

**POLLY HK (MYANMAR) CO., LTD.**

## **Environmental Management Plan**

**Laundry Service for Various Types of Clothes and  
Wears**



**Myanwei Environmental Solutions Company Limited**

**25-Jan-22**



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Date: 27, 1, 2022

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect of the Garment Laundry Service by Polly HK (Myanmar) 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.

# POLLY HK (MYANMAR) CO., LTD

Plot No. 301, Myay Taing Block No.25, NaWaDay MinGyi Road, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon Region

Date: 27, 1, 2022

Dear: Director  
Environmental Conservation Department  
Nay Pyi Taw



Subject: Environmental Management Plan (EMP) Report in respect of the Garment Laundry Service

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.

Polly HK (Myanmar) Company Limited will at all times comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that

  
MR. GONG SONGLIN  
DIRECTOR  
POLLY HK (MYANMAR)  
COMPANY LIMITED

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- CEMP = Construction Environmental Management Plan
- CMP = Contract Manufacturing Process
- CSR = Corporate Social Responsibility
- ECC = Environmental Compliance Certificate
- ECD = Environmental Conservation Department
- EIA = Environmental Impact Assessment
- EMOP = Environmental Monitoring Plan
- EMP = Environmental Management Plan
- GIIP = Good International Industry Practices
- HSE = Health, Safety and Environment
- IEE = Initial Environmental Examination
- IFC = International Finance Corporation
- NEQG = National Environmental Quality (Emission) Guidelines
- MIC = Myanmar Investment Commission
- MOECAP = Ministry of Environmental Conservation and Forestry
- MONREC = Ministry of Natural Resources and Environmental Conservation
- OEMP = Operation Environmental Management Plan
- OSHA = Occupational Safety and Health Administration
- PPE = Personal Protective Equipment
- WHO = World Health Organization
- YCDC = Yangon City Development Committee
- YESB = Yangon City Electricity Supply Board

## အစီရင်ခံစာအကျဉ်းချုပ်

Polly HK (Myanmar) Co., Ltd. သည် အဝတ်အထည်အမျိုးမျိုးကို လျှော်ဖွတ်ခြင်း ဝန်ဆောင်မှုပေးသော လုပ်ငန်းအတွက် ရင်းနှီးမြှုပ်နှံသော ကုမ္ပဏီအသစ်ဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၈ခုနှစ်၊ ဇန်နဝါရီလ၊ ၃ရက်နေ့တွင် (ထောက်ခံချက်အမှတ် ရကတ-၀၄၅/၂၀၁၈)ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။ ထို့ကြောင့် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၁၈ ခုနှစ်၊ အောက်တိုဘာလ၊ ၁၀ ရက်နေ့တွင် (စာအမှတ်၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၁၃၆၆/၂၀၁၈)) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Co., Ltd. (Myanwei)မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။ ရင်းနှီးမြှုပ်နှံမှု ပမာဏမှာ အမေရိကန်ဒေါ်လာ ၁ သန်း.

လုပ်ငန်းအမျိုးအစား	အဝတ်အထည် ရှော်ဖွတ်ခြင်း လုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှု ပုံစံ	၁၀၀ % နိုင်ငံခြားသား ရင်းနှီးမြှုပ်နှံမှု
မြေအမျိုးအစား	စက်မှုမြေ
မြေဧရိယာ	၂.၇၁၃ ဧက
အဆောက်အဦး ဧရိယာ	၁၄၀ × ၄၀၀ ပေ (တစ်ထက် အဆောက်အအုံ-ရှော်ဖွတ်ချင်းပြုလုပ်ရန်) ၄၀ × ၁၀၀ ပေ (တစ်ထက် အဆောက်အအုံ-ရုံးခန်း)
မြေငှားနှစ်	နှစ် ၆၀
တည်ဆောက်ရေးကာလ	၁ နှစ်
စတင်တည်ဆောက်သည့်နေ့	၁၈ ရက် မေလ ၂၀၁၈ ခုနှစ်
လုပ်ငန်းလည်ပတ်သည့်နေ့	၉ ရက် နိုဝင်ဘာလ ၂၀၁၉ ခုနှစ်
စက်ရုံလိပ်စာ	မြေကွက် အမှတ် ၃၀၁၊ မြေတိုင်းအမှတ် ၂၅၊ နဝဒေးမင်းကြီးလမ်း၊ ရွှေလင်ဘန်းစက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်။
Contact phone	09-0421017607

EMP အစီအစဉ်တွင် စက်ရုံတွင် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၎င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် Polly HK (Myanmar) Co., Ltd. သည်

**Environmental Management Plan**

စက်ရုံတွင် ကျမ်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို ကောင်အထည်ဖော်သွားမည်ဖြစ်သည်။

Polly HK (Myanmar) Co., Ltd. စက်ရုံသည် မြေကွက်အမှတ် ၃၀၁၊ မြေတိုင်းအမှတ် ၂၅၊ ရွှေလင်ဗန်း စက်မှုနယ်မြေ၊ လှိုင်သာယာမြို့နယ်တွင် တည်ရှိပါသည်။ စက်ရုံ၏အကျယ်အဝန်းမှာ ၂ ဒသမ ၇၁၃ ဧက ရှိပြီး ဝန်းအတွင်းတွင် တစ်ထပ် အဆောက်ဦး (ပေ ၄၀၀ × ပေ ၁၆၀)တွင် လျှော်ဖွတ်ခြင်းလုပ်ငန်းကို လုပ်ဆောင်လျက် ရှိပါသည်။ လုပ်ငန်းဆောင်ရွက်သည့် ရင်းနှီးမြှုပ်နှံမှုကာလမှာ ၂၀၁၈ ခုနှစ် မတ်လဖြစ်ပြီး၊ စတင်လုပ်ငန်းလည်ပတ်သည့်ခုနှစ်မှာ ၂၀၁၉ ခုနှစ် နိုဝင်ဘာလ ဖြစ်ကြောင်းသိရပါသည်။ အဆောက်အဦးတွင် မလျှော်ဖွတ်မီ အဝတ်အထည်ထားသည့်နေရာ၊ အဝတ်လျှော်စက်နေရာ၊ ရေညစ်စက်နေရာ၊ အဝတ်အခြောက်ခံစက်နေရာနှင့် အဝတ်ခေါက် ထုတ်ပိုးသည့်နေရာ အစရှိသည့်ဖြင့် ပိုင်းခြားဖွဲ့စည်းထားပါသည်။ လျှပ်စစ်ခန်း၊ မီးစက်ခန်းနှင့် ရေဆိုးသန့်စင်စက်နေရာများကို သီးခြားစီဖွဲ့စည်းတည်ဆောက်ထားပါသည်။ စက်ရုံ၏ အဓိကလုပ်သော အဝတ်အထည်လျှော်ဖွတ်ခြင်း လုပ်ငန်းသည် အလွန်ရိုးရှင်းပြီး၊ ဘေးထွက်ဆိုးကျိုးများသော ဓါတုပစ္စည်းအသုံးပြုခြင်းမရှိပါ။ ထို့ကြောင့် စက်ရုံ၏ လုပ်ငန်းလည်ပတ်မှုကြောင့် သဘာဝပတ်ဝန်းကျင်အပေါ် ဆိုးဆိုးဝါးဝါးထိခိုက်မှု မရှိကြောင်း လေ့လာတွေ့ရှိခဲ့ပါသည်။

စက်ရုံနှင့်ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ၊ စက်ရုံနှင့်သက်ဆိုင်သည့် ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာသဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။

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



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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 Conservation of Water Resources and River Law, 2006

## 37. The Commercial Tax Law (1990 Amended 2014)

လက်ရှိပတ်ဝန်းကျင်၏ ပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်နှင့် အခြေခံလေ့လာမှုများဖြစ်သည့် ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာခြင်းများကို ၂၀၁၈ ခုနှစ်၊ အောက်တိုဘာလ၊ ၃၀ ရက်နေ့တွင် ပြုလုပ်ခဲ့ပါသည်။ စက်ရုံအတွင်း အပူချိန်နှင့် စိုထိုင်းမှုတိုင်းတာတာခြင်း၊ ဆူညံသံတိုင်းတာခြင်းနှင့် လုပ်ငန်းခွင် အလင်းအခြေအနေ တိုင်းတာခြင်းများကို ပြုလုပ်ခဲ့ပြီး ရလဒ်များကို နောက်ဆက်တွဲတွင် အသေးစိတ် ဖော်ပြထားပါသည်။ ထို့အပြင် စက်ရုံတည်နေရာနှင့် သက်ဆိုင်သည့် အချက်အလက်များဖြစ်သော လူမှုစီးပွားအခြေအနေ၊ ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များ အစရှိသည့်များကို ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်ရှိ တရားဝင် ပြဌာန်းထားသော မြို့နယ်ဆိုင်ရာအချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။

စက်ရုံ၏လုပ်ဆောင်မှုများကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်ဆိုင်ရာထိခိုက်နိုင်မှုများကို ကွင်းဆင်းလေ့လာခြင်း၊ စီမံကိန်းအကြောင်းအရာများကို စက်ရုံမန်နေဂျာ၊ အရည်အသွေး ထိန်းချုပ်စစ်ဆေးကြီးကြပ်ရေးမှူးတို့နှင့် ဆွေးနွေးမေးမြန်းခြင်း၊ ပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များကို လေ့လာသုံးသပ်ပြီး စီမံကိန်းကာလတွင် ဖြစ်နိုင်ခြေရှိသော ထိခိုက်မှုများကို အဆင့်သတ်မှတ်ချက် (၄) ခုဖြင့် ခွဲခြားသတ်မှတ်ထားပါသည်။ ၎င်းတို့မှာ-

၁။ က-: သိသာသော ဆိုးကျိုးသက်ရောက်မှု

က+: သိသာသော ကောင်းကျိုးသက်ရောက်မှု

၂။ ခ-: ဆိုးကျိုးသက်ရောက်မှု အချို့ရှိခြင်း

ခ+: ကောင်းကျိုးသက်ရောက်မှု အချို့ရှိခြင်း

၃။ ဂ: အကျိုးသက်ရောက်မှု မရှင်းလင်းသဖြင့် ထပ်မံလေ့လာသင့်သည်

၄။ ဃ: အကျိုးသက်ရောက်မှု မရှိသလောက်ဖြစ်၊ ထပ်မံလေ့လာရန်မလို

သတ်မှတ်ထားသော အဆင့်သတ်မှတ်ချက်များအလိုက် ဖြေလျှော့ရေးနည်းလမ်းများဖြင့် ရှောင်လွှဲရန်နည်းလမ်းများကို ဖော်ပြထားပါသည်။

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်ကို ၂၆ ရက်၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်တွင် ရွှေလင်ဗန်းစီမံခန့်ခွဲရေးကော်မတီရုံး၊ ကနောင်ခန်းမတွင် ပြုလုပ်ခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကို အခန်း ၆ တွင် ဖော်ပြထားပါသည်။

အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင်အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို

**Environmental Management Plan**

လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားပြုလုပ်ထားပါသည်။

- လေထုစီမံခန့်ခွဲမှုအစီအစဉ်
- ဆူညံသံစီမံခန့်ခွဲမှုအစီအစဉ်
- အမှိုက်စွန့်ပစ်မှုစီမံခန့်ခွဲမှုအစီအစဉ်
- အရည်စွန့်ပစ်မှုစီမံခန့်ခွဲမှုအစီအစဉ်
- မီးဘေးအန္တရာယ်စီမံခန့်ခွဲမှုအစီအစဉ်
- လုပ်ငန်းခွင်အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးစီမံခန့်ခွဲမှုအစီအစဉ်
- အန္တရာယ်ရှိအမှိုက်စွန့်ပစ်မှုစီမံခန့်ခွဲမှုအစီအစဉ်
- အရေးပေါ်ကာကွယ်ရေးစီမံခန့်ခွဲမှုအစီအစဉ်
- ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်
- လေ့ကျင့်ရေးအစီအစဉ်
- မကျေလပ်မှုများအားဖြေရှင်းခြင်း
- လူထုအကျိုးပြုပူးပေါင်းမှုအစီအစဉ်

အဆိုပါ စက်ရုံသည် ရရှိလာသော အကျိုးအမြတ်၏ ၂% ကို လူမှုဖူလုံရေးလုပ်ငန်းများတွင် သုံးစွဲသွားမည် ဖြစ်ပါသည်။ လူမှုဖူလုံရေးလုပ်ငန်းများတွင် အလုပ်သမားများကို စွမ်းရည်တိုးတက်ရေးဆိုင်ရာ သင်တန်းများပေးခြင်း၊ တရုတ်ဘာသာစကားသင်တန်းများ ပို့ချပေးခြင်း၊ လိုအပ်သော ကျန်းမာရေးအသိပညာပေးခြင်း၊ ကျန်းမာရေး စောင့်ရှောက်ပေးခြင်းများကို ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။ ဥပမာအနေနှင့် ဒေသဖွံ့ဖြိုးရေးလုပ်ငန်းစီမံချက် အနေဖြင့် စက်ရုံအနီးဝန်းကျင်ရှိ စာသင်ကျောင်းများကို လှူဒါန်းမှုများကို ပြုလုပ်သွားမည် ဖြစ်ပါသည်။ ဒေသဖွံ့ဖြိုးရေးလုပ်ငန်းစီမံချက်ကို ဇယားတွင် ဖော်ပြထားပါသည်။

စဉ်	အကြောင်းအရာ	လှူဒါန်းမှု ရာခိုင်နှုန်း
၁။	စာသင်ကျောင်းများ	၀.၅%
၂။	သင်တန်းကျောင်းများ	၁%
၃။	ဝန်ထမ်းများ၏ ကျန်းမာရေးစောင့်ရှောက်မှု	၀.၅%

အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။ စီမံကိန်းနှင့် သက်ဆိုင်သူများအား စီမံကိန်းဆိုင်ရာ

**Environmental Management Plan**

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အကြောင်းအရာများ ရှင်းလင်းတင်ပြခြင်း၊ အကြံပြုချက်များနှင့် ဆွေးနွေးတင်ပြလာသည့် သဘောထား  
အကြံဉာဏ်များကိုရယူပြီး အစီအရင်ခံစာတွင် ဖော်ပြထားပါသည်။

## EXECUTIVE SUMMARY

Polly HK (Myanmar) Co., Ltd. is a new investment for laundry service for various types of clothes and wears company from China. The Yangon Regional Investment Commission (YRIC) has endorsed the project for the investment on 11, April, 2018 (Endorsement No. YGN-045/2018). YRIC 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 laundry service under the name of Polly HK (Myanmar) Co., Ltd. (Polly HK) as a solely owned foreign investment from the China. The estimated authorized capital investment is about 10,000,000 US

Type of Proposed Business	Laundry Service for Various Types of Clothes and Wears
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	2.713 acre
Total building area	160' x 400' one storey building (Laundry service) 40' x 100' one storey building (office)
Land lease year	60 years
Construction period	1 year
Construction Start Date	May 18, 2018
Operation starting date	November 9, 2018
Address of Polly HK factory	Plot No. 301, Myay Taing Block No. 25, NaWaDay MinGyi Road, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon region.
Contact phone	09-0421017607

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), the said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. YaKa-1/3/4 (EIA) (1366/2018) on 16, October, 2018. Therefore, Polly HK commissioned Myanwei Environmental Solutions Company Limited (Myanwei) for EMP report study.

Polly HK laundry service factory is located at Plot No. 301, Myay Taing Block No. 25, NaWaDay MinGyi Road, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon region. The total area of project site is 2.713 acre. There is one story building (160' x 400') for laundry service and (40' x 100') for office at project site. Main structure is designed into washing section, drying section and folding section. Transformer room, generator room and wastewater treatment plant are separated by main factory building structure.

The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for cloths and wears laundry. Electric power is used for the purpose of to run the

**Environmental Management Plan**

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washing machinery and to provide lighting. Wastewater treatment plant is provided for the laundry process to treat the discharge water from washing machine.

The next Chapter, provides the brief summary of relevant national environmental legislations such as Environmental Impact Assessment Procedure (2015) and National Environmental Quality (emission) Guidelines, established by the Ministry of Natural Resources and Environmental Conservation (MONREC) and overview of current local and international environmental and social policies including related international or regional convention for the proposed project. National Laws and Regulations, International Guidelines are referred for Environmental Management Plan of the proposed project.

38. The Constitution Law, 2008
39. The Environmental Conversation Law, 2012
40. The Environmental Conversation Rule, 2014
41. Environmental Impact Assessment Procedure, 2015
42. National Environmental Quality (Emission) Guideline, 2015
43. National Myanmar Environmental Policy, 2019
44. Foreign Investment Law, 2012
45. Foreign Investment Rule, 2013
46. Myanmar Investment Rule, 2017
47. Myanmar Insurance Law, 1993
48. Payment of Wages Law, 2016
49. The Payment of Wages Act, 1936
50. Yangon City Development Committee Law, 2018
51. The Amended Law for Factories Act, 1951 (2016)
52. The Private Industrial Enterprise Law
53. The Export and Import Law, 2012
54. The Prevention of Hazard from Chemical and Related Substances Law, 2013
55. The Underground Water Act
56. Myanmar Fire Brigade Law, 2015

57. Fire Safety Procedure
58. The Electricity Law, 2014
59. Boiler Law, 2015
60. Labor Dispute Settlement Law, 2012
61. The Law Amending the Settlement of Labor Dispute Law, 2019
62. The Social Security Law, 2012
63. The Employment and Skill Development, 2013
64. The Worker's Compensation Act, 1923
65. The Leave and Holidays Act (1951, partially reused in 2014)
66. The Minimum Wage Law, 2013
67. Public Health Law, 1972
68. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
69. Occupational Safety and Health Law, 2019
70. The Law on Standardization
71. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ (2018)
72. The Motor Vehicles Law, 2015
73. The Conservation of Water Resources and River Law, 2006
74. The Commercial Tax Law (1990 Amended 2014)

For environmental baseline, data were collected by onsite measurements analysis during operation phase on 30 October 2018. On-site measurement was taken by indoor 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 Tharyar Township.

In the next Chapter, the potential environmental impacts brought by various activities of proposed lubricant manufacturing process were identified by site surveying with checklist, meeting with client and assessing the environmental baseline information for the project along with its mitigation measure. The methodological approach used for the project impact assessment is adapted from the impact assessment methods recommended by the Canadian Environmental Assessment Agency (1990), by the World Bank (1991) and by the International Finance Corporation (Dec. 1998).

**Environmental Management Plan**

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

The impacts of pollution, natural environment and social environment, health and safety, emergency risk, and others were classified as A to D in accordance with the following criteria, assuming no specific measures toward the impacts are taken:

- A<sup>-</sup>: Significant negative impact      A<sup>+</sup>: Significant positive impact
- B<sup>-</sup>: Some negative impact      B<sup>+</sup>: Some positive impact
- C: Impacts are not clear, need more investigation
- D: No impact or impacts are negligible, no further study required

Significant impacts and proposed mitigation measures of the proposed factory were taken into consideration during the study.

Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made. On 26, December 2018, a public consultation and disclosure ceremony were held at the KaNaung Hall, Shwe Lin Ban Industrial Zone Management Committee Office, Hlaing Tharyar Township, Yangon.

The Environmental Management Plan (EMP) is prepared for the proposed project that covers the anticipated impacts of the said project, mitigation measures, management and monitoring plans during each of the phases. The development of the proposed project will be managed by Polly HK Co., Ltd. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation of EMP and Environmental Monitoring Plan (EMoP).

The EMP for Polly HK (Myanmar) Co., Ltd. has been prepared to address potential issues based upon discussion with factory management, workers, local community's view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for Polly HK factory are as follows:

- Air Quality Management Plan
- Noise Management plan
- Solid Waste Management plan
- Liquid Waste Management Plan
- Fire Management Plan
- Occupational Safety and Health Management Plan
- Hazardous Waste Management Plan
- Emergency Response and Management Plan
- Environmental Monitoring Schedule and Reporting
- Capacity Building and Training Plan
- Grievance Redress Mechanism (GRM)
- Corporate Social Responsibility (CSR) Plan



**Environmental Management Plan**

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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 feedbacks, desired and needs of local public recorded in public consultation meetings are well addressed and incorporated in formulation of EMP.

## 1. INTRODUCTION

### 1.1. PROJECT BACKGROUND

Polly HK (Myanmar) Co., Ltd. is a new investment for laundry service for various types of clothes and wears company from China. The Yangon Regional Investment Committee (YRIC) has endorsed the project for the investment on 11, April 2018 (Endorsement No. YGN-045/2018). YRIC 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 laundry service under the name of Polly HK (Myanmar) Co., Ltd. (Polly HK) 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), the said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. YaKa-1/3/4 (EIA) (1366/2018) on 16, October, 2018. Therefore, Polly HK commissioned Myanwei Environmental Solutions Company Limited (Myanwei) for EMP report study.

#### 1.1.1. Project Proponent Profile

This is the information of project proponent from the MIC's registration that is describing in below Table 1-1 and Table 1-2. The estimated authorized capital investment is about 10,000,000 US Dollar (Table 1-2). Organization chart of Polly HK (Myanmar) Co., Ltd. is presented in Figure 1-1.

**Table 1-1 Information of Polly HK (Myanmar) Co., Ltd.**

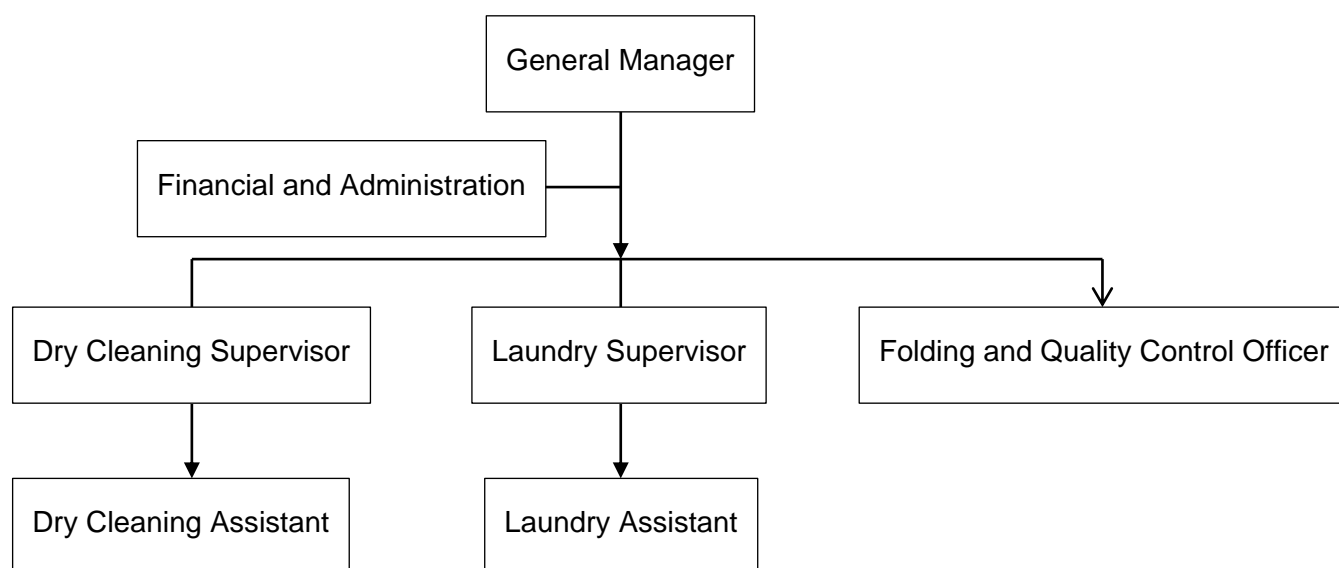
Investor Name:	Ms. Songlin Gong
ID No.:	PP. no. E 96366756
Citizenship:	Chinese
Address of Registration office:	82Ai Goo Dong Yang, Zhejiang Province, China
Phone no.:	13806779779

**Table 1-2 Salient features of the project**

Type of Proposed Business	Laundry Service for Various Types of Clothes and Wears
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	2.713 acre
Total building area	160' x 400' one storey building (Laundry service) 40' x 100' one storey building (office)
Land lease year	60 years
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**Environmental Management Plan**

Construction Start Date	May 18, 2018
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Address of Polly HK factory	Plot No. 301, Myay Taing Block No. 25, NaWaDay MinGyi Road, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon region.
Contact phone	09-0421017607

**Figure 1-1 Organization chart of Polly HK (Myanmar) Co., Ltd.****1.1.2. 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.

**Table 1-3 Member of EMP Study Team**

Name	Qualification	Responsibility
<b>MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY Limited</b>	<b>Transition Consultant Registration Certificate No. 0069</b>	<b>EIA Organisation</b> <b>No. 36-38, 9th floor (A), Grand Myay Nu Condo, Myay Nu Street, Sanchaung Township, Yangon, Myanmar. 01-7501221</b>

**Environmental Management Plan**

<b>Name</b>	<b>Qualification</b>	<b>Responsibility</b>
Dr. Win Aung	M.B, B.S (Yangon), M.P.H (Mahidol University, Thailand)	Public Health and Health Management Expert,
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public health consultant, project management
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment <b>TCR No. 0048</b>	Project Director, Environmental 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. 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
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



THE REPUBLIC OF THE UNION OF MYANMAR  
Ministry of Natural Resources and Environmental Conservation  
Environmental Conservation Department



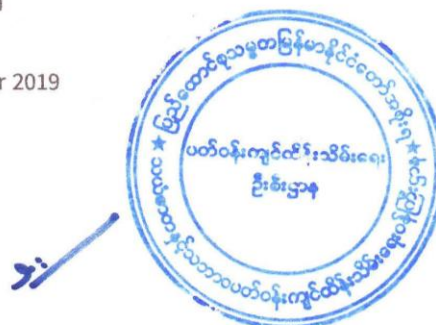
CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION  
(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10068 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<br>(အဖွဲ့အစည်းအမည်)   | Myanwei Consulting Co., Ltd.   |
| (b) Name of the representative in the organization<br>(အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်)  | U Nyan Lynn Aung   |
| (c) Citizenship of the representative in the organization<br>(အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား)   | Myanmar  |
| (d) Identity Card /Passport Number of the representative person in the organization<br>(အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်) | 12/Sakhana(N)056196  |
| (e) Address of organization<br>(ဆက်သွယ်ရန်လိပ်စာ)  | No. 28, Myay nu street, Sanchaung Township,<br>Yangon, Myanmar.<br>Mobile phone: 09440251888<br>E mail: <a href="mailto:ceo@myanweiconsulting.com">ceo@myanweiconsulting.com</a> |
| (f) Type of Consultancy<br>(အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)   | Organization   |
| (g) Duration of validity<br>(သက်တမ်းကုန်ဆုံးရက်)   | 31 December 2019   |



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

## Environmental Management Plan

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



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

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

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



## Environmental Management Plan



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

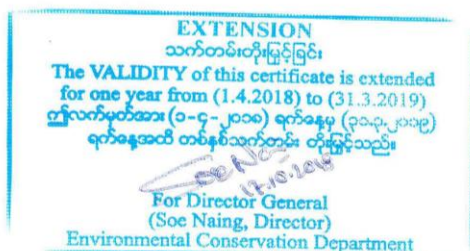


No. 0048 Date 31 March 2018

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<br>(အကြံပေးပုဂ္ဂိုလ်အမည်)                            | U Lin Htet Sein   |
| (b) Citizenship<br>(နိုင်ငံသား)   | Myanmar   |
| (c) Identity Card / Passport Number<br>(မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်) | 7/ Tha Ka Na (N) 101377   |
| (d) Address<br>(ဆက်သွယ်ရန်လိပ်စာ)   | No.54, Room No.704, Waizayantar Tower,<br>Waizayantar Road, Thingangyun Township,<br>Yangon.<br><a href="mailto:lin.tbs@gmail.com">lin.tbs@gmail.com</a> , 09 421137569 |
| (e) Organization<br>(အဖွဲ့အစည်း)  | Total Business Solution Co., Ltd.   |
| (f) Type of Consultancy<br>(အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)                  | Person  |
| (g) Duration of validity<br>(သက်တမ်းကုန်ဆုံးရက်)                            | 31 March 2018   |



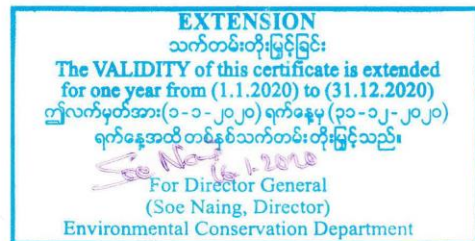
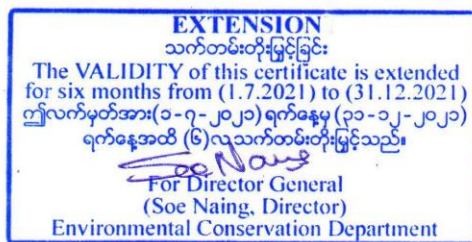
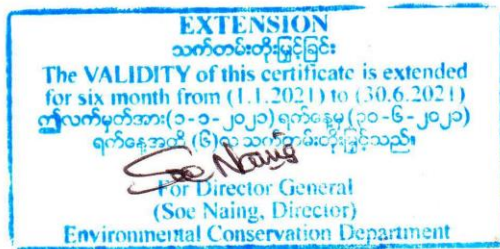
*(Signature)*  
Director General

Environmental Conservation Department  
Ministry of Natural Resources and Environmental Conservation

## Environmental Management Plan

**Areas of Expertise Permitted**  
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

**1. Geology and Soil**





## **2. PROJECT DESCRIPTION**

### **2.1. LOCATION**

Polly HK laundry service factory is located at Plot No. 301, Myay Taing Block No. 25, NaWaDay MinGyi Road, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon region. Location map is as shown in Figure 2-1.

### **2.2. SITE DESCRIPTION**

The total area of project site is 2.713 acre. There is one story building (160' × 400') for laundry service and (40' × 100') for office at project site. The factory layout plan can be seen in Figure 2-3. Main structure is designed into washing section, drying section and folding section. Transformer room, generator room and wastewater treatment plant are separated by main factory building structure.

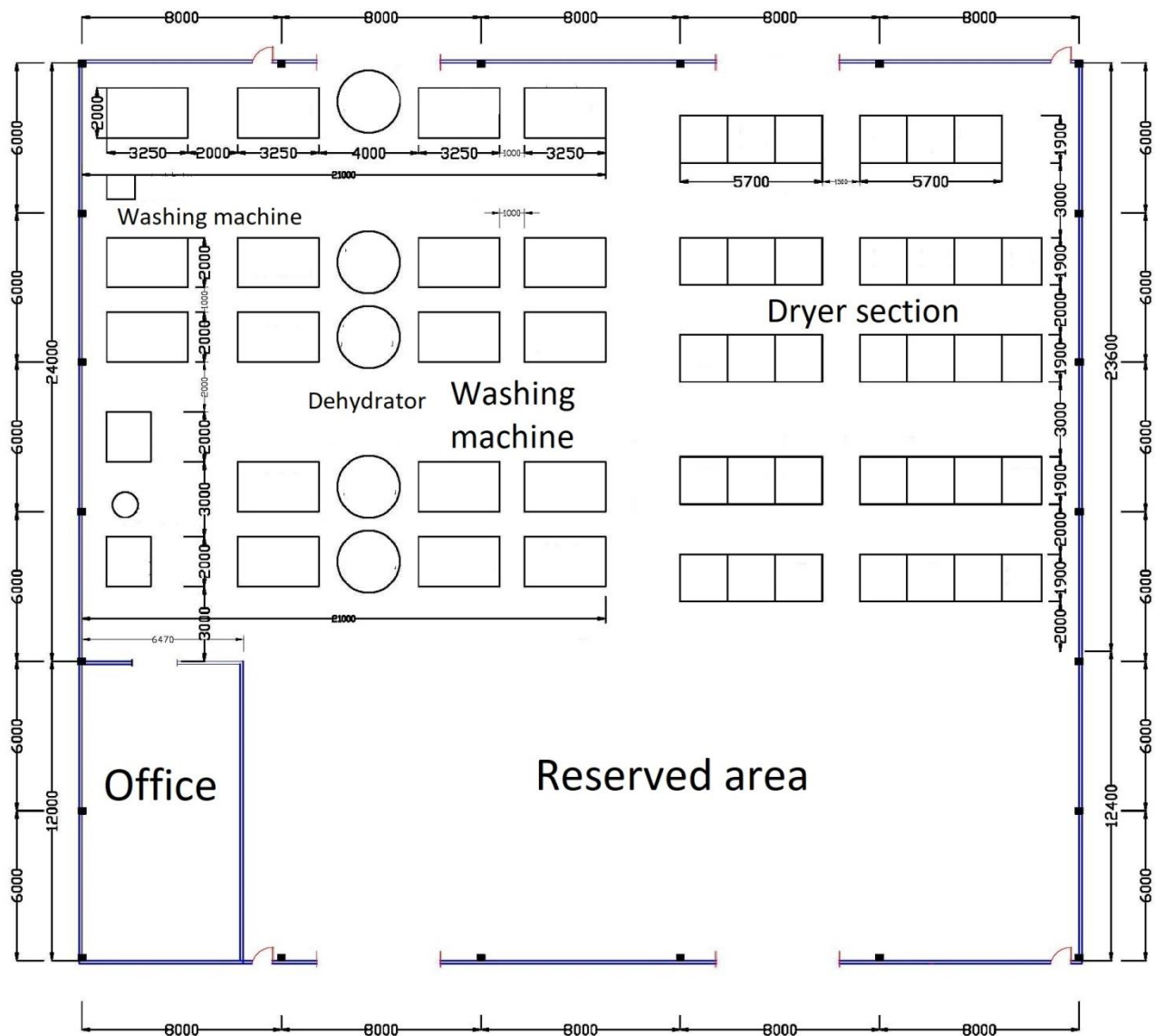


Figure 2-1 Location map of Polly HK factory





Figure 2-2 Site layout map of Polly HK factory

**Environmental Management Plan****Figure 2-3 Factory layout plan****2.3. PROJECT OPERATION****2.3.1. Utilities**

The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for cloths and wears laundry. Electric power is used for the purpose of to run the washing machinery and to provide lighting. Wastewater treatment plant is provided for the laundry process to treat the discharge water from washing machine.

**2.3.2. Machinery and equipment**

Lists of machinery and equipment required for the Polly HK factory is following in Table 2-1. The Polly HK (Myanmar) Co., Ltd factory was operated 312 days per year.

**Environmental Management Plan****Table 2-1 List of machinery of Polly HK factory**

No.	Machinery Name	Asset	Quantity
1	Washing Machine (M)	set	8
2	Washing Machine	set	1
3	Centrifugal Extractor	set	3
4	Drying Machine	set	15
5	Drying Oven	set	1
6	Blower	set	1

**2.3.3. Work force**

Human resource required by foreign experts/technicians and local persons for administrative and production process (Table 2-2). The project runs 55 days in a year and the working hours is from 7 AM to 5 PM in week days including Saturday. Currently, one shift (8 hours + overtime 2 hours) of production is running or operating.

**Table 2-2 Annual human resource requirement**

Designation	Number of employees
Manager	1
Supervisor	2
Office Staff	5
Skill Worker	27
Semi-Skill Worker	10
Driver	3
Guard	4
Foreign Technicians	3
Total	55

**2.3.4. Water**

Shwe Lin Ban industrial zone has no centralized water supply system and the factory gets water from the tube wells installed inside the factory compound. Groundwater from this tube well is pumped in the storage tanks for the factory including laundry service and domestic use. The project was use groundwater for laundry use, domestic use and firefighting. The groundwater stores in the three storage tanks on one-ground tanks with capacity of 10,000 gallons for firefighting and two overhead tanks with capacity of 1,800 gallons for domestic use.

**2.3.5. Electricity and fuel requirement**

The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 1,000 kVA of Transformers. Another source of energy 315 kVA generator will also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. They use diesel engine generator and 200 gallons per month.





1000 KVA transformer



315 KVA generator

**Figure 2-4 Electricity facility at Polly HK factory****2.3.6. Wastewater Treatment Plant**

Wastewater treatment system consists of wastewater tank, wastewater treatment system and treated water tank. It includes wastewater inlet pipe, over flow pipe and covered by steel wire mesh on water tank. The wastewater generated from the washing machine connected to wastewater tank and pump to the wastewater treatment system. Wastewater treatment system treats the wastewater to effluent levels acceptable by NEQ guidelines. The treated water flows by gravity from the wastewater treatment system to treated water tank. Wastewater treatment process is as shown in Figure 2-5. Design plan and detail process of wastewater treatment presented in **Appendix B**.

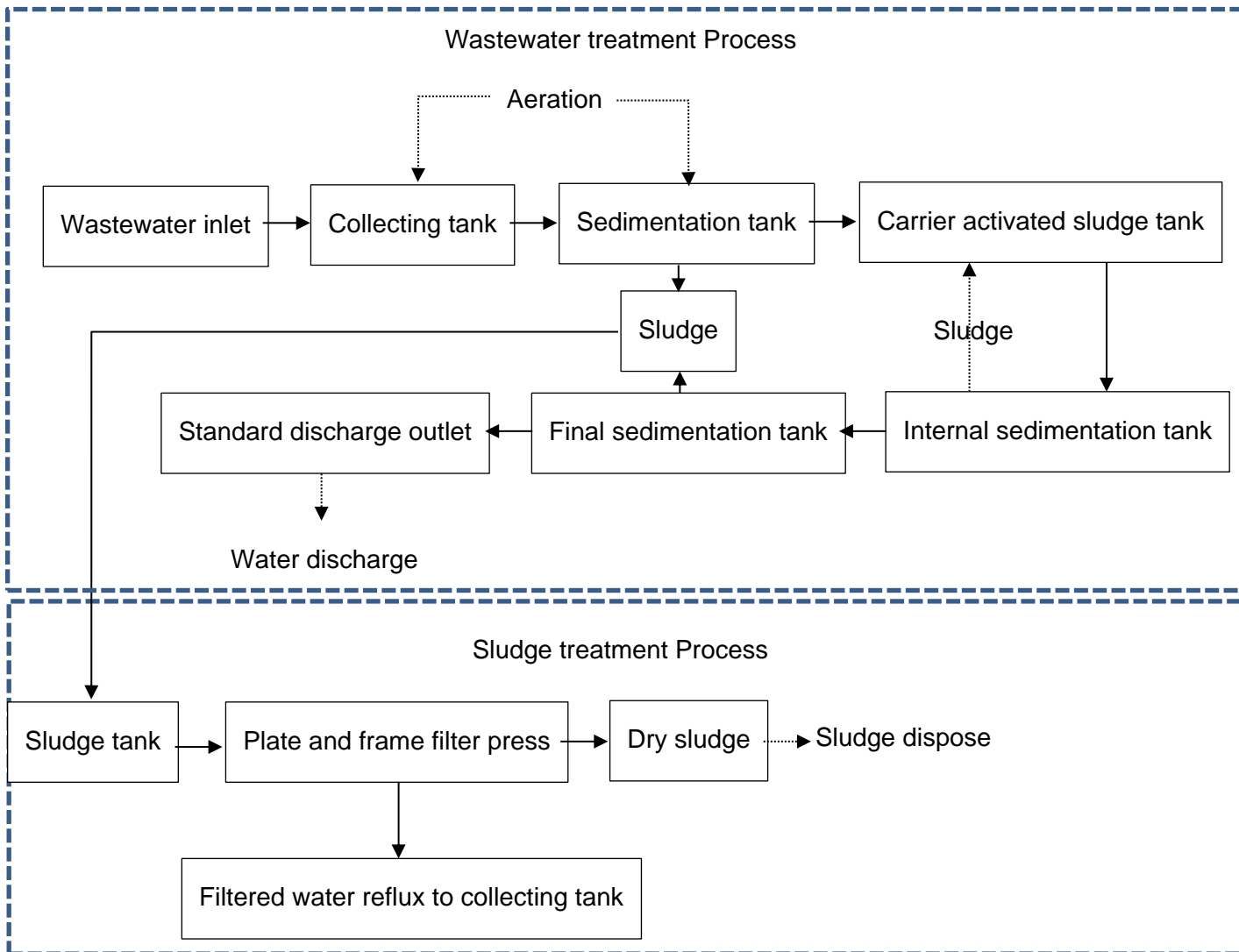
Process design parameters and description

Main structure Design parameters

1. Collection Pool
  - Effective Volume:  $V=100\text{m}^3$
  - Structure: Underground Type steel concrete
2. A sinking pond
  - Effective Area:  $S=35\text{m}^2$
  - Structure: Ground-type steel concrete
  - Built-in mud-drain bucket
3. Carrier activated sludge tank
  - Effective Volume:  $V=150\text{m}^3$
  - Structure: Ground-type steel concrete
  - Built-in micro-porous aeration pipe
4. Internal sedimentation tank
  - Effective Area:  $S=24\text{m}^2$
  - Structure: Ground-type steel concrete
5. Final sedimentation tank

**Environmental Management Plan**

- Effective Area:  $S=24\text{m}^2$
  - Structure: steel concrete on the ground
6. Sludge tank
- Effective Volume:  $V=100\text{m}^3$
  - Structure: Underground Type steel concrete

**Figure 2-5 Flow diagram of Wastewater treatment process****2.3.7. Water Drainage and flood protection**

Kitchen and dishwashing sink was drainage pipe with PVC to drain wastewater from washing area into the concrete channel. Within the factory compound, there was drainage channel with concrete to collect rainwater in the factory area. The factory is located in Hlaing Thar Yar Township. This area has been suffered from flood problems during raining season. The factory has already provided internal rainwater drainage system in connection with local drainage system outside the factory to drain into Hlaing River to prevent flood problems.



Figure 2-6 Rainwater drainage in factory compound

#### 2.4. LAUNDRY PROCESS

Annual rate of laundry service is 37,000 dozen per years, included Jeans (thickness and thinner) and various types of cloths and wears. The major operations involved in the laundry process are: sorting, washing, drying and finishing Figure 2-7 and detail process is presented in Table 2-3.

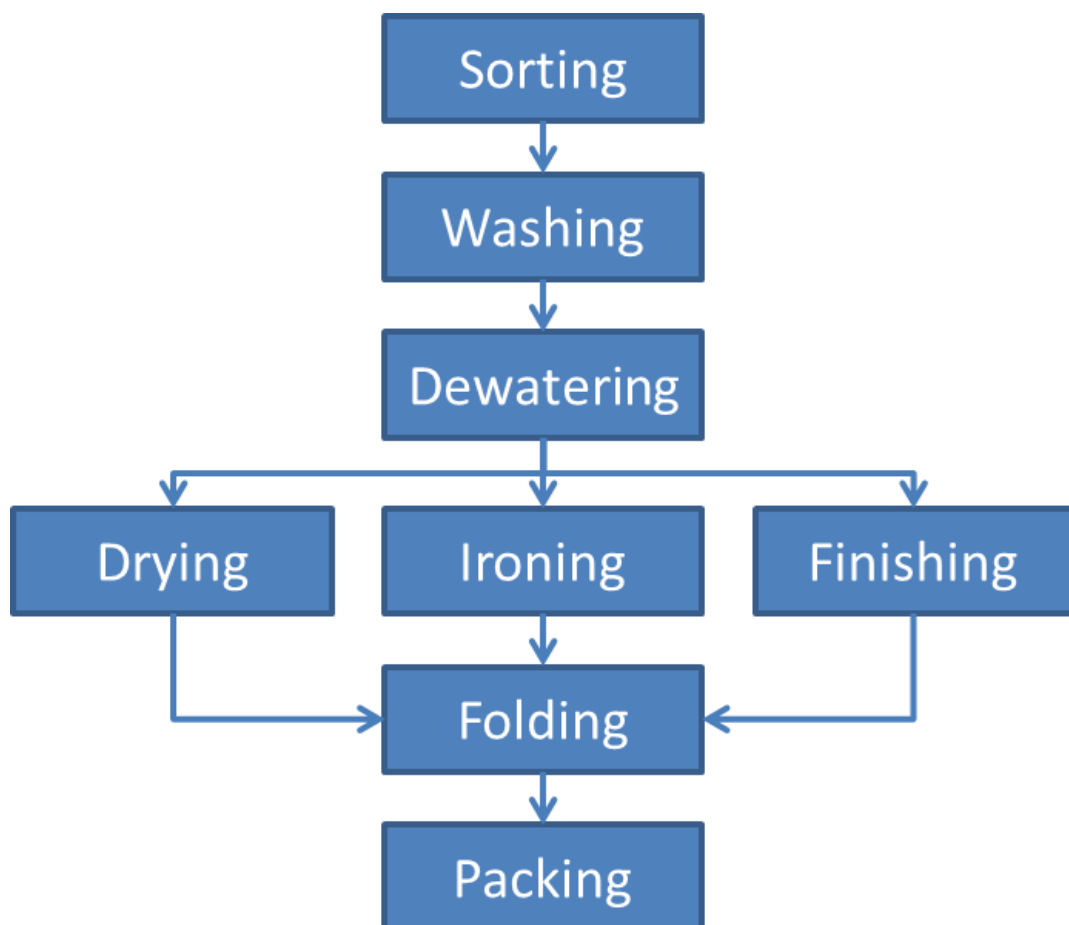




Figure 2-7 Flow Diagram of Polly HK's Laundry process




## Environmental Management Plan

**Table 2-3 Description of laundry process at Polly HK factory**

Photo	Description
 <p>Washing Machine</p>	<p>The cloths are washed as per requirements using ultrasonic washing machine. The machine systems are with digital controls, stainless steel construction and high-quality piezo elements. Add the detergent to the washer drum or dispenser before loading it. Washing process usually last 15-20 minutes and the machine can wash 100 cloths in one time. The washing machine requires 1000 liters of water for one wash cycle. Outlet Water drains to waste water treatment plant with gravity flow.</p> <p>1 cylinder (washing machine) = 100 Pcs</p> <p>Water consumption = 1000 liter</p> <p>Softener = 1.0 kg</p> <p>Silicon Oil = 0.5 kg</p> <p>Enzyme = 600 ml</p>
 <p>Dehydration Machine</p>	<p>After the washing process, hydro extractor machine which has a wall of perforated stainless-steel metal was used to extract water from the cloths. Hydro Extractors usually work on centrifugal force creating a high gravitational force to extract water from the product. The internal drum rotates at high speed thus throwing out the water contained in the cloths. The use of hydro extractor significantly reduces the energy required to dry cloths. Outlet Water drains to waste water treatment plant with gravity flow.</p>

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Photo	Description
 <p>Drying Machine</p>	<p>The machine was used to drying process by the industrial stream heated dryer. Dryer consist of a rotating drum called a "tumbler" through which heated air is circulated to evaporate the moisture. Dryer is designed to work in ambient temperatures from 20 °C to 60°C. Drying normally lasts between 40 and 45 minutes, but can also exceed 45 minutes, depending on the cloths to be dried</p>

**2.5. GENERATION OF WASTE, EMISSION AND DISTURBANCES****2.5.1. Industrial wastes**

Unit processes, which involve water, are washing machine. The factory has 9 washing machines are operated 4 time per day. Only wastewater generated from laundry process. Total amount of wastewater will be generated about 36 m<sup>3</sup> per day. This wastewater will be contaminated with color, total suspended solid (TSS), Chemical Oxygen Demand (COD), etc.

Wastewater sedimentation sludge is generated form wastewater treatment plant. The water will be used in this factory 1200 per day, 36000 per month and 432000 per year totally.

**2.5.2. Human wastes**

The number of staff and workers required in the day shift for the factory is maximum 55 persons during operation. Solid waste generated from maximum number of operators and office staffs with assumption of waste generation rate at 21.45 kg/day calculated based on solid waste generation rate of 0.39 kg/person/day<sup>1</sup>.

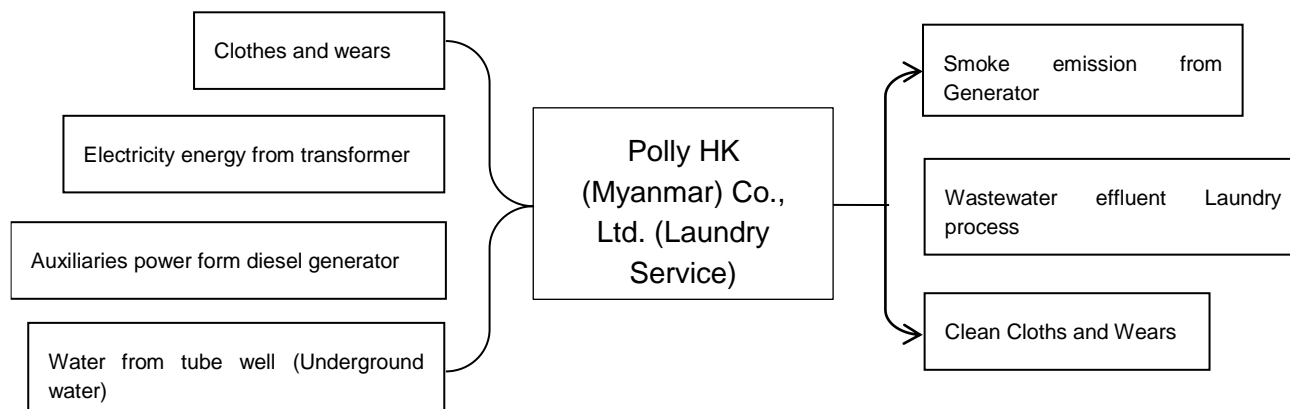
Domestic wastewater generated by maximum amount of 55 persons with assumption rate at 5.5 m<sup>3</sup>/day was calculated based on domestic wastewater generated rate of 0.1 m<sup>3</sup>/person/day<sup>2</sup>. This water will be released in operation hour discharge to septic tank or factory drainage.

<sup>1</sup> 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).

<sup>2</sup> The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m<sup>3</sup> per person per day (Metcalf & Eddy, 2004)

### 2.5.3. Waste Balance

A mass balance Polly HK factory is illustrated in below Figure 2-8, which presents water and energy inputs and the outputs with respect to residue and sub-products and liquid effluents.



**Figure 2-8 Typical mass balance of Polly HK factory**

## 2.6. FACILITIES

### 2.6.1. Solid waste management Facility

Factory does not dispose any somewhat solid waste on the factory premises or not dump in the surface water like local pond, canal, river etc. The solid waste is stored properly. Solid waste is stored separately in a certain location in proper manner such as metal/hazardous material waste such as fudge electric bulbs, empty chemical container is stored in separate place of waste storage. Plastic waste containers are installed at the end of each operation line. Garbage bins are provided in suitable place nearby canteen, toilet, dining room, etc. Sedimentation sludge of treatment plant will also collect operator every day and handle to YCDC waste collector. All of waste are collected by house keeper every day and inform YCDC to collect and dispose of waste two time per week. Figure 2-9 is presented the onsite waste management of Polly HK factory.



Wastewater treatment plant



Sludge collected container

**Figure 2-9 Solid waste management**



**Environmental Management Plan****2.6.2. Wastewater Management Facility**

Make sure that all drainage systems are covered and liquid wastes are disposed to drain after septic to avoid soil pollution. Clean the drainage lines periodically to prevent pollution of underlying water source.

Polly HK has constructed on-site wastewater treatment plant (WWTP) on the factory compound. The wastewater treatment plant utilizes combined treatment of (anaerobic) aeration process and sedimentation process. The production wastewater line is connected to WWTP. Management facility at Polly HK factory is provided in Figure 2-10 and Figure 2-11. Wastewater treatment plant can treatment 30 gallons per day.



Sedimentation Tank



Aeration Tank



Microorganisms Tank



Water Outlet with filter system

**Figure 2-10 Existing wastewater treatment plant**



**Figure 2-11 New construction of wastewater treatment plant**

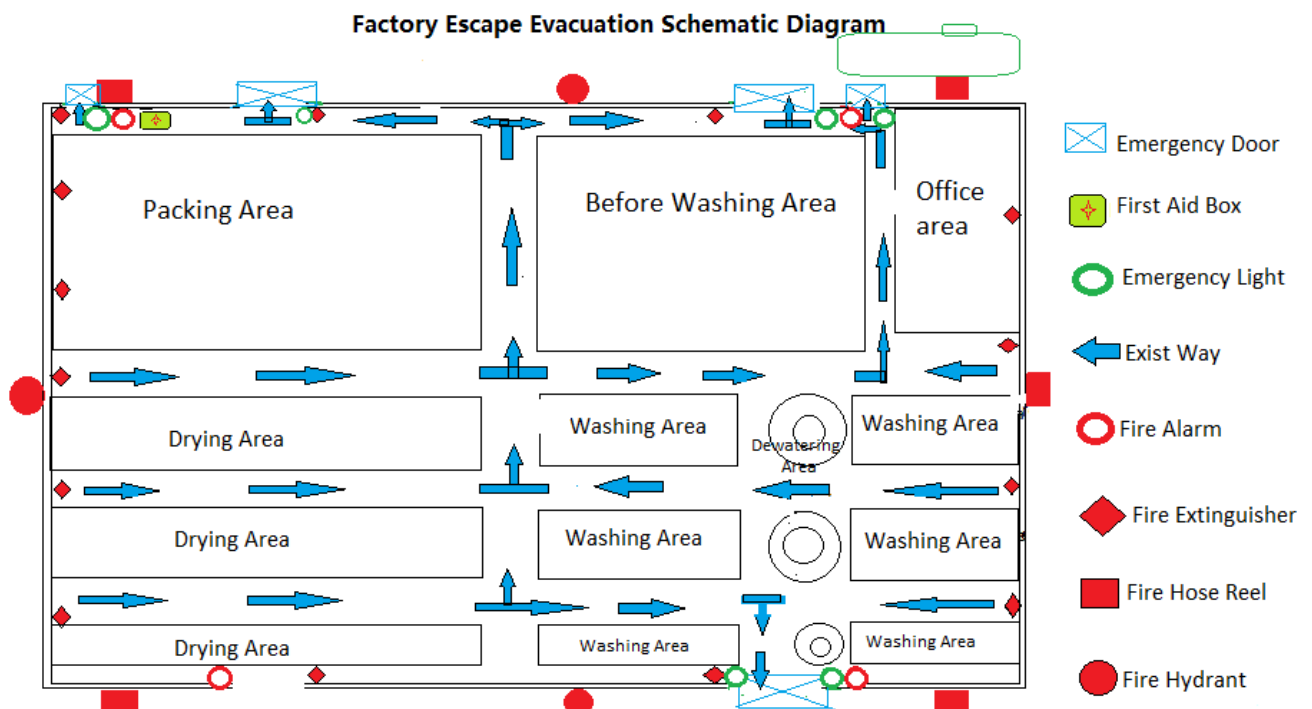
### 2.6.3. Emergency Preparedness Facility

The factory management has taken proper measures to handle any emergency like fire, earthquake, flood etc. Provision and inspection of firefighting equipment and fire hydrant system in all the sections of the factory. A detail evacuation plan (fire exit, 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. Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and displace that everybody can see it. Declaring the factory as a “no smoking zone”. When plant runs at abnormal situation e.g. if emission level increases than its normal level then immediately inform to HSE officer as well as project manager. Build a safety committee which from firefighting team, rescue team. The committee arranges a meeting every month to discuss about five safety management. Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety. Emergency response facilities at Polly HK factory is provided in Figure 2-12 and Figure 2-13.



**Figure 2-12 Emergency response facility**

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**Figure 2-13 Emergency escape schematic diagram at Polly HK factory**



### 3. 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.

#### 3.1. MYANMAR REGULATORY FRAMEWORK

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

##### 3.1.1. Laws and Regulations Related to Environmental and Social Considerations

Requirements related to environmental (and social) impact management for development projects are as follow:

###### 3.1.1.1. 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.

###### 3.1.1.2. 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;

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<p>Chapter IV</p> <p>Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry:</p> <p>Section 7</p>	<p>(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities;</p> <p>(b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment;</p> <p>(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;</p> <p>(d) prescribing environmental quality standards including standards on emissions, effluents, solid wastes, production procedures, processes and products for conservation and enhancement of environmental quality;</p> <p>(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;</p> <p>(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;</p> <p>(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.</p>
<p>Chapter VI</p> <p>Environmental Quality Standards:</p> <p>Section10</p>	<p>The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards:</p> <p>(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;</p> <p>(b) water quality standards for coastal and estuarine areas;</p> <p>(c) underground water quality standards;</p> <p>(d) atmospheric quality standards;</p> <p>(e) noise and vibration standards;</p> <p>(f) emissions standards;</p> <p>(g) effluent standards;</p> <p>(h) solid wastes standards;</p> <p>(i) other environmental quality standards stipulated by the Union Government.</p>
<p>Section 14</p>	<p>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.</p>
<p>Section 15</p>	<p>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.</p>



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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.
Chapter X Prior Permission Section 24	The Ministry may, in issuing the prior permission, stipulate terms and conditions relating to environmental conservation. It may conduct inspection whether or not it is performed in conformity with such terms and conditions or inform the relevant Government departments, Government organizations to carry out inspections.
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.
Chapter XIII Offences and Penalties Section 32	Whoever violates any prohibition contained in the rules, notifications, orders, directives and procedures issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year, or with fine, or with both.

**3.1.1.3. 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 of 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.
Chapter XIII Prohibitions Section 69	(a) Any person shall not emit, cause to emit, dispose, cause to dispose, pile and cause to pile, by any means, the pollutants to environment and the hazardous waste or hazardous material stipulated by notification under the Law and any of these rules at any place which may affect the public directly or indirectly.  (b) Any person shall not carry out the actions which can be damaged to natural environment which is changing due to ecosystem and such system, except the

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	permission of the relevant Ministry in order to the interest of the public.
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**3.1.1.4. Environmental Impact Assessment Procedure, December 2015**

Screening: Section 23	<p>a) The project proponent shall submit the Project Proposal to the Ministry for Screening.</p> <p>b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment.</p> <p>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:</p> <p>i) An EIA Type Project, or</p> <p>ii) An IEE Type Project, or</p> <p>iii) A Non IEE or EIA Type, and therefore not required to</p>
CHAPTER VIII. Responsibility for all Adverse Impacts Section 102	<p>The Project Proponent shall bear full legal and financial responsibility for:</p> <p>a) all of the Project Proponent's actions and omissions and those of its contractors, subcontractors, officers, employees, agents, representatives, and consultants employed, hired, or authorized by the Project acting for or on behalf of the Project, in carrying out work on the Project; and</p> <p>b) PAPs until they have achieved socio-economic stability at a level not lower than that in effect prior to the commencement of the Project, and shall support programs for livelihood restoration and resettlement in consultation with the PAPs, related government agencies, and organizations and other concerned persons for all Adverse Impacts.</p>
Section 103	The Project Proponent shall fully implement the EMP, all Project commitments, and conditions, and is liable to ensure that all contractors and subcontractors of the Project comply fully with all applicable Laws, the Rules, this Procedure, the EMP Project commitments and conditions when providing services to the Project.
Section 104	The Project Proponent shall be responsible for, and shall fully and effectively implement, all requirements set forth in the ECC, applicable Laws, the Rules, this Procedure and standards.
Section 105	The Project Proponent shall timely notify and identify in writing to the Ministry, providing detailed information as to the proposed Project's potential Adverse Impacts.
CHAPTER IX. Monitoring Section 106	The Project Proponent shall, during all phases of the Project (pre-construction, construction, operation, decommissioning, closure and post-closure), engage in continuous, proactive and comprehensive self-monitoring of the Project and activities related thereto, all Adverse Impacts, and compliance with applicable laws, the Rules, this Procedure, standards, the ECC, and the EMP.
Section 107	The Project Proponent shall notify and identify in writing to the Ministry any breaches of its obligations or other performance failures or violations of the ECC

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	and the EMP as soon as reasonably possible and in any event, in respect of any breach which would have a serious impact or where the urgent attention of the Ministry is or maybe required, within not later than twenty-four (24) hours, and in all other cases within seven (7) days of the Project Proponent becoming aware of such incident.
Section 108	The Project Proponent shall submit monitoring reports to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP, or periodically as prescribed by the Ministry.
Section 109	The monitoring reports shall include: <ul style="list-style-type: none"> <li>a) documentation of compliance with all conditions;</li> <li>b) progress made to date on implementation of the EMP against the submitted implementation schedule;</li> <li>c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;</li> <li>d) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;</li> <li>e) accidents or incidents relating to the occupational and community health and safety, and the environment; and</li> <li>f) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required.</li> </ul>
Section 110	Within ten (10) days of completing a monitoring report as contemplated in Article 108 and Article 109 in accordance with the EMP schedule, the Project Proponent shall make such report (except as may relate to National Security concerns) publicly available on the Project's website, at public meeting places (e.g. libraries, community halls) and at the Project offices. Any organization or person may request a digital copy of a monitoring report and the Project shall, within ten (10) days of receiving such request, submit a digital copy via email or as may otherwise be agreed upon with the requestor.
Section 113	For purposes of monitoring and inspection, the Project Proponent: <ul style="list-style-type: none"> <li>a) shall grant to the Ministry and/or its representatives, at any time during normal working hours, access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed; and</li> <li>b) from time to time as and when the Ministry may reasonably require, shall grant the Ministry access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed.</li> </ul>
Section 115	In the event of an emergency, or where, in the opinion of the Ministry, there is or may exist a violation or risk of violation of the compliance by the Project with all applicable environmental and social requirements, the Project shall grant full and immediate access to the Ministry at any time as may be required by the Ministry.

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Section 117	The Project Proponent shall further ensure that the Ministry's rights of access here under shall extend to access by the Ministry to the Project's contractors and subcontractors.
CHAPTER VIII. Monitoring Section 102	<p>The monitoring reports shall include:</p> <ul style="list-style-type: none"> <li>a) documentation of compliance with all Conditions;</li> <li>b) progress made to date on implementation of the EMP against the submitted implementation schedule;</li> <li>c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;</li> <li>d) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;</li> <li>e) accidents or incidents relating to the occupational and community health and safety, and the environment; and</li> <li>f) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required</li> </ul>

**3.1.1.5. 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.
Scope of Application	Provisions of the general and applicable industry-specific Guidelines shall be reflected in project environmental management plan (EMP) and environmental compliance certificate (ECC) and together constitute a project's commitment to take necessary measures to avoid, minimize and control adverse impacts to human health and safety, and the environment through reducing the total amount of emissions generation; to adopting process modifications, including waste minimization to lower the load of pollutants requiring treatment; and as necessary, to apply treatment techniques to further reduce the load of contaminants prior to release or discharge.
CHAPTER II Implementation Procedures	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. These Guidelines will henceforth be applied by the Ministry in satisfying this requirement until otherwise modified or succeeded by other guidelines or standards
Section 10	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 3 emissions. In this regard, the Ministry will require that project adhere to general and applicable industry guidelines set out in Annex 1.
Section 11	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, as distinguished from new projects. At the Ministry's discretion less stringent levels or measures than provided for in these Guidelines may be specified as appropriate, and a timeframe agreed for a project to fully comply with these Guidelines.

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Section 12	As specified in the EIA Procedure, projects shall engage in continuous, proactive and comprehensive self monitoring of the project and comply with applicable guidelines and standards. For purposes of these Guidelines, projects shall be responsible for the monitoring of their compliance with general and applicable industry-specific Guidelines as specified in the project EMP and ECC.
Section 13	Air emissions, noise, odor, and liquid /effluent discharges will be sampled and measured at points of compliance as specified in the project EMP and ECC.

**3.1.1.6. National Environmental Policy of Myanmar (2019)**

National Environmental Policy Vision & mission	<p><u>Vision</u></p> <p>A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar.</p> <p><u>Mission</u></p> <p>To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all policies, laws, regulation, plans, strategic, programmes and projects in Myanmar.</p>
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**3.1.1.7. Myanmar Investment Law, 2016**

Chapter II Objective Section 3	<p>The objectives of this Law are as follows:</p> <p>(a) to develop responsible investment businesses which do not cause harm to the natural environment and the social environment for the interest of the Union and its citizens;</p> <p>(b) to protect the investors and their investment businesses in accordance with the law;</p> <p>(c) to create job opportunities for the people;</p> <p>(d) to develop human resources;</p> <p>(e) to develop high functioning production, service, and trading sectors.</p> <p>(f) to develop technology, agriculture, livestock and industrial sectors;</p> <p>(g) to develop various professional fields including infrastructure around the Union;</p> <p>(h) to enable the citizens to be able to work alongside with the international community;</p> <p>(i) to develop businesses and investment businesses that meet international standards.</p>
Chapter XIII Employment of Staff and Workers Section 51	<p>The investor:</p> <p>(a) may appoint of any citizen who is a qualified person as senior manager, technical and operational expert, and advisor in his investment within the Union in accordance with the Laws;</p> <p>(b) shall appoint them to replace, after providing for capacity building programs in order to be able to appoint citizens to different level positions of management, technical and operational experts, and advisors;</p> <p>(c) shall appoint only citizens for works which does not require skill;</p> <p>(d) shall appoint skilled citizen and foreign workers, technicians, and staff by signing an employment contract between employer and employee in accordance with the labor laws and rules;</p> <p>(e) shall ensure to obtain the entitlements and rights in the labor laws and rules, including minimum wages and salary, leave, holiday, overtime fee, damages, compensation of the workman, social welfare, and other</p>

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	<p>insurance relating to workers in stipulating the rights and duties of employers and employees and occupational terms and conditions in the employment contract;</p> <p>(f) shall settle disputes arising among employers, among workers, between employers and workers, and technicians or staff in the investment in accordance with the applicable laws.</p>
<p>Chapter XVI</p> <p>Responsibilities of Investors</p> <p>Section 65</p>	<p>The Investor:</p> <p>(f) shall not make any significant alteration of topography or elevation of the land on which he is entitled to lease or to use, without the approval of the Commission;</p> <p>(g) shall abide by applicable laws, rules, procedures and best standards practiced internationally for this investment so as not to cause damage, pollution, and loss to the natural and social environment and not to cause damage to cultural heritage;</p> <p>(i) shall close and discontinue the investment only after payment of compensation to employees in accordance with applicable laws for any breach of employment contracts, closure of investment, sale and transfer of investment, discontinuation of investment, or reduction of workforce;</p> <p>(j) shall pay wages and salaries to employees in accordance with applicable laws, rules, procedures, directives and so forth during the period of suspension of investment for a credible reason;</p> <p>(k) shall pay compensation and indemnification in accordance with applicable laws to the relevant employee or his successor for injury, disability, disease and death due to the work;</p> <p>(l) shall supervise foreign experts, supervisors and their families, who employ in their investment, to abide by the applicable laws, rules, orders and directives, and the culture and traditions of Myanmar;</p>
<p>Chapter XVII</p> <p>Insurance</p> <p>Section 73</p>	<p>The investor shall ensure the types of insurance stipulated in the provision of the rules at any insurance enterprise which is entitled to carry out insurance businesses within the Union.</p>

**3.1.1.8. 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)	<p>Section 15 - If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person.</p> <p>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.</p>

**3.1.1.9. Myanmar Insurance Law (1993)**

<p>Chapter II</p> <p>Establishment and Aim</p> <p>Section 4</p>	<p>The Myanmar Insurance is established with the following aims: -</p> <p>social and economic losses which the people may encounter, due to common perils;</p> <p>(b) to promote the habit of savings individually by effecting life assurance, thus</p>
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	contributing to the accumulation of resource, of the State; (c) to win the trust and confidence of the people in the insurance system by providing effective insurance safeguards which may become necessary in view of the social and economic developments.
Chapter VI Effecting Insurance and Granting of Benefits Section 15	Owners of motor vehicles shall affect 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.

**3.1.1.10. The Commercial Tax Law (1990) Amended 2014**

Chapter 5 Registration and Intimation of Commencement of Enterprise Article 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimation 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 Article 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.
Article 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.
Article 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.
Article 12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
Article 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.

**3.1.1.11. The Amended Law for Factories Act, 1951 (Amended in 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.

**Environmental Management Plan****3.1.1.12. The Private Industrial Enterprise Law, 1990**

Chapter II Basic Principles Section 3	<p>Private Industrial Enterprises shall be conducted in accordance with the following basic principles: -</p> <p>(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;</p> <p>(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;</p> <p>(d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises;</p> <p>(e) to cause opening up of more employment opportunities;</p> <p>(f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution;</p> <p>(g) to cause the use of energy in the most economical manner.</p>
Chapter III Registration of Private Industrial Enterprises Section 4	<p>(a) Any person desirous of conducting any private industrial enterprise;</p> <p>(b) Any person conducting any private industrial enterprise on the day this Law is enacted; by using any type of power which is three horsepower and above or manpower of ten wage-earning workers and above shall register under this Law.</p>
Chapter VI Duties and Rights of the Entrepreneur Section 13	<p>The duties of the entrepreneur are as follows: -</p> <p>(b) shall abide by the terms and conditions of the registration certificate;</p> <p>(l) shall shift the place of enterprise, change the nature of enterprise, amalgamate enterprises and split up enterprises only with the approval of the Directorate;</p> <p>(g) shall abide by the orders and directives issued from time to time by the Ministry and the Directorate;</p>

**3.1.1.13. The Prevention of Hazard from Chemical and Related Substances Law, 2013**

Chapter II Aims Section 3	<p>This law was enacted with the objectives of:</p> <p>a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances;</p> <p>b. To supervise systematically in performing the chemical and related substances business with permission for being safety;</p> <p>c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically;</p> <p>d. To perform the sustainable development for the occupational safety, health and environmental conservation.</p> <p>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.</p>
Section 15	<p>A person who has obtained a licence, before starting the respective chemical and related substances business: -</p> <p>(a) shall be inspected for the safety and the power of resistance of the machinery and equipment by the respective Supervisory Board and Board of Inspection;</p> <p>(b) shall be attended the person who serve in the work to the respective foreign trainings or the trainings and the expert trainings on prevention of hazard from the</p>



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	chemical and related substances opened by the government department and the government organizations.
Section 16	<p>A person who has obtained a licence: -</p> <p>(a) shall abide the licence regulations;</p> <p>(b) shall perform to abide strictly the instructions for being safety in using the chemical and related substances by himself and also the persons who serve the work;</p> <p>(c) shall keep the required safety equipment enough in the chemical and related substances businesses, furthermore shall grant the personal protection equipment and dresses free of charge to the working persons;</p> <p>(d) shall make the course of training and study and instruction if necessary to the working persons for using the occupational safety equipment, the personal protection equipment and the dresses systematically in the chemical and related substances business;</p> <p>(e) shall be inspected by the respective Supervisory Board and Boards of Inspection in respect of whether or not the hazard may impact on the Human Being and Animals' health and the environment;</p> <p>(f) shall make medical checkup the working persons who will work in the chemical and related substances business and shall permit to serve in that work after obtaining the recommendation that his health is suitable for that work. This medical checkup records shall be kept systematically;</p> <p>(g) shall send the copy of informative letter of the permission to the respective Department of Township Administration, if the hazardous chemical or related substances are permitted to store;</p> <p>(h) shall acquire in advance the guidance and agreement of the respective Department of Fire Brigade, if the business that is worried to fire hazard is operated by using the fire hazard substances or the explosive substances;</p> <p>(i) shall transport only the permitted amount of the chemical and related substances in accordance with the prescriptive stipulations, if they are transported in local;</p> <p>(j) shall take the permission from the Central Supervisory Board if the chemical and related substance is altered and transferred from one place to any other place which contained in the license;</p> <p>(k) shall abide and perform in accordance with the related environmental laws not to impact and damage to the environment in operating the chemical and related substances business.</p>
Section 17	A person who has obtained a licence, shall put the insurance in accordance with the prescriptive stipulations to be able to pay the compensation, if the impact and damage is occurred on the Human Being and Animals or the environment in respect of the chemical and related substances businesses.
Section 22	A person who has obtained the registration certificate shall abide the regulations consisted in the registration certificate furthermore shall also abide the order and instructions issued occasionally by the Central Supervisory Board.
Chapter IX Hazard Control and Decrease Section 27	<p>A person who has obtained the licence to be complied the following matters to control and decrease the hazard of the chemical and related substances: -</p> <p>(a) classifying the hazard level to protect in advance the hazard according to the properties of the chemical and related substances;</p> <p>(b) expressing the Material Safety Data Sheet and Pictogram;</p> <p>(c) providing the safety equipment, the personal protection equipment to protect and decrease the accident and attending to the training to be used systematically;</p> <p>(d) performing in accordance with the stipulations in respect of transporting, possessing, storing, using, discharging the chemical and related substances;</p>

**Environmental Management Plan****3.1.1.14. Petroleum and Petroleum Product Law (2017)**

Chapter II Objective Section 3	<p>The Objectives of this law are as follows:</p> <p>a.to carry out the petroleum and petroleum product businesses activities systematically in accordance with the provisions of the law, stipulated standards, procedures and conditions;</p> <p>b.to enable the petroleum and petroleum product business activities to carry out safely without environmental impact;</p> <p>c.to establish free and fair competition in carrying out petroleum and petroleum product business activities;</p> <p>d.to secure energy requirement and energy security of the Union;</p> <p>e.to obtain tax revenue of the Union</p>
Chapter IV Application for Licence, Issue of Permit, Determining Conditions to be abided by, and Supervision Section 9	<p>The Ministry of Transport and Communications shall carry out the following functions relating to any petroleum and petroleum product;</p> <p>a. issuing licence to vehicles, vessels and barges that carry any petroleum and petroleum product;</p> <p>b. determining period, form, conditions, means of applying for licence, permitting authority and fees to be assessed, for licences under subsection (a);</p> <p>c. determining and supervision on ports for vessels and barges that carry out import, export, and transport by water in accord with procedures;</p> <p>d. taking action, as necessary, in accordance with the existing laws if it occurs spill or accident in carrying out import, export, transport, and sale and distribution of petroleum and petroleum product by water;</p> <p>e. determining procedures and conditions to be abided by in carrying out transport business except transport by pipeline.</p>
Section 10	<p>The Ministry of Natural Resources and Environmental Conservation shall carry out the following functions relating to any petroleum and petroleum product;</p> <p>a. issuing licence for the right to store for the storage tanks and warehouses;</p> <p>b. issuing transport permit for the vehicles, vessels and barges that shall carry any petroleum and petroleum product;</p> <p>c. determining the period, form and terms and conditions, manners of applying licence, permitting authority and fees to be assessed, for licence under subsection (a) and permit under subsection (b);</p> <p>d. if it occurs environmental impacts in carrying out petroleum and petroleum product business activities, taking action, as necessary, in accordance with the existing laws of on-site inspection;</p> <p>e. determining, in coordination with ministries concerned, procedures and conditions relating to standard and quality of storage tanks and warehouse, and tanks of vehicles, vessels and barges that carry any petroleum and petroleum product.</p>
Section 11	<p>On all receptacles containing any dangerous petroleum and petroleum product, the warning sign of danger by stamping, embossing, painting, printing or any other means shall be expressed. If it is impossible to express as such, similar warning signs of the nature of danger of gasoline, spirit or petroleum shall be expressed in writing at the ostensible place in salient words or signs near the receptacle.</p>
Chapter VI Prohibition Section 31	<p>Any licensee:</p> <p>a. shall not violate any prohibition contained in the rules, regulations, bye-laws, notifications, orders, directives, procedures and conditions or fail the duty to implement;</p> <p>b. shall not use a receptacle and transport vehicles and pipelines that contains any dangerous petroleum and petroleum product without saliently mentioning in</p>

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	<p>writing of warning signs;</p> <p>c. shall not import, transport, store and sell and distribute the dangerous petroleum and petroleum product, or non-dangerous petroleum and petroleum product except by the means stipulated in this law;</p> <p>d. shall not have the right to carry out without undertaking the environmental impacts, in operating petroleum and petroleum product business activities;</p> <p>e. shall not distribute and sell petroleum and petroleum products which do not fulfill or are not in conformity with the standard, quality and measurement.</p>
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**3.1.1.15.Industrial Use Explosive Substances Law, 2018**

Objective:	<p>The objectives of Industrial Use Explosive Substances Law (2018) are as follow:</p> <p>(a) to make, import, transport, store and use of exploiting materials that explode in the workplace must be carefully handle and use.</p> <p>(b) to take care of safety in the workplace which use yarns and accessories</p> <p>(c) to properly supervise the use of explosive materials in the workplace.</p>
Chapter 7 Prohibitions Article 18	Any license holder shall not be refused to perform the inspection of the inspector or the inspector general.
Article 19 (b)	Under Section 8, any explosive materials shall not be destroyed materials without the approval of the Defense Ministry's Executive Board.
Article 19 (c)	Rules and Regulations, orders, disciplines, instructions issued under this law must not fail to act.

**3.1.1.16.The Law on Standardization (2014)**

Chapter (II) Objectives Section 3	<p>The objectives of this Law are as follows:</p> <p>(a)to enable to determine Myanmar Standards;</p> <p>(b)to enable to support export promotion by enhancing quality of production organizations and their products, production processes and services;</p> <p>(c)to enable to protect the consumers and users by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards;</p> <p>(d)to enable to support protection of environment related to products, production processes and services from impact, and conservation of natural resources;</p> <p>(e)to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment;</p> <p>(f)to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade.</p> <p>(g)to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.</p>
Chapter 7 Taking Action by Committee No. 19	<p>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:</p> <p>warning suspending the certificate of certification for limited period</p> <p>cancelling the certificate of certification</p>
Chapter (VI) Application for and Issue of Certification	A person desirous of obtaining certificate of certification shall apply to the department and organization which has obtained the accreditation.

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Section 17	
Chapter (VII) Taking Action by Committee Section 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 orders: (a)warning; (b)suspending the certificate of certification for limited period; (c)cancelling the certificate of certification
Chapter (IX) Offences and Penalties Section 26	If any person who obtained certificate of certification uses standardization mark on the product which is not in conformity with the relevant standard or relating to service shall be punished with imprisonment for a term not exceeding one year or with fine not more than one million Kyats or with both.

**3.1.1.17.The Labor Organization Law (2011)**

Chapter V Rights and Responsibilities of the Labour Organization Section 17	The labour organizations shall have the right to carry out freely in drawing up their constitution and rules, in electing their representatives, in organizing their administration and activities or in formulating their programmes. The Labour Organizations have the right to negotiate and settle with the employer if the workers are unable to obtain and enjoy the rights of the workers contained in the labour laws and to submit demands to the employer and claim in accord with the relevant law if the agreement cannot be reached.
Section 18	The labour organization has the right to demand the relevant employer to re-appoint a worker if such worker is dismissed by the employer and if there is cause to believe that the reasons of such dismissal were based on labour organization membership or activities, or were not in conformity with the labour laws.
Section 19	The labour organizations have the right to send representatives to the Conciliation Body in settling a dispute between the employer and the worker. Similarly, they have the right to send representatives to the Conciliation Tribunals formed with the representatives from the various levels of labour organizations.
Section 20	In discussing with the Government, the employer and the complaining workers in respect of worker's rights or interests contained in the labour laws, the representatives of the labour organization also have the right to participate and discuss.
Section 21	The labour organizations have the right to participate in solving the collective bargains of the workers in accord with the labour laws.
Section 22	The labour organizations shall carry out peacefully in carrying out holding of meetings, going on strike and carrying out other collective activities in accord with their procedures, regulations, by-laws and any directives prescribed by the relevant Labour Federation.

**3.1.1.18.The Social Security Law (2012)**

The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
Chapter II Objectives Section 3	The objectives of this Law are as follows: (a) to support the development of the State's economy through the development of production by causing to enjoy more security in social life and health care by the workers who are major productive force of the State by the collective guaranty of the employer, worker and the State; (b) to enjoy more security in social life and medical care by the public by effecting their insurance voluntarily;

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	<p>(c) to raise public confidence upon the social security scheme by providing benefits which are commensurate with the realities;</p> <p>(d) to have the right to draw back some of the contributions paid by the employers and the workers as savings, in accord with the stipulations;</p> <p>(e) to obtain the right to continued medical treatment, family assistance benefit, invalidity benefit, superannuation benefit, survivors' benefit, unemployment benefit, the right to residency and ownership of housing after retirement in addition to health care and pecuniary benefit for sickness, maternity, death, employment injury of the workers.</p>
Chapter V Social Security System and Benefits Section 11	<p>(a) The following establishments shall be applied with the provisions for compulsory registration for social security system and benefits contained in this Law if they employ minimum number of workers and above determined by the Ministry of Labour in co-ordination with the Social Security Board:</p> <p>(i) production industries doing business whether or not they utilize mechanical power or a certain kind of power, works of production, repairing or services, or engineering works, mills, warehouses, establishments;</p> <p>(ix) works carried out with foreign investment or citizen investment or joint ventured businesses;</p> <p>(b) Any establishment which is applied with the provisions of compulsory registration under sub-section (a) shall continue to be applied by this Law even though any of the following situations occurs if it continues to carry out such work:</p> <p>(i) carrying out work by employing under stipulated minimum number of workers but more than one worker;</p> <p>(ii) changing the employer or changing the type of business.</p>
Social Security System Section 13	<p>The Social Security Board shall manage and keep the following social security systems in accord with the stipulations that insured persons may enjoy social security benefits:</p> <p>(b) Family Assistance Insurance System:</p> <p>i) education allowance benefit for the children of insured persons who earn below the specified amount of income;</p> <p>ii) health care and aid benefit in time of natural disaster;</p> <p>iii) suitable benefit for dependent family members.</p>
Section 15	<p>(a) The following funds are included in the Social Security Fund:</p> <p>(i) health and social care fund;</p> <p>(ii) family assistance fund;</p> <p>(iii) invalidity benefit, superannuation pension benefit, and survivors' benefit fund;</p> <p>(iv) unemployment benefit fund;</p> <p>(v) other social security fund for social security system of compulsory registration and contribution specified by the Ministry of Labour, in co-ordination with the Social Security Board, according to clause (2) of subsection (e) of section 13;</p> <p>(vi) other social security fund specified as to which contribution may be paid after voluntary according to clause (2) of sub-section (e) of section 13;</p> <p>(vii) fund for Social Security Housing Plan;</p>
Section 18	<p>(b) The employer shall deduct contributions to be paid by worker from his remuneration and pay to the social security fund together with contribution to be paid by him. The employer shall also bear the expenses for such contribution.</p>
Chapter VI Application to Employment Injury Benefit Insurance System, Employment Injury Benefit	<p>The provisions contained in this Law relating to the employment injury benefit insurance system shall apply to the following workers:</p> <p>(a) workers at establishments which are applied to social security system who have registered compulsorily in accord with sub-section (a) of section 16 and contributed to the social security funds contained in clauses (1), (3), (4) and (5) of</p>

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Fund and Benefits Section 45	sub-section (a) of section 15; (b) workers specified as being applied to provisions of compulsory registration for employment injury benefit insurance system by notification of the Ministry of Labour, in co-ordination with the Social Security Board with the approval of the Union Government.
Section 48	(a) The employer shall affect insurance by registering for employment injury benefit insurance system contained in section 45 at the relevant township social security office and pay contribution to employment injury benefit fund in accord with stipulations in order that workers applied to provisions of compulsory registration may obtain the employment injury benefits; (b) The employers may affect insurance by registering voluntarily for insurance of the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system, by paying stipulated contribution to employment injury benefit insurance fund; (c) When registering to effect insurance for employment injury benefit in accord with sub-sections (a) and (b), the worker shall submit medical certificate.
Section 49	Non-application to the Workmen's Compensation Act (a) The employers and insured persons of establishments where the employer had registered compulsorily in accordance with sub-section (a) of section 48 or where the employer had registered voluntarily in accord with sub-section (b) of section 48 who have paid contribution to employment injury benefit fund shall not apply to the provisions contained in the Workmen's Compensation Act as regards the employment injury benefit; (b) The insured persons who has affected insurance for employment injury benefit in accord with sub-sections (a) and (b) of section 48 shall be entitled only to the employment injury insurance benefits contained in this Law.
Section 53	(a) The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Section 75	The employer of establishments applied by this Law: (a) shall prepare and keep the following records and lists correctly and submit to the relevant township social security office in accord with the stipulations: i) records and lists of workers' daily attendance; ii) records of appointing new worker, employing worker by changing of work, suspension from work, dismissal from work and resignation from work; iii) records of promotion and paying remuneration; iv) records and lists of employers, managers, and administrators; and records of changes of them; (b) shall inform the relevant township social security office if the following matters arise: i) change in number of workers and address of establishment; ii) change of employer, change of business, suspension from work, and termination of work; iii) employment injury, employment death, and occupational diseases; (c) shall produce work records and lists on requirement of inspection team or official assigned duty under this Law by the Social Security Head Office and various Regional Social Security Offices.



**Environmental Management Plan****3.1.1.19.The Ethnic Rights Protection Law (24th February, 2015)**

Chapter II Objectives	<p>The objectives of this Law are as follows:</p> <p>(a) to obtain equal citizen's rights for all ethnic groups;</p> <p>(b) to live eternally together with amicable relations among ethnic groups on the basis of genuine Union Spirit;</p> <p>(c) to preserve and develop language, literature, fine art, culture, custom, national character, and historical heritage of ethnic groups;</p> <p>(d) to promote solidarity, mutual rarity and respect, and mutual assistance among ethnic groups;</p> <p>(e) to promote socioeconomic development including education, health, economy, transport and communication, so forth, of less-developed ethnic groups;</p> <p>(f) to fully obtain the rights prescribed in the Constitution by ethnic groups.</p>
Chapter IV Formation of the Ministry and Appointment of the Union Minister	<p>5. The matters of projects shall completely be informed, coordinated and performed with the relevant local ethnic groups in the case of development works, major projects, businesses and extraction of natural resources will be implemented within the area of ethnic groups.</p>

**3.1.1.20.Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)**

<p>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.</p>	
Section 23	<p>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.</p>
Section 24	<p>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.</p>
Section 25	<p>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.</p>
Section 38	<p>No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.</p>
Section 39	<p>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.</p>
Section 40	<p>The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal</p>
Section 51	<p>The project proponent has to pay the compensation decided by Tribunal if violates any act or any omission to damage the interest of labour by reducing of product without efficient cause.</p>

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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.
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**3.1.1.21. The Employment and Skills Development Law (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.	
Chapter (2) Employment and Employment Seeking Section 3	The Ministry shall manage the facilities and measures to help for selection of employment, obtaining employment for employment seeker suitable according to the age and strength; tenure in employment and skill development, and to help employers for obtaining workers suitable for the employment
Chapter (3) Making Contract of Employment Section 5	(a)(1) After the employer has employed a worker for any job, he shall within 30 days of so doing, sign a Contract of Employment with the worker. This clause however shall not apply to permanent workers of government departments and organizations. (2) If prior to employment, the worker is required to attend any per-employment training for a period or appointed on probation for a period, sub-section (1) shall not apply for that period. (c) The workplace rules in the Employment Contract shall conform to the rules made under existing laws and the rights of the workers in the Contract shall not be less than those in existing laws.
Chapter (5) Implementing Training Programs and Skills Development of Workers Section 14	Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
Chapter (8) Establishing and Utilizing Workers' Skills Development Fund Section 30	(a) The employers of Industrial and Service Enterprises shall pay contribution to the fund every month without fail amounting to not less than below 0.5% of the payroll of his workers up to the level of supervisors of the workers. (b) The employer shall not deduct the contribution paid under sub-section (a) to the fund from the wages of the workers.

**3.1.1.22. 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.	
Chapter IV Determining the Categories of Work Section 6	The National Committee shall determine, by notification, commercial, production and service, agricultural and livestock breeding business which shall be applied by the provisions relating to minimum wage contained in this Law, in the whole country or relevant Union, Region or State. Moreover, it may amend the said businesses in accord with the changing situation from time to time.
Chapter VII The Duties of the Employer Section 12	The employer: (a) shall not pay wage to the worker less than the minimum wage stipulated under this Law; (b) may pay more than the minimum wage stipulated under this Law; (c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law;



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	<p>(d) shall pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific benefits, interests or opportunities are to be paid, it may be paid in cash or partly in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker;</p> <p>(e) in paying minimum wage to the workers working in the agricultural and livestock business, some cash and some property at prevailing regional price may be paid jointly according to local custom or desire of the majority of workers or collective agreement. Such payment shall be for any personal use and benefit of the worker and his family and the value shall also be considerable and fair.</p>
Section 13	<p>The employer:</p> <p>(a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;</p> <p>(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;</p> <p>(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;</p> <p>(d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;</p> <p>(e) shall allow the entry and inspection of the inspection officer to the commercial, production and service businesses, agricultural and livestock breeding workplaces and give necessary assistances;</p> <p>(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;</p> <p>(g) if the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.</p>
<p>Chapter IX</p> <p>Assigning Duty to the Inspection Officer, Inspection and Taking Action</p> <p>Section 18</p>	<p>The inspection officer:</p> <p>(a) has the right to enter and inspect the relevant commercial, production and service workplaces, agricultural and livestock breeding workplaces and inspect whether or not they comply with and carry out in accord with the rules, notifications, orders, directives and procedures under this Law, whether or not the lists, schedules and documents, wages relating to the workers are prepared correctly, and whether or not such lists, schedules and documents are reported to the Department in accord with the stipulations;</p> <p>(b) may summon, inspect the relevant persons under the assignment of duty by the Department, asking and copying for the relevant lists, schedules and documents.</p> <p>(c) if there are outside workers at employer, has the right to inspect information relating to such outside workers, their names and addresses and the right to ask for and copy their lists and documents and lists relating to minimum wage;</p> <p>(d) in carrying out under sub-section (a), (b) and (c) relating to inspection, if required by the employer to produce the document, shall show the civil service identify card issued by the relevant department;</p> <p>(e) Report to the Department in accord with the stipulations relating to the finding under sub-sections (a), (b) and (c), and documents and papers called for.</p>

**Environmental Management Plan****3.1.1.23.Payment of Wages Law (2016)**

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.	
Chapter II Methods and Time of Payment of Wages Section 3	<p>The employer:</p> <p>(a) shall pay wages to the workers employing in his business in local currency or foreign currencies stipulated by the Central Bank of Myanmar. Such payment may be paid in cash or cheque or deposit into the bank account of the worker with the agreement between the employer and the worker.</p> <p>(b) In paying such wages:</p> <p>(i) if it is necessary to pay particular benefit, profits and opportunities for workers working in commerce, production and service businesses, it may be paid in cash or some in cash and some in things set up by local price on own volition of workers in accordance with the stipulations.</p> <p>(ii) For workers employing in agriculture and livestock breeding business, it may be paid some wage in cash and something set up by local price according to custom, or on the volition of majority of worker or by collective agreement. In paying so, it shall be for personal use and the interest of his family, and shall be appropriate and equitable.</p> <p>(c) If any worker is conscripted under the Public Military Service Law, the (60) days of wages shall be paid as a special right</p>
Section 4	<p>The employer:</p> <p>(a) shall pay wages at the end of the work or at the time agreed to pay to the worker for hourly, daily, weekly or other part time work, or temporary or piece work;</p> <p>(b) shall not exceed one month than the period agreed with the worker under sub-section (a) to pay wages;</p> <p>(c) shall pay the wages for the permanent work monthly. In making such payment:</p> <p>(i) if workers are not more than 100, wages shall be paid at the end of the period for payment of wage;</p> <p>(ii) If workers are more than 100, it shall be paid no later than five days after the end of the period for payment of wage;</p> <p>(d) shall pay the due wages within two working days from the date of termination, if a worker is terminated;</p> <p>(e) shall pay the wages at the end of the period for payment of wages, if a worker resigns on his own volition by sending prior written notice of resignation;</p> <p>(f) shall pay the due wages to a legal heir within two working days after the decease, if a worker is deceased;</p> <p>(g) shall pay all wages on a working day</p>
Section 5	If an employer encounters difficulty to make payment under sub-section(c) of the Section 4 due to any unexpected condition, including natural disaster, the employer shall submit that which date has been altered for the payment of wages with the consent of the workers to the Department on reasonable ground.

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Chapter III Deduction from Wages Section 13	<p>The employer:</p> <p>(a) may deduct from wages, except leaves which are entitled wages under the relevant law and public holidays, for the absent period from work;</p> <p>(b) may deduct expenses which are allowance accommodation and ferry service are arranged by the employer, meal allowance, electricity charges, water service charges and income taxes liable to be paid by worker and cash paid in excess under a mistake, which are not included in the expression of wages under this Law;</p> <p>(c) may deduct advance payment or reimburse or savings for the worker or any contribution under any law demanded by a worker from wages;</p> <p>(d) may deduct from the wages of the worker under a decision of a Court or Arbitration Council or Arbitration Body.</p>
Chapter IV Overtime Wages Section 14	The worker has the right to enjoy overtime wages stipulated by the law if he works over time.

**3.1.1.24. The Minimum Wage Law (2013)**

<p>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.</p>	
Chapter VII The Duties of the Employee Section 12	<p>The employer:</p> <p>(a) shall not pay wage to the worker less than the minimum wage stipulated under this Law</p> <p>(b) may pay more than the minimum wage stipulated under this Law;</p> <p>(c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law;</p> <p>(d) shall pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific, benefits, interests or opportunities are to be paid, it may be paid in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker;</p> <p>(e) in paying minimum wage to the workers working in the agricultural and live stock business, some cash and some property at prevailing regional price may be paid jointly according to local customer desire of the majority of workers or collective agreement. Such payment shall be for any personal use and benefit to the worker and his family and the value shall also be considerable and fair.</p>
Section 13	<p>The employer:</p> <p>(a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;</p> <p>(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;</p>

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	<p>(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;</p> <p>(d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;</p> <p>(e) shall allow the entry and inspection of the inspection officer to the commercial, production and service businesses, agricultural and livestock breeding workplaces and give necessary assistances;</p> <p>(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;</p> <p>(g) if the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.</p>
<p>Chapter VIII</p> <p>The Rights of the Workers Relating to the Minimum Wage</p> <p>Section 14</p>	<p>A worker working in any establishment relating to this Law:</p> <p>(a) has the right to obtain the minimum wage stipulated under this Law or, if the employer pay more than the said wage;</p> <p>(b) has the right to continue to enjoy the pay paid more, if the pay received is more than the minimum wage stipulated under this Law, before the coming into force of this Law;</p> <p>(c) has the right to enjoy the minimum wage stipulated under this Law, if the minimum wage contained in the employment agreement is less than the minimum wage stipulated under this Law;</p> <p>(d) has the right to enjoy not less than the minimum wage stipulated for each work where he is working when working in two or more works;</p> <p>(e) has the right to enjoy the stipulated minimum wage for the time worked in the part-time job, hourly job;</p> <p>(f) has the right to enjoy a holiday per week with pay in the salary-paid work. If he is employed in such holiday, he shall have the right to obtain over-time fee in accord with the existing law;</p> <p>(g) if working less than the working hours per day stipulated in a daily-waged job is not due to reduced working according to the desire of the worker, or if work has to be paused due to the failure of employer to give job, the full wage shall be paid as if the work is done full-time;</p> <p>(h) has the right to enjoy the stipulated minimum wage without discriminating between man and woman;</p> <p>(i) has the right to enjoy the minimum wage in cash, if he is a worker working in the commercial, production and service business. Moreover, if the specific benefits, interests or opportunities are to be paid, it may be paid in cash or partly in cash and partly in property at prevailing regional price jointly according to the desire of the worker;</p> <p>(j) if he is a worker working in the agricultural and livestock breeding business, the minimum wage may be enjoyed in some cash and some property at prevailing regional price jointly according to local custom or desire of the majority</p>

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	of workers or collective agreement for the worker and his family in accord with the stipulations.
Chapter X Prohibitions and Penalties Section 22	Any employer: (a) shall not fail to pay the workers the minimum wage stipulated under this Law; (b) shall not pay to the workers less than the minimum wages and other benefits which is entitled by the worker under section 14; (c) relating to the accounts, schedules, documents and lists of wage of the workers: (i) shall not make false entry, deceitful recording or false and deceitful reporting; (ii) shall not fail to report to the relevant department in accord with the stipulations; (iii) shall not fail to produce when required by the inspection officer; (d) shall not fail to go and accept inspection when summoned by the inspection officer; (e) shall not obstruct or interfere with the inspection officer who comes and inspects on duty.
Section 24	Any employer: (a) shall not violate any term and condition contained in the minimum wage notification; (b) shall not fail to inform the workers relating to the rates of minimum wage concerning to his workers among the rates of minimum wage stipulated under this Law and announce at the place where the workers are able to see it in the work centre and workplace;

**3.1.1.25. The Leave and Holidays Rules (1951, partially revised in 2018)**

This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leave and maternity leave.	
Chapter (3) Leave Section 23	A worker has the right to take leave with respective wages or with respective salary according to the type of leave and designated period set-up by the law. However, workers are entitled to take earned leave with respective average wages or average salary.
Section 24	Workers have the right to take casual leave, medical leave or maternity leave within the probation period.
Section 25	For days in which a worker is not in the workplace after the end of a period of leave, such days shall not be counted as leave.
Section 26	If there are holidays just before or right after one's leave commences, these days cannot be counted as part of the leave period.
Section 27	Subjecting a worker to relocation, suspension of duty, reduction of salary or

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	termination within their leave period is not allowed.
Chapter (4) Duties and Responsibilities of Worker Section 49	<p>The worker</p> <p>(a) must ask for leave from the employer or the manager or from an authorized person with Form</p> <p>(1) within the normal working hours.</p> <p>(b) must report to the employer or to the manager or to an authorized person when the worker is back in the workplace after taking leave.</p> <p>(c) must inform employer or manager or authorized person, by phone or any other method, if the worker is unable to return to the workplace from their current location by the end of leave due to natural disaster or unforeseen happenings or accident occurring within the leave period.</p>
Chapter (5) Duties and Responsibilities of an Employer Section 50	<p>The employer</p> <p>(a) must provide the worker casual leave, medical leave and maternity leave with respective wages or salary. Moreover, must allow the worker earned leave with respective average wages or average salary. If the employer normally pays the cost of living, then the cost of living must also be included.</p> <p>(b) must provide the worker with earned leave starting from the day of entitlement within 12 months, with respective average wages or with average salary, and also must advance the entitled wage prior to the worker taking leave.</p> <p>(c) must announce the number of entitled earned leave calculations within three months starting from the last day of the 12-month period or entitled earned leave. In this way, workers can take leave by turns (alternatively). Moreover, to fix the eligibility period within which workers can take earned leave.</p> <p>(d) if the worker resigns or is terminated or in case of death, has to pay the respective wages/salary within two business/working days starting from the date of incidence.</p> <p>(e) has to pay the eligible wage/salary for earned leave to his/her official representative (if the worker is deceased).</p> <p>(f) has to pay for the respective earned leave period if there is a temporary or permanent shutdown.</p> <p>has to allow eligible earned leave if the nature of work is less than twelve months.</p> <p>(g) is not allowed to suspend, to reduce the salary, to relocate or to terminate a worker due to the worker taking maternity leave or medical leave.</p> <p>(h) has to fill up Form (1), (2), (3), (4), (5) and (6) according to the law. These forms shall be easily accessible from the Inspector. The employer must maintain these documents for up to twelve months' period.</p> <p>(i) has to record the leave taken in Form (7) and submit to the Inspector not later than every seventh day of each month.</p> <p>(j) wants the worker to work on a gazette holiday, the employer must receive consent from the worker. The employer must submit Form (8) to the Inspector for approval.</p>



**Environmental Management Plan****3.1.1.26.Public Health Law (1972)**

Chapter 2 Prevention of Public Health Objectives	<p>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:</p> <p>The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law.</p> <p>The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law.</p> <p>The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.</p>
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**3.1.1.27.Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)**

Chapter 2 Prevention and Response Section 3	<p>(a) In order to prevent the outbreak of communicable diseases, the Department of Health shall implement the following activities systematically under the guidance of the Ministry of Health:</p> <p>(i) immunization of children by injection or orally;</p> <p>(ii) immunization of those who have attained eligible target group including adult by injection or orally, when necessary;</p> <p>(iii) carrying out health education activities relating to communicable disease;</p> <p>(iv) carrying out the activities of surveillance, prevention and control concerning communicable disease;</p> <p>(v) carrying out the activities of medical examination for prevention of communicable disease in cross-border entrance and exit of the country, international airport, seaport, other necessary airport, seaport and bus terminal;</p> <p>(vi) prohibition or restriction of movements at home, hotel, motel and guest house;</p> <p>(vii) isolation of infected person of communicable disease or suspect of being infected there with;</p> <p>(viii) carrying out the activities of spraying, immunization by injection or orally and environmental sanitation necessary for prevention and control according to communicable diseases;</p> <p>(ix) giving advice to and coordinating with relevant Government departments, organizations and non-governmental organizations for construction of healthy housing, obtaining safe drinking water and fresh water for use, proper waste disposal in order to prevent occurrence of communicable disease for workers who are carrying out activities of social and economic development;</p> <p>(x) carrying out other functions prescribed by the Ministry of Health, from time to time.</p>
Section 4	<p>The public shall comply with the measures undertaken by the Ministry of Health and the Department of Health under section 3 in respect of prevention of the occurrence and spread of communicable disease and control thereof."</p>

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Section 9	Sub-sections (d) and (e) contained in section 11 of the Prevention and Control of Communicable Diseases Law shall be substituted as follows: "(d) other necessary investigation; (e) prohibition of the right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."
Section 11	After sub-section (e) of section 14 of the Prevention and Control of Communicable Diseases Law, sub-section (f) shall be inserted as follows: "(f) right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."

**3.1.1.28.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.

**3.1.1.29.Natural Disaster Management Law (2013)**

Chapter II Objectives Section 3	The objectives of this Law are as follows: (a) to implement natural disaster management programmes systematically and expeditiously in order to reduce disaster risks; (b) to form the National Committee and Local Bodies in order to implement natural disaster management programmes systematically and expeditiously; (c) to coordinate with national and international government departments and organizations, social organizations, other non-government organizations or international organizations and regional organizations in carrying out natural disaster management activities; (d) to conserve and restore the environment affected by natural disasters; (e) to provide health, education, social and livelihood programmes in order to bring about better living conditions for victims.
Chapter VI	The department, organization or person that has been assigned responsibility

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<p>Natural Disaster Management</p> <p>Section 13</p>	<p>under this Law:</p> <p>(a) shall undertake the following functions after laying down the plan in accord with the natural disaster management plans in order to reduce damage and losses that are likely to be caused by natural disaster;</p> <p>(i) preparatory and preventive measures for natural disaster risk reduction in pre-disaster period;</p> <p>(ii) emergency responses including search and rescue during natural disaster;</p> <p>(iii) rehabilitation and reconstruction activities for improving better living standard in post disaster period and conservation of the environment that has been affected by natural disaster;</p> <p>(b) shall give priority and protect infants, the elderly, the disabled and women (especially pregnant women or mothers and suckling mother) in carrying out the functions contained in sub-section (a);</p> <p>(c) shall refrain from the act that causes injuring human dignity in supporting the victims.</p>
<p>Chapter VIII</p> <p>Offence and Penalties</p> <p>Section 25</p>	<p>Whoever, if the natural disaster causes or is likely to be caused by any negligent act without examination or by willful action which is known that a disaster is likely to strike, shall be punished with imprisonment for a term not exceeding three years and may also be liable to fine.</p>
<p>Section 26</p>	<p>Whoever interferes, prevents, prohibits, assaults or coerces any natural disaster management to the department, organization or person assigned by this Law shall, on conviction, be punished with imprisonment for a term not exceeding two years or with fine or with both.</p>
<p>Section 27</p>	<p>Whoever misinforms about the natural disaster for the purpose of dread to the public shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both.</p>
<p>Section 28</p>	<p>Any department, organization or person assigned by this Law commits any of the following acts or omissions shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both:</p> <p>(a) falsification of data on damage and losses caused by natural disasters dishonestly;</p> <p>(b) willful failure to perform assigned responsibility.</p>
<p>Section 29</p>	<p>Whoever violates any prohibition contained in rules, notifications and orders issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both.</p>
<p>Section 30</p>	<p>Whoever commits any of the following acts or omissions shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both:</p> <p>(a) willful failure to comply with any of the directives of the department, organization or person assigned by this Law to perform any of the natural disaster management;</p>

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	<p>(b) entering into the area or building affected by natural disaster without permission;</p> <p>(c) utilizing, trading, preventing or destroying food, relief items and rehabilitation materials provided for victims dishonestly;</p> <p>(d) making a false application for food, relief items and rehabilitation materials or cash assistance to the department, organization or person assigned by this Law as it is affected by natural disaster.</p>
Section 31	Whoever fails willfully to comply with the direction of remove or evacuation from an area or building at risk natural disaster to the public in such place for the purpose of reduction of damage and losses when the natural disaster strikes or it will be a natural disaster and for the purpose of no obstruction to the prevention and reduction activities of the natural disaster shall, on conviction, be punished with imprisonment for a term not exceeding one month or with fine or with both.

**3.1.1.30.Facts about YCDC (2014)**

<p>Yangon City Development Committee (YCDC) is the administrative body of Yangon which covers a total land area of 306.73 square miles. To maintain and develop the city within its territory, YCDC carries out the following duties and responsibilities:</p> <ul style="list-style-type: none"> <li>• Drawing and implementing land policies, administration of lands, developing and enforcing planning controls, protection of heritage buildings, regulation of construction sites.</li> <li>• Construction and maintenance of parks, gardens, playgrounds, recreation centers.</li> <li>• Promoting events and exhibitions to enhance the work of YCDC.</li> <li>• Providing parking spaces for vehicles and reducing traffic congestion.</li> <li>• Construction, maintenance, upgrading and administration of markets.</li> </ul>
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**3.1.1.31.Yangon City Development Committee Law (2018)**

Purpose:	To ensure sustainable development of the city so as to increase the standard of living of the city dwellers through the leadership of the City Development Committee. To promote clean, pleasant, beautiful and a habitable city like most developed cities around the world through the participation of city dwellers and to develop a people-oriented management system concerning with municipal works through responsibility, accountability, and transparency.
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

**3.1.1.32.Myanmar Engineering Council Law, 2013**

Chapter 2 Objectives	<p>The Objectives of this law are as follows:</p> <p>(a) to develop the dignity, ethical principles and ability of Myanmar citizen</p>
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Section 3	engineers, graduate technologists and technicians who are working in the engineering services (b) to explore beneficial, useful and good methods to research and develop the State's natural resources and human resources with the least environmental impact by a combination of engineering technology and information technology; (c) to guide, control, maintain and take necessary action with regard to specified standards and norms relating to specified subjects, systematic methods, safety and ethical principles and duties in teaching engineering subjects and in technological research and services; (d) to perform engineering and technological activities of the State and tasks assigned by the relevant ministry or organization from time to time;
Chapter 13 Prohibitions and Penalties Section 37	No one shall perform any engineering work and technological work which are specified as being dangerous to the public by a rule enacted under this law without having received a registration certificate issued by the council, except for engineers appointed in a government department or an organization in the performance of their duties.
Section 37	No engineer, graduate technologist and technician shall use, together with his name, a title which is not compatible with his status.
Section 38	No registered engineer, graduate technologist and technician- (a) shall transfer his registration certificate to anyone or allow it to be used by anyone; (b) shall fail to return his registration certificate to the council within 30 days from the day on which a decision is passed, or an administrative action is taken, under this law to cancel the registration certificate.
Section 39	Anyone convicted of having violated the prohibition contained in section 37 shall be punished with imprisonment for not more than 2 years or with a fine or with both.
Section 40	any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in section 38 shall be punished with imprisonment of not more than 1 year or with a fine or with both.
Section 41	Any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in 39 shall be punished with imprisonment of not more than 1 year or with a fine or with both.
Section 42	Any registered engineer, graduate technologist or technician convicted of having violated any prohibition under this law shall be punished with imprisonment of not more than 6 months or with a fine or with both.

**3.1.1.33.The Myanmar Fire Force Law (2015)**

Purpose	To ensure to prevent the fire, to provide the precautionary material and apparatuses, if the fire caused in the project area to be defeated because the project is business in which electricity and any inflammable materials such as petroleum are used. So, the project owner has to institute the specific fire service in line with the above law.
Section 25	The project proponent has to institute the specific fire services. The project owner has to provide materials and apparatuses for fire precaution and prevention.

**3.1.1.34.Myanmar Fire Brigade Law, 2015**

Chapter II	The objectives of this Law are as follows: (a) to prevent destruction of State-owned property, private property, cultural
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Objectives Section 3	heritage and the lives and property of the public by fire and other natural disaster; (b) to organize the Fire brigade systematically and to train members of the fire brigade; (c) to carry out extinguishing fire, prevention and search and rescue when fire, other natural disaster, epidemic disease or any kind of sudden disaster occurs; (d) to educate, organize and incite extensively so as to achieve public cooperation when any disaster occurs; (e) to participate and help, if necessary, for the State safety, peace of the public and the rule of law
Chapter VIII Activities for Fire Safety Section 15	The different levels of Fire Safety Body shall: (a) perform the activities for fire safety in accord with the procedures laid down by the Central Body; (b) organize and educate to obtain the cooperation of the public in the activities for fire safety; (c) supervise as may be necessary the participation of all the relevant members of fire brigade in accord with the work programmes laid down by the Central Body when fire hazard, other natural disaster, epidemic disease or sudden disaster occurs; (d) appoint fire safety warning groups in coordination with the relevant administrative organizations.
Section 16	The person-in-charge of the Township Fire Services Department shall: (a) issue, from time to time, the directives on fire safety to be abided by the residents in the city, ward or village - tract; (b) inspect or cause to inspect in accord with the stipulations whether the residents in the city, ward or village - tract abide by the directives issued under sub-section (a) and arrange to enable warning or taking action, as may be necessary, against those who do not abide by.
Chapter XI Prohibitions Section 24	No person shall fail to abide by the directives of fire safety issued under section 16 by the head of the relevant Township Department of Fire Services.
Section 25	The owner or manager of the factory, workshop, bus terminal, airport, port, hotel, motel, lodgings, condominium, market, department, organization or business exposed to fire hazard shall, in accord with the directive of the Department of Fire Services: (a) not fail to form the Reserve Fire Brigade; (b) not fail to provide fire safety equipment.
Section 26	No person shall, knowing that there is no outbreak of fire, report fraudulently the outbreak of fire to the Fire brigade.
Section 25	No person shall, without cause, obstruct, block, disturb, or attack the members of the fire brigade and vehicles which departed to extinguish the fire and direct by any means to the place which is not related to the outbreak of fire.

**3.1.1.35. Protection and Preservation of Cultural Heritage, 1998**

Chapter II Objectives Section 3	The objectives of this Law are as follows: (a) to implement the protection and preservation policy with respect to perpetuation of cultural heritage that has existed for many years; (b) to protect and preserve the cultural heritage regions and the cultural heritage therein so as not to deteriorate due to natural disaster or man-made destruction; (c) to uplift hereditary pride and to cause dynamism of patriotic spirit of citizens by
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	<p>protecting and preserving the cultural heritage regions.</p> <p>(d) to promote public awareness and will as to the high value of the protection and preservation of the cultural heritage regions;</p> <p>(e) to protect the cultural heritage regions from destruction;</p> <p>(f) to carry out protection and preservation of the cultural heritage regions in conformity with the International Convention approved by the State.</p>
<p>Chapter VI</p> <p>Applying for Prior Permission, Scrutinizing and Issuing</p> <p>Section 13</p>	<p>A person desirous of carrying out one of the following shall abide by the provisions of other existing laws and also apply to the Department in accordance with stipulations to obtain prior permission under this Law :</p> <p>(a) within the ancient monumental zone or the ancient site zone:</p> <p>(1) constructing or extending a building;</p> <p>(2) renovating the ancient monument or extending the boundary of its enclosure;</p> <p>(b) within the protected and preserved zone, constructing, extending, renovating a hotel, motel, guesthouse, lodging house or industrial building or extending the boundary of its enclosure;</p> <p>(c) within the cultural heritage region</p> <p>(1) carrying out the renovation and maintenance work of the ancient monument without altering the original ancient form and structure or original ancient workmanship;</p> <p>(2) carrying out archaeological excavations;</p> <p>(3) building road, constructing bridge, irrigation canal and embankment or extending the same.</p>
<p>Chapter VII</p> <p>Prohibitions</p> <p>Section 22</p>	<p>No person shall construct a building which is not in conformity with the conditions prescribed region wise by the Ministry of Culture in the cultural heritage region.</p>

**3.1.1.36. The Protection and Preservation of Ancient Monument Law (2015)**

Purpose	To ensure the protection of the ancient monument and information about it if it was in the project area. This law focuses as follows;
Section 12	The project proponent has to report to the village-tract or ward administrators if the project proponent will find any ancient monument under the ground or on the ground or under the water.
Section 15	The project proponent has to obtain the prior permission of the Department of Ancient Research Museum if the project area is in the prescribed area of the Ancient monument.
Sub-section (f) of section 20	The project proponent has to obtain the prior permission, by written, of Department of Ancient Research and National Museum if the project proponent disposes of the chemical and solid waste in the Ancient Monument.

**3.1.1.37. The Conservation of Water Resources and Rivers Law, 2016**

<p>Chapter II</p> <p>Aims</p> <p>Section 3</p>	<p>The aims of this Law are as follows:</p> <p>(a) to conserve and protect the water resources and rivers system for beneficial utilization by the public;</p> <p>(b) to smooth and safety waterways navigation along rivers and creeks;</p> <p>(c) to contribute to the development of State economy through improving water resources and river system;</p> <p>(d) to protect environmental impact.</p>
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Chapter V Prohibitions Section 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.
Section 11	No person shall: (a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk. (b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives. (c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.
Section 11	11. No person shall: (a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk. (b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives. (c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.
Section 19	No one shall dispose of any substance into the river-creek that may cause damage to waterway or change of watercourse from the bank or vessel which is plying, vessel which has berthed, anchored, stranded or sunk.
Section 22	No one shall, without the permission of the directorate, pile sand, shingle and other heavy materials for business purposes in the bank area and waterfront area.
Chapter VI Penalties Section 29	Whoever attempts or conspires or abets in the commission of an offence under this Law shall be punished with the punishment provided for such offence in this Law.
Chapter VII Miscellaneous Section 30	Any government department and organization or any person desirous of constructing drainage, utilizing river water intake, constructing bridges spanning rivers, connecting underground pipe, connecting underground electric power cable, connecting underground telecom cable or digging in rivers and creeks, bank boundary and waterfront boundary, under the requirement of work, shall in order not to adversely affect the water resources and rivers and creeks, carry out only after obtaining the approval of the Ministry of Transport.

**3.1.1.38. Underground Water Act (21st June, 1930)**

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.	
Section 3	No person shall sink a tube for the purpose of obtaining underground water except under and in accordance with the terms of a licence granted by the water

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	<p>officer.</p> <p>Every person owning a tube which was in existence before the extension of this Act to the local area concerned shall apply to the water officer for a licence for the said tube, and such licence shall be granted free of charge.</p>
Section 5	Every person obtaining or attempting to obtain underground water shall supply the water officer with such information as the President of the Union may by rule prescribe.
Section 6	<p>The President of the Union may make rules 1-</p> <p>(a) prescribing the conditions subject to which licences may be granted by the water officer under section 3;</p> <p>(b) prescribing the form of and the procedure for granting such licences and the fees payable for the issue thereof;</p> <p>(c) prescribing the information to be supplied to the water officer under section 5.</p>

**3.1.1.39. The Electricity Law (2014)**

<p>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.</p>	
Purpose	To ensure compliance with the conditions of permission for productions of in line with the above law.
Section 10 (b)	The project proponent will implement the project with the best practices to reduce the damages on the environment, health and socio-economy also will pay compensation for the damages and will pay the fund for environmental conservation.
Section 18	The project proponent has to take the certificate of electric safety, issued by the chief-inspector, before the commencement of power generation.
Section 21 (a)	The project proponent has to be liable for damages to any person or enterprise by failure to abide by the quality standards or rules, regulation, by-law, order, and a directive issued
Section 22 (a)	The project proponent has to be liable for damages to any person or enterprise by the negligence of project owner.
Section 26 (a, b)	The project owner has to comply with the permission for electric searching and generation.
Section 27	The project proponent will inform promptly to chief-inspector and head officer of related office while occurring of accident in electricity generation.
Section 40	The project proponent will comply with the standards, rules, and procedure. Moreover, will allow the inspection by respected governmental department and organization if it is necessary.
Section 68	The project proponent will pay the compensation to anyone who is injured or caused to death in electric shock or fire caused by the negligence or omitting of the project owner or representative of the project owner.

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Chapter 2 Objectives Section 3	The main objectives of this law are as follows: (a) For the safe driving of motor vehicles in public areas through registration according to official rules and regulations. (b) To provide driving licenses for driving particular types of motorized vehicles after qualification checks. (c) For the easy flow of road users and for the protection against road risks and vehicle perils. (d) To avoid traffic congestion and to use high technology transportation systems efficiently in order to implement protection against road risks and vehicle perils. (e) To reduce environmental pollution caused by motor vehicles.
Chapter (3) Motor vehicle registration Section 4	Every owner of a motor vehicle must register the vehicle with the registration officer.
Section 5	The owner of a motor vehicle must maintain the vehicle in a safe condition equal to the standard condition.
Section 6	The registration officer may not register the motor vehicle if the vehicle is disqualified for failing to comply with safety standards or the engine is broken or if the applicant has failed to disclose previous facts about former registrations of the vehicle.
Section 8	(a) The owner of the vehicle can request the registration officer to issue a temporary registration according to the regulations. (b) The temporary registration according to this section cannot be valid for more than three months. And this law does not allow temporary registration more than one time.
Section 10	The owner of a vehicle must notify the registration officer if the main parts of his/her vehicle needs to be changed or repaired.
Chapter (9) Prohibitions Section 45	No one is allowed to drive, request someone to drive, or park, motor vehicles in public places under the following conditions: (a) The motor vehicle is not registered. (b) The registration has been suspended, revoked or expired; the registration card is not displayed. (c) The registration card has been revoked or is expired.
Section 46	No one is allowed to drive, or allow to drive, motor vehicles in public places without risk insurance for others. This prohibition does not extend to passengers.
Section 47	(a) No one is allowed to drive a motor vehicle in public places without carrying the driving license with him/her. (b) No one is allowed to drive a motor vehicle in public places without a driving license. (c) The owner of, and the person responsible for, a motor vehicle are not allowed to give permission to someone without a driving license to drive in public places.
Section 50	No one is allowed to do the following in public places: (a) Driving above the speed limit or below the minimum speed. (b) Driving a motor vehicle which endangers others. (c) Driving a motor vehicle after the consumption of narcotic drugs or alcohol.
Section 50	No one is allowed: (a) To operate a business of manufacturing, selling or equipping motor vehicles without a business license.

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	(b) To operate a business of maintaining or repairing motor vehicles without a business license.
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3.1.1.41. The Forest Law, 3<sup>rd</sup> November, 1992

Chapter II Basic Principles Section 3	<p>This Law shall be implemented in accordance with the following basic principles: -</p> <p>(a) to implement the forestry policy of the Government;</p> <p>(b) to implement the environmental conservation policy of the Government;</p> <p>(c) to promote the sector of public co-operation in implementing the forestry policy and the environmental conservation policy of the Government;</p> <p>(d) to develop the economy of the State, to contribute towards the food, clothing and shelter needs of the public and for perpetual enjoyment of benefits by conservation and protection of forest; (e) to carry out in accordance with international agreements relating to conservation of forests and conservation of environment; (f) to prevent the dangers of destruction of forest and bio-diversity, outbreak of fires, infestation of insects and occurrence of plant disease;</p> <p>(g) to carry out simultaneously conservation of natural forests and establishment of forest plantations; (h) to contribute towards the fuel requirement of the country.</p>
Chapter III Constitution of Reserved Forest and Declaration of Protected Public Forest Section 8	<p>(a) A standing teak tree wherever situated in the State is owned by the State;</p> <p>(b) The Minister may declare, alter or cancel according to the locality the species of reserved trees which are to be conserved by the Forest Department.</p>
Chapter V Establishment of Forest Plantation Section 16	A person having obtained the right to extract forest produce on a commercial scale who has the responsibility of establishing forest plantations or carrying out natural regeneration under a permit for the State shall carry out the same at his own expense and in accordance with stipulation.
Chapter VI Permission for Extraction of Forest Produce Section 16	<p>A person who has obtained permission for extraction of forest produce shall: -</p> <p>(a) abide by the conditions contained in the permit;</p> <p>(b) abide by the orders, directives, prohibitions and restrictions issued by the Forest Department in accordance with this Law;</p> <p>(c) pay the royalties, security deposits and advances due;</p> <p>(d) affix the mark after measuring in the manner prescribed or affix the property-mark which has been registered.</p>
Chapter VII Removal of Forest Produce Section 23	<p>a) Whoever is desirous of moving any forest produce from one township to another within the country shall apply for a removal pass from the Forest Officer empowered by the Director-General for this purpose.</p> <p>(b) The provision of sub-section (a) shall not apply to the following cases:</p>



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	<p>(i) moving forest produce within the area permitted for extraction thereof;</p> <p>(ii) moving minor forest produce not exceeding the prescribed quantity and not on a commercial scale;</p> <p>(iii) moving from one township to another in a City Development area.</p>
Chapter IX Establishment of Wood-based Industry Section 30	A private entrepreneur who is desirous of establishing a sawpit, sawmill, tongue-and-groove mill, plywood mill, veneer mill or a wood-based industry with the exception of wood-based cottage industries and furniture industries has the right to establish the same only after obtaining a permit from the Forest Officer empowered for this purpose.
Chapter X Search, Arrest and Administrative Action Section 34	<p>If a person who has obtained permission to extract forest produce or his agent or his labourer violates any condition of the permit, the person granting permission to extract forest produce may pass any of the following orders: -</p> <p>(a) causing the suspension of the whole or any portion of the work carried out under the permit;</p> <p>(b) causing payment of the prescribed penalty to be made and permitting the work to be carried on;</p> <p>(c) cancelling the permit;</p> <p>(d) cancelling the permit and confiscating the security deposit and advances; if it is considered necessary causing payment of the prescribed penalty.</p>
Chapter XII Offences and Penalties Section 40	<p>Whoever commits any of the following acts shall, on conviction, be punished with fine which may extend to kyats 5,000 or with imprisonment for a term which may extend to 6 months or with both:</p> <p>(a) trespassing and encroaching in a reserved forest;</p> <p>(b) pasturing domestic animals or permitting domestic animals to trespass in a reserved forest;</p> <p>(c) breaking up any land, clearing, digging or causing damage to the original condition of the land without a permit in a reserved forest;</p> <p>(d) causing damage to a water-course, poisoning the water, using chemicals or explosives in the water in a reserved forest;</p> <p>(e) catching animals, hunting or fishing in a reserved forest;</p> <p>(f) kindling, keeping and carrying any fire or leaving any fire burning which may set fire to the forests in a reserved forest;</p> <p>(g) moving forest produce without submitting to examination at the revenue station;</p> <p>(h) violating any provision of the rule, procedure, order, directive or notification issued under this Law</p>

**3.1.1.42. National Land Use Policy, 2014 October**

Chapter I	In terms of the National Land Use Policy:
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Basic Principles of the National Land Use Policy Section 8	<p>(a) It shall use the land resources of the State sustainably and systematically by conserving and protecting them for the interest of all peoples of the State;</p> <p>(b) It shall enact the National Land Law which harmonize the existing laws relating to use of land resources and land tenures in the whole country including rural and urban areas and which may be implemented systematically;</p> <p>(c) It shall cause to decide the matters relating to land disputes arisen between the land users and the stakeholders transparently and truly in accord with the National Land Law;</p>
Section 8	<p>In implementing the continued entry of the foreign direct investments, sustainable economic development, effectiveness of the environmental conservation and protection, social harmonization, firmness of land tenures, immoveable property right and settlement of land dispute:</p> <p>(a) It shall increase responsible undertaking and respect the rule of law;</p> <p>(b) It shall strengthen the clean governance system by carrying out land use management, land tenure management in accord with law systematically and truly;</p> <p>(c) It shall establish modernized systems to enable to have access to correct information relating to land use management and land tenure management;</p> <p>(d) It shall establish the land dispute settlement mechanism which is easily implementable and impartial;</p> <p>(e) It shall arrange and carry out coordination process with the Stakeholder's transparently.</p>
Chapter II The Situation of the Existing Land Management Mechanism Section 12	<p>The State has arranged and carried out to expand agricultural land use by the State-owned organizations, cooperative societies, associate ons, joint ventures, other organizations which acquire agricultural land for businesses and individual agriculturalists after forming the Vacant, Fallow and Virgin Lands Management Central Committee under the Notification 44/91 dated 13<sup>th</sup> November, 1991.</p>

**3.1.1.43. The Conservation of Biodiversity and Protected Areas Law, 1994**

Chapter II Objectives Section 3	<p>The objectives of this Law are as follows: -</p> <p>(a) to implement the Government policy for wildlife protection;</p> <p>(b) to implement the Government policy for natural areas conservation;</p> <p>(c) to carry out in accordance with the International Conventions acceded by the State in respect of the protection and conservation of wildlife, ecosystems and migratory birds;</p> <p>(d) to protect endangered species of wildlife and their natural habitats;</p> <p>(e) to contribute for the development of research on natural science;</p> <p>(f) to protect wildlife by the establishment of zoological gardens and botanical gardens.</p>
Chapter V Protected Wildlife Section 15	<p>The Director General shall, with the approval of the Minister:</p> <p>(a) determine and declare endangered species of wild animal which are to be protected according to the following categories:</p> <p>(i) completely protected species of wild animals;</p> <p>(ii) normally protected species of wild animals;</p>

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	<p>(iii) seasonally protected species of wild animals;</p> <p>(b) determine and declare the endangered species of wild plants and their nature habitats thereof;</p> <p>(c) lay down and carry out measures for the preservation of protected wildlife species;</p> <p>(d) co-ordinate with the relevant department or organization if the wildlife which are to be determined for protection are under the administration of another Government department or Government organization.</p>
Chapter X Appeal Section 33	A person dissatisfied with an administrative order passed by a Forest Officer may file an appeal to the Director General within 30 days from the date of such order.
Chapter XI Offences And Penalties Section 35	<p>Whoever commits any of the following acts shall, on conviction be punished with imprisonment for a term which may extend to 3 years or with fine which may extend to kyats 10,000 or with both: -</p> <p>hunting without a licence;</p> <p>violation of any condition of the hunting licence;</p> <p>raising without permission, for commercial purpose normally protected wild animals and seasonally protected wild animals;</p> <p>causing water and air pollution, causing damage to a water-course or putting poison in the water in a natural area;</p> <p>possessing or disposing of pollutants or mineral pollutants in a natural area;</p> <p>establishing and operating a zoological garden or a botanical garden without a licence.</p>
Section 36	<p>Whoever commits any of the following acts shall, on conviction be punished with imprisonment for a term which may extend to 5 years or with fine which may extend to kyats 30,000 or with both: -</p> <p>(a) killing, hunting or wounding a normally protected wild animal or seasonally protected wild animal without permission, possessing, selling, transporting or transferring such wild animal or any part thereof without permission;</p> <p>(b) extracting, collecting or destroying in any manner any kind of protected wild plants within the prescribed area without permission;</p> <p>(c) destroying ecosystem or any natural state in the natural area;</p> <p>(d) altering, removing, destroying or obliterating without permission. any boundary mark of a natural area or any boundary mark of a zoological garden or botanical garden administered by the Government or in which the Government has subscribed share capital.</p>
Section 37	<p>Whoever commits any of the following acts shall, on conviction be punished with imprisonment for a term which may extend to 7 years or with fine which may extend to kyats 50,000 or with both: -</p> <p>(a) killing, hunting or wounding a completely protected wild animal without permission, possessing, selling, transporting or transferring such wild animal or any part thereof without permission;</p> <p>(b) exporting without the recommendation of the Director General a completely protected wild animal or a protected wild plant or any part thereof.</p>
Section 38	<p>The provisions of section 36 sub-section (a) or section 37 sub-section (a) shall not apply to: -</p> <p>the possessing as a souvenir or wearing as a traditional custom of any part of normally protected wild animal or a seasonally protected wild animal;</p> <p>the possessing or wearing with a certificate of registration issued under section 27 subsection (b) of any part of a completely protected wild animal; the possessing, use, sale, transport or transfer of a drug prepared from a part of a</p>

	protected wild animal.
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### 3.2. AUTHORIZED INSTITUTIONS AND RECOMMENDATIONS

The Ministry of Environmental Conservation and Forestry (MOECF) 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.

### 3.3. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUIDELINES

According to the Environmental Conservation Law, MOECF 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. In section 13 of NEQG, Air emissions, noise, odor, and liquid/effluent discharges will be sampled and measured at points of compliance as specified in the project EMP and ECC.

#### 3.3.1. General Guidelines

##### 3.3.1.1. Air Emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in concentrations that reach or exceed national ambient quality guidelines and standards, or in their absence current World Health Organization (WHO) Air Quality Guidelines<sup>1</sup> 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<sup>2</sup> for air pollutants not included in the following Table 3-1.

**Table 3-1 WHO's air quality guideline**

Parameter	Averaging Period	Guideline Value
Nitrogen Dioxide	1-year	40
	1-hour	200
Ozone	8-hour	100
Particulate Matter PM <sub>10</sub> <sup>a</sup>	1-year	10
	24-hour	50
Particulate Matter PM <sub>2.5</sub> <sup>b</sup>	1-year	10

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Parameter	Averaging Period	Guideline Value
	24-hour	25
Sulfur dioxide	24-hour	20
	10-minute	500

<sup>a</sup>Particulate matter 10 micrometers or less in diameter

<sup>b</sup>Particulate matter 2.5 micrometers or less in diameter

### 3.3.1.2. Wastewater

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

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

**Table 3-2 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (general application)<sup>3</sup>**

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

<sup>3</sup>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.



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Parameter	Unit	Guideline Values
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and grease	mg/l	10
pH	S.U. <sup>a</sup>	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 <sup>b</sup>
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

<sup>a</sup> Standard Unit

<sup>b</sup> 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

**3.3.2. IFC EHS Guidelines**

The Environmental, Health and Safety (EHS) Guidelines by 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 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 3-3 shows the contents of the section of Community Health and Safety.

**Table 3-3 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

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<b>Contents</b>	<b>Brief Description</b>
	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 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)

### 3.4. 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.

### 3.5. COMMITMENT OF POLLY HK (MYANMAR) CO., LTD.

Polly HK (Myanmar) Co., Ltd. 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

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be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures.

Polly HK 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

## **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 Environmental Management Plan (EMP) for this report preparation;

- a) Onsite Measurements and Analysis – Baseline parameters such as indoor temperature, humidity, noise and wastewater condition of the project operation area. The analyzed results are mentioned in this chapter.
- b) 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 Tharyar Township, Yangon Region.

### **4.2. ENVIRONMENTAL BASELINE STUDY**

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

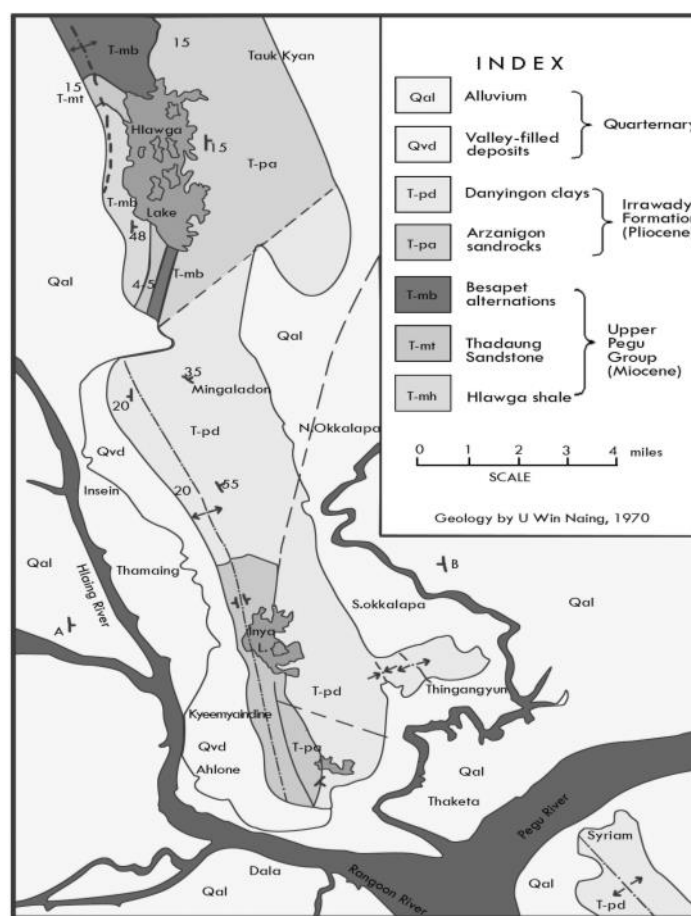
### **4.3. PHYSICAL COMPONENT**

#### **4.3.1. Topography**

The proposed project area is situated in Shwe Lin Ban Industrial Zone, Hlaing Tharyar 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**

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

**Environmental Management Plan****Figure 4-1 Geological Map of the project area****4.3.3. Air Quality**

To determine the existing baseline ambient air quality status within the project site on 30 October 2018, 3-hours of working period air pollutants level, which include dust  $PM_{10}$  and  $PM_{2.5}$  were measured at the selected site using the Air Quality Monitoring System. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission) Guideline and international ambient air quality standard (NAAQS, ACGIH) guidelines. It was observed that the air quality of ( $PM_{10}$ ,  $PM_{2.5}$ ) are within the National Environmental Quality (Emission) Guideline.

**Table 4-1 Observed air quality results**

Parameters	Observed value	Guideline value	Unit	Organization	Period
$PM_{10}$	47.4	50	$\mu g/m^3$	NEQG	3 hrs
$PM_{2.5}$	37.8	25	$\mu g/m^3$	NEQG	3 hrs

NEQ = National Environmental Quality (Emission) Guideline

NAAQS = National Ambient Air Quality Standards were developed by the U.S. EPA

ACGIH = the American Council of Governmental Industrial Hygienists recommends



#### 4.3.4. Hydrology

The nearest sensitive water body is about 0.53 km far from the Hlaing River. Utilization of groundwater for operation use of production process, boiler and general use of domestic purpose is achieved by tube Groundwater: Groundwater availability is generally based on the distribution of permeable and relatively impermeable rocks. The nature of openings in the rocks determines permeability of rocks. Based on local geological considerations, potential groundwater source of Yangon can be roughly divided into two sub regions, namely the low potential area and high potential area. Low potential areas are areas with those rock units of Hlawga Shale, Thadugan Sandstones and Basepet Alternation of upper Pegu Group (Miocene epoch) and Danyingon Clays of Irrawaddy rocks. These rocks and formations are a dense, massive and consolidated nature and have impervious characteristic. High potential areas are underlain by Pliocene Series and recent Formations. High potential area covers approximately 85 percent of the Yangon city including Pabedan. Stand pipe piezometers were installed at a depth of up to 30 m from the existing ground level while a pumping well was installed upon completion of the soil investigation works. Based on the results recorded up to the 8th of December 2012, stabilized groundwater level was observed to range between 0.49 m MSL to - 1.81 m MSL4.

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

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

#### 4.3.5. Climate

The proposed project is located at Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon Region. The climate condition of Hlaing Tharyar Township is the dry season of area in which the project starts in December and ends in March. The raining season starts in June and ends in September and the cold season follow with the cooler, drier months of October to January. The highest temperature is 42°C and low range is 27°C reference from Township Meteorology data, Regional Data of Hlaing Tharyar Township. 2012 to 2017 Yearly data of rainfall and temperature is presented in Table 4-2.

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**Table 4-2 Annual rainfall and temperature**

Year	Rainfall		Temperature	
	Raining day	Rainfall value	Summer season Max (°C)	Winter season Min (°C)
2012-2013	121	53.46	41	27
2013-2014	131	61.25	40	26
2014-2015	128	58.35	39	25
2015-2016	113	48.45	40	26
2016-2017	126	56.97	41	27

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

**4.3.6. Indoor Temperature and Humidity**

The indoor temperature and humidity condition during 30 October 2018 shows the average temperature of 31.88 °C while the average humidity is 85.16 %.



Temp and HD measure at Cutting



Temp and HD measure at Sewing

**Figure 4-2 Temperature and Humidity measurement in Polly HK factory****4.3.7. Water quality**

The baseline data on wastewater quality were collected and measured on 30 October, 2018 with respect to NEQ Guideline Standard and Laboratory analysis results can be seen in **(Appendix C)** for wastewater. The water quality of the nearest water features, which are likely to be affected by the project was studied with the aim of understanding, preventing and minimizing water pollutions in the public water sources so as to ensure human health and biodiversity. Water quality is one of the key factors affecting the environment and health. Analyzed results of groundwater result compare with NEQG, wastewater effluent results of the whole factory. The collected samples factory wastewater was tested at Ecological laboratory.



Figure 4-3 Wastewater sample collection

Table 4-3 Wastewater laboratory analysis result

Parameter	Results	Standard	Unit	Remark
pH	7.3	6-9		Normal
Temperature	23	± 3	°C	-
Colour	125	-	HU	-
Turbidity	8	NG	FAU	Clear
Total Dissolved Solid	350	≤ 2000	mg/L	Normal
TSS	9	≤ 50	mg/L	Normal
Total Solids	359	-	mg/L	-
Dissolved Oxygen	7.24	NG	mg/L	-
BOD	46	≤ 50	mg/L	Normal
COD	95	≤ 250	mg/L	Normal
Arsenic	0	≤ 0.1	mg/L	Clear
Chlorine Total Residual	1.72	≤ 0.2	mg/L	Normal

#### 4.3.7.1. Summary of wastewater result

According to the wastewater analysis results above shown in Table 4-3, all of the lists parameter is normal and within the limit of NEQ (emission) guideline.

**Environmental Management Plan****4.3.8. Noise**

The Noise level was measured by using Digital Sound Level Meter for working hours on 30, October 2018. The average noise level in the project site area is 66.575 dBA (Table 4-4). Receptor (nearby production area at project site) noise level of measurement are within the comfortable range of 40-60 decibel. However, found to be the Noise source monitoring at operation area (inside the production sector) of noise level is not exceeding the acceptable level of National Environmental Quality (Emission) Guideline.



Indoor Noise Measurement of the project

**Table 4-4 Result of Sound level measurement in the factory**

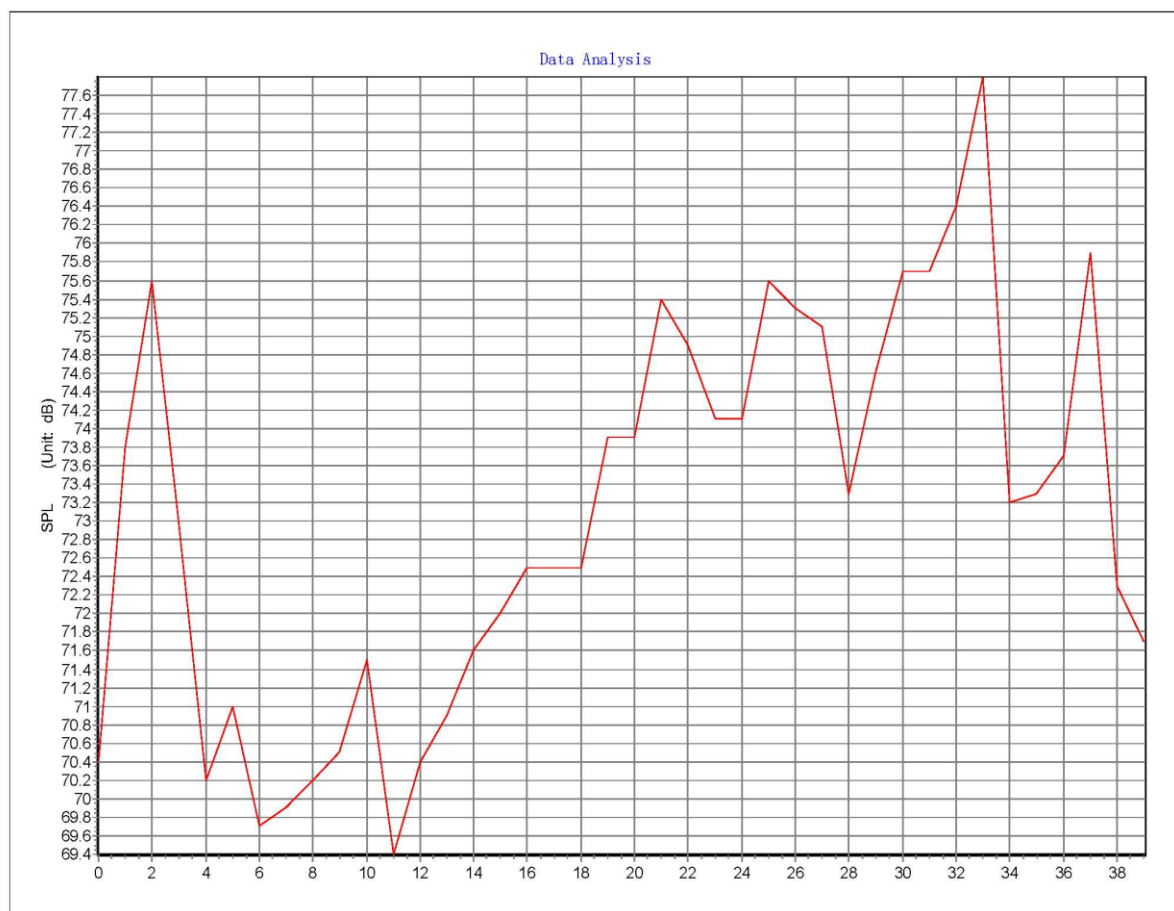
Rec No	Measure Value	Weight	Time	Date	Data Group Index
1	69	A	15:14:11	2018-10-30	0
2	70	A	15:15:11	2018-10-30	1
3	68	A	15:16:11	2018-10-30	1
4	70	A	15:17:11	2018-10-30	1
5	67	A	15:18:11	2018-10-30	1
6	71	A	15:19:11	2018-10-30	1
7	69	A	15:20:11	2018-10-30	1
8	69	A	15:21:11	2018-10-30	1
9	70	A	15:22:11	2018-10-30	1
10	70	A	15:23:11	2018-10-30	1
11	71	A	15:24:11	2018-10-30	1
12	69	A	15:25:11	2018-10-30	1
13	70	A	15:26:11	2018-10-30	1
14	70	A	15:27:11	2018-10-30	1
15	71	A	15:28:11	2018-10-30	1
16	7	A	15:29:11	2018-10-30	1
17	71	A	15:30:11	2018-10-30	1
18	71	A	15:31:11	2018-10-30	1
19	72	A	15:32:11	2018-10-30	1
20	72	A	15:33:11	2018-10-30	1
21	70	A	15:34:11	2018-10-30	1
22	70	A	15:35:11	2018-10-30	1



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Rec No	Measure Value	Weight	Time	Date	Data Group Index
23	70	A	15:36:11	2018-10-30	1
24	70	A	15:37:11	2018-10-30	1
25	70	A	15:38:11	2018-10-30	1
26	72	A	15:39:11	2018-10-30	1
27	72	A	15:40:11	2018-10-30	1
28	72	A	15:41:11	2018-10-30	1
29	71	A	15:42:11	2018-10-30	1
30	71	A	15:43:11	2018-10-30	1
31	70	A	15:44:11	2018-10-30	1
32	68	A	15:45:11	2018-10-30	1
33	67	A	15:46:11	2018-10-30	1
34	68	A	15:47:11	2018-10-30	1
35	68	A	15:48:11	2018-10-30	1
36	69	A	15:49:11	2018-10-30	1
37	67	A	15:50:11	2018-10-30	1
38	0	A	15:51:11	2018-10-30	1
39	70	A	15:52:11	2018-10-30	1
40	71	A	15:53:11	2018-10-30	1

66.575

**Figure 4-4 Sound analysis graph**



#### 4.4. BIOLOGICAL COMPONENT

There is no forest area, wildlife and wetlands within or around the project compound. The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Shwe Lin Ban industrial zone. Moreover, desktop review and site visits confirmed the absence of unique or ecologically significant flora and fauna. However, the nearest water body is the Haling River.

#### 4.5. SOCIO-ECONOMIC COMPONENT

##### 4.5.1. Population

Polly HK is located across Hlaing Tharyar Township townships in Yangon Region. In 2017, there are about people 414,209 in Township as shown in Table 4-5.

**Table 4-5 Population of Males and Females at Hlaing Tharyar Township (2017)**

Item	Older 18 year			Younger 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	105,075	119,903	224,978	44,884	49,782	94,666	149,959	169,685	319,644
Rural	33,257	31,319	64,576	14,953	10,536	29,989	48,210	46,355	94,565
Total	138,332	151,222	289,554	59,837	64,818	124,655	198,169	216,040	414,209

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

##### 4.5.2. Religion

The different kinds of religion present in Hlaing Tharyar Townships are as shown in Table 4-6.

**Table 4-6 Religion in Hlaing Tharyar Township (2017)**

Township	Buddhist	Christian	Hindu	Muslim	Total
Hlaing Tharyar	395,789	6,400	8,320	3,700	414,209

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

##### 4.5.3. Local Economy

Among regional towns, Hlaing Tharyar Township has a variety of businesses and services operating in the community with other businesses/services, based in the region. Most of the sources of livelihood in the Township are employment of factory. Services and facilities available include:

1. post office
2. beauticians
3. butcher
4. hairdressers
5. furniture and electrical store
6. restaurants
7. cafes
8. shoe and clothing shops
9. industrial services
10. pharmacy

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- 11. veterinarian
- 12. bus service
- 13. gift stores
- 14. music store
- 15. pubs and bars
- 16. florist

**4.5.4. Public Infrastructure and Access****4.5.4.1. Communication and Transportation**

Major transportation route in Hlaing Tharyar Township are port and car road as presented in Table 4-7.

**Table 4-7 Transportation route**

Categories	Township		Miles
	From	to	
Sail	Pan hlaing River and Hlaing confluence	Ngwe pin Lae Industrial	8
Bus line (61,23,68,16,6,69,17,74,20,52,53,54,67) City Bus	WYTU	Downtown area	
Car (Yangon - Patheingyi road)	King BaYin Naung bridge	Mya Sein young Stream	5.4
Car ( Yangon – Nyaung U road)	Aung zaya Bridge	BOC traffic circle	3.2
Car (King Anawmyathari Road)	Shwe Pyi Thar Bridge	Thamakone Traffic circle	4.6

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

**4.5.4.2. Education**

Location of major schools was 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 West Yangon Technological University, in the Hlaing Tharyar Township. The name and the located village tract/ ward of schools are described in Table 4-8.

**Table 4-8 List of major school in Hlaing Tharyar 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

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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
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
14	BEPS (1 to 32)	Hlaing Thar Yar
15	Pre School (1 to 6)	Hlaing Thar Yar

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

#### 4.5.4.3. Health Status

The diseases of high prevalence reported in 2013 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2014 of Hlaing Tharyar Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are as shown in Table 4-9 and Table 4-10.

**Table 4-9 Common Diseases in the project area, 2017**

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

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

**Environmental Management Plan****Table 4-10 Lists of hospital in the Hlaing Tharyar Township**

<b>Hospital Name</b>	<b>Beds/Services</b>	<b>Responsible</b>
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 Tharyar Townships, Regional data (www.gad.gov.mm.com)

**4.6. CULTURAL AND VISUAL COMPONENTS**

Hlaing Tharyar 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. IMPACT ASSESSMENT

### 5.1. SUMMARY OF ENVIRONMENTAL, SOCIAL AND HEALTH IMPACT ASSESSMENT

This chapter provides an assessment of potential impact arising from the project. The methodological approach used for the project impact assessment is adapted from the impact assessment methods recommended by the Canadian Environmental Assessment Agency (1990), by the World Bank (1991) and by the International Finance Corporation (Dec. 1998).

### 5.2. METHODOLOGY OF ASSESSMENT

The assessment includes description of how an environmental effect will occur or how the project will interact with the environment, the mitigation and environmental protection measures proposed to reduce or eliminate the environmental effect and the characterization of the residual environmental effect of the project. This would comprise an assessment into the Probability, Extent and Duration of the anticipated potential positive or negative impact. These three qualifiers are grouped under one synthesis indicator, the Significant of the impact. Figure 5-1 schematically present the basic process leading to evaluate the significant of the potential impact.

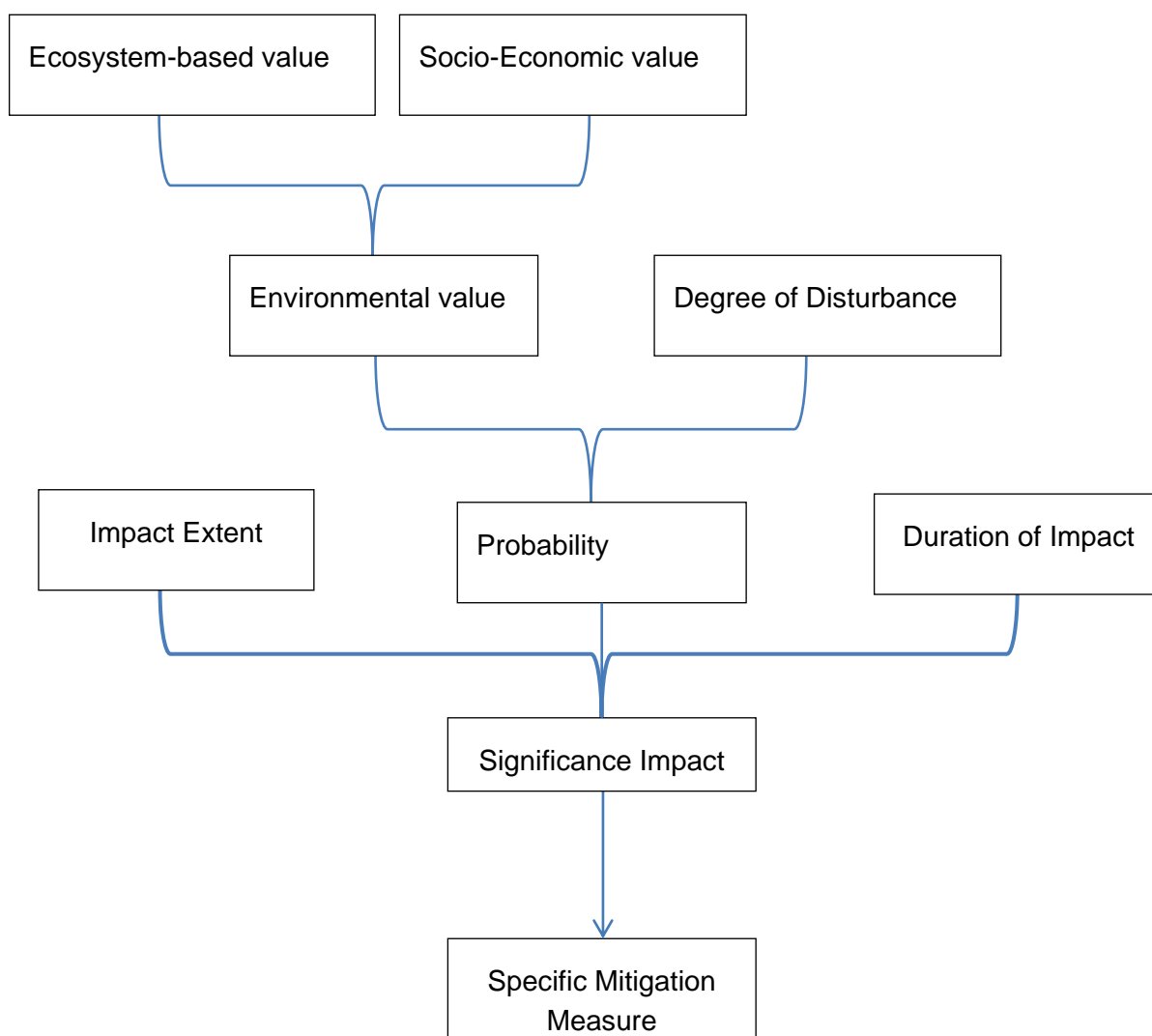


Figure 5-1 Impact evaluation methodology

**Environmental Management Plan****5.2.1. Environmental Value**

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

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

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

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

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

The environmental value integrates the ecosystem-based value and the social value as shown in Table 5-1.

**Table 5-1 Grid for determining environmental value**

Social Value	Ecosystem-Based Value		
	High	Medium	Low
High	High	High	High
Medium	High	Medium	Medium
Low	High	Medium	Low

**5.2.2. Degree of Disturbance**

The degree of disturbance for a component defines the scope of the changes that affect the component given its sensitivity to the proposed project. The changes for a given component may be negative or positive and the effect on the environmental component may be direct or indirect. The cumulative, synergetic or delayed impacts, beyond the simple relation of cause and effect, could



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amplify the degree of disturbance of an environmental component when the environment is especially fragile. The four levels of degree of disturbances are;

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

**5.2.3. Probability of the impact**

The probability of the impact expresses the relative importance of consequences attributable to a change in an environmental component. The intensity of the impact is an integration of the component's environmental value can be either positive or negative. The probability of the impact results from the interaction of the degrees of disturbance with the environmental value as shown in Table 5-2.

**Table 5-2 Grid for determining intensity of an impact**

Degree of Disturbance	Environmental Value		
	High	Medium	Low
High	Highly Probable	Probable	Improbable
Medium	Probable	Probable	Very Improbable
Low	Improbable	Very Improbable	Very Improbable

**5.2.4. Extent of the impact**

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

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

**5.2.5. Duration of the impact**

The duration of the impact describes the period of time during which a component undergoes changes due to the impact, is not necessarily equivalent to the period of time during which the direct

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source of impact is active. It must also take into consideration the frequency when the impact is intermittent. It is characterized as;

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

#### 5.2.6. Significance of the impact

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

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

The impacts of pollution, natural environment and social environment, health and safety, emergency risk, and others were classified as A to D in accordance with the following criteria, assuming no specific measures toward the impacts are taken:

- A<sup>-</sup>: Significant negative impact      A<sup>+</sup>: Significant positive impact
- B<sup>-</sup>: Some negative impact      B<sup>+</sup>: Some positive impact
- C: Impacts are not clear, need more investigation
- D: No impact or impacts are negligible, no further study required

The impact assessment and its scale from the interaction among the probability, extend and duration of the impact as shown in Table 5-3.

**Table 5-3 Evaluation of impact assessment**

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

### 5.3. POTENTIAL IMPACT DURING OPERATION PHASE

The following are the anticipated impacts during operation phases of Polly HK laundry service factory;

- Pollution
- Natural Environment
- Social Environment
- Health and Safety
- Emergency Risk
- Other

None of the impacts during operation phase are affected directly to local communities, but some environmental impacts are primarily related to the factory in which resource utilization is an issue that should be seen from a sustainable development perspective, combustion of fossil fuels, greenhouse emission and occupational health and safety for employees working at the proposed factory.

#### 5.3.1. Summary of Environmental Risk Assessment

Results of the environmental and social impact assessment are shown in Table 5-4. These impacts were evaluated in operation phase (OP). Even though the Project does not plan to close in the near future, the impact at the closing phase was estimated in case the Project should be closed due to unanticipated cases.

**Table 5-4 Results of Impact Assessment**

Categories	Evaluation	Reason of Evaluation
<b>Pollution</b>		
Air Quality	<b>D</b>	Impact on air quality due to increase of operation vehicle, boiler and generator is expected. Generator combustion would be generated SO, NO, CO, VOC and PM caused by significant impact in surrounding environment. This emergency generator usage if normal electricity supply could not provide for the proposed project.
Water Quality	<b>B<sup>-</sup></b>	Impact on water quality of the surrounding water bodies is not expected due to wastewater generated from the workers. And also, wastewater must be treated by wastewater treatment plant at the factory.
Waste	<b>B<sup>-</sup></b>	Industrial waste would be generated from operation such as cloth scraps, fabric paper tube, plastic bags, cardboard, paper board, wood, plastic string, etc.

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Categories	Evaluation	Reason of Evaluation
		Waste would be generated from operation workers, such as food waste, plastic, paper, glass, metal can, sanitary napkins, tissue paper, garden waste, etc.
Noise	D	Increase of noise levels due to the operation of the sewing line, cutting line, etc. would occur in site specific.
Offensive odor	D	There is not a possibility that offensive odor would be generated due to garment production process.
Natural Environment		
Protected area	D	Impact on protected areas, hydrology/topography/geology and soil erosion is not expected because of proposed project is situated in Industrial area of Hlaing Tharyar Township.
Flora/Fauna/Ecosystem		
Hydrology		
Topography/Geology		
Soil erosion		
Social Environment		
Living and livelihood	A <sup>+</sup>	There will be the improvement of local economy due to the increase of job opportunity with the start of the construction/demolished work and the operation by the Project.
Children’s right	D	There is no activity that will cause impact on children’s right. Child labour must not use in factory operation. Basically, children below 13 years old are not prohibited to work in any shop, commercial establishment or factory according to the labor law in Myanmar. Therefore, child labor would be controlled well to prevent employing.
Cultural and Heritage/Asset	D	There is no factor to cause the negative impact on the existing cultural, heritage/asset and landscape. Because of proposed project is situated in Industrial area of Hlaing Tharyar Township.
Landscape		
Health and Safety		
Risks of infectious disease such as ARI,	D	There is a possibility to increase the risks of infectious diseases due to influx of workers during in operation area.

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Categories	Evaluation	Reason of Evaluation
TB, etc.		Risks for communicable and vector-borne disease are expected among workers and the surrounding local community due to the influx of labors from outside. Existing public health care program will be utilized in cooperation with local government, and the project proponent will plan CSR activities regarding health care.
Occupational health and safety	<b>C</b>	Minor impact on the working conditions of workers of the production area is expected. In addition, project proponent shall comply with the related labor laws under the supervision Social Security Board (SSB).
Community health and safety	<b>D</b>	Impacts on community health and safety are expected due to influx of workers and increase of vehicle traffic.
<b>Emergency Risk</b>		
Flood risk	<b>D</b>	Flood risks such as heavy rain, cyclone, and high tide are expected to be Hlaing Tharyar Township.
Fire risk	<b>B<sup>-</sup></b>	There is a possibility for the risk of fire to increase due to economic activities. Polly HK laundry service factory shall install and maintain an effective fire alarm system and firefighting system in the operation building.
Earthquake	<b>D</b>	There is a possibility that buildings and structures in the industrial area would collapse if earthquake occurs.
<b>Other</b>		
Global warming	<b>C</b>	Emission of greenhouse gases (GHGs) would be generated from machineries, vehicle traffic, generator operation, etc.

**5.4. PROPOSED ENVIRONMENTAL MITIGATION MEASURE**

This section presents the proposed mitigation measures that factory will adopt to facilitate the management and control of potential adverse impacts associated with the project activities of Polly HK laundry service factory. The proposed mitigation measures are verified to be practical and implementable in operational conditions. Mitigation measures will be taken into the result of evaluation such that potential adverse impacts are reduced to as low as reasonably practical. The mitigation measures are presented for each phase in Table 5-5.

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**Table 5-5 Proposed mitigation measures with the factory's operation phase**

Potential Impact	Identified Risk	Mitigation Measures
Air pollution and Dust emission	Dust and exhaust atmospheric emission i.e. emission of SO <sub>2</sub> , NO <sub>x</sub> , CO, PM, etc. occur due to the stack gas of generator and vehicle movement	<ol style="list-style-type: none"> <li>1. Stack gas emission level can be controlled by using generator with low NO<sub>x</sub> technology</li> <li>2. Ensuring vehicles and generators are well maintained.</li> <li>3. The factory ensures that workers wear masks during working in dusty area.</li> </ol>
Water Pollution	<ol style="list-style-type: none"> <li>1. Dispose of oil used for maintenance of machines</li> <li>2. Sewerage discharge</li> </ol>	<ul style="list-style-type: none"> <li>• Regular check and maintain the drainage system in the factory compound</li> <li>• Regular check and maintain wastewater treatment plant and discharged wastewater quality testing by laboratory every six month. (Complied NEQ guideline)</li> </ul>
Noise Pollution	Noise can generate from vehicle movement and especially from the operation of generator, compressor and other vibration machine.	Use of Personal Protective Equipment (PPE) like ear plug/ear muff in the noisy workplace like generator area.
Waste Disposal	Improper management of solid waste will cause the adverse effect	<ul style="list-style-type: none"> <li>➢ Disposal of solid sewage waste in own septic tank following the waste management plan.</li> <li>➢ Solid waste need to collect into storage and handed over to YCDC.</li> <li>➢ Medical waste generated by the factory clinic is handed over to local hospital.</li> </ul>
Health and safety	Risks of infectious disease such as Malaria, Dengue, Tuberculosis, Hepatitis, Cholera	<ul style="list-style-type: none"> <li>• Create safety condition for work places</li> <li>• Educate and train workers for good working practice, good safety practice and good house-keeping practice</li> <li>• Prevent and avoid accidents at work places</li> <li>• Use eye protection and impermeable gloves as protective equipment while handling the hazardous materials.</li> <li>• Educate and train them for health education and workers in First Aid training</li> <li>• Provide first aid box with medicines and drugs comprising anti-malaria, anti-cholera and anti-toxicant.</li> <li>• The workplace must be hygiene with adequate facilities provided for cleaning food, utensils and equipment.</li> </ul>



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Potential Impact	Identified Risk	Mitigation Measures
		<ul style="list-style-type: none"><li>• Employees who are directly involved in the production process should not work while affected by infectious diseases.</li><li>• Factory shall has a dispensary run by a certified nurse.</li><li>• Conduct annual medical checkup for current staffs.</li><li>• A qualified medical doctor shall be appointed to perform medical checkups.</li><li>• Reporting of occupational incidents</li></ul>

## **6. PUBLIC CONSULTATION**

### **6.1. PUBLIC CONSULTATION PROCESS**

Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made.

On 26, December 2018, a public consultation and disclosure ceremony was held at the proposed project site of Polly HK Factory, Kanaung Hall, Shwe Lin Ban Industrial Zone Committee Office in order to disclose the project information to the following personnel:

- Institutions (Local or Government Authorities at Hlaing Tharyar Township)
- Project Affected Persons at proposed factory site
- Interested persons (Adjacent Factory)

It is aimed at disclosing the findings of environmental and social studies and the likely impacts upon them as well as mitigation and monitoring schemes to remediate the impacts caused by the project activities. It is also aimed at receiving recommendations, feedbacks upon the studies. Presentation activity photos of public hearing and consultation, ceremony is shown in Figure 6-1.

Agenda of the public hearing consultation meeting was held according to the following program:

- Opening of the meeting
- Presentation of EMP report study for production of Polly HK laundry service Factory
- Recommendation and suggestion by Attendees
- Closing of the meeting

### **6.2. RECOMMEND SUGGESTION AND COMMENT**

After the presentation, the floor opened for questions and answers. Most of government stakeholders are suggested for good monitoring measure during operation.

Daw Khin Ohnmar Soe, Environmental Conservation Department;

- Kind of chemical usage process are described in main report
- Factory location map and layout map are described detail in the main report
- To directly inform the Health department for the case of infectious disease
- Nurse and clinic provides for the emergence case of workers in the factory

U Kyaw Kyaw, YCDC (Environmental and Cleaning Department);

- To maintain the ventilation system of the factory building
- To prepare the firefighting plan and firefighting training



Figure 6-1 Public consultation meeting

### 6.3. INCLUDING IMPLEMENTATION PLANS

Nurse and clinic provides for the emergence case of workers and prepare the firefighting plan and firefighting training in the factory.

## 7. ENVIRONMENTAL MANAGEMENT PLAN

### 7.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the P-D-C-A cycle (Figure 7-1). Environmental management consists of four related tasks as described below:

- Plan (P) - What need to be done

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

- Do (D) - Implement the plan

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

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

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

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

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

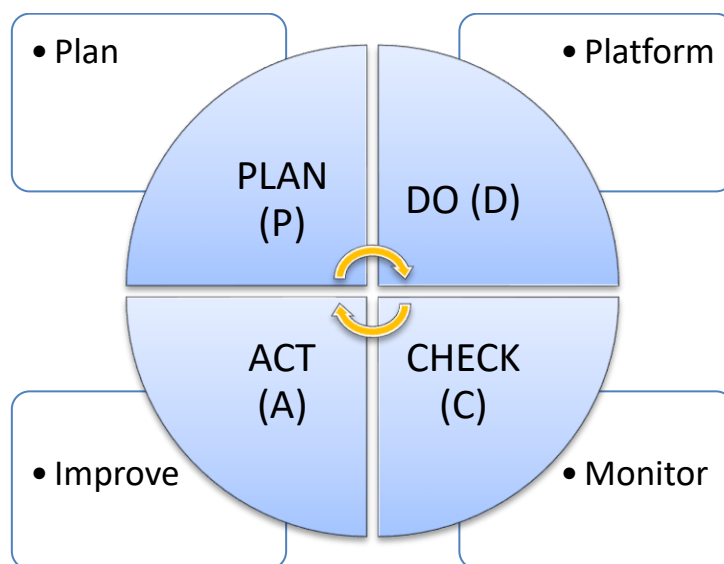


Figure 7-1 PDCA cycle

#### 7.1.1. Institutional Requirement

The development of the proposed project will be managed by Polly HK (Myanmar) Co., Ltd. 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 Management Plan**

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Environmental Monitoring Plan (EMoP) 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.

**7.2. RESPONSIBILITIES OF THE ENVIRONMENTAL MANAGEMENT PLAN**

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:

**Polly HK (Myanmar) 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 Polly HK (Myanmar) Company Limited for EMP implementation facilities.

**Environmental Conversation Department:** 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.

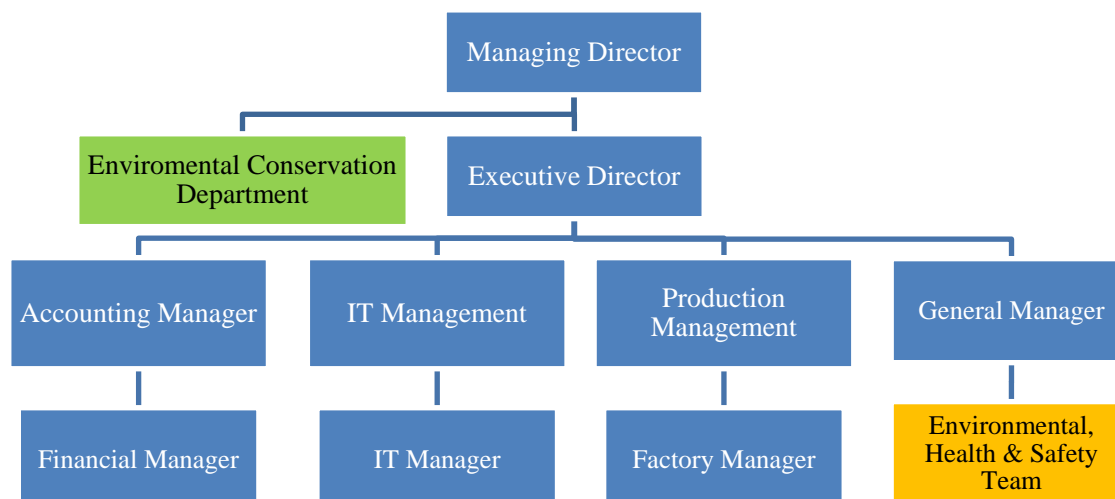
**Third-Party Environmental Consultant:** The environmental consultant will have to ensure that the proposed EMP is up to date and is being followed properly by the proponent. Periodic audits of the EMP will have to be done to ensure that its performance is as expected, by comparing with operating standards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

**7.2.1. 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;



**Environmental Management Plan****Figure 7-2 Organization Structure of Environmental Management**

The EMP for Polly HK (Myanmar) Co., Ltd. has been prepared to address potential issues based upon discussion with factory management, workers, local community's view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for Polly HK factory are as follows:

- Air Quality Management Plan
- Noise Management plan
- Solid Waste Management plan
- Liquid Waste Management Plan
- Fire Management Plan
- Occupational Safety and Health Management Plan
- Hazardous Waste Management Plan
- Emergency Response and Management Plan
- Environmental Monitoring Schedule and Reporting
- Capacity Building and Training Plan
- Grievance Redress Mechanism (GRM)
- Corporate Social Responsibility (CSR) Plan

**7.3. AIR QUALITY MANAGEMENT PLAN**

This factory is operated garment laundry service for (CMP) garment factory. So, there has no emitted gas and dust. The assessment study cannot be need for air quality management plan.

**7.4. NOISE MANAGEMENT PLAN**

Objectives:	<ul style="list-style-type: none"> <li>➤ To avoid nuisance noise to nearby residents generated from generator and other machineries.</li> <li>➤ To comply with noise standard of National Environmental Quality (Emission) Guideline</li> </ul>
Relevant government law	<ul style="list-style-type: none"> <li>➤ National Environmental Quality (Emission) Guidelines (2015)</li> </ul>



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and rule		
Time Frame	➤ Throughout the project life	
Management Plan	<div>➤ Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment</div> <div>➤ Impose speed limit to track and vehicles at the transportation route.</div> <div>➤ Provide sufficient personal protective equipment (PPE) at the work place</div> <div>➤ All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.</div>	
Monitoring & Reporting	Frequency	Biannually
	Monitoring Point	Two points in operation area
	Parameters	Sound Decibel
Estimated cost	100,000 Kyats per year	
Responsibility	HSE Manager or Environmental Management Team of Polly HK (Myanmar) Company Limited	

**7.5. SOLID WASTE MANAGEMENT PLAN**

Objectives:	<ul style="list-style-type: none"><li>➤ 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</li><li>➤ To comply government waste management policy</li></ul>
Relevant government law and rule	<ul style="list-style-type: none"><li>➤ Yangon City Development Committee Law (2018), National Waste Management Strategy and Action Plan (Draft 2018)</li></ul>
Time Frame	<ul style="list-style-type: none"><li>➤ Entire life spans of the factory operation</li></ul>
Management Plan	<ul style="list-style-type: none"><li>➤ Must be provides separate garbage bins at each building.</li><li>➤ All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area</li><li>➤ Final wastes should be disposed by using YCDC's service.</li></ul>
Monitoring & Reporting	<ul style="list-style-type: none"><li>➤ Daily wastes have to be collected and hand over to YCDC waste collector</li><li>➤ The inventory record of waste disposal will be maintained as proof for proper management as designed</li></ul>
Estimated cost	100,000 Kyats per month
Responsibility	Manager (HR) <ul style="list-style-type: none"><li>➤ Responsible for overall site cleanliness and waste management</li><li>➤ Regular waste collection to minimize excessive waste storage</li></ul>

**7.6. 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	➤ Regular inspection and cleaning, oil traps, septic tank and adequate covers for all

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Plan	storage and waste disposal areas can decrease these contaminations. ➤ Wastewater treatment plant WWTP installation ➤ regular check and cleaning WWTP	
Monitoring & Reporting	Frequency	Biannually
	Parameters	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically	
Estimated cost	1,000,000 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	

**7.7. 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 Polly HK (Myanmar) Company Limited

**7.8. 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

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	<p>sufficient lighting for workers for safe working and reducing optical problems of the workers.</p> <ul style="list-style-type: none"> <li>➤ Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department.</li> <li>➤ To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.</li> <li>➤ Manage the drainage systems of the factory to prevent health risk of the workers.</li> <li>➤ 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.</li> </ul>
Monitoring and Reporting	<ul style="list-style-type: none"> <li>➤ Weekly check fire extinguishers and water hydrant in position</li> <li>➤ Daily inspect that all fire exist are open</li> <li>➤ Servicing fire extinguisher and records accidents</li> </ul>
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Polly HK (Myanmar) Company Limited

**7.9. HAZARDOUS WASTE MANAGEMENT PLAN**

Objective	<ul style="list-style-type: none"> <li>➤ To avoid environmental pollution and adverse health effects due to its improper handling &amp; disposal.</li> </ul>
Relevant Government Law and Rule	<ul style="list-style-type: none"> <li>➤ Yangon City Development Committee Law (2018), Explosive Ordnance Disposal Law (2018)</li> </ul>
Time Frame	<ul style="list-style-type: none"> <li>➤ Entire life spans of proposed project</li> </ul>
Management Action	<ul style="list-style-type: none"> <li>➤ Proper inspection and maintenance in storage of hazardous waste.</li> <li>➤ Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements.</li> <li>➤ The empty chemical containers will hand over to suppliers for recycle or appropriate disposal</li> <li>➤ The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (e.g. DOWA and YCDC)</li> </ul>
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 Polly HK (Myanmar) Company Limited

**Environmental Management Plan****7.10. EMERGENCY RESPONSE AND MANAGEMENT PLAN**

Objectives:	<ul style="list-style-type: none"> <li>➤ 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.</li> </ul>
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)</li> </ul>
Time Frame	<ul style="list-style-type: none"> <li>➤ Entire life spans of the factory operation</li> </ul>
Management Plan	<ul style="list-style-type: none"> <li>➤ The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm</li> <li>➤ Provision and inspection of firefighting equipment and fire hydrant system in all the sections</li> <li>➤ A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers</li> <li>➤ Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training.</li> <li>➤ Regular fire drill operation is conducted</li> <li>➤ 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</li> <li>➤ 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.</li> <li>➤ A medical team has been prepared for primary treatment (First Aid)</li> <li>➤ 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.</li> <li>➤ Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management</li> <li>➤ Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety</li> </ul>
Monitoring & Reporting	<p>Weekly check fire extinguishers and water hydrant in position</p> <p>Daily inspect that all fire exist are open</p> <p>Servicing fire extinguisher and records accidents,</p>
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	<p>Manager and EHS officer</p> <ul style="list-style-type: none"> <li>➤ Arrange firefighting training after every 3 months</li> <li>➤ Responsible for fire control and response</li> <li>➤ Monitoring daily danger warning and bans</li> </ul>

**7.11. 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 Polly HK (Myanmar) Company Limited. The

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factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

**Table 7-1 Environmental Monitoring Process**

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
<b>Operation Phase</b>					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	2,500,000 Kyats	Environmental Management Team's Polly HK (Myanmar) Company Limited
Noise	Sound dBA	Biannually monitoring and reporting to ECD (first 3 years after operation)	Outdoor and Indoor of proposed project	100,000 Kyats	Environmental Management Team's Polly HK (Myanmar) Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Weekly	Recycle house and waste house and at the factory office	100,000 Kyats	Environmental Management Team's Polly HK (Myanmar) Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500,000 Kyats	Environmental Management Team's Polly HK (Myanmar) Company Limited
Light Intensity	Illuminance	Monthly	At the production line	20,000 Kyats	Environmental Management Team's Polly HK (Myanmar) Company Limited
<b>Decommissioning Phase</b>					
Air Quality	TSP, PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	One time during this phase	One point in the production area	500,000 Kyats	Land Owner & Environmental Management Team's Polly HK (Myanmar) Company Limited
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	50,000 Kyats	Land Owner & Environmental Management Team's Polly HK (Myanmar) Company Limited

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Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner & Environmental Management Team's Polly HK (Myanmar) Company Limited

**7.12. CAPACITY BUILDING AND TRAINING PLAN**

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

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

**7.12.1. 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.

**7.12.2. 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

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

**7.12.3. 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



**Environmental Management Plan**

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-  Hazardous materials spill response
-  First Aid

**7.12.4. 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 spread 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

**7.12.5. 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.

**Environmental Management Plan****7.12.6. 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 7-2 American National Fire Fighting Association (NFFA) Standards**

No.	Parameters	Proposed Capacity	Remark
1.	Fire water flow	14 bars	
2.	Deluging rate	12.0 liters/m <sup>2</sup> /min	
3.	Foam rate	10.0 liters/m <sup>2</sup> /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.

**Environmental Management Plan**

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**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.

**7.12.7. Site Fire Control**

4. Alert other people through fire alarm
5. If small, control using an extinguisher
6. Contact fire brigade if not under immediate control
7. Attend to human life in immediate danger
8. For electrical fires turn off power before fighting
9. 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
10. Obey all instructions
11. Proceed to an emergency evacuation area (Muster Point)

**7.12.8. 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

**7.12.9. Health and Safety Training Plan for Worker**

Health and Safety Training plan currently used and provided in Polly HK (Myanmar) 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

**Environmental Management Plan**

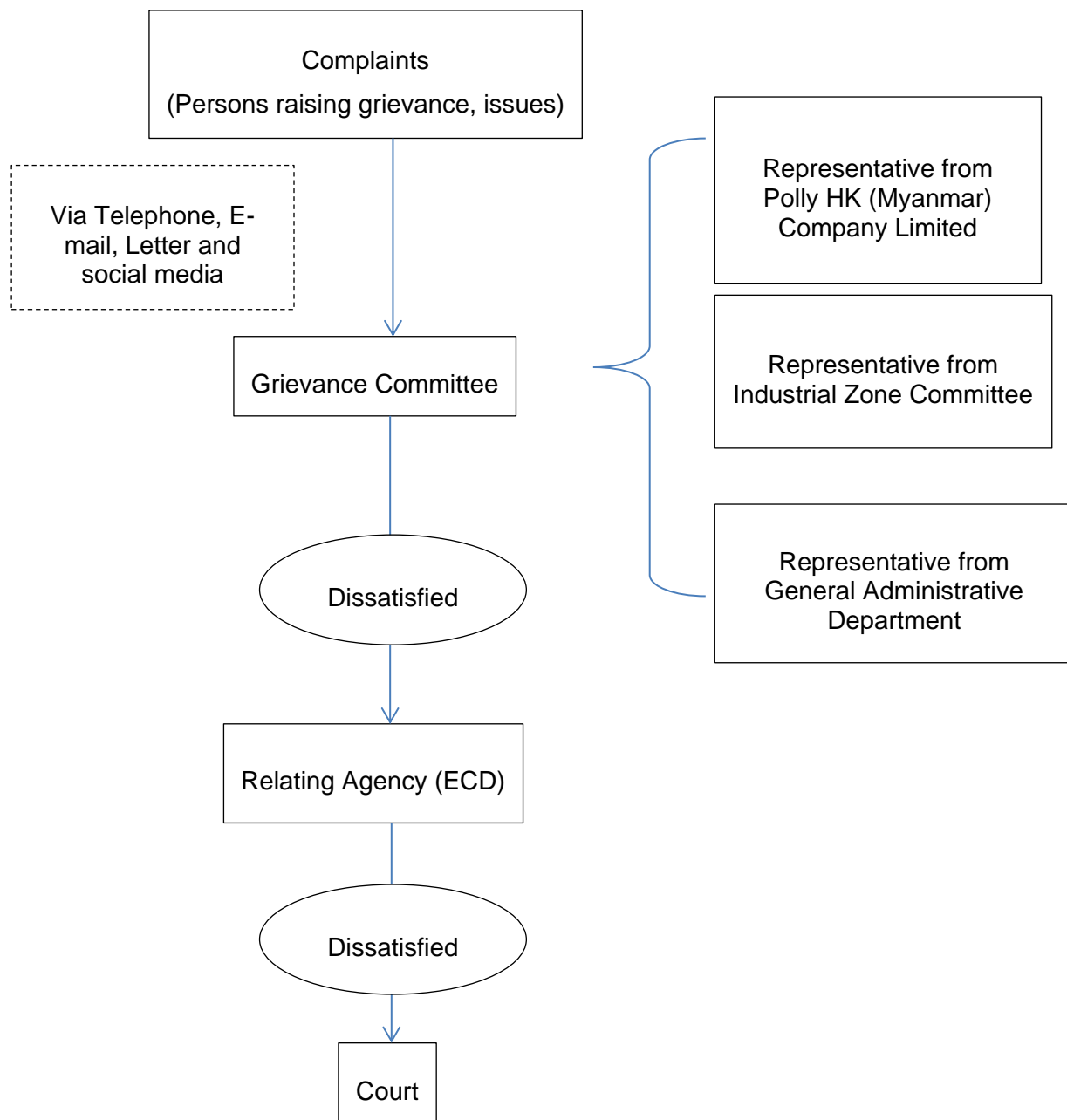
health and the respective departments propose safety or operational parts, top management makes decision and HR organizes and conducts the trainings.

**Table 7-3 Training Plan Used in Polly HK (Myanmar) 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

### 7.13. 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 through Grievance Committee, which includes the responsible persons of Polly HK (Myanmar) Company Limited representative from Shwe Lin Ban 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.

**Environmental Management Plan****Figure 7-3 Grievance Redress Mechanism Flow Diagram****7.14. 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 Polly HK (Myanmar) 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.

Polly HK (Myanmar) 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.

**Environmental Management Plan****Table 7-4 CSR Plan**

Area	Priority item	Contribution (%)	Estimated Cost (Kyats)	Detail targets
Health	Healthcare for employees and their family	0.5 %	1,500,000	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 %	7,000,000	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%	1,500,000	<ul style="list-style-type: none"> <li>• Donate to local charities with a worthy cause</li> <li>• Actively participate in community events</li> <li>• Encourage staff to participate, and to form a community engagement team to actively support community events</li> <li>• Embedding understanding and consciousness about human rights issues among the employees</li> <li>• Development of sexual harassment and power harassment (workplace bullying &amp; harassment) prevention efforts</li> </ul>



## 8. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Polly HK factory is located at Plot No. 301, Myay Taing Block No. 25, NaWaDay MinGyi Road, Shwe Lin Ban Industrial Zone, Hlaing Tharyar 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 garments manufacturing factory.

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

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

## **9. RECOMMENDATION**

This is recommendation that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to YCDC rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this EMP report. Once concerned authorities approve EMP, effective implementation of EMP by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

## APPENDIX A

### Company Documents

#### COMPANY PROFILE

[BACK TO PREVIOUS PAGE](#)

<b>Company Name (English)</b> POLLY HK (MYANMAR) COMPANY LIMITED	<b>Company Name (Myanmar)</b>	<b>Registration Number</b> 101016145	<b>Registration Date</b> 12/10/2015
<b>Company Type</b> Private Company Limited by Shares	<b>Status</b> Registered	<b>Foreign Company</b> Yes	<b>Small Company</b> No
<b>Annual Return Due Date</b> 12/11/2022			
<b>Principal Activity</b> 32 - Other manufacturing			

#### FILING HISTORY

#### ADDRESSES

#### OFFICERS

Document No.	Form/Filing Type	Filing Date	Effective Date
23342690017	AR - Annual Return	18/10/2021	18/10/2021
21772450017	I-9D - Application to revoke suspension of company registration	29/01/2021	31/01/2021
21771080011	AR - Annual Return	29/01/2021	29/01/2021
14695320010	I-9A - Notice of intent to suspend for failure to file annual return	13/11/2019	13/11/2019
10625560018	D-1 - Particulars of directors and secretary	22/10/2018	22/10/2018
10625380010	C-3 - Change to share capital or register of members	22/10/2018	22/10/2018
10096520013	B-1 - Application for re-registration of a private company limited by shares	19/08/2018	19/08/2018

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10096520013	B-1 - Application for re-registration of a private company limited by shares	19/08/2018	19/08/2018



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်  
ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ  
အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ- ၀၄၅ /၂၀၁၈ ၂၀၁၈ ခုနှစ် ဧပြီလ ၁၁ ရက်  
ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ  
ပုဒ်မ-၂၅ ပုဒ်မခွဲ (ဃ) အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

- (၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR.SONGLIN GONG  
(၂) နိုင်ငံသား CHINESE  
(၃) နေရပ်လိပ်စာ 82AI GOO DONG YANG CITY, ZHEJIANG  
PROVINCE, PEOPLE'S REPUBLIC OF CHINA  
(၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ -  
(၅) ဖွဲ့စည်းရာအရပ် -  
(၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား အထည်အမျိုးမျိုး နှင့် အဝတ်အထည်  
များကို လျှော်ဖွတ်သန့်စင်ခြင်း ဝန်ဆောင်မှုလုပ်ငန်း  
(၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ်၃၀၁၊ မြေတိုင်းရပ်ကွက်  
အမှတ်၂၅၊ ရွှေလင်းပန်း စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး  
(၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၁.၀၀၀ သန်း  
(၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့်  
နေ့မှ ၁ နှစ် အတွင်း  
(၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၁.၀၀၀ သန်းနှင့်  
ညီမျှသော မြန်မာကျပ်ငွေ  
(၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁ နှစ်  
(၁၂) အတည်ပြုမိန့်သက်တမ်း ၃၀ နှစ်  
(၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု  
(၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် POLLY HK (MYANMAR)  
COMPANY LIMITED



၂၀၁၈  
၂၀၁၈

ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ



ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်  
Certificate of Incorporation

**POLLY HK (MYANMAR) COMPANY LIMITED**  
Company Registration No. 101016145

မြန်မာနိုင်ငံကုမ္ပဏီများအက်ဥပဒေ ၁၉၁၄ ခုနှစ် အရ  
**POLLY HK (MYANMAR) COMPANY LIMITED**  
အား ၂၀၁၅ ခုနှစ် အောက်တိုဘာလ ၁၂ ရက်နေ့တွင်  
အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ  
အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့် ပြုလိုက်သည်။

This is to certify that  
**POLLY HK (MYANMAR) COMPANY LIMITED**  
was incorporated under the Myanmar Companies Act 1914 on 12 October  
2015 as a Private Company Limited by Shares.

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ

Registrar of Companies

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

Directorate of Investment and Company Administration



Former Registration No. 580FC/2015-2016(YGN)





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

Form (5-B)

178  
11-4-2018

Investment No. YGN - 045 /2018

Date 11 April 2018

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

- (1) Name of Investor MR.SONGLIN GONG
- (2) Citizenship CHINESE
- (3) Residence Address 82AI GOO DONG YANG CITY, ZHEJIANG  
PROVINCE, PEOPLE'S REPUBLIC OF CHINA
- (4) Name and Address of Principal Organization
- (5) Place of Incorporation
- (6) Type of business LAUNDRY SERVICE FOR VARIOUS TYPE  
OF CLOTHS AND WEARS
- (7) Place(s) of investment Project PLOT NO. 301, MYAY TAING  
BLOCK NO. 25, SHWE LIN PAN INDUSTRIAL ZONE, HLAING  
THAR YAR TOWNSHIP, YANGON REGION
- (8) Amount of Foreign Capital US\$ 1.000 MILLION
- (9) Period for Foreign Capital to be brought in WITHIN ONE YEAR  
FROM THE DATE OF ISSUANCE OF ENDORSEMENT
- (10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF  
US\$ 1.000 MILLION
- (11) Construction/ Preparation Period 1 YEAR
- (12) Validity of Endorsement 30 (THIRTY) YEARS
- (13) Form of Investment WHOLLY FOREIGN OWNED
- (14) Name of Company Incorporated in Myanmar POLLY HK  
(MYANMAR) COMPANY LIMITED



*[Signature]*  
11/4/2018  
Chairman

Yangon Region Investment Committee

**APPENDIX B**  
**Detail Description and Drawing of Wastewater Treatment Plant**

宝丽缅甸水洗有限公司污水处理工程

---

**Polly HK (Myanmar) Co., Ltd.**  
**Wastewater Treatment**

**Design Plan**

**Zhejiang Zhuojia Environment Co.,Ltd.**

**2018 June**

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## 1. Design basis, principle and scope

### 1.1 design principles

- The wastewater treatment system with simple Process, mature technology, low energy consumption and high efficiency is used.
- Combined with the characteristics of water and water quality of enterprises. After mixing production wastewater with domestic wastewater, the operation cost can be reduced greatly while organic pollution is degraded.
- use continuous process

### 1.2 Design scope

Technical documents such as design instructions, main drawings, equipment selection, investment estimation, operation costs, etc. for the major specialties of technology, civil engineering, machinery, electrical appliances, instrumentation control between the inlet and the standardized discharge port of the wastewater treatment system.

Workshop waste water, domestic waste water, clean sewage to sewage treatment station access pipes, ditches, power supply, tap water and standardized discharge outlets and after the discharge pipes shall be separately determined .

## 2. Design scale, water quality and discharge standard

### 2.1 design scale

According to the information and requirements provided by enterprises, the scale of wastewater treatment is:

Processing capacity  $Q = 1200\text{m}^3/\text{d}$

### 2.2 Design of influent water quality

According to the information provided by the owner, the influent water quality of the project is determined as follows:

$$\begin{array}{ll}\text{COD}_{\text{Cr}} \leq 300\text{mg/L} & \text{PH} \leq 9 \\ \text{NH}_3\text{-N} \leq 15\text{mg/L} & \text{SS} \leq 200\text{mg/L} \\ \text{Color} \leq 100\end{array}$$

### 2.3 Discharge standard

Discharge water is implemented in the first level standard of the comprehensive discharge standard for sewage (GB8978-1996).

## Sewage comprehensive standard (GB8978-1996)

Sr.no	Pollutants	First level standard	Third level standard
1	PH	6~9	6~9
2	SS	$\leq 70\text{mg/L}$	$\leq 400\text{mg/L}$
3	COD <sub>Cr</sub>	$\leq 100\text{mg/L}$	$\leq 500\text{mg/L}$
4	NH <sub>3</sub>	$\leq 15\text{mg/L}$	$\leq 45\text{mg/L}$
5	Color	$\leq 40$	$\leq 80$ 倍

## 3. Process principle, technology and process flow

## 3.1 Process principle

The basic principle of wastewater treatment is to separate pollutants from wastewater by physical, chemical and microbial methods, or change the chemical structure, or decompose into low molecular mineralized substances, so as to reduce the content of organic or inorganic substances in wastewater.

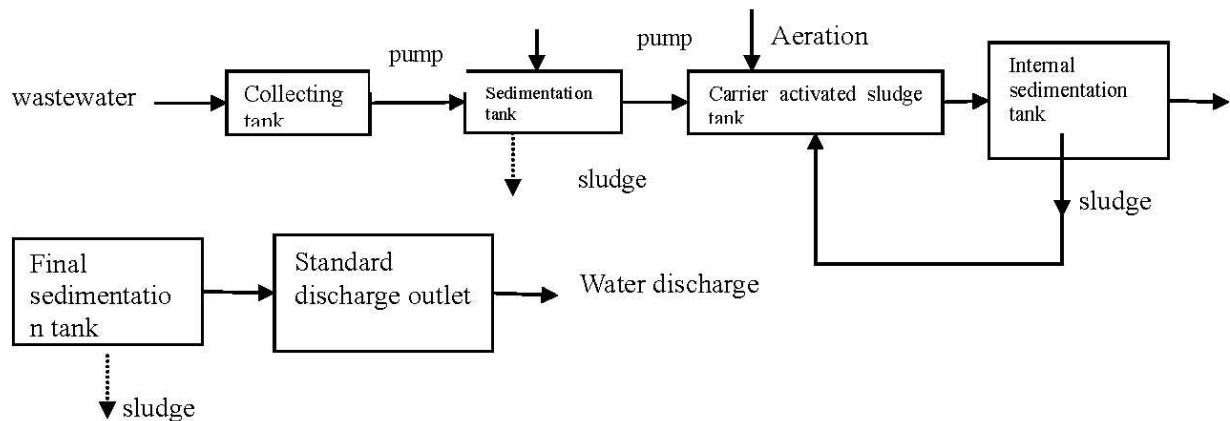
The sewage contains alkali, oxidant, surfactant, dye, slurry, staple fiber and so on.

The sewage has low COD, slightly alkaline PH value, low chroma of woven fabrics, medium chroma of fabric, mainly water insoluble dye particles, easy to decolorize.

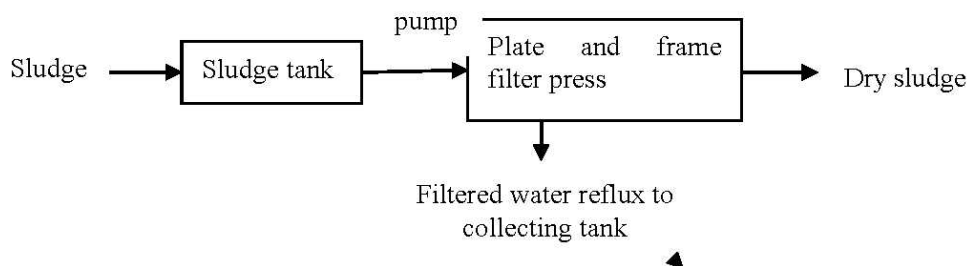
Domestic wastewater contains soluble organic matter and ammonia. It is easy to be decomposed by microorganisms, and eventually produces CO<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, a small number of organic matter and microorganisms. It can reduce the pollutants in the discharged water through the form of gas or solid discharges, so that it can be purified.

## 3.2 Process Flow

According to the characteristics of wastewater, combined with the company's processing technology, the process is to be followed:



Flow Diagram of Wastewater Treatment Process



Flow diagram of sludge treatment process

### 3.3 Process flow description

- (1) all sewage enters the pool and is mixed and homogenized .
- (2) Flocculants and coagulants are added to the reaction tank. The suitable size of alum is generated by electric neutralization and flow into the settling area. After a certain retention time, solid-liquid separation is achieved. The supernatant water is basically colorless and contains a small amount of organic matter. Into subsequent microbial treatment. The lower sludge is regularly discharged to the sludge tank.
- (3) a large number of microorganisms are adsorbed on special carriers in the activated sludge tank. In sufficient oxygen supply, microorganisms decompose organic matter in sewage. Synthesis of bacteria and generation of CO<sub>2</sub> and H<sub>2</sub>O to purify water. The surplus activated sludge is regularly discharged to the sludge tank.
- (4) the internal settling tank is used for microorganism capture and concentration. And returned to the activated sludge tank head of the carrier.

### 3.4 Process characteristics

1. After the unified collection of wastewater treatment, to achieve homogeneous wastewater, reduce water quality fluctuations, convenient operation management.
2. Good water quality.
3. System stability is good。



#### 4. Process design parameters and description

##### 4.1 Main structure Design parameters

###### (1) Collection Pool

Effective Volume:  $V=100\text{m}^3$

Structure: Underground Type steel concrete

###### (2) A sinking pond

Effective Area:  $S=35\text{m}^2$

Structure: Ground-type steel concrete

Built-in mud-drain bucket

###### (3) Carrier activated sludge tank

Effective Volume:  $V=150\text{m}^3$

Structure: Ground-type steel concrete

Built-in micro-porous aeration pipe

###### (4) Internal sedimentation tank

Effective Area:  $S=24\text{m}^2$

Structure: Ground-type steel concrete

###### (5) Final sedimentation tank

Effective Area:  $S=24\text{m}^2$

Structure: steel concrete on the ground

###### (6) Sludge tank

Effective Volume:  $V=100\text{m}^3$

Structure: Underground Type steel concrete

List of Major Construction

##### 4.2 The list of standard equipment

Sr.no	Name	Volume	Structure	Note
1	Collection Pool	$100\text{m}^3$	Steel concrete	Underground
2	Sedimentation tank	$35\text{m}^2$	Steel concrete	Over ground
3	Carrier activated sludge tank	$150\text{m}^3$	Steel concrete	Over ground
4	Internal sedimentation tank	$24\text{m}^2$	Steel concrete	Over ground

5	Final sedimentation	24m <sup>2</sup>	Steel concrete	Over ground
6	Sludge tank	100m <sup>2</sup>	Steel concrete	Under ground

Sr.no	Name	Parameters	Number	Note
1	Water lift pump	10m <sup>3</sup> /h.25m <sup>3</sup> /h	2	一用一备
2	Recoil pump	25m <sup>3</sup> /h	3	
3	Reflux	10m <sup>3</sup> /h	2	一用一备
4	Plate and frame filter press	100/1000	1 set	Air compressor and diaphragm pump
5	Fan	RSR100	2	一用一备

Sr.no	Name	Main parameter	Number	Note
1	Micro-porous aeration pipe	Φ90	100m	Activated tank
2	Perforated aeration pipe	DN50/25	50/260m	Collecting ,sludge tank
3	Dosing tank	3m <sup>2</sup>	2sets	
4	Carrier	100 目	10m <sup>3</sup>	Activated tank
5	Pipe valve	Various specifications	A batch	

## 5. Engineering Design

This project needs to do well in sewage diversion and sewage collection. Sewage and clean water collection are concentrated in one area.

### 5.1 Plane position

The area of the system is about 600 sq meter

Main structures and equipment layout

- The layout of sewage treatment works and facilities is clear and the layout is reasonable.
- The structure (building) is arranged according to the direction of the flow. The common wall between the pool and the pool is used as much as possible to save the cost. The connecting pipes between the units are arranged with the shortest path.

The sewage discharged from the gathering tank is up to standard and the water is directly discharged by gravity.

The sludge discharged from the facilities of each unit entered the sludge tank by differential pressure.

### 5.2 Piping layout

The pipeline as brief as possible, reduce unnecessary turning and crossing, as far as possible to reduce the pipeline layout, and anti-corrosion treatment, make the pipeline layout reasonable and beautiful, do not interfere with the operation of transport, each processing unit is arranged on the ATC for inspection.

## 6. Civil Design

### 6.1 Design basis

- Technical condition information
- Regional geological survey report for Engineering Construction -- to be mentioned
- About existing codes, regulations and local laws

The basic facts of civil engineering

The civil design is mainly composed of : grille wells, collecting pool, treating tank, sludge tank, equipment foundations ,etc.

### 6.2 Structure Design

This project is mostly a reservoir structure, its waterproof and impermeability requirements are strict, the use of steel concrete structure, material selection, may consider the use of additives to compensate for concrete solidification caused by shrinkage, dry crack, improve the density of concrete and impermeability.

The concrete label is generally as follows: cushion C10, subject C20, C25. Anti-seepage label: According to the water pressure design wall thickness to determine, the general S6 steel bar, select the principle of "fine and dense", in order to facilitate the anti-seepage effect.

## 7. Electrical Design

### 7.1 Scope of design

The design scope of this project is the distribution control of all power equipment and the lighting system of structure in the boundary area of sewage treatment station, without considering the influence of sewage treatment equipment capacity on the high and low voltage distribution facilities in the plant.

### 7.2. Power Supply and Distribution

The power load grade of this project is three-level, the power supply voltage is 380/220V, using a single power supply mode, the power cable is introduced from the existing plant substation sewage treatment power control cabinet.

The lighting power supply of this project is connected to the lighting distribution box by the power control cabinet, and then the circuit is divided to supply each individual illumination.

There are not many power equipment in this project. In order to save investment, there is no centralized control room, and the power equipment are field distribution control.

1. The power control cabinet is set up in the power room to operate and control the blower, sewage pump and solvent system.

2. In the sludge dewatering field, an electric control box is installed to control the sludge dewatering system.

All electric devices are manually controlled, and buttons are controlled near the scene control box.

Electric energy measurement: Installing a watt-hour meter in a power control cabinet to measure the electricity consumption of a wastewater treatment system so that enterprises can make cost statistics and accounting.

### 7.3 Summary of electricity load

The total installed capacity of the project is 26.55kw, the running load is 21.05kw, the two class runs, and the total power consumption is 209kwh/d.

Sr.no	Equipment name	Numb er	Capacity unit (kw)	Total Capacity (kw)	Used capacity (kw)	Time	Power consumption
1	Water lift pump	2	0.75/2.2	2.95	2.2	20hr	40kwh
2	Recoil pump	3	2.2	6.6	6.6	2h/d	12kwh
3	Reflux pump	2	0.75	1.5	0.75	24h/d	16kwh
4	Plate and frame filter	Set	7.5	7.5	7.5	8h/d	55kwh

	press						
5	Fan	2	4	8	4	24h/d	86kwh
Total				26.55	21.05		209kwh

#### 7.4. Protective grounding and cable laying

This project adopts electrical protection zero connection system. Repeated grounding is arranged at the power control cabinet, and the grounding resistance is not more than  $10\Omega$ . Reliable grounding should be ensured for metal enclosure of power equipment and installation of lamps and lanterns.

The cable laying of this project, automatic control cabinet to the control box of each electric point and power design cable are all directly buried through galvanized steel pipe.

Indoor lighting is buried by wire conduit, and outdoor lighting is buried by galvanized steel pipe.

### 8. Technical indicators and engineering benefits

#### 8.1 Expected processing effect

Index Item		CODcr (mg/l)	PH	NH3-N (mg/l)	SS (mg/l)	Color
Wastewater treatment tank		< 300	$\leq 9$	$\leq 15$	$\leq 200$	$\leq 100$
Sedimentation tank	Discharge	180	7-8			40
	Remove rate	40%				
Final sedimentation	Discharge rate	60-90	7-8	10	60	30
	Remove rate	50%				
National standard		100	6-9	15	70	40

#### 8.2 Engineering benefit

- The total amount of pollutants CODcr before treatment 4.95 tons / year in average.
- The total amount of CODcr emission after treatment is 1.65 tons / year.
- CODcr removal capacity of 3.3 tons / year.

- CODcr removal rate is greater than 67%.
- All other indicators of discharge wastewater meet the first grade standard.
- Wastewater quality indicators meet the discharge standards, reducing the environmental capacity load, creating a certain environmental benefits. It has created good aftereffect for the sustainable development of enterprises.

## 9. Conclusion and Suggestion

### 9.1 Conclusion

According to the characteristics of water quality, the sewage is collected centrally, homogenized and even in the regulating pool, and then treated uniformly, which is convenient for management and operation.

Physicochemical + biochemical treatment process was adopted.

Adopt suitable automatic control system to simplify operation management. The technology has the characteristics of maturity, stable treatment effect and moderate running cost. Most of the pollutants in the wastewater are converted into carbon dioxide, nitrogen, water and some semi-solid sludge by the treatment system.

### 9.2 Suggestion

After the completion of the wastewater treatment system, enterprises should strengthen two aspects of management. One is the management of the source of pollutants. All sections of the workshop should be strictly operated according to the production process to prevent the running, leaking, dripping and leakage of raw and auxiliary materials. This not only wastes raw materials, but also increases the cost of products, and brings serious adverse consequences to the subsequent treatment. The second is to improve the environmental ethics and operational responsibility of the sewage treatment operators to ensure the efficiency of the whole system.

In production, we should adopt technological reform, do a good job in cleaning and diversion, do a good job in all aspects of cleaner production, and ensure that wastewater treatment meets the standards.





# APPENDIX C

## Wastewater Quality Result



### ပတ်ဝန်းကျင်ရေးရာဓာတ်ခွဲခန်း Ecological Laboratory



စိမ်းလန်းအိမ်ခြံမြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

Reference Number/ ဓာတ်မှတ်: EL-R / 02727

Date / ရက်စွဲ: 5 November, 2018

### Laboratory Analysis Report /ဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာ

#### Sample Profilesနမူနာရာဇဝင်

နမူနာအမည် / Sample Name	Wastewater	နမူနာအမှတ် / Sample ID	4317
နေရာ (မြို့နယ်) / Location (Township)	Shwe Lin Ban Industrial Zone, Hlaingtharyar Township	လတ္တီတွဒ် / Latitude	-
နေရာ (တိုင်း/ပြည်နယ်) / Location (Division/State)	Yangon	လောင်ဂျီတွဒ် / Longitude	-
ပေးပို့သူအမည် / Sender Name	Polly HK	နမူနာကောက်ယူချိန် (နေ့၊ နာရီ) / Sampling Time (Date, Time)	30.10.2018
အဖွဲ့အစည်း/Organisation	-	နမူနာရောက်ရှိချိန် (နေ့၊ နာရီ) / Arriving Time (Date, Time)	30.10.2018 2:22 pm
ဆက်သွယ်ရန် / Contact	09421137569		

(This laboratory analysis report is based solely on the sample submitted by the customer)

(ဤဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာသည် ပေးပို့သူမှပို့ဆောင်ခဲ့သည့်နမူနာကိုသာအခြေခံထားပါသည်။)

#### Analysis Results စမ်းသပ်ချက်အဖြေ

စဉ် / Sr.	အရည်အသွေးညွှန်းကိန်း / Quality Parameter	ရလဒ် အဖြေ Results		နည်းစဉ် / Method	စံသတ်မှတ်ချက် / Drinking Standard	စွန့်စေ့ စံနှုန်း / Effluent Standard	မှတ်ချက် / Remarks
၁	ချဉ်ဖန်ကိန်း (pH)	7.3		pH meters	6.5 – 8.5	6.0 – 9.0 *	Normal
၂	အပူချိန် (Temperature)	23	°C	Estimated by Eco-Lab with Jenway Dissolved Oxygen Meter (Model 970)	-	±3°C	-
၃	အရောင် (Colour)	125	HU	Lovibond SpectroDirect Method No. 203	-	-	-
၄	နောက်ကျိမှု (Turbidity)	8	FAU	Lovibond SpectroDirect Method No. 385	≤10 FAU	NG	Clear
၅	ပျော်ဝင်အနည်များ (Total dissolved solids)	350	mg/L	Consort Multi-parameters Conductivity meter	NG	≤2000 mg/l *	Normal
၆	ဆိုင်ကြဲအနယ် (TSS)	9	mg/L	Lovibond SpectroDirect Method No. 383	NG	≤50 mg/L *	Normal
၇	စုပေါင်းအနည် (Total Solids)	359	mg/L	Lovibond SpectroDirect Method No. 383	-	-	-
၈	အောက်ဆီဂျင် ပျော်ဝင်မှု (Dissolved Oxygen)	7.24	mg/L	Jenway Dissolved Oxygen Meter (Model 970)	≥ 3 mg/L	NG	Normal
၉	ဇီဝဆိုင်ရာ အောက်ဆီဂျင်လိုအပ်ချက် (BOD <sub>5</sub> )	46	mg/L	Estimated by Eco-Lab with Jenway Dissolved Oxygen Meter (Model 970)	≤ 3 mg/L	≤ 50 mg/L *	Above DW limit
၁၀	ဓာတ်ဆိုင်ရာ အောက်ဆီဂျင်လိုအပ်ချက် (COD)	95	mg/L	Lovibond SpectroDirect Method No. 130, 131, 132	NG	≤ 250 mg/L *	Normal

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A-2, Kan Street, Hlaing Township, 11051, Yangon, Myanmar. Tel: +95 1 503301 | Fax: +95 1 503302

Email: [alarm.myanmar@gmail.com](mailto:alarm.myanmar@gmail.com) | website: [www.myanmaraffairs.com](http://www.myanmaraffairs.com)



# ပတ်ဝန်းကျင်ရေးရာတတ်ခွဲခန်း Ecological Laboratory



စိမ်းလန်းအိမ်ခြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

၁၁	ကလိုရင်း (Chlorine total residual)	1.72	mg/L	Lovibond SpectroDirect Method No. 100	NG	$\leq 0.2 \text{ mg/L} *$	Above the limit
၁၂	စိန်ဓာတ် (Arsenic)	0	mg/L	Lovibond Arsenic test kit code.no -400700	$\leq 0.01 \text{ mg/L}$	$\leq 0.1 \text{ mg/L} *$	Normal

\* Myanmar Emission Guideline 2015

NG=No Guideline

ND= Not Detected

စမ်းသပ်ပြီး Tested by

**Daw May Myat Khine**  
Lab. Technician II  
Ecological Laboratory  
ALARM

စစ်ဆေးပြီး Checked by

**Daw Lin Myat Myat Aung**  
Lab. Technician I  
Ecological Laboratory  
ALARM

တာဝန်ခံ Approved by

**Dr. Aye Aye Win**  
Laboratory In-Charge  
Ecological Laboratory  
(ALARM)

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





A-2, Kan Street, Hlaing Township, 11051, Yangon, Myanmar. Tel: +95 1 503301 | Fax: +95 1 503302

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## APPENDIX D

### Public Consultation






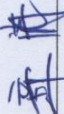


#### Attendant List

တော့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်ရန်ဖိတ်ကြားလွှာလက်ခံစာရင်း						
စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်	
၁။	အိတ်စားဖြူဦးစီး	အထူးအကြံပေး	မဟာမင်းကြီးရုံး	၀၇-၄၃၀၁၃၀၅၈၇		
၂။	ဒေါ်အောင်ဆန်းစုကြည်	အထူးအကြံပေး	အထူးအကြံပေး	၀၇-၄၃၀၁၃၀၅၈၇		
၃။	ဒေါ်အောင်ဆန်းစုကြည်	အထူးအကြံပေး	အထူးအကြံပေး	၀၇-၄၃၀၁၃၀၅၈၇		
၄။	ဒေါ်အောင်ဆန်းစုကြည်	အထူးအကြံပေး	အထူးအကြံပေး	၀၇-၄၃၀၁၃၀၅၈၇		
၅။	ဒေါ်အောင်ဆန်းစုကြည်	အထူးအကြံပေး	အထူးအကြံပေး	၀၇-၄၃၀၁၃၀၅၈၇		
၆။	ဒေါ်အောင်ဆန်းစုကြည်	အထူးအကြံပေး	အထူးအကြံပေး	၀၇-၄၃၀၁၃၀၅၈၇		



နေ့စွဲ - ၂၆ရက်၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူစာရင်း

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁။	ဒေါ်ခင်မိုးစိုး	ဦးစီးအရာရှိ	ပတ်လုံးလွှတ်တော်အဖွဲ့အစည်း	၀၉-၄၃၁၅၈၄၇	
၂။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	
၃။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	
၄။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	
၅။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	
၆။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	
၇။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	
၈။	ဒေါ်မိုးမိုးစိုး	အ-ဦးစီးအရာရှိ	၆၀၁၊ ကျောက်တော်မြို့နယ်	၀၉-၇၅၁၀၃၈၄၂၁	

Zhejiang Tongli Clothing (Myanmar)  
ကုမ္ပဏီလီမိတက်  
(CMP) စနစ်ဖြင့် အထည်ချုပ်လုပ်ငန်းနှင့်

Polly HK (Myanmar) ကုမ္ပဏီလီမိတက်  
အဝတ်လျော်လုပ်ငန်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာ (မူကြမ်း)  
အတွက်  
သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ

Myanwei Consulting Co., Ltd.  
၂၆ရက် ၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်

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အစည်းအဝေး အကြောင်းအရာ

- ၁။ ကုမ္ပဏီအား မိတ်ဆက်ခြင်း
- ၂။ စက်ရုံအကြောင်းအရာ ဖော်ပြချက်
- ၃။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်အား မိတ်ဆက်ခြင်း
- ၄။ သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့် ထိခိုက်မှုအဆင့် သတ်မှတ်ခြင်း
- ၅။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

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## (၁) ကုမ္ပဏီအား မိတ်ဆက်ခြင်း

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### Zhejiang TongLi Clothing (Myanmar) Co., Ltd. And Polly HK (Myanmar) Co., Ltd.

- Zhejiang Tongli သည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ ခွင့်ပြုမိန့်ကို ၂၀၁၅ ခုနှစ် အောက်တိုဘာလ ၁၄ ရက်နေ့ ရက်စွဲပါ (ခွင့်ပြုမိန့်အမှတ် ၁၀၂၄/၂၀၁၅) ရရှိခဲ့ပြီး ဖြစ်ပါသည်။
- Polly HK သည် ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၈ခုနှစ်၊ ဇန်နဝါရီလ၊ ၃ရက်နေ့တွင် (ထောက်ခံချက်အမှတ် ရကတ-၀၄၅/၂၀၁၈) ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။

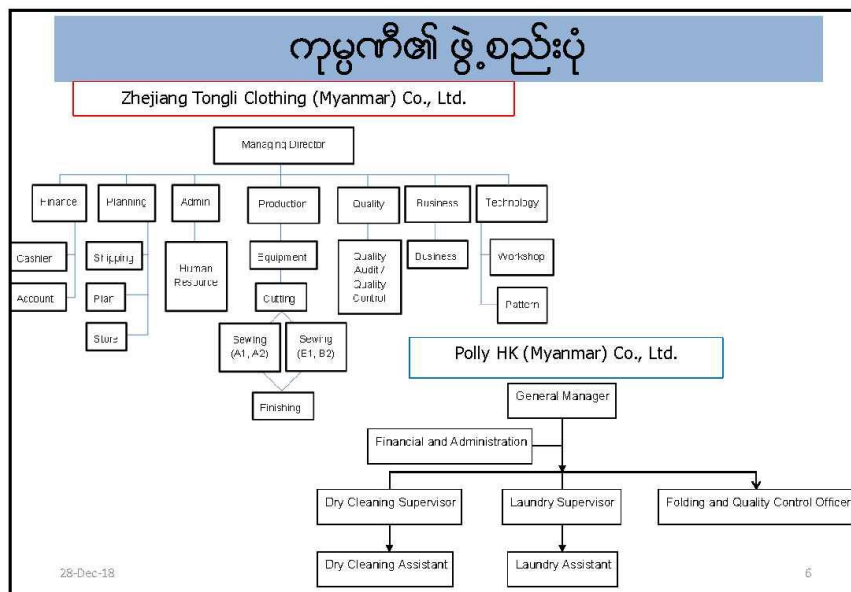
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လုပ်ငန်းအမျိုးအစား	(CMP) လစာစာရင်းနှင့် အထည်အမျိုးမျိုးထုတ်လုပ်သည့်လုပ်ငန်း နှင့် အဝတ်လျှော်လုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
မြေအမျိုးအစား	စက်မှုနယ်မြေ
မြေဧရိယာ	၂.၇၁၃ ဧက
အဆောက်အအုံ	အဆောက်အအုံ-၁ (ရုံးပိုင်းဆိုင်ရာနှင့်စက်ချုပ်လှိုင်း)=၄၀၀'x၁၈၀' အဆောက်အအုံ-၂ (ပိတ်ဖျက်လှိုင်းမီးပူတိုက်ခြင်းထုတ်ပိုးခြင်း)=၂၀၀'x၁၈၀' အဆောက်အအုံ-၃ (လျှော်မွတ်ခြင်း)=၄၀၀'x၁၆၀'
မြေကူးနှစ်	နှစ် ၆၀
ပြုပြင်ရေးကာလ	၁နှစ်
လုပ်ငန်းလည်ပတ်သည့်ကာလ	နှစ် ၅၀ ရင်းနှီးမြှုပ်နှံမှု
စက်ရုံလိပ်စာ	မြေကွက်အမှတ်၃၀၁၊ မြေတိုင်းရပ်ကွက်အမှတ် ၂၅၊ နဝဒေးမင်းကြီးလမ်း၊ ရွှေလင်ပန်းစက်မှုရန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

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## (၂) စက်ရုံအကြောင်းအရာ ဖော်ပြချက်

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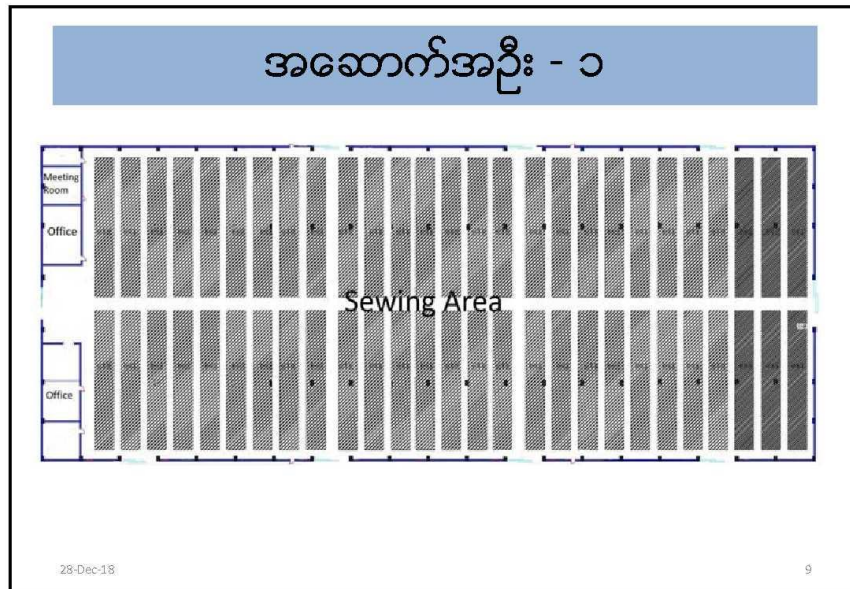
7

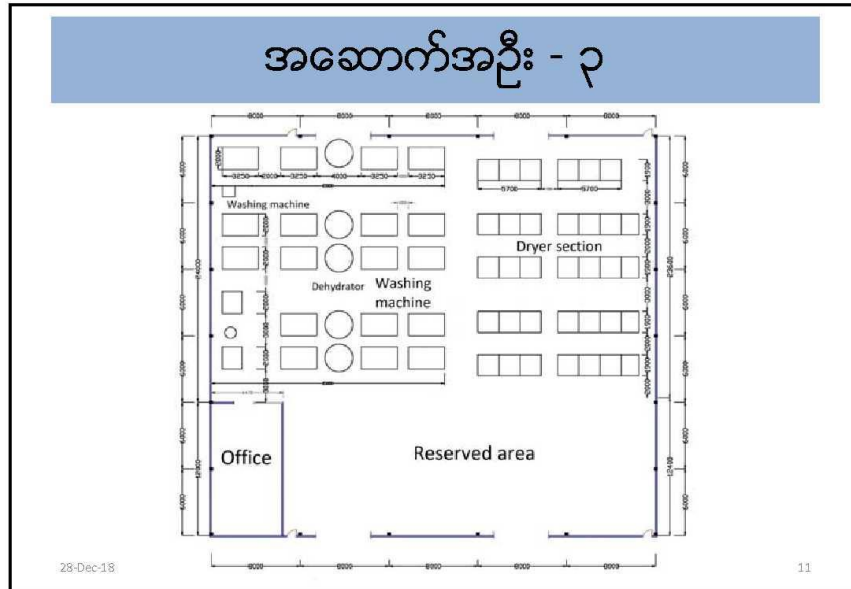
## စက်ရုံတည်နေရာ



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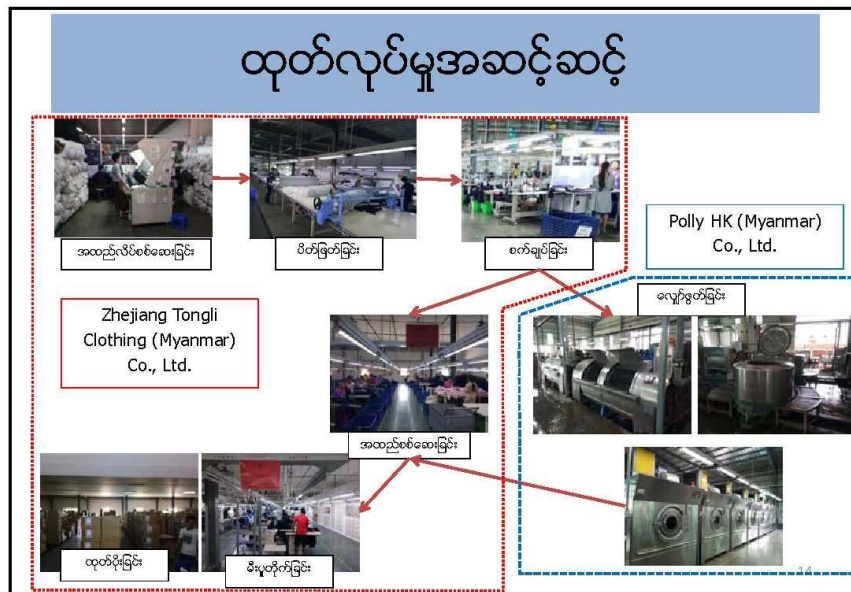
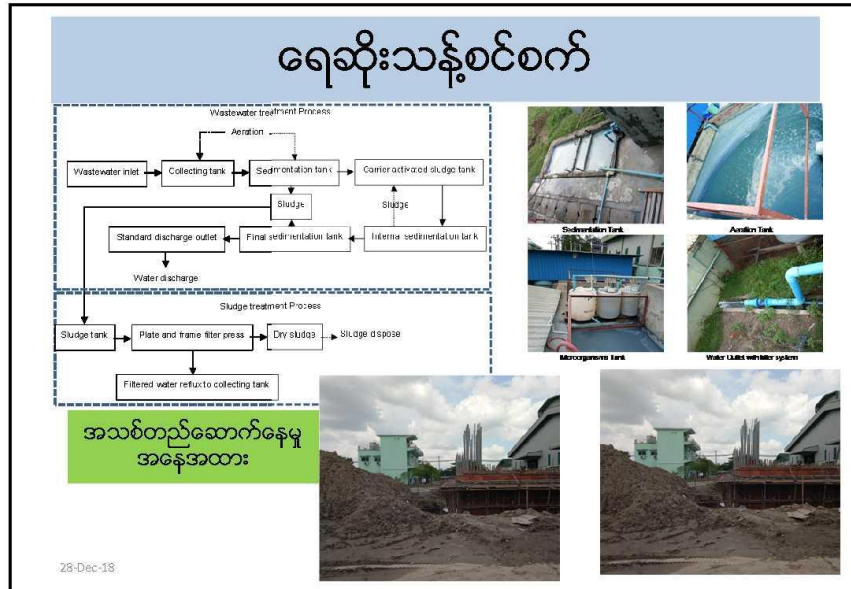
### စက်ရုံအတွက်အသုံးပြုမှု

လူဦးရေ	<ul style="list-style-type: none"> <li>၁,၇၃၈ယောက် (အထည်ချုပ်)</li> <li>၅၅ယောက် (အစတ်လျှော်)</li> </ul>	
ရေအသုံးပြုမှု	420 ft <sup>3</sup> (ဝန်တင်သုံးရေ) 1,350 ft <sup>3</sup> (ခဲသတ်ကန်) တစ်နှစ် ၂၀၀၀၀ ဂါလံ (စက်ရုံတစ်ခုလုံးစာ)	
လျှပ်စစ်အသုံးပြုမှု	1,000 kVA Transformer. 300 kVA and 500 kVA generators	
သွိုင်းလာ	4 ton/hr stream သွိုင်းလာ တစ်လုံး	

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## စွန့်ပစ်ပစ္စည်းထွက်ရှိမှု

- စက်ရုံမှထွက်သော စွန့်ပစ်ပစ္စည်း
  - ပိတ်ဖြတ်စ ပျမ်းမျှ ၅၀ kg (တစ်ရက်)
  - ဘွိုင်လာစွန့်ထုတ်ရေ ၀.၁ m<sup>3</sup> (တစ်ရက်)
  - စွန့်ပစ်ရေ 36 m<sup>3</sup> (တစ်ရက်)
- လုပ်သားမှထွက်သော စွန့်ပစ်ပစ္စည်း
  - အမှိုက်၊ ၀.၃၉ × ၁၇၃၈ = ၆၇၇.၈၂ kg (တစ်ရက်)
  - စွန့်ပစ်ရေ ၀.၁ × ၁၇၃၈ = ၁၇၃.၈ m<sup>3</sup> (တစ်ရက်)



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(၃) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု  
အစီအစဉ်အားမိတ်ဆက်ခြင်း

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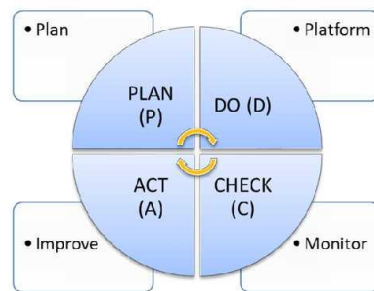
## ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ပြုလုပ်ခြင်း

- ၂၀၁၅ ခုနှစ် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်းများအရ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ပြုလုပ်ရန် ပြုလုပ်ခဲ့ပါသည်။
- တို့ကြောင့် EMP အစီအရင်ခံစားရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော မြန်မာ ကွန်စာတင်း ကုမ္ပဏီလီမိတက် (Myanwei Consulting Co., Ltd.)ကို ငှားရမ်းရေးဆွဲခဲ့ပါသည်။
- EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် Zhejiang Tongli Clothing (Myanmar) နှင့် Polly HK (Myanmar) ကုမ္ပဏီတို့သည် စက်ရုံတွင် ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် လျော့ချရေး၊ ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုတို့အတွက် အဖွဲ့အစည်းတစ်ခုထားရှိပြီး စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်ပါသည်။

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## စီမံခန့်ခွဲမှုပုံစံ



### (P) အစီအစဉ်ရေးဆွဲခြင်း

စီမံကိန်းဆောင်ရွက်သည့်ကာလတစ်လျှောက် EMP အစီအစဉ်ကို စံချိန်စံညွှန်းများနှင့်အညီ ဖန်တီးမှုရေးဆွဲခြင်း

### (D) အကောင်အထည်ဖော်ခြင်း

စီမံကိန်းမှ EMP အစီအစဉ်များကို အကောင်အထည်ဖော် ဆောင်ရွက်ခြင်း

### (C) စောင့်ကြပ်ကြည့်ရှုခြင်း

သက်ဆိုင်ရာပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုသူများမှ စစ်ဆေးမှတ်တမ်းရယူခြင်း

### (A) ဝင်ဆောင်ခြင်း

စောင့်ကြပ်ကြည့်ရှုစစ်ဆေးပြီးရလဒ်များကို ပိုမိုကောင်းမွန်သော အခြေအနေသို့ရောက်ရှိရန် ပြုပြင်မွမ်းမံခြင်း ၊

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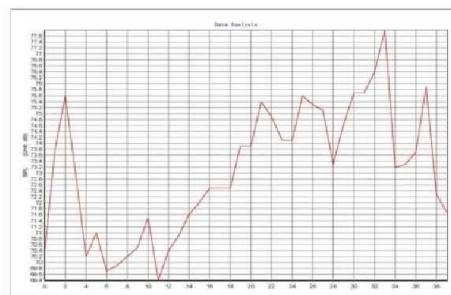
(၄) သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့်  
ထိခိုက်မှုအဆင့် သတ်မှတ်ချက်များ

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## ဆူညံသံတိုင်းတာမှု

- စက်ရုံအတွင်းတိုင်းတာမှု = 3<sup>rd</sup> September, 2018
- အထည်ချုပ်စက်ရုံ = ၆၉.၇၂ dBA
- အဝတ်လျှော်စက်ရုံ = ၆၆.၅၇ dBA



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## အလင်းရောင်တိုင်းတာမှု

- စက်ရုံအတွင်းတိုင်းတာမှု = ၃၊ ၉၊ ၂၀၁၈

No	Location	Measure value(Lux)	Standard*
1	Sewing line 1	404	400
2	Sewing line 2	412	400
3	Sewing line 3	345	400
4	Sewing line 4	341	400
5	Sewing line 5	450	400
	Cutting line 1	448	400
	Cutting line 2	471	400
	Finishing line 1	521	400
	Finishing line 2	385	400
	QC	1447	900 (except 1500 at audit tables)



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## ရေဆိုးအရည်အသွေးတိုင်းတာမှု

Parameter	Results	Standard	Unit	Remark
pH	7.3	6-9		Normal
Temperature	23	± 3	°C	-
Colour	125	-	HU	-
Turbidity	8	NG	FAU	Clear
Total Dissolved Solid	350	≤ 2000	mg/L	Normal
TSS	9	≤ 50	mg/L	Normal
Total Solids	359	-	mg/L	-
Dissolved Oxygen	7.24	NG	mg/L	-
BOD	46	≤ 50	mg/L	Normal
COD	96	≤ 250	mg/L	Normal
Arsenic	0	≤ 0.1	mg/L	Clear
Chlorine Total Residual	1.72	≤ 0.2	mg/L	Normal



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## သက်ရောက်မှုအဆင့်သတ်မှတ်ပုံ

စီမံကိန်းကာလတွင် ဖြစ်နိုင်ခြေရှိသော ထိခိုက်မှုများကို အဆင့်သတ်မှတ်ချက် (၄) ခုဖြင့် ခွဲခြားသတ်မှတ်ထားပါသည်။ ၎င်းတို့မှာ-

- ၁။ က-: သိသာသော ဆိုးကျိုးသက်ရောက်မှု  
 က+: သိသာသော ကောင်းကျိုးသက်ရောက်မှု
- ၂။ ခ-: ဆိုးကျိုးသက်ရောက်မှု အချို့ရှိခြင်း  
 ခ+: ကောင်းကျိုးသက်ရောက်မှု အချို့ရှိခြင်း
- ၃။ ဂ-: အကျိုးသက်ရောက်မှု မရှင်းလင်းသဖြင့် ထပ်မံလေ့လာသင့်သည်
- ၄။ ဃ-: အကျိုးသက်ရောက်မှု မရှိသလောက်ဖြစ်၊ ထပ်မံလေ့လာရန်မလို

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ညစ်ညမ်းမှု	
လေထုအရည်အသွေး	ခ- သွိုင်းလာ၊ မီးစက်နှင့် စက်ရုံသုံးယာဉ်များကြောင့် ပတ်ဝန်းကျင်လေထုကို ထိခိုက်စေပါသည်။ ထွက်သော အဓိအငွေ့များတွင် SO, NO, CO, VOC and PM များပါဝင်ခြင်းကြောင့် ပတ်ဝန်းကျင်ကို ထိခိုက်မှုဖြစ်စေပါသည်။
ရေထုအရည်အသွေး	ခ- စက်ရုံ၏ ကုန်ပစ္စည်းထုတ်လုပ်မှုမှ ရေဆိုးထွက်ရှိခြင်းမရှိ၊ ဝန်ထမ်းများအသုံးပြုပြီးသော ရေသာထွက်မည်ဖြစ်သောကြောင့်ပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုမရှိကြောင်းတွေ့ရှိခဲ့ပါသည်။
ဆူညံမှု	ဂ- စက်ရုံအတွင်းဆူညံသံတိုင်းတာမှုရလဒ်များအရ အနည်းငယ်ဆူညံမှုရှိကြောင်းတွေ့ရှိခဲ့ပါသည်။ ထိုဆူညံမှုမှာလဲ စက်ရုံအတွင်း လုပ်ငန်းခွင်အတွင်းသာဖြစ်ပြီး စက်ရုံပြင်ပ ပတ်ဝန်းကျင်ကိုမထိခိုက်နိုင်ပါ။
စွန့်ပစ်အမှိုက်	ခ- စက်ရုံမှထွက်ရှိသောအမှိုက်မှာ ပိတ်ဖြတ်စများ၊ ပိတ်လိပ်ရာတွင်အသုံးပြုသော စက္ကူလိပ်များ၊ အထည်ထုတ်ပိုးရာတွင် အသုံးပြုသော ပလတ်စတစ်အိတ်၊ စက္ကူဖာ၊ အစရှိသည်တို့ဖြစ်ပါသည်။  ဝန်ထမ်းများမှ ထွက်ရှိသော ရေသန့်ဘူးခွံ ပလတ်စတစ်အိတ်၊ စက္ကူ၊ tissue၊ စားကြင်းစားကျွန်း၊ အစရှိသော လူသုံးအမှိုက်များ ဖြစ်ပါသည်။

ဝန်ထမ်းကျန်းမာရေးနှင့် အန္တရာယ်ကင်းရှင်းရေး		
ကူးစက်ရောဂါ၊ ဥပမာ ARI, Flu, etc.	ဂ	ဖြစ်နိုင်ခြေနည်းပါးသော်လည်း လုပ်သားအင်အားဖြင့် လည်ပတ်သော စက်ရုံအမျိုးအစား ဖြစ်သောကြောင့် စက်ရုံတွင် ကျန်းမာရေး အသိပညာပေးမှုနှင့် ကျန်းမာရေး စောင့်ရှောက်မှုရှိရန် လိုအပ်ကြောင်း တွေ့ရှိခဲ့ပါသည်။
လုပ်ငန်းခွင်အန္တရာယ် ကင်းရှင်းရေးနှင့် ကျန်းမာရေး	ဂ	ထိခိုက်မှုနည်းသော လုပ်ငန်းအမျိုးအစားဖြစ်သော်လည်း လူမှုဖူလုံရေးမှာ ညွှန်ကြားထားသော စည်းမျဉ်းစည်းကမ်းများကို လိုက်နာရမည်ဖြစ်ပါသည်။
အနီးနားဝန်းကျင် အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေး	ဃ	ထိခိုက်မှုတစ်စုံတရာမတွေ့ရပါ။

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လူမှုဘဝ အခြေအနေ		
စားဝတ်နေရေးနှင့် ဇီပွားရေး	က <sup>+</sup>	လုပ်သားပြည်သူ အလုပ်အကိုင်အခွင့်အလမ်းများ တိုးပွားလာခြင်း၊ သာမန်လုပ်သားဘဝမှ ကျွမ်းကျင်ဝန်ထမ်းဘဝသို့ တက်လှမ်းနိုင်ခြင်း အစရှိသည့်ကောင်းကျိုးများရရှိစေနိုင်ပါသည်။
ကလေးလုပ်သား	ဃ	စက်ရုံတွင် ကလေးလုပ်သားအသုံးပြုမှု လုံးဝမရှိပါ။ မြန်မာနိုင်ငံ၏ အလုပ်သမား ဥပဒေအရ ၁၈ နှစ် အထက်လုပ်သား ခန့်အပ်ခွင့်ရှိကြောင်းကိုလည်း သိရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် စက်ရုံတွင် ကလေးလုပ်သား ခန့်ထားခွင့်ကို တားမြစ်ထားပါသည်။
ယဉ်ကျေးမှုနှင့် ရှေးဟောင်းအမွေအနှစ်	ဃ	စက်ရုံသည် လှိုင်သာယာမြို့နယ်ရှိ ရွှေလင်ပန်းစက်မှုဇုန်တွင် တည်ရှိသောကြောင့် ထိခိုက်မှုတစ်စုံတစ်ရာ မတွေ့ရပါ။
သဘာဝပတ်ဝန်းကျင်အခြေအနေ	ဃ	စက်ရုံသည် လှိုင်သာယာမြို့နယ်ရှိ ရွှေလင်ပန်း စက်မှုဇုန်တွင် တည်ရှိသောကြောင့် ထိခိုက်မှုတစ်စုံတစ်ရာ မတွေ့ရပါ။

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အရေးပေါ်အခြေအနေ	
မီးဘေးအန္တရာယ်	ခ- မတော်တဆမှု၊ ဝေပုံဆု၊ လျှပ်စစ်၊ အစရှိသည်တို့မှ ဖြစ်ပေါ်စေနိုင်ပါသည်။
ရေကြီးရေလျှံမှု	ဂ- မိုးကြီးခြင်း၊ မုန်တိုင်းတိုက်ခြင်း စသည်တို့ ဖြစ်ပေါ်စေနိုင်ပါသည်။
ငလျင်	ဂ- ငလျင်ဒဏ်ခံနိုင်သော အဆောက်အအုံတည်ဆောက်မှုပုံစံကြောင့် ထိခိုက်ပျက်စီးမှုဖြစ်စေနိုင်ပါသည်။
တခြားကဏ္ဍ	
ကမ္ဘာကြီးပူဇွန်လာမှု	ခ- စက်ရုံသုံးယာဉ်များ၊ မီးစက် အစရှိသော စွမ်းအင်လောင်ကျွမ်းခြင်းတို့ ကြောင့် ဖန်လုံအိမ်ခြံဝှံ၊ ထုတ်လွှတ်မှုဖြစ်စေပြီး ကမ္ဘာကြီးပူဇွန်လာမှု ဖြစ်စေသည်။

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(၅) ပတ်ဝန်းကျင်ပီပီခန့်ခွဲမှု အစီအစဉ်	
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## ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များ

- ၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၅။ အရေးပေါ်တုံ့ပြန်ရေး အစီအစဉ်
- ၆။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan
- ၇။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်
- ၈။ EMP အတွက် ငွေကြေးမျှဝေသုံးစွဲမှု အစီအစဉ်

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## လေထုညစ်ညမ်းမှုလျော့ချရေးနှင့် စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံတွင် မီးစက်အတွက် အမြင့်ပေ ၅၀ ရှိ မီးခိုးခေါင်းတိုင်ထားရှိခြင်း၊
- ခေါင်းတိုင်အား အမြဲကောင်းမွန်သော အခြေအနေတွင် ပြုပြင်ထားရှိခြင်း၊
- NOx ထွက်ရှိမှု နှုန်းနိမ့်သော နည်းပညာဖြင့် မီးစက်ကို အသုံးပြုခြင်း၊
- စက်ရုံတွင် (open burning) မိရှိခြင်းမပြုလုပ်ရန် တားမြစ်ထားခြင်း၊
- ဖုန်ထွက်သောနေရာတွင် အလုပ်လုပ်သော လုပ်သားများအတွက် နာခေါင်းစီးများ ဝတ်ဆင်စေခြင်း၊
- စက်ရုံအတွင်းနှင့် အနီးအနားတွင် သစ်ပင်စိုက်ပျိုးခြင်းဖြင့် Carbon ထွက်ရှိမှုကို လျော့ချစေပြီး လေထုညစ်ညမ်းမှုကို လျော့ချစေပါသည်။

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## ဆူညံမှုလျော့ချရေးနှင့် စီမံခန့်ခွဲမှု

- ဆူညံသံများသော မီးစက်ခန်းနှင့် လေမှုတ်စက်ခန်း အစရှိသည်တို့ကို သီးသန့်ခန်းထားရှိခြင်း
- လုံလောက်သော တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးပစ္စည်းများ ထောက်ပံ့ပေးခြင်း
- လုပ်သားများအား သင့်လျော်သော အခြေခံ သင်တန်းများပို့ချပေးခြင်း

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## အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲခြင်း

- စက်ရုံမှ မည်သည့်အမှိုက်ကိုမဆို အနီးအနားရှိ ရေမြောင်း၊ ရေကန်၊ ရောင်း၊ မြစ် အစရှိသည့်နေရာများတွင် မစွန့်ပစ်ရန်တားမြစ်ထားသည်။
- စက်ရုံတွင် စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် အမှိုက်ပုံးများထားရှိပေးသည့်အပြင် စနစ်တကျစွန့်ပစ်ရန် တိုက်တွန်းထားခြင်း
- စက်လိုင်းများတွင်လည်း ပိတ်စများပစ်ရန် ပုံးများထားရှိခြင်း
- အမှိုက်ပုံးများကိုလဲ အလွယ်တကူစွန့်ပစ်နိုင်ရန် သင့်တင့်သောနေရာများတွင် ထားပေးခြင်း
- အမှိုက်များကို စည်ပင်သာယာရေးကော်မတီသို့ အကြောင်းကြားပြီး တစ်ပတ်လျှင် နှစ်ကြိမ်စွန့်ပစ်ပါသည်။



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## ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု

- မိလ္လာကန်နှင့် စွန့်ပစ်ရေမြောင်းများကို အဖုံးအကာများဖြင့် ထားရှိခြင်း
- စက်ရုံရေမြောင်းများကို အမှိုက်စွန့်ပစ်မှု မရှိစေရန်တာမြစ်ခြင်းနှင့် ရေစီးရေလာကောင်းမွန်ရန် စီစဉ်ထားခြင်း
- ရေဆိုးသန့်စင်စက်ထားရှိခြင်းနှင့် သန့်စင်စက်မှထွက်ရှိလာသောရေကို ၆ လတစ်ကြိမ်တိုင်းတာခြင်း
- ရေအရည်အသွေးတိုင်းတာမှု ရလဒ်များကို အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးထုတ်လွှတ်မှု လမ်းညွှန်ချက်နှင့် အညီကိုက်ညီမှုရှိမရှိ လေ့လာဆန်းစစ်ခြင်း
- သန့်စင်စက်မှထွက်ရှိသောအနယ်များကိုလဲ YCDC သို့ခေါ်ယူစွန့်ပစ်ခြင်း

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## အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

- အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်အတွက် စက်ရုံတွင် ကောင်းမွန်စွာစီမံထားပြီးဖြစ်သည်။
- မီးဘေးကာကွယ်ရေးအတွက် မီးသတ်ဆေးဘူး၊ မီးသတ်ပိုက်၊ အရေးပေါ်အချက်ပေးစနစ်၊ အရေးပေါ်ဆက်သွယ်နိုင်သည့် လိပ်စာများကို နေရာတိုင်းတွင် တပ်ဆင်ထားပြီးဖြစ်သည်။
- အရေးပေါ်အခြေအနေတွင်လည်း စနစ်တကျပြုလုပ်နိုင်ရန် သင်တန်းများလည် ပို့ချပေးမည်ဖြစ်သည်။
- စက်ရုံတွင် အရေးပေါ်ကာကွယ်ရေးအဖွဲ့၊ မီးသတ်အဖွဲ့၊ စသည်ဖြင့် ဖွဲ့စည်းခြင်း၊ ဆွေးနွေးခြင်း၊ အသိပညာပေးခြင်း၊ စသည်ဖြင့် ပြုလုပ်ရန်။



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လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု (CSR) အစီအစဉ်		
Zhejiang Tongli Clothing (Myanmar) နှင့် Polly HK (Myanmar) ကုမ္ပဏီတို့တွင် CSR အတွက် အမြတ်ငွေ၏ ၂ % နှုန်းကို ကျန်းမာရေး၊ ပညာရေး၊ နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး၊ ပတ်ဝန်းကျင် ကာကွယ်စောင့်ကြပ်ခြင်းတို့အတွက် အသုံးပြုသွားမည် ဖြစ်သည်။		
ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	၀.၆ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	၀.၆ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	၀.၄ %
ပတ်ဝန်းကျင် ကာကွယ် စောင့်ကြည့်ရေး	ပတ်ဝန်းကျင် အရည်အသွေးများ ထိန်းသိမ်းရန်	၀.၄ %

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စောင့်ကြပ်ကြည့်ရှုရေး				
ကဏ္ဍ	အမျိုးအစား	နေရာ	ကြိမ်နှုန်း	တာဝန်ရှိသူ
လေအရည်အသွေး	SO <sub>2</sub> , NO <sub>x</sub> , CO <sub>2</sub> , CO and PM	ဘိုလ်လာအနီး	တစ်နှစ် တစ်ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာအကြံပေးနှင့် ပူးပေါင်း၍ (စက်ရုံတာဝန်ရှိသူ)
ဆူညံမှု	ဆူညံမှု ပမာဏ	စက်ရုံလုပ်ငန်းခွင်အတွင်း	တစ်နှစ် နှစ်ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာအကြံပေးနှင့် ပူးပေါင်း၍ (စက်ရုံတာဝန်ရှိသူ)
စွန့်ပစ်ပစ္စည်း	စက်ရုံမှထွက်သည့် အမှိုက် ဝန်ထမ်းစွန့်ပစ်အမှိုက်	စက်ရုံတွင် မာယီစွန့်ပစ်သည့် ခန့်ရာနှင့် ပြင်ပသို့စွန့်ပစ်သည့် စစ်တမ်း	တစ်ပတ် နှစ်ကြိမ်	စက်ရုံတာဝန်ရှိသူ
ရေအရည်အသွေး	NEQG မှသက်မှတ်ထားသော parameter များ	သန့်စင်စက်မှ ထွက်သောရေ	လစဉ်	စက်ရုံတာဝန်ရှိသူ
လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး	စစ်တမ်းကောက်ယူမှု	စက်ရုံအတွင်း	လစဉ်	စက်ရုံတာဝန်ရှိသူ
စွမ်းအင်	လျှပ်စစ်စွမ်းအင်၊ ရေအသုံးပြုမှု၊ လောင်စာ အသုံးပြုမှု	စက်ရုံအတွင်း	နေ့စဉ်	စက်ရုံတာဝန်ရှိသူ

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## EMP အတွက် ငွေကြေးမျှဝေသုံးစွဲမှု

အမျိုးအစား	နှုန်း	သုံးစွဲငွေ (USD)
<b>လျော့ချရေးအစီအစဉ်</b>		
စက်ရုံတွင်လေဝင်လေထွက်စနစ်	တစ်နှစ်တစ်ကြိမ်	၂၀၀ တစ်နှစ်
သစ်ပင်ပန်းမနုတ်ကုန်ပျိုးခြင်း	သုံးလ တစ်ကြိမ်	၇၀ တစ်ကြိမ်
အမှိုက်ခွန် ပစ်မှု	တစ်လတစ်ကြိမ်	၁၀၀၀ တစ်နှစ်
တစ်ကိုယ်ရေကာကွယ်ရေးပစ္စည်း (PPE)	တစ်နှစ်နှစ်ကြိမ်	၁၅၀ တစ်ကြိမ်
လုပ်သားဆေးစစ်ခြင်းနှင့် ကျန်းမာရေးစောင့်ရှောက်မှု	တစ်နှစ်တစ်ကြိမ်	၅၀၀ တစ်နှစ်
<b>အရေးပေါ်အစီအစဉ်</b>		
မီးသတ်ဆေးဘူး	တစ်လတစ်ကြိမ်	၃၀၀ တစ်လ
မီးသတ်ပေးစနစ်	တစ်လတစ်ကြိမ်	
ရှေ့ပြေးပျံ့နှံ့ဆေးသေတ္တာ	တစ်လတစ်ကြိမ်	

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ကျေးဇူးအထူးတင်ပါသည်။

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## APPENDIX E

### List of Commitment

Polly HK (Myanmar) Company Limited ၏ အဝတ်အထည် လျှော်ဖွတ်ခြင်းကြောင့် 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 အပေါ်လျော့ချရန် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမည့်အစီအစဉ်အား အကောင်အထည်ဖော်ခြင်း ရည်မှန်းချက် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် ပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို စဉ်ဆက်မပြတ် ပြန်လည်သုံးသပ်ခြင်း၊ စွမ်းဆောင်ရည်မြှင့်တင်ခြင်း ဖြင့် အောင်မြင်စေရန် လုပ်ဆောင်ပေးသော စနစ်တစ်ခုဖြစ်ပါသည်။ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် ပြန်လည်သုံးသပ်ခြင်းနှင့် အကဲဖြတ်ခြင်း သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် စဉ်ဆက်မပြတ်ပံ့ပိုးပေးသည်။	
	၁.၁	အဆိုပြုလုပ်ငန်း၏နောက်ခံအကြောင်းအရာ Polly HK (Myanmar) Company Limited သည် (CMP) စနစ် ဖြင့် အထည်ချုပ် စက်ရုံများအတွက် အဝတ်အထည်လျှော်ဖွတ်ခြင်း ဝန်ဆောင်မှု ပေးသော လုပ်ငန်းဖြစ်ပါသည်။	

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		ရန်ကုန်တိုင်း ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်မှ ထောက်ခံချက်အမှတ် (ခွင့်ပြုမိန့်အမှတ် YGN-၀၄၅ /၂၀၁၈) သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏စာအမှတ် ရက-၁/၃/၄ (အီးအိုင်အေ) ၁၃၆၆/၂၀၁၈)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 အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များ	အခန်း (၃)
စီမံကိန်းအကြောင်းအရာဖော်ပြချက်	၃	မြေကွက်အမှတ် (၃၀၁)၊ မြေတိုင်းအမှတ် ၂၅၊ ရွှေလင်ဘန်း စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ မြေဧရိယာ ၂.၇၁၃ ဧက အဆိုပြုလုပ်ငန်းသည် ပြည်တွင်းလုပ်သား ၅၅ ဦးဖြင့် အဝတ်အထည်လျှော်ဖွတ်ခြင်းလုပ်ဆောင်မည် ဖြစ်ပါသည်။ အဝတ်အထည်လျှော်ဖွတ်ခြင်း လုပ်ငန်းနှင့် သက်ဆိုင်ရာ အချက်အလက်များ ဖော်ပြထားပါသည် လုပ်ငန်းမှ ထွက်ရှိနိုင်သည့် ညစ်ညမ်းနိုင်မှုနှင့် စွန့်ပစ် ပစ္စည်းများနှင့် စက်ရုံမှ စီစဉ်ဆောင်ရွက်ထားမှုများအား ဖော်ပြထားပါသည်	အခန်း(၂)
ပတ်ဝန်းကျင် အရည်အသွေးတိုင်းတာမှု	၄	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့်	အခန်း (၄)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များကို အခြေခံလေ့လာ တိုင်းတာထားပါသည်။	
လေအရည်အသွေး	၄.၁	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ ထုတ်လွှတ်အစိုးအငွေ့ (Air emissions) လမ်းညွှန်သတ်မှတ်ချက် (PM10 နှင့် PM2.5) တို့ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၃.၃)
ဆူညံသံ	၄.၂	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ အမြင့်ဆုံးလက်ခံနိုင်သည့် ဆူညံသံအဆင့် (Noise level) လမ်းညွှန်သတ်မှတ်ချက် စက်မှုဇုန် ဧရိယာတွင် (70 One hour LAeq (dBA)) ဖြင့်နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၃.၈)
ရေအရည်အသွေး	၄.၃	စက်ရုံမှ ထွက်မည့် စွန့်ပစ်ရေ အရည်အသွေးကို တိုင်းတာပြီး အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၃.၇)
ဒေသဆိုင်ရာအချက်အလက်များ	၄.၄	အဆိုပြုလုပ်ငန်းတည်ရှိသည့် လှိုင်သာယာမြို့နယ်၏ဒေသဆိုင်ရာအချက်အလက်များ	အခန်းခွဲ (၄.၅)
ထိခိုက်မှုဆန်းစစ်ခြင်းနှင့်လျှော့ချရေးနည်းလမ်းများ	၅	<ul style="list-style-type: none"> <li>• ကောင်းကျိုး အလုပ်ကိုင်အခွင့်အလမ်းများပေါများလာခြင်း၊ လမ်းပန်းဆက်သွယ်ရေးကောင်းမွန်လာခြင်း၊ နည်းပညာများတိုးတက်လာခြင်း</li> <li>• ဆိုးကျိုး သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များ၊ ဂေဟစနစ်အရင်းအမြစ်များ၊ လူသားများအပေါ်ထိခိုက်မှုများ၊ အမှိုက်စွန့်ပစ်ခြင်းကြောင့်ထိခိုက်မှုများ</li> </ul>	အခန်း(၅)
ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု	၆	ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (EMP) အတွက် စက်ရုံစီမံခန့်ခွဲရေးအဖွဲ့၊ အလုပ်သမားများ၊ ဒေသခံလူထုများ၏ အမြင်၊ သက်ဆိုင်ရာ တာဝန်ရှိသူတို့၏အကြံပြုချက်များနှင့် ကွင်းဆင်းလေ့လာသူများမှ ဆွေးနွေးတိုင်ပင်မှုတို့ အပေါ် အခြေခံပြီး ဆောင်ရွက်သွားမည် ဖြစ်သည်။	အခန်း (၇)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		EMP တွင် စက်ရုံအတွင်း ဘေးအန္တရာယ် ကင်းရှင်းရေးစီမံခန့်ခွဲမှုများကို လိုက်နာရန်အတွက် ထည့်သွင်းဖော်ပြထားပါသည်။	
လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်များ	၆.၁	စက်ရုံမှ ထုတ်လွှတ် အဆိုးအငွေ့ ထွက်ရှိမှု မရှိခြင်း အထည်လျှော်ဖွတ်ခြင်း လုပ်ငန်းတစ်မျိုးကိုသာလုပ်ဆောင်ခြင်း ဖြစ်သောကြောင့် ထဲသွင်းဆင်းစားရန်မလိုပါ	အခန်းခွဲ (၇.၃)
ဆူညံသံထွက်ရှိမှု	၆.၂	မီးစက်ခန်းများထားရှိခြင်းနှင့် အခြားသက်ဆိုင်သည့် ပစ္စည်းများအား စနစ်တကျ ထိန်းသိမ်းထားရှိရမည်။ ဝန်ထမ်းများကို သက်ဆိုင်ရာကိစ္စရပ်များနှင့် ပတ်သက်၍ သင့်တော်သော သင်တန်းများပေးခြင်း၊ ဆူညံသံထွက်ရှိသည့်နေရာများတွင် PPE များကို ဝတ်ဆင်စေခြင်း	အခန်းခွဲ (၇.၄)
အမှိုက်စွန့်ပစ်မှု	၆.၃	စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း သတ်မှတ်ထားသောနေရာတွင်သာ အမှိုက်စို၊ အမှိုက်ခြောက်များ ခွဲခြားစွန့်ပစ်ခြင်း အမှိုက်များကို ရန်ကုန်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း	အခန်းခွဲ (၇.၅)
စွန့်ပစ်ရည်	၆.၄	ရေဆိုးသန့်စင်စက် တက်ဆင်ထားခြင်း ပုံမှန်စစ်ဆေးခြင်းနှင့် သန့်ရှင်းမှုပြုလုပ်ခြင်း	အခန်းခွဲ (၇.၆)
မီးဘေးအန္တရာယ်	၆.၅	မီးအန္တရာယ်အရေးပေါ်အခြေအနေများအတွက် စက်ရုံအတွင်းတွင် မီးသတ်ဆေးဘူးများ၊ မီးသတ်ရေပိုက်များ၊ မီးသတ်ရေကန် ထားရှိရမည်။ အရေးပေါ်ထွက်ပေါက်များနှင့် စုရပ်နေရာများအား လမ်းညွှန်ပြ ထားရှိရမည်။ မီးသတ်ရေလှောင်ကန်များ၊ မီးငြိမ်းသတ်ရေးကိရိယာများကို ပုံမှန်စစ်ဆေးခြင်း စက်ရုံအတွင်း အရေးပေါ်အချက်ပေးစနစ်များ တပ်ဆင်ခြင်း အရေးပေါ်ထွက်ပေါက်များတစ်လျှောက်တွင် စက်ပစ္စည်းများနှင့် အခြားသောကုန်ပစ္စည်းများ ပိတ်ဆို့ထားခြင်း မရှိရန် စီစဉ်ထားရမည်။	အခန်းခွဲ (၇.၇)
လုပ်ငန်းခွင်ထိခိုက်မှုနှင့် ကျန်းမာရေး	၆.၆	ရှေးဦးပြုစုနည်း သင်တန်းများ၊ ဘေးအန္တရာယ်ကင်းရှင်းရေး လေ့ကျင့်မှု၊	အခန်းခွဲ (၇.၈)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		<p>မီးငြိမ်းသတ်နည်းသင်တန်းများ၊ အခြားလိုအပ်သော လေ့ကျင့်မှုများ၊ စက်ပစ္စည်းများကို စနစ်တကျကိုင်တွယ်မှုများအား သင်တန်းပေးခြင်း</p> <p>လုပ်ငန်းခွင်အတွင်း အလုပ်သမားများ အလင်းရောင်ကောင်းစွာရရှိစေရန်နှင့် အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကို လုံလောက်စွာ ထားရှိခြင်း</p> <p>ဌာနတစ်ခုချင်းစီအတွက် တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်းများ ထောက်ပံ့ပေးခြင်း</p> <p>လျှပ်စစ်အန္တရာယ်ကာကွယ်ရန်အတွက် လျှပ်စစ်ထိန်းသိမ်းရေးဝန်ထမ်းများအား ထားရှိ၍ အဆိုင်းခွဲ၍ ပုံမှန်စစ်ဆေးကာကွယ်မှုများပြုလုပ်စေခြင်း</p> <p>ဝန်ထမ်းများ၏ကျန်းမာရေးအတွက် စက်ရုံတွင် စီမံခန့်ခွဲခြင်း</p> <p>လုပ်သားများအတွက် နာရီအတွင်း လက်ခံနိုင်သည့် အမြင့်ဆုံးဆူညံမှုနှုန်းမှာ 90 dB(A) ဖြစ်သည်။ ထို့ကြောင့် အသံဆူညံသည့်နေရာများတွင် အသံလုံသည့် နားကြပ်များ နားအကာအကွယ်ပစ္စည်းများ တပ်ဆင်စေခြင်း</p>	
အန္တရာယ်ရှိ စွန့်ပစ် ပစ္စည်း	၆.၇	<p>အန္တရာယ်ရှိ စွန့်ပစ် ပစ္စည်း ထားရှိမည့် နေရာကို စနစ်တကျ ထားရှိခြင်း</p> <p>လုပ်ငန်းခွင် အန္တရာယ်ကျင်းရှင်းရေးနှင့် ကျန်းမာရေး အစီအစဉ်ဖြင့် ကိုင်တွယ်ပြုလုပ်ရန် ပြန်လည်အသုံးပြုသောနည်းစနစ်ကို အသုံးပြုရန်နှင့် စနစ်တကျ ထားရှိရန်</p> <p>စွန့်ပစ်ရာတွင် လိုင်စင်ရ အဖွဲ့အစည်းများဖြစ်သော (DOWA and YCDC) တို့ဖြင့် စနစ်တကျ ပစ်ရန်</p>	အခန်းခွဲ (၇.၉)
အရေးပေါ် အခြေအနေ	၆.၈	<p>မီးဘေး၊ ငလျင်၊ ရေလွှမ်းမိုးမှု၊ မုန်တိုင်း နှင့်အခြားအရေးပေါ်ကိစ္စများကို ပို၍သင့်တော်သော စီမံခန့်ခွဲမှုများပြုလုပ်ခြင်း</p> <p>စက်ရုံ၏ ကဏ္ဍတစ်ခုချင်းတိုင်းတွင် မီးငြိမ်းသတ်ရေးကိရိယာများနှင့် မီးငြိမ်းသတ်ရေးစနစ်များ ထားရှိခြင်းနှင့် စစ်ဆေးခြင်း</p> <p>မီးဘေးထွက်ပေါက်၊ အရေးပေါ်ထွက်ပေါက် အစရှိသည်တို့ကို အလုပ်သမားများနှင့် တိုင်ပင်ဆွေးနွေးပြီး အသေးစိတ်အကဲဖြတ်ခြင်း</p>	အခန်းခွဲ (၇.၁၀)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		မီးငြိမ်းသတ်ခြင်းအား ပုံမှန်လေ့ကျင့်ထားရှိခြင်း ငလျင်လှုပ်တဲအခါ လုံခြုံသည့်နေရာတွင်သာနေရန်၊ အပြင်မထွက်ခြင်း၊ အပြင်တွင်လုပ်ကိုင်ရသည့် လုပ်သားများမှာ သစ်ပင်၊ အဆောက်အဦးများကို သတိထားရန်နှင့် သက်ဆိုင်ရာလုံခြုံရေးသင်တန်းများပို့ချခြင်း မှန်တိုင်းတိုက်ခြင်း၊ 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	၆.၉	အဆိုပြုစီမံကိန်းသည် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာအား ၆လ တစ်ကြိမ် ဝန်ကြီးဌာနများသို့ တင်ပြရမည်။ (စောင့်ကြပ်ကြည့်ရှုမှု ဇယားဖြင့် ဖော်ပြထားပါသည်)	အခန်းခွဲ (၇.၁၁)
မကျေနပ်မှုများနှင့် ပြဿနာများ ဖြေရှင်းခြင်း	၆.၁၀	စီမံကိန်းအနီးပတ်ဝန်းကျင်နေထိုင်သောသူများ (သို့) သက်ဆိုင်သူများသည် သူတို့ခံစားနေရသော ပြဿနာများနှင့် သက်ရောက်မှုများနှင့် ပတ်သက်၍ ဖြေရှင်းမှုများပြုလုပ်ရန် စက်ရုံ၏ တာဝန်ရှိသူများ၊ စက်မှုဇုန် စီမံခန့်ခွဲရေး ကော်မတီ၊ အုပ်ချုပ်ရေးဦးစီးဌာနတို့ဖြင့် ပူးပေါင်း ချိတ်ဆက် လုပ်ဆောင်ခြင်း။ ကော်မတီအဆင့်တွင် အခြားမဖြေရှင်းနိုင်သော ပြဿနာများကို တာဝန်ရှိအာဏာပိုင်များသို့ တင်ပြပြီး တရားရေးအရ အဆုံးအဖြတ်ပြုလုပ်မည် ဖြစ်သည်။	အခန်းခွဲ (၆.၁၃)
အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်း	၇	၂၆၊ ဒီဇင်ဘာလ ၂၀၁၈ ခုနှစ်တွင် ရွှေလင်ဘန်းစက်မှုဇုန် ကော်မတီရုံး ၏ ကနောင်ခန်းမတွင်	အခန်း(၆)



ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		ပြုလုပ်ခဲ့ပါသည့် အကြောင်းဖော်ပြထားပါသည်။	
လူထုအကျိုးတူပူးပေါင်းပါဝင်မှု	၇.၁	အဆိုပြုလုပ်ငန်းသည် လူထုအကျိုးပြုပူးပေါင်းပါဝင်မှုကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးအတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်က ချမှတ်သည့် အတိုင်း ကုမ္ပဏီ၏ အကျိုးအမြတ် ၂ ရာခိုင်နှုန်းအား နှစ်စဉ် ထည့်ဝင်သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၇.၁၄)
နိဂုံးနှင့်သုံးသပ်ချက်	၈	အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။	အခန်း(၈)