TRILLION PLEASURE INDUSTRIAL COMPANY LIMITED

Environmental Management Plan

Manufacturing of Garment (CMP basis)

Prepared by

MYANWEI ENVIRONMENTAL SOLUTIONS

MYANWEI ENVIRONMENTAL SOLUTIONS CO., LTD.

16-Jun-22

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Date: 16/06/2022

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing of garment on CMP basis by Trillion Pleasure Industrial Co., Ltd.

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.

TRILLION PLEASURE INDUSTRIAL COMPANY LIMITED

Holding No. ((119/1,120/1) + (126/2,127/2,128/2)+(121/1,123/2,124/2,125/2,126/2)+(120/1,121/1)), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No.383 (Sarmalaukywarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No.417-B (Ywarletchaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township,Maubin District ,Ayeyarwady Region

Date: 16/06/2022

Dear: Director

Environmental Conservation Department

Nay Pyi Taw

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing of Garment.

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

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

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

Trillion Pleasure Industrial Co., Ltd will always comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that

LYU JIE

Director

TRILLION PLEASURE INDUSTRIAL CO., LTD.

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Abbreviation

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

အစီရင်ခံစာအကျဉ်းချုပ်

နိဒါန်း

အဆိုပြုလုပ်ငန်းသည် CMP စနစ်ဖြင့် အဝတ်အထည်များချုပ်လုပ်ခြင်းလုပ်ငန်း အတွက် ရင်နှီးမြှုပ်နှံသော ကုမ္ပဏီဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၂၀ ပြည့်နှစ်၊ ဇူလိုင်လ ၃၀ ရက်နေ့တွင် (အတည်ပြုမိန့်အမှတ် ဧရာ-၀၅၆/၂၀၂၀) ဖြင့် ဧရာဝတီတိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

ထို့ကြောင့် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၂၀ ပြည့်နှစ်၊ သြဂုတ်လ ၇ ရက်နေ့တွင် စာအမှတ်၊ EIA/ARIC (CMP)/(၁၃၄၉/၂၀၂၀) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ဧရာဝတီတိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Co., Ltd. မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

EMP အစီအစဉ်တွင် Trillion Pleasure Industrial Co., Ltd ၏ အဝတ်အထည်များချုပ်လုပ်ခြင်း စီမံကိန်းအတွက် Myanwei Environmental Solutions Co., Ltd. မှရေးသားပြုစုထားသော ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာဖြစ်သည်။ အဆိုပါ လေ့လာဆန်းစစ်ခြင်း၏ ရည်ရွယ်ချက်များမှာ-

- ✓ သဘာဂပတ်ဂန်းကျင်နှင့် လူမှုစီးပွားပတ်ဂန်းကျင်အပေါ် စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ထိခိုက်မှုများကိုလေ့လာရန်။
- ✓ ထိုထိခိုက်မှုများကို လျော့ချနိုင်ရန် လျော့နည်းစေမည့်နည်းလမ်းများကို ဖော်ပြရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ပြင်ဆင်ရန်နှင့် အကောင်အထည်ဖော်ရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ လုပ်ဆောင်ရာတွင် လုံလောက်မှုရှိစေရန်။
- ✓ ဒေသခံများ၏ လူမှုရေးသက်သာချောင်ချိမှုများ တိုးမြှင့်ရန် နှင့် ဒေသအတွင်း ဖွံ့ဖြိုးတိုးတက်မှုများ အတွက် မရှိမဖြစ် အရေးပါသော လူမှုစီးပွားတာဂန်ယူမှု အစီအစဉ်အား အကောင်အထည်ဖော်ရန်တို့ ဖြစ်ပါသည်။

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

ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ

EMP ရေးဆွဲရခြင်း၏ရည်ရွယ်ချက်မှာ နိုင်ငံတော်နှင့် နိုင်ငံတကာမှ ချမှတ်ထားသော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ်များ၊ စည်းမျဉ်းစည်းကမ်းများ၊ ဥပဒေနှင့် နည်းဥပဒေများကို လိုက်နာပြီး ပတ်ဝန်းကျင်နှင့် လိုက်ရောညီထွေမှုရှိသော ထိခိုက်မှု လျော့ချရေး အစီအစဉ်များ ပြုလုပ်ရန်ဖြစ်ပါသည်။

ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ ရေးသားပြုစုသူများ၏ ကျွမ်းကျင်မှု နယ်ပယ်ဆိုင်ရာ ဖော်ပြချက်များကို ရေးသားဖော်ပြထားပါသည်။ ဥပဒေနှင့် နည်းဥပဒေ အခန်းတွင် MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များအပြင်စက်ရုံနှင့် ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာသဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။ စက်ရုံအတွင်းလိုက်နာဆောင်ရွက်ရမည့် စည်းမျဉ်းစည်းကမ်းများ၊ လုပ်ငန်းခွင် အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ အခြေခံစည်းမျဉ်းစည်း ကမ်းများလည်း ထည့်သွင်းဖော်ပြထားပါသည်။ Trillion Pleasure Industrial Co., Ltd ၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ ကတိကဝတ်များအပြင် ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ချရေး မူဝါဒများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

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

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

စီမံကိန်းဆိုင်ရာအချက်အလက်

အဆိုပြုထားသော စီမံကိန်း	CMP စနစ်ဖြင့်အဂတ်အထည်များချုပ်လုပ်ခြင်းလုပ်ငန်း
ရင်းနှီးမြုပ်နှံမှုပုံစံ	ရာနှုန်းပြည့်နိုင်ငံခြားသားရင်းနှီးမြုပ်နှံမှု
ကုမ္ပဏီအမည်	Trillion Pleasure Industrial Co., Ltd
အဆိုပြုရင်းနှီးမြုပ်နှံမှုကာလ	၅၀ နှစ်

စုစုပေါင်းမြေကွက်ဧရိယာ	၂၉.၉၄ ဧက (၁၂၁,၁၆၂.၉၉ စတုရန်းမီတာ)
မြေနေရာပုံစံ	စက်မှုဇုန်မြေ
တည်ဆောက်မှုကာလ	၂ နှစ်
စီမံကိန်း တည်နေရာ	ဦးပိုင်အမှတ် (၁၁၉/၁၊ ၁၂၀/၁)+(၁၂၆/၂၊ ၁၂၇/၂၊ ၁၂၈/၂)+ (၁၂၁/၁၊ ၁၂၃/၂၊ ၁၂၄/၂၊ ၁၂၅/၂၊ ၁၂၆/၂)+(၁၂၀/၁၊ ၁၂၁/၁)၊ ကွင်းအမှတ်-၃၈၂ (ဆားမလောက်ကွင်း)၊ ဦးပိုင်အမှတ်-(၁/၆၊ ၂/၁၊ ၃/၁၊ ၅/၁၊ ၆/၄)၊ ကွင်းအမှတ်-၃၈၃ (ဆားမလောက်ရွာသစ်ကွင်း) နှင့် ဦးပိုင်အမှတ်-(၂/၇၊ ၄/၃)၊ ကွင်းအမှတ်-၄၁၇-ခ (ရွာလယ်ချောင်းအသင်းကွင်း)၊ တဇင်ရေကျော်ကျေးရွာအုပ်စု၊ ညောင်တုန်းမြို့နယ်၊ မအူပင်ခရိုင်၊ ဧရာဝတီတိုင်းဒေသကြီး။
ဆက်သွယ်ရန် ဖုန်းနံပါတ်	ဦးဇော်လင်းအောင် ၀၉-၄၅၃၅၅၀၃၃၄

အဆိုပြုလုပ်ငန်းအတွက် တည်နေရာနှင့် စက်ရုံအတွင်းပါရှိသည့် အဆောင်များ၊ စားသောက်ဆောင်၊ စတို၊ ပြုပြင်ထိမ်းသေးရေးအခန်း၊ မီးဖိုချောင် အစရှိသည်တို့ကိုသီးခြားဖော်ပြထားပါသည်။ထို့အပြင် ထုတ်လုပ်မှုနည်းလမ်းများ၊ လိုအပ်သည့်ကုန်ကြမ်းများ၊ နှစ်စဉ်ထွက်ကုန်များ နှင့် စက်ပစ္စည်းများအား ဖော်ပြထားပါသည်။ အဆိုပြုလုပ်ငန်းအတွက်လိုအပ်သည့် စွမ်းအင်နှင့် အသုံးပြုသည့်ပမာဏများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။ ကျန်လုပ်ငန်းသုံးယာဉ်နှင့် ရုံးသုံးပစ္စည်းများကို ပြည်တွင်းမှ ဝယ်ယူအသုံးပြုပါသည်။ ကုန်ထုတ်လုပ်ခြင်းလုပ်ငန်းမှာ automatic machine နှင့် လူစွမ်းအားကို အသုံးပြုသော လုပ်ငန်းမျိုးဖြစ်ပါသည်။ ထုတ်လုပ်ပုံအဆင့်ဆင့်ကို အောက်ဖော်ပြပါ ပုံပြဇယားဖြင့် ဖော်ပြထားပါသည်။

လုပ်ငန်းမှ ပထမနှစ်မှ ၆ နှစ်အတွင်း အထည်အရေအတွက် (၁,၄၀၅,၀၀၀) မှ (၂,၀၆၉,၁၀၀)အထိ တိုးမြှင့်ထုတ်လုပ်သွားမည်ဖြစ်သည်။ နိုင်ငံခြားသားလုပ်သား (၁၃) ဦး နှင့် နိုင်ငံသား (ပြည်တွင်း) လုပ်သား (၂,၀၀၀) ဦးဖြင့် ဆောင်ရွက်သွားမည်ဖြစ်သည်။

အနီးပတ်ဝန်းကျင်အခြေအနေ

ကနဦးစစ်တမ်းကောက်ယူခြင်းနှင့် ဒေသဆိုင်ရာမှအချက်အလက်များရယူခြင်းသည် အလွန်အရေးကြီးပါသည်။ ပတ်ဂန်းကျင်အရည်အသွေး တိုင်းတာခြင်းကဲ့သို့သော ကနဦးစစ်တမ်းကောက်ယူခြင်းသည် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာတွင် အရေးပါသောအခန်းအဖြစ် တည်ရှိနေသည်။ ထို့အတွက် စီမံကိန်းဒေသသို့ ကွင်းဆင်းလေ့လာမှုများကို ၁၄ ရက်၊ ဇန်နဂါရီလ၊ ၂၀၂၂ တွင် လက်တွေ့ကွင်းဆင်းလေ့လာခဲ့ပီး လိုအပ်သည့် လေအရည်အသွး၊ ဆူညံမှု၊ အလင်း၊ အပူချိန်နှင့် စိုထိုင်းမှု အစရှိသည့် အချက်အလက်များကို ရယူခဲ့ပါသည်။ ကွင်းဆင်းလေ့လာထားသည့် အချက်အလက်များကို သက်ဆိုင်ရာခေါင်းစဉ်အလိုက် အမျိုးသားပတ်ဂန်းကျင်ဆိုင်ရာ အရည်အသွး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။ ထိုနည်းတူ လျော့ချရမည့်နည်းလမ်းများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။ စီမံကိန်းတည်ရှိရာဒေသရှိ ရာသီဥတု၊ မိုးရေချိန်၊ လူမှုစီးပွားရေးဆိုင်ရာအချက်အလက်များကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေး အစီအစဉ်

စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ပတ်ဂန်းကျင်ဆိုင်ရာအရင်းအမြစ်များ၊ ဂေဟဆိုင်ရာ အရင်းအမြစ်များ၊ လူ့စွမ်းအားအရင်းအမြစ်များ နှင့် စွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ခြင်း စသည့်ဖြစ်လာနိုင်သည့် ထိခိုက်မှုများကို ခွဲခြားသတ်မှတ်ပြီး ၎င်းတို့၏ ရလဒ်များကို ထိခိုက်မှုဆန်းစစ်သည့် နည်းလမ်းများကို အသုံးပြု၍ သတ်မှတ်ခဲ့ပါသည်။ စီမံကိန်းအား ထိခိုက်မှုများကို အပိုင်းသုံးပိုင်းခွဲ၍ သတ်မှတ်ထားသည်။ အမျိုးအစားမှာ တည်ဆောက်သည့်ကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလ နှင့် လုပ်ငန်းဖျက်သိမ်းသည့်ကာလ များဖြစ်ပါသည်။ ပတ်ဂန်းကျင်ထိခိုက်မှု လျော့ပါးစေရေး နည်းလမ်းများကိုလဲထည့်သွင်းဖော်ပြထားပါသည်။

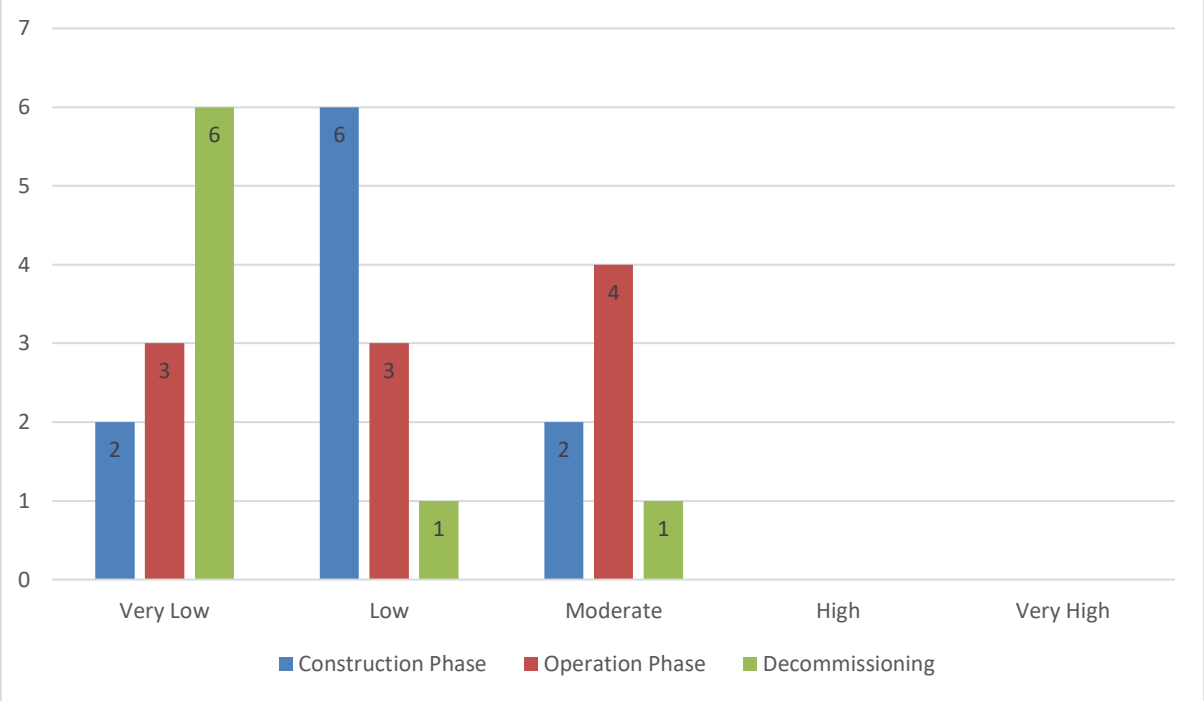
ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
စီမံကိန်းတည်ဆောက်စဉ်အတွင်း သက်ရောက်မှုများတွက်ချက်ခြင်း၊ သိသာထင်ရှားသောသက်ရောက်မှုများခန့်မှန်းခြင်း နှင့် လျော့ချရေးနည်းလမ်းများ		
လေထုညစ်ညမ်းမှု	တည်ဆောက်ရေးလုပ်ငန်းများမှ ထွက်သော ဖုန်မှုန့်များ၊ အမှုန်များ ကြောင့် စီမံကိန်း ပတ်ဝန်းကျင်ရှိ လေထု အရည်အသွေးကို ပြောင်းလဲစေနိုင်ခြင်း။ တည်ဆောက်ရေးလုပ်ငန်းသုံး မီးစက်များ၏ လောင်စာလောင်ကျွမ်းခြင်းမှ ဆာလဖာဒိုင်အောက်ဆိုက် ဓာတ်ငွေ့ထွက်ခြင်း	စီမံကိန်း ဇရိယာအတွင်း တစ်နေ့ နှစ်ကြိမ် ရေဖြန်းပေးခြင်း၊ စီမံကိန်းပတ်ဝန်းကျင်တစ်ဝိုက်တွင်ဖုန်မှုန့်ကာသည့် ဇကာများဖြင့် ဖုံးအုပ်ခြင်း၊ စီမံကိန်း ဇရိယာ၏ ၂မိတာအမြင့်ထိ ယာယီ ခြံစည်းရိုး တပ်ဆင်ခြင်း၊ ဆာလဖာဒိုင်အောက်ဆိုက်ဓာတ်ငွေ့ထွက်ခြင်းမှ ကာကွယ်ရန် လုပ်ငန်းသုံးစက်များကို ပုံမှန်ထိန်းသိမ်းခြင်း၊ စစ်ဆေးခြင်း
ရေထုညစ်ညမ်း	မြေတူးဖော်ခြင်းလုပ်ငန်းများ	စီမံကိန်းဇရိယာအနီးရှိ မြစ်ချောင်း များ၏ ရေအရည်အသွေးကို

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
မှု	ကြောင့်မျက်နှာပြင်ရေပြောင်းလဲမှုများဖြစ်ပေါ်နိုင်ခြင်း တည်ဆောက်ရေးလုပ်ငန်းများကြောင့် စွန့်ပစ်ရေများမြေအောက်ရေထဲသို့စိမ့်ဝင်နိုင်ခြင်း။	ဓလတစ်ကြိမ် ဆန်းစစ်ခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	တည်ဆောက်ရေးလုပ်ငန်းများ မှထွက်သော ဆီများယိုစိမ့်ခြင်းကြောင့် မြေဆီလွှာညစ်ညမ်းခြင်း	လျော့ချရန်မလိုပါ။
အသံဆူညံမှု	စီမံကိန်း တည်ဆောက်စဉ်ကာလတွင် တည်ဆောက်ရေးလုပ်ငန်းများကြောင့် ပတ်ဝန်းအပေါ် ဆူညံသံများသက်ရောက်နိုင်ခြင်း	ဆောက်လုပ်ရေး လုပ်သားများကို ဆူညံသံ ကာကွယ်သည့် တစ်ကိုယ်ရေကာကွယ်သုံးပစ္စည်းကိရိယာများ အသုံးပြုစေခြင်း။
ကုန်းနေ၊ ရေနေအပင် နှင့် သတ္တဝါများ ပျက်စီးဆုံးရှုံးမှု	စီမံကိန်းတည်ဆောက်ခြင်း	လျော့ချရန်မလိုပါ။
မီးဘေးအန္တရာယ်	ယာယီလျှပ်စစ်သွယ်တန်းမှုများကြောင့် မီးလောင်စေနိုင်ခြင်း လျှပ်စစ်အသုံးပြုမှု အတွက် ဝါယာကြိုးအပေါက်အပြဲများအသုံးပြုခြင်း။	စက်ရုံ၏မီးဘေးအန္တရာယ်ကာကွယ်ရန်အတွက် မီးသတ်ပူး၊ မီးသတ်ပိုက်၊ မီးသတ်ခေါင်း များထားရှိခြင်း။ မီးသတ်ဆိုင်ရာစက်ပစ္စည်းကိရိယာများကိုပုံမှန်စစ်ဆေးခြင်း၊အရေးပေါ်အခြေခနေအတွက်မီးသတ်ရေကန်အဆင်သင့်ထားရှိခြင်း။ စက်ရုံအတွင်းအရေးပေါ်အချက်ပေးစနစ်များထားရှိခြင်း
ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် လုံခြုံမှု	စက်ရုံလုပ်သားများ မတော်တဆထိခိုက်မှုများ ဖြစ်ပေါ်နိုင်ခြင်း	လုပ်သားများအတွက် တစ်ကိုယ်ရေ ကာကွယ်ရေးသုံးပစ္စည်းများ ပေးခြင်း (နားကြပ်၊ အကာအကွယ်လက်အိတ်၊ဖိနပ်၊ ဦးထုတ်၊မျက်မှန်) လျှပ်စစ်မတော်တဆမှုများ ၊ထိခိုက်မှုများကို ထိန်းသိမ်းရန် အလုပ်သမားတစ်ဦးသီးသန့်ထား၍ စစ်ဆေးစေခြင်း၊ ထိန်းသိမ်းစေခြင်း။
စွန့်ပစ်အစိုင်အခဲများ	ဆောက်လုပ်ရေးလုပ်သားများ၏ တစ်ကိုယ်ရေသုံး စွန့်ပစ်ပစ္စည်းများ ထွက်ရှိနိုင်ခြင်း၊ ဆောက်လုပ်ရေးပစ္စည်းထုတ်ပိုးမှုများ၏ စွန့်ပစ်ပစ္စည်းများထွက်ရှိခြင်း၊	စွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ရန် အမှိုက်ပုံးများထားရှိခြင်း၊ ဆောက်လုပ်ရေးလုပ်ငန်းမှထွက်သော အမှိုက်များကို အပတ်စဉ် စွန့်ပစ်ခြင်း
စွန့်ပစ် အရည်	မိလ္လာ နှင့် ယာယီ မိလ္လာကန်	မိလ္လာစနစ်များ၊ မိလ္လာကန်များကို ပုံမှန် သန့်ရှင်းရေးလုပ်ခြင်း၊ စစ်ဆေးခြင်း၊

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
	များမှထွက်သော အရည်များထွက်ခြင်း၊	အညစ်အကြေးစွန့်ပစ်ရေများ စိမ့်ဝင်မှုနည်းအောင်ဆောင်ရွက်ခြင်း။
အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများ	စက်ယန္တရား နှင့် မော်တော်ယာဉ်များမှ ထွက်သော အင်ဂျင်ဆီများ၊ ဒီဇယ်၊ ချောဆီများ စိမ့်ဝင်နိုင်ခြင်း။	အန္တရာယ်ရှိ အဆိပ်အတောက် ဖြစ်စေသော စွန့်ပစ်ပစ္စည်းများ၊ ပတ်ဝန်းကျင်သို့ စွန့်ပစ်ရာတွင် ပတ်ဝန်းကျင် ညစ်ညမ်းမှုကို ဖြစ်ပေါ်စေနိုင်သောကြောင့် ခွဲခြား၍ စွန့်ပစ်စေခြင်း။ ပုံမှန်စစ်ဆေးခြင်း။
လုပ်ငန်းလည်ပတ်ခြင်းကာလ အတွင်းသက်ရောက်မှုများတွက်ချက်ခြင်း၊ သိသာထင်ရှားသော သက်ရောက်မှုများ ခန့်မှန်းခြင်း နှင့် လျော့ချရေးနည်းလမ်းများ		
လေထုညစ်ညမ်းမှု	ရေနွေးငွေ့သုံးဘွိုင်လာမှ မီးခိုးများထွက်ခြင်း၊ အရေးပေါ်မီးစက်များ နှင့် လုပ်ငန်းသုံး မော်တော်ယာဉ်များမှ မီးခိုးများထွက်ခြင်း	လေထုညစ်ညမ်းမှုကိုလျော့ချရန် လုပ်ငန်းသုံးယာဉ်များ၊ မီးစက်များ၊ စက်ပစ္စည်းများကို ပုံမှန်စစ်ဆေးခြင်း။ထိန်းသိမ်းခြင်း ဘွိုင်လာ နှင့် မီးစက်အသုံးပြုခြင်းအတွက် မီးခိုးခေါင်းတိုင် မှ ဖြတ်သန်းစေ၍ ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့နည်းအောင်ပြုလုပ်ခြင်း လုပ်ငန်းသုံးမော်တော်ယာဉ်များ၊ မီးစက်များကို ထိန်းသိမ်းခြင်း။
ရေ	ကုန်ပစ္စည်းထုတ်လုပ်ခြင်း ဘွိုင်လာမှ စွန့်ထုတ်ရေထွက်ခြင်း	ဘွိုင်လာမှထွက်သောရေများကို လက်ခံနိုင်သော အရည်အသွေးဖြင့် ထုတ်လွှတ်ခြင်း ဘွိုင်လာစွန့်ပစ်ရေများကို ရေအပူချိန်တိုင်းခြင်း၊ အအေးခံပြီးမှ ရေမြောင်းထဲသို့စွန့်ပစ်ခြင်း
မြေဆီလွှာညစ်ညမ်းမှု	မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း။	လျော့ချရန်မလိုပါ။
ဆူညံသံ	ကုန်ပစ္စည်းထုတ်လုပ်ရေးလုပ်ငန်းကြောင့်ပတ်ဝန်းကျင် ဆူညံမှု။	စက်လိုင်းများနှင့် စက်ပစ္စည်းများရွေ့ရှားမှုကြောင့် ဆူညံသံကိုကာကွယ်ရန် လုပ်သားများကို နားကြပ်များအသုံးပြုစေခြင်း
ကုန်းနေ၊ရေနေအပင်နှင့် သတ္တဝါများ ပျက်စီးဆုံးရှုံးမှု	အထည်ချုပ်လုပ်ငန်း လုပ်ဆောင်ခြင်း	လျော့ချရန်မလိုပါ
မီးဘေးအန္တရာယ်	လျှပ်စစ်တပ်ဆင်အသုံးပြုမှုကြောင့် မတော်တဆဖြစ်ခြင်း အမှိုက်စွန့်ပစ်သည့် နေရာနှင့် ဓာတုပစ္စည်းသိုလှောင်သည့် နေရာမှ မီးလောင်ကျွမ်းနိုင်ခြင်း	စက်ရုံ၏မီးဘေးအန္တရာယ်ကာကွယ်ရန်အတွက် မီးသတ်ပူး၊ မီးသတ်ပိုက်၊ မီးသတ်ခေါင်း များထားရှိခြင်း။ မီးသတ်ဆိုင်ရာစက်ပစ္စည်းကိရိယာများကိုပုံမှန်စစ်ဆေးခြင်း၊အရေးပေါ်အခြေခနေအတွက် မီးသတ်ရေကန်အဆင်သင့်ထားရှိခြင်း။ စက်ရုံအတွင်းအရေးပေါ် အချက်ပေးစနစ်များထားရှိခြင်း။ အရေးပေါ်ထွက်ပေါက်များတွင်တစ်လျှောက်တွင် ကုန်ပစ္စည်းများပိတ်ဆိုခြင်းမရှိအောင်ရှင်းလင်းထားရှိခြင်း။
လုပ်ငန်းခွင်ကျန်းမာရေးနှင့်	စက်ပစ္စည်းများလည်ပတ်ခြင်းကြောင့်	အရေးပေါ်အခြေအနေများအတွက် စက်ပစ္စည်းကိုင်တွယ်မှုသင်တန်းပေးခြင်း၊ ကြက်ခြေနီသင်တန်းပေးခြင်း၊

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
လုံခြုံမှု	မတော်တဆထိခိုက်မှုများဖြစ်ပေါ်နိုင်ခြင်း။ ပစ္စည်းတင်ချုပြုလုပ်ခြင်း၊ ဖြတ်တောက်ခြင်း၊ ရောနှောခြင်း၊ ဖိနှိပ်ခြင်း၊ ထုတ်ပိုးခြင်း။ ရေနွေးငွေ့သုံးမီးပူများကြောင့် မတော်တဆထိခိုက်မှုများဖြစ်ပေါ်နိုင်ခြင်း။	မီးသတ်သင်တန်းပေးခြင်း။ လုပ်ငန်းခွင်တွင်း အလုပ်သမားများ အလင်းရောင်ကောင်စွာရရှိစေရန်နှင့် အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကို လုံလောက်စွာထားရှိခြင်း။ အလုပ်သမားများအတွက်တစ်ကိုယ်ရေကာကွယ်ရေးသုံးပစ္စည်းများဖြစ်သည့် နားကြပ်၊ လက်အိတ်၊ ဦးထုတ်၊ မျက်မှန် များ အသုံးပြုစေခြင်း။ လျှပ်စစ်အန္တရာယ်မဖြစ်စေရန် နှင့် ပြုပြင်ထိန်းသိမ်းမှုများ ပြုလုပ်ရန်အတွက် ဝန်ထမ်းထားရှိ၍ ပုံမှန်စစ်ဆေးခြင်း။
ကျန်းမာရေး	အရေးပေါ် မီးစက်များမှ ဆူညံသံများထွက်ပေါ်လာခြင်း။	လုပ်သားများအတွက်ကျန်းမာရေးမထိခိုက်စေရန် ရေမြောင်းများကိုစနစ်တကျထားရှိခြင်း။ လုပ်သားများအတွက် ရှစ်နာရီအတွင်းလက်ခံနိုင်သည့်အာမြင့်ဆုံး ဆူညံမှုနှုန်းမှာ 90dB(A) ဖြစ်သည်။ အသံဆူညံမှုအမြင့်ဆုံးနေရာများတွင် နားကြပ်များ တပ်ဆင်စေခြင်း။
စွန့်ပစ်အမှိုက်	ကုန်ထုတ်လုပ်သည့်နေရာမှထွက်ရှိသော ပိတ်အိုပိုင်းအစများ။ ကုန်ပစ္စည်းထုတ်ပိုးခြင်းမှထွက်ရှိသော အပိုင်းအစများ။ မီးဖိုချောင် လူနေဆောင် ရုံးခန်းမှတွက်ရှိသောအမှိုက်များ။	စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း။ သတ်မှတ်ထားသောနေရာတွင် အမှိုက်စို၊ အမှိုက်ခြောက်များခွဲခြားစွန့်ပစ်ခြင်း။ အမှိုက်များကို ညောင်တုန်းမြို့နယ်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။
စွန့်ပစ်အရည်	မိလ္လာစနစ်ထားရှိခြင်း။ ရုံးခန်း၊ မီးဖိုချောင် နှင့် လူနေဆောင်များမှ စွန့်ပစ်အရည်များတွက်ရှိခြင်း။	ဆီကန်၊ မိလ္လာကန်များ ကိုပုံမှန်စစ်ဆေးခြင်း၊ သန့်စင်ခြင်းများပြုလုပ်ခြင်းဖြင့် စွန့်ပစ်အရည်များ စိမ့်ဝင်မှုများကိုလျော့ကျစေနိုင်ခြင်း။
အန္တရာယ်ရှိအမှိုက်	မော်တော်ယာဉ်များ စက်ပစ္စည်းများ ပြုပြင်ထိန်းသိမ်းခြင်းမှ ဆီများတွက်ရှိခြင်း။	အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများသိုလှောင်မှု အားထိန်းသိမ်းခြင်း စစ်ဆေးခြင်း။ လုပ်ငန်းခွင်ကျန်းမာရေး လုံခြုံမှုနှင့်ပတ်ဝန်းကျင်ဆိုင်ရာ လိုအပ်ချက်များနှင့်ကိုက်ညီမှုရှိစေရန် ဓာတုပစ္စည်းများကို စနစ်တကျစွန့်ပစ်ခြင်း။ ဓာတုပစ္စည်းသိုလှောင်သည့် ပုံးခွန်များကို စနစ်တကျပြန်လည်အသုံးပြုခြင်း (သို့မဟုတ်) စနစ်တကျစွန့်ပစ်ခြင်း။ အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများကို ညောင်တုန်းမြို့နယ်စည်ပင်သာယာရေးကော်မတီ နှင့်ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။
လုပ်ငန်းပိတ်သိမ်းခြင်းကာလအတွင်းသက်ရောက်မှုများတွက်ချက်ခြင်း၊ သိသာထင်ရှားသော သက်ရောက်မှုများ ခန့်မှန်းခြင်း နှင့် လျော့ချရေးနည်းလမ်းများ		
လေထုညစ်ညမ်းမှု	အဆောက်အဦးများ ဖြိုချမှုများ။ ဖြိုချပစ္စည်းများ သယ်ယူမှုများ။	လျော့ချရန်မလိုပါ။ လိုအပ်ပါက မြေပိုင်ရှင်မှတာဝန်ရှိပါသည်။

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
ရေ	မြေပေါ်မြေအောက်ရေများအပေါ် သက်ရောက်မှုမရှိနိုင်ပါ။	လျော့ချရန်မလိုပါ။ လိုအပ်ပါက မြေပိုင်ရှင်မှတာဝန်ရှိပါသည်။
မြေဆီလွှာညစ်ညမ်းမှု	စီမံကိန်းဖျက်သိမ်းပြီးချိန်တွင် မြေဆီလွှာညစ်ညမ်းမှုမရှိနိုင်ပါ	လျော့ချရန်မလိုပါ။ လိုအပ်ပါက မြေပိုင်ရှင်မှတာဝန်ရှိပါသည်။
ဆူညံသံနှင့်တုန်ခါမှု	စီမံကိန်းဖျက်သိမ်းပြီးချိန်တွင် ဆူညံသံများဖြစ်ပေါ်ခြင်းမရှိနိုင်ပါ	လျော့ချရန်မလိုပါ။ လိုအပ်ပါက မြေပိုင်ရှင်မှတာဝန်ရှိပါသည်။
ကုန်းနေ၊ရေနေအပင် နှင့် သတ္တဝါများ ပျက်စီးဆုံးရှုံးမှု	စီမံကိန်းဖျက်သိမ်းမှုလုပ်ဆောင်ခြင်း	လျော့ချရန်မလိုပါ။ လိုအပ်ပါက မြေပိုင်ရှင်မှတာဝန်ရှိပါသည်။
လုပ်ငန်းခွင်လုံခြုံမှု	စီမံကိန်းဖျက်သိမ်းစဉ်တွင် မတော်တဆထိခိုက်မှုများဖြစ်ပေါ်စေနိုင်ခြင်း	လုပ်သားများ တစ်ကိုယ်ရေကာကွယ်ရေးသုံးပစ္စည်းများအသုံးပြုစေခြင်း။ (နားကြပ်၊လက်အိပ်၊ဖိနပ်၊ ဦးထုတ်၊မျက်မှန်)
စွန့်ပစ်အစိုင်အခဲ	ဖျက်သိမ်းရာမှ ထွက်ရှိလာသော တည်ဆောက်ရေးပစ္စည်းများ၊ အုတ်အကျိုးအပဲ့၊ အပိုင်းအစများ။	အမှိုက်ပုံးများထားရှိခြင်း၊ စနစ်တကျစွန့်ပစ်ခြင်း။ အမှိုက်များစနစ်တကျ ခွဲခြားု၍ ပဲခူးမြို့နယ်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်ကာစွန့်ပစ်ခြင်း
စွန့်ပစ်အရည်	ကျန်ရှိသော မိလ္လာစနစ် နှင့် မိလ္လာကန်များ	လျော့ချရန်မလိုပါ။
အန္တရာယ်ရှိအမှိုက်	စက်ဆီများ၊ ဒီဇယ်ပုံးအခွံများ။	ဓာတုပစ္စည်းထည့်ထားသော ပုံးအခွံများကို ပြန်လည်ဆေးကြောအသုံးပြုခြင်း သို့ စနစ်တကျ စွန့်ပစ်ခြင်း အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများကို စည်ပင်သာယာရေးကော်မတီသို့အကြောင်းကြား၍ စွန့်ပစ်ခြင်း။



ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

အဆိုပြုလုပ်ငန်း၏ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် Environmental Management System (EMS) စက်ဝိုင်းဖြင့် အစီစဉ်တကျ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ အစီအစဉ်တွင် စက်ရုံကြောင့် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၄င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် သည် စက်ရုံတွင် ကျန်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်ပါသည်။ အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင် အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်းပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားထားပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

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

၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

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

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းများကို့မြစ်၊ ချောင်း၊ အင်းအိုင် အတွင်းသို့ မစွန့်ပစ်ရ၊
- စွန့်ပစ်ပစ္စည်းများအား ပြန်လည်အသုံးပြုရန်နှင့် အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းအဖြစ် ခွဲခြားစွန့်ပစ်စေခြင်း၊
- အစိုင်အခဲစွန့်ပစ်ပစ်စွည်းများ (အဂတ်အစဖြတ်စ၊ ညှပ်စ) အား ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချစေခြင်း၊
- အိမ်သုံးစွန့်ပစ်အမှိုက်နှင့် လုပ်သားစွန့်ပစ် အမှိုက်များကို YCDC နှင့် နေ့စဉ် စွန့်ပစ်ခြင်း
- အမှိုက်စွန့်ပစ်ခြင်းနှင့် ပတ်သက်၍ သင်တန်းပို့ချပေးခြင်း

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

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

၅။ စွမ်းအင်စီမံခန့်ခွဲမှုအစီအစဉ်

- အပူအအေးထိန်းညှိပေးသည့် ကရိယာများတပ်ဆင်စေခြင်း
- စွမ်းအင်လျော့ချသည့် မီးလုံး၊ မီးချောင်းများတပ်ဆင်စေခြင်း
- စွမ်းအင်လျော့ချသည့်ကရိယာများ တပ်ဆင်ခြင်း
- အသုံးမပြုသည့်အချိန်တွင် စက်ပစ္စည်းများအား ပိတ်ထားခြင်း

၆။ ရေအသုံးပြုမှုစီမံခန့်ခွဲမှု အစီအစဉ်

- ရေအသုံးပြုမှုကို သိရှိနိုင်ရန် water meter အသုံးပြုခြင်း
- ရေအသုံးပြုမှုကို ထိန်းသိမ်းမှုများ ပြုလုပ်နိုင်စေရန် ဝန်ထမ်းများကို သင်ကြားပေးခြင်း
- မော်တော်ယာဉ်စက်ဆီနှင့်ချောဆီများကြောင့် ရေညစ်ညမ်းမှုမဖြစ်စေရန် ထိန်းသိမ်းဆောင်ရွက်ခြင်း

- စက်ရုံပတ်ဝန်းကျင်တွင်သစ်ပင်ပန်းမံများစိုက်ပျိုးထားရှိခြင်း

၇။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

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

၈။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၉။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

၁၀။ စွမ်းအင်မြှင့်တင်ခြင်းနှင့် လေ့ကျင့်ရေးအစီအစဉ်

၁၁။ မကြေနပ်မှု ဖြေရှင်းခြင်း နည်းလမ်း

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

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်တွင် စက်ရုံ၏ EMP အစီရင်ခံစာ အကြောင်းကို ရှင်းလင်းတင်ပြခြင်းဖြစ်သည်။ တွေ့ဆုံပွဲကို နိုင်ငံရေးကြောင့်လည်းကောင်း ကျန်းမာရေးဆိုင်ရာ Covid - 19 စည်းကမ်းချက်များကြောင့် ၈ ရက်၊ ဇွန်လ၊ ၂၀၂၂ ခုနှစ်တွင် လူမှုကွန်ယက်မှပင် ကြေညာခြင်းပြုလုပ်ခဲ့ပါသည်။ အဆိုပါထုတ်ပြန်ကြေငြာခြင်းတွင် အဆိုပြုစက်ရုံဆိုင်ရာ အချက်အလက်များ၊ ပက်သက်သည်များ အကျဉ်းချုံးပြီး တင်ပြထားပါသည်။ အဆိုပြုစီမံကိန်း၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်မှု အစီရင်ခံစာ အကျဉ်းကို ဤ (https://drive.google.com/file/d/1fuw8h1BbqIOmK4LprwGbmDxd50g2JRvS/view?usp=drivesdkhttps://drive.google.com/file/d/1RA3OFg2_tynESotiTBCG9bp835Tegc3S/view?usp=drivesdk) တွင် အသေးစိတ်ဝင်ရောက်ဖတ်ရှုနိုင်ပါသည်။

နိဂုံး

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

EXECUTIVE SUMMARY

Introduction

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

The project is new investment for manufacturing of garments by Contract Manufacturing Process (CMP) basic company from China. The project is issued by the Yangon Region Investment Committee (YRIC) on 30 July 2020 with the Endorsement No. (AYY- 056/2020). ARIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in Manufacturing of Garments on CMP basis under the name of Trillion Pleasure Industrial Co., Ltd as a solely owned foreign investment from the China.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. EIA/ARIC (CMP)/ (1349/2020) on 7 August 2020. Therefore, Trillion Pleasure Industrial Co., Ltd commissioned Myanwei Environmental Solutions Co., Ltd. for EMP report study. The specific objectives of this study are;

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

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

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

Policy, Legal and Institutional Framework

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

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

26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923
28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972
31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ၊ (2018)
35. The Motor Vehicles Law, 2015
36. The Conversation of Water Resources and River Law, 2006
37. The Commercial Tax Law (1990 Amended 2014)

Project Description

Type of Proposed Business	Manufacturing of Garments on CMP Basis
Type of investment	100% Foreign Investment
Name of Company	Trillion Pleasure Industrial Co., Ltd
Land lease year	50 years
Total land area	29.94 acres (121,162.99 sq. meter)
Type of land	Industrial Land
Construction Period	2 years
Address of Proposed Project	Holding No. (119/1,120/1) + (126/2, 127/2, 128/2) + (121/1,123/2,124/2,125/2,126/2) + (120/1,121/1), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No. 383 (Sarmalaukwyarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No. 417-B (Ywarleichaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township, Maubin District, Ayeyarwady Region.
Contact Person	U Zaw Lin Aung 09-453504134

The proposed project is located at Maubin District, Nyaungdon region. The total area of project site is 29.94. Main structure is designed into production area for three buildings. Transformer room, boiler room, generator room are separated by main factory building structure and also dormitory are. The factory layout plan which is also can be seen in this report. The main product of the Trillion

Pleasure Industrial Co., Ltd is garments. The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for domestic use. Electric power is used for the purpose of to provide lighting.

Production Process of Trillion Pleasure Industrial Company Limited

Production rate of Trillion Pleasure factory is produced between first year of operation and six-years operation as 1,405,000 to 2,069,100 dozen annually. It is required of work force (13) foreigners' technician and (2000) local employees for first year operation to 10years operation.

Brief Description of Surrounding Environment

Primary data and secondary data collections are very imported to assess environmental impacts. Primary data collections (environmental quality measurements and monitoring) play an important role for conducting EMP. Therefore. Myanwei Environmental Solutions Co., Ltd. conducted air quality, temperature and humidity, noise level measurement and light pollution measurement on 14 January 2022 and compared with the National Environmental Quality (Emission) Guidelines and described how to reduce the impact and how to maintain the pollutions. Also described the weather conditions, rainfalls, and socio-economic component of the proposed project.

Potential Environmental Impact and Mitigation Measure

Possible effects, such as impacts on environmental resources, ecological resources, human and waste disposal due to construction, operation, and decommissioning processes. Potential impacts for the proposed projects are normally differentiated into three main categories, viz, Construction phase, Operation phase and Decommissioning phase.

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

Evaluation and Perdition of Significant Impacts

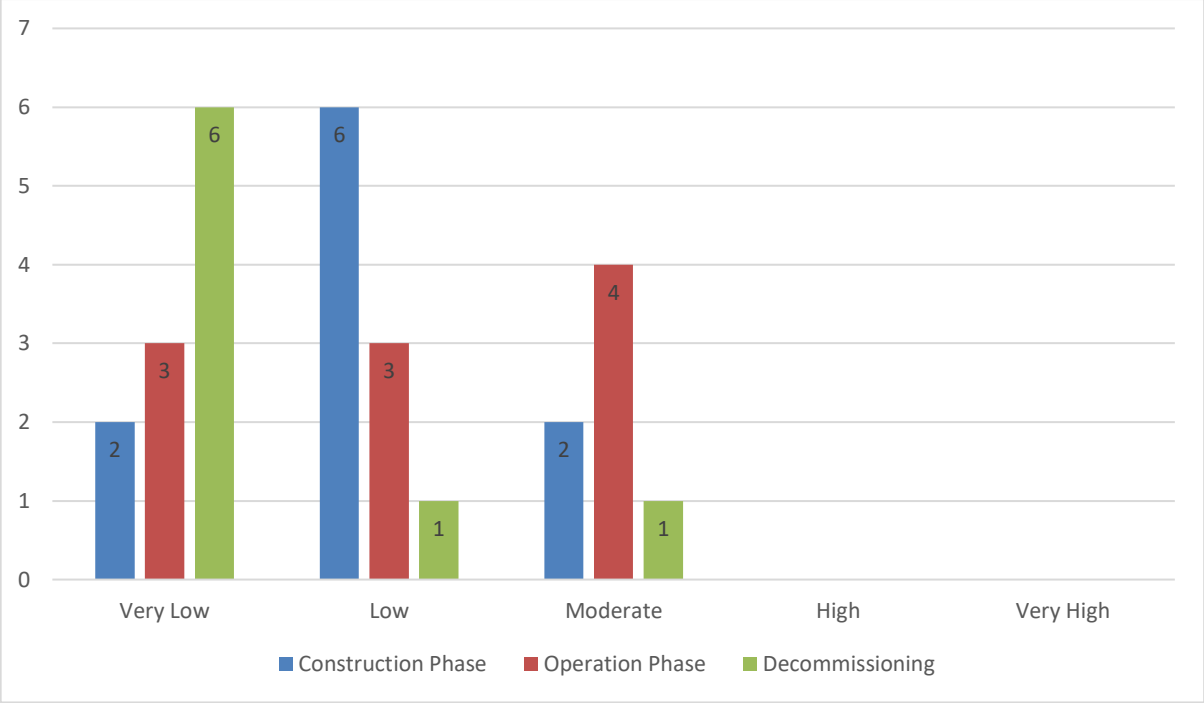
Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Construction Phase							

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Air	• Air quality can change due to dust and particulate matters in construction works • Sulphur dioxide gas emission form burning of fuel in construction work •	3	4	2	3	27	Low
Water	• Changes in water quality near water body because of soil excavation work • Water from construction work could infiltrate into the groundwater •	2	4	2	3	24	Low
Soil	• Accidental Spillage of Oil used by vehicles for construction work	2	4	2	3	24	low
Noise and Vibration	• Noise level will be significant because of heavy machineries and construction vehicles •	2	4	2	3	24	Low
Flora and fauna on terrestrial and aquatic life	• Operation of the factory construction	1	4	1	1	6	Very low
Fire	• Poor electrical installations temporarily • Using destroyed wires in electricity supply •	3	4	2	4	36	Moderate
Occupational Safety	• Accidental cases can cause construction workers by construction activities •	3	4	1	4	32	Moderate
Solid Waste	• Domestic wastes form the construction site workers • Residue wastes from construction materials	2	4	2	3	24	Low
Liquid Waste	• Septic system and sewage from construction area	2	4	2	2	16	Low
Hazardous Waste	• Engine oil, diesel, fuel and lubricant can discharge form vehicles and machines	2	4	1	2	14	Very Low

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Operation Phase							
Air	• Emission of smoke from steam boiler (Stream boiler) • Emission from emergency diesel generator and vehicle movement	3	4	2	4	36	Moderate
Water	• Production process	2	4	2	1	8	Very Low
	• Boiler blow down water	2	4	2	2	16	Low
Soil	• Engine oil leaks, spills at diesel storage and during fuel refueling.	1	4	1	1	6	Insignificant
Noise and Vibration	• Generating noise from the production machinery	2	4	2	3	24	Low
Flora and fauna on terrestrial and aquatic life	• Operation of the garment factory	1	4	1	1	6	Insignificant
Fire	• Poor electrical installations • Waste disposed area raw materials and chemical storage	3	5	2	4	40	Moderate
Occupational Safety	• Accidental cases cause by operating machines. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate
Health	• Influx of people • Noise from the generating of the emergency generators	2	4	1	2	14	Very Low
Solid Waste	• Residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	3	4	1	4	32	Moderate
Liquid Waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	2	16	Low
Hazardous Waste	• Used oil and lubricant discharged from the maintenance of vehicles and machines.	2	4	1	2	14	Very Low
Decommissioning Phase							
Air	• Dust and particulate matters from decommissioning of construction	1	1	1	2	6	Very Low

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
	materials						
Water	• No impact on surface water and ground water	2	1	2	1	5	Very Low
Soil	• No impact on soil at the decommissioning phase	1	1	1	1	3	Very Low
Noise and Vibration	• No noise and vibration at the decommissioning phase	2	4	2	1	8	Very Low
Flora and fauna on terrestrial and aquatic life	• Operation of the factory demolishing activity	1	4	1	1	6	Insignificant
Occupational Safety	• Accidental cases can cause by decommissioning activities •	1	1	1	3	9	Very Low
Solid Waste	• Demolished debris such as bricks, concrete materials	3	4	1	4	32	Moderate
Liquid Waste	• Residual septic system and sewage. •	2	4	2	2	16	Low
Hazardous Waste	• Residual empty fuel container and oil from operation	2	4	1	2	14	Very Low

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



Impact Significance of the Proposed Project

Environment Management Program

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

1. **Air pollution/Dust Management plan**

- The factory must be plant in its premises which reduce the carbon emission by the factory and minimize the air pollution
- Periodic maintenance of generator is conducted
- Prohibiting the burning of waste materials at the project site
- Providing mask to the employees who work in any dusty area
- Installation the windscreens to breakup the wind flow

2. **Noise Management Plan**

- Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment

- Impose speed limit to track and vehicles at the transportation route.
- Emergency use of diesel generator must be ensured by soundproof
- Noise level monitoring programs must be designed and conducted by trained specialist at production area

3. Solid Waste Management Plan

- The factory does not dispose the any sort of solid wastes on the factory premises or not dump in the surface water like a local pond, canal or river, etc.
- The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs and empty chemical container is stored another in separate place of storage area.
- Recycle wastes like cloth scrap, carton box, plastic sheet, etc. are hand over to local buyer for reuse and waste-tracking record shall be kept every day.
- The metal or glass waste of electric bulb is taken by the suppliers to recycle them.
- The daily domestic waste of worker hand-over to YCDC waste collector to collect every day
- Daily wastes are stored clearly labeled containers and in such a manner that all related personnel are provided proper training about the relevant issues.

4. Wastewater Management Plan

- Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity
- Regular check and maintain sewerage facility.
- Clean the factory drainage to avoid odor emission and to avoid the block of water flow
- Regularly monitor and check the discharge temperature from boiler wastewater before directly discharge into factory‘s final drainage

5. Energy Management Plan

- Installation of timers and thermostats to control heating and cooling
- Energy saving light installed in different area of the factory for saving energy
- Used of energy saving devices must be installed
- Ensure that good housekeeping measures such as turning off equipment and lights when not in use

6. Water Consumption Management Plan

- Install water meter for internal control of water consumption
- All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption
- The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles

- Trees plantation surrounding the factory

7. Emergency Respone and Disaster Management Plan

- The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm
- Provision and inspection of firefighting equipment and fire hydrant system in all the sections
- A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers
- Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training.
- Regular fire drill operation is conducted
- Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training
- Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals.
- A medical team has been prepared for primary treatment (First Aid)
- Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy.
- Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management
- Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety

8. Environmental Monitoring and Reporting

9. Corporate Social Reponsible (CSR) Plan

10. Capacity Building and training Plan

11. Grievance Redress Mechanism

Public Consulting

Public consultation meeting for Yangon Nadia-Pacific Clothing Company Limited celebrated on social media. During the preparation of this report, the third wave of COVID-19 becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people by closely contacting and to prevent spreading of disease. Thus, the present condition, the project's environmental condition and the management plans are through the social media of Myanwei Environmental Solution Company Limited Facebook page

https://drive.google.com/file/d/1fuw8h1BbqIOmK4LprwGbmDxd50g2JRvS/view?usp=drivesdk

declared on 8, June 2022. The suggestions, complains and comments from the public, organization and stakeholder are warmly welcome and accept via mailing, comment, telephoning and messengers.

Conclusion & Recommendation

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

This is recommended that;

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

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

1. INTRODUCTION

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

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

1.1. PROJECT BACKGROUND

The project is new investment for manufacturing of Garments on Contract Manufacturing Process (CMP) basic company from China. The Ayeyarwady Region Investment Committee (ARIC) issues the project on 30 July 2020 with the Endorsement No. (AYY- 056/2020). ARIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing of Garments on Cutting, Sewing and Packaging (CMP) basis under the name of Trillion Pleasure Industrial Co., Ltd.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. EIA/ARIC/(CMP)/(1349/2020) on 7 August 2020. Therefore, Trillion Pleasure Industrial Co., Ltd commissioned Myanwei Environmental Solutions Co., Ltd. (Myanwei) for EMP report study.

1.2. PROJECT PROPONENT PROFILE

This is the information of project proponent from the MIC's registration that is describing in below Table 1-1 and summary of project information is presented in Table 1-3.

Table 1-1 Information of Investor

Investor Name:	MR. TSANG KIN CHEUNG
ID No.:	KJ 0715765

Citizenship:	Chinese (Hong Kong)
Address of Registration office:	FLAT A, 3/F FAST INDUSTRIAL BUILDING, 658 CASTEK PEAK ROAD, LAI CHI KOK, KOWLOON, HONG KONG

Table 1-2 Director List

Name of Shareholder	Citizenship	Percentage
Trillion Pleasure Industrial Co., Ltd Representative by; MR. LYU, JIE MR. TSANG KIN CHEUNG MR. TSANG WAN HING	Chinese Chinese Chinese	100%

Table 1-3 Salient features of the project

Type of Proposed Business	Manufacturing of Garments on CMP Basis
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	29.94 acres (121,162.99 sq. meter)
Total building area	(240 ft × 150 ft) one storey building (350ft × 320 ft) one storey building (330 ft × 230 ft) one storey building (50 ft×140 ft) one storey building (33 × 92 ft) one storey building
Land lease year	50 years
Construction period	2 years
Address	Holding No. ((119/1,120/1)+(126/2, 127/2, 128/2)+ (121/1, 123/2, 124/2, 125/2, 126/2)+(120/1, 121/1)), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No. 383 (Sarmalaukywarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No. 417-B (Ywarleichaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township,, Maubin District, Ayeyarwady Region.
Contact person	U Zaw Lin Aung 09-771018419

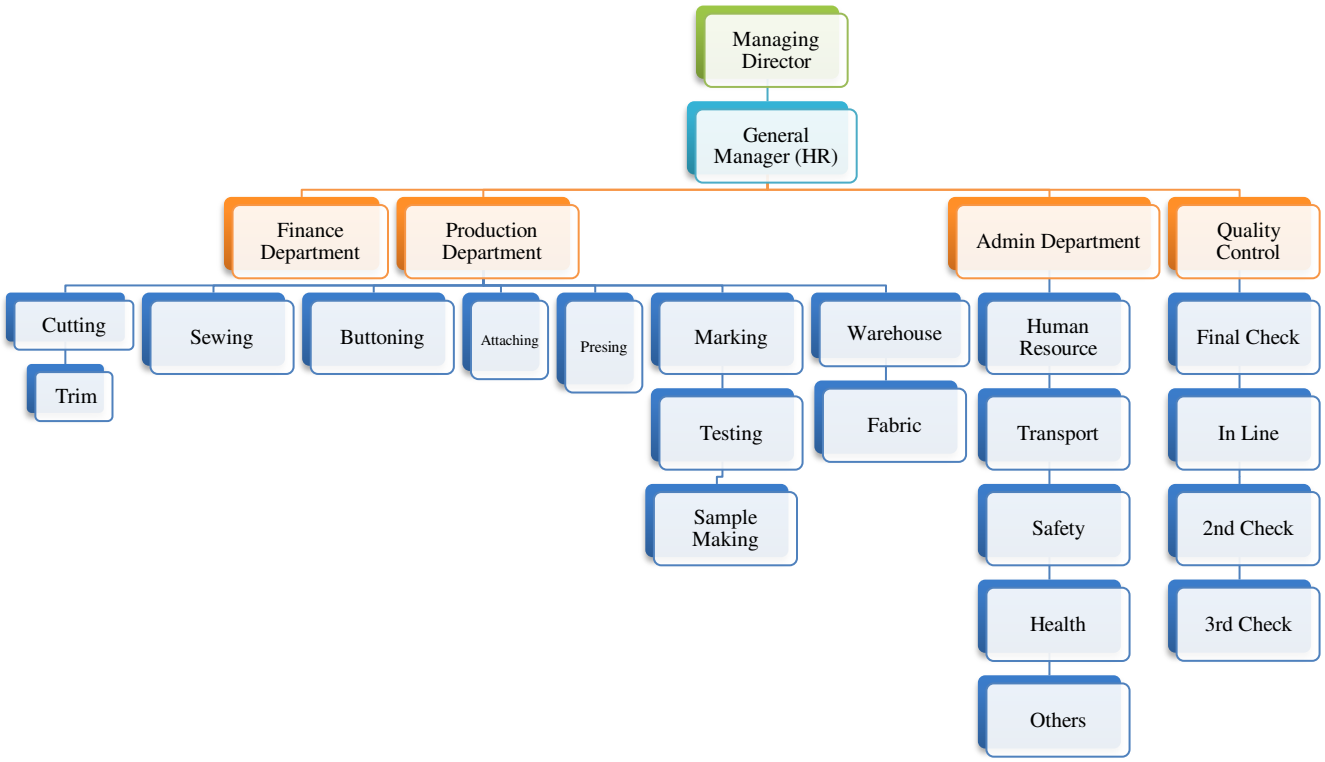


Figure 1-1 Organization Chart of Trillion Pleasure Industrial Co., Ltd

1.3. ENVIRONMENTAL CONSULTANT PROFILE

Myanwei Environmental Solutions Co., Ltd. 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 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 1-4 Member of EMP Study Team

Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	**Transition Consultant Registration Certificate No. 0069**	**EIA Organization**
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 Certificate in Environmental Stainability **TCR No. 0048**	Project Director, Environmental Consultant, Project 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
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 Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Si Yan Hein	B.Sc (Geology) Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration

MYANWEI
ENVIRONMENTAL SOLUTIONS

No. 36-38, 9th floor (A), Grand Myay Nu Condo, Myay Nu Street, Sanchaung Township, Yangon, Myanmar.

www.myanwweiconsulting.com

01-501221

2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

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

2.1. MYANMAR REGULATORY FRAMWORK

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

2.1.1. Laws and Regulations Related to Environmental and Social Considerations

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

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

Law and Regulation	Description
National Environmental Policy of Myanmar, (Notification No. 26/94 dated 5 December 1994)	To achieve harmony and balance between socioeconomic, natural resources and environment through the integration of environmental considerations into the development process enhancing the quality of the life of all its citizens.
Constitution 2008	
Section 37, (a)	The Union is the ultimate owner of all lands and all-natural resources above and below the ground, above and beneath the water and in atmosphere in the Union.
Section 37, (b)	The Union shall permit citizens rights of private property, right of inheritance, right of private initiative and patent in accord with the laws.
Section 372	The Union guarantees the right to ownership, the use of property and the right to private invention and patent in the conducting of business if it is not contrary to the provisions of this Constitution and the existing laws.
Section 45	The Union shall protect and conserve natural environment.
Section 390, (a), (b), (c), (d)	Every citizen has the duty to assist the Union in preserving and safeguarding the cultural heritage, conserving the environment, striving for the development of human resources, and protecting and preserving the public property.
Environmental Conservation Law, 30 March 2012	
Objectives	to contract a healthy and clean environmental and to conserve natural and cultural heritage for the benefit of present and future generations; to maintain the sustainable development through effective management of natural resources and to enable to promote international, regional and bilateral cooperation in the matters of environmental conversation.
Section 3	c) to enable to emerge a healthy and clean environment and to enable to conserve natural and cultural heritage for the benefit of present and future generations; (d) to reclaim ecosystems as may be possible which are starting to degenerate and disappear; (e) to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;

Law and Regulation	Description
Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities; (b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment; (c) To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances; (j) To prescribe the terms and conditions relating to effluent treatment in industrial estates and other necessary places and buildings and emissions of machines, vehicles and mechanisms; (m) To lay down and carry out a system of EIA and SIA as to whether or not a project or activity to be undertaken by any Government department, organization or person may cause a significant impact on the environment; (o) To manage to cause the polluter to compensate for environmental impact, cause to contribute fund by the organizations which obtain benefit from the natural environmental service system, cause to contribute a part of the benefit from the businesses which explore, trade and use the natural resources in environmental conservation works.
Chapter VI Environmental Quality Standards: Section10	The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards: (a) suitable surface water quality standards in the usage in rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs and other inland water sources of the public; (b) water quality standards for coastal and estuarine areas; (c) underground water quality standards; (d) atmospheric quality standards; (e) noise and vibration standards; (f) emissions standards; (g) effluent standards; (h) solid wastes standards; (i) other environmental quality standards stipulated by the Union Government.
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.
Section 16	A person or organization operating business in the industrial estate or business in the SEZ or category of business stipulated by the Ministry: (a) is responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste; (b) shall contribute the stipulated users' charges or management fees for the environmental conservation according to the relevant industrial estate, SEZ and business organization; (c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.

Law and Regulation	Description
Section 24	The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition include in prior permission, stipulated by the ministry, or not.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.
Environmental Conservation Rules, 2014	
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rules 61	The Ministry may approve and reply on the EIA report o IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Environmental Impact Assessment Procedure (December 2015)	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (a) of paragraph 102. The project proponent has to support, after consulting with effected persons by project, relevant government organization, government department and other related persons, to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under sub-paragraph (b) of paragraph 102 The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover, the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP and all conditions, under paragraph 103. The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104. The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105. The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106. The project proponent has to submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107. The project proponent has to submit the monitoring report dually or prescribed time by

Law and Regulation	Description
	Ministry in line with the schedule of EMP, under paragraph 108. The project proponent has to prepare the monitoring report in accord with the rule 109. The project proponent has to show this monitoring report in public place such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy of this report, by email or other way which way agreed with the asked person, to any asked person or organization, under paragraph 110. The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work-place of project and other work-place related to this project in any time, under paragraph 113. The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirements related to social or environment or caused to it, under paragraph 115. The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.
Screening: Section 23	a) The project proponent shall submit the Project Proposal to the Ministry for Screening. b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment. c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1=Categorization of Economic Activities for Assessment Purposes', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry: i) An EIA Type Project, or ii) An IEE Type Project, or iii) A Non-IEE or EIA Type, and therefore not required to
National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)	
Objectives	To provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.
National Myanmar Environmental Policy (2019)	
National Environmental Policy Vision & mission	**Vision** A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar. **Mission** To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all polices, laws, regulation, plans, strategic, programmes and projects in Myanmar.
Foreign Investment Law, 2012	
Section 8	(a) To support the primary objectives of the national economic development plan, and for businesses that cannot yet be run by the State and citizens or businesses that have insufficient funds and technology. (b) Development of employment activities (l) Protection and conservation of the environment. (q) Appearing the required modern services for the Union and citizens.

Law and Regulation	Description
Section 17	(a) To abide by the existing laws of the Republic of the Union of Myanmar. (b) To carry out the business by forming a company under the existing laws of Myanmar by the investor. (h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business. (k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant enterprises, departments or organizations in accord with the contract.
Foreign Investment Rule, 2013	
Rule 54	The promoter or investor shall: (a) comply with Environmental Protection Law in dealing with environmental protection matters related to the business; (b) shall carry out socially responsible investment in the interest of the Union and its people; (c) shall co-operate with authorities for occasional or mandatory inspection; (d) shall exercise due diligence to be in conformity and harmony with norms and standards prescribed by relevant Union Ministry in conducting construction of factories, workshops, buildings, and other activities; (e) shall enforce Safety and Health
Myanmar Investment Rules, 2017	
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment
Rule 206.	The project proponent has to submit the passport, expert evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law
Myanmar Insurance Law (1993)	Section 15 - If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person. Section 16 - The project proponent has to ensure insurance to compensate for general damages because the project may cause damages to the environment and injury to the public.
Payment of Wages Law (2016)	
Section 3 & 4	The project proponent has to pay the wages in accord with section 3 and 4 of said law,
Section 5	The project proponent has to submit with the agreements of employees & reasonable ground to the department if it is difficult to pay because of force majeure included in a natural disaster
Section 7-13	The project proponent has to abide by the provisions of section 7 to 13 in the chapter (3) in respect of deduction from wages.
Section 14	The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours
Yangon City Development Committee Law (2018)	
Section (317)	The proponent shall not block the natural river channel, change the course, and disrupt the water channel, filling with soil within the city boundaries without the consent of the Committee

Law and Regulation	Description
Section (318)	The project proponent shall not construct buildings, factories, and industries without sewage, toilet, septic tanks, and wastewater treatment system
Section (322)	The project proponent is not allowed to make activities that will produce noise pollution, water pollution, air pollution, and soil pollution to impact the environment within the city's boundaries
The Amended Law for Factories Act, 1951 (2016)	
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
Basic Principles: Section 3	Private Industrial Enterprises shall be conducted in accordance with the following basic principles: (a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise; (b) to acquire modern technical know-how for raising the efficiency of industrial enterprises and to establish the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market; (d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises; (e) to cause opening up of more employment opportunities; (f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution; (g) to cause the use of energy in the most economical manner.
The Export and Import Law (2012)	
Objectives	The objectives of this law are as follows: a) To enable to implement the economic principles of the State successfully. b) To enable to lay down the policies relating to export and import that supports the development of the State. c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards. d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.
Prohibitions: Section 5	No persons shall export or import restricted, prohibited and banned goods.
Prohibitions: Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Prohibitions: Section 5	A person who obtained any license shall not violate the conditions contained in the license.
The Prevention of Hazard from Chemical and Related Substances Law, 2013	
This law was enacted with the objectives of: a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances; b. To supervise systematically in performing the chemical and related substances business with permission for	

Law and Regulation	Description
being safety; c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically; d. To perform the sustainable development for the occupational safety, health and environmental conservation. Regarding the chemical management and storage, currently, regulations governing chemicals management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.	
Underground Water Act	
The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to conserve and protect underground sources of water supply in the Union of Burma. This act prohibits sinking of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township Officer or sub-divisional officer had power to close a license tube after exercising jurisdiction over the local area concerned and the expense of such closure shall be recoverable from the owner of the tube as if it were an arrear of land-revenue.	
Myanmar Fire Brigade Law (2015)	
The Pyidaungsu Hluttaw enacted this law by Law No.11/2015 on the date of 17th March, 2015 with the following objectives: (a) to take precautionary and preventive measures and loss of state own property, private property, cultural heritage and the live and property of public due to fire and other natural disasters (b) to organize fire brigade systemically and to train the fire brigade (c) to prevent from fire and to conduct release work when fire disaster, natural disaster, epidemic disease or any kind of certain danger occurs (d) to educate, organize and inside extensively so as to achieve public corporation (e) to participate if in need for national security, peace for the citizens and law and order	
Section-8 Fire Safety Procedures	
Rule17	The relevant Government Department or organization shall, for the purpose of precaution and prevention obtain the approval of the Fire Force Department before granting permission for the following cases: a. Constructing three-storied and above buildings market and condominium buildings, b. Operating hotel, motel, guest house enterprise c. Constructing factory, workshop, storage facilities and warehouse d. Operating business expose to fire hazard by using in inflammable materials or explosive materials e. Producing and selling fire-extinguishing apparatuses f. Doing transport business, public utility vehicles train, airplane, helicopter, vessel, ship, tonkin tug
Rule18	The relevant government department or organization shall obtain the opinion of the Fire Services Department for the purpose of fire precaution and prevention, when laying down plans for construction for town, village and downtown or village development plans
The Electricity Law (2014)	
In 2014, the new Electricity Law, a comprehensive piece of legislation covering licensing, a new regulatory commission, standards, inspection, tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity Law divides projects into “small” (up to 10 MW), “medium” (between 10 MW to 30 MW) and large (upwards of 30 MW); the states and regions can issue permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the Electricity Law, and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines	

Law and Regulation	Description
in accordance with existing laws.	
Boiler Law (2015)	
Chapter (2) Objective	The objectives of this law are as follows: (a) To obtain boilers in compliance with Myanmar Standards or International Standards (b) To prevent the country and citizens from hazards caused by boiler accidents (c) To use boilers in compliance with Myanmar Standards or International Standards within the country (d) To develop boiler technology and to produce experts capable of manufacturing, handling, repair, and maintenance of boilers (e) To optimize the use of boilers through effective utilization of fuel energy (f) To reduce the environmental, social and health impacts through long-lasting use of boilers.
Chapter (3) 4. With the permission of the Ministry, the inspector general can:	Notify the inspection methods and instructions according to the national or international standards for safe operations of boilers in line with this law, procedures and instructions Only the results obtained from the prescribed boiler standards and inspection methods will be approved.
Chapter (4). Boiler Registration	5. Anybody who would like to use a boiler in any kind of business should be registered. 6. Boiler should be manufactured according to Myanmar Standards or International Standards. 7. Those who would like to apply for boiler registration according to Section 5 should apply to the inspector with the application, documents and vouchers related to boiler 8. If the application regarding registration of boiler according to Section 7, the Registration Officer should conduct necessary inspection and submit results of the findings to the Inspector General. 9. The Inspector General should assess and inspect the submission of the Registration Officer according to Section 8 and could allow or reject for registration of the boiler. 10. The Inspector General shall define boiler size according to heated surface area in accordance with adopted procedures.
Chapter (13) Prohibitions	59. According to Section 21, nobody must alter, change, deface, deform or make embossed registration unnoticeable illegitimately. 60. Nobody is allowed to repair a boiler without boiler repair certificate. 61. Nobody is allowed to maintain a boiler without boiler maintenance certificate. 62. Nobody must alter safety relief valve in order to exceed the allowable pressure due to his consent or direction given by the owner. 63. Nobody must manufacture boilers against Section 25, Subsection 25 (a) and (b) enacted.
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
The Pyidaungsu Hluttaw hereby enacts this Law for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly.	
The Social Security Law (2012)	
The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
Section 53(a)	The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent

Law and Regulation	Description
	employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
This law was enacted for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall form the workplace coordinating committee consisting of the representatives of workers and the representatives of employer.	
Section 23	A party, employer or worker, may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of such body in accord with stipulated manners, may apply to the competent court in person or by the legal representative.
Section 24	The relevant Conciliation Body shall, in respect of the collective dispute known or received by the complaint of either party, employer or worker, in respect of the dispute; information sent by the Minister or the Region or State Government or any other means, carry out as follows: (a) conciliating so as to be settled within three days, not including the official holidays, from the day of knowing or receipt of such dispute; (b) concluding mutual agreement if the settlement is reached in conciliating under sub-section (a), before the Conciliation Body.
Section 25	The Conciliation Body shall refer the collective dispute which does not reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute.
Section 38	No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.
Section 39	No employer shall alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Tribunal, to affect the interest of such workers immediately.
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal f violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.
Section 46	Any employer who violates any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.
The Employment and Skill Development (2013)	
This law was enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Section 5	The project proponent has to appoint employees with the contract in line with the provision of section 5 of said law.
Section 14	Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
The Worker's Compensation Act, 1923	It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment, such as carpal tunnel syndrome.

Law and Regulation	Description
The Payment of Wages Act, 1936	The Payment of Wage Act defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday, and allows legal action against delayed payment or un-agreeable deduction.
The Leave and Holidays Act (1951, partially revised in 2014)	This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leave and maternity leave.
The Minimum Wage Law (2013)	The minimum wage law, passed in March 2013, was replaced the 1949 Minimum Wage Act. The law provides a framework for minimum wage determination: the presidential office establishing a tripartite minimum wage committee shall decide minimum wage with industrial variation based on a survey on living costs of workers possibly every two years. This also stipulates equal payment.
Public Health Law (1972)	**Chapter 2; Prevention of Public Health**
Objectives	To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. This law focuses as follows The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law. The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law. The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.
Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
Chapter 2 Prevention	4. When a Principal Epidemic Disease of a Notifiable Disease occurs; Immunization and other necessary measures shall be undertaken by the Department of Health, in order to control the spread thereof; The public shall abide by measures undertaken by the Department of Health under sub-section (a).
Chapter 4 Environmental Sanitation	For prevention of the outbreak of Communicable Disease and effective control of Communicable Disease when it occurs, the public shall under the supervision and guidance of the Health Officer of the relevant area, undertake the responsibility of carrying out the following environmental sanitation measures; Indoor, outdoor sanitation or inside the fence outside the fence sanitation; Well, ponds and drainage sanitation; Proper disposal o refuse and destruction thereof by fire; Construction and use of sanitary latrines; Other necessary environmental sanitation measures.
Occupational Safety and Health Law (2019)	
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.

Law and Regulation	Description
Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.
The law on Standardization	
Objectives	The Objectives of this Law are as follows: to enable to determine Myanmar Standard to enable to support export promotion by enhancing quality of production organizations and their product, production processes and services to enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards to enable to support protection of environment related to products, production process and services from impact, and conservation of natural resources to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.
Chapter 7 Taking Action by Committee No. 19	The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order: warning suspending the certificate of certification for limited period cancelling the certificate of certification
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဂတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဂတ္ထုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်၊ ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊ လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတက်သော ဂတ္ထုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ ကြီးကြပ်နိုင်ရန်။
အခန်း ၇ တားမြစ်ချက်များ အမှတ် ၁၈	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ဝံယူရန် ငြင်းပယ်ခြင်းမပြုရ။
အမှတ် ၁၉ (ခ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းခွင် ပေါက်ကွဲစေတက်သော ဂတ္ထုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။

Law and Regulation	Description
အမှတ် ၁၉ (၈)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။
The Motor Vehicles Law (2015)	
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles • The project proponent has to promise to abide by the nearly all provisions of said law and rules, especially the provisions related to air pollution, noise pollution and life safety.
The Conservation of Water Resources and Rivers Law (2006)	
Aims	The aims of this Law are as follows: (a) to conserve and protect the water resources and rivers system for beneficial utilization by the public; (b) to smooth and safety waterways navigation along rivers and creeks; (c) to contribute to the development of State economy through improving water resources and river system; (d) to protect environmental impact.
Chapter 5 Prohibitions No. 8	No person shall: (a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks. (b) cause the wastage of water resources wilfully.
No. 10	No person shall anchor the vessels where vessels are prohibited from anchoring in the rivers and creeks.
No.11 (a)	No person shall: dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.
No. 12	No person shall carry out growing of garden, digging, filling, silt trapping, closing pond, dyke building or erecting spur in the river-creek boundary, bank boundary and waterfront boundary without the permission of the relevant government department and organization.
No. 15	No person shall carry out the construction of switchback, dockyard, wet dockyard, water-tight dockyard, building of jetty, pier, landing stage or vessel landing by drainage in the river-creek boundary, bank boundary and waterfront boundary without the permission of the Directorate.
The Commercial Tax Law (1990) Amended 2014	
Chapter 5 Registration and Intimation of Commencement of Enterprise 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimidation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly Payment of Tax and Sending of Three-Monthly Return 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.

Law and Regulation	Description
12 (b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if there is cause to consider that he has taxable proceed of sale or receipt from service within a year.
12 (c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may, based on the information received, estimate and claim the tax payable or the additional tax payable.
12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
12 (e)	The tax payable on goods imported under sub-section (c) of section 4 of the Law shall be collected together with the customs duties by the Customs Department in accord with the manner of collecting customs duties.

2.2. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUILDLINES

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

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

2.2.1. General Guidelines

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

2.2.1.1. Air emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in concentrations that reach or exceed national ambient quality guidelines and standards, or in their absence current World Health Organization (WHO) Air Quality Guidelines1 for the most common pollutants as summarized below; and (ii) emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards (i.e. not exceeding 25 percent of the applicable air quality standards) to allow additional, future sustainable development in the same air shed. Industry-specific guidelines summarized hereinafter shall be applied by all projects to ensure that air emissions conform to good industry practice. Reference should be made to WHO's Air Quality Guidelines for Europe2 for air pollutants not included in the following Table 2-2.

Table 2-2 WHO's Air Quality Guideline

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

[a] Particulate matter 10 micrometers or less in diameter
[b] Particulate matter 2.5 micrometers or less in diameter

2.2.1.2. Wastewater

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

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

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

Parameter	Unit	Guideline Values
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2

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.

Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and grease	mg/l	10
pH	S.U.[a]	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulphide	mg/l	1
Temperature increase	°C	<3[b]
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

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

2.2.1.3. Noise levels

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

Table 2-4 Noise Levels of National Environmental Quality (Emission) Guideline

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

[a] Equivalent continuous sound level in decibels

2.2.2. Garment, Textile and Leather Products Manufacturing

This guideline applies to textile manufacturing using natural fibers, synthetic fibers (made entirely from chemicals), and regenerated fibers (made from natural materials by processing these materials to form a fiber structure). It does not include polymer synthesis and natural raw material production.

2.2.2.1. Effluent levels

Parameter	Unit	Guideline Value
5-day Biochemical oxygen demand	mg/l	30
Absorbable organic halogens	mg/l	1
Ammonia	mg/l	10
Cadmium	mg/l	0.02
Chemical oxygen demand	mg/l	160
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Cobalt		0.5
Color		7 (436 nm[a], yellow) 5 (525 nm, red) 3 (620 nm, blue)
Copper	mg/l	0.5
Nickel	mg/l	0.5
Oil and grease	mg/l	10
Pesticides		0.05-010[b]
pH	S.U. [c]	6-9
Phenol	mg/l	0.5
Sulfide	mg/l	1
Temperature increase	°C	<3 [d]
Total coliform bacteria	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

a Nanometers
b 0-05 mg/l for total pesticides (organ phosphorus pesticides excluded); 0.10 mg/l for organo phosphorus pesticides
c Standard Unit
b at the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge

2.2.2.2. Air emission levels

Parameter	Unit	Guideline Value
Ammonia	mg/Nm^{3a}	30
Carbon disulfide	mg/Nm^3	150
Chlorine	mg/Nm^3	5
Formaldehyde	mg/Nm^3	20
Hydrogen sulfide	mg/Nm^3	5
Particulates	mg/Nm^3	50^b
Volatile organic compounds	mg/Nm^3	2/20/50/75/100/1 150 $^{c, d}$

a Milligrams per normal cubic meter at specified temperature and pressure
b as the 30-minute mean for stack emissions
c Calculate as Total carbon
d As the 30-minute mean for stack emissions; 2 mg/Nm^3 for volatile organic compounds classified as carcinogenic or mutagenic with mass flow greater than or equal to 10 g/hr; 20 mg/Nm^3 for discharges of halogenated volatile organic compounds with a mass flow equal or greater than 100 g/hr; 50 mg/ Nm^3 for waste gases from drying of large installations (solvent consumption > 15 tons/year); 75 mg/Nm^3 for coating application processes for large installations (solvent consumption > 15 tons/year); 100 mg/Nm^3 for small installations (solvent consumption < 15 tons/year); if solvent is recovered from emissions and reused, the guideline value is 150 mg/Nm^3

2.2.3. **IFC EHS Guidelines**

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

There are two kinds of guidelines, General EHS Guidelines and Industry Sector Guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors in the following section: (1) Environment, (2) Occupational Health and Safety, (3) Community Health and Safety and (4) Construction and Decommissioning. Table 2-5 shows the contents of the section of Community Health and Safety.

Table 2-5 Community health and safety contents

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

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

2.3. INSTITUTIONAL ARRANGEMENT

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

2.4. COMMITMENT OF TRILLION PLEASURE INDUSTRIAL CO., LTD.

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

a) The accuracy and completeness of the EMP,

b) That the EMP has been prepared in strict compliance with applicable laws including this Procedure

c) That the Project will always comply fully with the commitments, mitigation measures, and plans in the EMP Report.

Trillion Pleasure Industrial Co., Ltd. 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 bublic talk for getting knowledge, risk prevention, bonus and social security service
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees.

3. PROJECT DESCRIPTION

3.1. LOCATION OF PROPOSED PROJECT

The proposed project is located at North Latitude 16°59'0.83"N and East Longitude 95°41'42.28"E, Holding No. ((119/1,120/1)+(126/2, 127/2, 128/2)+ (121/1, 123/2, 124/2, 125/2, 126/2)+(120/1, 121/1)), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No. 383 (Sarmalaukywarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No. 417-B (Ywarleichaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township,, Maubin District, Ayeyarwady Region.The location map of the proposed project size is shown in Figure 3-1.

3.2. OBJECTIVES OF PROPOSED PROJECT

The proposed project intends to manufacture Garments on CMP basic and to export 100% of the finished products. Active Pleasure Limited will supply raw materials for garments in People Republic of China. Active Pleasure Limited agrees to supply to ready make products and pay CMP charges to Trillion Pleasure Industrial Co., Ltd.

3.2.1. **Site Description of Proposed project site**

The total land area is 29.94 acres and build main factory buildings, warehouse, kitchen, canteen, maintenance house, etc. which were built on its land area. Also, factory layout drawing is able to seen in Figure 3-2 and Figure 3-3.

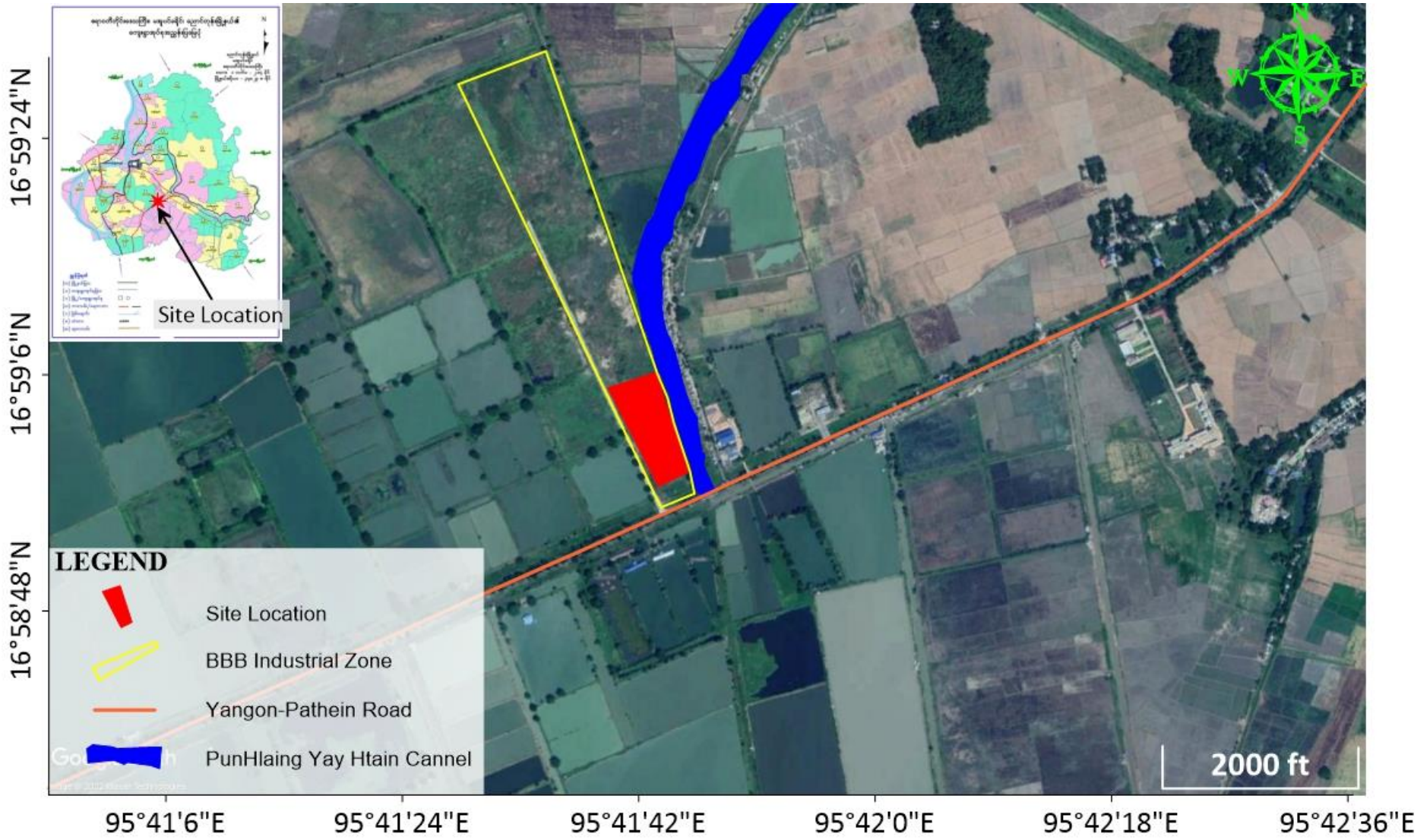


Figure 3-1 Location Map

1.Security Gate 2.Proposed Land for Factory Building 3.Temporary Dormitory 4.Transformer 5.Generator Room
6.Raw Materials Storage Area 7.Dormitory 8.Operation Area 9.Proposed Land for Boiler Room

Figure 3-2 Factory Aerial Photo

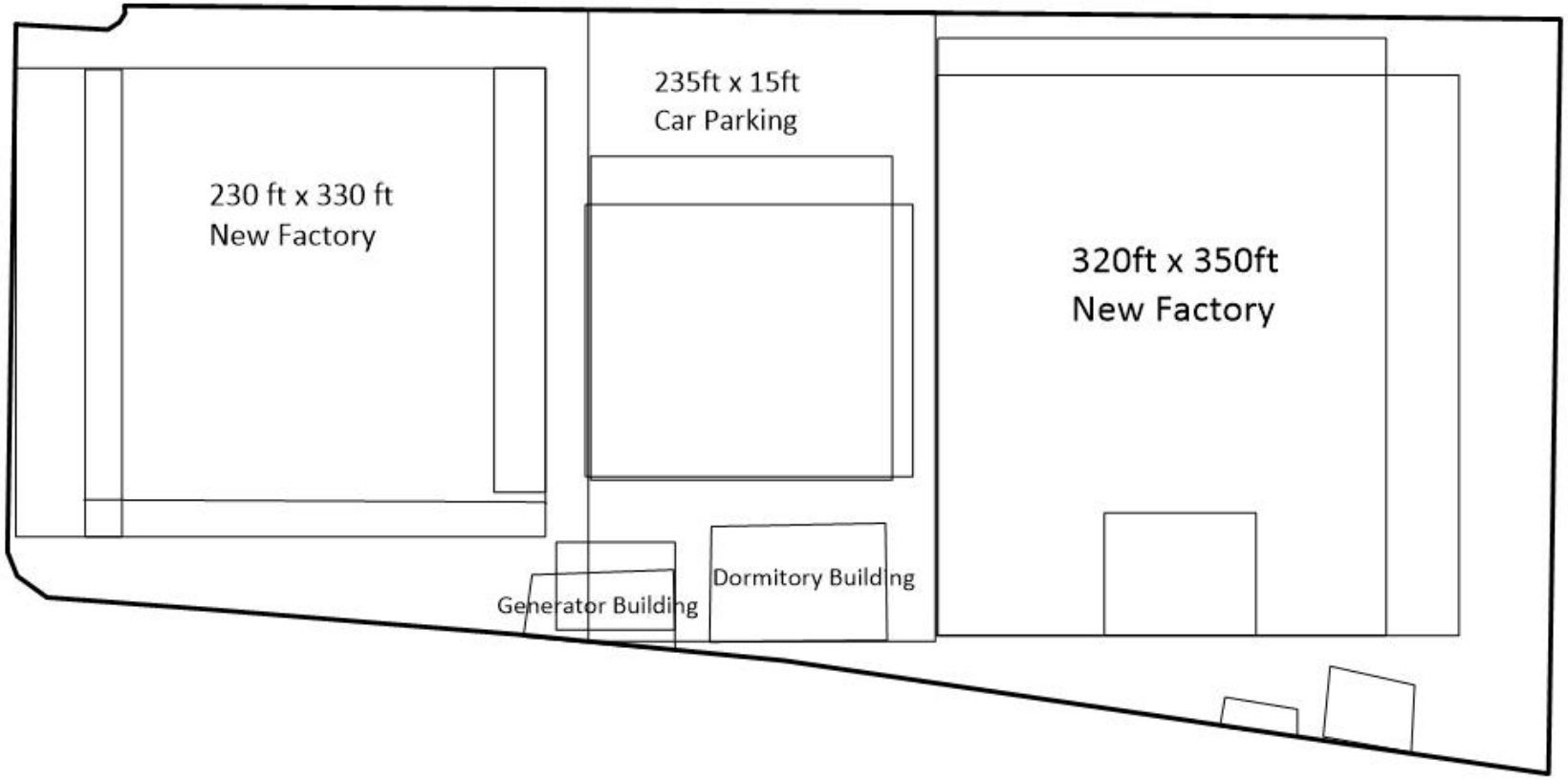


Figure 3-3 Factory Layout Drawing

3.2.2. Production Process

The production process is based on CMP system in which the production on consignment in which the main raw materials (fabrics, thread, label etc.) are provided by overseas buyers and imported free of charge, then cut, sewn, and packed in the domestic factories, after which all of the finished products are exported. The main operation of the proposed factory is sewing. The sewing was operated one and two needle sewing machine and checked by quality control supervisor on each sewing line. The ironing process is completed after QC process. Then Garments packing is completed and prior to shipping to destinations. The process flow diagram for Garments manufacturing is illustrated in Figure 3-4. During operation, the proposed factory is expected to produce Garments products as per Table 3-1.

Figure 3-4 Production Flow Diagram of Trillion Pleasure Industrial Co., Ltd.

3.2.3. Products

The product will be exposed to France, Sweden, Norway, Denmark, Germany, USA, Poland, Canada, Mexico, United Arab Emirates, Colombia, Belgium, Turkey, Croatia, Serbia, Republic of great, Britian, Indonesia, India, Taiwan, Vietnam, Japan, South Korea, Malaysia, Philippines, Thailand, Hond Kong. Estimated production rate from year one to year thirty are expressed in Table 3-1.

Table 3-1 Annual Production Rate

No	Product	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-30
1	Long Sleeve Top	Doz	7000000	735000	771750	850000	935000	1028500
2	Half Sleeve Top	Doz	250000	262500	275625	310000	341000	375100
3	Skirt	Doz	165000	173250	182000	200000	220000	242000
4	Dress	Doz	125000	131250	137500	150000	165000	181500
5	Tanktop	Doz	165000	173250	182000	200000	220000	242000

Figure 3-5 Products Photo

3.3. UTILITIES

3.3.1. **Raw Material**

The main raw materials are pp Thread, CC Thread, Silicon Tape, Label, Hangtag, Fabric, Hanger Loop, Elastic, Zipper, Binding Elastic and Ring which imported from China, Cambodia, Japan, Taiwan, Sweden, England, Hong Kong. Annual raw materials for production are described in Table 3-2.

Table 3-2 Annual Raw Materials Requirement

No.	Particulars	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year-4	Year-5	Year- 6-30
	Raw Materials								
1	PP Thread	5402	Yard	1,551,600,000	1,629,180,000	1,710,390,000	1,887,600,000	2,076,360,000	2,283,996,000
2	CC Thread	5204	Yard	1,239,600,000	1,301,580,000	1,366,515,000	1,509,600,000	1,660,560,000	1,826,616,000
3	Silicon Tape	3926	Yard	7,230,000	7,591,500	7,969,950	8,796,000	9,675,600	10,643,160
4	Label	5807	PCS	67,440,000	70,812,000	74,346,000	82,080,000	90,288,000	99,316,800
5	Hangtag	4821	PCS	33,720,000	35,406,000	37,173,000	41,040,000	45,144,000	49,658,400
6	Fabric	6004	Lbs	6,858,600	7,201,530	7,560,255	8,337,600	9,171,360	10,088,496
7	Hanger Loop	5609	Yard	7,800,000	8,190,000	8,596,800	9,456,000	10,401,600	11,441,760
8	Elastic	5604	Yard	1,782,000	1,871,100	1,965,600	2,160,000	2,376,000	2,613,600
9	Zipper	9607	PCS	1,980,000	2,079,000	2,184,000	2,400,000	2,640,000	2,904,000
10	Binding Elastic (1.3 CM)	5404	Yard	363,000	381,150	400,400	440,000	484,000	532,400
11	Ring	9606	SET	330,000	346,500	364,000	400,000	440,000	484,000
	Accessories								
1	Button	9606	PCS	8,430,000	8,851,500	9,293,250	10,260,000	11,286,000	12,414,600
2	Interlining	5603	Roll	7,025	7,376.25	7,744.38	8,550	9,405	10,345.50
3	String	5604	Mtr	702,500	737,625	774,437.50	855,000	940,500	1,034,550
4	Lace	5804	Mtr	421,500	442,575	464,662.50	513,000	564,300	620,730
5	Snap Button	9606	PCS	8,430,000	8,851,500	9,293,250	10,260,000	11,286,000	12,414,600
6	Paper Card	4911	PCS	1,405,000	1,475,250	1,549,875	1,710,000	1,881,000	2,069,100
7	Carton	4819	PCS	1,405,000	1,475,250	1,549,875	1,710,000	1,881,000	2,069,100
8	Plastic Pin	7326	Doz	1,405,000	1,475,250	1,549,875	1,710,000	1,881,000	2,069,100
9	Tissue Paper	4811	PCS	1,405,000	1,475,250	1,549,875	1,710,000	1,881,000	2,069,100

No.	Particulars	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year-4	Year-5	Year- 6-30
10	Polybag	3923	PCS	1,405,000	1,475,250	1,549,875	1,710,000	1,881,000	2,069,100
11	Sealing Tape	3506	Mtr	438,000	459,900	482,862.50	533,000	586,300	644,930
12	Marker Paper	4823	Kg	70,250	73,762.50	77,443.75	85,500	94,050	103,455

3.3.2. Machinery and Equipment

Automation systems for fully automatic and semiautomatic systems control of each process machine or complete processing line will be implemented. List of machinery and equipment required for the garment factory is following in Table 3-3.

Table 3-3 List of Machinery

No.	Particular	Unit	Quantity
1	Fabric Shrinkage Machine	SET	4
2	Fabric Checking Machine	SET	4
3	Fabric Relaxing Trolly	SET	50
4	Fabric Relaxing Machine	SET	2
5	Automatic Spreading Machine	SET	9
6	Fabric Rolling Machine	SET	1
7	Tape Cutting Machine	SET	2
9	Fusing Machine	SET	1
10	Cutting Panel Shelf	SET	1
11	Single Needle Sewing Machine	SET	20
12	Overlock Sewing Machine	SET	400
13	Overlock Sewing Machine Parts	SET	400
14	Flatlock Sewing Machine	SET	400
15	Flatlock Sewing Machine with Left Knife	SET	250
16	Snap Button Sewing Machine	SET	120
17	Bartack Sewing Machine	SET	10
18	Button Hole Machine	SET	10
19	Waistband Machine	SET	10
20	Lamp For Sewing Machine	SET	10
21	Net for Stack	Mtrs	2000
22	Stopper for Stack	PCS	90
23	Shelf Stack for Accessory	SET	39
24	Shelf Stack Board	SET	540
25	Shelf Stack for Fabric	SET	87
26	Shelf Stack for Finished Goods	SET	42
27	Shelf Stack for Cutting Panel	SET	27
28	Cutting Table	SET	10
29	Automatic Cutter	SET	3

No.	Particular	Unit	Quantity
30	Feeding Equipment	SET	60
31	Cutting Panel Checking Table	SET	30
32	Garment Checking Table	SET	30
33	Stool	SET	600
34	Air Compressor 100HP	SET	3
35	Drier for Air Compressor	SET	3
36	Air Compressor Tank	SET	3
37	Production Computerized Tracking System	SET	1
38	Metal Detecting Machine	SET	2
39	Carton Metal Detecting Machine	SET	16
40	Washing Machine	SET	1
41	Drying Machine	SET	1
42	Vacuum Cleaning Machine	SET	4
43	Steam Iron	SET	200
44	Ironing Board	SET	200
45	Decontamination Machine	SET	4
46	Checking Table	SET	30
46	Folding Table	SET	30
47	Finishing Goods Shelf	SET	40
48	Scissors	PCS	10000
49	Big Scissor	PCS	1000
50	Tag Gun	PCS	100
51	Cleaning Gun Set	SET	6
52	Plastic Bucket with Wheel	SET	100
53	Weight Scale (100Kgs)	SET	2
54	Electronic Scale (0.01-5Kgs)	SET	3
55	Steam Boiler (2tons)	SET	2
56	Wood Steam Boiler (2 Tons)	SET	1
57	Computer Server	SET	8
58	Richtimes Cutting Plotter	SET	2
59	Richpeace Stand Plotter	SET	1
60	Forklift	SET	1
61	Hand Pallet Truck	SET	10

No.	Particular	Unit	Quantity
62	Water Filter System	SET	2
63	Bar-Code Computer	SET	1
64	Fluorescent Tube	SET	4000
65	Diesel Generator Volvo 600KVA	SET	1
66	Diesel Generator Volvo 366KVA	SET	1
67	Motor for Sweing Machine	SET	60
68	Light Box	SET	4
69	Hot Spa Area Machine	SET	1
70	Solar Lamp	SET	20
71	RFID Card	SET	30000
72	Dehumidifier	SET	4
73	Card Cover	SET	30000
74	Stacker	SET	200
75	Vacuum Cleaner	SET	4
76	Stabilizer	SET	1
77	Electricity Cabinet	SET	1
78	Fire Pump	PCS	1
79	Intelligent Control System Box	PCS	2
80	Air Cylinder	PCS	1
81	Auto-Pump	PCS	1
82	Smoking Detecting Control Box	PCS	2
83	Derrick	PCS	800

3.3.3. **Human Resource**

Human resource required by foreign experts/technicians and local persons for administrative and production process are about 2,013 persons which are also described in Table 3-4. Most of the employees are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills.

Table 3-4 Manpower List on Trillion Pleasure Industrial Co., Ltd.

No.	Particular	Local	Foreign
1	General Manager		1
2	Production Manager		1
3	Sewing Mentor		**2**
4	QA Manager		1

No.	Particular	Local	Foreign
5	QC Manager		1
6	Cutting Supervisor		1
7	Mechanic Supervisor		1
8	Merchandisor		1
9	Warehouse Supervisor		1
10	Finishing Supervisor		1
11	Technician		**2**
12	HR Manager	1	
13	HR Assistant	4	
14	Q.A Supervisor	1	
15	Finance Supervisor	1	
16	Accountant	3	
17	Merchandiser Assistant	2	
18	Warehouse Supervisor	1	
19	Cutting Leader	2	
20	Sewing Supervisor	8	
21	Q.C Leader	4	
22	Finishing Supervisor	2	
23	Sewing Leader	50	
24	Mechanic	12	
25	Engineer (E.P)	6	
26	Q.C Staff	20	
27	Store Keeper	26	
28	Cutting Workers Skill Workers	20 1150	
29	Semi Skill Workers	650	
30	Finishing Workers	35	
31	Nurse	2	
Total		**2000**	**13**

3.3.4. **Water Requirement**

When the operation starts, 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 and domestic use. The main water use in the proposed project is for domestic usage such as for personal washing, food preparation, and washing of utensils. The factory has one tube well depth in 160 ft. During operation, the water will be pumped from the groundwater; the water is stored in two water storage tanks (3,000 gallons). The factory also has a water storage tank (399 m^3) for firefighting. Daily water requirement of proposed project is about 300 gallons.

3.3.5. Electricity and Fuel Requirement

The proposed project intended to get required electricity supply form Electricity Supply Board (Ayeyarwady Division) and distributed by two units of 500 kVA Transformers and another sources of energy 200 KVA and 250 KVA generators which also be kept as the emergency generator if normal electricity supply could not provide for the proposed project.

Required petrol and diesel for vehicles and generator are purchased from the nearest petrol station. Fuel requirement is about 8000 liters per month. To handle the leakage and spillage of the diesel, an interception with sand is kept under the tank.

Figure 3-6 Electricity Facilities

3.4. GENERATION OF WASTE, EMISSION AND DISTURBANCES

The project will be generated solid waste, liquid waste, and hazardous waste from the operation of the Trillion Pleasure factory. Detail description of waste generation and waste amount are shown in Table 3-5.

Table 3-5 Waste generation and waste amount

Waste		Type of wastes	Estimated waste amount	Source of generation
Construction phase				
Solid waste	Re-usable	Residual waste of construction materials	1%	Construction activities
	Non-re-usable	Food residues, domestic waste	58.5 kg / day*	Canteen, Kitchens, dormitory
Liquid waste		Sanitary discharge water	15 m^3 /day*	Toilet facility, kitchen and canteen
Hazardous waste		Oil leakage and spills	-	Operation of generator and movements of vehicles
Operation phase				
Solid waste	Re-usable	Residual pieces of fabric scraps	10% a roll of fabric (kg)	Production line and cutting line
		Raw material cutting wastes	1200 kg / month	
		Disposed packaging materials, paper or plastic wrapping	110 kg / month	Materials store and supply packaging
	Non re-usable	Food residues, domestic waste	785 kg / day*	Canteen, Kitchens, dormitory
Liquid waste		Sanitary discharge water	201.3 m^3 /day*	Toilet facility, kitchen and canteen
Hazardous waste		Residual chemicals, use chemical container		Chemical usage and store area
		Oil leakage and spills	-	Operation of generator and movements of vehicles

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

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

3.5. STEAM BOILER

The Steamed boiler (2 tons per hour of steam capacity) is used in ironing process for daily and used of fuel for steam boiler is wood. Wood was required for boiler operation at about 135 kg per hour, this wood supply from local supplier of Nyaungdon. General information of proposed boiler information is mentioned in below. There is no plan to institute boiler yet.

Description	Process
Model	DZL2.07/1.0/1.25-All
Steam Capacity	2 ton/hr
Rated Pressure	0.7 MPa
Rated Steam Temperature	170˚C
Coal Consumption	135 (kg/hr)

Thermal Efficiency	82%

3.6. DECOMMISSIONING PHASE

The proposed project investment duration is 50 years and they will close out the project according to their MIC proposal.

4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

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

4.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

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

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

4.2. PHYSICAL COMPONENT IN PROJECT AREA

4.2.1. Topography

The proposed project existing Nyaungdon Township is low and flat with an elevation of 10 meters (30ft) above sea level and it's had many creeks, water outlets, river, lake, and channels. These are flowing to the Pun Hlaing River, Irrawady River and Bal Lel River.

4.2.2. Geology

The Ayeyarwady Delta is part of the Tertiary Inner Burman Basin, which runs from the Gulf of Martaban north to the Himalayas. The Inner Burman Basin formed along the eastern margin of the Indian tectonic plate as it moved northwards towards Eurasia to produce the Himalayan mountains and Tibetan Plateau. Bender (1983) describes two sub-basins in the area as Prome (Pyay) embayment continued southwards by the Irrawaddy Delta Basin, hereafter referred to as a single Ayeyarwady Delta area.

This basin is constrained in the east and west by ranges formed of pre-Upper Miocene sedimentary rocks that have undergone regionally varying tectonic deformation at various periods, with dominant structural deformations caused by tangential compression and block-faulting (Bender, 1983). The central basin increases in width from 25 km in Pyay (Prome) Region up to 150 km between Pathein and Yangon.

The topography is very flat, with an altitude ranging from 35 m near Pyay, down to sea-level, 350 km south. The plain is composed of recent and Quaternary (Holocene; 2.5 My) fluviatile deposits including sands, gravels, and clays, underlain by a very important sequence of continental deposits (referred to as Irrawaddy Fm) of a thickness estimated between 2,740 m and 3,050 m.

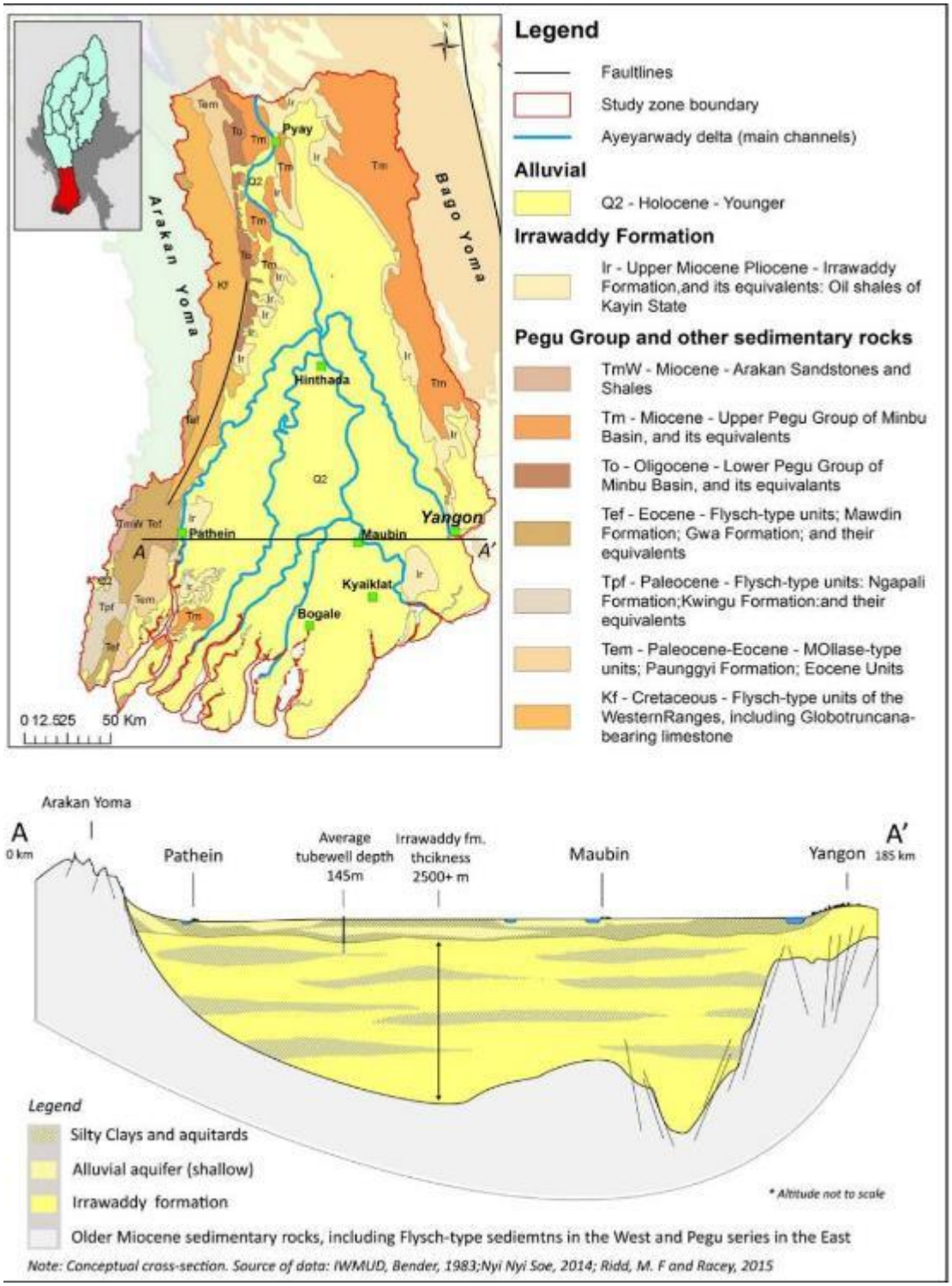


Figure 4-1 Hydro-geological map and conceptual cross-section of the Irrawaddy Delta Region

4.2.1. **Salinity**

Salinity caused by sea water intrusion is an important issue in the Ayeyarwady Delta and is common to several deltas in the world (Declares, 2017). Salty and brackish water is found in the channels of the delta under tidal influence but also in the groundwater systems. Catastrophic events such as Cyclone Nargis also cause sea water to flood and then infiltrate through the soil, contaminating

shallow groundwater resources in these cases, deep tube wells (>60 m) are likely less affected by changes related to surface water events.

Consequently, wells located in the south of the delta are more affected than those in the upper area. In some locations, populations have to rely exclusively on rainwater harvesting, or shallow lenses of freshwater locally found above brackish groundwater. In Pathein, salty water is frequent, and in Kyaiklat, there is no drilling as salty water is certain. Field visits measured another set of 29 locations in situ. Comparison of the salinity intrusion line between EC measured on site, field observations, and discussions with IWUMD staff in the Pathein office and local drillers, allows mapping of the best estimate of current salinity intrusion line. Interestingly, although most areas are salty in the southern delta, freshwater is found at depth in some locations, near the shore, south of Bogale Town. Drillers reported that in some locations they would first hit salty/brackish water (60 to 120 m) and then, below clay layers of variable thickness, fresh water

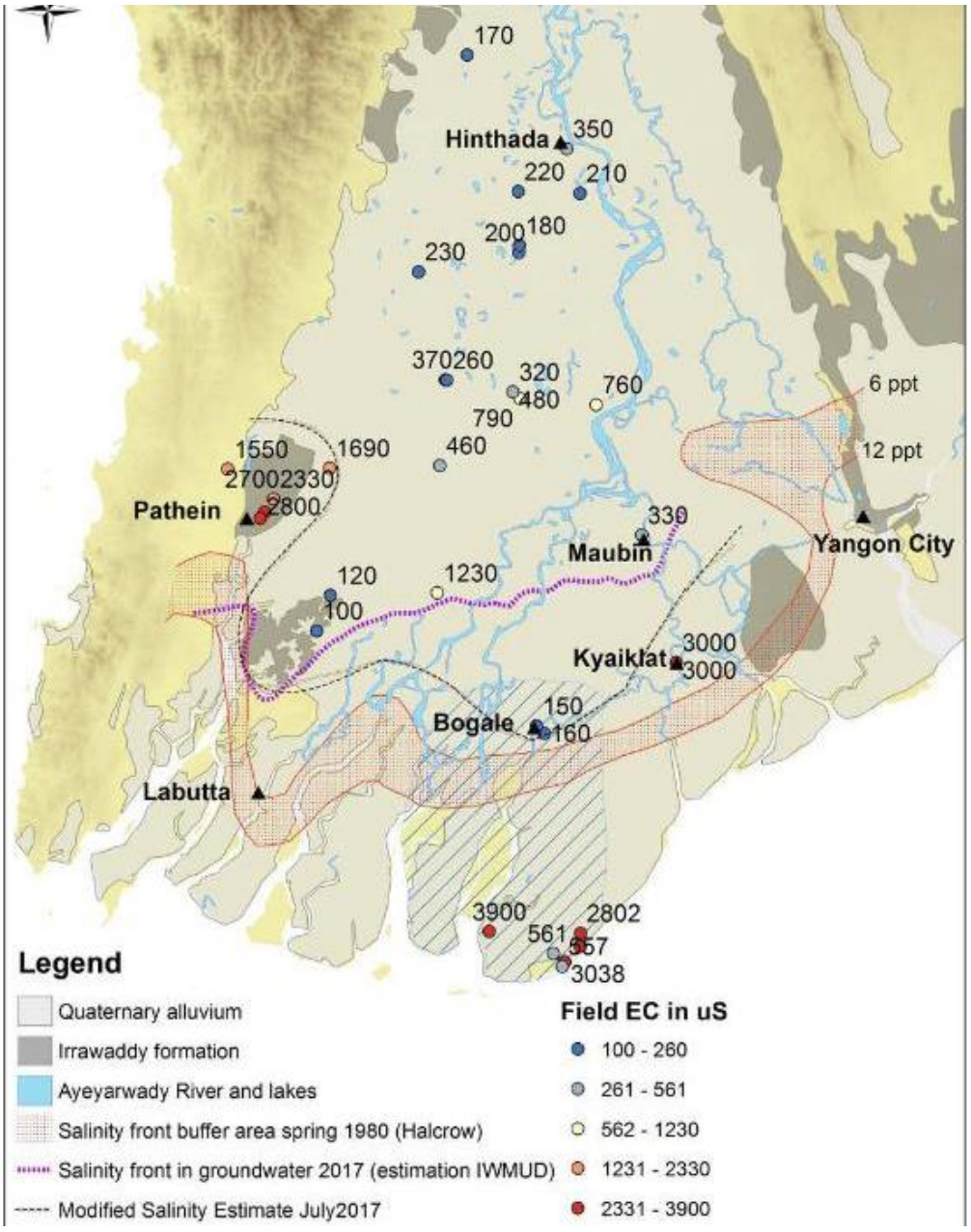


Figure 4-2 Geological Map of the Nyaungdon Township

4.2.2. **Hydrogeology**

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

Groundwater: The Delta GWZ includes the catchment and floodplain of the Ayeyarwady south of Kamma Town (about 30km north of Pyay). This is the point where the Alluvium of the Dry Zone terminates against the 20° N Uplift Area, which effectively closes the groundwater basins of the Dry Zone to the north. This delineation of the delta differs slightly from that used in defining the HEZs, in which the delta is considered to begin where the first distributary channels emerge from the mainstream, about 50 km upstream of Hinthada. The delta covers an area of 54,700 km2. It is bounded by hills of the Rakhine Yoma in the west and the Pegu (Bago) Yoma in the east. Below Hinthada, a broad delta opens out, with a maze of distributary channels. As defined for the AIRBM, the delta includes Yangon City and the right bank of the Yangon River. The delta divides into three zones: the tidal coastal front (including extensive mangroves); a brackish estuarine zone; and a freshwater floodplain. These zones shift with seasons and tides, with seasonal intrusion of sea water in the dry season. Paddy rice is cultivated across much of the delta, with varying degrees of irrigation and water management. The monsoon crop is dominantly rainfed, but requires protection from saline intrusion through embankments, sluice gates, and drainage systems. Dry season cropping draws on irrigation from canals and from groundwater.

The delta is densely settled with a total population of 15.02 million, including about 5.2 million in Yangon City. Administratively it lies mostly within the Ayeyarwady and Yangon regions, and includes a portion of Bago Region in the east. The climate is strongly monsoonal, with distinct wet and dry seasons. Total annual rainfall averages 2,240 mm, ranging from around one meter in the northern extent, to more than 3,000 mm in the far southwest. Like the Dry Zone, the lower Ayeyarwady Delta is expected to have high groundwater potential area. With high population density, extensive agricultural land and increasing industrial development, it is likely that groundwater will be increasingly important in future.

4.2.3. **Climate and Meteorology**

The climate condition of Nyaungdon Township is the hot and moisture season of area in which the project lies starts in December and ends in March. The raining season starts in June and ends in September and the cold season follow with the cooler, drier months of October to January. The highest temperature range is 45°C and low range 38°C reference from Township Meteorology data, Regional Data of Nyaungdon Township. 2013 to 2017 Yearly data of rainfall and temperature is presented in Table 4-1.

Table 4-1 Annual rainfall and temperature

Year	Rainfall		Temperature	
	Raining day	**Rainfall value (Inches)**	**Summer season Max (°C)**	**Winter season Min (°C)**
2017	117	89.34	35	18
2018	109	96.41	37	18
2019	104	81.11	39	17
2020	95	55.09	39	14

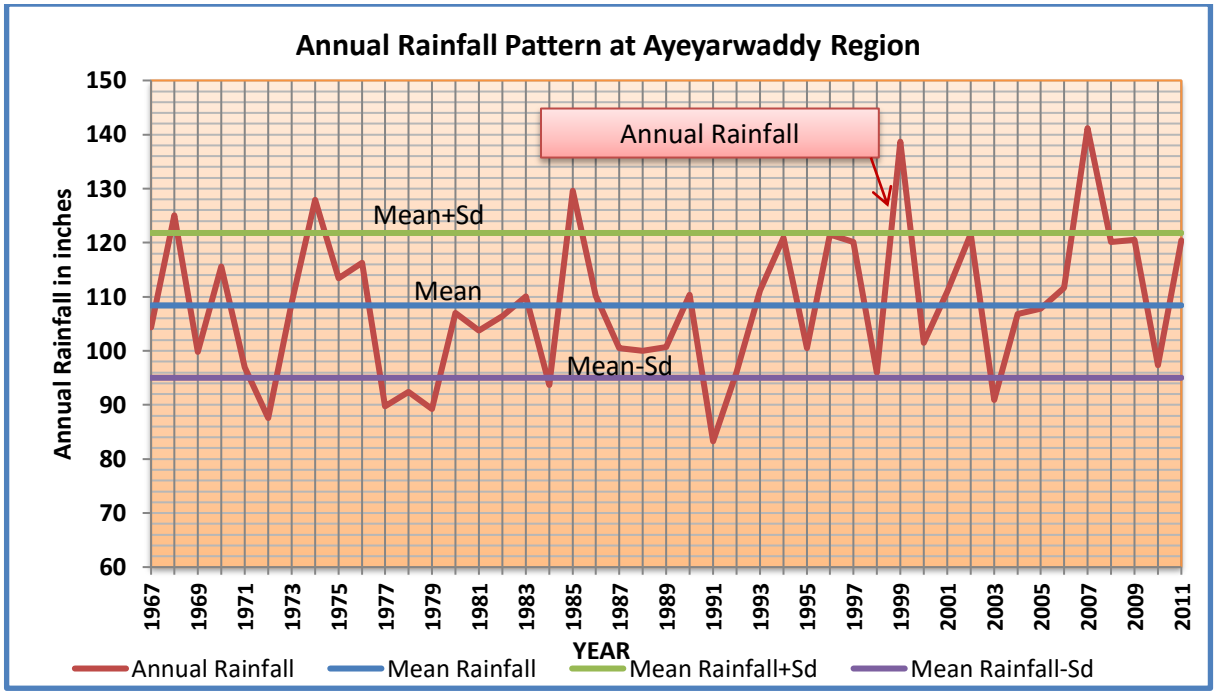


Figure 4-3 Annual Rainfall Pattern at Ayeyarwady

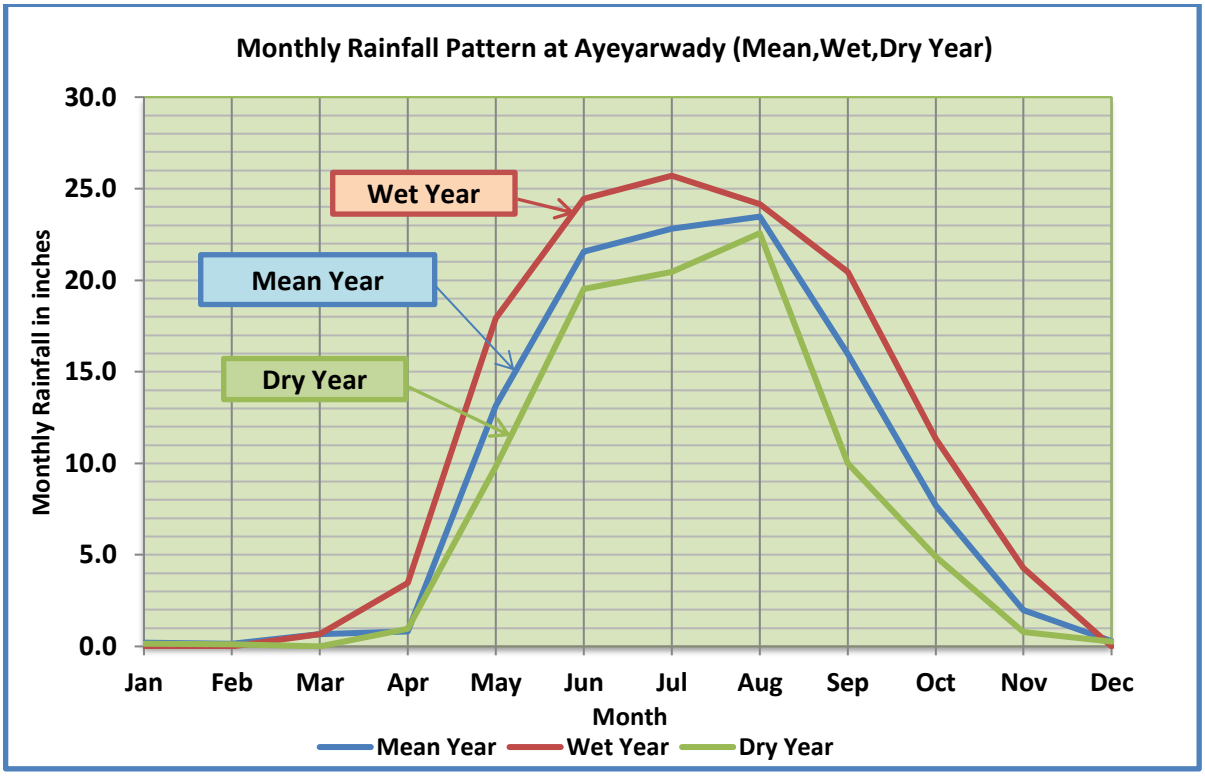


Figure 4-4 Monthly Rainfall Pattern at Ayeyarwady

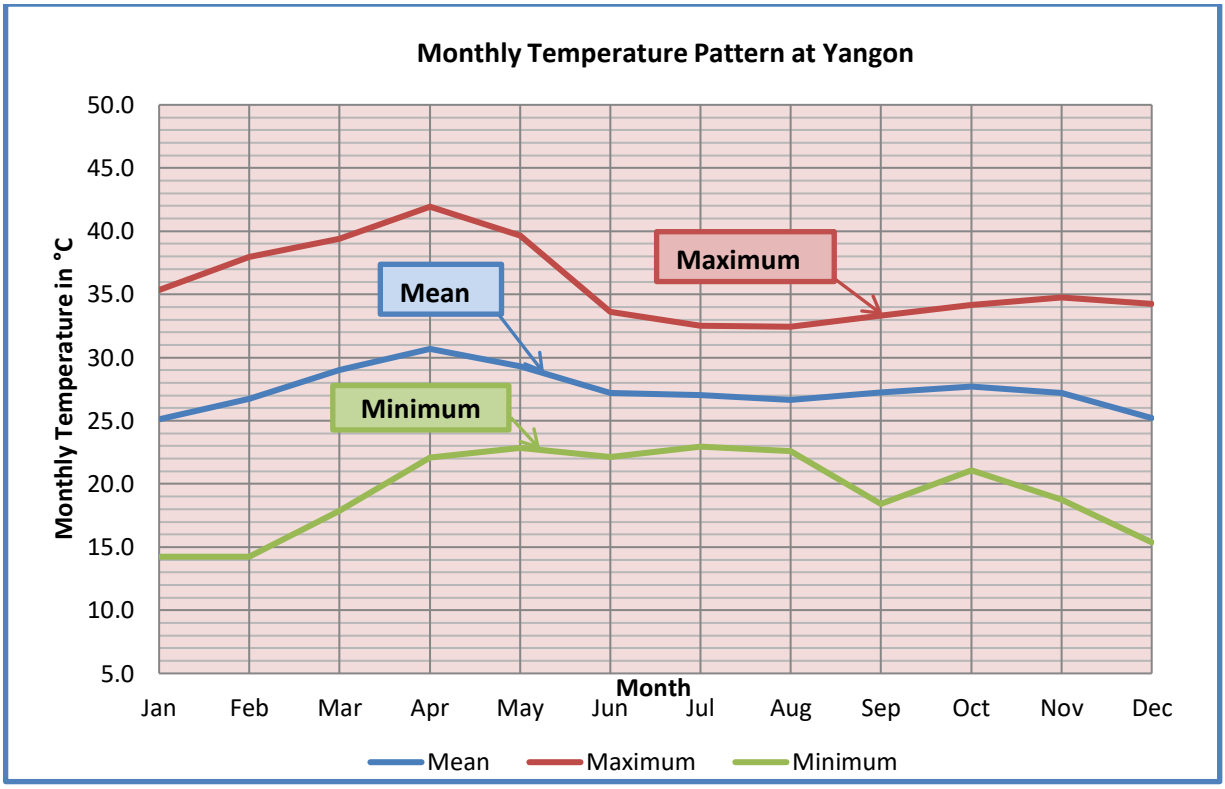


Figure 4-5 Monthly Temperature Pattern in Ayeyarwady

Table 4-2 Monthly Wind Speed at Yangon in kmile /hr

Wind Speed	Dry Season			Pre-Monsoon		Monsoon				Post Monsoon		Winter	Annual
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mean	4.3	4.5	4.8	5.4	5.5	5.3	5.2	5.6	4.7	4.8	5.2	5.2	5.0
Max	8.1	7.4	10.3	7.6	10.3	8.7	8.5	13.4	8.7	9.7	9.3	9.2	9.3
Min	2.6	2.3	1.0	3.2	2.7	2.7	2.3	3.5	2.9	1.9	1.8	3.7	2.5
Monthly Wind Speed at Yangon in mph (1mph = 1.61 kmph)													
Wind Speed	**Dry Season**			**Pre-Monsoon**		**Monsoon**				**Post Monsoon**		**Winter**	**Annual**
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Mean	2.7	2.8	3.0	3.4	3.4	3.3	3.2	3.5	2.9	3.0	3.2	3.3	3.1
Max	5.0	4.60	6.40	4.7	6.40	5.4	5.3	8.30	5.40	6.00	5.80	5.70	5.8
Min	1.6	1.40	0.60	2.0	1.70	1.7	1.4	2.20	1.80	1.20	1.10	2.30	1.6

Table 4-3 Monthly Relative Humidity at Yangon in %

Relative Humidity	Dry Season			Pre-Monsoon		Monsoon				Post Monsoon		Winter	Annual
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mean	60	57	61	62	74	88	89	89	85	80	72	65	73
Max	67	61	67	66	82	91	93	93	88	85	82	73	79
Min	55	51	54	58	63	83	85	83	81	77	66	60	68

4.3. BASELINE ENVIRONMENTAL MONITORING

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

4.3.1. Air Quality

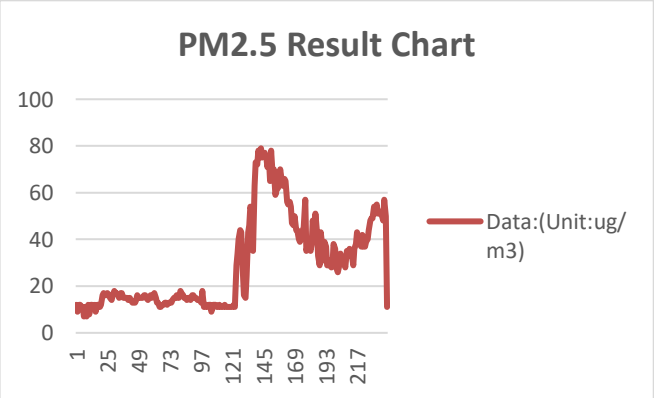
To determine the existing baseline ambient air quality status within the project site on 14, January, 2022, 24-hours of working period air pollutants level, which include dust (PM_{10} and $PM_{2.5}$) and gases (CO, CO_2, SO_2, NO_2) were measured at the selected site using the OCEANUS AQM-09 air monitoring station. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission) Guideline. The measurement location point is situated at North Latitude 16°58'58.65"N and East Longitude 95°41'44.17"E.

It was observed that the air quality of NO_2, O_3, CO, SO_2 concentration levels and particulate matters (PM_{10} and $PM_{2.5}$) are within the limit of National Environmental Quality (Emission) Guideline.[4]

Table 4-4 Observed Air Quality Results

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM_{10}	32.9	50	$\mu g/m^3$	NEQG	24 hrs
$PM_{2.5}$	25	25	$\mu g/m^3$	NEQG	24 hrs
SO_2	276	500	$\mu g/m^3$	NEQG	10 minutes
NO_2	21.3	200	$\mu g/m^3$	NEQG	1 hour
CO	0.3	10	$\mu g/m^3$	NEQG	8 hrs
O_3	98	100	$\mu g/m^3$	NEQG	8 hrs

NEQG = National Environmental Quality (Emission) Guideline



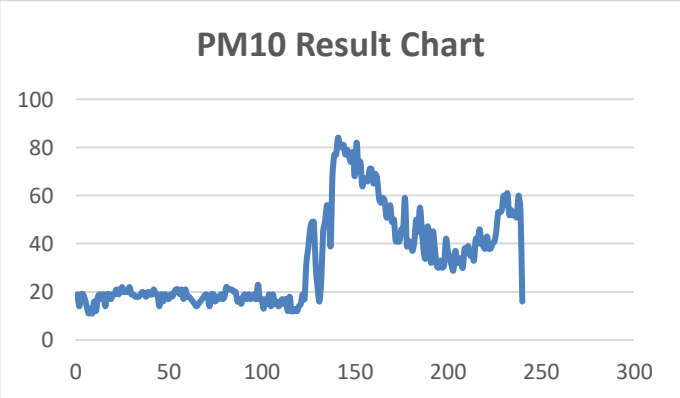


Figure 4-6 Air Quality Measurement Photos

4.3.2. **Noise**

The Noise level was measured by using Digital Sound Level Meter for working hours on 14 January 2022. The average noise level in the project site area is presented in Table 4-5 compared with NEQ guideline. However, according to the Noise source monitoring at construction site area of noise level is within the acceptable level of National Environmental Quality (Emission) Guideline. [4]

Table 4-5 Noise Level Measurement Result

Date and Time	Location	GPS value	Result value	NEQ Guideline
14.1.2022-15.1.2022 (11:00 am to 11:00 am)	Construction Area	16°58'58.78"N and 95°41'44.53"E	53.22 dBA	70 dBA

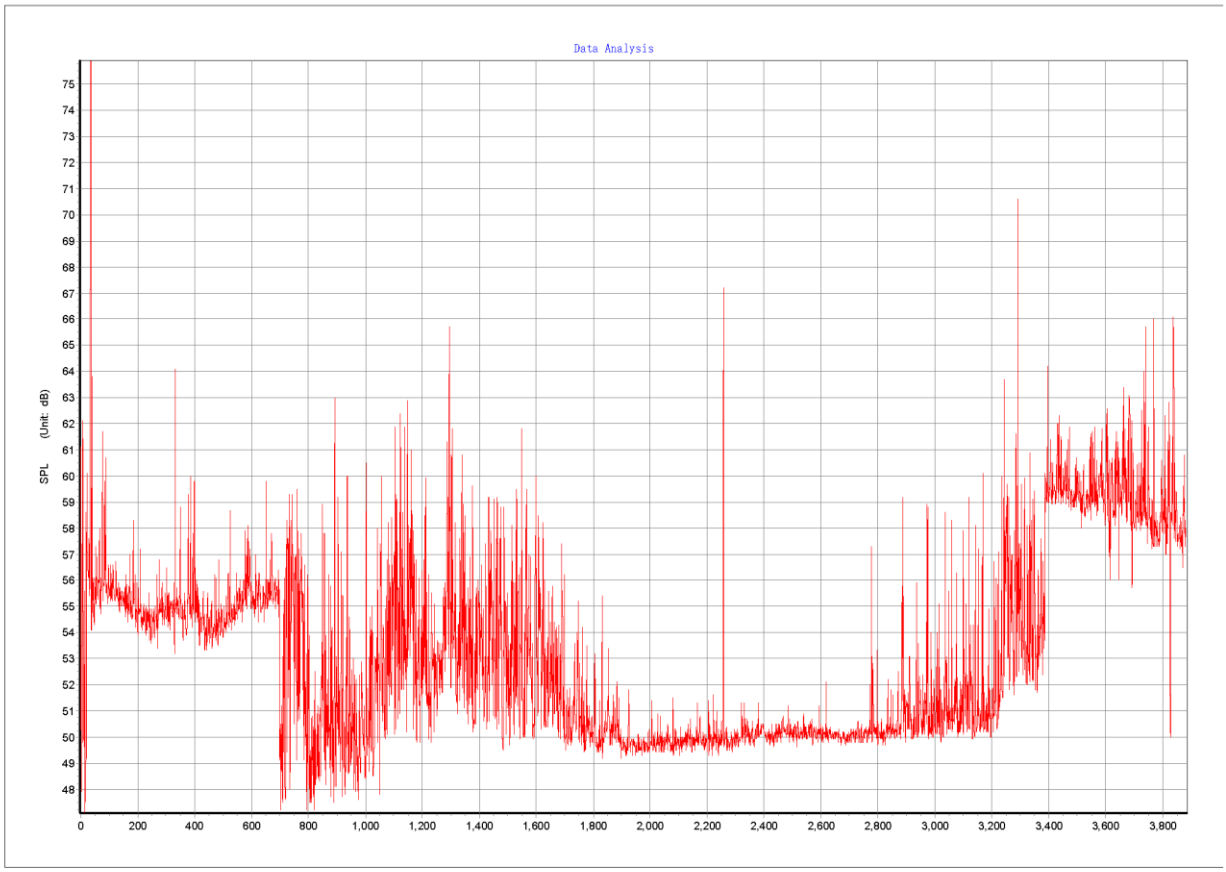


Figure 4-7 Noise Level Result Graph

Figure 4-8 Sound level measurement photo

However, found to be the Noise source monitoring at the project site overall level of noise in the workshop area is acceptable when compared with National Environmental Quality (Emission) Guideline. Therefore, no obvious influence can be caused occupational health and safety of employees during operation. Moreover, Personal Protective Equipment (PPE) to decrease adverse impact of noise will be provided for employees when necessary.

4.3.3. Surface Water Quality

The baseline data on surface water quality was collected in 16 January, 2022 with respect to WHO Guidelines. Tested water standard and laboratory analysis results can be seen in (**Appendix)** for surface water. The water quality of the nearest water source is Pun Hlaing Yay Htain Tadar Creek, 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 of surrounding environments. Analyzed results of surface water result compared with WHO guideline and water sample tested at ISO TECH Laboratory.

Table 4-6 Sample ground water collected point

Water Parameter	GPS Value	Location
Surface Water	16°59'0.65"N and 95°41'44.62"E	At the project area

Figure 4-9 Air, Sound Level and Surface water surveyed points

4.4. BIOLOGICAL COMPONENT

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

4.5. SOCIO-ECONOMIC COMPONENT

4.5.1. Population

Trillion Pleasure Industrial Co., Ltd. is located across Nyaungdon Township in Ayeyarwady Region. In 2020, the population of Nyaungdon Township is about 230,772 peoples as present in Table 4-7.

Table 4-7 Population of Males and Females at Nyaungdon Township (2020)

Item	Over 18 year			Under 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	2815	2748	5563	9370	11094	20464	12185	13842	26027
Rural	30080	29920	60000	70197	74548	144745	10277	104468	204745
Total	32895	32668	65563	79567	85642	165209	112462	118310	230772

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

4.5.2. Religion

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

Table 4-8 Religion Nyaungdon Township (2020)

Township	Buddhist	Christian	Hindu	Muslim	Total
Nyaungdon	223921	4499	183	2100	230772

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

4.5.3. Local Economy

Nyaungdon Township is in Ayeyarwady Region which is an economically important township. Nyaungdon Township has engaged in agriculturally based in the region. Nyaungdon township is located at the intersection of highway and waterways, It is a good transportation. The main products of the Nyaungdon Township are rice, beans, seasonal vegetables, fishes, fish paste, dried fish.

4.5.4. Public Infrastructure and Access

4.5.4.1. Communication and Transportation

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

Table 4-9 Transportation Route

Water Routes Name	Township		Nautical Miles
Nyaungdon - Pantanaw	From Nyaungdon	To Pantanaw	27
Nyaungdon - Danuphyu	From Nyaungdon	To Danuphyu	39
Nyaungdon - Kyain Pin Sal	From Nyaungdon	To Kyain Pin Sal	12

Water Routes Name	Township		Nautical Miles
Nyaungdon - Chaung Kyi	From Nyaungdon	To Chaung Kyi	21
Nyaungdon - Than Kyoe	From Nyaungdon	To Than Kyoe	10
Nyaungdon - Tha byu yay lal	From Nyaungdon	To Tha byu yay lal	5
Nyaungdon - Thapyay Chaung	From Nyaungdon	To Thapyay Chaung	7
Nyaungdon - Ywar Thit	From Nyaungdon	To Ywar Thit	6
Nyaungdon - Koon Thee Pin	From Nyaungdon	To Koon Thee Pin	4
Nyaungdon - Par Hlae	From Nyaungdon	To Par Hlae	10
Nyaungdon - Alal Chaung	From Nyaungdon	To Alal Chaung	5
Nyaungdon - Byaw Thalan	From Nyaungdon	To Byaw Thalan	8
Nyaungdon - Koke Ki Wa	From Nyaungdon	To Koke Ki Wa	12
Nyaungdon - Ouk Sal	From Nyaungdon	To Ouk Sal	13
Nyaungdon - Pay Si	From Nyaungdon	To Pay Si	12
Nyaungdon - Gone Min Htake	From Nyaungdon	To Gone Min Htake	9

No.	Railways	Township		Miles
1.	Yangon – Pathein	Aywae	Kyain Chaung	32/6

No.	Township	Bus Name	Transportation path	Type of Bus	No. of Bus
1	Nyaungdon	Baho Gate	Nyaungdon-Yangon	Express	8
2		Ranger Gate	Nyaungdon-Yangon	Express	7
3		Nyein Chan Aung	Nyaungdon-Yangon	Town Ace	7

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

4.5.4.2. Electricity

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

4.5.4.3. Education

Location of major schools were situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S) and basic education high school (B.E.H.S) in Nyaungdon Township. The name and the located village tract/ ward of schools are described in. [1]

Table 4-10 List of major school in Nyaungdon Township

No.	Name of School	Location
1.	BEHS (1)	N0 (2) ward
2.	BEHS (2)	N0 (3) ward
3.	BEHS (Sar ma louk)	Sar ma louk
4.	BEHS (Nat pay)	Nat pay
5.	BEHS (Chaung Gyi)	Chaung Gyi
6.	BEHS (Thapyay Chaung)	Thapyay Chaung
7.	BEHS (Mae Zali)	Mae Zali
8.	BEHS (Kyat Tu Yway)	Kyat Tu Yway Taung
9.	BEHS (Scaout)	Scaout Ywar Ma
10.	BEHS (Par Hlae Out Su)	Par Hlae Out Su
11.	BEHS (Nghat Pyaw Kyun)	Nghat Pyaw Kyun
12.	BEHS (Kyein Pin Sal)	Kyein Pin Sal
13.	BEHS (Branch) (Myo Ma)	No (7) Ward
14.	BEHS (Branch) (Thazin Yay Kyaw)	Thazin Yay Kyaw Village
15.	BEHS (Branch) (Yay Pyinn Chaung)	Yay Pyinn Chaung Village
16.	BEHS (Branch) (Tuu Chuang)	Tuu Chuang Village
17.	BEHS (Branch) (Ywar Thar Nyunt)	Ywar Thar Nyunt Village
18.	BEHS (Branch) (InnMa)	InnMa Village
19.	BEHS (Branch) (Paysi)	Pay Si Village
20.	BEHS (Branch) (Kyaung Shar Kone)	Warr Taw Soon Village
21.	BEMS (Gan Chaung)	Gan Chaung Village
22.	BEMS (Pae Yone Sake)	Pae Yone Sake Village
23.	BEMS (Shwe Hintha Kyoon)	Shwe Hintha Kyoon Village
24.	BEMS (Phoe Khone Su)	Phoe Khone Su Village
25.	BEMS (Tapay Kalar)	Tapay Kalar Village
26.	BEMS (Branch) (Ywar Thar Aye)	Ywar Thar Aye Village
27.	BEMS (Branch) (Chaung Ma Gyi)	Chaung Ma Gyi Village
28.	BEMS (Branch) (Ywar Thit)	Ywar Thit
29.	BEMS (Branch) (Ashwae Wae Dounk)	Ashwae Village
30.	BEMS (Branch) (Wae Ngal)	Wae Ngal Village
31.	BEMS (Branch) (Bawa Thit)	Tazin Yay Kyaw
32.	BEMS (Branch) (Gazan Lamai)	Gazan Lamai Village

No.	Name of School	Location
33.	BEMS (Branch) (Outo Thapyay Chaung)	Thapyay Chaung
34.	BEMS (Branch) (Nat Pay)	Nat Pay Village
35.	BEMS (Branch) (Htaw Ka Loe)	Htaw Ka Loe Village
36.	BEMS (Branch) (Baw Di)	Baw Di Village
37.	BEMS (Branch) (Thaung Tann Anyar Su)	Thaung Tann Anyar Su
38.	Post-BEPS (War Taw)	War Taw Village
39.	Post-BEPS (Bawa Thit)	Gazan Lamai Village
40.	Post-BEPS (Ywar Thit)	Ywar Thit Village
41.	Post-BEPS (Yawar TharGyi)	Ywar Thargyi Village
42.	Post-BEPS (Thet Yinn Chaung)	Thet Yinn Chaung Village
43.	Post-BEPS (Kyouk Tine Sar Phyu Su)	Kyouk Tine Sar Phyu Su Village
44.	Post-BEPS (Byaw Thalann)	Shwe Kyi Kone Village
45.	Post-BEPS (Myay Nu)	No.(9) Ward
46.	Post-BEPS (Shwe Gu)	Shwe Gu Village
47.	Post-BEPS (Thaung Su)	Thaung Su Village
48.	Post-BEPS (Outo Thapyay)	Outo Thapyay Village
49.	Post-BEPS (Alal Sal)	Alal Sal Village
50.	Post-BEPS (Damha Thukha Kyun)	Dama Thukha Kyun Village
51.	Post-BEPS (Zephyu Kyun)	Zephyu Kyun Village
52.	Post-BEPS (Taloke Htaw Kone)	Taloke Htaw Kone Village
53.	Post-BEPS (Kyouk Tine)	Kyouk Tine Village
54.	Post-BEPS (Aung Bawga)	Aung Bawga Village

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

4.5.4.4. Health Status

The diseases of high prevalence reported in 2020 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2020 of Nyaungdon Township, no accidental work injuries reported to the township hospital in 2019. The common diseases are shown in Table 4-11.

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

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

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

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

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

4.6. CULTURAL AND VISUAL COMPONENTS

Nyaungdon 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. POTENTIAL ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

5.1. METHODOLOGY FOR THE ASSESSMENTS

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

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

Table 5-1 Impact assessment parameters and its scale

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

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

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

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

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

5.2. IMPACT IDENTIFICATION

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

5.2.1. **Positive Impact**

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

5.2.2. **Negative Impact**

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

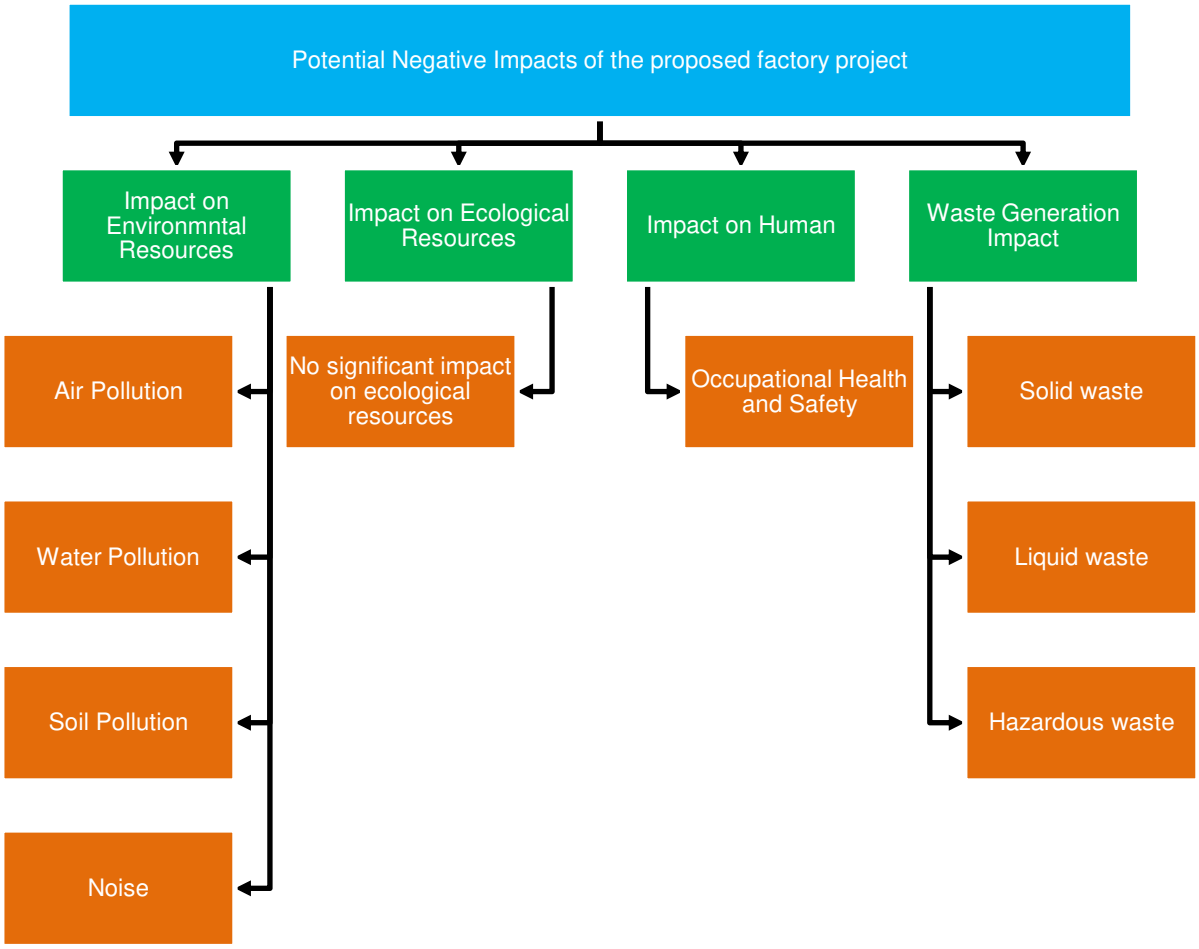


Figure 5-1 Potential Negative Impact Affect from Proposed Project

5.3. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS

The project activities, their impacts and significance of impact are provided in following Table.

Table 5-2 Evaluation and Perdition of Significant Impacts and mitigation measure for Construction Phase

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air	• Air quality can change due to dust and particulate matters in construction works • Sulphur dioxide gas emission form burning of fuel in construction work	3	4	2	3	27	Low	• Emissions of particulate matters and carbon dioxide gases into the air	• Spray water twice a day around construction site • Install shading net about 2m above temporary fence of construction area • To control air pollution like SO_2 gas in ambient air, generators have to check and maintain regularly.
Water	• Changes in water quality near water body because of soil excavation work • Water from construction work could infiltrate into the groundwater	2	4	2	3	24	Low	• Water from Construction activities can flow through the nearest water body	• Monitoring of nearest water body quality once per six months along the construction phase

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Soil	• Accidental Spillage of Oil used by vehicles for construction work	2	4	2	3	24	low	• The soil contamination of the factory compound area is neglect able due to the oil spillage at this area is insignificant.	• No Mitigation Measure
Noise and Vibration	• Noise level will be significant because of heavy machineries and construction vehicles	2	4	2	3	24	Low	• According to the monitoring of noise level within the construction area, the noise level is within the guideline and acceptable. • But, noise will disturb the construction workers due to heavy machinery movements and vehicles	• To facilities PPE like earmuffs and earpieces for construction workers
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the factory construction	1	4	1	1	6	Very low	• Not Significant Impact on Ecological Resources	• No Mitigation Measure
Impact on Human									
Fire	• Poor electrical	3	4	2	4	36	Moderate	• Serious damage to	• To provide fire extinguishers, fire

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	installations temporarily • Using destroyed wires in electricity supply							property and even injury and death	hose reels and fire hydrants on the walls of the factory for fire emergency cases. • Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. • The emergency fire alarms are installed at the factory for alerting the workers in case of fire.
Occupational Safety	• Accidental cases can cause construction workers by construction activities	3	4	1	4	32	Moderate	• Accident in workplace (physical injuries or even death) can occur during operation.	• Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. • To prevent electric shock hazards, electrical maintenance staffs (handyman) is to be assigned to do regular inspections and take preventive measures.
Waste Generation Impact									
Solid Waste	• Domestic wastes form the construction site workers	2	4	2	3	24	Low	• Surrounding environmental pollution	• Providing garbage bin for domestic wastes • Disposal of construction waste to the disposal site weekly

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	• Residue wastes from construction materials								
Liquid Waste	• Septic system and sewage from construction area	2	4	2	2	16	Low	• Sewage from temporary septic system will contaminate soil, surface water, ground water	• Regular inspection and cleaning, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Hazardous Waste	• Engine oil, diesel, fuel and lubricant can discharge form vehicles and machines	2	4	1	2	14	Very Low	• Reduce the risk of contamination from fuels, oils and hazardous wastes	• Proper inspection and maintenance in storage of hazardous waste.

Table 5-3 Evaluation and Perdition of Significant Impacts and mitigation measure for Operation Phase

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air	• Emission of smoke from steam boiler (Stream boiler) • Emission from emergency diesel	3	4	2	4	36	Moderate	• Air pollution in atmosphere. • Inhaling them can increase the chance you'll have health	• To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. • The factory uses chimney for

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	generator and vehicle movement							problems. • People with heart or lung disease, older adults and children are at greater risk from air pollution.	generator and steam boiler through which the flue gases are emitted for reducing the impact of stack emission on environment. • Ensuring vehicles, compressor and generator are well maintained.
Water	• Production process	2	4	2	1	8	Very Low	• The factory not generated wastewater from production process on CMP basic	• No Mitigation measures
	• Boiler blow down water	2	4	2	2	16	Low	• The factory uses about 0.5 m^3 per hour • Very little mount of blow down water (250 gal / day).	• Minimize boiler blow down water consistent with maintaining acceptably • After cooling the blow down water to discharge the industrial drainage and measure the temperature of it.
Soil	• Engine oil leaks, spills at diesel storage and during fuel refueling.	1	4	1	1	6	Insignificant	• The factory compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant.	• No Mitigation Measure
Noise and Vibration	• Generating noise from the production	2	4	2	3	24	Low	• The factory not operate heavy	• To control noise from sewing line and machinery movement, earmuffs and earpieces should be

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	machinery							machinery • the major noise source of CMP basic operation activities such as cutting, stitching/finishing and packaging by respective machines. • The boiler room and generator are separated as an another. • There is insignificant impact on surrounding environment.	provided for employees.
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the garment factory	1	4	1	1	6	Insignificant	• Not Significant Impact on Ecological Resources	• No Mitigation Measure
Impact on Human									
Fire	• Poor electrical installations • Waste disposed area raw materials and chemical	3	5	2	4	40	Moderate	• Serious damage to property and even injury and death	• To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. • Regular inspection for existing

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	storage								firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. • The emergency fire alarms are installed at the factory for alerting the workers in case of fire. • The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupational Safety	• Accidental cases cause by operating machines. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate	• Accident in workplace (physical injuries or even death) can occur during operation.	• First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. • According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. • Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. • To prevent electric shock hazards, electrical maintenance

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									staff (handyman) is to be assigned to do regular inspections and take preventive measures.
Health	• Influx of people • Noise from the generating of the emergency generators	2	4	1	2	14	Very Low	• Change in demographic structure, new diseases form immigrant workers • To cause a range of health problems ranging from stress, poor concentration, productivity losses in the workplace, and communication difficulties and fatigue from lack of sleep, to more serious issues	• Manage the drainage systems of the factory to prevent health risk of the workers. • The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.
Waste Generation Impact									
Solid Waste	• Residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	3	4	1	4	32	Moderate	• Surrounding environmental pollution and soil contamination	• Provides separate garbage bins at each building. • All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area • Final wastes should be disposed by connecting with Nyaungdon

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									township municipal
Liquid Waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	2	16	Low	• Contamination of soil, surface water, ground water	• Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Hazardous Waste	• Used oil and lubricant discharged from the maintenance of vehicles and machines.	2	4	1	2	14	Very Low	• Reduce the risk of contamination from fuels, oils and hazardous wastes • Response effectively to incident and accident	• Proper inspection and maintenance in storage of hazardous waste. • Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements. • The empty chemical containers will hand over to suppliers for recycle or appropriate disposal • The hazardous wastes are disposed by connecting with Nyaungdon Township municipal)

Table 5-4 Evaluation and Perdition of Significant Impacts and mitigation measure for Decommissioning Phase

Categories	Source of Impact	Significant of Potential Impacts	Impact Significance	Reason	Mitigation Measure

		M	D	E	P	SP			
Impact on Environmental Resource									
Air	• Dust and particulate matters from decommissioning of construction materials	1	1	1	2	6	Very Low	• Dust and particulate matters can only release within decommissioning time	• No Mitigation measures
Water	• No impact on surface water and ground water	2	1	2	1	5	Very Low	• The factory not generated wastewater from production process on CMP basic	• No Mitigation measures
Soil	• No impact on soil at the decommissioning phase	1	1	1	1	3	Very Low	• No soil impact because of garment factory	• No Mitigation Measure
Noise and Vibration	• No noise and vibration at the decommissioning phase	2	4	2	1	8	Very Low	• The factory not operate heavy machinery • the major noise source of CMP basic operation activities such as cutting, stitching/finishing and packaging by respective machines. • The boiler room and generator are separated as an another.	• No Mitigation Measure

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								• There is insignificant impact on surrounding environment.	
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the factory demolishing activity	1	4	1	1	6	Insignificant	• Not Significant Impact on Ecological Resources	• No Mitigation Measure
Impact on Human									
Occupational Safety	• Accidental cases can cause by decommissioning activities	1	1	1	3	9	Very Low	• Accident in workplace (physical injuries or even death) can occur	• Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for workers
Waste Generation Impact									
Solid Waste	• Demolished debris such as bricks, concrete materials	3	4	1	4	32	Moderate	• Surrounding environmental pollution and soil contamination	• Provides separate garbage bins at each building. • All of the solid wastes will be collected separately in garbage based on their types disposed by connecting with Nyaungdon Township municipal.
Liquid Waste	• Residual septic system and sewage.	2	4	2	2	16	Low	• Old septic tank will leave	• No mitigation measures

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Hazardous Waste	• Residual empty fuel container and oil from operation	2	4	1	2	14	Very Low	• Reduce the risk of contamination from fuels, oils	• The empty chemical containers will hand over to suppliers for recycle or appropriate disposal • The hazardous wastes are transported by specially licensed carriers and disposed by connecting with Nyaungdon municipal.

5.4. IMPACT AND MITIGATION MEASURE

Impact assessment on environmental, social and economic aspect is based on analysis of the magnitudes of potential impacts and significant potential impacts of the project. The assessment on both of positive and negative impacts was carried out in all three phases. Evaluation of significant of impact considered from significant point of evaluation as described in above Table 5-2, Table 5-3 and Table 5-4.

5.5. IMPACT ON ENVIRONMENTAL RESOURCE

5.5.1. Air Quality Impact

During the construction phase, air quality can change due to dust and particulate matters as potential environmental impact and SO_2 gas emits from burning of fuel in construction works but it is expected to be non-significant because the construction phase is a short-term affect. So, we are not assessed potential environmental impact during construction phase.

During the operation phase, there will be emission of smoke boiler (Stream boiler). Dust particles, NO_2 and SO_2 would be emitted from the activities of loading, unloading and transportation of the raw materials and final product. Various activities as cooking from kitchen, using air conditioners in office building, storage of raw materials, vehicles movement and operating diesel generators would also be a factor slightly affecting to air quality. However, these anticipated impacts are in manageable limits to control the air pollution with relevant mitigation measures and the proposed factory will be managed by using their HSE guidelines.

During the decommissioning phase, dust and particulate matters can emit from destroyed construction materials and this is assumed to be no significant impact at this phase.

5.5.2. Mitigation Measures for Air Quality Impact

Dust and particulate matters release from the construction work thus spraying water should be done on the construction site. Should install shading net about 2m above temporary fence of construction area. The significant sources of gas emission from emergency generator and transportation vehicles will be mitigated by using maintaining system in the construction area.

During operation, to control air pollution from the boiler emission, the vehicles, generators, and machineries must check and maintain regularly. The factory should use chimney with cyclone system for generator and boiler through which the flue gases are emitted for reducing the impact of stack emission on environment.

5.5.3. Air Quality Index

The United States Environmental Protection Agency (EPA) has developed an Air Quality Index that is used to report air quality. This AQI is divided into six categories indicating increasing levels of health concern. An AQI value over 300 represents hazardous air quality and below 50 the air quality is good.

AQI Values	Level of Health Concern	Colour
0 to 50	Good	Green
51 to 100	Moderate	Yellow

AQI Values	Level of Health Concern	Colour
101 to 150	Unhealthy for sensitive group	Orange
151 to 200	Unhealthy	Red
2001 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

5.5.3.1. Computing the AQI

The air quality index is a piecewise linear function of the pollutant concentration. At the boundary between AQI categories, there is a discontinuous jump of one AQI unit. To convert from concentration to AQI this equation is used;

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}}(C - C_{low}) + I_{low}$$

Where;

I = the (Air Quality) Index
C = the pollutant concentration
C_{high} = the concentration breakpoint that is ≥ C
C_{low} = the concentration breakpoint that is ≤ C
I_{high} = the Index breakpoint corresponding to C_{high}
I_{low} = the index breakpoint corresponding to C_{low}

Items	O3	PM 2.5	PM 10	CO	SO_2	NO_2	AQI value	Level of health concern
	C_{low} - $C_{high\ (Avg)}$	C_{low} - $C_{high\ (Avg)}$	C_{low} - $C_{high\ (Avg)}$	C_{low} - $C_{high\ (Avg)}$	C_{low} - $C_{high\ (Avg)}$	C_{low} - $C_{high\ (Avg)}$	C_{low} - $C_{high\ (Avg)}$	
Monitoring Result (Point-1,2) (Hour)	3-500 (8-hr)	7-79 (8 hr)	11-87 (8 hr)	0.3-0.9 (8hr)	3-500 (8 hr)	11-46 (8 hr)	51-100	Yellow
Air Quality Index	77.3	66.18	65.74	51.16	77.8	65.44	51.16-77.8	Moderate

5.5.4. **Energy Consumption and Related CO_2 (GNG) emission**

Though main electricity source for the factory is the national grid line, sound-proof diesel generators will be set-up in case of electricity shortages. So, the standby generators will be used for both operation and administration appliances. The proposed project will use 1759 gallons per month of diesel for vehicles such as transportation vehicle and emergency use of a generator in the construction phase. The following table shows the amount of CO_2 emission coming from the combustion of fuels.

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

Table 5-5 Category of GHGs Assessment

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

Source: EBRD GHG Assessment Methodology, 2010

Table 5-6 CO2 Emission by the Uses of Fuel

No.	Type	Amount (Liter/year)	Equivalent CO_2 emission (Kilotons)	Status
1	Diesel for generator	96,000	0.096	**Negligible**

According to above conversion, the emission of CO_2 relative to the fuel consumed by the proposed project will not harmfully effect to the environment. However, the proposed factory will use a lot of electrical energy mainly for lighting, running of equipment, running of pumping systems for pumping water into the storage tank. Since electricity generation involves utilization of natural resources, excessive electricity consumption will strain the resource and negatively impact on their sustainability.

5.5.5. Impact of Noise

During the construction phase, significant impact on noise and vibration to surrounding environment must be generated from the movements of vehicles, operating the machinery, excavation activities and transportation of equipment and construction materials by heavy trucks.

During the operation phase, noise impact may be a significant impact for garment production sectors. The significant sources of noise impact activities are the operation of various machinery and equipment listed in for sewing line, cutting line and the emergency used of generator, vehicles, and automobile movements (short-term noise) will be noise impacts sources.

During the decommissioning phase, the heavy vehicles, machineries, and equipment used for decommissioning activities can affect the noise level and vibration of the area. But it can be assumed to be neglect able since it is short time activities.

5.5.5.1. Exposure of Noise

The Occupational Safety and Health Administration (OSHA) have recommended permissible noise exposure limit for construction workers, which is based on 90 dB (A) for 8 hours exposure a day with 5dB trading rates. The limits are mentioned in Table 5-7. According to OSHA, the maximum allowable noise level for workers is 90 dB (A) for 8 hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas, need to provide if actual noise level monitoring results are more than 90 dB (A) at the work site for working time hours for 8 hours.

Table 5-7 Permissible exposure of noise limits

Total Time of Exposure Per Day in Hours	Noise Level dB(A)

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

5.5.6. Mitigation Measures for Noise Impact

The proposed project is in BBB industrial zone and the potential impact on noise and vibration is not assessed and short-term affect must be caused because the construction period is temporary. PPE like earmuffs and earpieces should be given for construction workers. According to the monitoring result, the noise level is within the NEQEG guideline limit.

The following mitigation measures will be considered to reduce noise levels in the operation phase of the garment factory. Used of Generator should be housed in a suitable acoustic enclosure. The acoustic insulation should be designed to meet mandatory standards based on a 25-dB insertion loss.

I. Low noise equipment should be used where possible
II. All preventive measures such as regular operation and maintenance of pump motors, and compressor should be carried out and enclosures will be provided to abate noise levels at source
III. Noisy equipment should not be permitted during night hours as much as possible
IV. PPE like earmuffs and earpieces should be given for employees.

5.5.7. Impact on Water Quality

In the construction phase of Trillion Pleasure Industrial Co., Ltd, tube well is the main source of water for construction work. Daily water consumption is average 1.363 cubic meter. There will be wastewater from soil excavation from construction work that flow into public drain.

In operation phase, pollution sources are boiler blow down water, domestic wastewater, and kitchen water. Although this water will impact of surface water because of these actives, pollution rate is neglectable.

In decommission phase, no impact source is expected.

The effluent wastewater will generate from soil excavation that can be flow into the river. Water pollution may be caused, which has Total Solid (TS), Total Suspended Solid (TSS). Thus, effluents discharged into Pun Hlaing Drainage Canal, highly colored; contain a heavy sediment load including toxic metallic compounds, chemical, biologically oxidizable materials and large quantities of putrefying suspended matter. Tannery effluents, without any pretreatment are discharged indiscriminately into water bodies or open land, resulting in contamination of surface as well as sub-surface water. Large

pH fluctuations and the high BOD value, caused by tannery effluents, can kill all-natural life in an effected water-body.

5.5.8. Mitigation Measures for Water Contamination

In construction phase, according to the estimated water consumption for the whole factory is 1.363 cubic meter daily for the purpose of construction work. So, the appropriate water conservation plan should be implemented with commensurate with the magnitude and cost of water use. Nearest water body quality should be monitored once per six months along the construction period.

In operation period, boiler blow down water must be minimized to consistent with maintaining acceptable quality. Blow down water should be discharged from the factory drain to the public drainage after cooling. Temperature of low-down water flowing from the boiler should be measured.

No mitigation measure is needed in decommissioning phase.

5.5.9. Toilet Facilities

Currently temporary toilet facilities have provided for construction workers in the dormitory in construction area. In phase one, the number of squat toilets will be between 50 and 60.

5.5.10. Impact on Soil Quality

During the construction phase, the excavation works from the construction activities must be the source of impact on soil. The soil is compacted by the vehicles and the solid waste disposal improperly by the workers can affect the soil quality. Oil spillage from the vehicles could be also polluted to the soil.

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

During the decommissioning phase, transportation of decommissioning materials and transferred of heavy machinery may happen oil leakage and lubricants, and thus it can lead to impact on soil. Moreover, it is a short time activity thus **no impact source will leave**.

5.6. IMPACT ON ECOLOGICAL RESOURCE

The proposed project is located TaZin Yay Kyaw Village Tract, Nyaungdon Township, Ayeyarwady region. The nearest water body is PunHlaing Yay Htain Tadar Creek which is about 50m away from the project. **Not Significant Impact on Ecological Resources.**

5.7. IMPACT ON HUMAN

5.7.1. Socio-economic Benefit

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

5.7.2. Occupational Health and Safety

During the construction phase, significant accidents, and injuries like electric shocks, falling from heights, chemical exposure, crushing injury, fire hazards can be occurred due to the construction activities including metal grinding and cutting, concrete work and welding the metals. Moreover, accidents and injuries to workers and local communities could be caused from heavy vehicles movement for the transport of construction materials and equipment. Small injuries due to slips, headache and sickness must be caused of the noise, air pollution and odor could also be affected to the workers and local people.

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

During the decommissioning phase, destroying activities can cause accidental case.

5.7.3. Mitigation Measures for Occupational Health and Safety

During the construction phase, significant accidents and injuries like electric shocks, falling from heights, chemical exposure, crushing injury, fire hazards can be occurred due to the construction activities including metal grinding and cutting, concrete work and welding the metals. Moreover, accidents and injuries to workers and local communities could be caused from heavy vehicles movement for the transport of construction materials and equipment. For the construction workers, the project will arrange clothing, helmets, and goggles, safety boots or shoes, gloves, overalls and protective aprons.

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

During the decommissioning phase, decommissioning activities can cause accidental injuries so personal protective equipment (PPE) should be provided.

5.7.4. Recommended Mitigation Measures for Occupational Health and Safety

- Consider the provision of personal protective equipment only after all measures for removing or controlling safety hazards have been provided reasonably impractical
- Ensure that sufficient personal protective equipment is provided and that they are readily available for every person who may need to use them.
- The management should ensure that all persons make full and proper use of the personal protective equipment provided

- Provide instruction and training in the proper use and care of any specific protective equipment where necessary
- Ensure that the personal protective equipment is in good condition. Report immediately any damage to the management for replacement. Always keep the personal protective equipment as clean as possible.

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

5.7.5. Material Storage guidelines

Storage practices to reflect the safety of workers are also developed in Trillion Pleasure Industrial Company Limited. All the shelves in the storage areas are secured, firmly placed and organized to prevent from any collisions that can affect the workers during working. Different materials will be stored separately by type and according to the designed layout.

5.7.6. Mitigation Measures for Fire Hazard

In construction phase, it should provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. The emergency fire alarms are installed at the factory for alerting the workers in case of fire.

In operation period, the emergency contact numbers of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases. The project proponent has plants to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. Fire extinguishers will be placed at various standby positions. Fire Drill Instructions and Evacuation Plan will be posted at every section of the factory.

No mitigation measure is needed in decommissioning phase.

5.8. IMPACT OF WASTE DISPOSAL

During the construction phase, the construction generates some domestic waste and residual irons. Domestic wastes are disposed by truck at the disposal site. Some iron waste from construction are collected within a place of project site. These recycled wastes are brought by the villagers near the project area.

In the operation phase, most activities of the garments factory will generate the relatively low level of waste. Solid waste from production sector will consists of process waste such as Industrial waste would be generated from operation such as yarn cone, plastic bags, cardboard, paper board, plastic string, etc. and food waste, plastic, paper, glass, metal can, sanitary napkins, tissue paper, garden waste, etc. However, proposed factory has been implemented the solid waste disposal system by the segregation of waste type such as paper waste, food waste, production waste and hazardous waste according to their environmental health and safety guideline. The required rubbish bins have

been provided and regularly checked and monitored by assigned person of proposed factory. Before send to dumping site of Nyaungdon Township municipal, the proper disposal waste facilities and temporary waste disposal site have been provided in the factory site and they should be followed and monitored the solid waste disposal system with the help of Municipal guidelines. Moreover, for the purpose of hygienic canteen, kitchen facilities and standard septic type of toilets, well-cleaned and well-maintained already provided for the proposed factory site.

In decommissioning phase, demolished construction materials such as bricks, construction materials will leave in the project area and visual amenity impact can cause.

5.8.1. **Solid Waste**

During the construction and decommissioning phase, various kinds of solid wastes will be generated. All of production waste such as yarn piece, yarn cone, plastic bags, cardboard, wood, plastic string, and other non-hazardous waste will be collected by designated garbage bins and then sent to the temporary storage areas of solid waste in the project site area These wastes will be collected and clean every day to avoid any undesirable working condition and environmental impacts. Based on their types (glass, metal, plastic, wood, chemical, cement residues, oil spills and paper based), these solid wastes will be collected separately in rubbish bins and regular and proper disposal will be done in accordance with Nyaungdon Township municipal guideline.

In the operation phase, major solid wastes of the garment factory may be generated from production lines, cutting and packaging. These wastes are disposed in the factory area and then will be disposed to the waste disposal site.

5.8.2. **Liquid Waste**

In construction state, source of liquid waste is from domestic, kitchen waste and septic system but it is short time so impact is neglectable. During the operation phases, sanitary wastewater from the usage of toilet facilities, kitchen and canteens will be discharged as liquid waste. All the liquid waste will be collected in septic tanks which are attached with proper sewage treatment tanks (as mentioned in factory site plan) and regular monitoring should be done in cooperation with Nyaungdon Municipal and follow the guidelines for proper disposal. There may be expected no significant liquid waste from the decommissioning phase.

5.8.3. **Mitigation Measures for Waste Disposal**

At construction state, waste categorization has been developed into at least four types of waste that includes iron, compost waste, lubricant waste, recycle waste such as poly propylene bags (PP) and cardboards etc. It should provide garbage bin for domestic wastes for construction workers and construction waste must be disposed to the disposal site weekly.

All of production waste such as yarn piece, yarn cone, plastic bags, cardboard, wood, plastic string, and other non-hazardous waste will be collected by designated garbage bins and then sent to the temporary storage areas of solid waste in the project site area, which include 4 compartments for different kinds of waste categories. In addition, pest control program has also implemented at the entrance of rodents and insects. Trillion Pleasure Industrial Co., Ltd. also has an agreement service with Nyaungdon township municipal for waste disposal facilities to collect the all-production waste, office waste and domestic waste. According to the waste management practice, garment factory has provided the dedicated dustbins for paper waste, plastic waste, production waste and food waste for

the proper disposal of waste. Appropriate recycling methods are in practice to dispose of the wastes in the environmentally friendly manner.

6. ENVIRONMENTAL MANAGEMENT PROGRAM

6.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

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

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

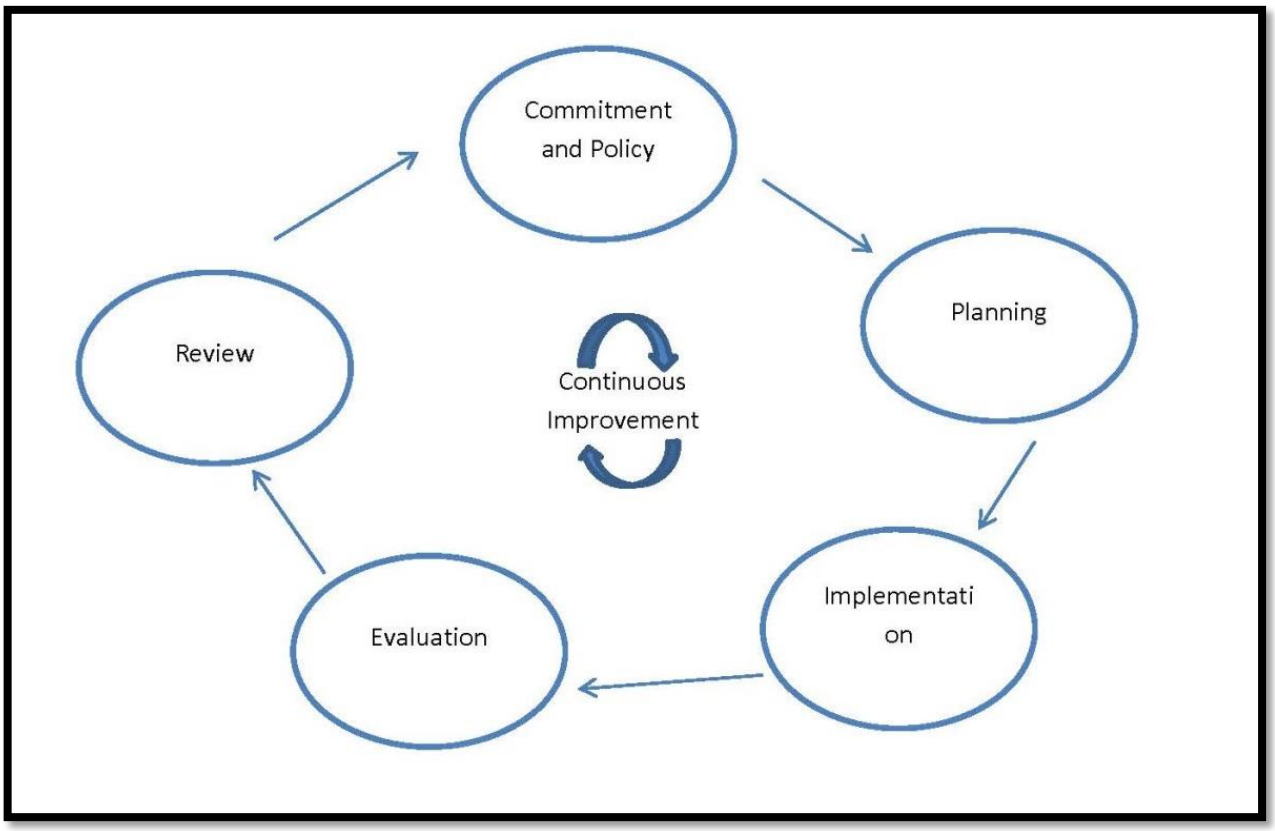


Figure 6-1 Continuous Improvement Circle

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

- **Planning** – An organization first identifies environmental aspects of its operations. Environmental aspects are those items, such as air pollutants or hazardous waste that can have negative impacts on people and the environment. An organization then determines which aspects are significant by choosing criteria considered most important by the organization. For example, an organization may choose worker health and safety, environmental compliance, and cost as its criteria. Once significant environmental aspects are determined, an organization sets objectives and targets. An objective is an overall environmental goal (e.g., minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (e.g., reduce use of chemical X by 25% by September 1998). The final part of the planning stage is devising an action plan for meeting the targets. This includes designating responsibilities, establishing a schedule, and outlining clearly defined steps to meet the targets.
- **Implementation** – An organization follows through with the action plan using the necessary resources (human, financial, etc.). An important component is employee training and awareness for all employees. Other steps in the implementation stage include documentation, following operating procedures, and setting up internal and external communication lines.
- **Evaluation** – A company monitors its operations to evaluate whether targets are being met. If not, the company takes corrective action.
- **Review** – Top management reviews the results of the evaluation to see if the EMS is working. Management determines whether the original environmental policy is consistent with the organization's values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

6.1.1. Institutional Requirement

Trillion Pleasure Industrial Co., Ltd. will manage the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and monitoring of EMP and Environmental Monitoring Plan (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.

6.1.2. Responsibilities of the EMP

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

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

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

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

6.1.3. Structure and Responsibilities for the EMP Development and Implementation

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

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

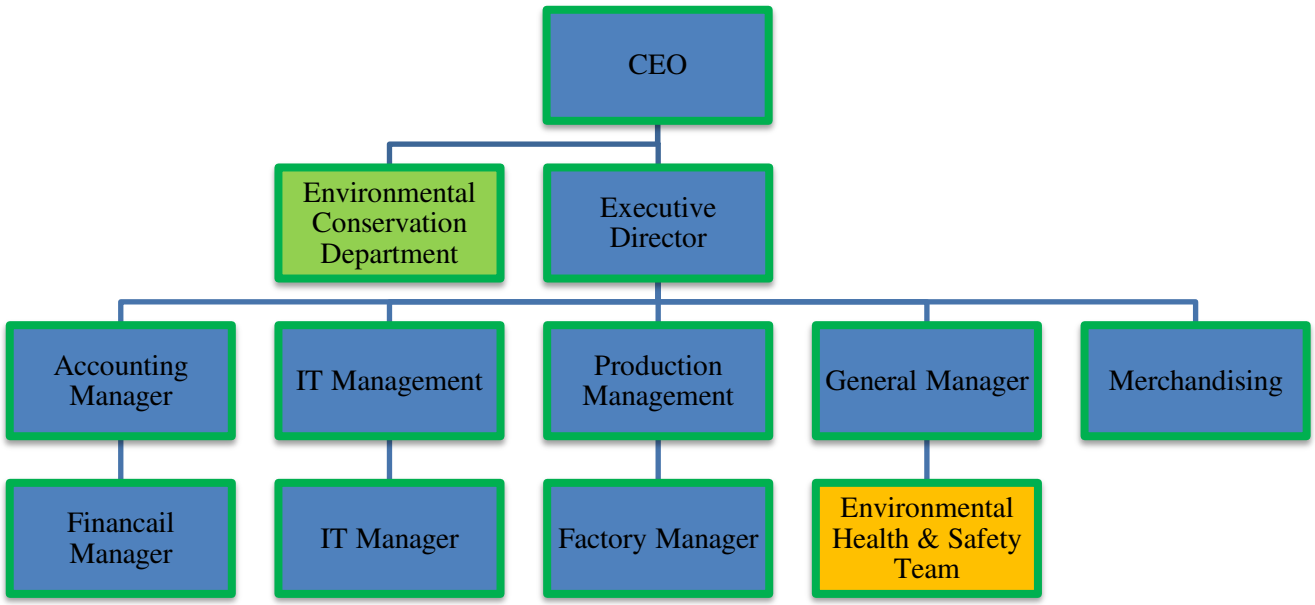


Figure 6-2 Organization Structure of Environmental Management

6.2. ENVIRONMENTAL MANAGEMENT ACTION

The EMP for Trillion Pleasure Industrial Co., Ltd. has been prepared to address potential issues based upon discussion with factory management, workers, local community 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 Trillion Pleasure Industrial Co., Ltd. are as follows:

6.2.1. **Air Pollution/Dust Management Plan**

Objectives:	• To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement. • To comply with relevant government rules
Performance Indicator:	• Nil complaints relating to air quality management • Extraction equipment maintained as per maintenance schedule
Management Plan	• The factory must be plant in its premises which reduce the carbon emission by the factory and minimize the air pollution • Periodic maintenance of generator is conducted • Prohibiting the burning of waste materials at the project site • Providing mask to the employees who work in any dusty area • Installation the windscreens to breakup the wind flow
Estimated Cost	• 1,000,000 Kyats per year
Responsibility	Management of the factory; • Head of maintenance: Total implementation of above of air pollution management plan • Production manager: Air quality in the production area is good enough • Manager: To hire organization/independent third-party testing air quality • EHS officer-Monitor the hygiene of ambient air quality in surrounding of the factory

6.2.2. **Noise Management Plan**

Objectives:	• To avoid nuisance noise to nearby residents generated from generator and other machineries. • To comply with noise standard of National Environmental Quality (Emission) Guideline
Performance Indicator:	Nil complaints relating to noise nuisance
Management Plan	• Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment • Impose speed limit to track and vehicles at the transportation route. • Emergency use of diesel generator must be ensured by soundproof • Noise level monitoring programs must be designed and conducted by trained specialist at production area
Estimated Cost	• 500,000 Kyats per year
Responsibility	Manager • To hire organization/independent third party testing noise level • Ensure that all workers use PPE during operation

6.2.3. Solid Waste Management Plan

Objectives:	• To minimize waste generation by developing strategies for the management and disposal of all waste in a manner that is sustainable and sensitive to the environment • To comply government waste management policy
Performance Indicator:	Nil complaints relating to noise nuisance
Management Plan	• The factory does not dispose the any sort of solid wastes on the factory premises or not dump in the surface water like a local pond, canal or river, etc. • The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs and empty chemical container is stored another in separate place of storage area. • Recycle wastes like cloth scrap, carton box, plastic sheet, etc. are hand over to local buyer for reuse and waste-tracking record shall be kept every day. • The metal or glass waste of electric bulb is taken by the suppliers to recycle them. • The daily domestic waste of worker hand-over to Nyaungdon Municipal waste collector to collect every day • Daily wastes are stored clearly labeled containers and in such a manner that all related personnel are provided proper training about the relevant issues.
Estimated Cost	• 50,000 Kyats per month
Responsibility	Manager (HR) • Responsible for overall site cleanliness and waste management • Regular waste collection to minimize excessive waste storage

6.2.4. Wastewater Management Plan

Objectives:	• Prevent pollution underlying groundwater sources
Performance Indicator:	• Implement an environmental friendly sewerage system
Management Plan	• Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity • Regular check and maintain sewerage facility. • Clean the factory drainage to avoid odor emission and to avoid the block of water flow • Regularly monitor and check the discharge temperature from boiler wastewater before directly discharge into factory‘s final drainage
Estimated Cost	• 500,000 Kyats per year
Responsibility	• Manager -To hire organization/independent third-party testing wastewater quality • EHS officer-Monitor the condition of factory’s drainage and sewerage system

6.2.5. Energy Management Plan

Objectives:	• The energy management is aimed at minimizing electricity use results from site

	equipment and working lighting • Comply with the standard of energy use
Performance Indicator:	• Annual energy savings for all department facilities • Annual fuel saving for generator and vehicle
Management Plan	• Installation of timers and thermostats to control heating and cooling • Energy saving light installed in different area of the factory for saving energy • Used of energy saving devices must be installed • Ensure that good housekeeping measures such as turning off equipment and lights when not in use
Estimated cost	• Approximately 1,000,000 Kyats per year
Responsibility	Manager • To arrange energy, audit technical personnel • To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises

6.2.6. **Water Consumption Management Plan**

Objectives:	• The water consumption management is aimed at minimizing ground water use
Performance Indicator:	• Prohibitions on accessing and using underground water without a license • Water consumption saving of general water use from groundwater
Management Plan	• Install water meter for internal control of water consumption • All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption • The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles • Trees plantation surrounding the factory
Estimated cost	• 100,000 Kyats per year
Responsibility	Manager • Arrange audit on water usage controls environmental officer

6.2.7. **Emergency Response and Disaster Management Plan**

Objectives:	• Reduce the risk of accidents at the factory area
Performance Indicator:	• Establish a safe working environment
Management Plan	• The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm • Provision and inspection of firefighting equipment and fire hydrant system in all the sections • A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers • Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training.

	• Regular fire drill operation is conducted • Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training • Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals. • A medical team has been prepared for primary treatment (First Aid) • Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy. • Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management • Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	Manager and EHS officer • Arrange firefighting training after every 3 months • Responsible for fire control and response • Monitoring daily danger warning and bans

6.3. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

The EMP cell members responsible may conduct daily, weekly, or monthly general inspections of the project area and facilities. The objectives are to identify non-compliances to EMP. Table 6-1 is provided the environmental monitoring schedule for Trillion Pleasure Industrial Co., Ltd. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP.

Table 6-1 Environmental Monitoring Schedule for Trillion Pleasure Industrial Co., Ltd.

Issues	Parameter	Frequency	Area to be monitored	Monitoring Cost (MMK)	Responsible Organization
Construction Phase					
Air Quality	SO2, NO2, CO, CO2, PM2.5, PM10	Once in the construction	Construction area	1,000,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited and Third Party
Water	pH, Apparent Colour, Turbidity, TDS, Total solids, Chloride, Free	Once in the construction	Nearest water body, ground water	200,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial

Issues	Parameter	Frequency	Area to be monitored	Monitoring Cost (MMK)	Responsible Organization
	Cyanide, Nitrate, Arsenic, Cadmium, Copper, Iron, Lead and Zinc				Company Limited and Third Party
Noise	dBA (Construction Time)	Once in the construction	Construction area	100,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited and Third Party
Fire	Fire installation	Once per month	Construction area	200,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited
Occupational Health and Safety	Accidental case, PPE for construction workers	Once per month	Construction worker	100,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited
Waste Generation	Solid waste, liquid waste	Once a week	Construction area	20,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited
Operation Phase					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	2,500,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited and Third Party
Air quality	SO2, NO2, CO, CO2, PM2.5, PM10	Biannually monitoring and reporting to	One point in the factory	700,000 Kyats	Environmental Management Team's Trillion Pleasure

Issues	Parameter	Frequency	Area to be monitored	Monitoring Cost (MMK)	Responsible Organization
		ECD (First 3 years after operation)			Industrial Company Limited and Third Party
Waste Generation	Solid waste, Liquid waste and Hazardous waste	weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	200,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited
Light intensity	Illuminance	Monthly	At the production line (especially cutting and QC)	50,000 Kyats	Environmental Management Team's Trillion Pleasure Industrial Company Limited
Decommissioning Phase					
Air quality	SO2, NO2, CO, CO2, PM2.5, PM10	One time during this phase	One point in the production area	1,000,000 Kyats	Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	200,000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner

6.4. 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 Trillion Pleasure Industrial Co., Ltd. consists of three main sectors; Health, Education and Community Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

Trillion Pleasure Industrial Co., Ltd. will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as on job training to be more qualified, language (Chinese) training on weekends with experienced teachers and providing necessary healthcare such as medical checkups and giving proper medical knowledge about deceases and its prevention. Part of our CSR activity such as donations will also contribute to public school around our factory (Table 6-2).

Table 6-2 CSR Plan at Trillion Pleasure Industrial Co., Ltd.

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

6.4.1. Public School

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

6.4.2. Non-profit Training

We will contribute 1% of our net profit for the trainings of our Employees. Our trainings include job-related trainings, language trainings and safety trainings. The main objective of our trainings is that we want our product with their work but also improving their other skills such as language and promoting knowledge about safety measures and occupational health employees to be not only become more productive and more qualified.

6.4.3. Healthcare

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

6.5. CAPACITY BUILDING AND TRAINNING PLAN

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

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

6.5.1. Assignment of responsibilities

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

6.5.2. Emergency procedures

Emergency procedures are operating instructions for employees to follow in emergency case
About work safety in the concerned processing, the management team should

a) Identify and list out all possible emergency situations in the workplace
b) Assess the effects and impacts of the emergency situations

c) Establish emergency response plans
d) Provide and maintain emergency equipment and other necessary resources
e) Ensure that staff are familiarized with the arrangements in case of emergencies by providing procedural instructions and employee training and organizing drills

6.5.3. Training for Emergencies

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

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

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

6.5.4. Fire Prevention and Protection

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

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

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

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

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

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

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

6.5.5. Fire Protection Equipment

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

2. Portable Fire Extinguishers: All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable

extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:

- Correct type of extinguisher to use on different classes of fire
- Proper techniques for use of the equipment to extinguish a fire

3. Standpipes and Hoses: All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.

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

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

6.5.6. **Fire Safety and Evacuation Plan**

Fire Evacuation plans should include the following information

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

Fire Safety Plans should include the following information:

1. Procedure for reporting a fire or other emergency
2. Site plans indicating the following
   - The Occupancy assembly point
   - The locations of fire hydrants
   - The normal routes of fire department vehicles access
3. Floor Plans identifying the locations of the following
   - Exits
   - Primary evacuation routes
   - Secondary evacuation routes
   - Accessible egress routes
   - Areas of refuge
   - Exterior area for assisted rescue
   - Manual fire alarm boxes
   - Portable fire extinguishers
   - Occupant-use hose stations
   - Fire alarm annunciators and controls

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

Table 6-3 American National Fire Fighting Association (NFFA) Standards

No.	Parameters	Proposed Capacity	Remark

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

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

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

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

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

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

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

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

6.5.7. Site Fire Control

1. Alert other people through fire alarm
2. If small, control using an extinguisher
3. Contact fire brigade if not under immediate control
4. Attend to human life in immediate danger
5. For electrical fires turn off power before fighting
6. Once out of the building, stay out. Do not allow people to go back into the burning building to collect valuables. While evacuating the building, close doors (but do not lock) to slow down the spread of fire
7. Obey all instructions
8. Proceed to an emergency evacuation area (Muster Point)

6.5.8. 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.

6.5.9. Health and Safety Training Plan for Worker

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

Table 6-4 Training Plan Used in Trillion Pleasure Industrial Company Limited

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

6.6. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain though Grievance Committee, which includes the responsible persons of Trillion Pleasure Industrial Co., Ltd. representative from BBB Industrial Zone and representative from General Administration Department of Nyaungdon. 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 (Figure 6-3) show steps of Grievance Redress Mechanism of Proposed Factory Project.

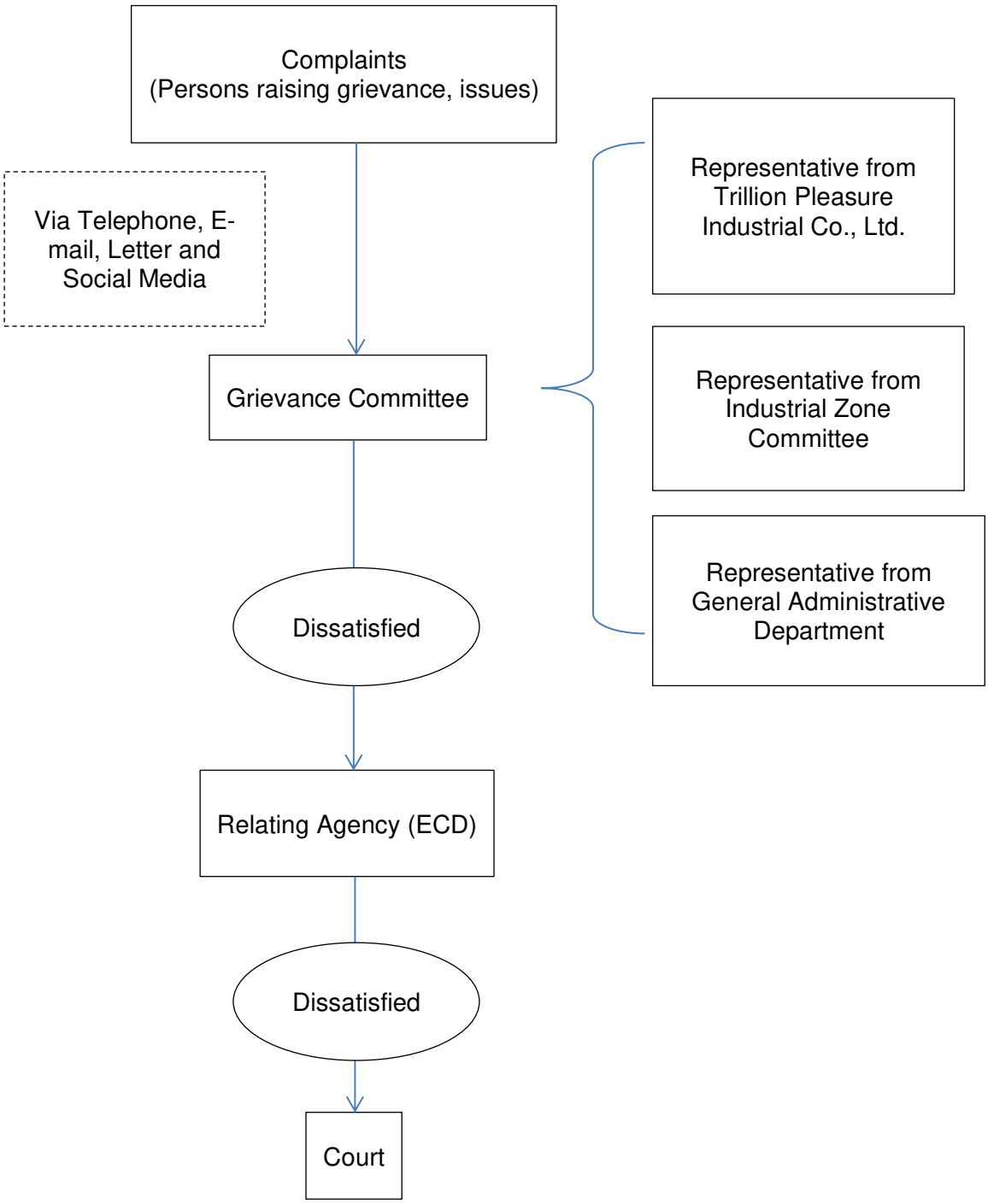


Figure 6-3 Grievance Redress Mechanism Flow Diagram

7. PUBLIC DISCLOSURE

7.1. PROJECT INFORMATION DISCLOSURE

This chapter presents public consultation and information disclosures during the remaining period of the Environmental Management Plan (EMP). Public consultation is a process for gathering opinions and suggestions from related stakeholders. It will help to improve the implementation of the project, set the scope for the environmental impact assessment and development mitigation measures, which will be reported in the project's EMP report.

Public consultation conducted as part of this EMP project has three purposes:

1) Information the stakeholders about the Project, environmental and social issues related to project construction and operation, and mitigation measures to minimize environmental and social impacts;

2) Considering the views, concerns, and perceptions of stakeholders, communities and individuals that could be affected by the project or who otherwise have an interest in the project;

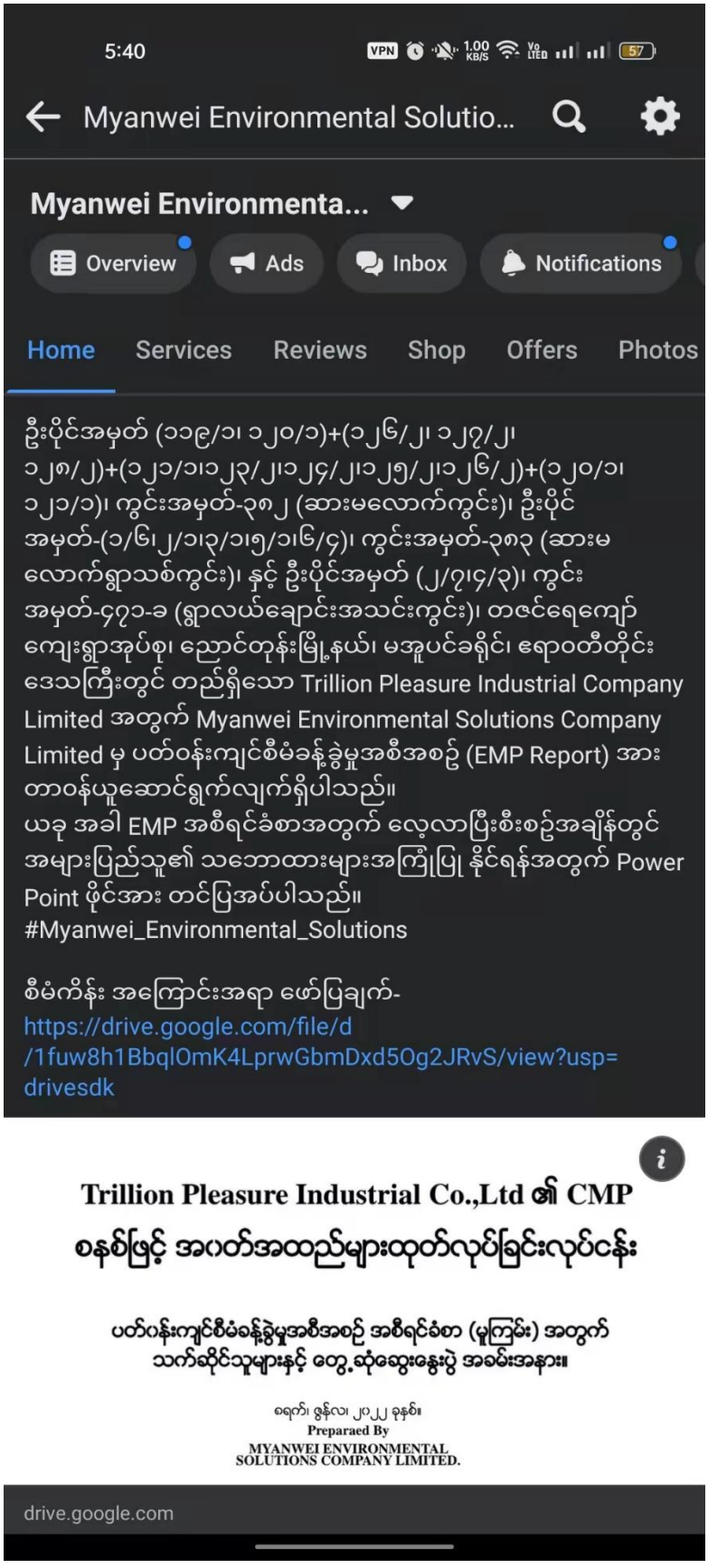
3) Participation and partnership where issues and needs are jointly discussed and assessed.

Although the public consultation is the effective way to achieve the information purpose, to seek views of the participation and partnership purpose, it cannot hold due to the current condition of Covid-19 diseases which started spreading in Myanmar since April, 2020.

During the preparation of this report, the third wave of COVID-19 becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people by closely contacting and to prevent spreading of disease. Thus, the present condition, the project's environmental condition and the management plans are through the social media of Myanwei Environmental Solution Company Limited Facebook page https://drive.google.com/file/d/1fuw8h1BbqIOmK4LprwGbmDxd50g2JRvS/view?usp=drivesdk declared on 8 June 2022. The suggestions, complains and comments from the public, organization and stakeholder are warmly welcome and accept via mailing, comment, telephoning, and messengers.

Details of project information disclosure in the public consultation Power Point presentation (Annex) which is describing in below and includes as follows;

- Objective of EMP
- Project Description
- Existing Environment and Monitoring
- Potential Impact and Mitigation measures
- Cooperative Social Responsibility (CSR)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Photos
ဦးပိုင်အမှတ် (၁၁၉/၁၊ ၁၂၀/၁)+(၁၂၆/၂၊ ၁၂၇/၂၊ ၁၂၈/၂)+(၁၂၁/၁၊၁၂၃/၂၊၁၂၄/၂၊၁၂၅/၂၊၁၂၆/၂)+(၁၂၀/၁၊ ၁၂၁/၁)၊ ကွင်းအမှတ်-၃၈၂ (ဆားမလောက်ကွင်း)၊ ဦးပိုင်အမှတ်-(၁/၆၊ ၂/၁၃/၁၈/၁၅/၁၆/၄)၊ ကွင်းအမှတ်-၃၈၃ (ဆားမလောက်ရွာသစ်ကွင်း)၊ နှင့် ဦးပိုင်အမှတ် (၂/၇၊၄/၃)၊ ကွင်းအမှတ်-၄၇၁-ခ (ရွာလယ်ချောင်းအသင်းကွင်း)၊ တဇင်ရေကျော်ကျေးရွာအုပ်စု၊ ညောင်တုန်းမြို့နယ်၊ မအူပင်ခရိုင်၊ ဧရာဝတီတိုင်းဒေသကြီးတွင် တည်ရှိသော Trillion Pleasure Industrial Company Limited အတွက် Myanwei Environmental Solutions Company Limited မှ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP Report) အား တာဝန်ယူဆောင်ရွက်လျက်ရှိပါသည်။
ယခု အခါ EMP အစီရင်ခံစာအတွက် လေ့လာပြီးစီးစဉ်အချိန်တွင် အများပြည်သူ၏ သဘောထားများအကြုံပြု နိုင်ရန်အတွက် Power Point ဖိုင်အား တင်ပြအပ်ပါသည်။
#Myanwei_Environmental_Solutions
စီမံကိန်း အကြောင်းအရာ ဖော်ပြချက်-
https://drive.google.com/file/d/1fuw8h1BbqlOmK4LprwGbmDxd5Og2JRvS/view?usp=drivesdk
Trillion Pleasure Industrial Co.,Ltd ၏ CMP
စနစ်ဖြင့် အဂတ်အထည်များထုတ်လုပ်ခြင်းလုပ်ငန်း
ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ (မူကြမ်း) အတွက်
သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနား။
ရက်၊ ဖွန်လ၊ ၂၀၂၂ ခုနှစ်၊
Preparaed By
MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED.
drive.google.com

8. CONCLUSION & RECOMMENTATION

8.1. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Trillion Pleasure Industrial Co., Ltd. is located Holding No. ((119/1,120/1)+(126/2, 127/2, 128/2)+ (121/1, 123/2, 124/2, 125/2, 126/2)+(120/1, 121/1)), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No. 383 (Sarmalaukywarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No. 417-B (Ywarleichaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township,, Maubin District, Ayeyarwady 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 product manufacturing factory.

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

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

The effective implementation of the mitigation measures proposed will ensure towards good environmental management within the proposed project area. Furthermore, the environmental monitoring plan prepared as part of the EMP will provide adequate opportunities to address any residual impacts during the operation phase.

In conclusion, it has been figured out that, the proposed factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

8.2. RECOMMENTATION

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to YCDC rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.

- Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third-party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

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

9. REFERENCE

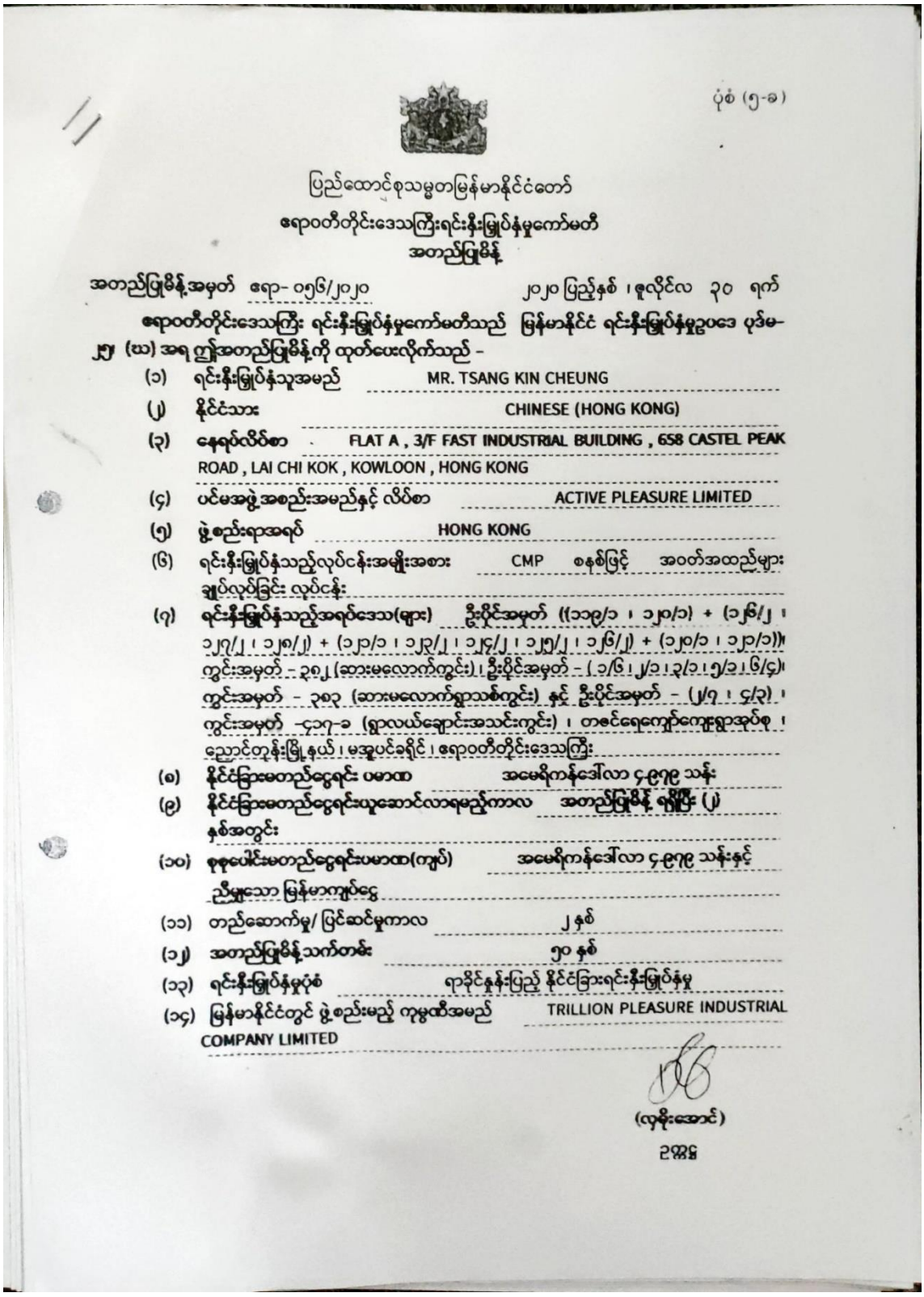
[1] General Administrative Department (Nyaungdon Township), Nyaungdon Township Data (2020).

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

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

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

APPENDIX A
Company Document's Trillion Pleasure Industrial Co., Ltd.



ပုံစံ (၅-ခ)

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

ရောဝတီတိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ

အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရော- ၀၅၆/၂၀၂၀ ၂၀၂၀ ပြည့်နှစ်၊ ဇူလိုင်လ ၃၀ ရက်

ရောဝတီတိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုဥပဒေ ပုဒ်မ-၂၅ (ဃ) အရ ဤအတည်ပြုမိန့်ကို ထုတ်ပေးလိုက်သည် -

(၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR. TSANG KIN CHEUNG

(၂) နိုင်ငံသား CHINESE (HONG KONG)

(၃) နေရပ်လိပ်စာ FLAT A , 3/F FAST INDUSTRIAL BUILDING , 658 CASTEL PEAK ROAD , LAI CHI KOK , KOWLOON , HONG KONG

(၄) ပင်မအဖွဲ့အစည်းအမည်နှင့် လိပ်စာ ACTIVE PLEASURE LIMITED

(၅) ဖွဲ့စည်းရာအရပ် HONG KONG

(၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အဝတ်အထည်များ ချုပ်လုပ်ခြင်း လုပ်ငန်း

(၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) ဦးပိုင်အမှတ် ((၁၁၉/၁ ၊ ၁၂၀/၁) + (၁၂၆/၂ ၊ ၁၂၇/၂ ၊ ၁၂၈/၂) + (၁၂၁/၁ ၊ ၁၂၂/၂ ၊ ၁၂၄/၂ ၊ ၁၂၅/၂ ၊ ၁၂၆/၂) + (၁၂၀/၁ ၊ ၁၂၁/၁))၊ ကွင်းအမှတ် - ၃၈၂ (ဆားမလောက်ကွင်း)၊ ဦးပိုင်အမှတ် - (၁/၆ ၊ ၂/၁ ၊ ၃/၁ ၊ ၅/၆)၊ ကွင်းအမှတ် - ၃၈၃ (ဆားမလောက်ရွာသစ်ကွင်း) နှင့် ဦးပိုင်အမှတ် - (၂/၇ ၊ ၄/၁)၊ ကွင်းအမှတ် -၄၁၇-ခ (ရွာလယ်ချောင်းအသင်းကွင်း)၊ တောင်ရေကျော်ကျေးရွာအုပ်စု၊ ညောင်တုန်းမြို့နယ်၊ မအူပင်ခရိုင်၊ ရောဝတီတိုင်းဒေသကြီး

(၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၄,၉၇၉ သန်း

(၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိပြီး (၂) နှစ်အတွင်း

(၁၀) စုစုပေါင်းမတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၄,၉၇၉ သန်းနှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၂ နှစ်

(၁၂) အတည်ပြုမိန့်သက်တမ်း ၅၀ နှစ်

(၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု

(၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် TRILLION PLEASURE INDUSTRIAL COMPANY LIMITED

(လှိုင်းအောင်)

ဒုအဖွဲ့ဝင်

Form (5-B)

THE REPUBLIC OF THE UNION OF MYANMAR

Ayeyawady Region Investment Committee

ENDORSEMENT

Endorsement No. AYY- 056/2020 Dated 30th July, 2020

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

(1) Name of Investor MR. TSANG KIN CHEUNG

(2) Citizenship CHINESE (HONG KONG)

(3) Residence Address FLAT A, 3/F FAST INDUSTRIAL BUILDING, 658 CASTEL PEAK ROAD, LAI CHI KOK, KOWLOON, HONG KONG.

(4) Name and Address of Principle Organization ACTIVE PLEASURE LIMITED

(5) Place of Incorporation HONG KONG

(6) Type of Business MANUFACTURING OF GARMENTS ON CMP BASIS

(7) Place(s) of Investment Project HOLDING NO. ((119/1,120/1) + (126/2, 127/2, 128/2) + (121/1,123/2,124/2,125/2,126/2) + (120/1,121/1)), KWIN NO. 382 (SARMALAUK KWIN), HOLDING NO. (1/6,2/1,3/1,5/1,6/4), KWIN NO. 383 (SARMALAUKYWARTHIT ATHIN KWIN) AND HOLDING NO.(2/7,4/3), KWIN NO. 417-B (YWARLEICHAUNG ATHIN KWIN), TA ZIN YAY KYAW VILLAGE TRACT, NYAUNGDON TOWNSHIP, MAUBIN DISTRICT, AYEYAWADY REGION.

(8) Amount of Foreign Capital USD 4.979 MILLION

(9) Period for Foreign Capital to be brought in WITHIN TWO YEARS FROM THE DATE OF ISSUANCE OF ARIC ENDORSEMENT

(10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF USD 4.979 MILLION

(11) Construction Period 2 YEARS

(12) Validity of Endorsement 50 YEARS

(13) Form of Investment WHOLLY FOREIGN OWNED

(14) Name of Company Incorporated in TRILLION PLEASURE INDUSTRIAL COMPANY LIMITED

(Hla Moe Aung)
Chairman

Confidential

THE REPUBLIC OF THE UNION OF MYANMAR
AYEYAWADY REGION INVESTMENT COMMITTEE
One-Stop Service Complex, Myat Toe, Pathein

No.
Date

Tel:95-42-29256/29257
Fax:95-42-29258

Ourref: ARIC/E-060 /Industry / 2020 (258 C)
Date : 30th , July 2020

Subject: Decision of the Ayeyawady Region Investment Committee on the Endorsement for Manufacturing of Garments on CMP Basis under the name of Trillion Pleasure Industrial Company Limited

Reference: Trillion Pleasure Industrial Company Limited's letter dated 17th July , 2020

1. The Ayeyawady Region Investment Committee, at its meeting (7/2020) held on 17th July , 2020 approved the endorsement for investment in Manufacturing of Garments on CMP Basis under the name of Trillion Pleasure Industrial Company Limited submitted by Mr. Tsang Kin Cheung from Hong Kong (china) a wholly foreign owned investment in accordance with the Myanmar Investment Law and Rules.

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

(a) The term of an Endorsed project shall be initial fifty (50) years commencing from the date of the issuance of the Endorsement by the Ayeyawady Region Investment Committee.

(b) The term of the Lease Agreement for land of shall be initial fifty (50) years commencing from the date of signing of the Lease Agreement between Castle Land Ltd. ၊ Kong Land Ltd. ၊ Peak Land Ltd. ၊ Wing Land Ltd. ၊ Nan Land Ltd. ၊ Hong Land Ltd. (Lessors) and Trillion Pleasure Industrial Company Limited) (Lessee) and extendable for two times for ten (10) years respectively by mutual agreement between the Lessor and the Lessee subject to the approval of the Myanmar Investment Commission.

Confidential

(c) The rent for the land shall be US$ 30671.15 (United States Dollar thirty thousand six hundred and seventy-one and fifteen cents only) for the total area of the land measuring 29.94 acres (121162.99 square meters).

(d) Trillion Pleasure Industrial Company Limited, which has obtained this endorsement to receive benefits relating to the right to use land under Chapter XII and exemptions and reliefs under sections 75,77 and 78 of the Chapter XVIII of Myanmar Investment Law may submit the application form.

(e) Trillion Pleasure Industrial Company Limited shall use its best efforts to achieve a timely realization of the work stated in the endorsement application.

(f) Trillion Pleasure Industrial Company Limited shall obey and respect the responsibilities of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.

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

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

(I) Trillion Pleasure Industrial Company Limited which has benefitted from the Endorsement or exemptions and reliefs shall submit an annual report in the prescribed form to the Committee within three (3) months of the end of the financial year in accordance with rule 196 of Myanmar Investment Rules and shall publish a

summary of the report on its website or the Commission's website.

(j) Trillion Pleasure Industrial Company Limited must, during the operation period under the endorsement of the Committee, submit its operating report quarterly in the prescribed form in accordance with rule 197 of Myanmar Investment Rules.

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

4. Trillion Pleasure Industrial Company Limited shall submit five (5) copies of all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and the Land Lease Agreement to the Committee.

(Hla Moe Aung)
Chairman

Trillion Pleasure Industrial Company Limited

cc: 1. Ministry of Home Affairs
2. Ministry of Office of the Union Government
3. Ministry of Natural Resources and Environmental Conservation
4. Ministry of Labour, Immigration and Population
5. Ministry of Commerce
6. Ministry of Planning , Finance and Industry
7. Ministry of Investment and Foreign Economic Relations
8. Myanmar Investment Commission
9. Chairman, CMP Enterprise Supervision Committee
10. Office of the Ayeyawady Region Government
11. Director General, Department of Environmental Conservation
12. Director General, Directorate of Labour

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

APPENDIX B
Transitional Consultant Registration Certificate

THE REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 00068 Date 24 MAY 2019

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

(ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို ထုတ်ပေးလိုက်သည်။)

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

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန

Director General

Environmental Conservation Department

Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted

(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

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

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန

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

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

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

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား(၁-၁-၂၀၂၂) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၂) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
25.3.2022
For Director General
(Soe Naing, Director)
Environmental Conservation Department

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 0048 Date

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

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

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

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁.၃.၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်သက်တမ်း တိုးမြှင့်သည်။
17.10.2018
For Director General
(Soe Naing, Director)
Environmental Conservation Department

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

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Geology and Soil

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

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်နေ့မှ (၃၁-၁၂-၂၀၁၉)
ရက်နေ့အထိ (၉)လသက်တမ်း တိုးမြှင့်သည်။
10.6.2019
For Director General
(Soe Naing, Director)
Environmental Conservation Department

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

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား(၁-၁-၂၀၂၀)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၀)
ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
16.1.2020
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား(၁-၁-၂၀၂၂)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၂)
ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
8.3.2022
For Director General
(Soe Naing, Director)
Environmental Conservation Department

APPENDIX C
Monitoring Result

Noise result

MYANWEI
ENVIRONMENTAL SOLUTIONS

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

Project Name:	TRILLION PLEASURE INDUSTRIAL COMPANY LIMITED
Project Location:	Holding No. ((119/1,120/1)+(126/2, 127/2, 128/2)+ (121/1, 123/2, 124/2, 125/2, 126/2)+(120/1, 121/1)), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No. 383 (Sarmalaukywarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No. 417-B (Ywarleichaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township,, Maubin District, Ayeyarwady Region.
Sampling Date:	14 January, 2022 to 15 January, 2022
Sampling Time:	11:00 am to 11:00 am
Sampling Condition:	Normal Condition
Sampling By:	Environmental Team Represented by Myanwei Environmental Solutions Co., Ltd.

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°58'58.78"N 95°41'44.53"E

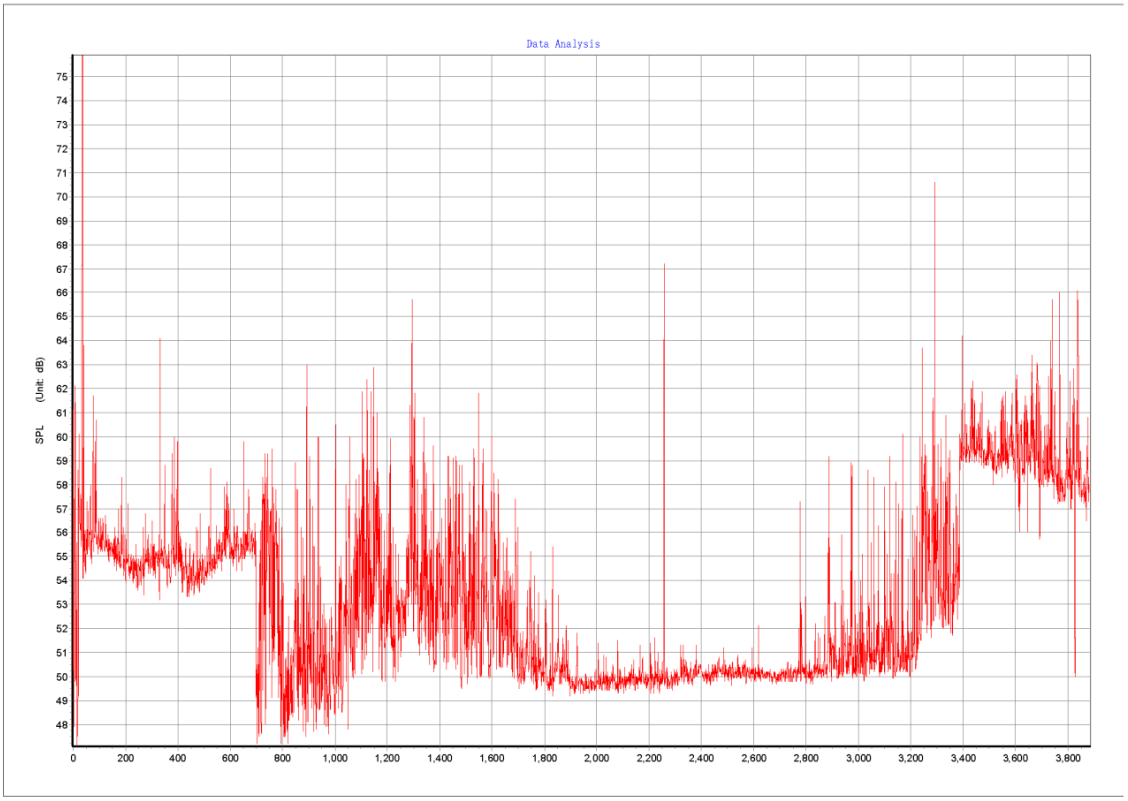
No	Place	Unit	Result	Standard	Remark
1	Construction Area	dBA	53.22 dBA	70 dBA	Under the limit

National Environmental Quality (Emission) Guideline

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

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

Noise Graph


Data Analysis
SPL (Unit: dB)
75
74
73
72
71
70
69
68
67
66
65
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
2,200
2,400
2,600
2,800
3,000
3,200
3,400
3,600
3,800

Air Quality Result

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

Project Name:	TRILLION PLEASURE INDUSTRIAL COMPANY LIMITED
Project Location:	Holding No. ((119/1,120/1)+(126/2, 127/2, 128/2)+ (121/1, 123/2, 124/2, 125/2, 126/2)+(120/1, 121/1)), Kwin No.382 (Sarmalauk Kwin), Holding No. (1/6,2/1,3/1,5/1,6/4), Kwin No. 383 (Sarmalaukywarthit Athin Kwin) and Holding No. (2/7,4/3), Kwin No. 417-B (Ywarleichaung Athin Kwin), Ta Zin Yay Kyaw Village Tract, Nyaungdon Township,, Maubin District, Ayeyarwady Region.
Sampling Date:	14 January, 2022 to 15 January, 2022
Sampling Time:	11:00 am to 11:00 am
Sampling Condition:	Good
Sampling By:	Environmental Team Represented by Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
AQM-09	PM,O_3,NO_2,SO_2,CO	0-999.9 (µg/m^3)	16°58'58.65"N 95°41'44.17"E

Monitoring Result (Construction Area)

No	Parameter	Unit	Result	Standard	Remark
1	PM_{10}	(µg/M^3)	32.9	50	Below
2	$PM_{2.5}$	(µg/M^3)	25	25	Normal
3	SO_2	(µg/M^3)	276	500	Below
4	NO_2	(µg/M^3)	21.3	200	Below
5	CO	(µg/M^3)	0.3	10	Below
6	O_3	(µg/M^3)	98	100	Below

National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10	1-year 24-hour	20 50	(µg/M^3)
PM 2.5	1-year 24-hour	10 25	(µg/M^3)
NO_2	1-year 1-hour	40 200	(µg/M^3)
SO_2	24 hours 10 minutes	20 500	(µg/M^3)

O_3	-	100	ppm
CO	-	-	ppm

a. Particulate matter 10 micrometer or less in diameter
b. Particulate matter 2.5 micrometer or less in diameter
c. Calculated as Total carbon
d. As the 30-minute mean for stack emissions: 2 mg/Nm3 for volatile organic compounds classified as carcinogenic or mutagenic with mass flow greater than or equal to 10 g/hour; 20 mg/Nm3 for discharges of halogenated volatile organic compounds with a mass flow equal or greater than 100 g/hour; 50 mg/Nm3 for waste gases from drying of large installations (solvent consumption > 15 tons/year); 75 mg/Nm3 for coating application processes for large installations (solvent consumption > 15 tons/year); 100 mg/Nm3 for small installations (solvent consumption < 15 tons/year); if solvent is recovered from emissions and reused, the guideline value is 150 mg/Nm3

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

Water Quality Analysis Result

ISO TECH LABORATORY

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

ISO 9001:2015 Cert. No. 688600

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 2 of 2

W0122 417

WATER QUALITY TEST RESULTS FORM

Client	Trillion Pleasure Industrial Co.,Ltd.
Nature of Water	Surface Water
Location	Nyaungdon Township
Date and Time of collection	16.1.2022
Date and Time of arrival at Laboratory	18.1.2022
Date and Time of commencing examination	19.1.2022
Date and Time of completing	24.1.2022

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
Temperature (°C)		°C	
Fluoride (F)		mg/l	1.5 mg/l
Lead (as Pb)		mg/l	0.01 mg/l
Arsenic (As)		mg/l	0.01 mg/l
Nitrate ($N.NO_3$)		mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)	6.0	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)		mg/l	
Cyanide (CN)		mg/l	0.07 mg/l
Zinc (Zn)	Nil	mg/l	3 mg/l
Copper (Cu)		mg/l	2 mg/l
Silica (SiO_2)		mg/l	

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

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

Approved by
Signature:
Name: Thinzar Theint Theint
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co.,Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com