MYANMAR SINCERECE COMPANY LIMITED

Environmental Management Plan

Manufacturing of Garment on CMP Basis

Prepared by

Myanwei Environmental Solutions Co., Ltd.

20-Jan-22

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Date: 20, 01, 2022

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect to manufacture of Garment by Myanmar Sincerece Company Limited.

EMP report describes the environmental condition of a project, including significant impact, formulation of mitigation measures and preparation of institutional requirements and environmental monitoring.

Myanwei Environmental Solutions 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.

Myanmar Sincerece Company Limited

No.70, Seik Kan Thar Road, Shwe Than Lwin Industrial Zone,Hlaing Thar Yar Township, Yangon.

Date: 20, 01, 2022

Dear: Director

Environmental Conservation Department

Nay Pyi Taw

Subject: Environmental Management Plan (EMP) Report in respect to manufacture of Garment

We refer to the captioned EMP report, which has been prepared by Myanwei Environmental Solutions Co., Ltd. (Third Party Consultant) in compliance with EIA procedure (2015) and other related laws/rules.

We believe, to the best of our knowledge at the time of writing, that;

- The EMP report is accurate and complete
- The EMP report has been prepared in strict compliance with all applicable laws, rules, regulations and procedures in force.

Myanmar Sincerece Company Limited will at all time comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that

Ms. Bai Hong

The Promoter

Myanmar Sincerece 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

အဆိုပြုလုပ်ငန်းသည် CMP စနစ်ဖြင့် အဂတ်အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်း အတွက် ရင်းနှီးမြှုပ်နှံသော ကုမ္ပဏီဖြစ်ပါသည်။ မြန်မာနိုင်ငံ ရင်နှီးမြှုပ်နှံမှုကော်မရှင်၏ ခွင့်ပြုမိန့်ကို ၂၀၁၇ ခုနှစ် ဇွန်လ ၂၁ ရက်နေ့ ရက်စွဲပါ (အတည်ပြုမိန့်အမှတ်၊ ၀၀၂/၂၀၁၇) ရရှိခဲ့ပြီး ဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

ထို့ကြောင့် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီလ၊ ၅ ရက်နေ့တွင် စာအမှတ်၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၂၂၅/၂၀၁၉) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Company Limited (MYANWEI) မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

EMP အစီအစဉ်တွင် Myanmar Sincerece Company Limited ၏ အဂတ်အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်းစီမံကိန်းအတွက် MYANWEI မှရေးသားပြုစုထားသော ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာဖြစ်သည်။ အဆိုပါ လေ့လာဆန်းစစ်ခြင်း၏ ရည်ရွယ်ချက်များမှာ-

- ✓ သဘာဂပတ်ဂန်းကျင်နှင့်လူမှုစီးပွားပတ်ဂန်းကျင်အပေါ် စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ထိခိုက်မှုများကိုလေ့လာရန်။
- ✓ ထိုထိခိုက်မှုများကို လျော့ချနိုင်ရန် လျော့နည်းစေမည့်နည်းလမ်းများကို ဖော်ပြရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ပြင်ဆင်ရန်နှင့် အကောင်အထည်ဖော်ရန်။
- ✓ စီမံကိန်းအတွက်ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အစီရင်ခံစာလုပ်ဆောင်ရာတွင်လုံလောက်မှုရှိစေရန်။
- ✓ ဒေသခံများ၏ လူမှုရေးသက်သာချောင်ချိမှုများ တိုးမြှင့်ရန် နှင့် ဒေသအတွင်း ဖွံ့ဖြိုးတိုးတက်မှုများ အတွက်မရှိမဖြစ် အရေးပါသော လူမှုစီးပွားတာဂန်ယူမှု အစီအစဉ်အား အကောင်အထည်ဖော်ရန်တို့ ဖြစ်ပါသည်။

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

ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ

EMP ရေးဆွဲရခြင်း၏ရည်ရွယ်ချက်မှာ နိုင်ငံတော်နှင့် နိုင်ငံတကာမှ ချမှတ်ထားသော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ်များ၊ စည်းမျဉ်းစည်းကမ်းများ၊ ဥပဒေနှင့် နည်းဥပဒေများကို လိုက်နာပြီး

ပတ်ဝန်းကျင်နှင့် လိုက်ရောညီထွေမှုရှိသော ထိခိုက်မှု လျော့ချရေး အစီအစဉ်များ ပြုလုပ်ရန်ဖြစ်ပါသည်။ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ ရေးသားပြုစုသူများ၏ ကျွမ်းကျင်မှု နယ်ပယ်ဆိုင်ရာ ဖော်ပြချက်များကို ရေးသားဖော်ပြထားပါသည်။ ဥပဒေနှင့် နည်းဥပဒေ အခန်းတွင် MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များအပြင်စက်ရုံနှင့် ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာသဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။ စက်ရုံအတွင်းလိုက်နာ ဆောင်ရွက်ရမည့် စည်းမျဉ်းစည်းကမ်းများ၊ လုပ်ငန်းခွင် အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ အခြေခံစည်းမျဉ်းစည်း ကမ်းများလည်း ထည့်သွင်းဖော်ပြထားပါသည်။ Myanmar Sincerece Company Limited ၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ ကတိကဝတ်များအပြင် ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ချရေး မူဝါဒများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law, 2016
12. The Payment of Wages Act, 1936
13. Yangon City Development Committee Law, 2018
14. The Amended Law for Factories Act, 1951 (2016)
15. The Private Industrial Enterprise Law
16. The Export and Import Law, 2012

17. The Prevention of Hazard from Chemical and Related Substances Law, 2013
18. The Underground Water Act
19. Myanmar Fire Brigade Law, 2015
20. Fire Safety Procedure
21. The Electricity Law, 2014
22. Boiler Law, 2015
23. Labor Dispute Settlement Law, 2012
24. The Law Amending the Settlement of Labor Dispute Law, 2019
25. The Social Security Law, 2012
26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923
28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972
31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ၊ (2018)
35. The Motor Vehicles Law, 2015
36. The Conversation of Water Resources and River Law, 2006
37. The Commercial Tax Law (1990 Amended 2014)

စီမံကိန်းဆိုင်ရာအချက်အလက်

ရင်းနှီးမြှုပ်နှံသူ၏ အချက်အလက်

ရင်းနှီးမြှုပ်နှံသူ အမည်	Ms. Bai Hong
ID No.:	E74047441

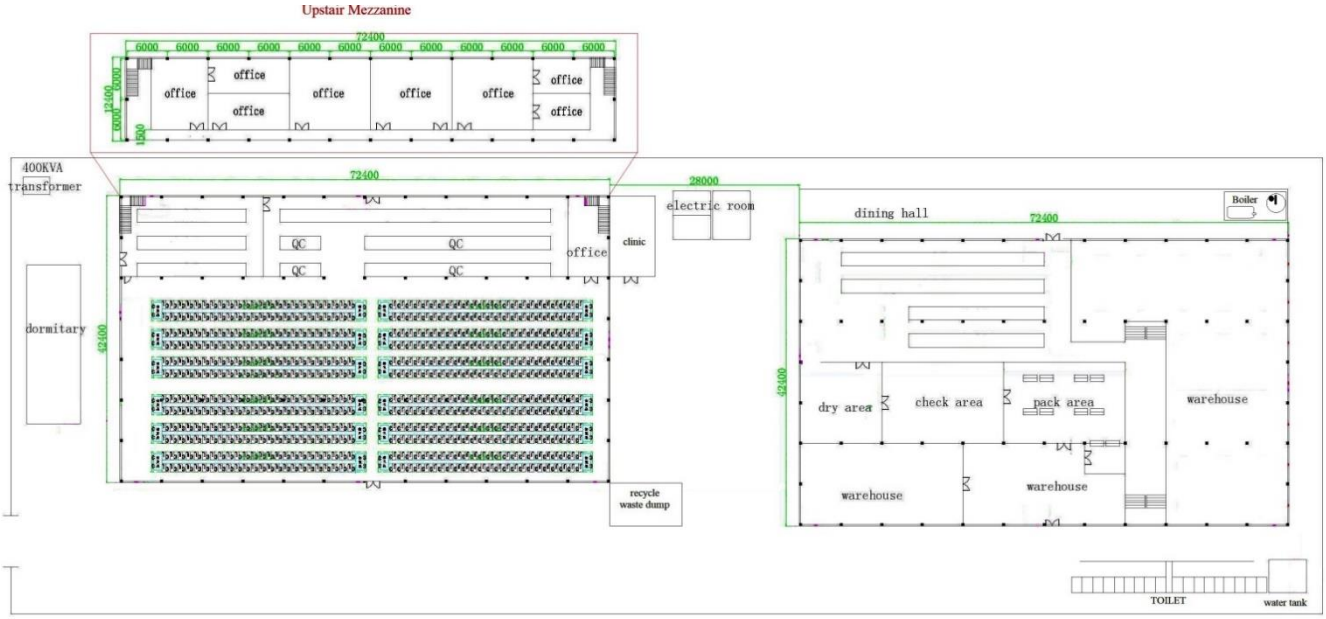
နိုင်ငံသား	တရုတ်နိုင်ငံသား
မှတ်ပုံတင်သွင်းသည့် လိပ်စာ	No. 7, Gangwan Street, Dalian, China.

အဆိုပြုထားသော စီမံကိန်း၏ အဓိကလက္ခဏာများ

အဆိုပြုထားသော စီမံကိန်း	CMPစနစ်ဖြင့်အဝတ်အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှုပုံစံ	၁၀၀% နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
ရှယ်ယာအမျိုးအစား	ပုံမှန်အစုရှယ်ယာ
မြေနေရာပုံစံ	စက်မှုဇုန်မြေ
စုစုပေါင်းမြေကွက်ဧရိယာ	၂.၇၅၂ ဧက (၁၁၂၅၈.၃၆ စတုရန်းမီတာ)
မြေငှားကာလ	၂၀ နှစ်
တည်ဆောက်မှုကာလ	၁၈လ
အဆိုပြုရင်းနှီးမြှုပ်နှံမှုကာလ	၂၀ နှစ်
စီမံကိန်း တည်နေရာ	မြေကွက်အမှတ်(၇၀)၊ မြေတိုင်းရပ်ကွက်အမှတ်(၁၄)၊ ရွှေသံလွင်စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
ဆက်သွယ်ရန် ဖုန်းနံပါတ်	မအေးသီတာစမ်း (HR Manager) ၀၉-၂၅၁၀၈၉၉၄၈ ayethidasan32@gmail.com

Myanmar Sincerece Company Limited ၏ အထည်ချုပ်စက်ရုံသည် မြေကွက်အမှတ်(၇၀)၊ မြေတိုင်းရပ်ကွက်အမှတ်(၁၄)၊ ရွှေသံလွင်စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိပါသည်။ စက်ရုံ၏အကျယ်အဝန်းမှာ ၂.၇၅၂ ဧက (၁၁၂၅၈.၃၆ စတုရန်းမီတာ) ရှိပြီး ဝန်းအတွင်းတွင် (၁၄၀ ပေ x ၂၅၀ ပေ) ရှိသော ၂ထပ်စက်ရုံအဆောက်အဦး (၂)လုံးနှင့် (၄၀ပေ × ၈၀ပေ)၊ (၄၀ပေ × ၁၀၀ပေ) ပတ်လည်ရှိသော ရုံးခန်းအဆောက်အဦး (၂)လုံးရှိပါသည်။

စက်ရုံတည်နေရာပြ မြေပုံ



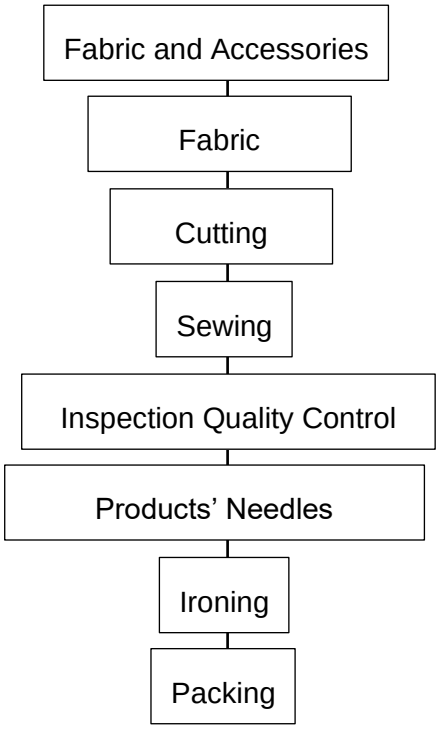
စက်ရုံတည်ဆောက်ထားမှု မြေပုံ

Myanmar Sincerece Company Limited ၏ကုန်ကြမ်းပစ္စည်းများဖြစ်သည့် ပိတ်အထည်အလိပ်၊ အတွင်းခံလိုင်နှင်စ၊ ချည်လုံး၊ ကြယ်သီး၊ ဇစ်၊ ခါးပတ်ချိတ်နှင့်အခြားဆက်စပ်ပစ္စည်းများကို

တရုတ်နိုင်ငံမှမှာယူတင်သွင်းပါသည်။ ကုန်ကြမ်းများကို ကုန်ကြမ်းသိုလှောင်ခန်းတွင် စနစ်တကျ သိုလှောင်ထားရှိပါသည်။

ကုန်ကြမ်းထားရှိမှု ဓာတ်ပုံ

Myanmar Sincerece Company Limited ၏အဓိကထုတ်ကုန်များမှာ အမျိုးသား၊ အမျိုးသမီးဂတ်အင်္ကျီအမျိုးမျိုးနှင့် ဘောင်းဘီအမျိုးမျိုးတို့ဖြစ်ပါသည်။ အဆိုပြုလုပ်ငန်းအတွက် တည်နေရာနှင့် စက်ရုံအတွင်းပါရှိသည့် အဆောင်များ၊ စားသောက်ဆောင်၊ စတို၊ ပြုပြင်ထိန်းသိမ်းရေးအခန်း၊ မီးဖိုချောင် အစရှိသည်တို့ကိုသီးခြားဖော်ပြထားပါသည်။ထို့အပြင် ထုတ်လုပ်မှုနည်းလမ်းများ၊ လိုအပ်သည့်ကုန်ကြမ်းများ၊ နှစ်စဉ်ထွက်ကုန်များ နှင့် စက်ပစ္စည်းများအား ဖော်ပြထားပါသည်။ အဆိုပြုလုပ်ငန်းအတွက်လိုအပ်သည့် စွမ်းအင်နှင့် အသုံးပြုသည့်ပမာဏများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။ ကျန်လုပ်ငန်းသုံးယာဉ်နှင့် ရုံးသုံးပစ္စည်းများကို ပြည်တွင်းမှ ဝယ်ယူအသုံးပြုပါသည်။ ကုန်ထုတ်လုပ်ခြင်းလုပ်ငန်းမှာ automatic machine နှင့် လူစွမ်းအားကို အသုံးပြုသော လုပ်ငန်းမျိုးဖြစ်ပါသည်။ ထုတ်လုပ်ပုံအဆင့်ဆင့်ကို အောက်ဖော်ပြပါ ပုံပြဇယားဖြင့် ဖော်ပြထားပါသည်။



ထုတ်လုပ်ပုံလုပ်ငန်းအဆင့်ဆင့်

လုပ်ငန်းမှ ပထမနှစ်မှ ၁၀ နှစ်အတွင်းအထည်အရေအတွက် (၂,၄၆၀,၀၀၀) မှ (၄,၉၂၀,၀၀၀) အထိ တိုးမြှင့်ထုတ်လုပ်သွားမည်ဖြစ်သည်။ နိုင်ငံခြားသားလုပ်သား (၄၅)ဦး နှင့် နိုင်ငံသား (ပြည်တွင်း)လုပ်သား (၁၄၀၇) ဦးမှ (၂၀၁၁) ဦးအထိခန့်အပ်ပြီး လုပ်ငန်း ဆောင်ရွက်သွားမည်ဖြစ်သည်။ EMPအတွက်ကွင်းဆင်းလေ့လာချိန်တွင် စက်ရုံ၌ လက်ရှိ လူဦးရေဖြင့် ထုတ်လုပ်မှုအချို့ပြုလုပ်နေပြီး ပြင်ဆင်မှုများလဲပြုလုပ်နေသည်ကို တွေ့ရှိခဲ့ပါသည်။ စက်ရုံ၏ လုပ်ငန်းလည်ပတ်မှုကြောင့်လည်း သဘာဝပတ်ဝန်းကျင်အပေါ် ဆိုးဆိုးဝါးဝါးထိခိုက်မှု မရှိကြောင်း လေ့လာတွေ့ရှိခဲ့ပါသည်။

Down Coat

Wellon Coat

Padding Coat

Jacket

Pants/ Trousers

Skirt

Dress

ထုတ်ကုန်ဓာတ်ပုံ

အနီးပတ်ဝန်းကျင် အခြေအနေ

ကနဦးစစ်တမ်းကောက်ယူခြင်းနှင့် ဒေသဆိုင်ရာမှအချက်အလက်များရယူခြင်းသည် အလွန်အရေးကြီးပါသည်။ ပတ်ဂန်းကျင်အရည်အသွေး တိုင်းတာခြင်းကဲ့သို့သော ကနဦးစစ်တမ်းကောက်ယူခြင်းသည် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာတွင် အရေးပါသောအခန်းအဖြစ် တည်ရှိနေသည်။ ထို့အတွက် စီမံကိန်းဒေသသို့ ကွင်းဆင်းလေ့လာမှုများကို ၂၁ ရက်၊ ဇန်နဂါရီလ၊ ၂၀၁၉ တွင် လက်တွေ့ကွင်းဆင်းလေ့လာခဲ့ပီး လိုအပ်သည့်

လေအရည်အသွး၊ ဆူညံမှု၊ အလင်း၊ အပူချိန်နှင့် စိုထိုင်းမှု အစရှိသည့် အချက်အလက်များကို ရယူခဲ့ပါသည်။ ကွင်းဆင်းလေ့လာထားသည့် အချက်အလက်များကို သက်ဆိုင်ရာခေါင်းစဉ်အလိုက် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။ ထို့အပြင် စက်ရုံတည်နေရာနှင့် သက်ဆိုင်သည့် အချက်အလက်များဖြစ်သော လူမှုစီးပွားအခြေအနေ၊ ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များ အစရှိသည်များကို ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်မှ တရားဝင်ပြဋ္ဌာန်းထားသော မြို့နယ်ဆိုင်ရာအချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။

အဆိုပြုလုပ်ငန်း၏စစ်တမ်းကောက်ယူမှု

အမျိုးအစား	**ရလဒ်**
ရာသီဥတုအခြေအနေ	
အပူချိန်	၃၀.၉ °C
စိုထိုင်းဆ	၃၁.၃%
ဆူညံသံ	
စက်ရုံအတွင်း	၆၆.၀၃ dBA
ပိတ်ဖြတ်ဌာန	၆၈.၉၁ dBA
စက်ချုပ်ဌာန အေ	၇၄.၆၉ dBA
စက်ချုပ်ဌာန ဘီ	၇၃.၃၄ dBA
လေထုအရည်အသွေး	
PM_{10}	၄၈ µg/m^3
$PM_{2.5}$	၁၆.၈၆ µg/m^3
CO	၀.၃၄ µg/m^3
NO_2	၁၁ µg/m^3
SO_2	၁၇၁ µg/m^3

ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေး အစီအစဉ်

အဆိုပြု စီမံကိန်း၏ အဓိကဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်ထိခိုက်မှုကို အခြေခံစစ်တမ်းများ ပေါ်မူတည်၍ ယေဘုယျ နည်းလမ်းများအတိုင်း လျော့ချမှုများ ပြုလုပ်သွားပါမည်။ ပတ်ဝန်းကျင် ထိခိုက်မှုကို လေ့လာဆန်းစစ်ရာတွင် စီမံကိန်းကာလအတွင်း ထိခိုက်မှု တစ်ခုချင်းစီ၏ ပမာဏ၊ ကြာမြင့်ချိန်၊ ကျယ်ပြန့်မှုနှင့် ဖြစ်နိုင်ချေတို့အား ဖော်ပြထားပါသည်။

အကဲဖြတ်ခြင်း	**အတိုင်းအတာ**				
	၁	၂	၃	၄	၅

ပမာဏ	မလုံလောက်သော	အနည်းငယ်နှင့် လုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	အသင့်အတင့်နှင့် အနည်းငယ် လုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	မြင့်မားနှင့် သိသာစွာလုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	အလွန်မြင့်မားနှင့် အမြဲတမ်းလုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော
အချိန်	၀-၁ နှစ်	၂-၅ နှစ်	၆-၁၅ နှစ်	လုပ်ငန်း လည်ပတ်စဉ် ကာလတစ်လျှောက်	လုပ်ငန်းပိတ်သိမ်းခြင်းကာလအထိ
ကျယ်ပြန့်မှု	လုပ်ငန်းခွင်အတွင်း	ဒေသအတွင်း	မြို့နယ်အတွင်း	နိုင်ငံအတွင်း	နိုင်ငံတကာအတွင်း
ဖြစ်နိုင်ချေ	လုံး၀မဖြစ်နိုင်သော	မဖြစ်နိုင်သော	ဖြစ်နိုင်သော	ဖြစ်နိုင်ချေမြင့် သော	အတိအကျ

သတ်မှတ်ချက် = (ပမာဏ+အချိန်+ကျယ်ပြန့်မှု) × ဖြစ်နိုင်ချေ

ပတ်၀န်းကျင်ထိခိုက်မှုကို အောက်ပါအတိုင်း ခွဲခြားနိုင်သည်။

သတ်မှတ်ချက်	ထိခိုက်မှုအဆင့်
<၁၅	အလွန်နိမ့်
၁၅ - ၂၉	နိမ့်
၃၀ - ၄၄	အလယ်အလတ်
၄၅ - ၅၉	မြင့်
၆၀	အလွန်မြင့်

ပတ်၀န်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာလ။ ။ပတ်၀န်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သောကြောင့် ဤကာလကိုထည့်သွင်း မစဉ်းစားတော့ပါ။			
လုပ်ငန်းလည်ပတ်ခြင်းကာလ			
• လေထုညစ်ညမ်းမှု	• သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုန့်နှင့် ဖန်လုံအိမ်ဓာတ်ငွေ့ထွက်ခြင်း • လုပ်ငန်းခွင်အတွင်းဖုန်မှုန့်ထွက်ခြင်း • မီးဖိုမှမီးခိုးထွက်ခြင်း	အသင့်တင့်	• ဘွိုင်လာနှင့်မီးစက် တို့တွင် မီးခိုးခေါင်းတိုင် တပ်ဆင်ခြင်းဖြင့် အခိုးအငွေ့ကြောင့် ပတ်၀န်းကျင်ထိခိုက်မှုကို လျော့ချခြင်း၊ • စက်ရုံအတွင်းနှင့် အနီးအနားတွင် သစ်ပင်ပန်းမံ စိုက်ပျိုးခြင်းဖြင့် carbon

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
	• အရေးပေါ်သုံးမီးစက်မှ စွန့်ထုတ်အခိုးအငွေ့ထွက်ခြင်း		ထွက်ရှိမှုကို လျော့ချပေးခြင်း။ • NOx ထွက်ရှိမှုနည်း သောနည်းပညာမြင့် စက်ပစ္စည်းများသုံးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• မိလ္လာစွန့်ထုတ်ရေ • စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အနည်းငယ်	• လက်ရှိရေဆိုးစွန့်ပစ်မှုပုံစံဖြစ်သော မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပေးခြင်း။ • မိလ္လာကန်နှင့် မိလ္လာ စနစ်ကိုလူဦးရေနှင့် သင့်တင့်သည့် ပမာဏ ရှိရန် စီစဉ်ထားခြင်း။ • ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကိုပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များ မှ 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 ပိတ်ဖြတ်ခြင်း၊ထုပ်ပိုးခြင်းမှထွက်ရှိသည့်အမှိုက်များနှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန်နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း။
စွန့်ပစ်အရည်	• စားသောက်ဆောင် တို့မှစွန့်ထုတ်ရေ။ မိလ္လာကန်စနစ်။	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန်နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း။
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များ ပြုပြင်ထိန်းသိမ်းမှုမှ ထွက်ရှိသည့် အမှိုက်များ။	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း။ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
			စနစ်တကျထားရှိစေခြင်း။
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက် အလုပ်အကိုင်အခွင့်အလမ်းများ ရရှိစေခြင်း		
လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• NOxထွက်ရှိမှုနည်းသောနည်းပညာမြင့် စက်ပစ္စည်းများသုံးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• ဖြိုချပစ္စည်းများနှင့် မိလ္လာဖျက်ဆီးမှုများ	အနည်းငယ်	• ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• အဆောက်အဦးနှင့် ဆက်စပ်ပစ္စည်းများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
အမှိုက်စွန့်ပစ်မှု	• အဆောက်အဦးများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန်နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း။
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ် များ ပြုပြင်ထိန်းသိမ်းမှု မှ ထွက်ရှိသည့်အမှိုက်များ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း။ • စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း။
မတော်တဆ ထိခိုက်မှုများ	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက်အ လုပ်အကိုင် ခေတ္တရရှိခြင်း		

ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်

အဆိုပြုလုပ်ငန်း၏ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် Environmental Management System (EMS) စက်ဝိုင်းဖြင့် အစီစဉ်တကျ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ အစီအစဉ်တွင် စက်ရုံကြောင့် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၄င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် သည်

စက်ရုံတွင် ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်ပါသည်။ အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင် အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်းပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားထားပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံတွင် ကာဗွန် နှင့် လေထုညစ်ညမ်းမှု လျော့ချရန် သစ်ပင်ပန်းပင်များ စိုက်ပျိုးထားရှိခြင်း
- စက်ရုံအတွင်း မည်သည့် စွန့်ပစ်အမှိုက်များကို မီးရှို့ဖျက်စီးခြင်းအား မပြုလုပ်စေခြင်း
- အမှုန်များသောနေရာများတွင် လုပ်ငန်းလုပ်ဆောင်ရမည့် လုပ်သားများကို မျက်နှာအုပ် (Mask) များတပ်ဆင်စေခြင်း

၂။ ရေသုံးစွဲမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- ရေအသုံးပြုမှု အတွက် ရေအသုံးပြုမှု ထိန်းချုပ်သည့် ပစ္စည်း တပ်ဆင်ထားရှိစေခြင်း
- ရေအသုံးပြုသည့် နေရာများ ၊ အိမ်သာများတွင် ရေကို သင့်လျော်သော နည်းလမ်းနှင့် အသုံးပြုခြင်း နှင့် ထိန်းသိမ်းစောင့်ရှောက်ခြင်း ဆိုင်ရာ နည်းလမ်းများ သိရှိစေခြင်းနှင့် သင်တန်းပို့ချခြင်း

၃။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံ၏ မိလ္လာစနစ်နှင့် ရေစီးကြောင်းများနှင့် အနီးဝန်းကျင်ရှိ ရေမြောင်းစနစ်များကို ရေလုံစေခြင်းနှင့် လုံလောက်သော အရွယ်အစား ထားရှိစေခြင်း
- မိလ္လာလိုအပ်ချက်များကို ပုံမှန်စစ်ဆေးပေးခြင်းနှင့် ပြုပြင်ထိန်းသိမ်းခြင်း

၄။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းများကို မြစ်၊ ချောင်း၊ အင်းအိုင် အတွင်းသို့ မစွန့်ပစ်ရ
- စွန့်ပစ်ပစ္စည်းများအား ပြန်လည်အသုံးပြုရန်နှင့် အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းအဖြစ် ခွဲခြားစွန့်ပစ်စေခြင်း
- အစိုင်အခဲစွန့်ပစ်ပစ္စည်းများ(ပလတ်စတစ်အိတ်ခွံ၊ စက္ကူဘူးခွံ)အား ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချစေခြင်း
- အိမ်သုံးစွန့်ပစ်အမှိုက်နှင့် လုပ်သားစွန့်ပစ် အမှိုက်များကို YCDC နှင့် နေ့စဉ် စွန့်ပစ်ခြင်း
- အမှိုက်စွန့်ပစ်ခြင်းနှင့် ပတ်သက်၍ သင်တန်းပို့ချပေးခြင်း

၅။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- မီးစက်အသုံးပြုမှုအတွက် အသံလုံခန်းများဆောက်လုပ်ထားရှိခြင်း
- လုပ်ငန်းသုံးသည့်ယာဉ်များကို သတ်မှတ်အရှိန်ထက် ကျော်လွန်၍ မမောင်းနှင်စေခြင်း
- လုပ်ငန်းခွင်အတွင်း လုပ်သားများအတွက် တစ်ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်း (PPE) များလုံလောက်စွာ ထားရှိပေးခြင်း
- လုပ်သားများကို PPE အသုံးပြုမှုနှင့် ပက်သက်၍ သင်တန်းများပို့ချပေးခြင်းနှင့် ဆူညံသံများသော နေရာတွင် အလုပ်လုပ်စဉ်တွင် PPE များကိုသေချာစွာ အသုံးပြုစေခြင်း

၆။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

- မီးသတ်ကိရိယာများနှင့် မီးသတ်နည်းစနစ်များကို လုပ်ငန်းဆောင်ရွက်သည့်နေရာတိုင်းတွင် ထားရှိပေးခြင်းနှင့် သိရှိစေခြင်း
- မီးဘေးကာကွယ်ရေး လမ်းကြောင်းမြေပုံ အသေးစိတ်ကို ပြုလုပ်ထားရှိရန်နှင့် လုပ်သားများကို အသိပေးထားခြင်း
- လုပ်သားများကို ငလျင်လှုပ် လျှင် လုပ်ဆောင်ရမည့် အချက်များကို အသိပေးထားခြင်း
- စက်ရုံ၏ ဆေးဘက်ဆိုင်ရာ အဖွဲ့အစည်းမှ ရှေးဦးသူနာပြုစုနည်းများ အတွက် ပြင်ဆင်ထားရှိခြင်း
- မီးသတ်တပ်ဖွဲ့ ၊ ကယ်ဆယ်ရေးအဖွဲ့များ ဖြင့် လုံခြုံရေးကော်မတီ ဖွဲ့စည်းခြင်း၊ ကော်မတီမှ လုံခြုံရေး စီမံခန့်ခွဲရေး နှင့် ပတ်သက်သည်များ ဆွေးနွေးရန် လစဉ် အစည်းအဝေးများ ပြုလုပ်စေခြင်း

၇။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၈။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

၉။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် ငွေကြေးလျာထားမှု

၁၀။ မကျေနပ်မှု ဖြေရှင်းခြင်း နည်းလမ်း

အဆိုပြုလုပ်ငန်း၏ လူထုအကျိုးတူပူးပေါင်းပါဝင်မှုများအဖြစ် အကျိုးအမြတ်၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်ပယ်ဖွံ့ဖြိုးတိုးတက်ရေးများတွင် ထည့်ဝင်လှူဒါန်းသွားမည်ဖြစ်ပါသည်။ အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုရေးလုပ်ဆောင်ရမည့် လုပ်ငန်းစဉ်များနှင့် ဖြေရှင်းရမည့်နည်းလမ်းများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်ကို ၁၄ ရက်၊ မတ်လ၊ ၂၀၁၉ ခုနှစ်တွင် Sky Hotelတွင်ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲ အစည်းဝေးတွင် သက်ဆိုင်ရာ အစိုးရအဖွဲ့ရုံး၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှုကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကိုပါ ထည့်သွင်းဖော်ပြထားပါသည်။

လူထုတွေ့ဆုံပွဲအကျဉ်းချုပ်

အချိန်	ကြာသပတေးနေ့၊ မတ်လ၊ ၁၄ရက်၊ ၂၀၁၉ခုနှစ်
နေရာ	Sky Hotel၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်မြို့။
အစီအစဉ်အကျဉ်း	• စက်ရုံနောက်ခံအကြောင်း • စက်ရုံလုပ်ငန်းအကြောင်း • ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေးအစီအစဉ် • ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ် • အမေးအဖြေကဏ္ဍ

နိဂုံး

စီမံကိန်းဖော်ဆောင်သည့် အချိန်အတွင်း ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများ၊ လျော့ချရေး နည်းလမ်းများ၊ အစီအစဉ်များ၊ တိုင်းတာမှုများ စသည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်များကို လုပ်ဆောင်ရပါသည်။ Myanmar Sincerece Company Limited မှ စက်ရုံတွင် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် အဖွဲ့အစည်းဖွဲ့စည်းခြင်း၊ ပုံမှန်ဆန်းစစ်လေ့လာခြင်းများ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ ပတ်ဝန်းကျင် လေထုအရည်အသွေး၊ မိလ္လာစနစ်၊ စွန့်ပစ်အစိုင်အခဲ စွန့်ပစ်မှုများကို စက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အဖွဲ့အစည်းမှ ဆန်းစစ်သွားမည်ဖြစ်ပါသည်။ အဆိုပြုစီမံကိန်းမှ လူထုအကျိုးပြုလုပ်ငန်းများ နှင့် အရေးပေါ်ဆောင်ရွက်ချက်များ၊ ဒေသဆိုင်ရာ အကျိုးပြုလုပ်ငန်းများကို လုပ်ဆောင်သွားမည်ဖြစ်ပါသည်။

အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။ စီမံကိန်းနှင့် သက်ဆိုင်သူများအား စီမံကိန်းဆိုင်ရာ အကြောင်းအရာများ ရှင်းလင်းတင်ပြခြင်း၊ အကြံပြုချက်များနှင့် ဆွေးနွေးတင်ပြလာသည့် သဘောထား အကြံဉာဏ်များကိုရယူပြီး အစီအရင်ခံစာတွင် ဖော်ပြထားပါသည်။

အကြံပြုချက်များအရ-

- အစီရင်ခံစာတွင် ဖော်ပြထားသည့် ပတ်ဂန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် ကတိကဂတ်များကို စီမံကိန်း၏ သက်တမ်းတလျောက်တွင် အကောင်အထည်ဖော် ဆောင်ရွက်ပါမည်။

- အစိုင်အခဲနှင့် အရည် စွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်မြို့တော် စည်ပင်သာယာရေးကော်မတီ၏ စည်းကမ်းများအတိုင်း စွန့်ပစ်ပါမည်။
- အလုပ်သမားများအား သင့်တော်သော သင်တန်းများပေးခြင်း၊ လုပ်ငန်းခွင်အတွင်း တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ အသုံးပြုစေခြင်းများ ဆောင်ရွက်ပါမည်။
- ပတ်ဂန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်များကို နေ့စဉ်၊ လစဉ်နှင့် နှစ်စဉ် လုပ်ငန်းခွင်အတွင်း လုပ်ဆောင်မည်။
- ပတ်ဂန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ် မှတ်တမ်းများကို သေချာသိမ်းဆည်း၍ တတိယအဖွဲ့အစည်း သို့ တင်ပြမည်။
- ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ပါမည်။

အချုပ်အားဖြင့်ဆိုသော် အဆိုပြုသူသည် ပတ်ဂန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနမှ ညွှန်ကြားလာသော အဆိုပြုချက်များ၊ အကြံပြုချက်များကို လိုက်နာဆောင်ရွက်ရမည်။ ထိရောက်သော ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုကို အဆိုပြုသူမှ ဆောင်ရွက်ရမည်။ အဆိုပြုသူသည် ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များအတိုင်း လိုက်နာဆောင်ရွက်မည်။

EXECUTIVE SUMMARY

Introduction

Environmental 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 Myanmar Sincerece Company Limited The Environmental Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the industry specific control measures, the proposed industry should adopt following guidelines.

The project is new investment for Manufacturing of Garment on CMP Basis 100% Export to China. The project is issued by the Myanmar Investment Commission (MIC) on 21 June 2017 with the Endorsement No. (YGN- 002/2017). MIC asked 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 Myanmar Sincerece Company Limited as a solely owned foreign investment from the China.

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) (225/2019) on 05 February 2019. Therefore, Myanmar Sincerece Company Limited commissioned Myanwei Environmental Solutions Company Limited (MYANWEI) 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 manufacture of Garment on CMP Basis and 100% export to foreign country.

The main purpose of this EMP report is to obey the rule and regulation of Local and International Environmental Protection programs and harmonize with the environmental and 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.

1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law, 2016
12. The Payment of Wages Act, 1936
13. Yangon City Development Committee Law, 2018
14. The Amended Law for Factories Act, 1951 (2016)
15. The Private Industrial Enterprise Law
16. The Export and Import Law, 2012
17. The Prevention of Hazard from Chemical and Related Substances Law, 2013
18. The Underground Water Act
19. Myanmar Fire Brigade Law, 2015
20. Fire Safety Procedure
21. The Electricity Law, 2014
22. Boiler Law, 2015
23. Labor Dispute Settlement Law, 2012
24. The Law Amending the Settlement of Labor Dispute Law, 2019
25. The Social Security Law, 2012
26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923
28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972

31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပြစ္စည်းများဆိုင်ရာ ဥပဒေ၊ (2018)
35. The Motor Vehicles Law, 2015
36. The Conservation of Water Resources and River Law, 2006
37. The Commercial Tax Law (1990 Amended 2014)

Project Description

Information of Investor

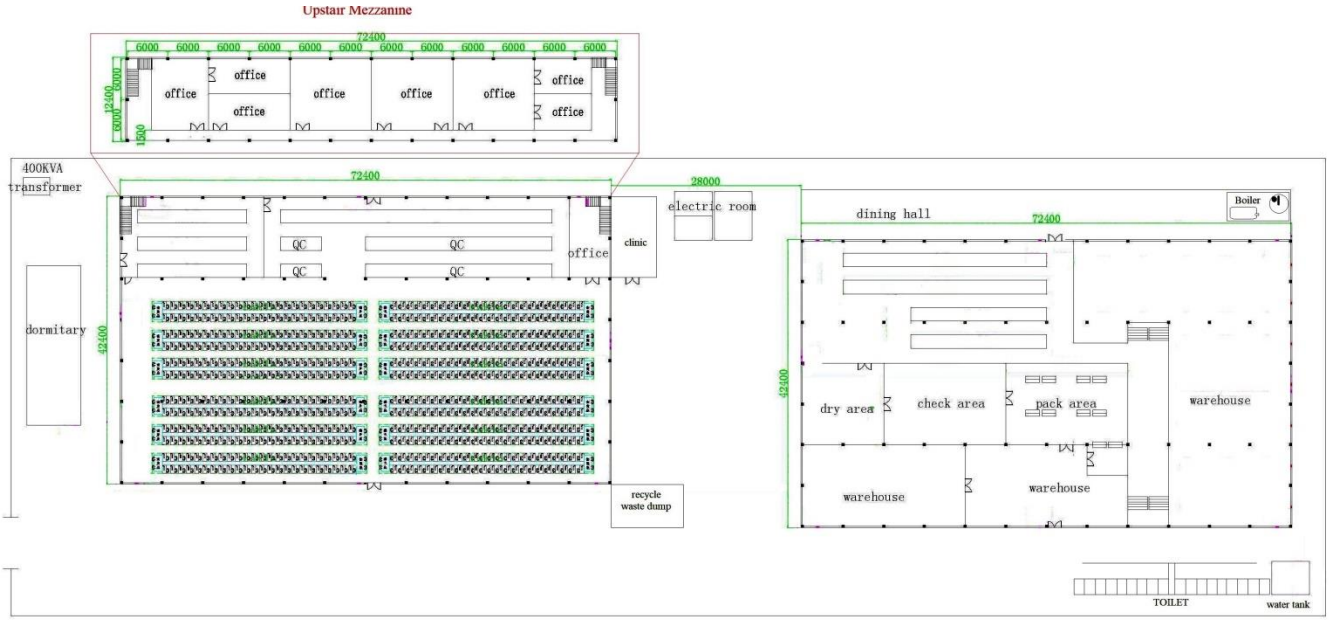
Investor Name:	Ms. Bai Hong
ID No.:	E74047441
Citizenship:	Chinese
Address of Registration office:	No.7, Gangwan Street, Dalian, China.

Salient Features of the Proposed Project

Type of Proposed Business	Manufacturing of Garment on CMP Basis
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	2.782 acres (11258.36 sq-meter)
Land lease year	20 years
Construction period	18 months
Investment Period	20 years
Address	Plot No.70, Myay Taing Block No.14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Contact person	Ma Aye Thida San (HR Manager) 09-251089948 ayethidasan32@gmail.com

Myanmar Sincerece Company Limited is located at North Latitude 16°51'39.28"N and East Longitude 96°02'25.87"E, Plot No. (70), Myay Taing Block No. 14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The total area of project site is 2.782 acres (11258.36 square meters). The project area is situated into two buildings that separated by (Building A and Building B). Building A is one storey and one mezzanine of 140ft × 250ft for sewing area and office area. Building B is one storey of 140ft × 250ft for cutting, finishing, ironing and packing area.The factory layout plan which is also can be seen in this report.

Location map of Myanmar Sincerece Company Limited

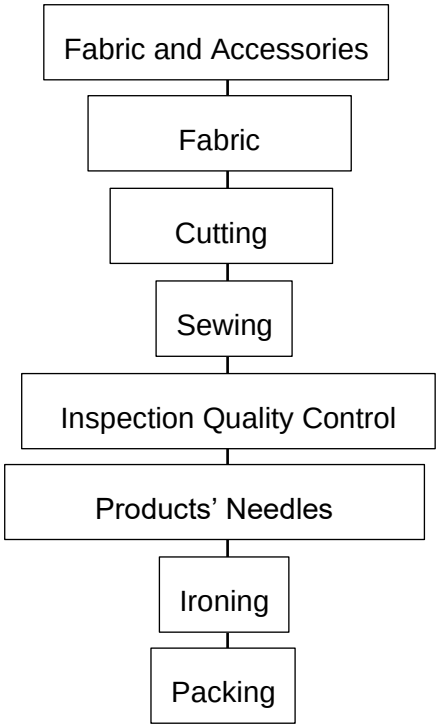


Factory Layout Drawing

The raw materials of Myanmar Sincerece Company Limited are Fabric, Lining, Thread, Button, Buckle, Zipper, etc. and other related materials which are imported from China and these are stored in factory warehouse.

Raw Storage Photo

The main products of the Myanmar Sincerece Company Limited are Down Coat, Wellon Coat, Padding Coat, Jacket, Pants/Trousers, Skirt, Dress and Vest. 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 provide lighting.



Production Process

Production rate of Myanmar Sincerece Company Limited is produced between first year of operation and (10) years operation as 2,460,000 to 4,920,000 pieces annually. It's required of work force (45) foreign technicians and (1,407 to 2,011) local employees for first year operation to (10) years operation. Moreover, the factory is installed and upgrading for operation with current employees during our site survey for EMP report. Myanmar Sincerece 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 wastewater discharge from the factory is estimated about 4311 m^3 per month.

Down Coat

Wellon Coat

Padding Coat

Jacket

Pants/ Trousers

Skirt

Dress

Product Photos

Brief Description of Surrounding Environment

For environmental baseline, data were collected by onsite measurements analysis during operation phase on 21 January 2019. On-site measurement was taken by air quality, temperature, humidity, noise level and operation light condition at the factory. Moreover, secondary data collection of proposed project site area such as socio-economic condition, physical/ biological environment, weather data were collected from official township data was obtained from Regional Data of Hlaing Thar Yar Township.

Survey Result in Proposed Project

Type	Result
Weather Condition	
Indoor Temperature	30.9 °C
Humidity	31.3 %
Noise Level	
Within the factory	66.03 dBA
Cutting Section	68.91 dBA
Sewing Section A	74.69 dBA
Sewing Section B	73.34 dBA
Air Quality	
PM_{10}	48 µg/m^3
$PM_{2.5}$	16.86 µg/m^3
CO	0.34 µg/m^3
NO_2	11 µg/m^3
SO_2	171 µg/m^3

Potential Environmental Impact and Mitigation Measure

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.

Impact Assessment Parameter and Its skill

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

Evaluation of Significant Impacts and Mitigation

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 and kitchen • Emission from emergency diesel generator	4	3	2	3	27	Low
Water Pollution	• Sewage disposed of from the toilets • Oil spill and grease leaks from transporting vehicles and machinery equipment used in operation phase	4	3	2	3	27	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	4	2	1	3	21	Low
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.	4	4	2	3	30	Moderate
Liquid Waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	4	4	2	3	30	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	2	1	2	10	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

Environmental Management Program

The proposed project of environmental management plan, which need to made the Environmental Management System (EMS). In that plan, it includes not only reducing to the environmental and social-economic impact but also includes the environmental management plan and the monitoring plan. In this EMP to implement the health, safety and occupational for the industry, they need to create a team and to must be implemented that. The EMP for Myanmar Sincerece 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 Myanmar Sincerece Company Limited are as follows:

1. Air pollution/Dust Management plan
    - Must be plant around the proposed project to reduce carbon emission
    - Should be prohibited burning of waste material at the proposed project site
    - Must be control air pollution, the vehicles, generators and machineries have to check and maintain regularly.

- The factory should use chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment.
- Must be ensuring vehicles, compressor and generator are well maintained.

2. Noise Management
   - Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment
   - Impose speed limit to track and vehicles at the transportation 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.
3. Solid Waste Management plan
   - Must be provides separate garbage bins at each building.
   - All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area
   - Final wastes should be disposed by using YCDC's service.
4. Wastewater Management Plan
   - Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
5. Energy Consumption 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
6. Emergency Response 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
   - 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

7. Corporate Social Responsible (CSR) Plan

Myanmar Sincerece Company Limited will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar

No.	Particle	Contribution
1.	Public school	0.5%
2.	Non-profit training	1
3.	Employee healthcare	0.5%

8. Grievance Redress Mechanism

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 Myanmar Sincerece Company Limited representative from Hlaing Thar Yar Industrial Zone and representative from General Administration Department (Hlaing Thar Yar 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.

Public Consulting

This chapter presents results of public consultation and information disclosure conducted for the Myanmar Sincerece Company Limited. Public participation can consider as the required element of the EMP process. In this study various stakeholder participation were made. Public consultation during preparation of EMP report was conducted on March 14, 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.

Summary of Public Consultation

Time and Date	Thursday, 14 March, 2019 10:30-12:30
Venue	Sky Hotel, Hlaing Thar Yar Township, Yangon.
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

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

Everyone wants to live in a place that's clean and healthy. That is why one of the world's primary concerns is the environment. As sad as it is, the world today is dying. The environment is slowly decaying, and it's all because of human negligence. Environmental Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented which needs to be implemented by the proposed expansion of Myanmar Sincerece Company Limited. The Environmental Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the industry specific control measures, the proposed industry should adopt following guidelines.

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 Environmental Management System (EMS) is a framework that helps an organization achieves its environmental goals through consistent review, evaluation, and improvement of its environmental performance. The assumption is that 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.

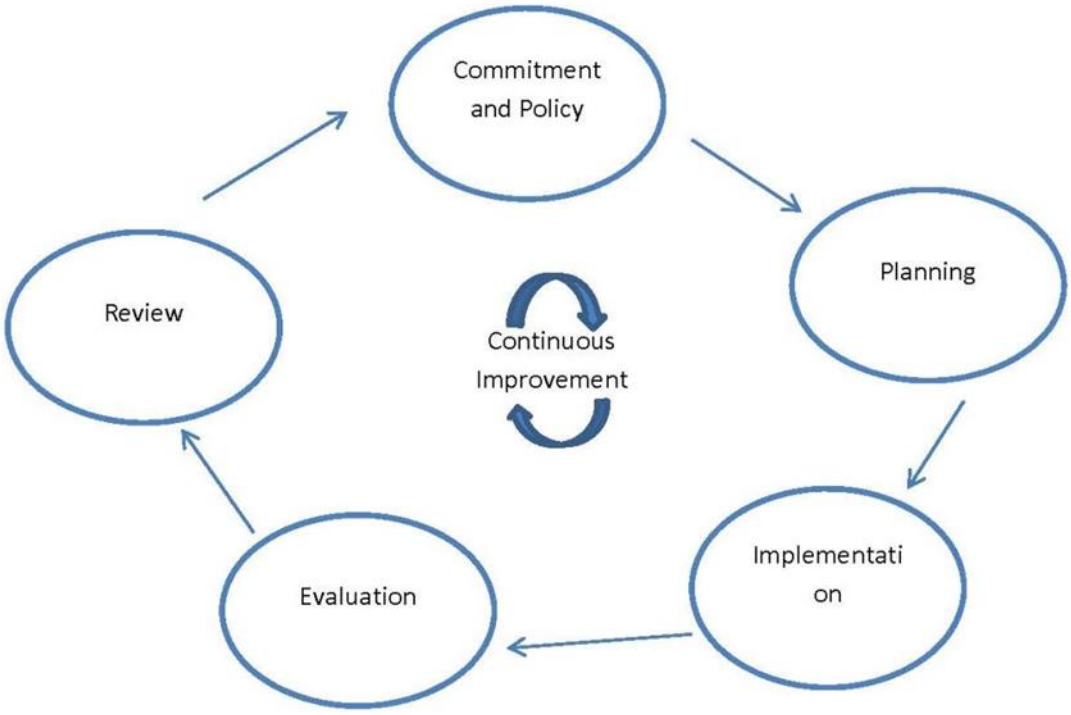


Figure 1-1 Continuous Improvement Circle

- **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.

1.3. INSTITUTIONAL REQUIREMENT

Myanmar Sincerece 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.

1.3.1. 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:

Myanmar Sincerece 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 Myanmar Sincerece 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.

1.3.2. 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.

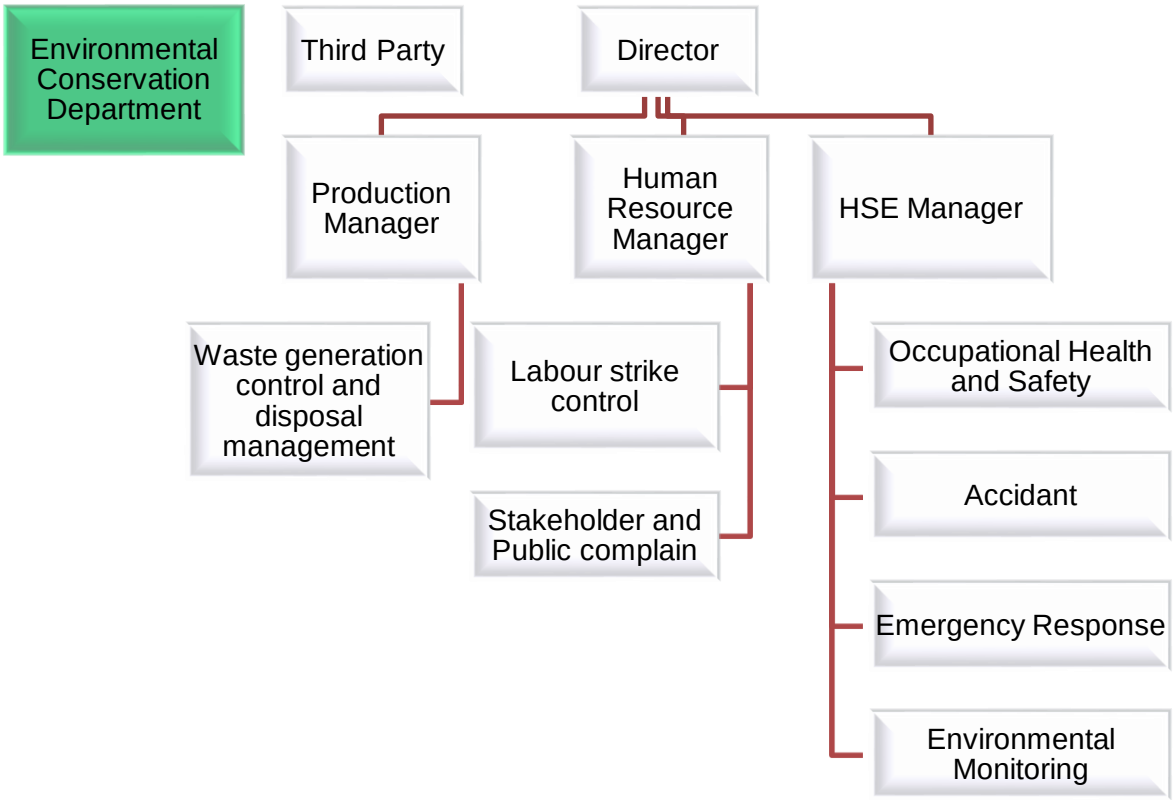


Figure 1-2 Organization Structure of Environmental Management Plan

Table 1-1 Responsibilities of HSE Members

Roles	Responsibilities
General Manager	The General Manager will be assisted by the Operations Manager and also the HR and HSE Officer. In terms of environmental protection commitments, the Operation Manager will be the key driving force and will be responsible for: • Establishing overall environmental direction and policy • Ensuring the implementation of the EMP • Ensuring investigation of all environmental incidents are reviewed and that reports are submitted on time • Ensuring an effective system of internal and external communication is in place • Providing advice regarding the environmental program
Operation Manager	The Operation Manager will assist the General Manager in looking into the overall environmental matters during the operational phase of the Project. The Operation Engineer will also be responsible for: • Adherence to the overall environmental direction and policy • Ensuring the implementation of the recommended actions in the investigation of all environmental incidents • Managing resources for operation wastes
HR Manager	The HR Manager will carry out the day-to-day management of workers and social issues in the factory. The HR Manager will be responsible for: • Assisting the management in publicising and implementing corporate and local policies,

Roles	Responsibilities
	objectives and programs • Maintaining key environmental-related documents and information • Communicating/ liaising with the local authorities on environmental issues
HSE Officer	The HSE Officer will be the key person in charge of all environmental matters pertaining to the site. The HSE Officer will be responsible for: • Coordinating the implementation of environmental programs, including monitoring of the project site environmental performance • Performing periodic internal environmental audits and inspections to ensure compliance with the legal environmental requirements • 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 Manager to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.

1.4. PROJECT BACKGROUND

Myanmar Sincerece Company Limited is a new investment for manufacturing of Garment on CMP Basis 100% export company from China. The Myanmar Investment Commission (MIC) has endorsed the project for the investment on 21 June 2017 (Endorsement No. 002/2017). MIC asked 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 Myanmar Sincerece 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) (225/2019) on 05 February 2019. Therefore, Myanmar Sincerece Company Limited commissioned Myanwei Environmental Solutions Co., Ltd (Myanwei) for EMP report study.

1.4.1. Project Proponent Profile

This is the information of project proponent from the MIC's registration that is describing in below Table 1-2 and Table 1-3. The commercial operation started date is March 2019. The estimated authorized capital investment is 2.14 million US Dollar (Table 1-3). Organization chart of Myanmar Sincerece Company Limited is presented in Figure 1-3.

Table 1-2 Information of Investor

Investor Name:	Ms. Bai Hong
ID No.:	E74047441
Citizenship:	Chinese

Address of Registration office:	No. 7, Gangwan Street, Dalian, China.

Table 1-3 Salient Features of the Project

Type of Proposed Business	Manufacturing of Garment on CMP Basis
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	2.782 acres (11258.36 sq-meter)
Total building area	7560.45 sq-m (all buildings)
Land lease year	20 years
Construction period	18 months
Operation starting date	20 years investment permit
Address	Plot No.70, Myay Taing Block No.14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Contact person	Ma Aye Thida San (HR Manager) 09-251089948 ayethidasan32@gmail.com

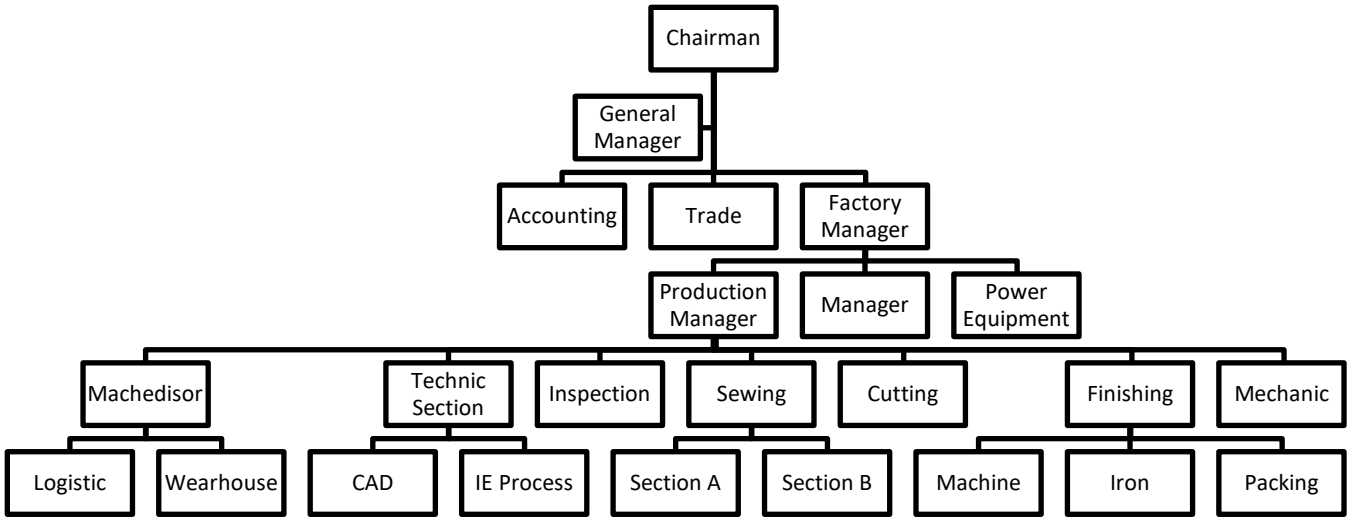


Figure 1-3 Organization chart of Myanmar Sincerece Company Limited Environmental Consultant Profile

MYANWEI ENVIRONMENTAL SOLUTIONS 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.

Myanwei Environmental Solutions Company Limited	No. 36-38, 9th floor (A), Grand Myay Nu Condo, Myay Nu Street, Sanchaung Township, Yangon, Myanmar.	01-501221 env@myanweiconsulting.com www.myanwweiconsulting.com.

Table 1-4 Member of EMP Study Team

Name	Qualification	Responsibility
MYANWEI ENVIRONMENTAL SOLUTIONS LIMITED	**Transition Consultant Registration Certificate No. 0069**	**EIA Organisation**
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment **TCR No. 0048**	Project Director, Environmental consultant, project management
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public health consultant, project management
Ms. Wah Wah Zaw	B.E Material and Metallurgy Engineering Diploma in Environmental Planning and Management M.S Environmental Planning and Management	Senior Environmental Consultant, Social and Environmental Research, Quality control, Environmental planning and Management
Ms. Khin Thu Zar Myint	B.E(Materials and Metallurgy) Dip in Environmental Planning and Management	Senior Environmental Consultant, Social Research, Public consultation, social economic investigation
Ms. Su Myat Hlaing	B.E. Civil Engineering B. Tech Civil Engineering	Environmental Engineer
Mr. Kyaw Win Han	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Team leader of baseline survey, monitoring measure
Mr. Aung Kyaw Moe	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, monitoring measure, document administration
Mr. Saw Yan Naung	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, monitoring measure, document administration
Mr. Myat Ko Ko	B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management	Junior Environmental Consultant, monitoring measure, document administration

Name	Qualification	Responsibility
Mr. Htoo Nanda Aung	B.Sc (Forestry)	Junior Environmental Consultant, monitoring measure, document administration
Mr. Si Yan Hein	B.Sc (Geology)	Junior Environmental Consultant, monitoring measure, document administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology	Junior Environmental Consultant, monitoring measure, document administration

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	(a) To specify categories and classes of hazardous wastes generated from the

Law and Regulation	Description
Powers relating to the Environmental Conservation of the Ministry: Section 7	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' charges 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.

Law and Regulation	Description
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 or IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Environmental Impact Assessment Procedure (December 2015)	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (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

Law and Regulation	Description
	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 Myanmar Environmental Policy (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.

Law and Regulation	Description
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

Law and Regulation	Description
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.

Law and Regulation	Description
	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

Law and Regulation	Description
	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.

Law and Regulation	Description
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.
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
The Pyidaungsu Hluttaw hereby enacts this Law for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly.	
The Social Security Law (2012)	
The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
Section 53(a)	The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Labor Dispute Settlement Law (28 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,

Law and Regulation	Description
	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 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 proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.
Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
Chapter 2 Prevention	4. When a Principal Epidemic Disease of a Notifiable Disease occurs;

Law and Regulation	Description
	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 of 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.

Law and Regulation	Description
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 certification
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဥတ္တုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဥတ္တုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်။ ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်။ လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတက်သော ဥတ္တုပစ္စည်းများ 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 ပေါက်ကွဲစေတက်သော ဥတ္တုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။
Myanmar Insurance Law (1993)	
Chapter VI Effecting Insurance and Granting of Benefits Section 15	Owners of motor vehicles shall effect compulsory Third Party Liability Insurance with the Myanmar Insurance.
Section 16	An entrepreneur or an organization operating an enterprise which may cause loss to State-owned property or which may cause damage to the life and property of the public or which may cause pollution to the environment shall affect compulsory General Liability Insurance with the Myanmar insurance.
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

Law and Regulation	Description
	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 -

2.2.2. 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 Europe for air pollutants not included in the following Table 2-2.

Table 2-2 WHO'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

2.2.3. 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

[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.

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

2.2.4. IFC EHS Guidelines

The EHS Guidelines 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. Table 2-4 shows the contents of the section of Community Health and Safety.

Table 2-4 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.
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

Contents	Brief Description
	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)

2.3. INSTITUTIONAL ARRANGEMENT

The Ministry of Environmental Conservation and Forestry (MOECAF) was reformed as the Ministry of Natural Resources and Environmental Conservation (MONREC) on 30th March, 2016 in order to undertake both environmental and natural resources conservation and management more effectively. Under Section 3 of the Environmental Impact Assessment Procedure (2015), pursuant to section 21 of the law and Articles 52, 53 and 55 of the Environmental Conservation Rules, all projects and project expansions undertaken by any organization, which may cause impact on environmental quality that, are required to obtain prior permission. This is to be in accordance with section 21 of the Environmental Conservation Law, and Article 62 of the Environmental Conservation Rules, having the potential to cause adverse impacts, that are required to undertake IEE or EIA or to develop an EMP, and to obtain an Environmental Compliance Certificate (ECC) in accordance with this EIA procedure.

2.4. INTERNATIONAL GUIDELINES

Organization's Guidelines, World Bank Safeguard Policies, IFC Performance Standards and National Environmental Quality (Emission) Guidelines (2015) are referred for EMP of the proposed factory project.

2.5. COMMITMENT OF MYANMAR SINCERECE COMPANY LIMITED

Myanmar Sincerece 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.

Myanmar Sincerece 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 (EMoP)
- 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 services
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees

3. PROJECT DESCRIPTION

3.1. LOCATION OF PROPOSED PROJECT

The proposed project is located at North Latitude 16°51'39.28"N and East Longitude 96°02'25.87"E, Plot No.70, Myay Taing Block No.14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The location map of the proposed project site is shown in Figure 3-1.

3.2. OBJECTIVES OF PROPOSED PROJECT

3.2.1. Site Description of Proposed Project Site

The total land area is 2.782 acres (11258.36 square meters) and build main factory buildings, warehouse, canteen, maintenance house, etc. which were built on its land area. Also, factory layout drawing is able to seen in Figure 3-2.

Figure 3-1 Location map of Myanmar Sincerece Company Limited

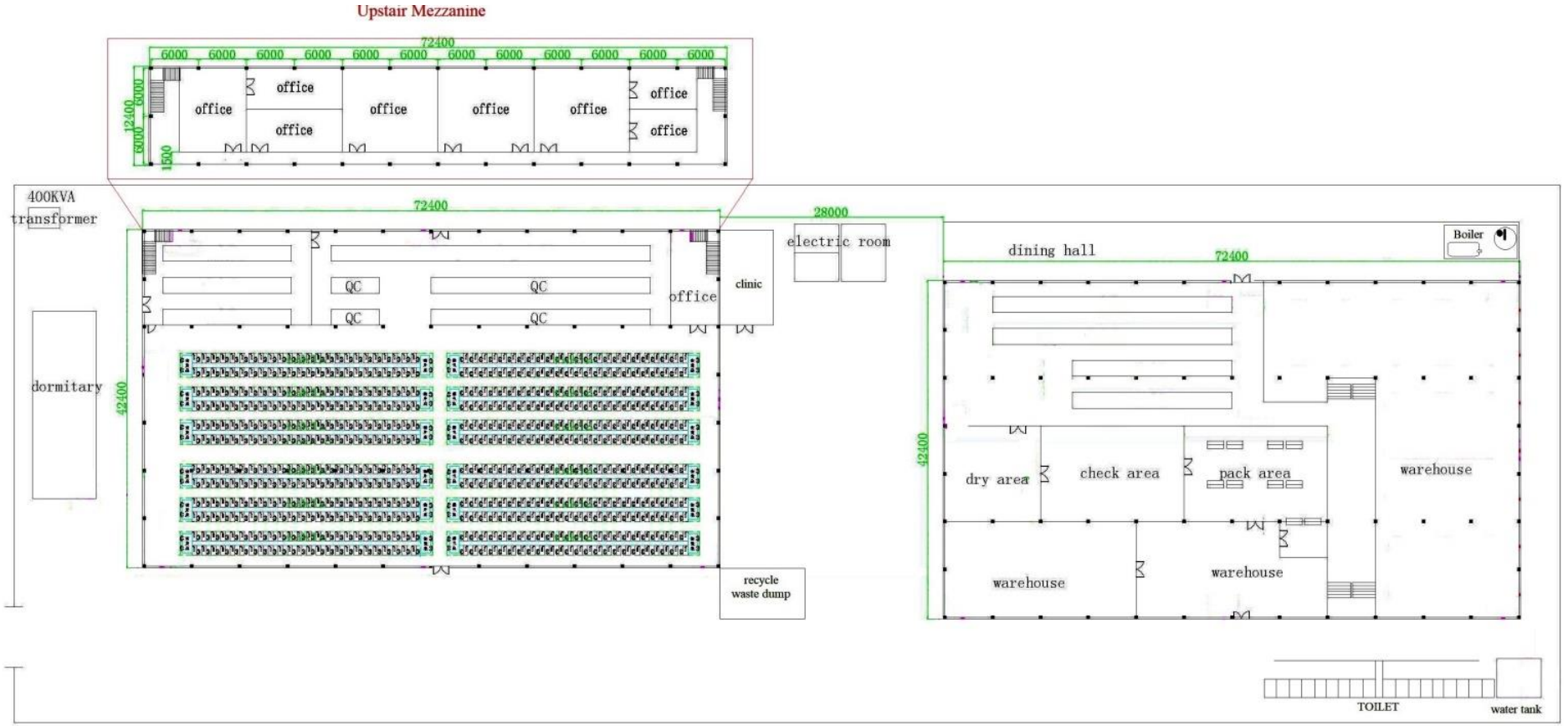


Figure 3-2 Factory Layout Drawing

3.3. PROJECT OPERATION

Construction phase of the factory is started in June 2017 according to the MIC's Endorsement. The operation phase of the factory is started from March 2019 and the duration of project is 20 years. The Myanmar Sincerece Company Limited will close the factory as their MIC proposal.

3.4. 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.

3.4.1. Machinery and Equipment

Lists of machinery and equipment required for the Myanmar Sincerece Company Limited is following in Table 3-1 and these are imported from China. The working day of the factory is at least 262 days per year.

Table 3-1 List of Machinery

No.	Machinery Name	Asset	Quantity
1	Computer sewing machine	set	700
2	Double needle machine	set	60
3	Computer QQ sewing machine	set	4
4	Computer button holing sewing machine	set	7
5	Computer bartack machine	set	22
6	Computer button sewing machine	set	5
7	Patten sewing machine	set	5
8	Side cutting sewing machine	set	60
9	Overlock machine	set	50
10	ironing machine	set	100
11	Target volume display	set	20
12	Snap button machine	set	20
13	Long arm sewing machine	set	20
14	Automatic template machine	set	10
15	Blind stitch machine	set	4
16	Fabric inspection machine	set	4
17	Automatic spreading machine	set	2
18	Cutting table	set	5
19	Cutting machine	set	20
20	Band knife machine	set	8
21	End cutter	set	20
22	Computer-Aided Design	set	2
23	Fusing press machine	set	3

No.	Machinery Name	Asset	Quantity
24	Mini fusing press machine	set	3
25	Needle detector machine	set	6
26	Steam iron	set	200
27	Steam iron pipe	set	400
28	Template cutting machine	set	3
29	Packing band machine	set	4
30	Air Compressor	set	2
31	Electric awl machine	set	6
32	Seam sealing machine	set	16
33	Automatic feather machine	set	2
34	Two-needle chain stitch sewing machine	set	12
35	Interlock sewing machine	set	3
36	Multi needle sewing machine	set	4
37	Hand stitch sewing machine	set	4
38	Double needle belt loop sewing machine	set	2
39	Forklift	set	1
	Total		**1819**

3.4.2. Work Force

The proposed Factory of Myanmar Sincerece Company Limited has most of the employees are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills. Currently, one shift (8 hours + overtime 2 hours) of production is running or operating. Human resource required by foreign experts/technicians and local persons for administrative and production process are 1407-2011 persons. Among these there are about 45 of foreign persons.

Table 3-2 Employment Schedule of Myanmar Sincerece Company Limited

Employee	Number of Person					
	Year 1		Year 2		Year 3-10	
	Local	Foreign	Local	Foreign	Local	Foreign
General Manager	-	1	-	1	-	1
Deputy General	-	1	-	1	-	1
Production Manager	-	1	-	1	-	1
Head Merchandiser	-	3	-	4	-	5
Head Mechanic	-	1	-	1	-	1
Quality Control Manager	-	2	-	2	-	3
Procurement Manager	-	1	-	1	-	1
Mechanical Technician	-	4	-	5	-	6
Production Technician	-	5	-	7	-	10

Employee	Number of Person					
	Year 1		Year 2		Year 3-10	
	Local	Foreign	Local	Foreign	Local	Foreign
Packing Supervisor	-	5	-	6	-	6
Sampling Technician	-	2	-	2	-	5
Assistant Production Manager	1	-	1	-	1	-
Assistant Merchandise	1	-	1	-	1	-
HR Manager	1	1	1	1	1	1
Admin Manager	1	-	1	-	1	-
Assistant Store Manager	1	-	4	-	4	-
Shipping Manager	1	-	1	-	1	-
Assistant Shipping Manager	1	-	1	-	1	-
Chief Accountant	1	-	1	-	1	-
Accountant	1	2	1	2	1	3
Assistant Account Manager	1	-	1	-	1	-
Supervisor	20	-	25	-	30	-
Leader	20	-	25	-	30	-
Operator	800	-	900	-	950	-
Helper	20	-	25	-	30	-
Quality Control	300	-	400	-	400	-
Pattern Assistant	1	-	2	-	5	-
Driver	5	-	6	-	8	-
General Worker	200	-	400	-	500	-
Cleaner	12	-	15	-	20	-
Security	15	-	15	-	18	-
Electrician	2	-	3	-	5	-
Sample Manager	1	-	1	-	1	-
Fire Safety Officer	1	-	1	-	1	-
Total	**1437**		**1866**		**2056**	

3.4.3. Water Requirement

Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township has no centralized water supply system and the factory gets water from the tube well installed inside the factory compound. The factory has one tube well depth in 152ft. During operation, the water will be pumped from the groundwater; the water is stored in the water storage tank for operation and fire fighting. The main water use in the proposed project is for operation use of boiler water and for domestic usage such as for personal washing, food preparation, and washing of utensils. Drinking water will be provided by outsource suppliers. Main source of water supply will be provided by tube well water (ground water) in which ground water will be pumped and will be treated by oxidation tower, chlorine dosing system, de-iron filter (FRP), carbon filter, and cartridge filter. The estimated water used for processes is about

4396.425 cubic meter per year. Daily drinking water requirement of proposed project is about 400 liters per day. Annual drinking water consumption for the whole factory is about 32,158 gallons per year. Figure 3-3 is described by water supply system for Myanmar Sincerece Company Limited.

Sink for Employees

Fire Water Tank

Figure 3-3 Water Supply System

3.4.4. Electricity and Fuel Requirement

The proposed project intended to get required electricity supply from Yangon City Electricity Supply Board (YESB) and distributed by 400 kVA Asia General Transformer (AGT) and another sources of energy 500 kVA and 100 kVA generators which also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Estimated electricity usage is about 3,024,000 kwh per year.

Required petrol and diesel for vehicles and generators are purchased from the nearest petrol station. Fuel requirement is about 30 gallons per month. To handle the leakage and spillage of the diesel, an interception with sand is kept under the tank.

Transformer (400 kVA)

Generator (500 kVA)

Figure 3-4 Electricity Facilities at Myanmar Sincerece Company Limited

3.4.5. Boiler Usage

The factory has two steamed boilers are used in ironing process for daily and used of fuel for steam boiler is diesel. Diesel fuel was required for boiler operation 36.4 liters per hour. Specification of steam boiler is presented in Table 3-3.

Table 3-3 Specification of Diesel Fuel Steam Boiler

Model				ZH-500K
Performance	Equivalent Output		kg/h	500
	Heat Output		kcal/h	269000
	Heating Surface Area		m^2	6.8
	Max.Pressure		Kgf/cm^2	10
	Water Content		L	95
	Boiler Efficiency		%	88
	Water Preheater		\	N
	Combustion Type		\	ON-OFF
	Fuel Consumption		L/h	36.4
	Electrical Power Capacity		kw	2.85
	Power Of Auxiliary Equipment	Water Pump Motor	kw	1.5
		Exhausting Fan Motor		0.75
		Injection Pump Motor		0.4
		Control Panel		0.2
	Product Weight		kg	920
Pipe Diameters	Fuel Inlet Diameter		mm	15
	Feed Water Inlet Diameter			25
	Steam Outlet Diameter			32
	Boiler-Water Drain Diameter			25
	Safety Valve Diameter			25
	Auto Blowdown Diameter			\
	Chimney Diameter		ømm	200
	Power Wire Inlet Diameter		mm^2	2.0
Size	Boiler Dimensions	Length	mm	1481
		Width		1098
		Height		2115

Steam Boiler

Diesel Fuel Tank

Figure 3-5 Photo of Boiler Area at Myanmar Sincerece Company Limited

3.5. PRODUCTION PROCESS

3.5.1. Raw Material

The main raw materials of Myanmar Sincerece Company Limited are fabric, lining, thread, button, buckle, zipper, etc. and other related materials which are imported from China. List of Raw materials are described in Table 3-4.

Figure 3-6 Raw Storage Photo

Table 3-4 List of Raw Materials Requirement

Particular	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-10
Fabrics	meter	6,957,000	8,000,550	9,391,950	11,131,200	12,522,600	13,914,000
down bag	meter	3,321,000	3,819,150	4,483,350	5,313,600	5,977,800	6,642,000
Interlining/ Interlining Tape	meter	3,357,000	3,860,550	4,531,950	5,371,200	6,042,600	6,714,000
dowm	kg	3,330,000	3,829,500	4,495,500	5,328,000	5,994,000	6,660,000
wellon	kg	72,000	82,800	97,200	115,200	129,600	144,000

Particular	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-10
padding	meter	126,000	144,900	170,100	201,600	226,800	252,000
Cord	meter	1,305,000	1,500,750	1,761,750	2,088,000	2,349,000	2,610,000
Elastic Band/ String	meter	6,630,000	7,624,500	8,950,500	10,608,000	11,934,000	13,260,000
Thread(500 meter)	coil	4,542,000	5,223,300	6,131,700	7,267,200	8,175,600	9,084,000
Tape	meter	15,900,000	18,285,000	21,465,000	25,440,000	28,620,000	31,800,000
Label	(pc)	1,530,000	1,759,500	2,065,500	2,448,000	2,754,000	3,060,000
Stoper(resin/metal	(pc)	7,230,000	8,314,500	9,760,500	11,568,000	13,014,000	14,460,000
Buckle(resin/metal etc)	(pc)	14,460,000	16,629,000	19,521,000	23,136,000	26,028,000	28,920,000
Eyelet(metal)	(pc)	18,780,000	21,597,000	25,353,000	30,048,000	33,804,000	37,560,000
Ring/Clip(metal)	(pc)	4,320,000	4,968,000	5,832,000	6,912,000	7,776,000	8,640,000
Rivet(metal)	(pc)	5,070,000	5,830,500	6,844,500	8,112,000	9,126,000	10,140,000
Front/Back/Side zipper	(pc)	11,640,000	13,386,000	15,714,000	18,624,000	20,952,000	23,280,000
Pocket zipper	(pc)	10,140,000	11,661,000	13,689,000	16,224,000	18,252,000	20,280,000
Shoulder pad	(pc)	20,280,000	23,322,000	27,378,000	32,448,000	36,504,000	40,560,000
Embroidery patch	(pc)	4,110,000	4,726,500	5,548,500	6,576,000	7,398,000	8,220,000
Hanger	(pc)	5,820,000	6,693,000	7,857,000	9,312,000	10,476,000	11,640,000
Tag	(pc)	-	-	-	-	-	-
Spare button bag	(pc)	-	-	-	-	-	-
Plastic bag	(pc)	4,110,000	4,726,500	5,548,500	6,576,000	7,398,000	8,220,000
Carton	(pc)	4,110,000	4,726,500	5,548,500	6,576,000	7,398,000	8,220,000
Seal tape	(pc)	4,110,000	4,726,500	5,548,500	6,576,000	7,398,000	8,220,000

3.5.2. Production Process

The main operation of the factory is sewing. The sewing was operated 11 lines and checked by quality control supervisor. The ironing process is completed after QC process. Then garment packing is completed and prior to shipping to its destinations. The process flow diagram for garment manufacturing is illustrated in Figure 3-7.

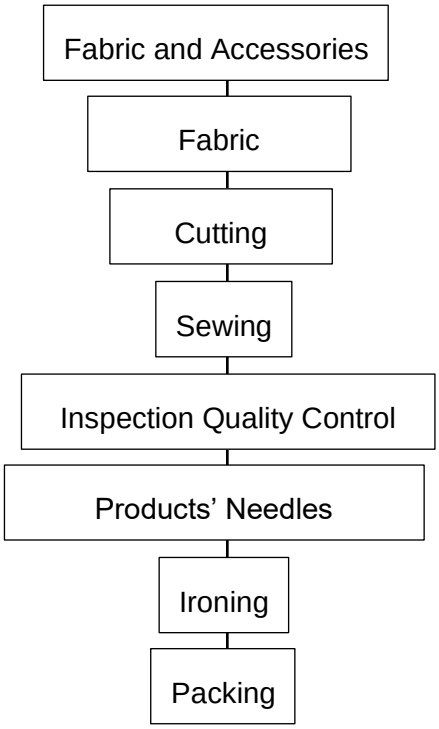


Figure 3-7 Process Flow Diagram of Myanmar Sincerece Company Limited

The first stage in the manufacturing of Garment 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, 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 work piece in a specific area.

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

The QC passed products are sent to ironing section and after that the products are sent to packing section 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.

Store and Fabric Inspection Warehouse

Cutting Section

Sample Room

Sewing Section

Ironing Section

QC & Finishing Department

Quality Control Packing and Product Warehouse

Figure 3-8 Production Process Photos

3.5.3. Products

The products of Myanmar Sincerece Company Limited are Down Coat, Wellon Coat, Padding Coat, Jacket, Pants/Trousers, Skirt, Dress and Vest. The main products are exported to China. Figure 3-9 is described in final products storage photo and Table 3-5 is described in annual production rate.

Figure 3-9 Final Products Storage Photo

Table 3-5 Annual Production Rate

Particulars	Unit	Year					
		1	2	3	4	5	6-10
Production		2,460,000	2,829,000	3,321,000	3,936,000	4,428,000	4,920,000
Down Coat	Pcs	360,000.00	414,000.00	486,000.00	576,000.00	648,000.00	720,000.00
Wellon Coat	Pcs	360,000.00	414,000.00	486,000.00	576,000.00	648,000.00	720,000.00
Padding Coat	Pcs	450,000.00	517,500.00	607,500.00	720,000.00	810,000.00	900,000.00

Particulars	Unit	Year					
		1	2	3	4	5	6-10
Jacket	Pcs	540,000.00	621,000.00	729,000.00	864,000.00	972,000.00	1,080,000.00
Pants/Trouser	Pcs	750,000.00	862,500.00	1,012,500.00	1,200,000.00	1,350,000.00	1,500,000.00
Skirt	Pcs	750,000.00	862,500.00	1,012,500.00	1,200,000.00	1,350,000.00	1,500,000.00
Dress	Pcs	450,000.00	517,500.00	607,500.00	720,000.00	810,000.00	900,000.00
Vest	Pcs	450,000.00	517,500.00	607,500.00	720,000.00	810,000.00	900,000.00

Down Coat

Wellon Coat

Padding Coat

Jacket

Pants/ Trousers

Skirt

Dress

Vest

Figure 3-10 Products Photo

3.6. FACILITIES OF THE FACTORY

3.6.1. Firefighting plan of proposed project

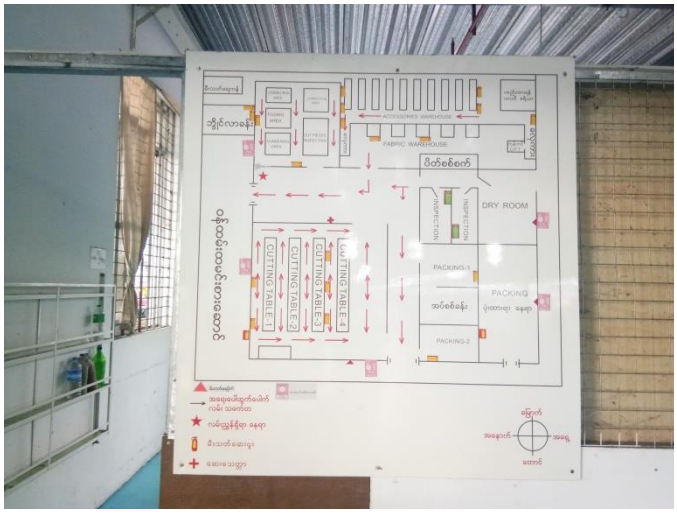
The project proponent has provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire fighting is also constructed with 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-fighting system are mentioned in Figure 3-11.

Fire Water Pump

Fire Water Tank

Fire Hose Reel

Fire Alarm and Extinguisher



Emergency Escape Plan Map

First Aid Box

Figure 3-11 Firefighting Plan and Escape Plan

3.6.2. 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 15 rooms and for female are 15 rooms.

Sink for Workers

Toilets

Figure 3-12 Toilet Facility Photo

3.7. GENERATION OF WASTE, EMISSION, AND DISTURBANCES

Myanmar Sincerece 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 wastewater discharge from the factory is estimated about 4311 m^3 per month.

Solid waste (recycle waste) such as broken machine parts, paper box, plastic bags, 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. Total amount of solid waste discharge from factory is maximum 560.43 kg daily and handover to YCDC two-times per month. Wastes generated from the garment 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 50 kg per day are generated from operation process.

Waste Collector Bins

Recycle Waste Dumping Area

Garbage Bin

Domestic Waste Bin

Figure 3-13 Solid Waste Disposal at Proposed Project

Figure 3-14 Water Drainage System

3.7.1. Waste Generation

The project will be generated solid waste, liquid waste and hazardous waste from the operation of the Myanmar Sincerece Company Limited. Detail description of waste generation and waste amount are shown in below.

Table 3-6 Waste Generation & Waste Amount

Wastes		Type of Wastes	Estimated Waste Amount	Source of Generation
Solid Waste	Re-usable	Disposed packaging materials, paper or plastic wrapping	50 kg / day	Cutting line and Packing section
	Non re-usable	Food residues, domestic waste	560.43 kg / day*	Canteen, Kitchens, dormitory

Liquid Waste	Sanitary discharge water	143.7 m^3 /day*	Toilet facility, kitchen and canteen
Hazardous Waste	Oil leakage and spills	-	Operation of generator and movements of vehicles

* 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).

*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 are methodologies used for the Environmental Management Plan (EMP) report preparation;

- Onsite Measurements and Analysis – Baseline parameters such as air quality and noise 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 Hlaing Thar Yar Township, Yangon Region.

4.2. BASELINE ENVIRONMENTAL MONITORING

The baseline environmental quality at the Project Site and its immediate surroundings was established by temperature, humidity, light 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 21 January 2019 shows the average temperature of 31.3°C while the average humidity is 30.9%.

Table 4-1 Relative Humidity and Temperature Measure at Proposed Project

Date and Time	Description	Result Value	Environmental parameter air station guideline
21 January 2019 (10:00 am to 4:00 pm)	Relative Humidity RH%	31.3 (%)	Present condition
	Temperature	30.9 °C	Present condition

Figure 4-1 Temperature and Humidity Measurement in Operation Area

4.2.2. Noise

The Noise level was measured by using Digital Sound Level Meter on 21 January 2019. The average noise level in the project site area is presented in **Table 4-2** compared with NEQ guideline. However, according to the Noise source monitoring at the project site (within the factory and cutting section) of noise level is within the acceptable level of National Environmental Quality (Emission) Guideline but the noise level of operation area (sewing section) is slightly higher than the NEQE Guideline. The noise source for this project is the running of sewing machines and equipment. But, it was found out that the noise emission cannot affect to the surrounding area. Therefore, in that factory ought to provide the ear protection to all labors. The maintaining of sewing machines and equipment should be carried out to reduce the noise emission.

Table 4-2 Noise Level Measurement Result

Date and Time	Location	GPS Value	Result Value	NEQ Guideline
21 January 2019 (10:00 am to 4:00 pm)	Within the factory	16°51'40.89"N and 96°02'26.99"E	66.03 dBA	70 dBA
	Cutting Section	16°51'43.03"N and 96°02'26.7"E	68.91 dBA	70 dBA
	Sewing Section A	16°51'38.66"N and 96°02'25.98"E	74.69 dBA	70 dBA
	Sewing Section B	16°51'40.34"N and 96°02'26.36"E	73.34 dBA	70 dBA

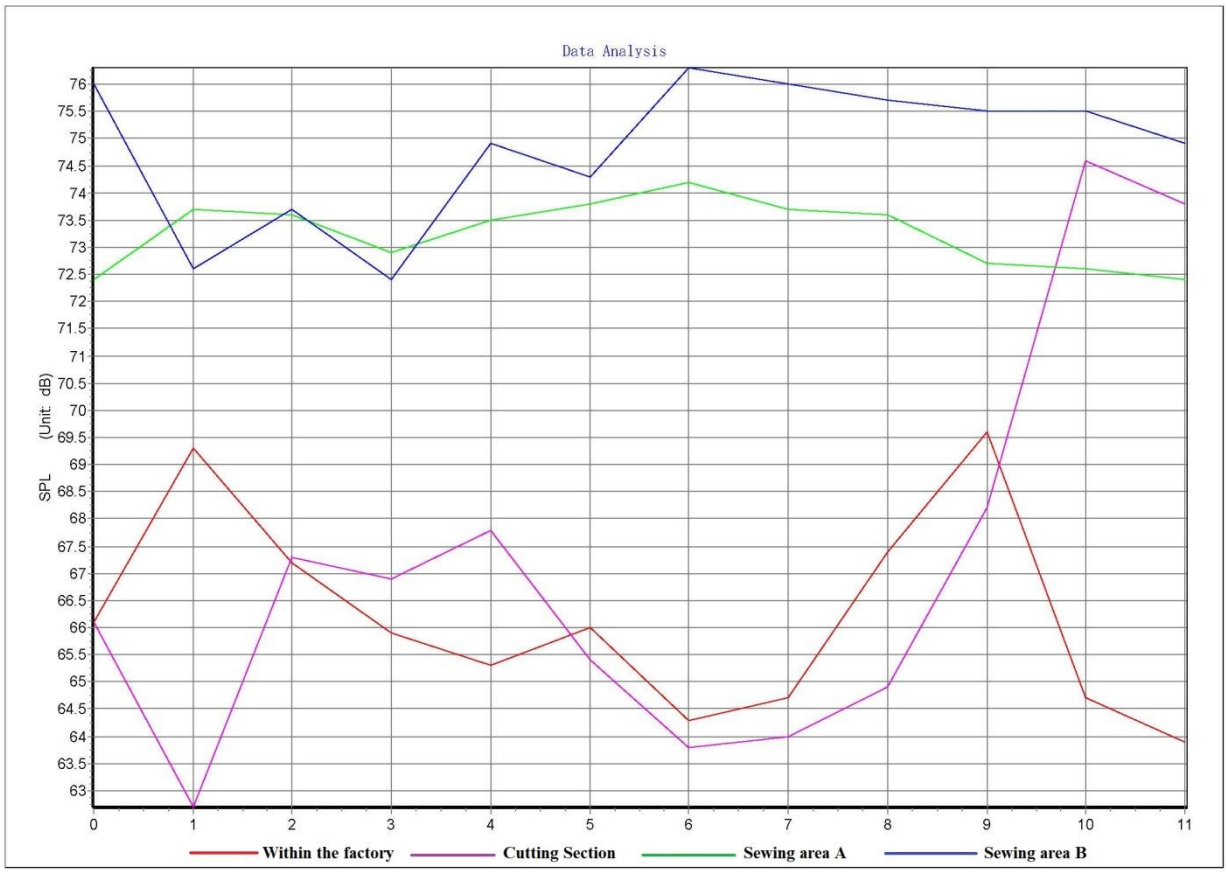


Figure 4-2 Noise Level Result Graph

Figure 4-3 Sound Level Measurement Photo

4.2.3. Air Quality

To determine the existing baseline ambient air quality status within the project site on 21, January 2019, air pollutants level, which include dust (PM_{10} and $PM_{2.5}$) and gases (CO, SO_2, NO_2) were measured at the selected site using the OCEANUS AQM-09 air monitoring station. 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 point is situated at North Latitude 16°51'39.28"N and East Longitude 96°02'25.87"E.

It was observed that the air quality of PM_{10} & $PM_{2.5}$, CO, SO_2 and NO_2 concentration levels are within the limit of the National Environmental Quality (Emission) Guideline.

Table 4-3 Observed Air Quality Results

Parameters	Observed Value	Guideline Value	Unit	Organization	Period
PM_{10}	48	50	µg/m^3	NEQG	6 hours
$PM_{2.5}$	16.86	25	µg/m^3	NEQG	6 hours
SO_2	171	500	µg/m^3	NEQG	6 hours
NO_2	11	200	µg/m^3	NEQG	6 hours
CO	0.34	-	ppm	-	6 hours

Figure 4-4 Air Quality Measurement Photo

4.2.4. Light

Activities of the workers in the Myanmar Sincerece Company Limited are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the garment factory on 21 January 2019, is presented in Table 4-5. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in garment factory is provided in Table 4-4.

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 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 IEESNA Lighting Handbook

Department	Type of Light	Wattage of Light	Lux Level
Warehouse	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

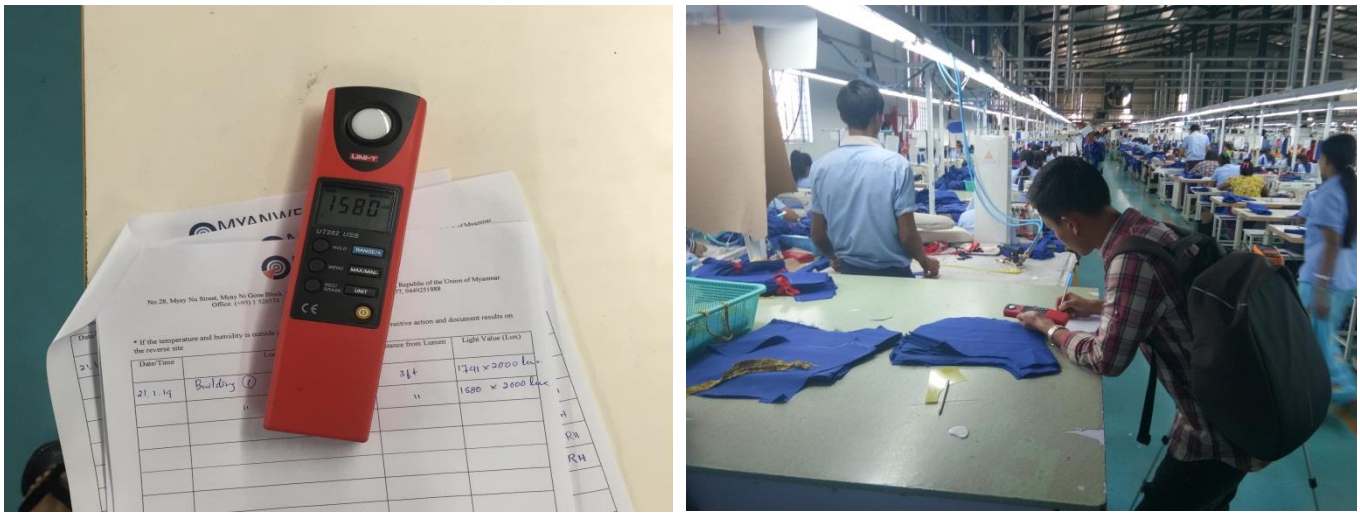


Figure 4-5 Light Quality Measurement Photos

Table 4-5 Result of Light Measurement in Myanmar Sincerece Company Limited

No.	Location	Measured Value (Lux)	Standard*
1.	Cutting Line 1	202	1000
2.	Cutting Line 2	1463	1000
3.	Cutting Line 3	578	1000
4.	Cutting Line 4	1216	1000
5.	Cutting Line 5	892	1000
6.	Cutting Line 6	1149	1000
7.	Packing Area 1	1058	400
8.	Packing Area 2	1369	400
9.	Hang Tag Check Line 1	735	600
10.	Hang Tag Check Line 2	1297	600
11.	Sewing Line 1	1741	400
12.	Sewing Line 2	1580	400
13.	Sewing Line 3	1021	400

No.	Location	Measured Value (Lux)	Standard*
14.	Sewing Line 4	1163	400
15.	QC	1382	900 (except 1500 at audit tables)

* 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).

According to the monitoring results, Myanmar Sincerece Company Limited light level is normal condition according to the NEQ guideline that's why some places need to reduce the light level and ought to put on the electricity bulb more over the higher places. On the other hand, some places are a bit lower than the NEQ guideline that is why which need to change like a more powerful light bulb in that light level lower places. In this ways is able to adjust the light pollution of this factory.

4.3. PHYSICAL COMPONENT (SECONDARY DATA)

4.3.1. Topography

Yangon area is the largest; most populated and urbanized area in Myanmar. There are thirty-three townships in Yangon city were located at the convergence on the Yangon. The proposed project area is situated at Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

4.3.2. Geology

In Yangon area mainly composed of Pegu Group, Irrawaddy Formation and Alluvium. 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 4-6.

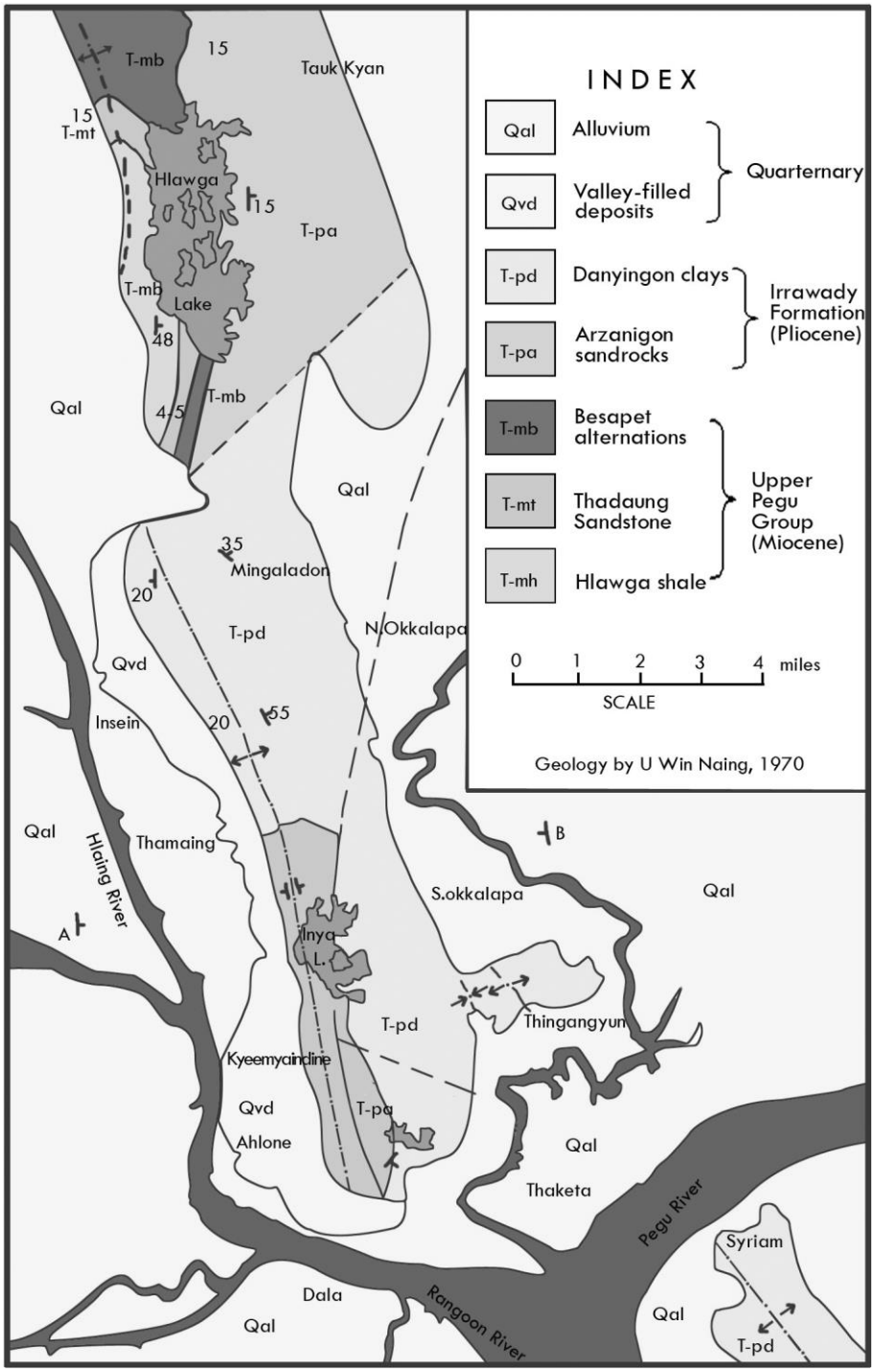


Figure 4-6 Geological Map of Yangon Region

4.3.3. 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).

4.3.4. 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 silty 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 can accommodate the construction of the Project. [2]

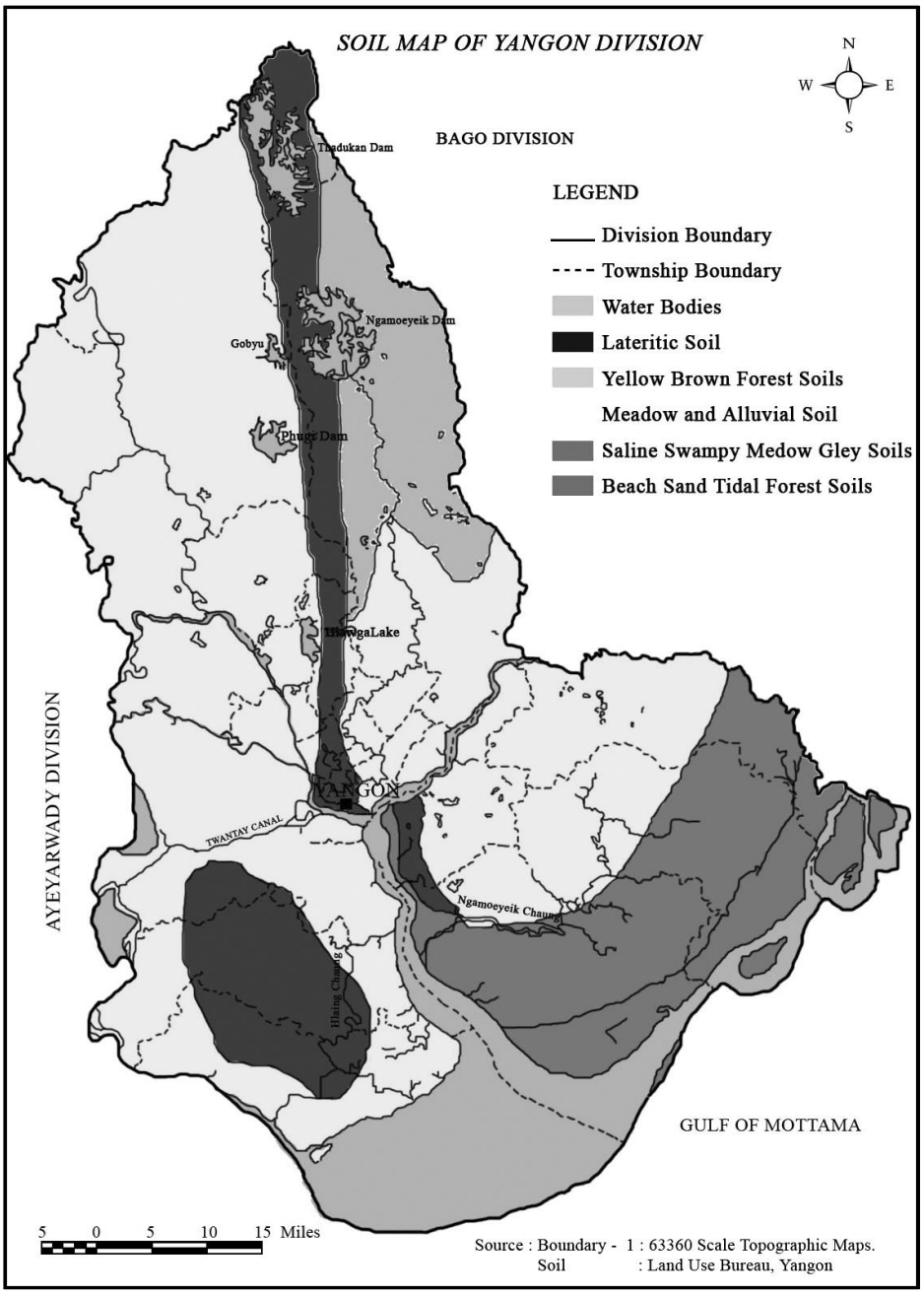


Figure 4-7 Soil Map of Yangon (Source: Land use of Bureau of Yangon)

4.3.5. 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 Hlaing River which flows north to south. 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 Hlaing Thar Yar River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Hlaing Thar Yar River joins the Yangon River and from there, flow towards the Southwestern direction into Andaman Sea.

4.3.6. Climate and Meteorology

4.3.6.1. Average weather in Yangon

In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year-round. Over the course of the year, the temperature typically varies from 67 °F to 97 °F and is rarely below 62 °F or above 101 °F. [6]

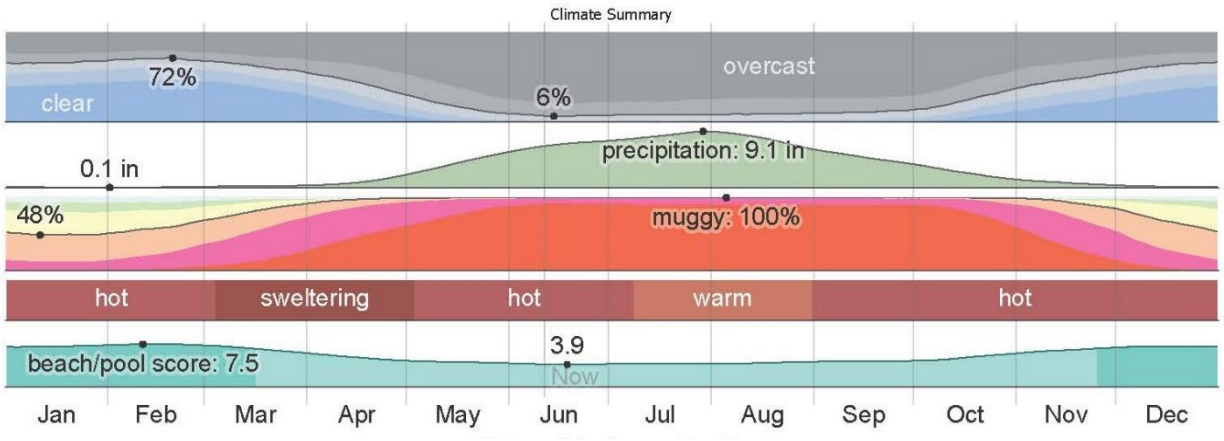


Figure 4-8 Climate Summary of Yangon Region

4.3.6.2. Temperature

The hot season lasts for 2.0 months, from March 2 to May 3, with an average daily high temperature above 95 °F. The hottest day of the year is April 11, with an average high of 97 °F and low of 78 °F.

The cool season lasts for 3.9 months, from June 2 to September 29, with an average daily high temperature below 87 °F. The coldest day of the year is January 10, with an average low of 67 °F and high of 88 °F.

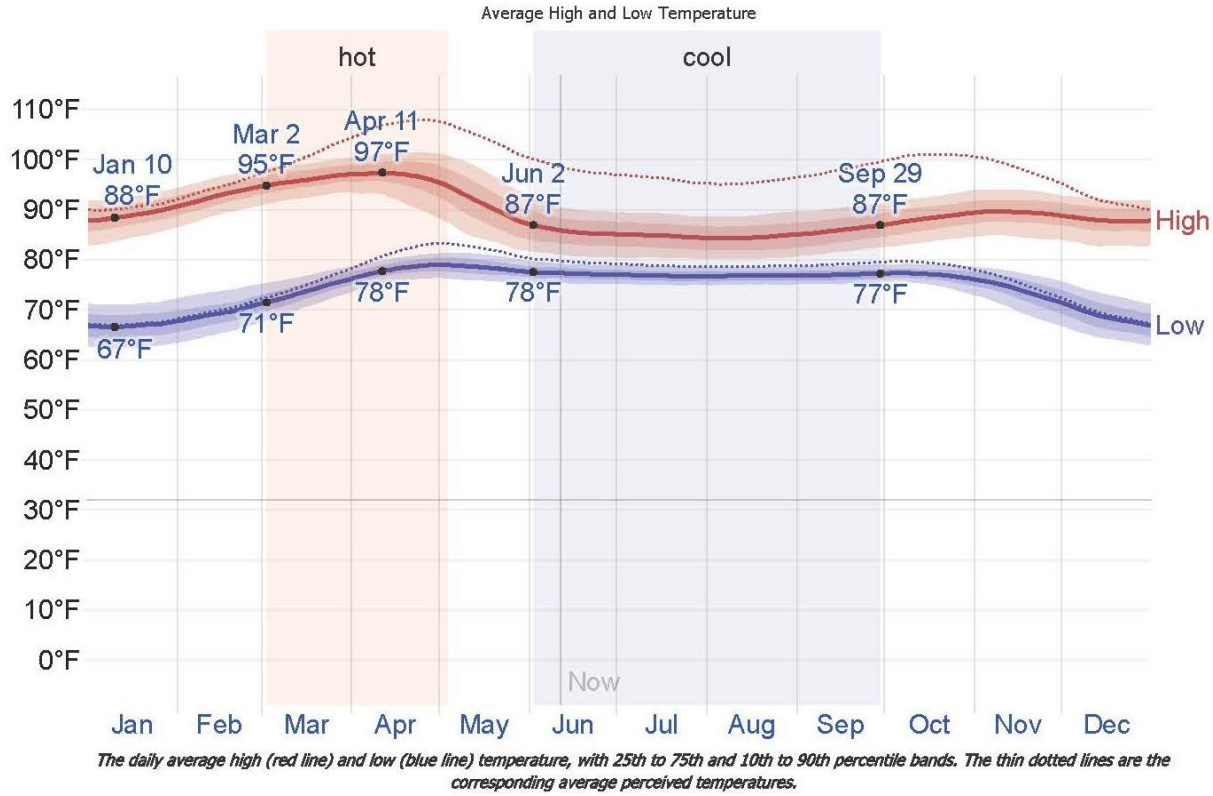


Figure 4-9 Average Temperature of Yangon Region

4.3.6.3. Clouds

In Yangon, the average percentage of the sky covered by clouds experiences extreme seasonal variation over the course of the year. In clearer part of the year in Yangon begins around November 2 and lasts for 5.6 months, ending around April 22. On February 20, the clearest day of the year, the sky is clear, mostly clear, or partly cloudy 72% of the time, and overcast or mostly cloudy 28% of the time.

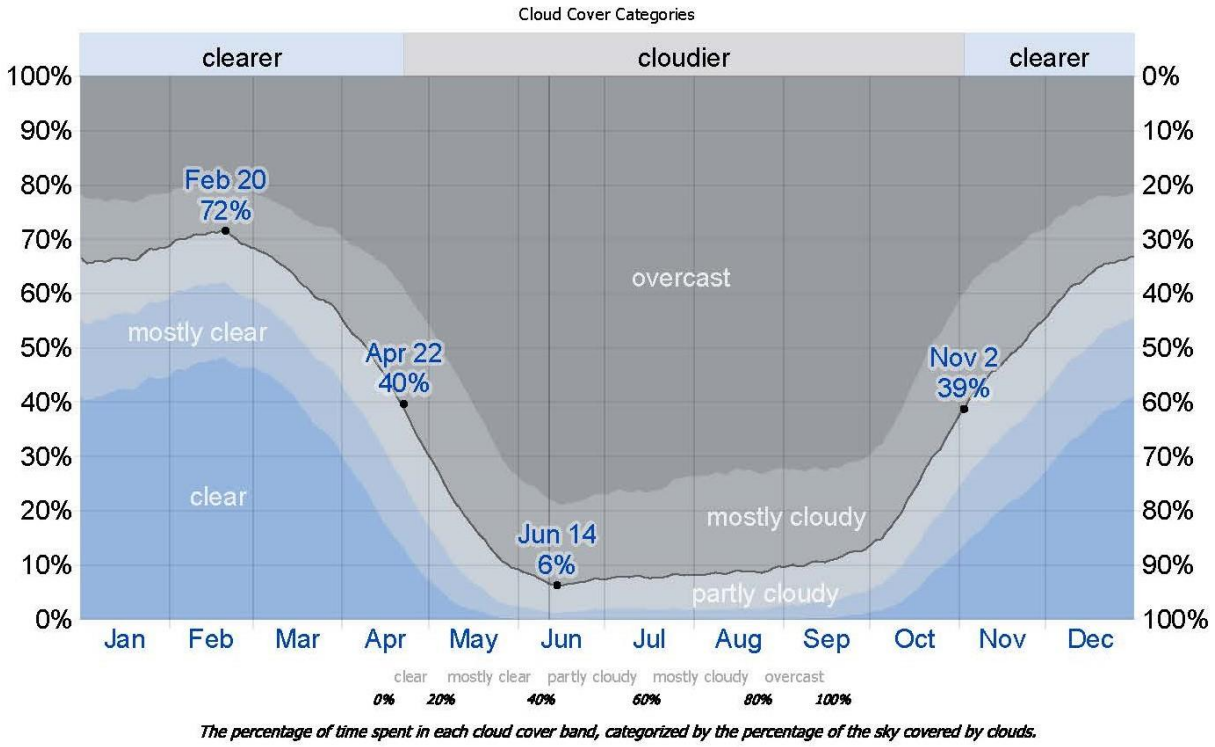


Figure 4-10 Cloud Cover Categories

4.3.6.4. Rainfall

To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Yangon experiences extreme seasonal variation in monthly rainfall. The rainy period of the year lasts for 7.7 months, from April 5 to November 28, with a sliding 31-days rainfall of at least 0.5 inches. The most rain falls during the 31 days centered around July 30, with an average total accumulation of 9.1 inches. The rainless period of the year lasts for 4.3 months, from November 28 to April 5. The least rain falls around February 1, with an average total accumulation of 0.1 inches.

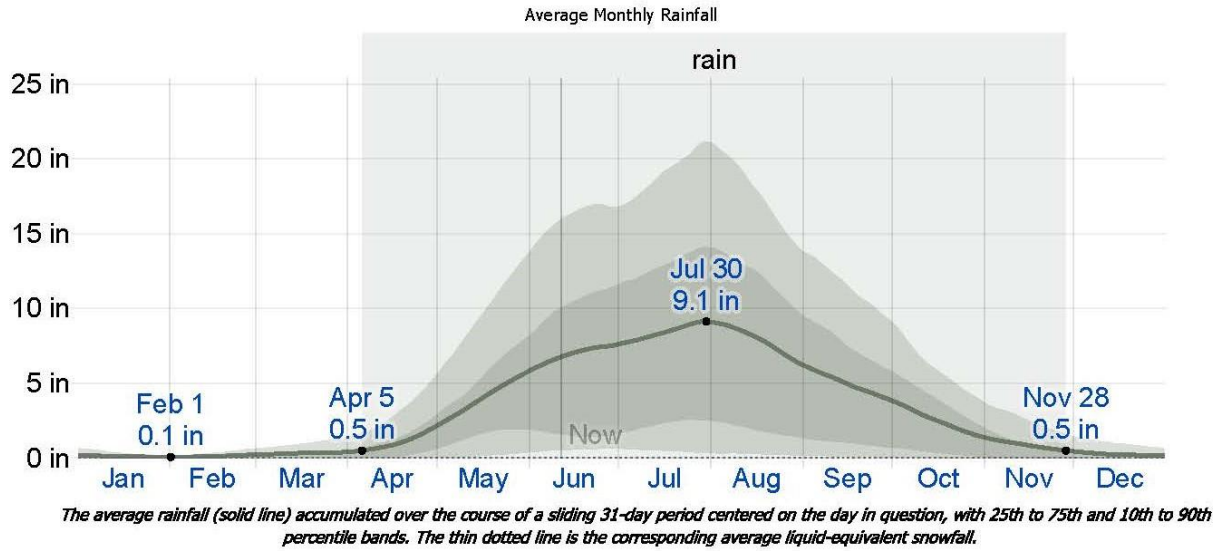


Figure 4-11 Average Monthly Rainfall at Yangon Region

Table 4-6 Annual Rainfall and Temperature

Year	Rainfall		Temperature	
	Raining Day	Rainfall Value	Summer Season Max (°C)	Winter Season Min (°C)
2017-2018	102	105.4	41	27
2018-2019	88	84.8	40	26

Source: Department of Administrative Hlaing Thar Yar Township, Regional Data (www.gad.gov.mm)

4.3.6.5. Humidity

We base the humidity comfort level on the dew point, as it determines whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel drier and higher dew points feel more humid. Unlike temperature, which typically varies significantly between night and day, dew point tends to change more slowly, so while the temperature may drop at night, a muggy day is typically followed by a muggy night.

Yangon experiences extreme seasonal variation in the perceived humidity. The muggier period of the year lasts for 10 months, from February 22 to December 23, during which time the comfort level is muggy, oppressive, or miserable at least 61% of the time. The muggiest day of the year is August 5, with muggy conditions 100% of the time. The least muggy day of the year is January 11, with muggy conditions 48% of the time.

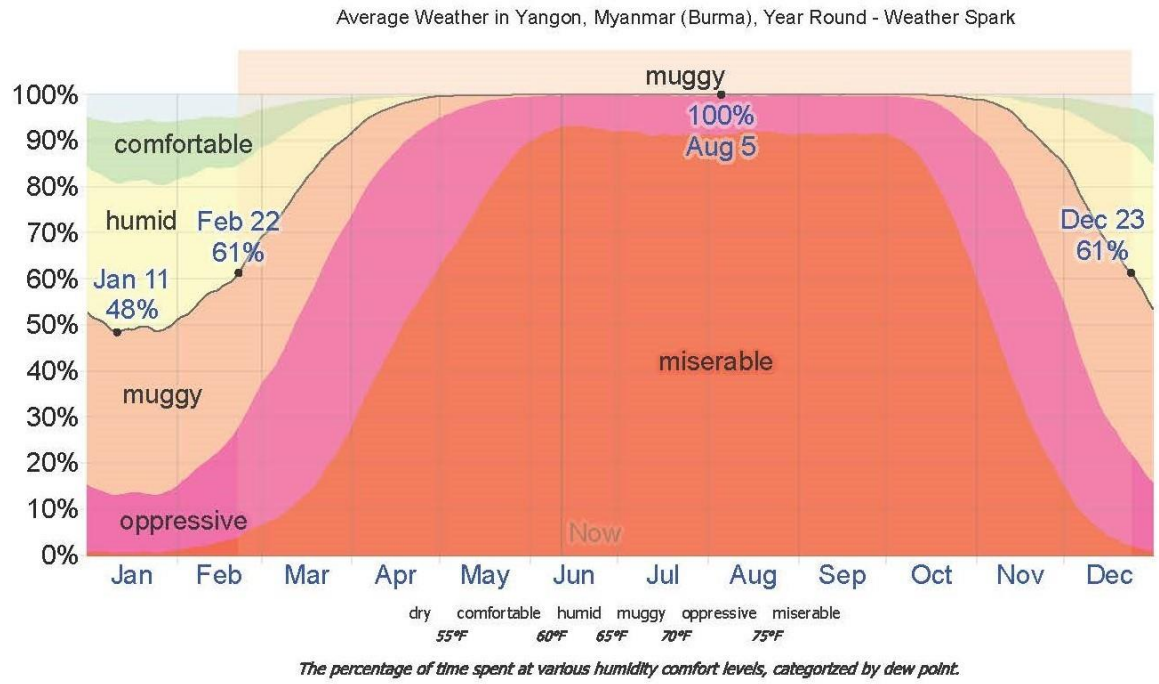


Figure 4-12 Humidity of Yangon

4.3.6.6. Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly depended on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Yangon experiences significant seasonal variation over the course of the year. The winder part of the year lasts for 4.1 months, from May 1 to September 4, with average wind speeds of more than 8.2 miles per hour. The windiest day of the year is June 24, with an average hourly wind speed of 10.6 miles per hour. The calmer time of year lasts for 7.9 months, from September 4 to May 1. The calmest day of the year is January 9, with an average hourly wind speed of 5.8 miles per hour.

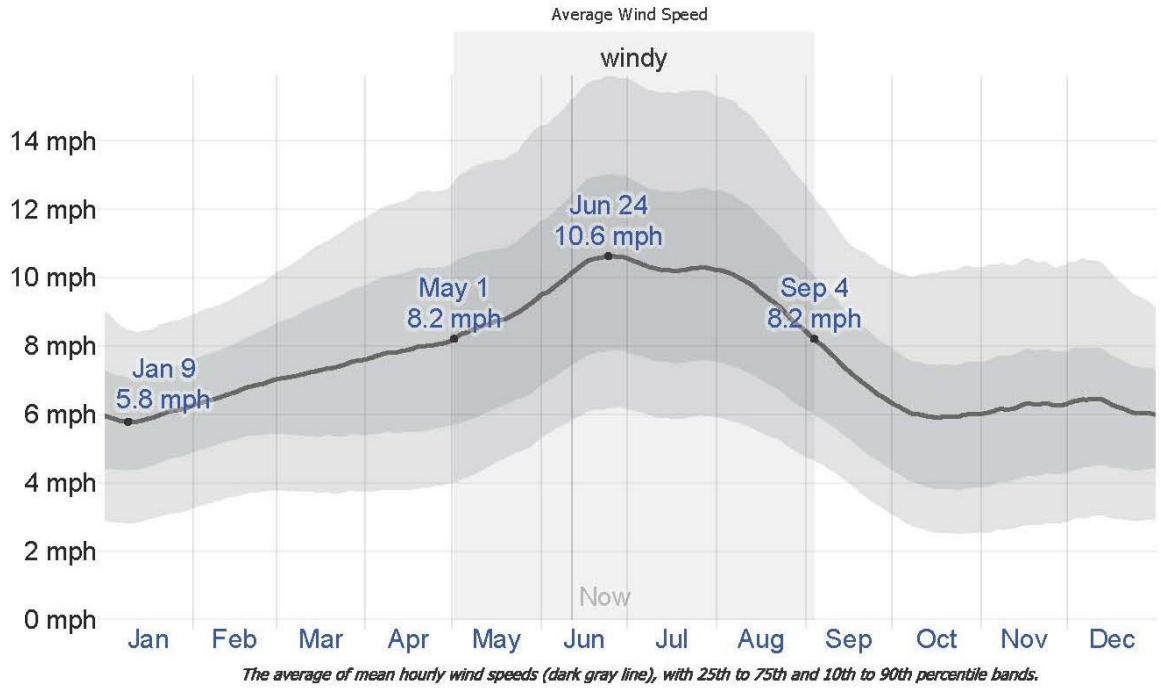


Figure 4-13 Average Wind Speed in Yangon

4.4. BIOLOGICAL COMPONENT (SECONDARY DATA)

As the proposed project area is located in the industrial zone, the information of ecological resources is very unlikely. In addition, within the proposed project area, there are no forests, protected areas and coastal resources. The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Hlaing Thar Yar Township. The Project Site is a built-environment and the species of flora surveyed at the site are native species uncommon to the Yangon area.

Ecological Resources	Existing condition
Fisheries, aquatic biology	The nearest river is Hlaing River. Fresh water fish species are residing in the river
Wildlife	Non existence
Forests	Non existence
Rare or endangered species	Non existence
Protected areas	Non existence
Coastal resources	A few mangrove species observed at the river bank of Hlaing River

4.5. SOCIO-ECONOMIC COMPONENT

4.5.1. Population

Myanmar Sincerece Company Limited is located across Hlaing Thar Yar Township in Yangon Region. In 2019, the population of Hlaing Thar Yar Township is about 440,949 peoples as present in Table 4-7.

Table 4-7 Population of Males and Females at Hlaing Thar Yar Township (2019)

Item	Over 18 years			Under 18 years			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	110,193	125,186	235,379	49,964	55,193	105,157	160,157	180,379	340,536
Rural	34,642	32,707	67,349	16,488	16,576	33,065	51,130	49,283	100,413
Total	144,835	157,893	302,728	66,452	71,769	138,221	211,287	229,662	440,949

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

4.5.2. Religion

The different kinds of religion present in Hlaing Thar Yar Township are shown in Table 4-8. More than 90% of the people living in the township are Buddhists. [1]

Table 4-8 Religion in Hlaing Thar Yar Township (2019)

Township	Buddhist	Christian	Hindu	Muslim	Total
Hlaing Thar Yar	422,539	6,400	8,320	3,700	440,949

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

4.5.3. Local Economy

Among regional towns, Hlaing Thar Yar 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

4.5.4. Public Infrastructure and Access

4.5.4.1. Communication and Transportation

Major transportation route in Haling Thar Yar Township are railway, port, and car road as presented in Table 4-9. [1]

Table 4-9 Transportation Route

Categories	Township		Miles
Water Route	From Pun Hlaing River and Hlaing confluence	To Ngwe Pin Lae Industrial	8

No.	Township	Bus Stop	Transportation path	Type of Bus	No. of Bus
1.	Hlaing Thar Yar	16	11	YBS	125

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

4.5.5. Electricity

The electricity demand of Hlaing Thar Yar Township is higher and higher due to the normally increased in population and infrastructure. [1]

4.5.6. 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 Hlaing Thar Yar Township.

Table 4-10 List of major school in Hlaing Thar Yar Township

No.	Name of School	Location
1.	West Yangon Technological University	Outside Padan Village Tract
2.	BEHS (1)	No. (2) ward
3.	BEHS (2)	No. (12) ward
4.	BEHS (3)	No. (17). Ward
5.	BEHS (4)	No. (5) ward
6.	BEHS (5)	No. (7) ward
7.	BEHS (6)	Yae Okken
8.	BEHS (7)	No. (16) ward
9.	BEHS (8)	No. (20) ward
10.	BEMS (Branch) (1)	No. (6) Ward
11.	BEMS (Branch) (2)	Nyaung Village Tract
12.	BEMS (Branch) (3)	Dine Su, Nyaung Village
13.	BEMS (Branch) (4)	No. (6) ward
14.	BEMS (Branch) (5)	No. (1) ward
15.	BEMS (Branch) (6)	No. (10) ward
16.	BEMS (Branch) (7)	Outside Padan Village Tract
17.	BEMS (Branch) (8)	No. (18) ward
18.	BEMS (Branch) (9)	Shwe Lin Pan Village Tract
19.	BEMS (Branch) (10)	No. (9) Ward

No.	Name of School	Location
20.	BEMS (Branch) (11)	No. (12) Ward
21.	BEMS (Branch) (12)	No. (18) Ward
22.	BEMS (Branch) (13)	No. (15) Ward
23.	BEMS (Branch) (14)	No. (14) Ward
24.	BEMS (Branch) (15)	No. (13) Ward
25.	BEMS (Branch) (16)	No. (11) Ward
26.	BEMS (Branch) (17)	No. (7) Ward
27.	BEMS (Branch) (18)	No. (11) Ward
28.	BEPS (1 to 32)	Hlaing Thar Yar
29.	Pre School (1 to 6)	Hlaing Thar Yar

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

4.5.7. Health Status

The diseases of high prevalence reported in 2019 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2019 of Hlaing Thar Yar Township, no accidental work injuries reported to the township hospital in 2019. The common diseases are shown in Table 4-11.

Table 4-11 Common Diseases in the Hlaing Thar Yar Township

Disease	Hlaing Thar Yar	
	Morbidity	Mortality
Malaria (Per 100000P)	-	-
Dysentery	37	-
Diarrhea (Per 100000P)	21	-
TB (Sputum+) (Per 10000P)	67	-
Hepatitis	5	-

Table 4-12 Lists of hospital in the Hlaing Thar Yar Township

Hospital Name	Beds/Services	Responsible
Township Hospital	200	Government
Cottage Hospital (Shwe Lin Pan)	16	Government
Pan Hlaing	95	Private
Tun Foundation	20	Private
Total	330	-

Source: Department of Administrative Hlaing Thar Yar, Regional data (www.gad.gov.mm.com)

4.6. CULTURAL AND VISUAL COMPONEMTS

Hlaing Thar Yar 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. RISK ASSESSMENT AND MITIGATION MEASURE PLAN

5.1. IMPACT IDENTIFICATION

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.

5.1.1. 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 Hlaing Thar Yar Township, there may have business opportunities to local people. Local people can have a market by selling foods, snacks and drinks nearby the factory.

5.1.2. 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.

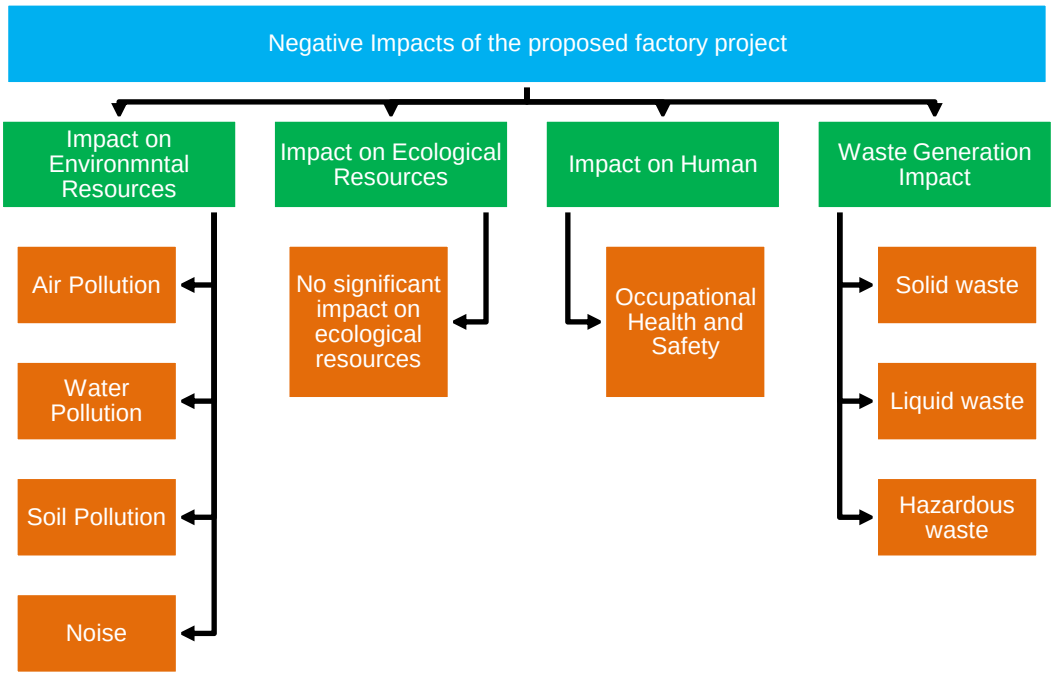


Figure 5-1 Potential negative impact affect from proposed factory project

5.2. 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) calculated by following formula.

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

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

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

5.3. POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION AND DECOMMISSIONING PHASE

Construction phase: 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 environment is not assessed and affected must be caused the construction period.

Decommissioning phase: The proposed duration of the investment shall be 20 years. The term of the Lease shall be initial 10 years commencing from the date of signing of the Lease Agreement between Local owner and Myanmar Sincerece Company Limited for proposed project site for 2.782 acres (11258.36 square meters) of land and 5 years extendable for two times after expiry of 10 years term of lease. The project of land and building will be restitution to land owner after close the operation. Therefore, the assessment study cannot be needed for environmental impact assessment during decommission phase.

These two phases of operation shall be represented by land owner. If the owner will be demolished their factory, they will need mitigation and monitoring plan for environmental impact. Therefore, Myanwei's environmental assessment team presented for monitoring plan during decommissioning phase.

5.4. SIGNIFICANT IMPACTS OF PROJECT ACTIVITY AND MITIGATION MEASURE

The project activities, their impacts and significance of impact are provided in Table 5-2.

Table 5-2 Evaluation and Perdition of Significant Impacts and Mitigation Measures on Operation Phase

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air Quality	• Dust and GHGs emission from vehicles used for transporting raw materials and final products • Emission from emergency diesel generator and vehicle movement	4	3	2	3	27	Low	• Air pollution in atmosphere. • Inhaling them can increase the chance you'll have health problems. • People with heart or lung disease, older adults and children are at greater risk from air pollution.	• To control air pollution, the vehicles, generators and machineries have to check and maintain monthly. • The factory uses chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment. The height of chimney is about 50ft. • Ensuring vehicles, compressor and generator are well maintained by M&E Engineer. • The factory has planted trees to reduce carbon emission and minimize air pollution.
Water Pollution	• Production process	4	3	2	3	27	Low	• The factory has not generated wastewater from production process on CMP basic	• No Mitigation Measure

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Soil	• Engine oil leaks, spills at diesel storage and during fuel refueling.	1	4	1	2	12	Very Low	• The factory compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant.	• No Mitigation Measure
Noise and Vibration	• Generating noise from the production machinery	4	2	1	3	21	Low	• The factory not operate heavy machinery • The major noise source of CMP basic operation activities such as cutting, stitching/finishing and packaging by respective machines. There is insignificant impact on surrounding environment	• Use noise covering equipment and personal protective equipment (PPE) like ear plug/ earmuffs for factory workers in the noisy workplace. Provide 200 pieces of ear plug to the workers. • Should be used low noise equipments and built individual rooms like generator and compressor rooms
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the manufacturing of garment	4	1	2	2	15	Very Low	• Not Significant Impact on Ecological Resources	• No Mitigation Measure
Impact on Human									

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Fire	• Poor electrical installations • Waste disposed area raw materials and chemical storage	3	5	2	4	40	Moderate	• Serious damage to property and even injury and death	• To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. In proposed project is provided the 50 fire extinguishers, 5 fire hose reels and 6 fire hydrants. • Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire fighting. • 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.
Occupational Safety	• Accidental cases cause by operating machines. • Unloading, mixing, cutting, pressing and packaging activities.	3	4	1	4	32	Moderate	• Accident in workplace (physical injuries or even death) can occur during operation.	• First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. The project is provided 1 first aid kit for the

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	• Accidental cases of thermic fluid heater								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. Post the emergency ph no. on the visible of factory workers.
Health	• Influx of people • Noise from the generating of the emergency generators	2	4	1	2	14	Very Low	• Change in demographic structure, new diseases from immigrant workers • To cause a range of health problems ranging from stress, poor concentration,	• Manage the drainage systems of the factory to prevent health risk of the workers. In proposed project, the factory drainage is disposed in separated tank and which flows to municipal drainage. • The maximum allowable noise level for workers is 90dB(A) for

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								productivity losses in the workplace, and communication difficulties and fatigue from lack of sleep, to more serious issues	8hours 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
Waste Generation									
Solid Waste	• Residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	2	4	1	4	28	Low	• Surrounding environmental pollution and soil contamination	• Provides separate garbage bins at each building. In proposed project, 10 garbage bins are provided in operation area. • All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area • Final wastes should be disposed weekly by using YCDC's service.
Liquid Waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	4	32	Moderate	• Contamination of soil, surface water, ground water	• Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Hazardous Waste	• Used oil and lubricant	2	4	1	2	14	Very Low	• Reduce the risk of contamination from	• Proper inspection and maintenance in storage of

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	discharged from the maintenance of vehicles and machines.							fuels, oils and hazardous wastes • Response effectively to incident and accident	hazardous waste. • Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements. • The empty chemical containers will hand over to suppliers for recycle or appropriate disposal • The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (eg., DOWA and YCDC)
Natural Disaster									
Earthquakes, Floods, Landslides and Cyclone	-	-	-	-	-	-	-	-	• Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.

The proposed project should do environmental monitoring (every 6 months) and report to Ministry of Natural Resources and Environmental Conservation Department.

Table 5-3 Evaluation and Prediction of Significant Impacts and Mitigation Measure on Decommissioning Phase

Environmental Impact	Project Activities	Significant of Potential Impacts	Impact Significance	Reason	Mitigation Measure

		M	D	E	P	S			
Air Pollution	Demolish of buildings and related materials Transportation of demolished materials	3	1	1	4	20	Low	Emissions of particulate matters and carbon dioxide gases into the air	Spray water twice a day Cover mesh trap around the decommission area Install shading net about 2 meters above temporary fence of decommission area Carry broken material with cover by canvas.
Water Pollution	Sewage from decommissioning workers Demolition machinery equipment	3	1	1	3	15	Low	Contamination of surface water and ground water	Systematically demolish the septic tanks.
Soil Contamination	Demolished of buildings and related materials Transportation of demolished materials	3	1	1	3	15	Low	Contamination of soil	Manage the spillage of oil and diesel and sewage.
Noise Pollution and Vibration	Decommission activities Transportation of demolished materials	3	1	1	3	15	Low	Noise pollution to the surrounding	Carry out the activities during day time. (working hour) Maintain the machines and vehicles to reduce noise pollution. Provide the ear plugs to the workers.
Waste Disposal	Demolished debris such as bricks, concrete materials	2	1	1	3	12	Very Low	Dumping to the surrounding environment	Recyclable materials and dispose to the define areas. Should disposed with YCDC.
Hazardous Waste	Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low	Spillage of lubricant	Manage the disposal way of hazardous waste. Should obey the MSDS rules and disposed if

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	S			
									there have hazardous waste.
Occupational Health and Safety (Accidents, Injuries)	Decommissioning activities Transportation of demolished materials	3	1	2	3	18	Low	Injuries and accidents	Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board. Clean up excessive waste debris and liquid spills regularly. Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.

6. ENVIRONMENTAL MANAGEMENT ACTION

6.1. 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) ➢ Motor Vehicles Act, (2015) ➢ Boiler Law (2015)	
Time Frame	➢ Entire life spans of the factory operation	
Management Action	➢ Must be plant around the proposed project to reduce carbon emission ➢ Should be prohibited burning of waste material at the proposed project site ➢ Must be control air pollution, the vehicles, generators and machineries have to check and maintain regularly. ➢ The factory should use chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment. ➢ Must be ensuring vehicles, compressor and generator are well maintained.	
Monitoring & Reporting	Frequency	Biannually
	Monitoring Point	Indoor and Outdoor of proposed project
	Parameters	TSP, $PM_{2.5}$, PM_{10}, SO_2, NO_2, O_3, CO
Estimated cost	1,000,000 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	

6.2. 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 ➢ Impose speed limit to track and vehicles at the transportation 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.

Monitoring & Reporting	Frequency	Biannually
	Monitoring Point	Two points in operation area
	Parameters	Sound Decibel
Estimated cost	500,000 Kyats per year	
Responsibility	HSE Manager or Environmental Management Team of Myanmar Sincerece Company Limited	

6.3. 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	➢ Yangon City Development Committee Law (2018), National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	➢ Entire life spans of the factory operation
Management Plan	➢ Must be provides separate garbage bins at each building. ➢ All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area ➢ Final wastes should be disposed by using YCDC's service.
Monitoring & Reporting	➢ Daily wastes have to be collected and hand over to YCDC waste collector ➢ The inventory record of waste disposal will be maintained as proof for proper management as designed
Estimated cost	50,000 Kyats per month
Responsibility	Manager (HR) ➢ Responsible for overall site cleanliness and waste management ➢ Regular waste collection to minimize excessive waste storage

6.4. LIQUID WASTE MANAGEMENT PLAN (WASTEWATER)

Objectives:	➢ To implementation plan for the management of liquid waste from collection, through treatment and resource recovery, to residual disposal	
Relevant government law and rule	➢ Yangon City Development Committee Law (2018), National Environmental Quality (Emission) Guidelines (2015), Underground Water Act	
Time Frame	➢ Entire life spans of the factory operation	
Management Plan	➢ Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.	
Monitoring & Reporting	Frequency	Biannually
	Parameters	pH, Turbidity, Conductivity, Iron, Sulpahte, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically	
Estimated cost	500,000 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

6.5. FIRE MANAGEMENT PLAN

Objectives:	➢ To ensure that fire control practices are implemented on site to minimise the risk of fire from site operations and bush fires
Relevant government law and rule	➢ Myanmar Fire Brigade Law 2015
Time Frame	➢ Entire life spans of proposed project operation
Management Plan	➢ Must be provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. ➢ Must be indicated the emergency exit and assembly point in public area. ➢ Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire fighting. ➢ 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.
Monitoring & Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguisher, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)
Estimated cost	1,200,000 Kyats per year
Responsibility	HSE Manager, Operation Manager or Environmental Management Team of Myanmar Sincerece Company Limited

6.6. OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PLAN

Objective	➢ To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.
Relevant Government Law and Rule	➢ Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of 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 (PPE) 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. ➢ Manage the drainage systems of the factory to prevent health risk of the workers. ➢ The maximum allowable noise level for workers is 90dB(A) for 8hours 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.
Monitoring and 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	1,000,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Myanmar Sincerece Company Limited

6.7. HAZARDOUS WASTE MANAGEMENT PLAN

Objective	➢ To avoid environmental pollution and adverse health effects due to its improper handling & disposal.
Relevant Government Law and Rule	➢ Yangon City Development Committee Law (2018), Explosive Ordnance Disposal Law (2018)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ Proper inspection and maintenance in storage of hazardous waste. ➢ Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements. ➢ The empty chemical containers will hand over to suppliers for recycle or appropriate disposal ➢ The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (e.g. DOWA and YCDC)
Monitoring and Reporting	Any hazardous materials purchased should include a Material Safety Data Sheet (MSDS), otherwise known as a Safety Data Sheet (SDS) or Product Safety Data Sheet (PSDS). By mandate of the World Health Organization's Inter-Organization Programme for the Sound Management of Chemicals (IOMC), all manufacturers of hazardous materials are required to provide a MSDS so that end users can treat the materials properly.
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager or Environmental Management Team of Myanmar Sincerece Company Limited

6.8. ENERGY MANAGEMENT PLAN

Objectives:	➢ To improve energy efficiency, reduce cost, optimize capital investment, reduce environmental and greenhouse gas emissions, and conserve natural resources
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 1,000,000 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

6.9. EMERGENCY RESPONSE AND MANAGEMENT PLAN

Objectives:	➢ To reduce the harmful effects of all hazards, including disasters. The World Health Organization defines an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming a disaster, which is even harder to recover from.
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 ➢ 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 1,500,000 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

6.10. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

The EMoP 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 EMoP. is provided the environmental monitoring schedule for Myanmar Sincerece Company Limited 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 Process

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Operation Phase					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	2,500,000 Kyats	Environmental Management Team's Myanmar Sincerece Company Limited
Air Quality	$PM_{2.5}$, PM_{10}, SO_2, NO_2, O_3, CO	Biannually monitoring and reporting to ECD (first 3 years after operation)	Outdoor and Indoor of proposed project	800,000 Kyats	Environmental Management Team's Myanmar Sincerece Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Myanmar Sincerece Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500,000 Kyats	Environmental Management Team's Myanmar Sincerece Company Limited
Light Intensity	Illuminance	Monthly	At the production line	20,000 Kyats	Environmental Management Team's Myanmar Sincerece Company Limited
Decommissioning Phase					
Air Quality	TSP, $PM_{2.5}$, PM_{10}, SO_2, NO_2,	One time during this	One point in the production area	1,000,000 Kyats	Land Owner

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
	O_3, CO	phase			
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1,000,000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner

6.11. 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 accidential 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;

6.11.1. 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.

6.11.2. 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

6.11.3. 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

6.11.4. 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

6.11.5. 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.

6.11.6. 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 trained 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.

6.11.7. 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)

6.11.8. 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

6.11.9. Health and Safety Training Plan for Worker

Health and Safety Training plan currently used and provided in Myanmar Sincerece Company Limited 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 Myanmar Sincerece Company Limited

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

6.12. 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 Myanmar Sincerece Company Limited representative from Hlaing Thar Yar Industrial Zone and representative from General Administration Department (Hlaing Thar Yar 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 show steps of Grievance Redress Mechanism of Proposed Factory Project.

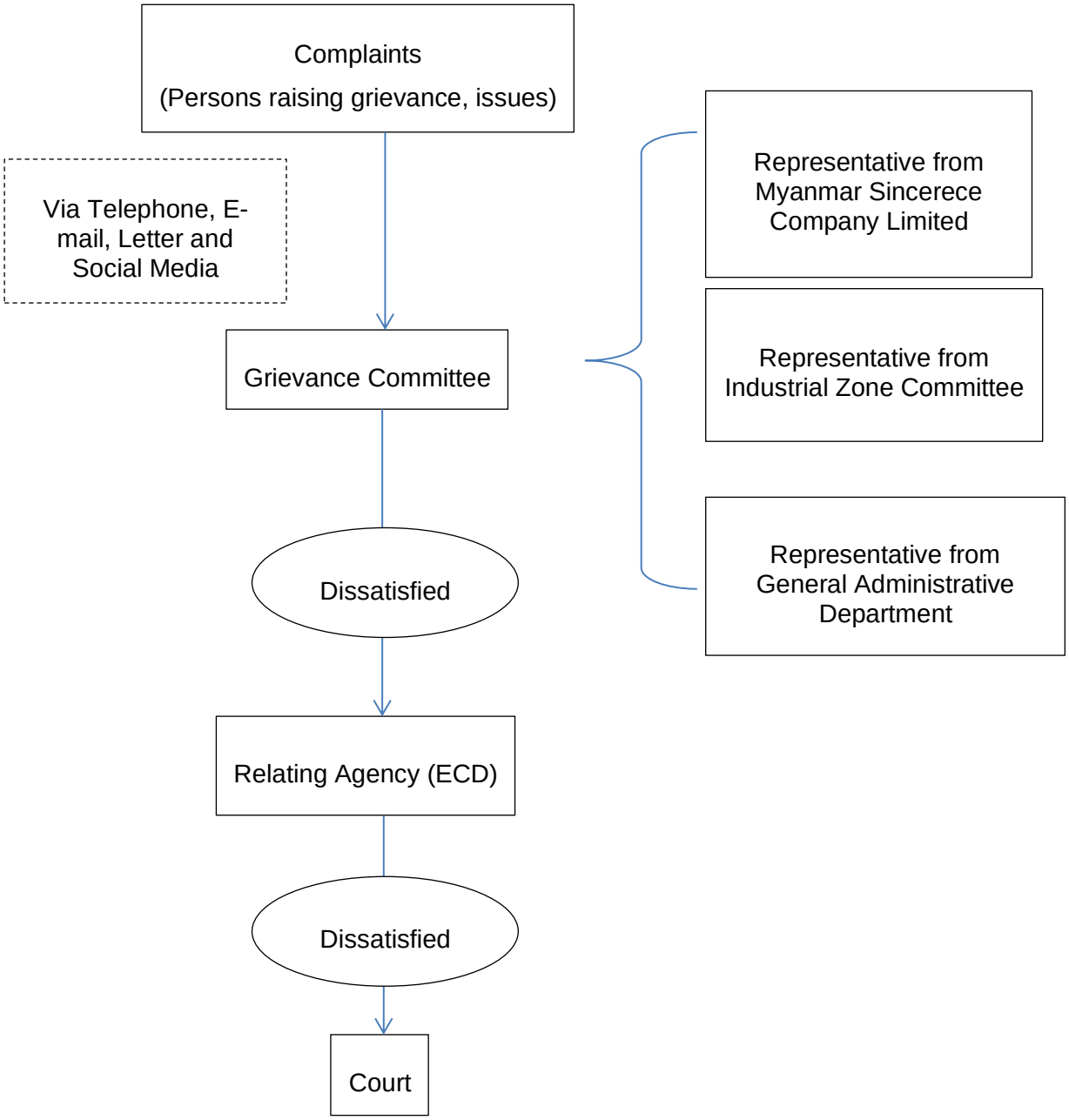


Figure 6-1 Grievance Redress Mechanism Flow Diagram

6.13. 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 Myanmar Sincerece Company Limited consists of three main sectors; Health, Education and Communities Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

Myanmar Sincerece Company Limited has a plan to implement and donate 2 percent of the profit per year for Corporate Social Responsibility (CSR) and Employee Welfare Arrangement.

Table 6-4 CSR Plan at Myanmar Sincerece Company Limited

Area	Priority item	Contribution (%)	Estimated Cost (Kyats)	Detail targets
Health	Healthcare for employees and their family	0.5 %	2,500,000	One of our main concerns is the well-being of our employees. We will contribute 0.5 % of our net profit for the healthcare which includes medical checkup for the employees and providing health education to our workers.
Education	Raising awareness education level and human right	0.5 %	5,000,000	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.
Community Development	Donation to local community	1%	2,500,000	• Donate to local charities with a worthy cause • Actively participate in community events • Encourage staff to participate, and to form a community engagement team to actively support community events • Embedding understanding and consciousness about human rights issues among the employees • Development of sexual harassment and power harassment (workplace bullying & harassment) prevention efforts

7. PUBLIC CONSULTATION

7.1. PUBLIC CONSULTATION PROCESS

This chapter presents results of public consultation and information disclosure conducted for the Myanmar Sincerece Company Limited. 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 14, March, 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. Ko Htet Wai Aung presented EMP study and findings from Myanwei, after the presentation following question and answer section. Summary of public consultation meeting is presented. Summary of public consultation meeting is presented in Table 7-1. Figure 7-1 is shown the consultation meeting photo. **(PCM attendant list and presentation power point slide are described in Appendix E)**

Table 7-1 Summary of Public Consultation Meeting

Time and Date	Thursday, 14 March 2019 10:30-12:30
Venue	Sky Hotel, Hlaing Thar Yar Township, Yangon.
Agenda	• Presentation on the Background Information of Project, • Project Description, • Impact Assessment, Environmental Mitigation • Environmental Management Plan and Monitoring Plan • Site survey and performances of Myanmar Sincerece Company Limited • Received and Answer from feedback of participants






Figure 7-1 Public Consultation Meeting Photo

7.2. RECOMMENDATION, 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 garment on CMP Basis. In addition,

Suggestion; U Myint Soe; Assistant Supervisor (Environmental Conservation and Cleaning Department-Industrial Section) YCDC

- To compliance with YCDC procedure for solid waste management and disposed process
- To implement sufficient septic tank design for workers and to compliance with procedure for sanitation

Suggestion; Daw Thet Hnin Hnin Su; (Environmental Conservation Department)

- To improve lighting condition for operation section
- To separate temporary waste disposal tank by recycle waste and domestic waste
- To measure noise level in sewing area for suitable location describe coordinate point in report

8. CONCLUSION AND RECOMMENDATION

8.1. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Myanmar Sincerece Company Limited which is located Land Plot No. (70), Myay Taing Block No. (14), Shwe Than Lwin Industrial Zone, Hlaing Thar Yar 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 garment factory.

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

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

It 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 be disposed according to Yangon City Development Committee (YCDC) rules and regulations
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area

- Daily, monthly and annual action plans 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 policies, 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 Project Proponent shall submit monitoring report to the Ministry every six (6) months, as provided in a schedule in the EMP. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

9. REFERENCE

[1] General Administrative Department (Hlaing Thar Yar Township), Hlaing Thar Yar Township Data (2019).

[2] Hla Hla Aung, Potential Seismicity of Yangon Region (Geological Approach), “Yangon Surface Displacement As Detected by Insar Time Series Analysis” July 2011.

[3] Ministry of Natural Resources and Environmental Conversation (MONREC), “Environmental Impact Assessment Procedure” December 2015.

[4] Ministry of Natural Resources and Environmental Conversation (MONREC), “National Environmental Quality (Emission) Guidelines” December 2015.

[5] Specifications for accident prevention signs and tags, regulations (standards 29-CFR), Occupational Safety and Health Administration.

[6] https;//weatherspark.com/y/112503/Average-Weather-in-Yangon-Myanmar-(Burma)-Year-Round.

APPENDIX A
Myanmar Sincerece Company Limited

THE REPUBLIC OF THE UNION OF MYANMAR

Myanmar Investment Commission

Endorsement

Form (5-A)
Sr. No. 002
Date 21-6-2017

Endorsement No. 002/2017 Date 21st June 2017

This endorsement is issued by the Myanmar Investment Commission according to the Section 25, Sub-section (d) of the Myanmar Investment Law-

(1) Name of Investor MS. BAI,HONG

(2) Citizenship CHINESE

(3) Residence Address NO.7, GANGWAN STREET, DALIAN, PEOPLE'S REPUBLIC OF CHINA

(4) Name and Address of Principal Organization -

(5) Place of Incorporation -

(6) Type of business MANUFACTURING OF GARMENT ON CMP BASIS

(7) Place(s) of investment Project PLOT NO. 70, MYAY TAING BLOCK NO.14, SHWE THAN LWIN INDUSTRIAL ZONE, HLAING THAR YAR TOWNSHIP, YANGON REGION

(8) Amount of Foreign Capital US$ 2.14 MILLION

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

(10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF US$ 2.14 MILLION

(11) Construction Period 18 (EIGHTEEN) MONTHS

(12) Validity of Endorsement 10 (TEN) YEARS

(13) Form of Investment WHOLLY FOREIGN OWNED

(14) Name of Company Incorporated in Myanmar MYANMAR SINCERECE COMPANY LIMITED

21.6.17

Chairman
Myanmar Investment Commission

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်
အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ၀၀၂/၂၀၁၇ ၂၀၁၇ ခုနှစ် ဇွန်လ ၂၇ ရက်

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေပုဒ်မ ၂၅ (ဃ) အရ ဤအတည်ပြုမိန့်ကို ထုတ်ပေးလိုက်သည် -

(၁) ရင်းနှီးမြှုပ်နှံသူအမည် MS. BAI,HONG

(၂) နိုင်ငံသား CHINESE

(၃) နေရပ်လိပ်စာ NO.7, GANGWAN STREET, DALIAN, PEOPLE'S REPUBLIC OF CHINA

(၄) ပင်မအဖွဲ့အစည်းအမည်နှင့် လိပ်စာ -

(၅) ဖွဲ့စည်းရာအရပ် -

(၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အဝတ်အထည် အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်း

(၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ်-၇၀၊မြေတိုင်းရပ်ကွက် အမှတ်-၁၄၊ ရွှေသံလွင်စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

(၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၂.၁၄ သန်း

(၉) နိုင်ငံခြားပတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ ဆတည်ပြုပိန့်ရရှိသည့်နေ့မှ ၁ နှစ် အတွင်း

(၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၂.၁၄ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁၈ လ

(၁၂) အတည်ပြုမိန့်သက်တမ်း ၁၀ နှစ်

(၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု

(၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် MYANMAR SINCERECE COMPANY LIMITED

21.6.17

ဥက္ကဋ္ဌ
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

THE REPUBLIC OF THE UNION OF MYANMAR
MYANMAR INVESTMENT COMMISSION
No.1, Thitsar Road, Yankin Township, Yangon

Tel: 01-658128
Fax: 01-658141

Our ref : MIC-3/E-3/2017(002)
Date : 21st June 2017

Subject: **Decision of the Myanmar Investment Commission on the Endorsement for "Manufacturing of Garment on CMP Basis" under the name of "Myanmar Sincerece Company Limited"**

Reference: Myanmar Sincerece Company Limited Letter dated on 17th March 2017

1. The Myanmar Investment Commission, at its meeting (8/2017) held on 19th May, 2017 had approved that the endorsement for investment in "Manufacturing of Garment on CMP Basis" under the name of Myanmar Sincerece Company Limited submitted by Ms. Bai,Hong (80%) and Ms. Jin Yingshu (20%) from the 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 endorsement permitted duration of the project shall be initial 10 (ten) years commencing from the date of the issuance of Endorsement by Myanmar Investment Commission and extendable for 5(five) years in two times with the approval of Myanmar Investment Commission.

(b) Myanmar Sincerece Company Limited, who has obtained these endorsement for enjoyment of benefits relating to right to use land under Chapter XII and exemptions and reliefs under section 75, 77 and 78 of the Chapter XVIII of Myanmar Investment Law may submit the application form.

(c) Myanmar Sincerece Company Limited shall use its best efforts for timely realization of work stated in the endorsement application.

(d) Myanmar Sincerece Company Limited shall obey and respect the responsibilities of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.

(e) Myanmar Sincerece Company Limited shall carry out preventing, mitigation and monitoring significant environmental impacts

according to the type of investment activities in accordance with the relevant laws, rules, regulations and procedures.

(f) Myanmar Sincerece Company Limited shall submit to the Commission of transfer of share or transfer of business to any person during the investment period in accordance with section 72 of Myanmar Investment Law and Myanmar Investment Rule 191.

(g) If Myanmar Sincerece Company Limited who has been enjoyed the endorsement or the tax incentive shall submit an annual report in the prescribed form to the Commission within 3 months of the end of the financial year in accordance with Myanmar Investment Rule 196 and shall publish these summary of report on its website or the Commission's website.

(h) Myanmar Sincerece Company Limited must, during the operation period under the endorsement of the Commission, submit its operating report quarterly in the prescribed form in accordance with Myanmar Investment Rule 197.

3. Myanmar Sincerece Company Limited shall submit all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and the Land and Building Lease Agreement, each of (5) copies shall have to be forwarded to the Commission.

(Kyaw Win)
Chairman

Myanmar Sincerece Company Limited

cc:
1. Office of the Government of the Republic of the Union of Myanmar
2. Ministry of Home Affairs
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. Chairman, CMP Enterprises Supervision Committee
9. Office of the Yangon Region Government
10. Director General, Department of Environmental Conservation
11. Director General, Directorate of Labour

12. Director General, Department of Immigration
13. Director General, Directorate of Industrial Supervision and Inspection
14. Director General, Department of Trade
15. Director General, Directorate of Investment and Company Administration
16. Director General, National Archives Department
17. Director General, Customs Department
18. Director General, Internal Revenue Department

APPENDIX B
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

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန

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

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10048 Date 11 JUL 2017

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

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

(a)	Name of Consultant (အကြံပေးပုဂ္ဂိုလ်အမည်)	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

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 nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်နေ့မှ (၃၁.၁၂.၂၀၁၉) ရက်နေ့အထိ (၉)လသက်တမ်း တိုးမြှင့်သည်။
Soe Naing 10.6.2019
For Director General
(Soe Naing, Director)
Environmental Conservation Department

APPENDIX C
Monitoring Result

Air Quality Result

MYANWEI
ENVIRONMENTAL SOLUTIONS
Plot No. (36, 38), Room No. 9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting .com

Project Name:	Myanmar Sincerece Company Limited
Project Location:	Plot No. 70, Myay Taing Block No. 14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Sampling Date:	January 21, 2019
Sampling Time:	10:00 AM to 4:00 PM
Sampling Condition:	
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
OCEANUS-AQM-09	PM, NO_2, SO_2, CO Detector	0-999.9 ($\mu g/m^3$)	Operation Area (Outdoor)

National Environmental Quality (Emission) Guideline

Parameter	Averaging Period	Guideline Value	Unit
PM_{10}[a]	1-year 24-hour	20 50	($\mu g/m^3$)
$PM_{2.5}$[a]	1-year 24-hour	10 25	($\mu g/m^3$)
NO_2[a]	1-year 1-hour	40 200	($\mu g/m^3$)
SO_2[a]	24-hour 10-min	20 500	($\mu g/m^3$)

a. Values from air quality guidelines-global update 2005: particulate matter, ozone, nitrogen dioxide and sulfur dioxide.

Monitoring Result

Parameters	Observed Value	Guideline Value	Unit	Organization	Period
PM_{10}	48	50	$\mu g/m^3$	NEQG	6 hours
$PM_{2.5}$	16.86	25	$\mu g/m^3$	NEQG	6 hours
SO_2	171	500	$\mu g/m^3$	NEQG	6 hours
NO_2	11	200	$\mu g/m^3$	NEQG	6 hours
CO	0.34	-	ppm	NEQG	6 hours

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

Noise Result

MYANWEI
ENVIRONMENTAL SOLUTIONS
Plot No. (36, 38), Room No. 9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting .com

Project Name:	Myanmar Sincerece Company Limited
Project Location:	Plot No. 70, Myay Taing Block No. 14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Sampling Date:	January 21, 2019
Sampling Time:	10:00 AM to 4:00 PM
Sampling Condition:	
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°51'39.28"N and 96°02'25.87"E

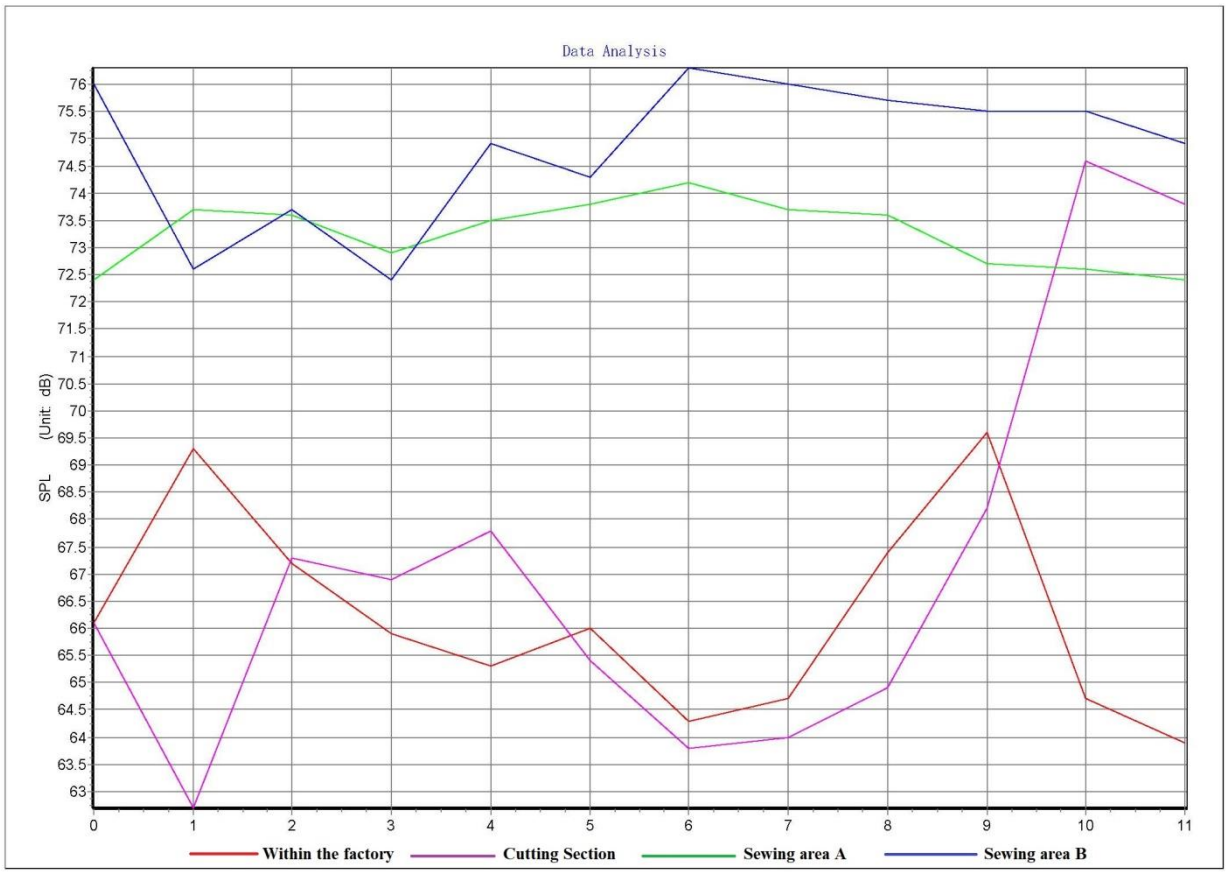
No.	Place	Unit	Result	Standard	Remark
1.	Within the factory	dBA	66.03	70 dBA	Normal
2.	Cutting Section	dBA	68.91	70 dBA	Normal
3.	Sewing Section A	dBA	74.69	70 dBA	Slightly Above
4.	Sewing Section B	dBA	73.34	70 dBA	Slightly Above

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



Light Result

MYANWEI
ENVIRONMENTAL SOLUTIONS
Plot No. (36, 38), Room No. 9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting .com

Project Name:	Myanmar Sincerece Company Limited
Project Location:	Plot No. 70, Myay Taing Block No. 14, Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Sampling Date:	January 21, 2019
Sampling Time:	10:00 AM to 4:00 PM
Sampling Condition:	
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°51'39.28"N 96°02'25.87"E

No.	Measure Area	Unit	Result	Standard	Remark
1.	Cutting Line 1	Lux	202	1000	Normal
2.	Cutting Line 2	Lux	1463	1000	Slightly Above
3.	Cutting Line 3	Lux	578	1000	Normal
4.	Cutting Line 4	Lux	1216	1000	Slightly Above
5.	Cutting Line 5	Lux	892	1000	Normal
6.	Cutting Line 6	Lux	1149	1000	Slightly Above
7.	Packing Area 1	Lux	1058	400	Above
8.	Packing Area 2	Lux	1369	400	Above
9.	Hang Tag Check Line 1	Lux	735	600	Slightly Above
10.	Hang Tag Check Line 2	Lux	1297	600	Above
11.	Sewing Line 1	Lux	1741	400	Above
12.	Sewing Line 2	Lux	1580	400	Above
13.	Sewing Line 3	Lux	1021	400	Above
14.	Sewing Line 4	Lux	1163	400	Above
15.	QC	Lux	1382	900	Above

IEESNA Lighting Handbook

Department	Type of Light	Wattage of Light	Lux Level
Warehouse	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.

Drinking Water Result

ISO TECH LABORATORY

ISO 9001:2008 Cert. No.668283

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

W0918 506

WATER QUALITY TEST RESULTS FORM

Client	Ma Moe
Nature of Water	Tube Well Water
Location	Hlaing Thar Yar Township
Date and Time of collection	20.9.2018
Date and Time of arrival at Laboratory	20.9.2018
Date and Time of commencing examination	21.9.2018
Date and Time of completing	23.9.2018

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
pH	6.2		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	2	NTU	5 NTU
Conductivity	56	micro S/cm	
Total Hardness	2	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	1	mg/l as $CaCO_3$	
Magnesium Hardness	1	mg/l as $CaCO_3$	
Total Alkalinity	14	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)	14	mg/l as $CaCO_3$	
Iron	0.10	mg/l	0.3 mg/l
Chloride (as CL)	12	mg/l	250 mg/l
Sodium Chloride (as NaCL)	20	mg/l	
Sulphate (as SO_4)	Nil	mg/l	500 mg/l
Total Solids	31	mg/l	1500 mg/l
Suspended Solids	3	mg/l	
Dissolved Solids	28	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	4	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 Heim 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, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

APPENDIX D
Boiler Certificate

ဘွိုင်လာယာယီအသုံးပြုခွင့်လက်မှတ်

{ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၆ အပိုဒ်ခွဲ (ဆ) }

စာအမှတ် [illegible]

....Ms. Jin Ying Shu (Director)....

....Myanmar Sincere [illegible]....

....[illegible]....

....[illegible]....အား....

....................ကုမ္ပဏီ၊....................နိုင်ငံမှ

ထုတ်လုပ်သည့်ဘွိုင်လာအမှတ်....................ပါသော

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

ခွင့်ပြုဖိအား......0.5 MPa........ဖြင့်လက်မှတ်ထုတ်ပေးသည့်နေ့မှ (၆)လအသုံးပြုခွင့်ရှိသည်။ ယင်းကာလအပိုင်းအခြားကျော်လွန်သည့်အခါ ထုတ်ပေးထားသည့် ဤယာယီအသုံးပြုခွင့်လက်မှတ် ပျက်ပြယ်စေရမည်။

ဒုတိယညွှန်ကြားရေးမှူး
(ဘွိုင်လာစစ်ဆေးရေး)
ရန်ကုန်တိုင်းဒေသကြီး

ဘွိုင်လာစစ်ဆေးရေးမှူး
ဌာနခွဲမှူး
(ဘွိုင်လာစစ်ဆေးရေး)
ရန်ကုန်တိုင်းဒေသကြီး

ရက်စွဲ။ ....[illegible]..........

မှတ်ချက် ။ ။ ဘွိုင်လာဥပဒေပုဒ်မ ၁၅ ပါပြဋ္ဌာန်းထားသည့် သက်ဆိုင်ရာအစိုးရဌာန အဖွဲ့ အစည်းက လိုအပ်၍တောင်းဆိုသည့်အခါ ဤလက်မှတ်ကို တင်ပြရမည်။

ဘွိုင်လာယာယီအသုံးပြုခွင့်လက်မှတ်

{ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၆ အပိုဒ်ခွဲ (ဆ) }

စာအမှတ်/.....

.....

.....

.....

.....

.....

.....ကုမ္ပဏီ၊.....နိုင်ငံမှ

ထုတ်လုပ်သည့်ဘွိုင်လာအမှတ်.....ပါသော

သို့မဟုတ်ဘွိုင်လာမှတ်ပုံတင်အမှတ် မ.စ.....ဖြစ်သော.....ဘွိုင်လာကို

ခွင့်ပြုဖြစ်အား.....ဖြင့်လက်မှတ်ထုတ်ပေးသည့်နေ့မှ (၆)လအသုံးပြုခွင့်ရှိသည်။

ယင်းကာလအပိုင်းအခြားကျော်လွန်သည့်အခါ ထုတ်ပေးထားသည့် ဤယာယီအသုံးပြုခွင့်လက်မှတ်

ပျက်ပြယ်စေရမည်။

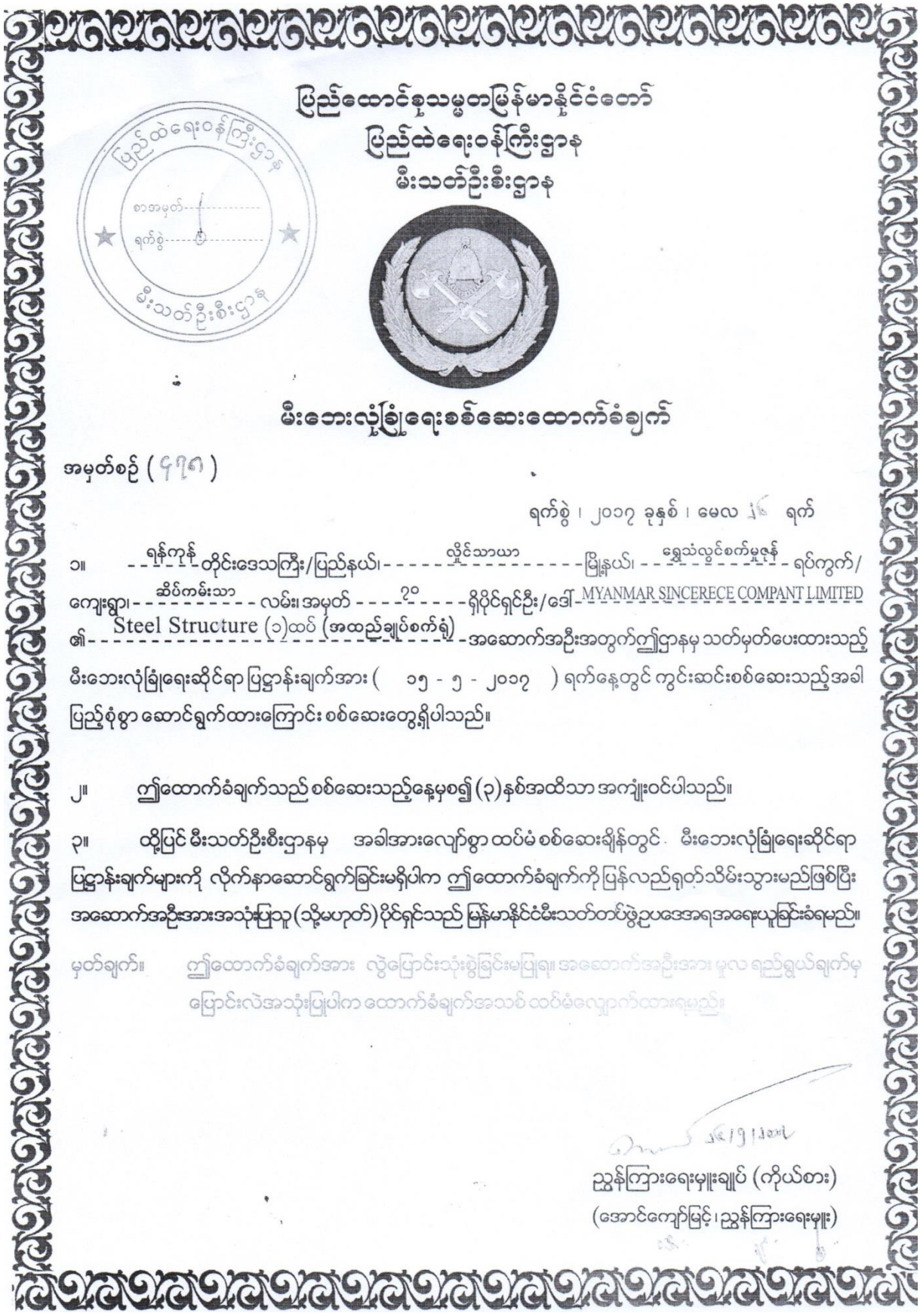
ဒုတိယညွှန်ကြားရေးမှူး
(ဘွိုင်လာစစ်ဆေးရေး)
ရန်ကုန်တိုင်းဒေသကြီး

ဘွိုင်လာစစ်ဆေးရေးမှူး
(ဘွိုင်လာစစ်ဆေးရေး)
ရန်ကုန်တိုင်းဒေသကြီး

ရက်စွဲ။ .....

မှတ်ချက် ။ ။ ဘွိုင်လာဥပဒေပုဒ်မ ၁၅ ပါပြဋ္ဌာန်းထားသည့် သက်ဆိုင်ရာအစိုးရဌာန အဖွဲ့
အစည်းက လိုအပ်၍တောင်းဆိုသည့်အခါ ဤလက်မှတ်ကို တင်ပြရမည်။

APPENDIX E
Fire Safety Certificate and Training



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
ပြည်ထဲရေးဝန်ကြီးဌာန
မီးသတ်ဦးစီးဌာန

မီးဘေးလုံခြုံရေးစစ်ဆေးထောက်ခံချက်

အမှတ်စဉ် (၄၇၈)

ရက်စွဲ ၊ ၂၀၁၇ ခုနှစ် ၊ မေလ ၂၆ ရက်

၁။ ရန်ကုန် တိုင်းဒေသကြီး/ပြည်နယ်၊ လှိုင်သာယာ မြို့နယ်၊ ရွှေသံလွင်စက်မှုဇုန် ရပ်ကွက်/ကျေးရွာ၊ ဆိပ်ကမ်းသာ လမ်း၊ အမှတ် ၃၀ ရှိပိုင်ရှင်ဦး/ဒေါ် MYANMAR SINCERECE COMPANT LIMITED ၏ Steel Structure (၁)ထပ် (အထည်ချုပ်စက်ရုံ) အဆောက်အဦးအတွက်ဤဌာနမှ သတ်မှတ်ပေးထားသည့် မီးဘေးလုံခြုံရေးဆိုင်ရာ ပြဋ္ဌာန်းချက်အား (၁၅ - ၅ - ၂၀၁၇) ရက်နေ့တွင် ကွင်းဆင်းစစ်ဆေးသည့်အခါ ပြည့်စုံစွာ ဆောင်ရွက်ထားကြောင်း စစ်ဆေးတွေ့ရှိပါသည်။

၂။ ဤထောက်ခံချက်သည် စစ်ဆေးသည့်နေ့မှစ၍ (၃)နှစ်အထိသာ အကျုံးဝင်ပါသည်။

၃။ ထို့ပြင် မီးသတ်ဦးစီးဌာနမှ အခါအားလျော်စွာ ထပ်မံ စစ်ဆေးချိန်တွင် မီးဘေးလုံခြုံရေးဆိုင်ရာ ပြဋ္ဌာန်းချက်များကို လိုက်နာဆောင်ရွက်ခြင်းမရှိပါက ဤထောက်ခံချက်ကို ပြန်လည်ရုတ်သိမ်းသွားမည်ဖြစ်ပြီး အဆောက်အဦးအားအသုံးပြုသူ (သို့မဟုတ်) ပိုင်ရှင်သည် မြန်မာနိုင်ငံမီးသတ်တပ်ဖွဲ့ဥပဒေအရအရေးယူခြင်းခံရမည်။

မှတ်ချက်။ ။ ဤထောက်ခံချက်အား လွဲပြောင်းသုံးစွဲခြင်းမပြုရ။ အဆောက်အဦးအား မူလ ရည်ရွယ်ချက်မှ ပြောင်းလဲအသုံးပြုပါက ထောက်ခံချက်အသစ် ထပ်မံလျှောက်ထားရမည်။

ညွှန်ကြားရေးမှူးချုပ် (ကိုယ်စား)
(အောင်ကျော်မြင့်၊ ညွှန်ကြားရေးမှူး)

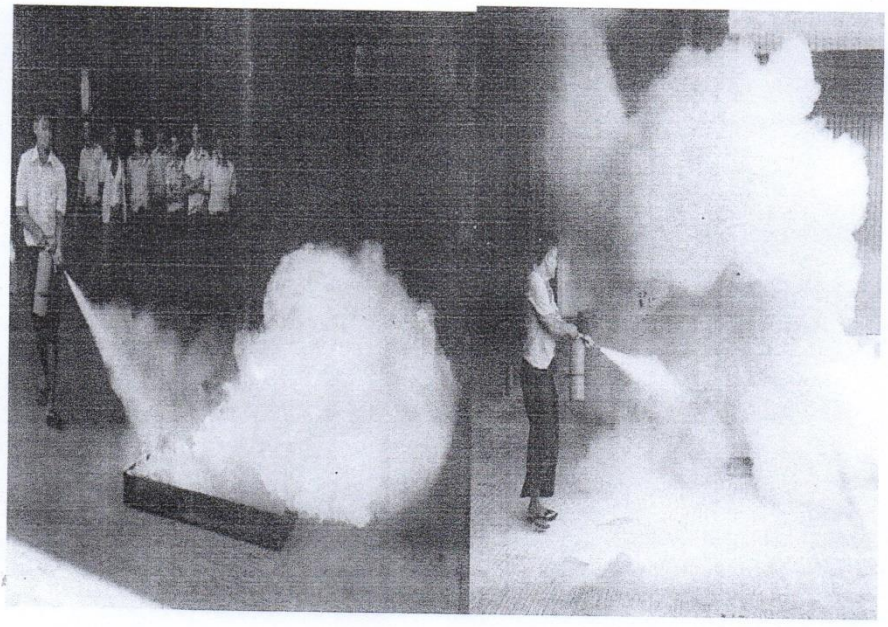
Myanmar Sincerece Co., Ltd
Fire Fighting Report

MYANMAR SINCERECE CO.,LTD.

Sr No: MSC-

Date: 15 JUN 2018

သရုပ်ပြလေ့ကျင့်မှု ဓါတ်ပုံမှတ်တမ်းများ



Myanmar Sincerece Co., Ltd
Fire Fighting Report

APPENDIX F
Emergency Response Process

MYANMAR SINCERECE CO.,LTD.

EMERGENCY RESPONSE PLAN

HAZARD	STEP-1	Responsible Person	STEP-2	Responsible Person	STEP-3	Responsible Person	STEP-4	Responsible Person	STEP-5	Responsible Person	STEP-6	Responsible Person	STEP-7	Responsible Person	STEP-8	Responsible Person	STEP-9	Responsible Person	STEP-10	Responsible Person
ဘေးအန္တရာယ်	အဆင့်. ၁	တာဝန်ရှိသူ	အဆင့်. ၂	တာဝန်ရှိသူ	အဆင့်. ၃	တာဝန်ရှိသူ	အဆင့်. ၄	တာဝန်ရှိသူ	အဆင့်. ၅	တာဝန်ရှိသူ	အဆင့်. ၆	တာဝန်ရှိသူ	အဆင့်. ၇	တာဝန်ရှိသူ	အဆင့်. ၈	တာဝန်ရှိသူ	အဆင့်. ၉	တာဝန်ရှိသူ	အဆင့်.၁၀	တာဝန်ရှိသူ
Fire	To rang the fire alarm	Any man who are near the control plan	To Shutdown the main power switch	Electrician Maintenance	To Identify the location of fire	Security Guard	Inform all about the fire by announcement	Security Guard	First Evacuate the vulnerable people	Everybody who is nearest and the management	Evacuate everybody	Everybody who is nearest and the management	Assemble in or order for head count	Everybody who is nearest and the management	Give First Aid treatment of the injured people	Doctor,Nurse & First Aides	Extinguish the fire if managable	Fire Fighters and Management	Call the fire Department	Fire Fighters and Management
မီးဘေး	အရေးပေါ်ခေလုတ်အားနှိပ်ရန်	အရေးပေါ်ခလုတ်နားတွင်ရှိသူမည်သူမဆို	မိန်းခလုတ်ကိုပိတ်ရန်	လျှပ်စစ်ကျွမ်းကျင် / မီးသမား	မီးလောင်သည့်နေရာအားဖော်ထုတ်ခြင်း	လုံခြုံရေးအဖွဲ့	မီးလောင်ခြင်းကိုကြေငြာရန်	လုံခြုံရေးအဖွဲ့	အားနည်းသူများကိုဘေးကင်းရာသို့အရင်ရွှေ့ပြောင်းရမည်	အုပ်ချုပ်ရေးပိုင်းမှလူများနှင့်အနီးနားတွင်ရှိသူတိုင်း	လူတိုင်းကိုဘေးကင်းရာသို့ရွှေ့ပြောင်းရန်	အုပ်ချုပ်ရေးပိုင်းမှလူများနှင့်အနီးနားတွင်ရှိသူတိုင်း	စုဝေးခြင်းသို့ မဟုတ်လူရေတွက်ခြင်း	အုပ်ချုပ်ရေးပိုင်းမှလူများနှင့်အနီးနားတွင်ရှိသူတိုင်း	ထိခိုက်သူများကိုရှေးဦးပြုစုခြင်း	ဆရာဝန် သူနာပြုနှင့်ကြက်ခြေနီ	မီးငြိမ်းသတ်ရန်	အုပ်ချုပ်ရေးပိုင်းမှသူများနှင့်မီးသတ်အဖွဲ့	မီးသတ်ဌာနသို့အကြောင်းကြားရန်	အုပ်ချုပ်ရေးပိုင်းမှသူများနှင့်မီးသတ်အဖွဲ့
Earthquak	To inform people	Any are who firstly got	To Shutdown the main power switch	Electrician Maintenance	First Evacuate the vulnerable people	Everybody who is nearest and the management	Evacuate everybody	Everybody who is nearest and the management	Assemble in or order for head count	Everybody who is nearest and the management	Give First Aid treatment of the injured people	Doctor,Nurse & First Aider								
မြေငလျင်	လူများကိုအသိပေးရန်	အရင်ဦးဆုံးသိရှိသူ	မိန်းခလုတ်ကိုပိတ်ရန်	လျှပ်စစ်ကျွမ်းကျင် / မီးသမား	အားနည်းသူများကိုဘေးကင်းရာသို့အရင်ရွှေ့ပြောင်းရမည်	အုပ်ချုပ်ရေးပိုင်းမှလူများနှင့်အနီးနားတွင်ရှိသူတိုင်း	လူတိုင်းကိုဘေးကင်းရာသို့ရွှေ့ပြောင်းရန်	အုပ်ချုပ်ရေးပိုင်းမှလူများနှင့်အနီးနားတွင်ရှိသူတိုင်း	စုဝေးခြင်းသို့ မဟုတ်လူရေတွက်ခြင်း	အုပ်ချုပ်ရေးပိုင်းမှလူများနှင့်အနီးနားတွင်ရှိသူတိုင်း	ထိခိုက်သူများကိုရှေးဦးပြုစုခြင်း	ဆရာဝန် သူနာပြုနှင့်ကြက်ခြေနီ								
Storm	To inform people	Security and the Authority	Evacuate and the shut down the factory (if possible)		Management															
လေမုန်တိုင်း	လူများကိုအသိပေးရန်	လုံခြုံရေးနှင့်အာဏာပိုင်အဖွဲ့အစည်း	ဘေးကင်းရာသို့ရွှေ့ပြောင်းခြင်းနှင့်ဖြစ်နိုင်လျှင်စက်ရုံပိတ်ခြင်း		အုပ်ချုပ်ရေးပိုင်းမှသူများ															

MYANMAR SINCERECE Company Limited No. Date.

APPENDIX G
Public Consultation Meeting

Attendance List

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

နေ့စွဲ - ၁၄ ရက်၊ မတ်လ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
1.	နှင်းသီတာထွန်း	HR Manager	Myanmar Sincere Co., Ltd	09.251089948	
2.	ဝင့်ဝါဖြိုး	Office Staff	"	09-254459285	
3	ဒေါ်တင်မြသောက်လှိုင်	HR Manager	Sheng Mao Art (Myanmar) Co., Ltd	09420181647	
4.	ဒေါ်စန္ဒာထွန်း	Administative Officer	T/s. Public Health Department.	09.5169772	
5.	ဒေါ်သက်နှင်းနှင်းရီ	Staff Officer	ECD, Yangon	09-402748584	

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

နေ့စွဲ - ၁၄ ရက်၊ မတ်လ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁	ဦးဇော်လွင်	အငယ်တန်းအင်ဂျင်နီယာ-၂	မကွေးတိုင်းဒေသကြီး [illegible] ရေနှင့် သန့်ရှင်းရေးဌာန	09.448050983	
၂။	ဦးကျော်ကျော်	ဝ/ထ ကြီးကြပ်ရေးမှူး	〃	09.5098374	
၃။	〃 ခင်မိုး	လ/ထ ကြီးကြပ်ရေးမှူး	〃	09.451623098	

Presentation Slide

14-Mar-19

(၁) MYANMAR SINCERECE COMPANY LIMITED အထည်ချုပ်စက်ရုံအကြောင်း ဖော်ပြချက်

14-Mar-19 3

MYANMAR SINCERECE COMPANY LIMITED

- **MYANMAR SINCERECE COMPANY LIMITED** သည် လက်ခစား (CMP)စနစ်ဖြင့်အဝတ်အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းအတွက် မြန်မာနိုင်ငံတွင်ရင်းနှီးမြှုပ်နှံသော ကုမ္ပဏီအသစ်ဖြစ်ပါသည်။
- မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၇ ခုနှစ်၊ ဇွန်လ၊ ၂၁ရက်နေ့တွင် (အတည်ပြုမိန့်အမှတ်-၀၀၂/၂၀၁၇)ဖြင့် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်မှ ရရှိပြီးဖြစ်ပါသည်။
- ရန်ကုန်တိုင်းဒေသကြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ သဘောထားပြန်ကြားချက်အရ Environmental Management Plan (EMP) အစီရင်ခံစာရေးဆွဲရန်လိုအပ်ကြောင်း သဘောထားမှတ်ချက်ရရှိခဲ့ပါသည်။
- ထိုပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား တတိယအဖွဲ့အစည်းဖြစ်သော ကျွန်ုပ်တို့၏ Myanwei Consulting Co., Ltd. မှတာဝန်ယူရေးဆွဲခဲ့ပါသည်။

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စီမံကိန်းအကြောင်းအရာအကျဉ်း

လုပ်ငန်းအမျိုးအစား	(CMP) လခစားစနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုး ချုပ်လုပ်သည့်လုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
မြေဧရိယာ	စုစုပေါင်း ၂ ဒသမ ၇၆၈ ဧက (၇၅၆၀.၄၅ စတုရန်းမီတာ)
အဆောက်အဦး	စုစုပေါင်း ၁ ဒသမ ၈၆၈ ဧက (၇၅၆၀.၄၅ စတုရန်းမီတာ) (၁၄၀ ပေ × ၂၅၀ ပေ) တစ်ထပ်အဆောက်အဦး (၁) လုံး (၁၄၀ ပေ × ၂၅၀ ပေ) နှစ်ထပ်အဆောက်အဦး (၁) လုံး
လုပ်ငန်းလည်ပတ်သည့်ကာလ	၁၀ နှစ် ရင်းနှီးမြှုပ်နှံမှု
စက်ရုံလိပ်စာ	မြေကွက်အမှတ် ၇၀၊ မြေတိုင်းရပ်ကွက်အမှတ် ၁၄၊ ရွှေသံလွင်စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

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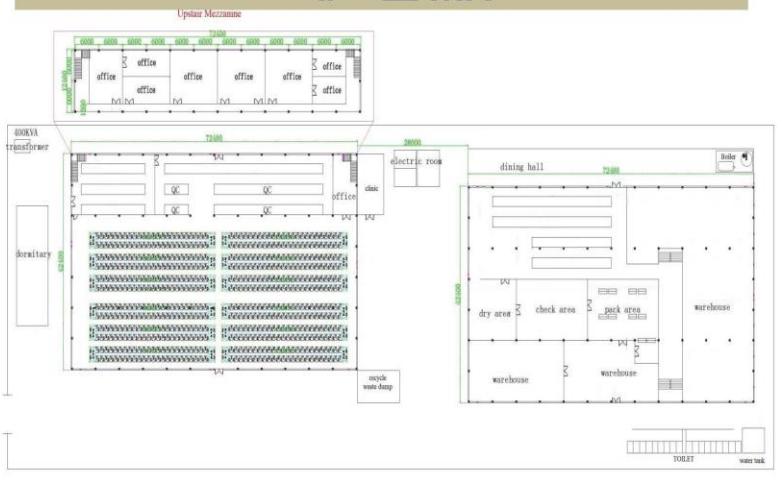
Myanmar Sincerece စက်ရုံတည်နေရာ

စက်ရုံတည်ရှိမှုပုံစံ



လုပ်ငန်းလည်ပတ်ရန်အခြေခံလိုအပ်ချက်များ

ရေအသုံးပြုမှုအခြေအနေ	
ရေသုံးစွဲမှု (နှစ်စဉ်)	• (၄၃၉၆.၄၂၅) ကုဗမီတာ
ရေအရင်းအမြစ်	• အပီစိတွင်းရေ (၁ တွင်း)
လျှပ်စစ်အသုံးပြုမှုအခြေအနေ	
လျှပ်စစ်အသုံးပြုမှု (နှစ်စဉ်)	၃,၀၂၄,၀၀၀ ကီလိုဝပ်အာဝါ
ရယူသည့်အရင်းအမြစ်	၄၀၀ ကေဗီအေ ထရန်စဖော်မာ တစ်လုံး ၅၀၀ ကေဗီအေ ဂျန်နရေတာ တစ်လုံး
အဓိကလိုအပ်ချက်	
လူဦးရေ	• ၈၀၃ ယောက်
အဓိကကုန်ကြမ်းပစ္စည်း	အထည်
ဘွိုင်လာအသုံးပြုမှု	၀.၅ တန် ဘွိုင်လာတစ်လုံး (ဒီဇယ်လောင်စာ)

ထုတ်လုပ်မှုအဆင့်ဆင့်

ထုတ်လုပ်မည့်အင်္ကျီပုံစံ ရေးဆွဲခြင်းနှင့် နမူနာချုပ်ခြင်း

ထုတ်လုပ်မှုအတွက် ပိတ်ဖြတ်ခြင်း

အထည်ချုပ်ခြင်း

အထည်စစ်ဆေးခြင်း

မီးပူတိုက်ခြင်း

စစ်ဆေးခြင်း၊ ပါကင်ထုတ်ပိုးခြင်း

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Myanmar Sincerece Co., Ltd. ၏နှစ်အလိုက်ထုတ်ကုန်ပစ္စည်းပမာဏ

Particulars	Unit	Year					
		1	2	3	4	5	6-10
Production		2,460,000	2,829,000	3,321,000	3,936,000	4,428,000	4,920,000
Down Coat	Pcs	360,000.00	414,000.00	486,000.00	576,000.00	648,000.00	720,000.00
Wellon Coat	Pcs	360,000.00	414,000.00	486,000.00	576,000.00	648,000.00	720,000.00
Padding Coat	Pcs	450,000.00	517,500.00	607,500.00	720,000.00	810,000.00	900,000.00
Jacket	Pcs	540,000.00	621,000.00	729,000.00	864,000.00	972,000.00	1,080,000.00
Pants/Trouser	Pcs	750,000.00	862,500.00	1,012,500.00	1,200,000.00	1,350,000.00	1,500,000.00
Skirt	Pcs	750,000.00	862,500.00	1,012,500.00	1,200,000.00	1,350,000.00	1,500,000.00
Dress	Pcs	450,000.00	517,500.00	607,500.00	720,000.00	810,000.00	900,000.00
Vest	Pcs	450,000.00	517,500.00	607,500.00	720,000.00	810,000.00	900,000.00

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(၂) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်အား မိတ်ဆက်ခြင်း

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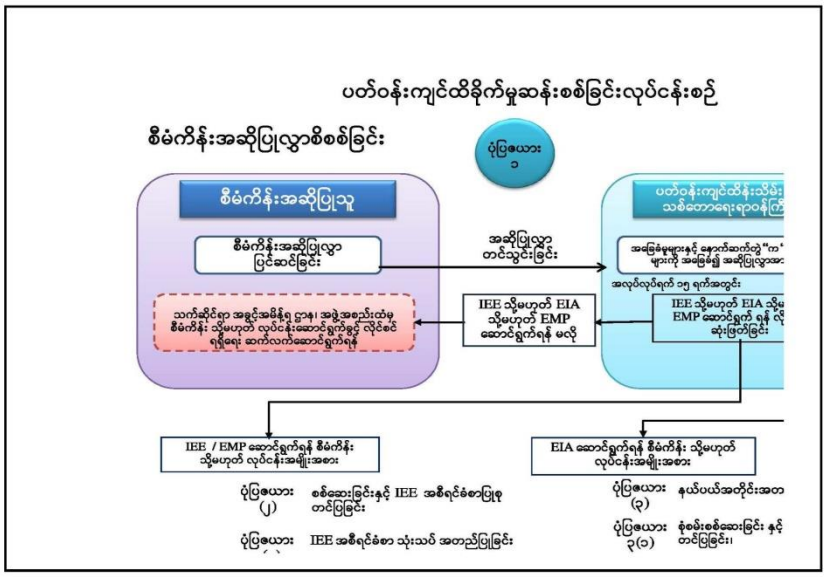
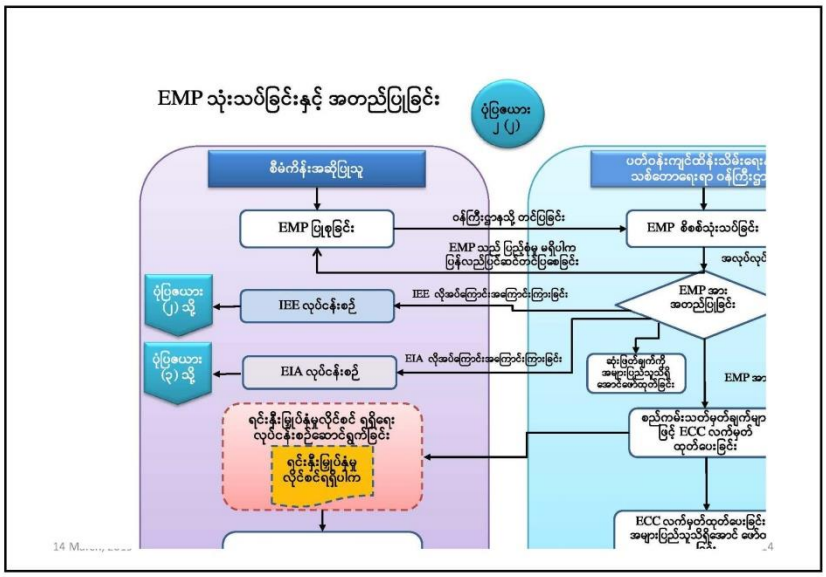
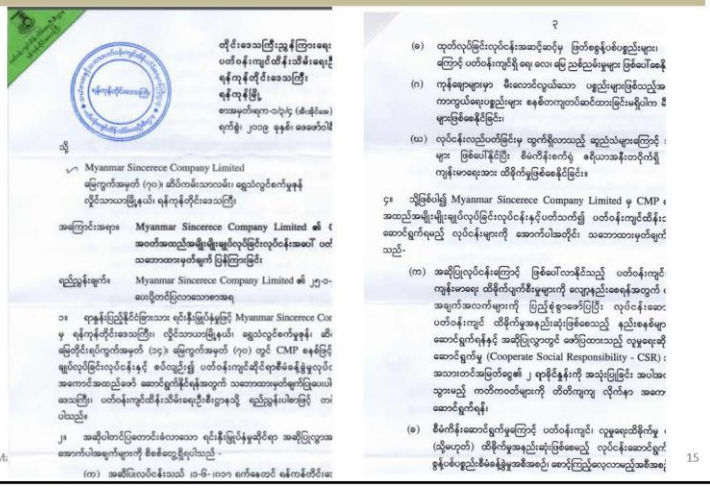

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းလုပ်ငန်းစဉ်
စီမံကိန်းအဆိုပြုလွှာစိစစ်ခြင်း
ပုံပြဇယား ၅
စီမံကိန်းအဆိုပြုသူ
စီမံကိန်းအဆိုပြုလွှာ ပြင်ဆင်ခြင်း
သက်ဆိုင်ရာ အခွင့်အရေးရှိသူ ဌာန၊ အဖွဲ့အစည်းထံမှ စီမံကိန်း သို့မဟုတ် လုပ်ငန်းဆောင်ရွက်ခွင့် လိုင်စင် ရရှိရေး ဆက်လက်ဆောင်ရွက်ရန်
အဆိုပြုလွှာ တင်သွင်းခြင်း
IEE သို့မဟုတ် EIA သို့မဟုတ် EMP ဆောင်ရွက်ရန် မလို
IEE / EMP ဆောင်ရွက်ရန် စီမံကိန်း သို့မဟုတ် လုပ်ငန်းအမျိုးအစား
EIA ဆောင်ရွက်ရန် စီမံကိန်း သို့မဟုတ် လုပ်ငန်းအမျိုးအစား
ပုံပြဇယား (၂) စစ်ဆေးခြင်းနှင့် IEE အစီရင်ခံစာပြုစု တင်ပြခြင်း
ပုံပြဇယား IEE အစီရင်ခံစာ သုံးသပ် အတည်ပြုခြင်း
ပုံပြဇယား (၃) နှစ်ပတ်လည်အတိုင်းအတာ
ပုံပြဇယား ၃(၁) စုံစမ်းစစ်ဆေးခြင်း နှင့် တင်ပြခြင်း၊


EMP သုံးသပ်ခြင်းနှင့် အတည်ပြုခြင်း
ပုံပြဇယား ၂ (၂)
စီမံကိန်းအဆိုပြုသူ
EMP ပြုစုခြင်း
ဝန်ကြီးဌာနသို့ တင်ပြခြင်း
EMP သည် ပြည်စုံမှု မရှိပါက ပြန်လည်ပြင်ဆင်တင်ပြစေခြင်း
EMP စိစစ်သုံးသပ်ခြင်း
ပုံပြဇယား (၂) သို့
IEE လုပ်ငန်းစဉ်
IEE လိုအပ်ကြောင်းအကြောင်းကြားခြင်း
EMP အား အတည်ပြုခြင်း
ပုံပြဇယား (၃) သို့
EIA လုပ်ငန်းစဉ်
EIA လိုဆပ်ကြောင်းအကြောင်းကြားခြင်း
ဆုံးဖြတ်ချက်ကို အများပြည်သူသိရှိ အောင်ဆောင်ထုတ်ခြင်း
ရင်းနှီးမြှုပ်နှံမှုလိုင်စင် ရရှိရေး လုပ်ငန်းစဉ်ဆောင်ရွက်ခြင်း
ရင်းနှီးမြှုပ်နှံမှု လိုင်စင်ရရှိပါက
ECC လက်မှတ်ထုတ်ပေးခြင်း အများပြည်သူသိရှိအောင် ဖော်ပ

သဘောထားမှတ်ချက်



Myanmar Sincerece Company Limited

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(၃) သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ

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စီမံကိန်းပတ်ဝန်းကျင်အနေအထား

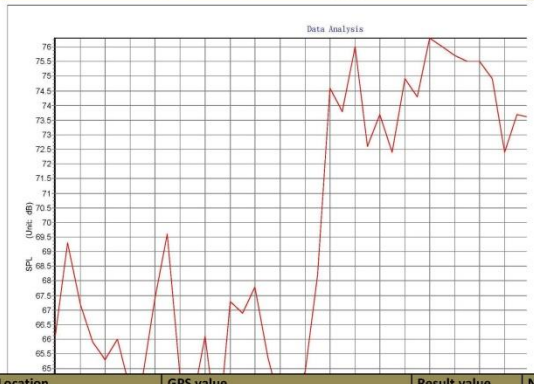
စဉ်	အကြောင်းအရာ	ဖော်ပြချက်
၁	ကိုဩဒိနိတ်အမှတ်	မြောက်လတ္တီကျူ ၁၆° ၅၁′ ၃၉.၂၈″ နှင့် အရှေ့လောင်ဂျီကျူ ၉၆° ၀၂′ ၂၅.၈၇″
၂	ရာသီဥတုအခြေအနေ	လှိုင်သာယာမြို့နယ် နှစ်စဉ်ပျမ်းမျှအမြင့်ဆုံးအပူချိန် ၄၂ °C အနိမ့်ဆုံးအပူချိန် ၂၇°C စုစုပေါင်း မိုးရေချိန်လက္ခ ၅၃ မှ ၆၀
၃	စက်ရုံနေရာတွင်မြေအသုံးချမှု	စက်မှုလုပ်ငန်းနှင့်သက်ဆိုင်သောမြေအသုံးချမှုပုံစံ
၄	လမ်းပန်းဆက်သွယ်ရေး	ရန်ကုန်-ပုသိမ်လမ်း ၊ ရန်ကုန်-ညောင်တုန်းလမ်း
၅	အနီးဆုံးရေအရင်းအမြစ်	ပန်းလှိုင်မြစ်
၆	သစ်တော်ဇရိယာ	မရှိ
၇	ကန့်သတ်ကာကွယ်ထားသော ဇရိယာ	မရှိ

ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာမှုနှင့် ကွင်းဆင်းလေ့လာခြင်း


ဆူညံသံတိုင်းတာခြင်းများ


အပူချိန်နှင့် စိုထိုင်းမှုတိုင်းတာခြင်း လုပ်ငန်းခွင်အလင်းရောင်တိုင်းတာခြင်း

ဆူညံသံတိုင်းတာမှုရလဒ်



Date and Time	Location	GPS value	Result value	NEQ Guideline
21, January 2019	Sewing area	16°51'39.68"N / 96° 2'25.85"E	73.34 dBA	70 dBA
	Cutting area	16°51'42.60"N / 96° 2'26.16"E	68.91 dBA	70 dBA
	Packing area	16°51'42.36"N / 96° 2'27.34"E	62.69 dBA	70 dBA
	Outside of the factory	16°51'38.26"N / 96° 2'25.74"E	66.03 dBA	70 dBA

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အလင်းရောင်ရရှိမှုတိုင်းတာချက်များ

No	Location	Measure value(Lux)	Standard*
1	Cutting line 1	202	400
2	Cutting line 2	1463	400
3	Cutting line 3	578	400
4	Cutting line 4	1216	400
5	Cutting line 5	892	400
6	Cutting line 6	1149	400
7	Parking Area 1	1058	400
8	Parking Area 2	1369	400
9	Hang Tag Check line 1	735	600
9	Hang Tag Check line 2	1297	600
10	Sewing line 1	1741	600
11	Sewing line 2	1580	600
12	Sewing line 3	1021	600
13	Sewing line 4	1163	600
14	QC	1382	900 (except 1500 at audit tables)

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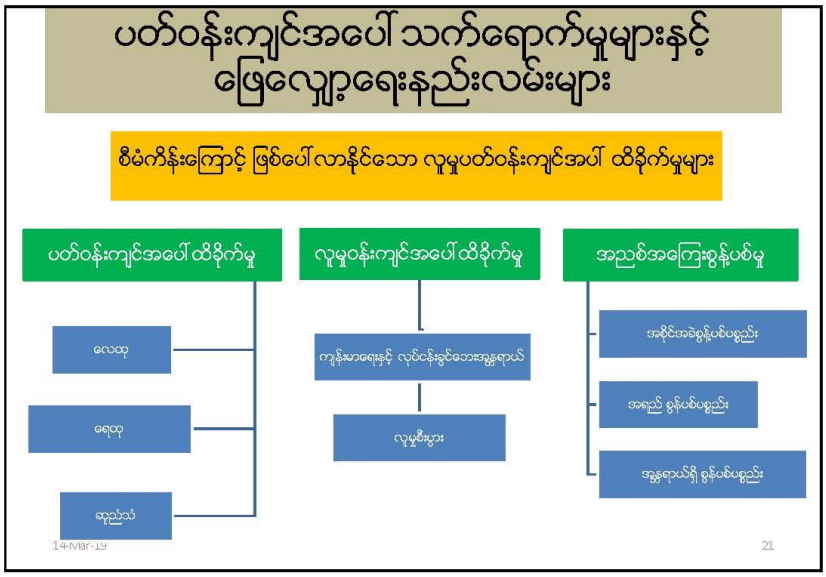

သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
လေအရည်အသွေး	ဒီဇယ်သွိုင်လာနှင့် အရေးပေါ် သုံးမီးစက်တို့မှ အခိုးအငွေ့ထွက်ရှိခြင်း	သွိုင်လာအတွက် အနည်းဆုံး ပေ ၆၀ ရှိသာ မီးခိုးခေါင်းတိုင်တပ်ဆင်ခြင်း၊ NOx ထွက်ရှိမှုနည်းသော နည်းပညာသုံး စက်ပစ္စည်းများကို သုံးစွဲခြင်း စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ဆူညံသံ	သွိုင်လာ၊ လေမှုတ်စက်၊ မီးစက်	ဆူညံသံများသော နေရာများကို သီးခြားတည်ဆောက်ခြင်း။
စက်ရုံစွန့်ပစ် ရေဆိုး	ရေအိမ်၊ စားသောက်ဆောင်တို့မှ စွန့်ထုတ်ရေ	မိလ္လာစနစ်နှင့် ရေမြောင်းများကိုပုံမှန်သန့်ရှင်း ရေးလုပ်ခြင်း။

သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးပါဆောင်ရွက်မှု
စွန့်ပစ်ပစ္စည်း (အစိုင်အခဲ)	• စက်ရုံမှထွက်သောစွန့်ပစ်ပစ္စည်း (ပိတ်ဖြတ်စ၊ ကုန်ထုတ်ပစ္စည်းများဖြစ်သော စက္ကူစနှင့် ပလက်စတစ်များ) • ဝန်ထမ်းစွန့်ပစ်အမှိုက်များ	• စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုနိုင်သောပစ္စည်း၊ စွန့်ပစ်ရန်ပစ္စည်းနှင့် အန္တရာယ်ရှိပစ္စည်းဟူ၍ ခွဲခြားထားရှိခြင်း • စွန့်ပစ်ရာတွင် သက်ဆိုင်ရာအဖွဲ့အစည်း (YCDC) ဆက်သွယ်ပြီး စနစ်တကျစွန့်ပစ်စေခြင်း • YCDC သန့်ရှင်းရေးဌာနသို့ နေ့စဉ်အကြောင်းကြားပြီး သိမ်းဆည်းစေခြင်း

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သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးပါဆောင်ရွက်မှု
လုပ်သားကျန်းမာရေးနှင့် လုပ်ငန်းခွင်အန္တရာယ်ကင်းရှင်းရေး	• ကူးစပ်ရောဂါ၊ကုန်ပစ္စည်းသယ်ယူပို့ဆောင်ခြင်းနှင့်မော်တော်ယာဉ်သွားလာခြင်း • လုပ်ငန်းခွင်အတွင်း ထိခိုက်ရှနာမှု	• လုပ်သားများအတွက်ပုံမှန်ကျန်းမာရေးစစ်ဆေးပေးခြင်း၊ကျန်းမာရေးစောင့်ရှောက်မှုပေးခြင်း၊အသိပညာပေးခြင်း၊ • စက်ရုံတွင်အရေးပေါ်ပြုစုရန်ဆေးပေးခန်းထားရှိခြင်း၊ • လုပ်ငန်းခွင်အန္တရာယ်ကင်းရှင်းရေးအတွက် သင်တန်းပို့ချပေးခြင်း။ • တကိုယ်ရည်ကာကွယ်သုံးပစ္စည်းများထောက်ပံ့ပေးခြင်းနှင့် အသုံးပြုရန်ပညာပေးဟောပြောခြင်း။

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(၄) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

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ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်များကိုကျွှာအလိုက်ခွဲခြားရေးဆွဲထားပါသည်

၁။ လေထုညစ်ညမ်းမှုလျော့ချရေးနှင့် စီမံခန့်ခွဲမှု အစီအစဉ်

၂။ ဆူညံသံထိန်းသိမ်းရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၅။ စွမ်းအင်နှင့် ရေအသုံးပြုမှု စီမံခန့်ခွဲမှု အစီအစဉ်

၆။ အရေးပေါ်တုံ့ပြန်ရေး အစီအစဉ်

၇။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၈။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

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လေထုညစ်ညမ်းမှုလျော့ချရေးနှင့် စီမံခန့်ခွဲမှု အစီအစဉ်

ရည်ရွယ်ချက်	• စက်ရုံသုံးစက်ကိရိယာများကြောင့် ပတ်ဝန်းကျင်လေထုထိခိုက်မှုကိုလျော့ချစေရန်နှင့် ကောင်းမွန်သောထိန်းသိမ်းမှု ပြုလုပ်ရန်
လိုက်နာရမည့်စည်းကမ်း	• အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	• စက်ရုံအတွင်းနှင့် အနားဝန်းကျင်တွင် သစ်ပင်ပန်းမန်စိုက်ပျိုးခြင်း • ဘွိုင်လာ၊ မီးစက်နှင့် စက်ရုံသုံးယာဉ်များကို ပုံမှန်ပြုပြင်မွမ်းမံခြင်း • စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းအား မီးရှို့ဖျက်စီးခြင်း မလုပ်ခြင်း • လုပ်သားများအား တစ်ကိုယ်ရည်သုံးအကာအကွယ်ပစ္စည်းများထောက်ပံ့ခြင်း၊ အသိပညာပေးသင်တန်းများ ပေးခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	• ပတ်ဝန်းကျင်လေထုအရည်အသွေး (CO, NO_2, SO_2, $PM_{2.5}$, PM_{10}) ကို တစ်နှစ်ကို ၂ ကြိမ်တိုင်းတာပေးရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတစလျောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၁၀ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	• ပြုပြင်ထိန်းသိမ်းရေးအရာရှိ - လေထုညစ်ညမ်းမှုလျော့ချရေးနည်းလမ်းများ • ထုတ်လုပ်ရေးမန်နေဂျာ- လုပ်ငန်းခွင်လေထုသန့်ရှင်းရေး • မန်နေဂျာ - ပတ်ဝန်းကျင်လေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

ဆူညံမှုထိန်းသိမ်းရေးဆိုင်ရာ စီမံခန့်ခွဲခြင်း

ရည်ရွယ်ချက်	• ဒေသပတ်ဝန်းကျင်ဆူညံမှုဖြစ်ပေါ်ရန်
လိုက်နာရမည့်စည်းကမ်း	• ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) • အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	• ဘွိုင်လာ၊မီးစက်၊ဇေလမ္ဘတ်စက်တို့ကို ဆူညံသံထိန်းချုပ်နိုင်သော ခန်းဖွဲ့စည်းမှုပုံစံ တည်ဆောက်ထားခြင်း • လုပ်ငန်းသုံးယာဉ်များကိုဆူညံသံလျော့ချရန် သတ်မှတ်အရှိန်ထက်ကျော်လွန်မောင်းစေခြင်း • လုပ်သားများအား တစ်ကိုယ်ရည်သုံး အကာအကွယ်ပစ္စည်းများ ထောက်ပံ့ခြင်း၊ အသိပညာပေးသင်တန်းများပေးခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	လုပ်ငန်းခွင်ဆူညံသံပမာဏကို တစ်နှစ် ၂ ကြိမ်တိုင်းတာရမည်
အချိန်ကာလ	စီမံကိန်းကာလတစ်လျောက်
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှ တစ်နှစ် ၅ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	• မန်နေဂျာ - ဆူညံသံတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲခြင်း

ရည်ရွယ်ချက်	• **စွန့်ပစ်အမှိုက်ထွက်ရှိမှုလျော့ချရေးနှင့် စွန့်ပစ်အမှိုက်ကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုကိုလျော့ချရန်**
လိုက်နာရမည့်စည်းကမ်း	• ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) • National Waste Management Strategy and Action Plan (Draft 2018)
စီမံခန့်ခွဲမှုအစီအစဉ်	• စက်ရုံမှ မည်သည့်စွန့်ပစ်ပစ္စည်းမှ မြစ်၊ ချောင်း၊ အင်း၊ အိုင် အတွင်းသို့ မစွန့်ပစ်ရ • စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုနိုင်သောပစ္စည်း(ပိတ်ဖြတ်စ၊ စက္ကူဗူး၊ ပလက်စတစ်၊ စသည်ဖြင့်) များကို ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချခြင်း • စွန့်ပစ်ရန်ပစ္စည်း (လုပ်သားများမှစွန့်ပစ်ပစ္စည်းနှင့်မီးဖိုချောင်ထွက်ပစ္စည်းများ) ကို မြို့တော်စည်ပင်သာယာရေးအဖွဲ့အစည်းကို နေ့စဉ်ခေါ်ယူပြီး သိမ်းဆည်းစေခြင်း • အန္တရာယ်ရှိပစ္စည်း (စက်ဆီအဟောင်းများ၊ လျှပ်စစ်ပစ္စည်းအပျက်များ၊ သံထည်ပစ္စည်း) များကို ဝယ်ယူသူထံမှပြန်လည် သိမ်းဆည်းစေခြင်း • စက်ရုံတွင် အမှိုက်စွန့်ပစ်ရန် အတွက် အမှိုက်ပုံးများကို စီမံထားခြင်း • စက်ရုံဝန်းထမ်းအားလုံးကို စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် တိုက်တွန်းနှိုးဆော်ထားခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	• နေ့စဉ် အမှိုက်သိမ်းဆည်းမှုကို စစ်ဆေးရန် • အမှိုက်စွန့်ပစ်မှု စာရင်းကို စနစ်တကျပြုလုပ် မှတ်တမ်းတင်ရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၂၄ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ • စက်ရုံအတွင်းသန့်ရှင်းရေးအတွက်စီမံခန့်ခွဲရန်တာဝန်ရှိသည် • အမှိုက်စွန့်ပစ်မှု ပုံမှန်ပြုလုပ်ရန်နှင့် စွန့်ပစ်ပစ္စည်းသယ်ယူသူများကို ပုံမှန်ပြုလုပ်ရန် တာဝန်ယူဆောက်ရွက်ရန်

ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု

ရည်ရွယ်ချက်	• **မြေပေါ်ရေနှင့် မြေအောက်ရေ ညစ်ညမ်းမှုမဖြစ်စေရေး**
လိုက်နာရမည့်စည်းကမ်း	• ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) • အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	• စက်ရုံရေမြောင်းများနှင့်မိလ္လာစနစ်ကို စနစ်တကျ သန့်ရှင်းအောင်ထားရှိခြင်း လုံလောက်သည့်အတိုင်းအတာ ပမာဏရှိခြင်း • မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပြီး လိုအပ်သကဲ့သို့ ထိန်းသိမ်းပြုပြင်ခြင်း • စက်ရုံရေမြောင်းအတွင်းတွင် ပိတ်ဆို့မှုမရှိစေရန်နှင့် အနံ့ဆိုးများမထွက်စေရန်စီမံခြင်း • ဘွိုင်လာစွန့်ထုတ်ရေများကို စက်မှုဇုန်ရေမြောင်းသို့ တိုက်ရိုက်စွန့်ထုတ်ခြင်း မပြုလုပ်ရန်နှင့် ရေအပူချိန်ကို ပုံမှန်စောင့်ကြည့်စစ်ဆေးရန်
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	စက်ရုံရေမြောင်းနှင့် မိလ္လာစနစ်ကို ပျက်စီးမှုမရှိစေရေး စောင့်ကြည့်ရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၈ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	• မန်နေဂျာ - စွန့်ထုတ်ရေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

စွမ်းအင်နှင့်ရေအသုံးပြုမှု စီမံခန့်ခွဲခြင်း

ရည်ရွယ်ချက်	• **စွမ်းအင်နှင့် ရေ သုံးစွဲမှုလျော့ချရေး**
လိုက်နာရမည့်စည်းကမ်း	National Energy Management Committee (Myanmar Energy Master Plan 2015) The Underground Water Act (1930)
စီမံခန့်ခွဲမှုအစီအစဉ်	• စွမ်းအင်အသုံးနည်းသော Lighting စနစ်တပ်ဆင်ခြင်း • ရေအသုံးပြုမှု သိရှိနိုင်သော မီတာတပ်ဆင်ခြင်း • စက်ပစ္စည်းနှင့် Lighting အသုံးပြုမှုကို စောင့်ကြည့်ထိန်သိမ်းရေးစနစ်ထားရှိခြင်း (ဥပမာ- အသုံးမပြုပဲမီးဖွင့်ထားခြင်း၊ စက်ဖွင့်ထားခြင်းမျိုး မရှိစေရန်) • ဝန်ထမ်းများအားအသိပညာပေးခြင်းနှင့် လိုက်နာဆောင်ရွက်ရန် တိုက်တွန်းခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	နှစ်အလိုက် သုံးစွဲမှုပမာဏ စာရင်းပြုစုရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၅ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ • စွမ်းအင်နှင့်ရေ အသုံးပြုမှုစာရင်း စစ်ဆေးခြင်း • ဝန်ထမ်းများလိုက်နာဆောင်ရွက်မှု စစ်ဆေးခြင်း

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အရေးပေါ် တုန့်ပြန်ရေး အစီအစဉ်

ရည်ရွယ်ချက်	• **စက်ရုံတွင်းမတော်တဆထိခိုက်မှု လျော့ချရေး**
လိုက်နာရမည့်စည်းကမ်း	• အလုပ်အကိုင်နှင့် ကျွမ်းကျင်မှုဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ (၂၀၁၃), ILO guide to Myanmar Labour Law (2017)
စီမံခန့်ခွဲမှုအစီအစဉ်	• အရေးပေါ် အခြေအနေဖြစ်သော (မီး၊ ငလျင်၊ ရေကြီးရေလျှံမှု) တို့အတွက် စက်ရုံတွင် စက်ရုံတွင်စီမံခန့်ခွဲမှုရှိခြင်း • စက်ရုံ၏မီးသတ်စနစ်များကို ပုံမှန်စစ်ဆေးခြင်း • ရေဆွဲထားသော အရေးပေါ် တုန့်ပြန်ရေးအစီအစဉ်များကို ဝန်းထမ်းများအကျွမ်းတဝင်ဖြစ်စေရန်စီမံထားခြင်း • လောင်စာသိုလှောင်နေရာများ၊ လျှပ်စစ်ဖြန့်ဖြူးရေးနေရာများကို အဓိကထားပြီး စောင့်ကြည့်စစ်ဆေးခြင်း၊ ပြုပြင်မွမ်းမံခြင်း • ပုံမှန်မီးဘေးကာကွယ်ရေး၊ ငလျင်လှုပ်ခတ်လျှင် ပြုလုပ်ရမည့်ပုံစံများ၊ ရေကြီးရေလျှံမှု အခြေအနေထိန်းသိမ်းရေး အစီအစဉ်များ၊ ရှေးဦးပြုစုခြင်းသင်တန်းများကို ပုံမှန်လေ့ကျင့်မှုများ သင်ကြားမှုများ ပြုလုပ်ခြင်း • အရေးပေါ် ဆက်သွယ်ရန် ဖုန်းနံပါတ်၊ လိပ်စာများ၊ အများသူငါမြင်သာစေသောနေရာများတွင် ကပ်ထားခြင်း • စက်ရုံတွင်း မီးသတ်အဖွဲ့ငယ်၊ အန္တရာယ်ကင်းရှင်းရေး စောင့်ကြည့်ရေးအဖွဲ့ငယ်များထားရှိပြီး လစဉ် ဆွေးနွေးတိုင်ပင်ခြင်း လေ့ကျင့်ခြင်းများ ပြုလုပ်ခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	• မီးသတ်ဆေးဘူး၊ မီးသတ်ပိုက်၊ မီးသတ်ရေကန် အပါတ်စဉ်စစ်ဆေးခြင်း • မတော်တဆထိခိုက်မှုနှင့် လေ့ကျင်းရေးအစီအစဉ်များမှတ်တမ်းထားရှိခြင်း
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၁၅ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	Manager and EHS officer • မီးသတ်သင်တန်းများ ၃ လတစ်ကြိမ်ပြုလုပ်ရန်စီမံပေးခြင်း • အရေးပေါ် အခြေအနေနှင့် မတော်တဆထိခိုက်မှုမရှိစေရေး စောင့်ကြည့်စစ်ဆေးခြင်း

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စောင့်ကြပ်ကြည့်ရှုရေး

Environmental Issues	Parameter	Recommended Monitoring Frequency
Noise	• Noise level in decibel	• Biannually
Waste Management	• Garbage collection • Cleaning & Maintenance	• Daily • Daily
Water and Energy Consumption	• Liters of Diesel/Fossil fuel for the generator • Biomass (Fired Wood) fuel for the boiler	• Monthly monitoring of energy use • Daily monitoring of fuel use
Water Consumption	• All water taps shut off when not use • Power to unused equipment shut off at the distribution panel	• Daily • Daily
Emergency Response Equipment	• Extinguisher's position • Water hydrants • Fireman switch testing • Servicing fire extinguishers • Review records of accident • OHS training	• Daily • Daily • Monthly • Quarterly • Quarterly • Biannually

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လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု (CSR) အစီအစဉ်

Myanmar Sincerece ကုမ္ပဏီတွင် CSR အတွက် အမြတ်ငွေ၏ ၂ % နှုန်းကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးတို့အတွက် အသုံးပြုသွားမည် ဖြစ်သည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	၀.၈ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	၀.၈ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	၀.၄ %

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(၅) ကွင်းဆင်းလေ့လာခြင်းများနှင့် စက်ရုံ၏ဆောင်ရွက်ချက်များ

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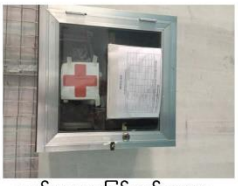
ဝန်ထမ်းများအတွက်ပြင်ဆင်ထားရှိမှု



ကျန်းမာရေးပြင်ဆင်ထားမှု

ဆေးပေးခန်းနှင့် ခရေးငယ်များအတွက်အခန်းထားရှိခြင်း

Toilet Facilities

14 March, 2019 ဝန်ထမ်းသောက်သုံးရေ 36

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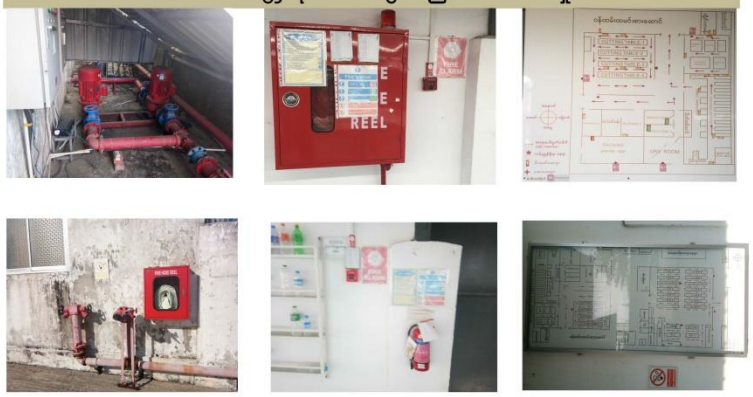
အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု

14 March, 2019 37

အရေးပေါ်ထွက်ပေါက်ပြုပြင်မြဲပုံနှင့် မီးဘေးအန္တရာယ်အတွက်ပြင်ဆင်ထားမှု



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လျှပ်စစ်သုံးစွဲမှုနှင့် လောင်စာသိုလှောင်မှု




14 March 39


ဒီဇယ်သုံးဘွိုင်လာနှင့် ခေါင်းတိုင်တပ်ဆင်ထားရှိမှု


14 March, 2019 စက်ရုံတွင်းအလုပ်သမားများအနှံ့အသက်ကင်းဧရိယာစီစဉ်ထားမှု 40


ကျေးဇူးအထူးတင်ပါသည်။
14-Mar-19
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APPENDIX H
List of Commitments

Myanmar Sincerece Company Limited ၏ အပတ်အထည်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော သဘာဝပတ်ဝန်းကျင်၊ လူမှုဘဝ နှင့် ကျန်းမာရေး ထိခိုက်မှုများရှိခဲ့ပါက လျော့ချရေး၊ စီမံခန့်ခွဲရေး နှင့် တားဆီးရေး အစီအစဉ် များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan – EMP) တွင် ပါဝင်ရမည့် အချက်များကို အကောင်အထည်ဖော် စီမံဆောင်ရွက်သွားမည် ဖြစ်ကြောင်း၊ အောက်ဖော်ပြပါ ဇယားဖြင့် အကျဉ်းချုပ် စာရင်းပြုစု ဖော်ပြထားပါသည်။

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
နိဒါန်း	၁	**ရည်ရွယ်ချက်** ▪ လုပ်ငန်းလုပ်ဆောင်မှုများကြောင့်ဖြစ်ပေါ်လာသည့် ပတ်ဝန်းကျင်ထိခိုက်မှု အပေါ် လျော့ချရန် ▪ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမည့်အစီအစဉ်အား အကောင်အထည်ဖော်ခြင်း **ရည်မှန်းချက်** ▪ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် ပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို စဉ်ဆက်မပြတ် ပြန်လည်သုံးသပ်ခြင်း၊ စွမ်းဆောင်ရည်မြှင့်တင်ခြင်း ဖြင့် အောင်မြင်စေရန် လုပ်ဆောင်ပေးသော စနစ်တစ်ခုဖြစ်ပါသည်။ ▪ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် ပြန်လည်သုံးသပ်ခြင်းနှင့် အကဲဖြတ်ခြင်း	

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		▪ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် စဉ်ဆက်မပြတ်ပံ့ပိုးပေးသည်။	
	၁.၁	**အဆိုပြုလုပ်ငန်း၏နောက်ခံအကြောင်းအရာ** Myanmar Sincerece Company Limited သည် CMP စနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုးကိုချုပ်လုပ်ပြီး တရုတ်နိုင်ငံသို့တင်ပို့ရောင်းချသွားမည်ဖြစ်သည်။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှထောက်ခံချက်အမှတ်(ရကတ-၀၀၂/၂၀၁၇) သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏စာအမှတ် ရက-၁/၃/၄ (အီးအိုင်အေ) (၂၂၅၅/၂၀၁၉)ဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ရေးဆွဲရန် သဘောထားပြန်ကြားခြင်း	
မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာမူဘောင်များ	၂	ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂) ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး နည်းဥပဒေ (၂၀၁၄) ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) မြန်မာနိုင်ငံမှ ချမှတ်ထားသော စက်ရုံနှင့် သက်ဆိုင်သည့် အခြား လိုက်နာဆောင်ရွက်ရမည့် လုပ်ထုံးလုပ်နည်း၊ ဥပဒေ၊ နည်းဥပဒေ နှင့် မူဝါဒများ	အခန်း (၂)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
		အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များ	
စီမံကိန်းအကြောင်းအရာဖော်ပြချက်	၃	မြေကွက်အမှတ်၇၀၊ မြေတိုင်းရပ်ကွက်အမှတ်၁၄၊ ရွှေသံလွင်စက်မှုဇုန်၊လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ မြေဧရိယာ ၂.၇၈၂ ဧက (၁၁၂၅၈.၃၆ စတုရန်းမီတာ)	အခန်းခွဲ (၃.၁)
	၃.၁	**အဆိုပြုလုပ်ငန်း၏ရည်ရွယ်ချက်** တရုတ်နိုင်ငံမှ ကုန်ကြမ်းပစ္စည်းများကို ရယူပြီး CMP စနစ်ဖြင့် ချုပ်လုပ်၍ အဆိုပါ နိုင်ငံသို့ပြန်လည်ပေးပို့သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၃.၂)
	၃.၂	အဆိုပြုလုပ်ငန်းသည် ပြည်ပမှ ပညာရှင် ၄၅ ဦး၊ ပြည်တွင်းလုပ်သား ၁၄၀၇ဦးမှ၂၀၁၁ဦးထိခန့်အပ်ပြီး အဝတ်အထည်အမျိုးမျိုးကို ချုပ်လုပ်သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၃.၄.၂)
	၃.၃	အဆိုပြုလုပ်ငန်း၏ အဓိကကုန်ကြမ်းမှာ ချည်မျှင်ဖြစ်ပြီးအခြားလိုအပ်သည့်ဆက်စပ်ပစ္စည်းများကိုလည်းတရုတ်နိုင်ငံမှတင်သွင်းသွားမည်ဖြစ်သည်။	အခန်းခွဲ (၃.၅.၁)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
	၃.၄	အဆိုပြုလုပ်ငန်း၏ထုတ်ကုန်မှာ- အမျိုးသား၊ အမျိုးသမီးဟတ်အက်ကီ အမျိုးမျိုးနှင့် ဘောင်းဘီအမျိုးမျိုး တို့ဖြစ်ပါသည်။	အခန်းခွဲ (၃.၅.၃)
ပတ်ဝန်းကျင် အရည်အသွေးတိုင်းတာမှု	၄	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များကို အခြေခံလေ့လာ တိုင်းတာထားပါသည်။	အခန်း (၄)
ဆူညံသံ	၄.၁	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ အမြင့်ဆုံးလက်ခံနိုင်သည့် ဆူညံသံအဆင့် (Noise level) လမ်းညွှန်သတ်မှတ်ချက် စက်မှုဇုန် ဧရိယာတွင် (70 One hour LAeq (dBA)) ဖြင့်နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၂)
လေအရည်အသွေး	၄.၂	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ ထုတ်လွှတ်အခိုးအငွေ့ (Air emissions) လမ်းညွှန်သတ်မှတ်ချက် တို့ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၃)
စက်ရုံတွင်း အလင်းရောင် ရရှိမှု	၄.၃	Illumination and Limiting Glare Index based on IES Code, 1968 ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၄)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
ဒေသဆိုင်ရာအချက်အလက်များ	၄.၄	အဆိုပြုလုပ်ငန်းတည်ရှိသည့် လှိုင်သာယာမြို့နယ်၏ဒေသဆိုင်ရာအချက်အလက်များကိုဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၃)
ထိခိုက်မှုဆန်းစစ်ခြင်းနှင့်လျော့ချရေးနည်းလမ်းများ	၅	**ထိခိုက်မှုဆန်းစစ်ခြင်း** • ကောင်းကျိုး အလုပ်ကိုင်အခွင့်အလမ်းများပေါများလာခြင်း၊ လမ်းပန်းဆက်သွယ်ရေးကောင်းမွန်လာခြင်း၊ နည်းပညာများတိုးတက်လာခြင်း • ဆိုးကျိုး သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များ၊ ဂေဟစနစ်အရင်းအမြစ်များ၊ လူသားများအပေါ် ထိခိုက်မှုများ၊ အမှိုက်စွန့်ပစ်ခြင်းကြောင့်ထိခိုက်မှုများ	အခန်း(၅)
	၅.၁	**ဆန်းစစ်ခြင်းနည်းလမ်း** သိသာထင်ရှားသောသက်ရောက်မှု=(ပမာဏ+အချိန်+ကျယ်ပြန့်မှု) × ဖြစ်နိုင်ချေ	အခန်းခွဲ (၅.၂)
ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု	၆	Myanmar Sincerece Company Limited ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (EMP) အတွက် စက်ရုံစီမံခန့်ခွဲရေးအဖွဲ့၊ အလုပ်သမားများ၊ ဒေသခံလူထုများ၏ အမြင်၊ သက်ဆိုင်ရာ တာဝန်ရှိသူတို့၏အကြံပြုချက်များနှင့် ကွင်းဆင်းလေ့လာသူများမှ	အခန်း (၆)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		ဆွေးနွေးတိုင်ပင်မှုတို့ အပေါ် အခြေခံပြီး ဆောင်ရွက်သွားမည် ဖြစ်သည်။ EMP တွင် စက်ရုံအတွင်း ဘေးအန္တရာယ် ကင်းရှင်းရေးစီမံခန့်ခွဲမှုများကို လိုက်နာရန်အတွက် ထည့်သွင်းဖော်ပြထားပါသည်။	
လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်များ	၆.၁	ကာဗွန်ဒိုင်အောက်ဆိုက်လျော့ချရန်အတွက် စက်ရုံအနီးအတွင်း သစ်ပင်ပန်းပင်များစိုက်ပျိုးရမည်။ အဆိုပြုလုပ်ငန်းဇရိယာအတွင်း စွန့်ပစ်ပစ္စည်းများ မီးရှို့ခြင်းကို တားမြစ်ထားမည်။ လေထုညစ်ညမ်းမှုလျော့ချရန် လုပ်ငန်းသုံးယာဉ်များ၊ မီးစက်များနှင့် လုပ်ငန်းဆိုင်ရာ စက်ပစ္စည်းများကို ပုံမှန်စောင့်စစ်ဆေးရမည်။ ပတ်ဝန်းကျင်အပေါ် မီးခိုးထွက်ရှိမှုလျော့နည်းစေရန် မီးခိုးခေါင်းတိုင်များ တပ်ဆင်ရမည်။ မော်တော်ယာဉ်များ၊ ရေစုပ်စက်များနှင့် မီးစက်များကို ပုံမှန် ပြုပြင်၊ ထိန်းသိမ်းထားရှိရမည်။	အခန်းခွဲ (၆.၁)
ဆူညံသံထွက်ရှိမှု	၆.၂	မီးစက်ခန်းများထားရှိခြင်းနှင့် အခြားသက်ဆိုင်သည့် ပစ္စည်းများအား စနစ်တကျ ထိန်းသိမ်းထားရှိရမည်။ ဝန်ထမ်းများကို သက်ဆိုင်ရာကိစ္စရပ်များနှင့် ပတ်သက်၍ သင့်တော်သော သင်တန်းများပေးခြင်း၊ ဆူညံသံထွက်ရှိသည့်နေရာများတွင် PPE များကို ဝတ်ဆင်စေခြင်း	အခန်းခွဲ (၆.၂)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
အမှိုက်စွန့်ပစ်မှု	၆.၃	စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း သတ်မှတ်ထားသောနေရာတွင်သာ အမှိုက်စို၊ အမှိုက်ခြောက်များ ခွဲခြားစွန့်ပစ်ခြင်း အမှိုက်များကို ရန်ကုန်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း	အခန်းခွဲ (၆.၃)
စွန့်ပစ်အရည်	၆.၄	ဆီကန်၊ မိလ္လာကန်များကို ပုံမှန်စစ်ဆေးခြင်း၊ သန့်စင်ခြင်းများပြုလုပ်ခြင်း	အခန်းခွဲ (၆.၄)
မီးဘေးအန္တရာယ်	၆.၅	မီးအန္တရာယ်အရေးပေါ်အခြေအနေများအတွက် စက်ရုံအတွင်းတွင် မီးသတ်ဆေးဘူးများ၊ မီးသတ်ရေပိုက်များ၊ မီးသတ်ရေကန် ထားရှိရမည်။ အရေးပေါ်ထွက်ပေါက်များနှင့် စုရုပ်နေရာများအား လမ်းညွှန်ပြ ထားရှိရမည်။ မီးသတ်ရေလှောင်ကန်များ၊ မီးငြိမ်းသတ်ရေးကရိယာများကို ပုံမှန်စစ်ဆေးခြင်း စက်ရုံအတွင်း အရေးပေါ်အချက်ပေးစနစ်များ တပ်ဆင်ခြင်း အရေးပေါ်ထွက်ပေါက်များတစ်လျောက်တွင် စက်ပစ္စည်းများနှင့် အခြားသောကုန်ပစ္စည်းများ ပိတ်ဆို့ထားခြင်း မရှိရန် စီစဉ်ထားရမည်။	အခန်းခွဲ (၆.၅)
လုပ်ငန်းခွင်ထိခိုက်မှုနှင့် ကျန်းမာရေး	၆.၆	ရှေးဦးပြုစုနည်း သင်တန်းများ၊ ဘေးအန္တရာယ်ကင်းရှင်းရေး လေ့ကျင့်မှု၊	အခန်းခွဲ

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		မီးငြိမ်းသတ်နည်းသင်တန်းများ၊ အခြားလိုအပ်သော လေ့ကျင့်မှုများ၊ စက်ပစ္စည်းများကို စနစ်တကျကိုင်တွယ်မှုများအား သင်တန်းပေးခြင်း လုပ်ငန်းခွင်အတွင်း အလုပ်သမားများ အလင်းရောင်ကောင်းစွာရရှိစေရန်နှင့် အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကို လုံလောက်စွာ ထားရှိခြင်း ဌာနတစ်ခုချင်းစီအတွက် တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်းများ ထောက်ပံ့ပေးခြင်း လျှပ်စစ်အန္တရာယ်ကာကွယ်ရန်အတွက် လျှပ်စစ်ထိန်းသိမ်းရေးဝန်ထမ်းများအား ထားရှိ၍ အဆိုင်းခွဲ၍ ပုံမှန်စစ်ဆေးကာကွယ်မှုများပြုလုပ်စေခြင်း ဝန်ထမ်းများ၏ကျန်းမာရေးအတွက် စက်ရုံတွင် စီမံခန့်ခွဲခြင်း လုပ်သားများအတွက် ဓနာရီအတွင်း လက်ခံနိုင်သည့် အမြင့်ဆုံးဆူညံမှုနှုန်းမှာ 90 dB(A) ဖြစ်သည်၊ ထို့ကြောင့် အသံဆူညံသည့်နေရာများတွင် အသံလုံသည့် နားကြပ်များ၊ နားအကာအကွယ်ပစ္စည်းများ တပ်ဆင်စေခြင်း	(၆.၆)
အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း	၆.၇	အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများ သိမ်းဆည်းမှုအား ပုံမှန်စောင့်ကြပ်စစ်ဆေးခြင်း လုပ်ငန်းခွင်ကျန်းမာရေး လုံခြုံမှုနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ လိုအပ်ချက်များနှင့် အညီ ဓာတုပစ္စည်းများကို စနစ်တကျစွန့်ပစ်ခြင်း	အခန်းခွဲ (၆.၇)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		မာတုပစ္စည်းသိုလှောင်သည့် ပုံးခွံများကို စနစ်တကျပြန်လည်အသုံးပြုခြင်း (သို့မဟုတ်) စနစ်တကျစွန့်ပစ်ခြင်း အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ (သို့မဟုတ်) လိုင်စင်ရ အမှိုက်စွန့်ပစ်ရေးဆိုင်ရာ အဖွဲ့အစည်းများ (ဥပမာ DOWA or YCDC)နှင့် ချိတ်ဆက်၍ စွန့်ပစ်ခြင်း	
စွမ်းအင်	၆.၈	အပူနှင့် အအေးထိန်းရန်အတွက် အချိန်ကန့်သတ်သည့်ကရိယာနှင့် သာမိုစတပ်များတပ်ဆင်ခြင်း စွမ်းအင်ချွေတာသောကရိယာများတပ်ဆင်ခြင်း အသုံးမပြုသည့် အချိန်တွင် မီးပိတ်ထားခြင်း၊ စက်ပစ္စည်းများ ရပ်နားထားခြင်း	အခန်းခွဲ (၆.၈)
အရေးပေါ် အခြေအနေ	၆.၉	မီးဘေး၊ ငလျင်၊ ရေလွှမ်းမိုးမှု၊ မုန်တိုင်း နှင့်အခြားအရေးပေါ်ကိစ္စများကို ပို၍သင့်တော်သော စီမံခန့်ခွဲမှုများပြုလုပ်ခြင်း စက်ရုံ၏ ကဏ္ဍတစ်ခုချင်းတိုင်းတွင် မီးငြိမ်းသတ်ရေးကရိယာများနှင့် မီးငြိမ်းသတ်ရေးစနစ်များ ထားရှိခြင်းနှင့် စစ်ဆေးခြင်း မီးဘေးထွက်ပေါက်၊ အရေးပေါ်ထွက်ပေါက် အစရှိသည်တို့ကို အလုပ်သမားများနှင့်	အခန်းခွဲ (၆.၉)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		တိုင်ပင်ဆွေးနွေးပြီး အသေးစိတ်အကဲဖြတ်ခြင်း မီးငြိမ်းသတ်ခြင်းအား ပံ့မှန်လေ့ကျင့်ထားရှိခြင်း ငလျင်လှုပ်တဲ့အခါ လုံခြုံသည့်နေရာတွင်သာနေရန်၊ အပြင်မထွက်ခြင်း၊ အပြင်တွင်လုပ်ကိုင်ရသည့် လုပ်သားများမှာ သစ်ပင်၊ အဆောက်အဦးများကို သတိထားရန်နှင့် သက်ဆိုင်ရာလုံခြုံရေးသင်တန်းများပို့ချခြင်း မုန်တိုင်းတိုက်ခြင်း၊ ရေကြီးခြင်း၊ မြေပြိုခြင်းတို့ကြောင့် မြွေကဲ့သို့သော အခြားအန္တရာယ်ရှိတိရိစ္ဆာန်များအန္တရာယ်များကို သတိပေးခြင်း ရှေးဦးသူနာပြုခြင်းကဲ့သို့သော ကျန်းမာရေးဆိုင်ရာအဖွဲ့အစည်းများ ပြင်ဆင်ထားရှိခြင်း နီးစပ်ရာ ဆေးရုံ၊ ဆေးခန်း၊ ရဲစခန်း၊ မီးသတ်ဌာနတို့၏ ဆက်သွယ်နိုင်မည့် ဖုန်းနံပါတ်များအား လူအများမြင်သာသည့် နေရာများတွင် ထားရှိခြင်း မီးသတ်အဖွဲ့၊ ကယ်ဆယ်ရေးအဖွဲ့ နှင့် လုံခြုံရေးဟူသော အဖွဲ့များ ထားရှိ၍ လစဉ် လုံခြုံရေးများအတွက် အစည်းအဝေးများပြုလုပ် စီမံခန့်ခွဲခြင်း ဘေးအန္တရာယ်ဆိုင်ရာ သင်တန်းများအား သေချာပြုလုပ်စေခြင်း	
စောင့်ကြပ်ကြည့်ရှုမှု	၆.၁၀	အဆိုပြုစီမံကိန်းသည် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာအား ၆လ တစ်ကြိမ်	အခန်းခွဲ

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
		ဝန်ကြီးဌာနများသို့ တင်ပြရမည်။	(၆.၁၀)
လေအရည်အသွေး စစ်ဆေးမှု	၆.၁၁	SO2, NO2, CO, CO2, PM2.5, PM10 တစ်နှစ် ၂ ကြိမ် (လုပ်ငန်းစတင်ပြီး ၃နှစ်တွင်) အဆိုပြုလုပ်ငန်း/စက်ရုံဝန်းအတွင်း ၈ သိန်း တစ်နှစ်	ဇယား (၆.၁)
စွန့်ပစ်ပစ္စည်းထွက်ရှိမှုအခြေအနေ	၆.၁၂	စွန့်ပစ်ပစ္စည်းအစိုင်အခဲ၊ စွန့်ပစ်ရည်နှင့် အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်း အပတ်စဉ် စက်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်ထားရှိသည့်နေရာနှင့် အမျိုက်ကန်များ ၅ သောင်း (တစ်ကြိမ်)	ဇယား (၆.၁)
မီးဘေးအန္တရာယ် စစ်ဆေးမှု	၆.၁၃	မီးငြိမ်းသတ်ရေးကိရိယာများ လစဉ် စက်ရုံအတွင်း	ဇယား (၆.၁)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		၅ သိန်း တစ်လ	
စက်ရုံတွင်း အလင်းရောင်အခြေအနေ	၆.၁၄	အလင်းရောင် လစဉ် ကုန်ပစ္စည်းဖြတ်တောက်ခြင်း၊ အရည်အသွေးစစ်ဆေးခြင်းကဲ့သို့သော လုပ်ငန်းများလုပ်ကိုင်သည့် နေရာ ၂ သောင်း တစ်လ	ဇယား (၆.၁)
ဘေးအန္တရာယ်ဆိုင်ရာ သင်တန်းပို့ချခြင်း	၆.၁၅	လုပ်ငန်းခွင်၌ ကြုံတင်ခန့်မှန်းနိုင်သော အရေးပေါ်အခြေအနေများကို အရေးပေါ်တုန့်ပြန်နိုင်ရန် အစီအစဉ်များ ချမှတ်ဆောင်ရွက်ခြင်း	အခန်းခွဲ (၆.၁၁)
မကျေနပ်မှုများနှင့် ပြဿနာများ ဖြေရှင်းခြင်း	၆.၁၆	စီမံကိန်းအနီးပတ်ဝန်းကျင်နေထိုင်သောသူများ (သို့) သက်ဆိုင်သူများသည် သူတို့ခံစားနေရသော ပြဿနာများနှင့် သက်ရောက်မှုများနှင့် ပတ်သက်၍ ဖြေရှင်းမှုများပြုလုပ်ရန် စက်ရုံ၏ တာဝန်ရှိသူများ၊ စက်မှုဇုန် စီမံခန့်ခွဲရေး ကော်မတီ၊ အုပ်ချုပ်ရေးဦးစီးဌာနတို့ဖြင့် ပူးပေါင်း ချိတ်ဆက် လုပ်ဆောင်ခြင်း။ ကော်မတီအဆင့်တွင် အခြားမဖြေရှင်းနိုင်သော ပြဿနာများကို တာဝန်ရှိအာဏာပိုင်များသို့	အခန်းခွဲ (၆.၁၂)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		တင်ပြပြီး တရားရေးအရ အဆုံးအဖြတ်ပြုလုပ်မည် ဖြစ်သည်။	
လူထုအကျိုးတူပူးပေါင်းပါဝင်မှု	၆.၁၇	အဆိုပြုလုပ်ငန်းသည် လူထုအကျိုးပြုပူးပေါင်းပါဝင်မှုကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးအတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်က ချမှတ်သည့် အတိုင်း ကုမ္ပဏီ၏ အကျိုးအမြတ် ၂ ရာခိုင်နှုန်းအား နှစ်စဉ် ထည့်ဝင်သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၆.၁၃)
အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်း	၇	သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်ကို ၁၄ ရက်၊ မတ်လ၊ ၂၀၁၉ ခုနှစ်တွင် Sky Hotelတွင်ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲ အစည်းဝေးတွင် သက်ဆိုင်ရာ အစိုးရအဖွဲ့ရုံး၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှုကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။	အခန်း(၇)
နိဂုံးနှင့်သုံးသပ်ချက်	၈	အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။	အခန်း(၈)