign Capital US$ 1.262 MILLION

(9) Period for Foreign Capital to be brought in WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF ENDORSEMENT

(10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF US$ 1.262 MILLION .

(11) Construction/ Preparation Period ONE YEAR

(12) Validity of Endorsement 30 YEARS

(13) Form of Investment WHOLLY FOREIGN OWNED

(14) Name of Company Incorporated in Myanmar ASIA LINK (MYANMAR) FASHION COMPANY LIMITED

YRIC1702019

13/3/2019

(Phyo Min Thein)
Chairman

ပုံစံ (၅-ခ)

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ
အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ- ၁၇၀/၂၀၁၉ ၂၀၁၉ ခုနှစ် မတ် လ ၁၃ ရက်

ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ၊ ပုဒ်မ-၂၅ ပုဒ်မခွဲ (ဃ) အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

(၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR. YANG JIANWU

(၂) နိုင်ငံသား CHINESE

(၃) နေရပ်လိပ်စာ 11TH VILLAGER GROUP, TAINING VILLAGE, SANXIANHU TOWN, NAN COUNTY, HUNAN PROVINCE, PEOPLE'S REPUBLIC OF CHINA.

(၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ FOSHAN BIAOMEI FASHION CO., LTD, NO. 89, LIAN'AN AVENUE, YANBU COMPREHENSIVE, DALI TOWN, NANHAI DISTRICT, FOSHAN CITY, PEOPLE'S REPUBLIC OF CHINA.

(၅) ဖွဲ့စည်းရာအရပ် တရုတ်ပြည်သူ့သမ္မတနိုင်ငံ

(၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အမျိုးသမီးဝတ်ဘရာစီယာ၊ အတွင်းခံ ဘောင်းဘီနှင့် ရေကူးဝတ်စုံ အမျိုးမျိုး ချုပ်လုပ်ခြင်း လုပ်ငန်း

(၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ် (၈၅)၊ မြေတိုင်းရပ်ကွက်အမှတ် (၅၁)၊ သာခုကန် စက်မှုဇုန်၊ ရွှေပြည်သာ မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

(၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၁.၂၆၂ သန်း

(၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့်နေ့မှ ၁ နှစ် အတွင်း

(၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၁.၂၆၂ သန်းနှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁ နှစ်

(၁၂) အတည်ပြုမိန့်သက်တမ်း (၃၀) နှစ်

(၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု

(၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် ASIA LINK (MYANMAR) FASHION COMPANY LIMITED

YRJC1/02019

(ဖြိုးမင်းသိန်း)
ဥက္ကဋ္ဌ

Confidential

THE REPUBLIC OF THE UNION OF MYANMAR
YANGON REGION INVESTMENT COMMITTEE
Plot No. 49, Seinlae May Street,
Kabar Aye Pogada Road, Yankin Township, Yangon.

Republic of the Union of Myanmar ★ Yangon Region Investment Committee ★
No. 215 9
Date 13.3.19

Tel: 01- 658263
Fax: 01- 658264

Our ref :YRIC-1/E170/2019(215 9)
Date : 13 March 2019

Subject: **Decision of the Yangon Region Investment Committee on the Endorsement for manufacturing of brassier , underwear and swimwear on CMP basis under the name of Asia Link (Myanmar) Fashion Company Limited**

Reference: Asia Link (Myanmar) Fashion Company Limited 's letter dated 28th February 2019

1. The Yangon Region Investment Committee, at its meeting (4/2019) held on 6th March 2019, approved the Endorsement for investment in manufacturing of brassier, underwear and swimwear on CMP basis under the name of Asia Link (Myanmar) Fashion Company Limited submitted by Foshan Biaomei Fashion Co., Ltd (100%) from People's Republic of China as a wholly foreign owned investment in accordance with the Myanmar Investment Law and Rules.

2. The terms and conditions of the Endorsement are stated in the following paragraphs:

(a) The term of an Endorsed project shall be thirty (30) years commencing from the date of the issuance of the Endorsement by the Yangon Region Investment Committee.

(b) The term of the Lease Agreement for land and buildings shall be initial ten (10) years and extendable for two times for ten (10) years commencing from the date of signing of the Lease Agreement between U Thein Kyin, U Sai Won Si, U Sai Win Htun (Lessor) and Asia Link (Myanmar) Fashion Company Limited (Lessee).

(c) The annual rent for the land and buildings shall be Kyat 192.632 million (Kyat one hundred and ninety-two million and

six hundred and thirty-two thousand only)calculated for the total land measuring 9226.833 square meters (2.280 acres) and annual lease rates.

(d) Asia Link (Myanmar) Fashion Company Limited which has obtained the Endorsement for enjoyment of exemptions and reliefs under sections 75, 77 and 78 of the Chapter XVIII of Myanmar Investment Law, may submit the application form.

(e) Asia Link (Myanmar) Fashion Company Limited shall use its best efforts to achieve a timely realization of the work stated in the Endorsement application.

(f) Asia Link (Myanmar) Fashion Company Limited shall obey and respect the responsibilities of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.

(g) Asia Link (Myanmar) Fashion Company Limited shall carry out prevention, mitigation and monitoring of significant environmental impacts according to the type of investment activities in accordance with the relevant laws, rules, regulations and procedures.

(h) Asia Link (Myanmar) Fashion Company Limited shall submit to the Myanmar Investment Commission any transfer of shares or transfer of the business to any person during the investment period in accordance with section 72 of Myanmar Investment Law and rule 191of Myanmar Investment Rules.

(i) Asia Link (Myanmar) Fashion Company Limited which has benefitted from the Endorsement or enjoyment of exemptions or reliefs shall submit an annual report in the prescribed form to the Myanmar Investment Commission within three (3) months at

the financial year in accordance with rule 196 of Myanmar Investment Rules and shall publish a summary of the report on its website or the Myanmar Investment Commission's website.

(j) Asia Link (Myanmar) Fashion Company Limited must during the operation period under the Endorsement of the Yangon Region Investment Committee, submit its operating report quarterly in the prescribed form in accordance with rule 197 of Myanmar Investment Rules.

3. Asia Link (Myanmar) Fashion Company Limited shall carry out in accordance with the stipulations of the relevant Union Ministries, governmental department and governmental organizations to obtain license, permit or registration as per section 65(d) of Myanmar Investment Law.

4. Asia Link (Myanmar) Fashion Company Limited shall submit five (5) copies of all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and the Lease Agreement for land and building to the Yangon Region Investment Committee.

(Phyo Min Thein)

Chairman

Asia Link (Myanmar) Fashion Company Limited

cc: 1. Ministry of Home Affairs
2. Ministry of Office of the Union Government
3. Ministry of Natural Resources and Environmental Conservation
4. Ministry of Labour, Immigration and Population
5. Ministry of Industry
6. Ministry of Commerce
7. Ministry of Planning and Finance
8. Ministry of Investment and Foreign Economic Relations

9. Office of the Myanmar Investment Commission
10. Chairman, CMP Enterprises Supervision Committee
11. Director General, Department of Environmental Conservation
12. Director General, Directorate of Labour
13. Director General, Department of Immigration
14. Director General, Directorate of Industrial Supervision and Inspection
15. Director General, Department of Trade
16. Director General, National Archives Department
17. Director General, Customs Department
18. Director General, Internal Revenue Department
19 Director General, Directorate of Investment and Company Administration
20 Monitoring and Supervision Division, Directorate of Investment and Company Administration

APPENDIX B
Land Lease Agreement

မြေစည်ပင်စရိတ် = ၇-၃-၀၈

= ၉၃၄၈၀၀၀ -

မြေငှါး ခ = ၁၇၁ / ၂၂-၁-၀၈

= ၈၃၀ -

၂၀၀၇-၀၈ (စ) တွ ၁၈၁

မြေငှါးခ ပေးသွင်းခြင်း

ရှင်း

ပြည်ထောင်စုမြန်မာနိုင်ငံတော်အစိုးရ

ဆောက်လုပ်ရေးဝန်ကြီးဌာန

မြို့ရွာနှင့်အိုးအိမ်ဖွံ့ဖြိုးရေးဦးစီးဌာန

ရန်ကုန်မြို့

" စက်မှုလက်မှုလုပ်ငန်းအတွက်-မြေအသုံးပြုခွင့် "

(တဆင့်လွှဲပြောင်း / ရောင်းချ / ပေါင်နှံ / ပေးကမ်းခွင့်မရှိရ)

ဦး သိန်း မော်(စ) ဦး မောင်မြတ်ဘိုး(ခ)

ရန်ကုန်မြို့ စ၁သီယ၁ ၏ သမီး / သား ဦး စံသိန်း

အမျိုးသားမှတ်ပုံတင်အမှတ် ၁၂/ဒဂန(နိုင်)၀၆၂၉၆၅ အား ရွှေပြည်သာ၁ မြို့

မြေတိုင်းရပ်ကွက်အမှတ် ၅၁ ဧရိယာခန့်မှန်းခြေ ၂.၂၈၀ ဧကရှိ

မြေကွက်အမှတ် ၈၅ မြေ(၁)ကွက်ကို စလုပ်ငန်း

-------------- လုပ်ငန်းအတွက် အဆောက်အဦဆောက်လုပ်အသုံးပြုရန် အောက်ပါစည်းကမ်းချက်များဖြင့် ပူးတွဲပါမြေပုံအရ၊ ၂၀၀၈ ခုနှစ် ဇန်နဝါရီ လ (၂၄) ရက် နေ့မှစ၍ ခွင့်ပြုလိုက်သည်။

(၁) စ လုပ်ငန်းအတွက် အသုံးပြုခွင့်ရသောမြေကွက်တွင် မြေလက်ခံရရှိပြီးသည့်နေ့မှ (၃)လအတွင်း အဆောက်အဦ စတင်ဆောက်လုပ်အသုံးပြုရမည်။

(၂) စက်မှုလက်မှုမြေကွက်အတွင်း စလုပ်ငန်း အဆောက်အဦးမှတပါးခွင့်ပြုထားသူ၏ ကြိုတင်ခွင့်ပြုချက်မရှိဘဲ အခြားလူနေအိမ်စသည်များကို ဆောက်လုပ်ခွင့်မပြုရ။

(၃) စက်မှုလက်မှုမြေအကွင်း စက်မှုလုပ်ငန်းမှတပါး အခြားလုပ်ငန်းများအတွက် အသုံးမပြုရ။

(၄) စက်မှုလက်မှုမြေကွက်ရသူသည် မြေကွက်ကို ခွဲစိတ်ခြင်း၊ တဆင့်လွှဲပြောင်း / ရောင်းချ ပေါင်နှံ / ပေးကမ်းခြင်း လုံးဝမပြုလုပ်ရ။

(၅) သုံးလပတ်ကျသင့်မြေငှားခငွေ(၈၃၀ -)တိတိကို ကြိုတင်ပေးဆောင်ရမည်။

(၆) စက်မှုလက်မှုမြေကွက်ရသူသည် သတ်မှတ်ထားသောမြေခွန်မြေခများကို မှန်ကန်စွာ ပေးဆောင်ရမည့်အပြင် အခြားအခါအားလျော်စွာ သတ်မှတ်ထားသော စည်းကမ်းများကို လိုက်နာရမည်။

(၇) စက်မှုလက်မှုလုပ်ငန်း အဆောက်အဦဆောက်လုပ်ခွင့်ပြုသော သက်တမ်းသည် ၂၀၁၈ ခုနှစ်၊ ဇန်နဝါရီ လ (၂၃) ရက် နေ့တွင် ကုန်ဆုံးမည်။ အသုံးပြုခွင့်ကာလကုန်ဆုံးသောအခါ အမြဲတမ်းဆက်လက်အသုံးပြုခွင့်ရလိုပါက၊ မြေငှားစာချုပ်နှင့် လျှောက်ထားနိုင်ခွင့်ရှိသည်။

(၈) စက်မှုလက်မှုအသုံးပြုခွင့်ရသူသည် သတ်မှတ်ထားသောစည်းကမ်းများကို လိုက်နာရန် ပျက်ကွက်ပါက၊ ခွင့်ပြုထားသော မြေကွက်ကို ဆောက်လုပ်ထားသော အဆောက်အဦနှင့်ကကွ မြို့ရွာနှင့်အိုးအိမ်ဖွံ့ဖြိုးရေးဦးစီးဌာနမှ ပြန်လည်သိမ်းယူနိုင်ခွင့်ရှိသည်။

(၉) စက်မှုလက်မှုအလုပ်ရုံများ မဆောက်လုပ်မီ စနစ်တကျရှိစေရန် အဆောက်အဦပုံစံနှင့်မြေကွက်အပေါ်တွင် အဆောက်အဦအနေအထားပြပုံစံတို့ကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ၏ အတည်ပြုချက်ကို ရယူရမည်။

(၁၀) စက်မှုလက်မှုမြေကွက်များတွင် အောက်ပါအတိုင်း ချန်လုပ်၍ အဆောက်အဦ ဆောက်လုပ်ရမည်-

(က) အလျား × အနံ ------- ၁၅၀ ပေ × ၁၀၀ ပေရှိမြေကွက်တွင်

မျက်နှာစာ	---------	၂၅ ပေ
နောက်ဖေး	---------	၇ ပေ
ဘေးဘက်	---------	၈ ပေ

(ခ) အလျား × အနံ ------- ၆၀ ပေ × ၄၀ ပေရှိမြေကွက်တွင်

မျက်နှာစာ	---------	၉ ပေ
နောက်ဖေး	---------	၇ ပေ
ဘေးဘက်	---------	၄ ပေ

(စံသိန်း)
၇/တကန(နိုင်)၀၂၉၄၆၅

မြေအသုံးပြုခွင့်ရသူ၏လက်မှတ်

၂၄/၁/၂၀၀၈

ညွှန်ကြားရေးမှူးချုပ် (ကိုယ်စား)
(ကျော်ဝင်း - ဒုတိယညွှန်ကြားရေးမှူး)
မြေနှင့် အခွန်ဌာနခွဲ

စာအမှတ်၊ မခ / မအခ / ရပသ (သာကေတ) လိုင်စင် - ၁၅ / ၀၇ (၂၂၈)
ရက်စွဲ ၊ ၂၀၀၈ ခုနှစ် ဇန်နဝါရီ လ (၂၄) ရက်

မိတ္တူကို-

၁။ မူရင်းမြေအသုံးပြုခွင့်အမိန့်ကို မြေအသုံးပြုခွင့်ရသူ ဦးဇောမန်ကူး၊မ ၁၄(ခ) ဦး စံသိန်း ၁၂/ဗဟန(နိုင်)၀၆၂၉၆၅

အားထုတ်ပေးသည်။

၂။ ဒုတိယညွှန်ကြားရေးမှူး၊ မြေတိုင်းဌာနခွဲသို့ မြို့မြေစာရင်းတွင် မှတ်သားရန်နှင့် မိုရာ‌ေဂ္ဂာတာမှ၍

သုံးလပတ်မြေခနှုန်းထား ၈၃၀ ကျပ် ရှစ်ရာသုံးဆယ်

ပ်ါတီဖြင့် စည်းကြပ်ကောက်ခံနိုင်ရန်ပေးပို့ပါသည်။

၃။ ဦးစီးအရာရှိ၊ မြေယာရုံးခွဲ(၁၁) ရွှေပြည်သာ ၁၊ သာ ၁ ခုတန်စက်မှုဇုန်သို့ သိသာရန်နှင့်

လိုအပ်သလို ဆောင်ရွက်နိုင်ရန် ပေးပို့ပါသည်။

၄။ ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ ရွှေပြည်သာ ၁၊ သာ ၁ ခုတန်စက်မှုဇုန်

သို့ သိသာရန်နှင့် လိုအပ်သလို ဆောင်ရွက်နိုင်ရန် ပေးပို့ပါသည်။

၅။ ရုံးလက်ခံ

ရန်ကုန်မြို့တော်

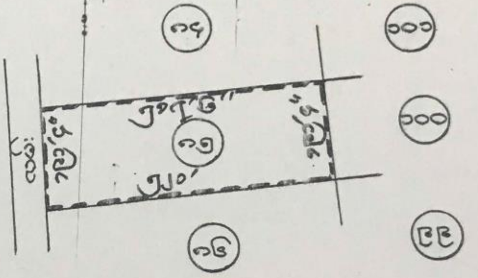
အိုးအိမ်ပုံစံ
အက်စ် - ၂၂

--------ရွှေပြည်သာ------ မြို့နယ်၊ လူနေရပ်ကွက်အမှတ် ----သာဓုကြာနက်ကမြို့မှ---

မြေတိုင်းရပ်ကွက်အမှတ်၊ -----၅၁------ မှ မြေကွက်အမှတ် -------၈၅---- ၏မြေပုံ -

စကေး ၁ လက္မ = ၃၀၀ ပေ

C



ရည်ညွှန်းချက်

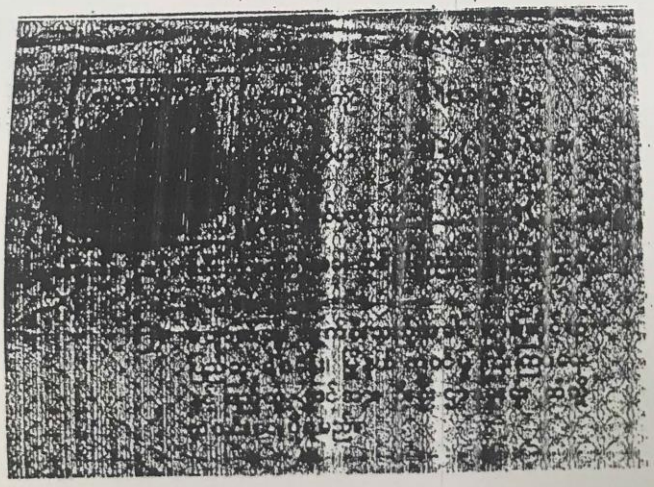
-------------------- ရေယာ

--၉၉၃၅၇၈------- စတုရန်းပေ

--၂၁.၂၈၀------- ကေ

မြေတိုင်း (၄) မြေတိုင်း (၃) မြေတိုင်း (၂)

ဦးစိုး[illegible]ရှိ
မြေတိုင်းဌာနခွဲ
မြို့ရွာနှင့်အိုးအိမ်ဖွံ့ဖြိုးရေးဦးစီးဌာန



APPENDIX C
Transitional Consultant Registration Certificate

THE REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 00068 Date 24 MAY 2019

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၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို ထုတ်ပေးလိုက်သည်။)

(a)	Name of Organization (အဖွဲ့အစည်းအမည်)	Myanwei Consulting Co., Ltd.
(b)	Name of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်)	U Nyan Lynn Aung
(c)	Citizenship of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား)	Myanmar
(d)	Identity Card /Passport Number of the representative person in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်)	12/Sakhana(N)056196
(e)	Address of organization (ဆက်သွယ်ရန်လိပ်စာ)	No. 28, Myay nu street, Sanchaung Township, Yangon, Myanmar. Mobile phone: 09440251888 E mail: ceo@myanweiconsulting.com
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Organization
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 December 2019

Director General

Environmental Conservation Department

Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted

(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Facilitation of meeting,
2. Land use,
3. Legal analysis,
4. Geology and soil,
5. Occupational Safety and Health,
6. Public Health

ပထဝီနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

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။
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)လ သက်တမ်းတိုးမြှင့်သည်။
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)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)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၂)
ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
25.3.2022
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for six months from (1.1.2023) to (30.6.2023)
ဤလက်မှတ်အား(၁-၁-၂၀၂၃)ရက်နေ့မှ(၃၀-၆-၂၀၂၃)
ရက်နေ့အထိ (၆)လသက်တမ်းတိုးမြှင့်သည်။
For Director General
(Sa Aung Thu, Director)
Environmental Conservation Department

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10048 Date

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)	U Lin Htet Sein
(b)	Citizenship (နိုင်ငံသား)	Myanmar
(c)	Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်)	7/ Tha Ka Na (N) 101377
(d)	Address (ဆက်သွယ်ရန်လိပ်စာ)	No.54, Room No.704, Waizayantar Tower, Waizayantar Road, Thingangyun Township, Yangon. lin.tbs@gmail.com , 09 421137569
(e)	Organization (အဖွဲ့အစည်း)	Total Business Solution 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။
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. Geology and Soil

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။
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။
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။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

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)
ရက်နေ့အထိတစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
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)
ရက်နေ့အထိတစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for six months from (1.1.2023) to (30.6.2023)
ဤလက်မှတ်အား(၁-၁-၂၀၂၃)ရက်နေ့မှ(၃၀-၆-၂၀၂၃)
ရက်နေ့အထိ (၆)လသက်တမ်းတိုးမြှင့်သည်။
For Director General
(Sa Aung Thu, Director)
Environmental Conservation Department

APPENDIX D
Monitoring Result

Light Result

MYANWEI
ENVIRONMENTAL SOLUTIONS
No. 49 (B), Inya Yeik Thar Street, Mayangone Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 95185776, Mobile: (+95) 9421137569; Website: www.myanweiconsulting .com

Project Name:	Asia Link (Myanmar) Fashion Company Limited
Project Location:	Plot No. 85, Myay Taing Block No. Zone (51), Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon Region.
Sampling Date:	19 August 2019
Sampling Time:	1:00 am to 4:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
Uni-T (Luminometer)	UT380 Series	100 times/second	16°59'20.61"N 96°05'14.71"E

No	Measure area	Unit	Result	Standard	Remark
1	Warehouse	Lux	380	200-300	Above
2	Cutting section	Lux	709	500-1500	Normal
3	Sewing section	Lux	1037.1	500-1500	Normal
4	Packing section	Lux	1158	500-1500	Normal

IESNA Lighting Handbook

Department	Type of Light	Wattage of Light	Lux Level
Fabric store	Fluorescent tube light	40 W	300
Sewing floor	LED tube light	20 W (T8)	400
Cutting floor	LED tube light	22 W (T8)	1000
Finishing	LED tube light	28 W (T8)	600
Inspection points	LED tube light	28 W (T8)	900 (except 1500 at audit tables)
Sampling	LED tube light	22 W (T8)	500
Office areas	Fluorescent tube light	36 W (T)	300

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

Noise Result

MYANWEI
ENVIRONMENTAL SOLUTIONS
No. 49 (B), Inya Yeik Thar Street, Mayangone Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 95185776, Mobile: (+95) 9421137569; Website: www.myanweiconsulting .com

Project Name:	Asia Link (Myanmar) Fashion Company Limited
Project Location:	Plot No. 85, May Taing Block No. 51, Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon Region.
Sampling Date:	19 August 2019
Sampling Time:	8:00 am to 5:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°59'20.3"N 96°05'13.5"E

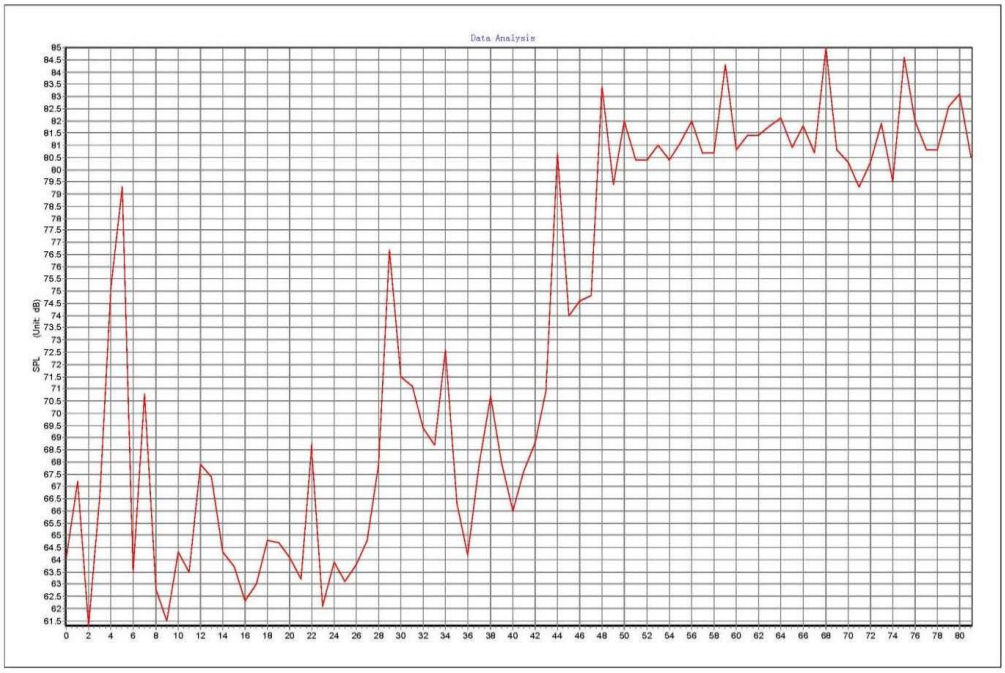
No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	72.88	70 dBA	Slightly Above

National Environmental Quality (Emission) Guideline

Receptor	One Hour Laeq (dBA)	Guideline value
	Daytime	Nighttime
	7:00 – 22:00 (10:00 – 22:00 for Public holidays)	22:00 – 07:00 (22:00 – 10:00 for Public holidays)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED.

Monitoring Graph



Air Result

MYANWEI
ENVIRONMENTAL SOLUTIONS
No. 49 (B), Inya Yeik Thar Street, Mayangone Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 95185776, Mobile: (+95) 9421137569; Website: www.myanweiconsulting .com

Project Name:	Asia Link (Myanmar) Fashion Company Limited
Project Location:	Plot No. 85, May Taing Block No. 51, Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon Region.
Sampling Date:	19 August 2019
Sampling Time:	9:00 am to 5:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
OCEANUS-AQM-09	$PM_{2.5}$, PM_{10}, CO_2, NO_2, SO_2, O_3	0-999.9(µg/M^3)	16°59'20.3"N 96°05'13.5"E

National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10[a]	1-year 24-hour	20 50	(µg/M^3)
PM 2.5[a]	1-year 24-hour	10 25	(µg/M^3)
O_3[a]	8-hour	100	(µg/M^3)
NO_2[a]	1-year 1-hour	40 200	(µg/M^3)
SO_2[a]	24-hour 10-min	20 500	(µg/M^3)
CO[b]	15-min 30-min 1-hour 8-hour	100 60 30 10	(µg/M^3)

a. Values from air quality guidelines-global update 2005: particulate matter, ozone, nitrogen dioxide and sulfur dioxide.
b. Values from air quality guidelines for Europe, 2nd edition.

Monitoring Result

Parameters	Observed value	Guideline value	Unit	Guideline
Indoor Air Quality Measurement				
PM_{10}	30.2	50	µg/m^3	NEQG
$PM_{2.5}$	8.3	25	µg/m^3	NEQG

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

MYANWEI
ENVIRONMENTAL SOLUTIONS
No. 49 (B), Inya Yeik Thar Street, Mayangone Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 95185776, Mobile: (+95) 9421137569; Website: www.myanweiconsulting .com

Project Name:	Asia Link (Myanmar) Fashion Company Limited
Project Location:	Plot No. 85, May Taing Block No. 51, Thar Du Kan Industrial Zone, Shwe Pyi Thar Township, Yangon Region.
Sampling Date:	28 March 2023
Sampling Time:	9:00 am to 5:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
OCEANUS-AQM-09	$PM_{2.5}$, PM_{10}, CO_2, NO_2, SO_2, O_3	0-999.9(μg/M^3)	16°59'19.55"N 96°05'14.18"E

National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10[a]	1-year 24-hour	20 50	(μg/M^3)
PM 2.5[a]	1-year 24-hour	10 25	(μg/M^3)
O_3[a]	8-hour	100	(μg/M^3)
NO_2[a]	1-year 1-hour	40 200	(μg/M^3)
SO_2[a]	24-hour 10-min	20 500	(μg/M^3)
CO[b]	15-min 30-min 1-hour 8-hour	100 60 30 10	(μg/M^3)

a. Values from air quality guidelines-global update 2005: particulate matter, ozone, nitrogen dioxide and sulfur dioxide.
b. Values from air quality guidelines for Europe, 2nd edition.

Monitoring Result

Parameters	Observed value	Guideline value	Unit	Guideline
Outdoor Air Quality Measurement				
PM_{10}	12.3	50	μg/m^3	NEQG
$PM_{2.5}$	3.4	25	μg/m^3	NEQG

Ozone	60.5	100	µg/m^3	NEQG
Nitrogen dioxide	50	200	µg/m^3	NEQG
Sulfur dioxide	5	20	µg/m^3	NEQG
Carbon dioxide	1	NG	µg/m^3	-

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

APPENDIX E
Water Result

ISO TECH LABORATORY

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

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

W0419 331

WATER QUALITY TEST RESULTS FORM

Client	Asia Link (Myanmar) Fashion Co.,Ltd.
Nature of Water	R.O Water
Location	No.(85), Thardukan Industrial Zone, Shwe Pyi Thar Township
Date and Time of collection	8.4.2019
Date and Time of arrival at Laboratory	8.4.2019
Date and Time of commencing examination	9.4.2019
Date and Time of completing	11.4.2019

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
pH	7.5		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	Nil	NTU	5 NTU
Conductivity	36	micro S/cm	
Total Hardness	8	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	6	mg/l as $CaCO_3$	
Magnesium Hardness	2	mg/l as $CaCO_3$	
Total Alkalinity	6	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	6	mg/l as $CaCO_3$	
Iron	0.05	mg/l	0.3 mg/l
Chloride (as CL)	2	mg/l	250 mg/l
Sodium chloride (as NaCL)	3	mg/l	
Sulphate (as SO_4)	Nil	mg/l	500 mg/l
Total Solids	19	mg/l	1500 mg/l
Suspended Solids	1	mg/l	
Dissolved Solids	18	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	2	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	0.1	ppt	

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

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

Approved by
Signature:
Name: Soe Thit
B.E (Civil) 1980,
Technical Officer
ISO TECH Laboratory

(a division of WEG Co.,Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

APPENDIX F
Fire Safety Training

SHOT ON MI 5X
MI DUAL CAMERA

SHOT ON MI 5X
MI DUAL CAMERA

SHOT ON MI 5X
MI DUAL CAMERA

SHOT ON MI 5X
MI DUAL CAMERA

APPENDIX G
Public Consulting Meeting

Invitation List

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ ဖိတ်ကြားထားသူများစာရင်း

နေ့စွဲ - ရက်၊ အောက်တိုဘာလ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
	Daw Myat Su Mon	D 80	ECD, YGN		[signature]
	[illegible]	[illegible]	[illegible]	09403660440	[signature]
	[illegible]	[illegible]	[illegible]	09-421259584	[signature]
	[illegible]	[illegible]	[illegible]		[signature]
	[illegible]	[illegible]	[illegible]	01 3610933	[signature]
	[illegible]	[illegible]	[illegible]	610720	[signature]
	[illegible]	[illegible]	ကျန်းမာရေး	09-421026016	[signature]
	[illegible]	[illegible]	[illegible]	09-680778387	[signature]
	[illegible]	[illegible]	DISI	0973122714	[signature]

Myanwei Consulting Company Limited

Attendend List

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

နေ့စွဲ - ၃၀ ရက်၊ အောက်တိုဘာလ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁၀။	[illegible]	HR staff	Great lucky star	09.776087624	
၁၁။	[illegible]	Ass Manager	"	09-430298?4	
၁၂	[illegible]	[illegible]	[illegible]	09.262[illegible]	
၁၃	[illegible]	[illegible]	[illegible]	09 781503877	
၁၄	[illegible]	[illegible]	[illegible]	09.966060773	

Myanwei Consulting Company Limited

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

နေ့စွဲ - ၃၀ ရက်၊ အောက်တိုဘာလ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁	[illegible]	[illegible]	[illegible]	095012015	
၂	[illegible]	[illegible]	"	0950/3310	
၃	[illegible]	[illegible]	"	09795812321	
၄	[illegible]	[illegible]	[illegible]	09-974222928	
၅	[illegible]	Manager	Asia Link (Myanmar)	09971781111	
၆	[illegible]	HR Assistant	"	09694066446	
၇	[illegible]	Admin Manager	Royal Aster Co ltd	09795115112	
၈	[illegible]	Manager	Shwe Sea Sar Garment	0973124126	
၉	[illegible]	HR staff	Great lucky star	09-451058093	

Myanwei Consulting Company Limited

Presentation Slides

Asia Link (Myanmar) Fashion Co., Ltd ၏ (CMP)
စနစ်ဖြင့် အမျိုးသမီးဝတ်ဘရာစီယာ၊
အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံ ချုပ်လုပ်ခြင်း
လုပ်ငန်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ (မူကြမ်း) အတွက်
သက်ဆိုင်သူများနှင့် ဇတွေ့ဆုံဆွေးနွေးမှု အခမ်းအနား။

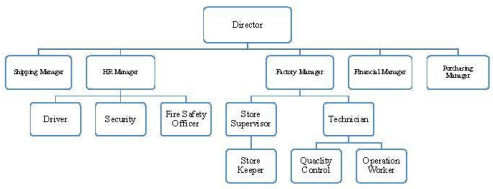
ဥဝရက်၊ အောက်တိုဘာလ၊ ၂၀၁၉ ခုနှစ်။
Preparaed By
Myanwei Consulting Co., Ltd.

အစည်းအဝေး အကြောင်းအရာ

၁။ Asia Link (Myanmar) Fashion Company Limited အား မိတ်ဆက်ခြင်း
၂။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား မိတ်ဆက်ခြင်း
၃။ သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့်
ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ
၄။ ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့်
ဖြေလျော့ရေးနည်းလမ်းများ
၅။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် နှင့်
၆။ စက်ရုံ၏ဆောင်ရွက်ချက်များ

Asia Link (Myanmar) Fashion Company Limited

Asia Link (Myanmar) Fashion Co., Ltd. ၏ ဒွို့စည်းဝုံ



Asia Link (Myanmar) Fashion Company Limited

လုပ်ငန်းအမျိုးအစား	(CMP) လစဉ်းစနစ်ဖြင့် အမျိုးသမီးဝတ်ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံ ချုပ်လုပ်ခြင်းလုပ်ငန်း
ဒွိုင်ပြုပ်နိုန်အမှတ်	(ဒွိုင်ပြုပ်နိုန်အမှတ်- ၁၇၀/၂၀၁၉) ၂၀၁၉ ခုနှစ်၊ မတ်လ ၁၂ ရက်။
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငြားရင်းနှီးမြှုပ်နှံမှု
မြေဧရိယာ	မြေဧရိယာစုစုပေါင်း = ၂.၅၈ ဧက(၉၂၂၆.၈၃၃ စတုရန်းမီတာ)
အဆောက်အဦး	ရုံးခန်းအဆောက်အဦး (၁၄၀ × ၁၂၀ စတုရန်းပေ) စက်ရုံအဆောက်အဦး (၁၂၀ × ၃၀၀ စတုရန်းပေ) စတိုရန်း အဆောက်အဦး (၄၀ × ၄၀ စတုရန်းပေ) သံကုန်ကုန်ကရင်အဆောက်အဦး (၂၀ × ၂၀ စတုရန်းပေ) သံကုန်ကုန်ကရင်အဆောက်အဦး (၂၅ × ၃၅ စတုရန်းပေ)
ရင်းနှီးမြှုပ်နှံသည့်ကာလ	နှစ် ၃၀ ရင်းနှီးမြှုပ်နှံမှု
စက်ရုံလိပ်စာ	မြေကွက်အမှတ် ၈၅၊ မြေတိုင်းရပ်ကွက်အမှတ် ၅၁၊ သာဓုကန် စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

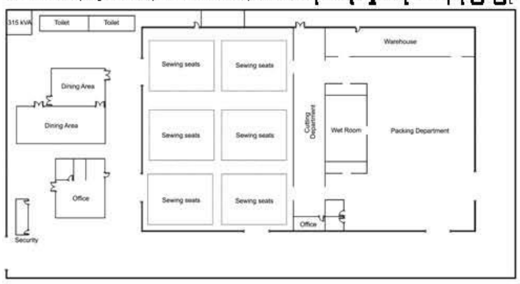
လုပ်ငန်းလည်ပတ်ရန်အခြေခံလိုအပ်ချက်များ

ရေအသုံးပြုမှုအခြေအနေ	
ရေအရင်းအမြစ်	အဝီစိတွင်းရေ (၁ တွင်း)
အဓိကလိုအပ်ချက်	
လက်ရှိလူဦးရေ	၈၆၈ ယောက်
အဓိကကုန်ကြမ်း	Micro Fabric၊ ချည်တည့်နှင့်ဆက်စပ်ပစ္စည်းများ၊ ဇစ်၊ ပုံစံခွက်၊ ရေမြှုပ်၊ ဘရာစီယာကြိုး၊ ကြယ်သီး၊ ရာဘာ နှင့် သားရေကြိုး၊
နှစ်စဉ်ထွက်ကုန်ပစ္စည်းပမာဏ	နှစ်စဉ် ပျမ်းမျှ အရေအတွက် ပထမနှစ်မှ ၁၀နှစ်အတွင်း (၇,၀၀၀,၀၀၀ မှ ၇,၇၀၀,၀၀၀) ထည်

Asia Link (Myanmar) Fashion Co., Ltd. ၏ တည်ရှိသည့်နေရာ

Asia Link (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်မှုအလိုက် နေရာပြမြေပုံ

Asia Link (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်မှုအလိုက် နေရာပြမြေပုံ



Asia Link (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်ပုံအဆင့်ဆင့်

Sampling → Sample Inspection → Fabric and accessories preparation → Cutting → Sewing → QC → Product's Needles Inspection → Packing → Product's Store → Export Container → Shipment port

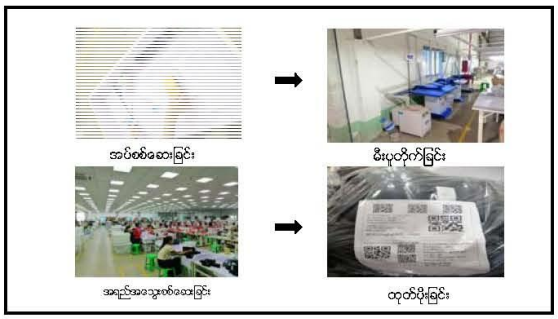
Asia Link (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်ပုံများ


ကုန်ကြမ်းသိုလှောင်ခြင်း


ချည်မျှင်စစ်ခြင်း


ပိတ်ဖြတ်ခြင်း

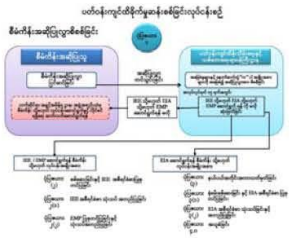

စက်ချုပ်ခြင်း

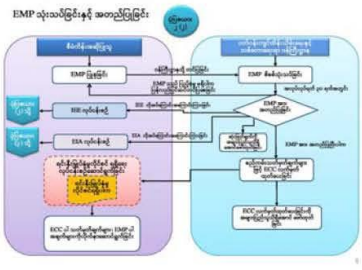


Asia Link (Myanmar) Fashion Co., Ltd. ၏ထုတ်ကုန်ပစ္စည်းများ

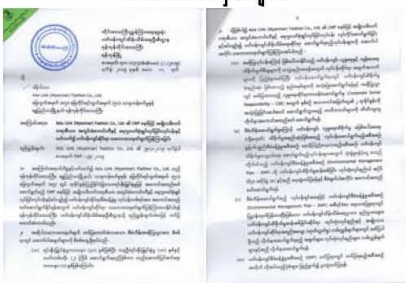
ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား မိတ်ဆက်ခြင်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ပြုလုပ်ခြင်း





သဘောထားမှတ်ချက်



သက်ရောက်မှုဆန်းစစ်ခြင်းရလဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ

စီမံကိန်းပတ်ဝန်းကျင်အနေအထား

စဉ်	အကြောင်းအရာ	ဖော်ပြချက်
၁။	ကိုဩဒိနိတ်အမှတ်	မြောက်လတ္တီကျု ၁၆°၅၉'၂၀.၃"နှင့် အရှေ့လောင်ဂျီကျု ၉၆° ၀၅'၁၃.၅"
၂။	ရာသီဥတုအခြေအနေ	ရွှေပြည်သာမြို့နယ် နှစ်စဉ်ပျမ်းမျှအမြင့်ဆုံးအပူချိန် ၃၈ °C အနိမ့်ဆုံးအပူချိန် ၃၀°C စုစုပေါင်း မိုးရေချိန်လက္မ ၅၅.၆၉လက်မ
၃။	စက်ရုံနေရာတွင်မြေအသုံးချမှု	စက်မှုလုပ်ငန်းနှင့်သက်ဆိုင်သောမြေအသုံးချမှုပုံစံ (စက်မှုဇုန်)
၄။	လမ်းပန်းဆက်သွယ်ရေး	အောက်မင်္ဂလာဒုံလမ်း၊ဒညင်းကုန်းဘူတာရုံလမ်း၊ရေရောင်လမ်း၊
၅။	အနီးဆုံးရေအရင်းအမြစ်	လှော်ကားကန်
၆။	သစ်တောဧရိယာ	မရှိ
၇။	ကန့်သတ်ကာကွယ်ထားသော ဧရိယာ	မရှိ
၈။	တိုင်းတာမှုရလဒ်	❑ ဆူညံသံ တိုင်းတာခြင်း ❑ အလင်းရောင် တိုင်းတာခြင်း ❑ လေထုအရည်အသွေး တိုင်းတာခြင်း ❑ အပူချိန် နှင့် စိုထိုင်းမှု အရည်အသွေး တိုင်းတာခြင်း

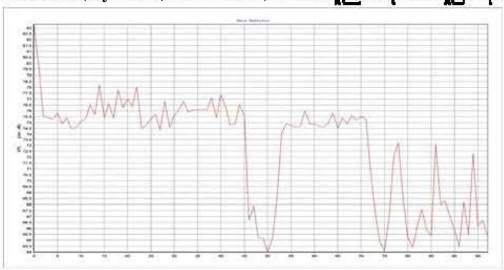
ဆူညံသံတိုင်းတာမှု

Date/ Time	Measurement Area	GPS value	Measurement Result	NEQ Guildline
19 August 2019 (10:00 to 4:00 pm)	Operation Area	16°59'20.3"N 96°05'13.5"E	72.88 dBA	70 dBA

အထက်ဖော်ပြပါ ဆူညံသံတိုင်းတာမှုရလဒ်များအရ
Asia Link (Myanmar) Fashion Co., Ltd.၏ဆူညံသံများမှာ National Emission Quality Guideline ထက်ကျော်လွန်မှုအနည်းငယ်ရှိနေသည်ကို လေ့လာတွေ့ရှိရပါသည်

စက်ရုံတွင်းဆူညံသံတိုင်းတာမှု

Asia Link (Myanmar) Fashion Co., Ltd. ၏ဆူညံသံတိုင်းတာမှုပြ ဂရပ်



လုပ်ငန်းခွင်အလင်းရောင်တိုင်းတာမှု

Date/ Time	Measurement Area	Measurement Result	Standard Value	Remark
19 August, 2019	Warehouse	380	300	Above
	Cutting Section	709	1000	Below
	Sewing Section	1037.1	400	Above
	Packing Section	1158	600	Above

Lighting standards and codes usually provide recommended illuminance ratios between the task area and its surroundings (EN 12464-1 2002) (CIBSE 1997) (IESNA 2000, 676708).


လုပ်ငန်းခွင်အတွင်း အလင်းရောင်တိုင်းတာမှု

လေထုတိုင်းတာမှု

Date/Time	Parameter	Measurement Area	Result	Guideline Value	Unit	Organization	Period
19 August 2019	PM_{10}	Project Area	30.2	50	µg/m3	NEQG	8 hours
	$PM_{2.5}$		8.3	25	µg/m3	NEQG	8 hours

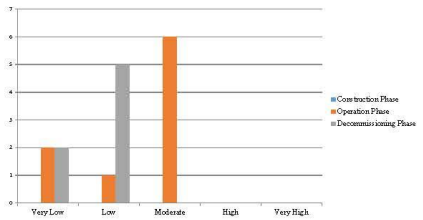

ဓာတ်ရိုက်ထွင်း
လေထုတိုင်းတာခြင်း

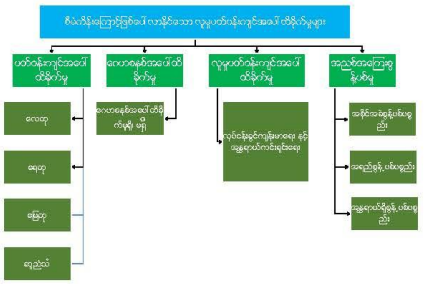
အပူချိန်တိုင်းတာမှု


A sia Link (Myanmar) Fashion Co., Ltd. ၏ လုပ်ငန်းခွင်ပျမ်းမျှစိုထိုင်းမှုမှာ ၇၃.၅၅% နှင့် အပူချိန်တိုင်းတာမှုမှာ ၃၂.၂၄° C ရှိပါသည်။

ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျှော့ရေးနည်းလမ်းများ

Impact Significance Data Chart on Proposed Project





သက်ရောက်မှု	စိမ်ကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
ဆူညံသံ	▪ မီးစက်၊ လေမှုတ်စက် နှင့် မော်တော်ယာဉ် အသုံးပြု မှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု	▪ ဆူညံသံထွက်သောနေရာများကို အကာအကွယ် ဖြင့်ထားရှိခြင်း ▪ စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ပေးခြင်း
မီးဘေးအန္တရာယ်	▪ ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲ ပေါ့လျော့မှု	▪ ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း ▪ လျှပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း
စွန့်ပစ်အမှိုက်	▪ ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ပိတ်စ အပိုင်းအစများ၊ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ	▪ စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပြီး သီးခြားစွန့်ပစ်စေခြင်း
စွန့်ပစ်အရည်	▪ နေအိမ်၊ စားသောက်ဆောင် တို့မှစွန့်ထုတ်ရေ၊ မိလ္လာကန်စနစ်	▪ စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပြီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	▪ စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်းသိမ်းမှု က ထွက်ရှိသည့်အမှိုက်များ	▪ စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

လေထုညစ်ညမ်းမှုလျော့ချရေး

ရည်ရွယ်ချက်	စိမ်ကိန်းကြောင့် စက်ရုံမှ ထွက်သော ဓာတ်ငွေ့များနှင့် မီးစက်များမှ ထွက်ရှိသော ဓာတ်ငွေ့များကြောင့် လေထုညစ်ညမ်းမှုကို လျော့ချရန်
လိုက်နာရမည့် စည်းကမ်း	အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှု အစီအစဉ်	▪ စက်ရုံအတွင်းနှင့် အနားဝန်းကျင်တွင် သစ်ပင်ပန်းမန်စိုက်ပျိုးခြင်း ▪ စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းအား မီးရှို့ဖျက်စီးခြင်း မပြုလုပ်ခြင်း ▪ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ Helmets စသည်တို့အားထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	▪ ပြုပြင်ထိန်းသိမ်းရေးအရာရှိ - လေထုညစ်ညမ်းမှုလျှော့ချရေးနည်းလမ်းများ ▪ ထုတ်လုပ်ရေးမန်နေဂျာ- လုပ်ငန်းခွင်လေထုသန့်ရှင်းရေး ▪ မန်နေဂျာ - ပတ်ဝန်းကျင်လေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

ဆူညံသံလျော့ချရေး

ရည်ရွယ်ချက်	ဒေသပတ်ဝန်းကျင်ဆူညံမှုမဖြစ်ပေါ်စေရန် နှင့် စက်ရုံရှိ မီးစက်နှင့် အခြားစက်ပစ္စည်းများကြောင့် လုပ်သားများအပေါ် ထိခိုက်မှု လျော့ချရန်
လိုက်နာရမည့် စည်းကမ်း	▪ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) ▪ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ မီးစက်၊လေမှုတ်စက်တို့ကို ဆူညံသံထိန်းချုပ်နိုင်သော ခန်းဖွဲ့စည်းမှုပုံစံ တည်ဆောက်ထားခြင်း ▪ လုပ်ငန်းသုံးယာဉ်များကိုဆူညံသံလျော့ချရန်သတ်မှတ်အရှိန်ထက်ကျော်လွန်မမောင်းစေခြင်း ▪ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ Helmets စသည်တို့အား ထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - ဆူညံသံတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

အစိုင်အခဲစွန့်ပစ်မှု ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	စွန့်ပစ်အမှိုက်ထွက်ရှိမှုလျှော့ချရေးနှင့် စွန့်ပစ်အမှိုက်ကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုကို လျော့ချရန်
လိုက်နာရမည့်စည်းကမ်း	▪ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) ▪ National Waste Management Strategy and Action Plan (Draft 2018)
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ စက်ရုံမှ မည်သည့်စွန့်ပစ်ပစ္စည်းမှ မြစ်၊ ချောင်း၊ အင်း၊ အိုင် အတွင်းသို့ မစွန့်ပစ်ရ ▪ စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုနိုင်သောပစ္စည်း(ဗူး၊ ဘူး၊ စက္ကူ၊ ပလက်စတစ်၊ စသည်ဖြင့်) များကို ပြင်ပတွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချခြင်း ▪ စွန့်ပစ်ရန်ပစ္စည်း(လုပ်သားများမှစွန့်ပစ်ပစ္စည်းနှင့်မီးဖိုချောင်ထွက်ပစ္စည်းများ)ကို မြို့တော်စည်ပင်သာယာရေးအဖွဲ့အစည်း ကို နေ့စဉ်ခေါ်ယူပြီး သိမ်းဆည်းစေခြင်း ▪ အန္တရာယ်ရှိပစ္စည်း (စက်ဆီအဟောင်းများ၊ လျှပ်စစ်ပစ္စည်းအပျက်များ၊ သံထည်ပစ္စည်း) များကို ဝယ်ယူသူထံမှပြန်လည် သိမ်းဆည်းစေခြင်း ▪ စက်ရုံတွင် အမှိုက်စွန့်ပစ်ရန် အတွက် အမှိုက်ပုံးများကို စီမံထားခြင်း ▪ စက်ရုံဝန်းထမ်းအားလုံးကို စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် တိုက်တွန်းနှိုးဆော်ထားခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	▪ မန်နေဂျာ - စက်ရုံအတွင်းသန့်ရှင်းရေးအတွက်စီမံခန့်ခွဲရန်တာဝန်ရှိသည် ▪ အမှိုက်စွန့်ပစ်မှု ပုံမှန်ပြုလုပ်ရန်နှင့် စွန့်ပစ်ပစ္စည်းသယ်ယူသူများကို ပုံမှန်ပြုလုပ်ရန် တာဝန်ယူဆောက်ရွက်ရန်

စွန့်ပစ်အရည် ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	မြေပေါ်ရေနှင့် မြေအောက်ရေ ညစ်ညမ်းမှုမဖြစ်စေရေး
လိုက်နာရမည့်စည်းကမ်း	▪ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) ▪ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ စက်ရုံရေမြောင်းများနှင့်မိလ္လာစနစ်ကို စနစ်တကျ သန့်ရှင်းအောင်ထားရှိခြင်း လုံလောက်သည့်အတိုင်းအတာ ပမာဏရှိခြင်း ▪ မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပြီး လိုအပ်သကဲ့သို့ ထိန်းသိမ်းပြုပြင်ခြင်း ▪ စက်ရုံရေမြောင်းအတွင်းတွင် ပိတ်ဆို့မှုမရှိစေရန်နှင့် အနံ့ဆိုးများမထွက်စေရန်စီမံခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - စွန့်ထုတ်ရေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

စွမ်းအင်သုံးစွဲမှု ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	**လျှပ်စစ်သုံးစွဲမှုလျှော့ချစေရန်နှင့် လုပ်ငန်းခွင်အတွင်း လျှပ်စစ်သုံးစွဲမှုကြောင့် အန္တရာယ်မရှိစေရန်**
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ စက်ရုံတွင်း လျှပ်စစ်သုံးစွဲမှုများအတွက် စွမ်းအင်လျှော့ချနိုင်သည့် စက်ကရိယာများတပ်ဆင်ခြင်း ▪ အသုံးမပြုလျှင် စက်ကရိယာများပိတ်ဆင်ထားခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ

မြေအောက်ရေသုံးစွဲမှု

ရည်ရွယ်ချက်	စွမ်းအင်နှင့် ရေ သုံးစွဲမှုလျှော့ချရေး
လိုက်နာရမည့်စည်းကမ်း	The Underground Water Act (1930)
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ စွမ်းအင်အသုံးနည်းသော Lighting စနစ်တပ်ဆင်ခြင်း ▪ ရေအသုံးပြုမှု သိရှိနိုင်သော မီတာတပ်ဆင်ခြင်း ▪ စက်ပစ္စည်းနှင့် Lighting အသုံးပြုမှုကို စောင့်ကြည့်ထိန်းသိမ်းရေးစနစ်ထားရှိခြင်း (ဥပမာ-အသုံးမပြုပဲမီးဖွင့်ထားခြင်း၊ စက်ဖွင့်ထားခြင်းမျိုး မရှိစေရန်) ▪ ဝန်ထမ်းများအားအသိပညာပေးခြင်းနှင့် လိုက်နာဆောင်ရွက်ရန် တိုက်တွန်းခြင်း
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	မန်နေဂျာ ▪ စွမ်းအင်နှင့်ရေ အသုံးပြုမှုစာရင်း စစ်ဆေးခြင်း ▪ ဝန်ထမ်းများ၏လိုက်နာဆောင်ရွက်မှု စစ်ဆေးခြင်း

အရေးပေါ်အခြေအနေတုန့်ပြန်မှု

ရည်ရွယ်ချက်	**စက်ရုံတွင်းမတော်တဆထိခိုက်မှု လျော့ချရေး**
လိုက်နာရမည့်စည်းကမ်း	**အလုပ်အကိုင်နှင့် တွင်းကျင့်မှုနှင့်ဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ (၂၀၁၃), ILO guide to Myanmar Labour Law (2017)**
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ အရေးပေါ်အခြေအနေဖြစ်သော (မီး၊ လျှပ်၊ ငလျင်၊ ရေကြီးရေလျှံမှု) တို့အတွက် စက်ရုံတွင် စီမံခန့်ခွဲမှုရှိခြင်း ▪ စက်ရုံ၏မီးသတ်စနစ်များကို ပုံမှန်စစ်ဆေးခြင်း ▪ ရေးဆွဲထားသော အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်များကို ဝန်းထမ်းများ အကျွမ်းတဝင်ဖြစ်စေရန် စီမံထားခြင်း ▪ လောင်စာသိုလှောင်နေရာများ၊ လျှပ်စစ်ဖြန့်ဖြူးရေးနေရာများကို အဓိကထားပြီး စောင့်ကြည့်စစ်ဆေးခြင်း၊ ပြုပြင်မွမ်းမံခြင်း ▪ ပုံမှန်မီးဘေးကာကွယ်ရေး၊ လျှော်လုပ်စက်လျှင် ပြုလုပ်ရမည့်ပုံစံများ၊ ရေကြီးရေလျှံမှု အခြေအနေထိန်းသိမ်းရေး အစီအစဉ်များ၊ ရှေးဦးပြုစုခြင်းသင်တန်းများကို ပုံမှန်လေ့ကျင့်မှုများ သင်ကြားမှုများ ပြုလုပ်ခြင်း ▪ အရေးပေါ်ဆက်သွယ်ရန် ဖုန်းနံပါတ်၊ လိပ်စာများ၊ အများသူငါမြင်သာစေသောနေရာများတွင် ကပ်ထားခြင်း ▪ စက်ရုံတွင်း မီးသတ်အဖွဲ့ ငယ်၊ အန္တရာယ်ကင်းရှင်းရေး စောင့်ကြည့်ရေးအဖွဲ့ငယ်များထားရှိပြီး လစဉ် တွေးနွေးတိုင်ပင်ခြင်း၊ လေ့ကျင့်ခြင်းများ ပြုလုပ်ခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	▪ Manager and EHS officer ▪ မီးသတ်သင်တန်းများ ၃ လတစ်ကြိမ်ပြုလုပ်ရန်စီမံပေးခြင်း ▪ အရေးပေါ်အခြေအနေနှင့် မတော်တဆထိခိုက်မှုမရှိစေရေး စောင့်ကြည့်စစ်ဆေးခြင်း

ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု

ကဏ္ဍ	အချက်အလက်	ကြိမ်နှုန်း	နေရာ	တာဝန်ရှိသူ
လုပ်ငန်းလည်ပတ်ချိန်				
လေထု	$PM_{2.5}$, PM_{10}	တစ်နှစ် ၂ကြိမ်	ထုတ်လုပ်မှု ဧရိယာအတွင်း	Asia Link (Myanmar) Fashion Company Limited
ရေ	pH, DO, BOD, COD, TDS, Temp, Oil and Grease, Chlorine, Arsenic	တစ်နှစ် ၂ကြိမ်	ရေဆိုးသန့်စင်ဆက်မှ သန့်စင်ပြီးရေ	Asia Link (Myanmar) Fashion Company Limited
ဆူညံသံ	ဆူညံသံ ပမာဏ	တစ်နှစ် ၂ကြိမ်	၂ နေရာ (ထုတ်လုပ်မှု ဧရိယာ အတွင်း)	Asia Link (Myanmar) Fashion Company Limited
အမှိုက်စွန့်ပစ်မှု	အစိုင်အခဲ အရည် နှင့် အန္တရာယ်ရှိပစ္စည်း	ပုံမှန်	စက်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်နှင့် စွန့်ပစ်ရန်တွက် အမှိုက်ပုံများအား ခွဲခြားခြင်း	Asia Link (Myanmar) Fashion Company Limited
မီးဘေးအန္တရာယ်	မီးသတ်ဆေးဘူးပစ္စည်းများနှင့်အရေးပေါ်ဖုန်းနံပါတ်များ	လစဉ်	စက်ရုံဧရိယာ အတွင်း	Asia Link (Myanmar) Fashion Company Limited
အလင်းရောင်ပြင်းအား	အလင်းရောင်စစ်ဆေးခြင်း	တစ်နှစ် ၂ကြိမ်	ထုတ်လုပ်မှု ဧရိယာအတွင်း (ဝိုင်းဝန်းခြင်း နှင့် အချုပ်အလုပ်အား စစ်ဆေးခြင်း)	Asia Link (Myanmar) Fashion Company Limited
လုပ်ငန်းဖြတ်သိမ်းခြင်းကာလ				
လေထု	PM2.5, PM10	ဖြတ်သိမ်းမှု ကာလအတွင်း ၁ကြိမ်	ထုတ်လုပ်မှု ဧရိယာအတွင်း	Asia Link (Myanmar) Fashion Company Limited
ရေ	pH, DO, BOD, COD, TDS, Temp, Oil and Grease, Chlorine, Arsenic	ထိုကာလအတွင်း ၁ကြိမ်	ရေဆိုးသန့်စင်ဆက်မှ သန့်စင်ပြီးရေ	Asia Link (Myanmar) Fashion Company Limited
ဆူညံသံ	ဆူညံသံ ပမာဏ	ထိုကာလအတွင်း ၁ကြိမ်	ဖြတ်သိမ်းမှု ဧရိယာ	Asia Link (Myanmar) Fashion Company Limited
ပြန်လည်ထူထောင်ခြင်း	သစ်ပင်များပြန်လည်စိုက်ပျိုးခြင်း		ဖြတ်သိမ်းမှု ဧရိယာအားလုံး	Asia Link (Myanmar) Fashion Company Limited

ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု ခန့်မှန်းကုန်ကျစရိတ်

စဉ်	အကြောင်းအရာ	အကြိမ်အရေအတွက်	ကုန်ကျစရိတ် (အမေရိကန် ဒေါ်လာ)
လျှော့ချခြင်းအစီအစဉ်			
၁.	စက်ရုံအတွင်းလေအဝင်အထွက်အစီအစဉ်	၁နှစ် တကြိမ်	နှစ်စဉ် ဒေါ်လာ ၂၀၀
၂.	စက်ရုံဧရိယာအတွင်း သစ်ပင်များစိုက်ပျိုးခြင်း	၃လ တကြိမ်	၃လခြား ဒေါ်လာ ၇၀
၃.	အစိုင်အခဲအမှိုက်ပစ်ခြင်း	၁၂ ကြိမ်	နှစ်စဉ် ဒေါ်လာ ၁၀၀၀
၄.	တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးပစ္စည်းများဝယ်ယူခြင်း	၆ လ တကြိမ်	၆ လခြား ဒေါ်လာ ၁၅၀
၅.	ဆေးပစ္စည်းများနှင့် ကျန်းမာရေးစစ်ဆေးခြင်း	၁ နှစ် တကြိမ်	နှစ်စဉ် ဒေါ်လာ ၅၀၀
အရေးပေါ်အစီအစဉ်			
၁.	မီးသတ်ဆေးဘူး	၁လ တကြိမ်	လစဉ် ဒေါ်လာ ၃၀၀
၂.	မီးသတ်အချက်ပြ စနစ်	၁လ တကြိမ်	
၃.	ရှေးဦးသူနာပြု ပစ္စည်းများ	၁လ တကြိမ်	
စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်			
၁.	ရေဆိုးရေသစ်	၂ ကြိမ်	၁နှစ် ဒေါ်လာ ၂၀၀
၂.	ဆူညံသံ	၂ ကြိမ်	၁နှစ် ဒေါ်လာ ၃၀၀
၃.	စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ	၁ ကြိမ်	ဒေါ်လာ ၁၀၀၀

လူမှုအကျိုးတူပူးပေါင်း ပါဝင်မှု

Asia Link (Myanmar) Fashion တွင် CSR အတွက် အမြတ်ငွေ၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးတို့ အတွက် အသုံးပြုသွားမည် ဖြစ်ပါသည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	ဝ.၈ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	ဝ.၈ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	ဝ.၄ %

စက်ရုံ၏ဆောင်ရွက်ချက်များ


ဝန်ထမ်းများအတွက်သုံးဆပြေပ်ဆင်ထားရှိမှု


ဝန်ထမ်းများအတွက်စားသောက်ဆောင်




Asia Link (Myanmar) Fashion Co., Ltd. ၏ လျှပ်စစ်သုံးစွဲမှု


Asia Link (Myanmar) Fashion Co., Ltd. ၏ Electronic boiler သုံးစွဲမှု




Asia Link (Myanmar) Fashion Co., Ltd. ၏ မီးသေးအန္တရာယ်အတွက် ထားရှိမှုများ

Asia Link (Myanmar) Fashion Co., Ltd. ၏ မီးသေးအန္တရာယ်သင်တန်းပို့ချမှုများ

ဝန်ထမ်းများအတွက် ဆေးခန်းနှင့်ဆေးပစ္စည်းများထားရှိမှုများ

Thank You for Your Patient Attention!

APPENDIX H
List of Commitment

Asia Link (Myanmar) Fashion Company Limited ၏ အမျိုးသမီးဝတ် ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီနှင့် ရေကူးဝတ်စုံအမျိုးမျိုးချုပ်လုပ်ခြင်း လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော သဘာဝပတ်ဝန်းကျင်၊ လူမှုဘဝနှင့် ကျန်းမာရေးထိခိုက်မှုများရှိခဲ့ပါက လျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့်တားဆီးရေးအစီအစဉ်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan-EMP) တွင်ပါဝင်ရမည့်အချက်များကို အကောင်အထည်ဖော်စီမံ ဆောင်ရွက်သွားမည်ဖြစ်ကြောင်း အောက်ဖော်ပြပါ ဇယားဖြင့် အကျဉ်းချုပ်စာရင်းပြုစု ဖော်ပြထားပါသည်။

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
နိဒါန်း	၁	**ရည်ရွယ်ချက်** • လုပ်ငန်းလုပ်ဆောင်မှုများကြောင့်ဖြစ်ပေါ်လာသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုအပေါ် လျှော့ချရန်။ • ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမည့်အစီအစဉ်အား အကောင်အထည်ဖော်ခြင်း။ **ရည်မှန်းချက်** • သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် ပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို စဉ်ဆက်မပြတ် ပြန်လည်သုံးသပ်ခြင်း၊ စွမ်းဆောင်ရည်မြှင့်တင်ခြင်းဖြင့် အောင်မြင် စေရန် လုပ်ဆောင်ပေးသော စနစ်တစ်ခုဖြစ်ပါသည်။	အခန်း (၁)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါရည်ညွှန်းချက် (အခန်း)
		• သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် ပြန်လည်သုံးသပ်ခြင်းနှင့်အကဲဖြတ်ခြင်း။ • သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းရည်ကို မြှင့်တင်ရန် စဉ်ဆက်မပြတ် ပံ့ပိုးပေးသည်။	
	၁.၁	**အဆိုပြုလုပ်ငန်း၏နောက်ခံအကြောင်းအရာ** • Asia Link (Myanmar) Fashion Company Limited သည် အမျိုးသမီးဝတ် ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီ၊နှင့် ရေကူးဝတ်စုံအမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းဖြစ်ပြီး နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှု လုပ်ငန်းတစ်ခုဖြစ်ပါသည်။ • ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ၏ ထောက်ခံချက်အမှတ် (YGN-170/2019) ဖြစ်ပြီး သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီး ဌာန၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ သဘောထား မှတ်ချက် (Yaka-1/3/4(EIA) (797/2019)။	အခန်းခွဲ (၁.၃)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာ မူဘောင်များ	၂	• ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ (၂၀၁၂) • ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနည်းဥပဒေ (၂၀၁၄) • ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) • မြန်မာနိုင်ငံမှချမှတ်ထားသော စက်ရုံနှင့်သက်ဆိုင်သည့် အခြားလိုက်နာ ဆောင်ရွက်ရမည့်လုပ်ထုံးလုပ်နည်း၊ ဥပဒေ၊ နည်းဥပဒေနှင့် မူဝါဒများ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်နှင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များ။	အခန်း (၂)
စီမံကိန်းအကြောင်းအရာဖော်ပြချက်	၃	• ရန်ကုန်တိုင်းဒေသကြီး၊ သာဓုကန်စက်မှုဇုန်၊ ကွင်းအမှတ် (၈၅)တွင် တည်ရှိပါသည်။	အခန်းခွဲ (၃.၁)
	၃.၁	• စုစုပေါင်း ဧရိယာသည် ၂.၂၈ ဧက ဖြစ်ပါ သည်။	အခန်းခွဲ (၃.၁.၁)
	၃.၂	• အဆိုပြုလုပ်ငန်း၏ထုတ်ကုန်သည် အမျိုးသမီးဝတ် ဘရာစီယာ၊ အတွင်းခံဘောင်းဘီ၊နှင့် ရေကူးဝတ်စုံအမျိုးမျိုး တို့ဖြစ်ပါသည်။	အခန်းခွဲ (၃.၁.၅)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
	၃.၃	• အဆိုပြုလုပ်ငန်းအတွက် လိုအပ်သောအဓိကကုန်ကြမ်များ ကို တောင်ကိုရီးယား၊ တရုတ်နှင့် ဂျပန်နိုင်ငံမှတင်သွင်းမည် ဖြစ်သည်။	အခန်း၃ (၃.၂.၁)
	၃.၄	• အဆိုပြုလုပ်ငန်းသည် ပြည်ပမှ ၂၀ ဦးနှင့် ပြည်တွင်းလုပ်သား ၈၄၈ တို့ဖြင့် လုပ်ငန်းကို ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။	အခန်း၃ (၃.၂.၂)
ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာမှု	၄	• အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုဆိုင်ရာလမ်းညွှန်ချက်များကို အခြေခံလေ့လာတိုင်းတာထားပါသည်။	အခန်း (၄)
ဆူညံသံ	၄.၁	• အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ အမြင့်ဆုံးလက်ခံ နိုင်သည့် ဆူညံသံအဆင့် (Noise level) လမ်းညွှန် သတ်မှတ်ချက် စက်မှုဇုန် ဧရိယာတွင် (70 One hour LAeq (dBA)) ဖြင့်နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်း၄ (၄.၂.၂)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
အလင်းရောင်ရရှိမှု	၄.၂	• ,Illumination and Limiting Glare Index based on IES Code 1968 ဖြင့် နှိုင်းယှဉ်ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၃)
မြေအောက်ရေအရည်အသွေး	၄.၃	• WHO Guideline ဖြင့်နှိုင်းယှဉ်ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၄)
လေအရည်အသွေး	၄.၄	• အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ ထုတ်လွှတ်အခိုး အငွေ့ (Air emissions) လမ်းညွှန် သတ်မှတ်ချက် တို့ဖြင့် နှိုင်းယှဉ်ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၅)
ဒေသဆိုင်ရာအချက်အလက်များ	၄.၅	• ရွှေပြည်သာမြို့နယ်အထွေထွေအုပ်ချုပ်ရေးရုံးမှ အချက်အလက်များကို ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၃)နှင့် (၄.၄)
ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းနှင့် လျော့ချရေးနည်းလမ်းများ	၅	**ဆန်းစစ်ခြင်းနည်းလမ်း** • သိသာထင်ရှားသောသက်ရောက်မှု= (ပမာဏ + အချိန် + ကျယ်ပြန့်မှု)* ဖြစ်နိုင်ခြေ	အခန်းခွဲ (၅.၁)
	၅.၁	**ထိခိုက်မှုဆန်းစစ်ခြင်း** • **ကောင်းကျိုး**	အခန်းခွဲ (၅.၂)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		• အလုပ်အကိုင်အခွင့်အလမ်းပေါများလာခြင်း၊ • လမ်းပန်းဆက်သွယ်ရေးကောင်းမွန်လာခြင်း၊ နည်းပညာများ တိုးတက်လာခြင်း။ • **ဆိုးကျိုး** • သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များ၊ ဂေဟစနစ်အရင်း အမြစ်များ၊ လူသားများအပေါ်ထိခိုက် မှုများ၊ အမှိုက်စွန့်ပစ် ခြင်းကြောင့်ထိခိုက်မှုများ။	
ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု	၆	• Asia Link (Myanmar) Fashion Company Limited ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP)အတွက် စက်ရုံ စီမံခန့်ခွဲရေးအဖွဲ့၊ အလုပ်သမားများ၊ ဒေသခံလူထုများ၏ အမြင်၊ သက်ဆိုင်ရာ တာဝန်ရှိသူတို့၏ အကြံပြုချက်များနှင့် ကွင်းဆင်းလေ့လာသူများမှ ဆွေးနွေးတိုင်ပင်မှု တို့အပေါ် အခြေခံပြီး ဆောင်ရွက်သွားမည် ဖြစ်သည်။ • EMP တွင် စက်ရုံအတွင်း ဘေးအန္တရာယ် ကင်းရှင်းရေး စီမံခန့်ခွဲမှုများကို လိုက်နာရန်အတွက် ထည့်သွင်းဖော်ပြထား ပါသည်။	အခန်း (၆)
လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်များ	၆.၁	• ကာဗွန်ဒိုင်အောက်ဆိုဒ်လျော့ချရန်အတွက် စက်ရုံအနီး အတွင်း သစ်ပင် ပန်းပင်များစိုက်ပျိုးရမည်။	အခန်းခွဲ (၆.၂)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		• အဆိုပြုလုပ်ငန်းဧရိယာအတွင်း စွန့်ပစ်ပစ္စည်းများ မီးရှို့ခြင်းကို တားမြစ်ထားရမည်။ • လေထုညစ်ညမ်းမှုလျော့ချရန်လုပ်ငန်းသုံးယာဉ်များ၊ မီးစက်များနှင့် လုပ်ငန်းဆိုင်ရာစက်ပစ္စည်းများကို ပုံမှန် စောင့်ကြည့်စစ်ဆေးရမည်။ • ပတ်ဝန်းကျင်အပေါ် မီးခိုးထွက်ရှိမှုလျော့နည်းစေရန် မီးခိုးခေါင်းတိုင်များ တပ်ဆင်ရမည်။ • မော်တော်ယာဉ်များ၊ ရေစုပ်စက်များနှင့် မီးစက်များကို ပုံမှန်ပြုပြင်ထိန်းသိမ်း ထားရှိရမည်။	
ဆူညံသံထွက်ရှိမှု	၆.၂	• မီးစက်ခန်းများထားရှိခြင်းနှင့်အခြားသက်ဆိုင်သည့် စက်ပစ္စည်းများအား စနစ်တကျထိန်းသိမ်းထားရှိရမည်။ • စက်ရုံဝန်းအတွင်း ယာဉ်သွားလာမှုအား speed limit သတ်မှတ်ထားရှိခြင်း။ • ဝန်ထမ်းများကို သက်ဆိုင်ရာကိစ္စရပ်များနှင့်ပတ်သက်၍ သင့်တော်သော သင်တန်းများပေးခြင်း၊ ဆူညံသံထွက်ရှိသည့် နေရာများတွင် PPE များကို ဝတ်ဆင်စေခြင်း။	အခန်းခွဲ (၅.၃)
အစိုင်အခဲစွန့်ပစ်ပစ္စည်း	၆.၃	• အဆောက်အဦတစ်ခုစီတွင် သီးခြားအမှိုက်ပုံးများထားရှိ ခြင်း၊ အမှိုက်အမျိုး အစားခွဲခြားစွန့်ပစ်ခြင်း၊ တစ်ပတ်အတွင်း	အခန်းခွဲ (၆.၄)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		ထွက်ရှိသော အမှိုက် 273 kg ခန့်အား အမှိုက်သိုလှောင်ရုံတွင် ထားရှိပြီးနောက် YCDC နှင့်ချိတ်ဆက် ၍ အမှိုက်များကို စွန့်ပစ်ခြင်း။ • ပြန်လည်အသုံးပြု၍ရသောအမှိုက်များ (100 kg) ခန့်အား ဒေသအတွင်းဝယ်ယူသူများထံသို့ပြန်လည်ရောင်းချခြင်း။ • Domestic waste များအား YCDC နှင့်ချိတ်ဆက်၍ နေ့စဉ် စွန့်ပစ်ခြင်း။ • အမှိုက်သိမ်းသည့်ဝန်ထမ်းများအား အန္တရာယ်မဖြစ်စေရန် PPE ဝတ်ဆင်၍ သိမ်ယူစေခြင်း။	
စွန့်ပစ်အရည်	၆.၄	• ပုံမှန်စစ်ဆေးခြင်းနှင့် သန့်ရှင်းရေးလုပ်ခြင်း၊ မိလ္လာကန်၊ သိုလှောင်ရုံနှင့် အမှိုက်စွန့်ပစ်ရာနေရာအားလုံးအတွက် လုံလောက်သော အကာအရံများထားရှိခြင်း။	အခန်းခွဲ (၆.၅)
စွမ်းအင်	၆.၅	• အပူနှင့်အအေးထိန်းရန်အတွက် အချိန်ကန့်သတ်သည့် ကိရိယာနှင့် သာမိုစတပ်များတပ်ဆင်ခြင်း။ • စွမ်းအင်ချွေတာသောကိရိယာများတပ်ဆင်ခြင်း။ • အသုံးမပြုသည့်အချိန်တွင် မီးပိတ်ထားခြင်း၊ စက်ပစ္စည်းများ ရပ်နားထားခြင်း။	အခန်းခွဲ (၆.၆)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
ရေရှည်သုံးစွဲမှု	၆.၆	• ရေသုံးစွဲမှုကိုထိန်းချုပ်နိုင်ရန် ရေမီတာများတပ်ဆင်အသုံး ပြုခြင်း၊ ဝန်ထမ်းများအား အသိပညာပေးခြင်း၊ စက်ရုံဝန်း ကျင်တွင် သစ်ပင်များစိုက်ပျိုးခြင်း။	အခန်းခွဲ (၆.၇)
အရေးပေါ်တုံ့ပြန်မှုနှင့် ဘေးအန္တရာယ်စီမံခန့်ခွဲမှု	၆.၇	• မီးဘေး၊ ငလျင်၊ ရေလွှမ်းမိုးမှု၊ မုန်တိုင်းနှင့် အခြားအရေး ပေါ်ကိစ္စ များကို ပို၍သင့်တော်သော စီမံခန့်ခွဲမှုများပြုလုပ် ခြင်း။ • စက်ရုံ၏ ကဏ္ဍတစ်ခုချင်းတိုင်းတွင် မီးငြိမ်းသတ်ရေး ကိရိယာ များနှင့် မီးငြိမ်းသတ်ရေးစနစ်များထားရှိခြင်းနှင့် စစ်ဆေးခြင်း။ • မီးဘေးထွက်ပေါက်၊ အရေးပေါ်ထွက်ပေါက်အစရှိသည် တို့ကို အလုပ်သမား များနှင့် တိုင်ပင်ဆွေးနွေးပြီး အသေးစိတ်အကဲဖြတ်ခြင်း၊ မီးငြိမ်းသတ်ခြင်း အား ပုံမှန်လေ့ကျင့်ထားရှိခြင်း။ • ငလျင်လှုပ်တဲ့အခါ လုံခြုံသည့်နေရာတွင်သာနေရန်၊ အပြင် မထွက်ခြင်း၊ အပြင်တွင်လုပ်ကိုင်ရသည့် လုပ်သားများမှာ သစ်ပင်၊ အဆောက်အဦများကို သတိထားရန်နှင့် သက်ဆိုင်ရာလုံခြုံရေး သင်တန်းများပို့ချခြင်း။ • မုန်တိုင်းတိုက်ခြင်း၊ ရေကြီးခြင်း၊ မြေပြိုခြင်းတို့ကြောင့် ဖြွေကွဲသို့သော အခြားအန္တရာယ်ရှိတိရိစ္ဆာန်များအန္တရာယ်များကို	အခန်းခွဲ (၆.၈)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါရည်ညွှန်းချက် (အခန်း)
		သတိပေးခြင်း၊ ရှေးဦးသူနာပြုခြင်းကဲ့သို့သော ကျန်းမာရေး ဆိုင်ရာ အဖွဲ့အစည်းများ ပြင်ဆင် ထားရှိခြင်း။ • နီးစပ်ရာဆေးရုံ၊ ဆေးခန်း၊ ရဲစခန်း၊ မီးသတ်ဌာနတို့၏ ဆက်သွယ်နိုင်မည့် ဖုန်းနံပါတ်များအား လူအများမြင်သာ သည့်နေရာများတွင် ထားရှိခြင်း။ • မီးသတ်အဖွဲ့၊ ကယ်ဆယ်ရေးအဖွဲ့နှင့်လုံခြုံရေးဟူသော အဖွဲ့များ ထားရှိ၍ လစဉ် လုံခြုံရေးများအတွက် အစည်းအဝေးများပြုလုပ်စီမံခန့်ခွဲခြင်း၊ ဘေးအန္တရာယ်ဆိုင်ရာ သင်တန်းများအား သေချာပြုလုပ်စေခြင်း။	
စောင့်ကြပ်ကြည့်ရှုမှု	၇	• အဆိုပြုစီမံကိန်းသည် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာအား (၆) လ တစ်ကြိမ် ဝန်ကြီးဌာနသို့ တင်ပြရမည်။	အခန်း၃ (၆.၉)
လေအရည်အသွေးစစ်ဆေးမှု	၇.၁	• PM2.5, PM 10, O_3, SO_2, NO_2, CO_2, • တစ်နှစ် ၂ ကြိမ် • အဆိုပြုလုပ်ငန်းအတွင်း • ၅ သိန်း	ဇယား (၆.၁)
ဆူညံသံ	၇.၂	• ဆူညံသံ • စက်ရုံဝန်းအတွင်း • ၁၀ သိန်း	ဇယား (၆.၁)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
စွန့်ပစ်ပစ္စည်းထွက်ရှိမှု	၇.၃	• စွန့်ပစ်ပစ္စည်းအစိုင်အခဲ၊ စွန့်ပစ်ရည်နှင့်အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း။ • မကြာခဏ • စက်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်ထားရှိသည့် နေရာ နှင့် အမှိုက်နန်များ • ၁၀ သိန်း	ဧယား (၆.၁)
မီးဘေးအန္တရာယ်စစ်ဆေးမှု	၇.၄	• မီးငြိမ်းသတ်ရေးကိရိယာများ • လစဉ် • စက်ရုံအတွင်း • ၅ သိန်း	ဧယား (၆.၁)
စက်ရုံအတွင်း အလင်းရောင်ရရှိမှုအခြေအနေ	၇.၅	• အလင်းရောင် • တစ်နှစ် (၂)ကြိမ် • ကုန်ပစ္စည်းဖြတ်တောက်ခြင်း၊ အရည်အသွေးစစ်ဆေးခြင်းကဲ့သို့သော လုပ်ငန်းများ လုပ်ကိုင်သည့်နေရာ • ၅ သိန်း	ဧယား (၆.၁)
ဘေးအန္တရာယ်ဆိုင်ရာ သင်တန်းပို့ချခြင်း	၈	• လုပ်ငန်းခွင်၌ ကြုံတင်ခန့်မှန်းနိုင်သော အရေးပေါ် အခြေအနေများကို အရေးပေါ်တုံ့ပြန်နိုင်ရန် အစီအစဉ်များ ချမှတ်ဆောင်ရွက်ခြင်း။	အခန်းခွဲ (၆.၁၀)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
လူထုအကျိုးတူပူးပေါင်းပါဝင်မှု	၉	• အဆိုပြုလုပ်ငန်းသည် လူထုအကျိုးပြုပူးပေါင်းပါဝင်မှုကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး အတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်က ချမှတ်သည့်အတိုင်း ကုမ္ပဏီ၏ အကျိုးအမြတ် ၂ ရာခိုင်နှုန်းအား နှစ်စဉ် ထည့်ဝင်သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၆.၁၁)
မကျေနပ်မှုများနှင့် ပြဿနာများကို ဖြေရှင်းခြင်း	၁၀	• စီမံကိန်းအနီးပတ်ဝန်းကျင်နေထိုင်သောသူများ (သို့) သက်ဆိုင်သူများသည် သူတို့ခံစားနေရသော ပြဿနာများ နှင့် သက်ရောက်မှုများနှင့် ပတ်သက်၍ ဖြေရှင်းမှုများပြု လုပ်ရန်။ • စက်ရုံ၏ တာဝန်ရှိသူများ၊ စက်မှုဇုန်စီမံခန့်ခွဲရေးကော်မတီ၊ အုပ်ချုပ်ရေးဦးစီး ဌာနတို့ဖြင့် ပူးပေါင်းချိတ်ဆက်လုပ်ဆောင် ခြင်း။ • ကော်မတီအဆင့်တွင် အခြားမဖြေရှင်းနိုင်သော ပြဿနာ များကို တာဝန်ရှိ အာဏာပိုင်များသို့တင်ပြပြီး တရားရေးအရ အဆုံးအဖြတ် ပြုလုပ်မည် ဖြစ်သည်။	အခန်းခွဲ (၆.၁၂)
အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်း	၁၁	• သက်ဆိုင်သူများနှင့်တွေ့ဆုံဆွေးနွေးခြင်းအစီအဉ်ကို ၃၀ ရက်၊ အောက်တိုဘာလ၊ ၂၀၁၉ ခုနှစ်တွင် သာဓုကန် စက်မှုဇုန်စီမံခန့်ခွဲရေးကော်မတီ၌ ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲအစည်းအဝေးတွင် သက်ဆိုင်ရာအစိုးရ အဖွဲ့ရုံး၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှု ကော်မတီ၏ တာဝန်ရှိ	အခန်း (၇)

ကတိကဝတ်၏အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		ပုဂ္ဂိုလ်များ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များ ပေးခဲ့ပါသည်။	
နိဂုံးနှင့်သုံးသပ်ချက်	၁၂	• အကျည်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန် ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်း များနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင် ဆိုင်ရာစီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန် တာဝန်များကို ပတ်ဝန်ကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြ ရှင်းလင်းတင်ပြထား ပါသည်။	အခန်း (၈)

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