# SUDEY INDUSTRIAL MYANMAR COMPANY LIMITED

**Environmental Management Plan** 

Manufacturing of Garments on CMP Basis





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Date: 30, 12, 2021

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing of Garment by Sudey Industrial Myanmar Company Limited.

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

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

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



# SUDEY INDUSTRIAL MYANMAR COMPANY LIMITED

Plot No.(10/1+11/4), Kwin No.(649/Kali East North), Kali(Tap Kalay)Village Tract, Bago Township, Bago District, Bago Region.

> No.-Date.

Date:

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.

Sudey Industrial Myanmar Company Limited will at all times comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that

YUAN ZHONGHZNG Mr. Yuan Zhongheng Promoter SUDEY INDUSTRIAL MYANMAR 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. BRIC = Bago Region Investment Committee
- 15. MOECAF
  - F = Ministry of Environmental Conservation and Forestry
     C = Ministry of Natural Resources and Environmental Conservation
- 16. MONREC = N
- 17. OEMP = Operation Environmental Management Plan
- 18. OSHA = Occupational Safety and Health Administration
- 19. PPE = Personal Protective Equipment
- 20. WHO = Word Health Organization
- 21. BESB = Bago City Electricity Supply Board

# အစီရင်ခံစာအကျဉ်းချုပ်

လူတိုင်းသည် သန့်ရှင်းပြီး ကျန်းမာသည့် နေရာတွင်နေထိုင်လိုကြသည်။ ယခုအချိန်တွင် ကမ္ဘာ့မြေ၏အဓိက စိုးရိမ်ပူပန်မှုမှာ ပတ်ဝန်းကျင်ပြောင်းလဲမှုဖြစ်စဉ်များကြောင့်ဖြစ်သည်။ အဘယ်ကြောင့်ဆိုသော် လူသားတို့၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအပေါ် ပေါ့ဆမှုကြောင့်ဖြစ်သည်။ ထို့ကြောင့် သဘာဝပတ်ဝန်းကျင် ထိခိုက်မှုမဖြစ်စေရေး၊ ရေရှည်စဉ်ဆက်မပြတ် တိုးတက်ကောင်းမွန်ရေးအတွက် စနစ်ကျသော ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်ရှိရန်လိုအပ်ပါသည်။ ထို့ကြောင့် Sudey Industrial Myanmar Company Limited ၏ ထုတ်လုပ်မှုလုပ်ငန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (EMP) ကို အကောင်အထည်ဖော်ခဲ့ပါသည်။ EMP ၏ အဓိက ရည်ရွယ်ချက်မှာ ညစ်ညမ်းမှုထိန်းသိမ်းရေး စွန့်ပစ်ပစ္စည်းလျှော့ချရေးနှင့် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုရေး အစီအစဉ်များကို အလေးထားဖော်ပြထားပြီး၊ စက်မှုလုပ်ငန်းဆိုင်ရာ တိကျသော ထိန်းချုပ်မှု

အဆိုပြုလုပ်ငန်းသည် (CMP) အထည်ချုပ်လုပ်ငန်းအတွက် အသစ်ရင်းနှီးမြှုပ်နှံသော ကုမ္ပကီဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၉ ခုနှစ်၊ ဇွန်လ ၂၈ ရက်နေ့တွင် (ထောက်ခံချက်အမှတ် (ပခတ- ၀၂၀/၂၀၁၉)ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

မြန်မာနိုင်ငံ၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂ဂ၁၂)အရ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၁၉ ခုနှစ်၊ ဒီဇင်ဘာလ၊ ၂၄ ရက်နေ့တွင် (စာအမှတ်၊ (ပဲခူး/အီးအိုင်အေ) ၂၅၆၇/၂၀၁၉) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Company Limited မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

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# ရင်းနှီးမြှုပ်နှံသူ၏ အချက်အလက်

### အဆိုပြုထားသော စီမံကိန်း၏ အဓိကလက္ခဏာများ

လုပ်ငန်းအမျိုးအစား	CMP စနစ်ဖြင့် အပတ်အထည်မျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်း
ရင်းနှီးမြုပ်နှံမှုအမျိုးအစား	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြုပ်နှံမှု

မြေအမျိုးအစား	စက်မှုဇုန်မြေ
အကျယ်အဝန်း	၇.၀၁ ဧက (၂၈၃၆၈.၄၆ စတုရန်းမီတာ)
အဆောက်အဦး	ပင်မအဆောက်အဦး (၁၅၂ × ၅၄ × ၁၂) မီတာ ၂ လုံး
	၂ ထပ်လူနေဆောင် (၅၂ × ၁၆.၄ × ၆.၆) မီတာ ာ လုံး
မြေငှားမှု	၅ဂ နှစ်
တည်ဆောက်ရေးကာလ	၂နှစ်
လိပ်စာ	ဦးပိုင် အမှတ်(၁၀/၁+၁၁/၄) ၊ ကွင်းအမှတ် (၆၄၉) ၊ ကလိအရှေ့မြောက်ကွင်း၊ ကလိ(တပ်ကလေး)ကျေးရွာအုပ်စု၊ ပဲခူးမြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး။
ဆက်သွယ်ရန်	သူရိန် (HR Manager)
	ဂ၉-၆ခေ၁၃၃၁ဂ၁

အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်ကို Myanwei Environmental Solutions Co., Ltd တာဝန်ယူ ရေးဆွဲထားပါသည်။

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

- 1. Environmental Conservation Law, 30 March 2012
- 2. Environmental Conservation Rules, 2014
- 3. Environmental Impact Assessment Procedure (December 2015)
- 4. National Environmental Quality (Emission) Guideline (NEQG) (December 2015)
- 5. National Environmental Policy of Myanmar (2019)
- 6. Foreign Investment Law, 2012
- 7. Foreign Investment Rule, 2013
- 8. Myanmar Investment Rule, 2017
- 9. Payment of Wages Law (2016)
- 10. Bago Municipal Law (2016)
- 11. The Amended Law for Factories Act, 1951 (2016)
- 12. The Private Industrial Enterprise Law, 1990
- 13. The Export and Import Law (2012)

- 14. The Prevention of Hazard from Chemical and Related Substances Law, 2013
- 15. Underground Water Act
- 16. Myanmar Fire Brigade Law (2015)
- 17. The Electricity Law (2014)
- 18. Labor Dispute Settlement Law (28 March 2012 replacing 1929 version)
- 19. The Employment and Skill Development (2013)
- 20. The Worker's Compensation Act, 1923
- 21. The Payment of Wages Act, 1936
- 22. The Leave and Holidays Act, (1951, partially revised in 20140
- 23. The Minimum Wage Law (2013)
- 24. Public Health Law (1972)
- 25. Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)
- 26. Occupational Safety and Health Law (2019)
- 27. The Law on Standardization
- 28. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဝတ္တုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)
- 29. Myanmar Insurance Law (1993)
- 30. The Conservation of Water Resources and River Law (2006)

Sudey Industrial Myanmar Company Limited စက်ရုံသည် ဦးပိုင် အမှတ်(၁၀/၁+၁၁/၄) ၊ ကွင်းအမှတ် (၆၄၉) ၊ ကလိအရှေ့မြောက်ကွင်း၊ ကလိ(တပ်ကလေး)ကျေးရွာအုပ်စု၊ ပဲခူးမြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီးတွင်တည်ရှိပြီး မြေဧရိယာစုစုပေါင်း ၇.၀၁ ဧက (၂၈၃၆၈.၄၆ စတုရန်းမီတာ)ကျယ်ဝန်းပါသည်။

### Sudey Industrial Myanmar Company Limited

### **Environmental Management Plan**



96° 29' 24" E 96° 29' 42" E 96° 30' 0" E 96° 30' 18" E 96° 30' 36" E 96° 30' 54" E 96° 31' 12" E 96° 31' 30" E 96° 31' 48" E

အဆိုပြုလုပ်ငန်း၏ တည်နေရာပြပုံ



1.Security Gate 2.Ferry Gate 3.Office 4.Canteen 5.Water Tank 6.Boiler room and Generator Room 7.Toilets 8.Sewing and Cutting Area 9.Warehouse 10.Operation Area

# စက်ရုံတည်ဆောက်ပုံပြပုံ

Sudey Industrial Myanmar Company Limited ၏ အဓိက ကုန်ကြမ်းမှာ ပိတ်စဖြစ်ပြီး တရုတ်နိုင်ငံ မှ တင်သွင်းပါသည်။ ကုန်ကြမ်းများကို ကုန်ကြမ်းသိုလှောင်ခန်းတွင် စနစ်တကျ သိုလှောင်ထားရှိပါသည်။



ကုန်ကြမ်းထားရှိမှု ဓာတ်ပုံ

Sudey Industrial Myanmar Company Limited ၏ အဓိက ထုတ်ကုန်မှာ ဂျာကင်အမျိုးမျိုး၊ ကုတ်အမျိုးမျိုးနှင့် ဘောင်းဘီတိုအမျိုးမျိုးတို့ ဖြစ်ပါသည်။



# ထုပ်လုပ်ပုံ လုပ်ငန်းအဆင့်ဆင့်

လုပ်ငန်းမှ ပထမနစ်မှ ၁၀ နှစ်အတွင်းအထည်ရေ (၁,၆၀၇,၀၀၀) မှ (၁,၇၃၄,၀၀၀) အထိ တိုးမြှင့်ထုတ်လုပ်သွားမည်ဖြစ်သည်။ နိုင်ငံခြားသားကျွမ်းကျင်ပညာရှင် (၂၁) ယောက်နှင့် နိုင်ငံသား (ပြည်တွင်း) ဝန်ထမ်းများကို ပထမနစ် မှ ၁၀ နှစ်အတွင်း ၁၅၄၁ ဦး ခန့်အပ်ပြီး ဆောင်ရွက်သွားမည်ဖြစ်သည်။ EMP အတွက်ကွင်းဆင်းလေ့လာချိန်တွင် စက်ရုံ၌ လက်ရှိ လူဦးရေ ၁၅၂၃ ယောက်ဖြင့် ထုတ်လုပ်မှုအချို့ပြုလုပ်နေပြီး ပြင်ဆင်မှုများလဲပြုလုပ်နေသည်ကို တွေရှိခဲ့ပါသည်။ စက်ရုံ၏ လုပ်ငန်းလည်ပတ်မှုကြောင့်လည်း သဘာဝပတ်ဝန်းကျင်အပေါ် ဆိုးဆိုးဝါးဝါးထိခိုက်မှု မရှိကြောင်း လေ့လာတွေ့ရှိခဲ့ပါသည်။

### Sudey Industrial Myanmar Company Limited

### Environmental Management Plan



### ထုတ်ကုန်ဓာတ်ပုံ

လက်ရှိပတ်ဝန်းကျင်၏ ပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်၊ ပတ်ဝန်းကျင်အရည်အသွေး တိုင်းတားခြင်းများနှင့် သက်ရောက်မှုများကို ၂ဂ၂ဂ ပြည့် နှစ်၊ ဖေဖော်ဝါရီလ ၃ ရက်နေ့တွင် ပြုလုပ်ခဲ့ပါသည်။ ထို့အပြင် စက်ရုံတည်နေရာနှင့် သက်ဆိုင်သည့် အချက်အလက်များဖြစ်သော လူမှုစီးပွားအခြေအနေ၊ ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များ အစရှိသည့်များကို ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်မှ တရားဝင်ပြဌာန်းထားသော မြို့နယ်ဆိုင်ရာအချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။

### အဆိုပြုလုပ်ငန်း၏စစ်တမ်းကောက်ယူမှု

အမျိုးအစား	ရလဒ်	
ရာသီဥထုအခြေအနေ		
အပူချိန်	၃၄.၆ °C	
စိုထိုင်းဆ	၃၄.၈ %	
ဆူညံသံ		
စက်ချုပ်ဌာန	၇၃.၈၃ dBA	
လေထုအရည်အသွေး		
PM 10	<u> </u>	
PM 2.5	<del>२</del> <i>९</i> . <i>५</i>	

အဆိုပြု စီမံကိန်း၏ အဓိကဖြစ်ပေါ် စေနိုင်သော ပတ်ဝန်းကျင်ထိခိုက်မှုကို အခြေခံစစ်တမ်းများ ပေါ် မူတည်၍ ယေဘုယျ နည်းလမ်းများအတိုင်း လျော့ချမှုများ ပြုလုပ်သွားပါမည်။ ပတ်ဂန်းကျင် ထိခိုက်မှုကို လေ့လာဆန်းစစ်ရာတွင် စီမံကိန်းကာလအတွင်း ထိခိုက်မှု တစ်ခုချင်းစီ၏ ပမာဏ၊ ကြာမြင့်ချိန်၊ ကျယ်ပြန့်မှုနှင့် ဖြစ်နိုင်ချေတို့အား ဖော်ပြထားပါသည်။

အုပ်စုများ သက်ရောက်မှု အရင်းအမြစ် လျော့ချရေးနည်းလမ်းများ	အုပ်စုများ	သက်ရောက်မှု အရင်းအမြစ်	လျော့ချရေးနည်းလမ်းများ
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သတ်မှတ်ရက်	ထိရိက်မှုအဆင့်
<ാ൭	အလွန်နိမ့်
ാ - പ്ര	နိုင့်
<del>२</del> ० - ८८	အလယ်အလတ်
୨୭ <sup>-</sup> ୭୧	မြင့်
ଦେ	အလွန်မြင့်

# ပတ်ဝန်းကျင်ထိခိုက်မှုကိုအောက်ပါအတိုင်း ခွဲခြားနိုင်သည်။

ඛිරිඃ	Э	J	9	9	ອ
ഗ്ലാന	မလုံလောက် သော	အနည်းငယ် နှင့် လုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင် သော	အသင့်အတင့် နှင့် အနည်းငယ် လုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	မြင့်မားနှင့် သိသာစွာလုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	အလွန်မြင့်မားနှင့် အမြံတမ်းလုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင်သော
အချိန်	ပ-၁ နှစ်	၂-၅ နှစ်	၆-၁၅ နှစ်	လုပ်ငန်း လည်ပတ်စဉ် ကာလ တစ်လျောက်	လုပ်ငန်းပိတ်သိမ်း ရြင်းကာလအထိ
ကျယ်ပြန့်မှု	လုပ်ငန်းခွင် အတွင်း	ဒေသအတွင်း	မြို့နယ်အတွင်း	နိုင်ငံအတွင်း	နိုင်ငံတကာအတွင်း
ဖြစ်နိုင်ချေ	လုံးဂ မဖြစ်နိုင်သော	မဖြစ်နိုင်သော	ဖြစ်နိုင်သော	ဖြစ်နိုင်ရေမြင့် သော	အတိအကျ

သတ်မှတ်ချက် = ( ပမာဏ+အချိန်+ကျယ်ပြန့်မှု)\* ဖြစ်နိင်ချေ

အတိုင်းအတာ

### Environmental Management Plan

အကဲဖြတ်

အုပ်စုများ	သက်ရောက်မှု အရင်းအမြစ်	လျော့ချရေးနည်းလမ်းများ
လေအရည်အသွေး	ကုန်ကြမ်းပစ္စည်းများ၊ ကုန်ချောပစ္စည်းများသယ်ဆောင် သော ယာဉ်များမှ ဖုန်မှုန့်များ၊ဘွိုင်လာ ၊အရေးပေါ် မီးစက်များနှင့် ယာဉ်အသွားအလာမှ ထွက်သော မီးခိုးများ	<ul> <li>လေညစ်ညမ်းမှုများကိုထိန်းချုပ်ခြင်း၊ ယာဉ်များ၊ မီးစက်များ၊ ဘွိုင်လာ နှင့် စက်ပစ္စည်းများကို ပုံမှန်စစ်ဆေးခြင်း။</li> <li>ယာဉ်များ၊ ကွန်ပရက်ဆာ၊ ဘွိုင်လာ၊ မီးစက်များကို ကောင်းမွန်စွာထိန်းသိမ်းခြင်း။</li> <li>ဘွိုင်လာမှ မီးခိုးထွက်ရှိမှုများကို စစ်ပေးသည့်အိတ်များတပ်ဆင်စေခြင်း၊မီးခိုးခေါင်းတိုင်များ တပ်ဆင်စေခြင်း။</li> </ul>
ရေအရည်အသွေး	အဝတ်အထည်ချုပ်လုပ်ခြင်းလု ပ်ငန်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
မြေအရည်အသွေး	အင်ဂျင်ဆီများ၊ ဒီဇယ်ဆီများသိုလှောင်ခြင်းနှင့် ဖိတ်ယိုခြင်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
ဆူညံသံနှင့် တုန်ခါမှု	ကုန်ပစ္စည်းထုတ်လုပ်သည့်လုပ်င န်းများမှ စက်ပစ္စည်းများမှ ဆူညံသံများထွက်ခြင်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
ကုန်းနေ အပင်နှင့် သတ္တဝါများ၊ ရေနေသတ္တဝါများ	အထည်ချုပ်လုပ်ငန်းလုပ်ဆောင်ြ ခင်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
မီးဘေးအွန္တရာယ်	လျပ်စစ်တပ်ဆင်ရာတွင် စနစ်တကျတပ်ဆင်မှု မရှိခြင်း ကုန်ကြမ်းပစ္စည်း စွန့်ပစ်ခြင်း၊ ဓာတုပစ္စည်း သိုလှောင်ခြင်း။	<ul> <li>စက်ရုံ၏မီးဘေးအန္တရာယ်ကာကွယ်ရန်အတွက် မီးသတ်ဗူး၊ မီးသတ်ပိုက်၊ မီးသတ်ခေါင်း များထားရှိခြင်း။</li> <li>မီးသတ်ဆိုင်ရာစက်ပစ္စည်းကိရိယာများကိုပုံမှန်စစ်ဆေးခြင်း၊ အရေးပေါ် အခြေနေအတွက် မီးသတ်ရေကန်အဆင်သင့်ထားရှိခြင်း။</li> <li>စက်ရုံအတွင်းအရေးပေါ် အချက်ပေးစနစ်များထားရှိခြင်း။</li> <li>စက်ရုံအတွင်းအရေးပေါ် အချက်ပေးစနစ်များထားရှိခြင်း။</li> <li>အရေးပေါ် ထွက်ပေါက်များတစ်လျှောက်တွင် ကုန်ပစ္စည်းများပိတ်ဆို့ခြင်းမရှိအောင်ရှင်းလင်းထားရှိခြင်း။</li> </ul>
လုပ်ငန်းခွင် ဘေးအွန္တရာယ်	စက်ပစ္စည်းများလည်ပတ်ခြင်းြေ ကာင့် မတော်တဆထိခိုက်မှုများဖြစ်ပေ ါ်နိုင်ခြင်း။ ပစ္စည်းတင်ချပြုလုပ်ခြင်း၊	<ul> <li>အရေးပေါ် အခြေအနေများအတွက် စက်ပစ္စည်းကိုင်တွယ်မှုသင်တန်းပေးခြင်း၊ ကြက်ခြေနီသင်တန်းပေးခြင်း၊ မီးသတ်သင်တန်းပေးခြင်း။</li> <li>လုပ်ငန်းခွင်တွင်း အလုပ်သမားများ အလင်းရောင်ကောင်စွာရရှိစေရန်နှင့် အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကိ</li> </ul>

အုပ်စုများ	သက်ရောက်မှု အရင်းအမြစ်	လျော့ရျရေးနည်းလမ်းများ
	ဖြတ်တောက်ခြင်း၊ ရောနှောခြင်း၊ ဖိနှိပ်ခြင်း၊ ထုတ်ပိုးခြင်း။ ရေနွေးငွေသုံးမီးပူများကြောင့် မတော်တဆထိခိုက်မှုများဖြစ်ပေ ၂်နိုင်ခြင်း။	လုံလောက်စွာထားရှိခြင်း။ • အလုပ်သမားများအတွက်တစ်ကိုယ်ရေကာကွယ်ရေးသုံးပစ္စည်း များဖြစ်သည့် နားကြပ်၊ လက်အိတ်၊ ဦးထုပ်၊ မျက်မှန် များ အသုံးပြုစေခြင်း။ • လျှပ်စစ်အွန္တရာယ်မဖြစ်စေရန် နှင့် ပြုပြင်ထိန်းသိမ်းမှုများ ပြုလုပ်ရန်အတွက် ဝန်ထမ်းထားရှိ၍ ပုံမှန်စစ်ဆေးခြင်း။
ကျန်းမာရေး	အရေးပေါ် မီးစက်များမှ ဆူညံသံများထွက်ပေါ် လာခြင်း။	<ul> <li>လုပ်သားများအတွက်ကျန်းမာရေးမထိခိုက်စေရန် ရေမြောင်းများကိုစနစ်တကျထားရှိခြင်း။</li> <li>လုပ်သားများအတွက် ရှစ်နာရီအတွင်းလက်ခံနိုင်သည့်အာမြင့်ဆုံး ဆူညံမှု နှုန်းမှာ 90dB(A) ဖြစ်သည်။ အသံဆူညံမှုအမြင့်ဆုံးနေရာများတွင် နားကြပ်များ တပ်ဆင်စေခြင်း။</li> </ul>
စွန့်ပစ်အစိုင်အခဲများ	ကုန်ထုတ်လုပ်သည့်နေရာမှထွ က်ရှိသော ပိတ်အပိုင်းအစများ။ ကုန်ပစ္စည်းထုတ်ပိုးခြင်းမှထွက် ရှိသော အပိုင်းအစများ။ မီးဖိုချောင် လူနေဆောင် ရုံးခန်းမှတွက်ရှိသောအမှိုက်များ။	<ul> <li>စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း။</li> <li>သတ်မှတ်ထားသောနေရာတွင် အမှိုက်စို၊ အမှိုက်ခြောက်များခွဲခြားစွန့်ပစ်ခြင်း။</li> <li>အမှိုက်များကို ရန်ကုန်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။</li> </ul>
စွန့်ပစ်အရည်	မိလ္လာစနစ်ထားရှိခြင်း။ ရုံးခန်း၊ မီးဖိုချောင် နှင့် လူနေဆောင်များမှ စွန့်ပစ်အရည်များတွက်ရှိခြင်း။	• ဆီကန်၊ မိလ္လာကန်များ ကိုပုံမှန်စစ်ဆေးခြင်း၊ သန့်စင်ခြင်းများပြုလုပ်ခြင်းဖြင့် စွန့်ပစ်အရည်များ စိမ့်ဝင်မှုများကိုလျော့ကျစေနိုင်ခြင်း။
အန္တရာယ်ရှိစွန့်ပစ်ပစွ ည်းများ	မော်တော်ယာဉ်များ စက်ပစ္စည်းများ ပြုပြင်ထိန်းသိမ်းခြင်းမှ ဆီများတွက်ရှိခြင်း။	<ul> <li>အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများသိုလှောင်မှု အားထိန်းသိမ်းခြင်း စစ်ဆေးခြင်း။</li> <li>လုပ်ငန်းခွင်ကျန်းမာရေး လုံခြုံမှုနှင့်ပတ်ပန်းကျင်ဆိုင်ရာ လိုအပ်ချက်များ နှင့်ကိုက်ညီမှုရှိစေရန် ဓာတုပစ္စည်းများကို စနစ်တကျစွန့်ပစ်ခြင်း။</li> <li>ဓာတုပစ္စည်းသိုလှောင်သည့် ပုံးခွန်များကို စနစ်တကျပြန်လည်အသုံးပြုခြင်း (သို့မဟုတ်) စနစ်တကျစွန့်ပစ်ခြင်း။</li> <li>အန္တရာယ်ရှိစွန့်ပစ်ဝစ္စည်းများကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေး ကော်မတီ (သို့မဟုတ်) လိုင်စင်ရ အမှိုက်စွန့်ပစ်ရေးဆိုင်ရာအဖွဲ့အစည်းများ (ဥပမာ Bago Clean or Bago Municipal) နှင့်ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။</li> </ul>

လုပ်ငန်းလည်ပတ်စဉ်ကာလတွင် သတ်မှတ်ချက်များမှာ သတ်မှတ်ချက် အလယ်အလတ် ၃ခု (မီးဘေးအန္တရာယ်၊ လုပ်ငန်းခွင်ဘေးအန္တရာယ်၊ စွန့်ပစ်အစိုင်အခဲ)၊ နိမ့် သတ်မှတ်ချက် ၂ခု (လေထုအရည်အသွေး၊ အလွန်နိမ့်သတ်မှတ်ချက် ၄ခု (ရေထုညစ်ညမ်းမှု၊ စွန့်ပစ်အရည်) နှင့် ဆူညံသံ၊ ကျန်းမားရေးနှင့် အန္တရာယ်ရှိစွန့်ပစ်အမိုက်) များနှင့် လုပ်ငန်းပိတ်သိမ်းစဉ်ကာလတွင် သတ်မှတ်ချက်များမှာ အလွန်နိမ့် (စွန့်ပစ်အမှိုက်နှင့် အွန္တရာယ်ရှိစွန့်ပစ်အမှိုက်) နှင့် နိမ့်သတ်မှတ်ချက် ၅ခု (လေထုအရည်အသွေး၊ ရေထုညစ်ညမ်းမှု၊ မြေဆီလွှာညစ်ညမ်းမှု၊ ဆူညံသံနှင့် လုပ်ငန်းခွင်ဘေးအန္တရာယ်) တို့တွေ့ ရှိရပြီး ၎င်းအားပုံနှင့်နိုင်းယှဉ်ဖော်ပြထားပါသည်။



အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများ နိုင်းယှဉ်ပြပုံ

# လူထုတွေ့ဆုံပွဲ အကျဉ်းချုပ်

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်တွင် စက်ရုံ၏ EMP အစီရင်ခံစာ အကြောင်းကို ရှင်းလင်းတင်ပြခြင်းဖြစ်သည်။ တွေ့ဆုံပွဲကို ၆ ရက်၊ မတ်လ၊ ၂ဂ၂ဂ ခုနှစ်တွင် ဦးပိုင် အမှတ်(၁ဂ/၁+၁၁/၄) ၊ ကွင်းအမှတ် (၆၄၉) ၊ ကလိအရှေမြောက်ကွင်း ၊ ကလိ(တပ်ကလေး)ကျေးရွာအုပ်စု ၊ ပဲခူးမြို့နယ် ၌ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲတွင် စက်ရုံ၏သက်ဆိုင်ရာပုဂ္ဂိုလ်များ၊ အစိုးရအဖွဲ့ရုံးများဖြစ်သော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန၊ စက်မှုကြီးကြပ်နှင့် စစ်ဆေးရေး ဦးစီးဌာန၊ ပတ်ဝန်း ကျင်ထိန်းသိမ်းရေးနှင့် သန့်ရှင်းရေးဌာ အစရှိသော သက်ဆိုင်ရာဌာနများ၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲ မှုကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကိုပါ ထည့်သွင်းဖော်ပြထားပါသည်။

အချိန်	သောကြာနေ့၊ ၆ ရက်၊ မတ်လ ၊ ၂ဂ၂ဂ။	
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နေရာ	ဦးပိုင် အမှတ်(၁၀/၁+၁၁/၄) ၊ ကွင်းအမှတ် (၆၄၉) ၊ ကလိအရှေ့မြောက်ကွင်း ၊ ကလိ(တပ်ကလေး)ကျေးရွာအုပ်စု ၊ ပဲခူးမြို့နယ် ၊ ပဲခူးတိုင်းဒေသကြီး။
အစီအစဉ်အကျဉ်း	<ul> <li>စက်ရုံနောက်ခံအကြောင်း</li> <li>စက်ရုံလုပ်ငန်းအကြောင်း</li> <li>ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျှော့ချရေးအစီအစဉ်</li> <li>ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်</li> <li>အမေးအဖြေကက္က</li> </ul>

# (အသေးစိတ်ကို အခန်း ၆ တွင် ဖော်ပြထားပါသည်)

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

အဆိုပြုစီမံကိန်းသည် ရရှိလာသော အကျိုးအမြတ်၏ ၂% ကို လူမှုဖူလုံရေးလုပ်ငန်းများတွင် သုံးစွဲသွားမည် ဖြစ်ပါသည်။

စဉ်	အကြောင်းအရာ	လှူဒါန်းမှု ရာခိုင်နှုန်း
ЭII	စာသင်ကျောင်းများ	ပ.၅%
اال	သင်တန်းကျောင်းများ	ე%
91	ဂန်ထမ်းများ၏ ကျန်းမာရေးစောင့်ရှောက်မှု	റ.൭%

Sudev	/ Industrial	Mvanmar		Limited ຈຳ	လထအက်	ရှူးပြုလုပ်င	န်းများဆောင်	ရက်မသ်	အစီအစ	Sc
Jude	maasalali	ryanna	company				မာများမလာဘ		300300	Υ

စက်ရုံအတွက် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာလုပ်ဆောင်ချက်များသည် စက်ရုံသို့ကွင်းဆင်းလေ့လာခဲ့သော ကျွမ်းကျင်ပညာရှင်များမှ စက်ရုံ၏ဆောင်ရွက်ချက်များ၊ စက်ရုံဂန်ထမ်းများ၊ နယ်ပယ်ဆိုင်ရာအဖွဲ့ အစည်းများ၏ အမြင်များ နှင့် စက်ရုံမှ သက်ဆိုင်သူများ၏တိုင်ပင်ဆွေးနွေးအကြံပြုချက်များအပေါ် အခြေခံ၍ ရေးဆွဲပြင်ဆင်ထားပါသည်။ ဖြစ်နိုင်ချေရှိသော ပတ်ဂန်းကျင်ထိခိုက်မှုများအပေါ် မူတည်၍ လိုအပ်သည့် သဘာပပတ်ဂန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုလုပ်ဆောင်ချက်များမှာ အောက်ပါအတိုင်းဖြစ်ပါသည်။ ၂။ ဆူညံသံဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၃။ မီးဘေးအန္တရာယ် စီမံခန့်ခွဲမှုအစီအစဉ်

၅။ အစိုင်အခဲစွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲမှုအစီအစဉ်

၆။ စွန့်ပစ်အရည် (ရေဆိုး) စီမံခန့်ခွဲမှုအစီအစဉ်

၇။ အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲမှုအစီအစဉ်

အကြံဉာဏ်များကိုရယူပြီး အစီအရင်ခံစာတွင် ဖော်ပြထားပါသည်။

၁၀။ သင်ကြားပို့ချမှု အစီအစဉ်

Myanwei Environmental Solutions Co., Ltd.

၈။ အရေးပေါ် အခြေအနေဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၉။ သဘာဂပတ်ဂန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုခြင်းနှင့် အစီရင်ခံခြင်း

အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊

နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ

စီမံခန့်ခွဲမှု အလေ့အကျင်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု

အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။ စီမံကိန်းနှင့် သက်ဆိုင်သူများအား စီမံကိန်းဆိုင်ရာ

အကြောင်းအရာများ ရှင်းလင်းတင်ပြခြင်း၊ အကြံပြုချက်များနှင့် ဆွေးနွေးတင်ပြလာသည့်

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၄။ လုပ်ငန်းခွင်ဘေးအန္တရာယ်ကင်းရှင်းရေနှင့် ကျန်းမာရေးဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

**Environmental Management Plan** 

သဘောထား

### EXECUTIVE SUMMARY

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

The project is new investment for manufacturing of Garment on Contract Manufacturing Process (CMP) basic company from China. The project is issued by the Bago Region Investment Committee (BRIC) on 28 June 2019 with the Endorsement No. (BGO- 020/2019). BRIC asked for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing of Garment under the name of Sudey Industrial Myanmar Company Limited as a solely owned foreign investment from the China.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. (Bago/EIA) (2567/2019) on 24 December 2019. Therefore, Sudey Industrial Myanmar Company Limited commissioned Myanwei Consulting Company Limited for EMP report study.

Investor Name:	Mr. Yuan Zhongheng	
ID No.:	E 18821329	
Citizenship:	Chinese	
Address of Registration office:	21 Ningnan Street,501,Building A,Yuhua District,Nanjing,China.	

### Information of Investor

### Salient Features of the Proposed Project

Type of Proposed Business	Manufacturing of Garment on CMP basic
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	7.01 Acres (28368.46 sq meter)
Total building area	Three Building Two Factory Buildings (152 x 54 x 12) m One Hostel (52 x 16.4 x 6.6) m

Land lease year	50 years
Construction period	2 years
Address	U Paing No (10/1+11/4), Plot No.(649), Kali(TatKalay)Village, Bago Region.
Contact person	09-688113101 Thurein(Admin Manager)

Includes the scope of the study of proposed project, EMP study objective and responsibility of EMP expert team of Myanwei Environmental Solutions Company Limited and also described about of objective of Environmental Management Plan.

The brief summary of relevant national environmental legislations such as Environmental Impact Assessment Procedure (2015) and National Environmental Quality (emission) Guidelines, established by the Ministry of Natural Resources and Environmental Conservation (MONREC) and overview of current local and international environmental and social policies including related international or regional convention for the proposed project. These are as follow:

- 1. Environmental Conservation Law, 30 March 2012
- 2. Environmental Conservation Rules, 2014
- 3. Environmental Impact Assessment Procedure (December 2015)
- 4. National Environmental Quality (Emission) Guideline (NEQG) (December 2015)
- 5. National Environmental Policy of Myanmar (2019)
- 6. Foreign Investment Law, 2012
- 7. Foreign Investment Rule, 2013
- 8. Myanmar Investment Rule, 2017
- 9. Payment of Wages Law (2016)
- 10. Bago Municipal Law (2016)
- 11. The Amended Law for Factories Act, 1951 (2016)
- 12. The Private Industrial Enterprise Law, 1990
- 13. The Export and Import Law (2012)
- 14. The Prevention of Hazard from Chemical and Related Substances Law, 2013
- 15. Underground Water Act
- 16. Myanmar Fire Brigade Law (2015)
- 17. The Electricity Law (2014)
- 18. Labor Dispute Settlement Law (28 March 2012 replacing 1929 version)
- 19. The Employment and Skill Development (2013)
- 20. The Worker's Compensation Act, 1923
- 21. The Payment of Wages Act, 1936
- 22. The Leave and Holidays Act, (1951, partially revised in 20140
- 23. The Minimum Wage Law (2013)
- 24. Public Health Law (1972)
- 25. Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)
- 26. Occupational Safety and Health Law (2019)
- 27. The Law on Standardization
- 28. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဝတ္တုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)
- 29. Myanmar Insurance Law (1993)

### 30. The Conservation of Water Resources and River Law (2006)

And occupational health and safety guideline is referenced from International Finance Corporation (IFC) guidelines. Sudey Industrial Myanmar Company Limited is commitment and complied for environmental prevention and EMP.

Sudey Industrial Myanmar Company Limited is located at U Paing No (10/1+11/4), Plot No.(649), Kali(TatKalay)Village, Bago Region. The total area of project site is 7.01 acres (28368.46 sq meter). Main structure is designed into office area for one building and QC department, cutting section, sewing department and iron department for other building. Transformer room and generator room are separated by main factory building structure.



96° 29' 24" E 96° 29' 42" E 96° 30' 0" E 96° 30' 18" E 96° 30' 36" E 96° 30' 54" E 96° 31' 12" E 96° 31' 30" E 96° 31' 48" E

Location Map of Proposed Project



1.Security Gate 2.Ferry Gate 3.Office 4.Canteen 5.Water Tank 6.Boiler room and Generator Room 7.Toilets 8.Sewing and Cutting Area 9.Warehouse 10.Operation Area

### **Factory Layout Drawing**

The main raw materials of Sudey Industrial Myanmar Company Limited is fabric and other relatively raw material are export form china which are stored in factory warehouse.



**Raw Storage Photo** 

The main products of the Sudey Industrial Myanmar factory are jackets, coats and shorts,etc. The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for domestic use. Electric power is used for the purpose of to run the steam boiler and to provide lighting. Sudey Industrial Myanmar Company Limited

#### **Environmental Management Plan**



### **Production Process**

Production rate of Sudey Industrial Myanmar Company Limited is produced between first year of operation and (10) years operation as 1,607,000 to 1,734,000 pieces annually. It's required of work force (21) foreign technicians and 1541 local employees for first year operation to (10) years operation. Moreover, the factory is installed and upgrading for operation with current 1523 employees during our site survey for EMP report. Sudey Industrial Myanmar Company Limited is using ground water for both industrial and household purpose, which is supplied by deep tube well. The factory also has generators for electricity generation. The fuel used in the industry is Diesel. The sanitary liquid waste of the factory is stored in septic tank.



#### **Product Photos**

For environmental baseline, data were collected by onsite measurements analysis during operation phase on 3 February 2020. On-site measurement was taken by indoor temperature, humidity, noise level and operation light condition at the factory. Moreover, secondary data collection of proposed project site area such as socio-economic condition, physical/ biological environment, weather data were collected from official township data was obtained from Regional Data of Bago Township.

### Survey Result in Proposed Project

Туре	Result	
Weather Condition		
Indoor temperature	34.6 °C	

Sudey Industrial Myanmar Company Limited

### **Environmental Management Plan**

Humidity	34.8 %		
Noise level			
Sewing section	73.83 dBA		
Air Quality			
PM 10	44.4		
PM 2.5	34.4		

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

### Impact Assessment Parameter and Its skill

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

### **Evaluation of Significant Impacts and Mitigation Measure on Operation Phase**

Categories	Source of Impact	Impact Significance	Mitigation Measure
Air	<ul> <li>Dust and GHGs emission from vehicles used for transporting raw materials and final products</li> <li>Emission from emergency diesel generator, boiler and vehicle movement</li> </ul>	Low	<ul> <li>To control air pollution, the vehicles, generators, boiler and machineries have to check and maintain regularly.</li> <li>Ensuring vehicles, compressor, boiler and generator are well maintained.</li> <li>Smoke emission should be fitted with the bag filter.</li> </ul>

Categories	Source of Impact	Impact Significance	Mitigation Measure
Water	<ul> <li>Dormitory Cleaning and Kitchen</li> </ul>	Very Low	No Mitigation measures
Soil	<ul> <li>Engine oil leaks, spills at diesel storage and during fuel refueling.</li> </ul>	Insignificant	No Mitigation Measure
Noise and Vibration	<ul> <li>Generating noise from the production machinery</li> </ul>	Very Low	No Mitigation Measure
Flora and fauna on terrestrial and aquatic life	Operation of the garment factory	Insignificant	No Mitigation Measure
Fire	<ul> <li>Poor electrical installations</li> <li>Waste disposed area raw materials</li> </ul>		• To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases.
		Moderate	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.
			• 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	<ul> <li>Accidental cases cause by operating machines.</li> <li>Unloading, cutting, and packaging</li> </ul>		• First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.
	<ul> <li>Accidental cases of thermic fluid heater</li> </ul>	Moderate	• According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers.
			• Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department.
			• To prevent electric shock hazards, electrical maintenance staff

Categories	Source of Impact	Impact Significance	Mitigation Measure
			(handyman) is to be assigned to do regular inspections and take preventive measures.
Health	<ul> <li>Influx of people</li> <li>Noise from the generating of the emergency generators</li> </ul>	Very Low	<ul> <li>Manage the drainage systems of the factory to prevent health risk of the workers.</li> <li>The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.</li> </ul>
Solid Waste	<ul> <li>Residual pieces of fabric scraps from the production lines</li> <li>Waste from packaging materials</li> <li>Waste from kitchen, dormitory and office.</li> </ul>	Moderate	<ul> <li>Provides separate garbage bins at each building.</li> <li>All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area</li> <li>Final wastes should be disposed by using Bago Municipal's service.</li> </ul>
Liquid Waste	<ul> <li>Septic system and sewage.</li> <li>Domestic liquid waste disposal from office, kitchen and dormitory.</li> </ul>	Low	• 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.		<ul> <li>Proper inspection and maintenance in storage of hazardous waste.</li> <li>Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements.</li> </ul>

Very Low	•	The empty chemical containers will hand over to suppliers for recycle or appropriate disposal
	•	The hazardous wastes are

transported by specially licensed carriers and disposed in a licensed faculty (eg., Bago Clean and Bago Municipal)

### Evaluation of Significant Impacts and Mitigation Measure on Decommissioning Phase

Environmental	Project Activities	Impact	Mitigation Measure
		1	

Impact		Significance	
Air pollution	<ul> <li>Demolish of buildings and related materials</li> <li>Transportation of demolished materials</li> </ul>	Low	<ul> <li>Spray water twice a day</li> <li>Cover mesh trap around the decommission area</li> <li>Install shading net about 2 meters above temporary fence of decommission area</li> <li>Carry broken material with cover by canvas.</li> </ul>
Water pollution	<ul> <li>Sewage form decommissioning workers</li> <li>Demolition machinery equipment</li> </ul>	Low	<ul> <li>Systematically demolish the septic tanks.</li> </ul>
Soil Contamination	<ul> <li>Demolish of buildings and related materials</li> <li>Transportation of demolished materials</li> </ul>	Low	<ul> <li>Manage the spillage of oil and diesel and sewage.</li> </ul>
Noise Pollution and Vibration	<ul> <li>Decommission activities</li> <li>Transportation of demolished materials</li> </ul>	Low	<ul> <li>Carry out the activities during day time.</li> <li>Maintain the machines and vehicles to reduce noise pollution.</li> <li>Provide the ear plugs to the workers.</li> </ul>
Waste disposal	<ul> <li>Demolished debris such as bricks, concrete materials</li> </ul>	Very Low	<ul> <li>Recyclable materials and dispose to the define areas.</li> </ul>
Hazardous waste	Used lubricants from decommissioning vehicles and machines	Very Low	Manage the disposal way of hazardous waste.
Occupational Health and Safety (Accidents, Injuries)	<ul> <li>Decommissioning activities</li> <li>Transportation of demolished materials</li> </ul>	Low	<ul> <li>Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board.</li> <li>Clean up excessive waste debris and liquid spills regularly.</li> <li>Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.</li> </ul>

The assessment of each impact is based on consideration of the magnitude, duration, extent and probability of activities, which are going to be carried out during operation phases. In operation phase, there are 3 moderate significance impact on environment and human (Fire, occupational health and safety and hazardous waste). 2 low significant impacts on environment and human (air and liquid waste). 4 very low significant impact on environment and human (water pollution, noise and vibration, health and hazardous waste). In decommissioning phase 2 very low significant impact on environment and human (waste disposal and hazardous waste). 5 low significant impacts on environmental and human (air, water pollution, soil contamination, noise and vibration and occupational health and safety). Significance impacts on environmental and human and detail impact assessment for operation phases and decommissioning can be seen in above tables. All of the impacts during operation phases

and decommissioning phase can be minimized by using mitigation measures and implementing Environmental Management Plan.



**Comparison of Impact Significant of Proposed Project** 

Negative impacts and mitigation measures of the proposed factory were taken into consideration during the study. The significant sources of gas emission from emergency generator and transportation vehicles will be mitigated by using maintaining system in the operation process. 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. the appropriate water conservation plan should be implemented. Sudey Industrial Myanmar Company Limited also has an agreement services with Bago Municipal for waste disposal facilities to collect the production waste, office waste and domestic waste. Monitoring should be designed and implemented by accredited professionals, as part of an occupational health and safety-monitoring program.

### **Summary of Public Consultation**

This chapter presents results of public consultation and information disclosure conducted for the Sudey Industrial Myanmar factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made. Public consultation during preparation of EMP report was conducted on 6, March, 2020 following the EIA procedure. The project's stakeholders in this category are key officials or representatives of the regional and local authorities who have direct responsibilities for the administration of the EMP process for environmental and social clearance and issuing operation permits for proposed development projects. For this factory, relevant key offices at the national level are Environmental Conservation Department Bago (ECD) and Industry Supervision and Inspection Department. Relevant key office at the regional level is Bago Municipal, General Administrative Department, Fire Department, Factories and General Labor Law Inspection Department, Public Health Department, Industrial Supervision and Inspection Department.

Time and Date Friday, 6 March 2020

	10:30-12:30		
Venue	U Paing No (10/1+11/4),Plot No.(649),Kali(TatKalay)Village,Bago Region.		
Agenda	Presentation on the Background Information of Project,		
Project Description,			
	<ul> <li>Impact Assessment, Environmental Mitigation</li> </ul>		
<ul> <li>Environmental Management Plan and Monitoring Plan</li> </ul>			
	Received and Answer from feedback of participants		

The Environmental Management Plan (EMP) formulated with the anticipated impacts, mitigation measures, management and monitoring plans during all phases are implemented. Sudey Industrial Myanmar Company Limited has organized Environmental Management Team to accomplish these plans and to review EMP regularly for improvements and modifications. Ambient air quality, noise, water quality, sewage and solid waste disposal are monitored by Team Leaders of Committee. The project proponent has performed Corporate Social Responsibility (CSR) plan and Emergency Preparedness for the benefits of residents and local community.

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

### CSR plan of Sudey Industrial yanmar Company Limited.

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

The environmental management action for the factory 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 action based upon the potential impacts of activities:

- 1. Air pollution/Dust Management plan
- 2. Noise Management Plan
- 3. Fire Management Plan
- 4. Occupational Safety and Health Management Plan
- 5. Solid Waste Management plan
- 6. Liquid Waste Management Plan
- 7. Hazardous Waste Management Plan
- 8. Emergency Management plan
- 9. Environmental Monitoring Schedule and Reporting
- 10. Capacity Building and Training Plan

In Conclusion, the environmental management practices, procedures and responsibilities are defined here in to get full compliance with the existing environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar. All the feed backs, desired and needs of local public recorded in public consultation meetings are well addressed and incorporated in formulation of

EMP. It has been figured out that, the proposed garment factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socioeconomic 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 Bago Municipal rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

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

Environment Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented in this chapter needs to be implemented by the proposed expansion of Sudey Industrial Myanmar Factory. The Environment Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the industry specific control measures, the proposed industry should adopt following guidelines. Ministry of Natural Resources and Environmental Conservation said that nine sectors are now obliged to undertake EMP.

# 1.1. PROJECT BACKGROUND

The project is new investment for manufacturing of garments on Contract Manufacturing Process (CMP) basic company from China. The project is issued by the Bago Region Investment Committee (BRIC) with Endorsement No. (BGO-020/2019) on 28 June 2019. BRIC asks 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 under the name of Sudey Industrial Myanmar Company Limited as a solely owned foreign investment from the China.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No.(Bago/EIA) (2567/2019) on 24 December 2019. Therefore, Sudey Industrial Myanmar Company Limited commissioned Myanwei Environmental Solution Company Limited for EMP report study.

# 1.1.1. Project Proponent Profile

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

Investor Name:	Mr. Yuan Zhongheng
ID No.:	E 18821329
Citizenship:	Chinese
Address of Registration office:	21 Ningnan Street, 501, Building A, Yuhua District, Nanjing, China.

# Table 1-1Information of Investor

# 1.1.2. Investment Plan and Salient Features of the Project

The estimated authorized capital investment is 4.838 million US Dollar (Table 1-2). Organization chart of Sudey Industrial Myanmar Company Limited is presented in Figure 1-1.

Table 1-2	Salient features of the project
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Type of Proposed Business	Manufacturing of Garment on CMP basic
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Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	7.01 acres
Total building area	Three Building Two Factory Buildings (152 x 54 x 12) m One Hostel (52 x 16.4 x 6.6) m
Land lease year	50 years
Construction period	2 year
Address	U Paing No (10/1+11/4), Plot No.(649), Kali(TatKalay)Village, Bago Region.
Contact person	09-688113101 Thurein(Admin Manager)



Figure 1-1 Organization Chart of Sudey Industrial Myanmar Company Limited

# 1.1.3. Environmental Consultant Profile

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

Table 1-3   Member of EMP study team		
Member List	Responsibility	
Dr. Hein Lynn Aung (Director)	Health Impact Assessment, Mitigation and Monitoring	
M.B, B.S (Yangon),	Report Reviewing	
Master of Management from Australia		
Mr. Lin Htet Sein (Environmental	Base Line data collecting management, Project description, legal	
Consultant)	assessment, impact assessment, mitigation measure, monitoring	
MSc (Regional Geology)	plan, report preparation and reviewing	
BSc (Hons) Geology		
Mr. Nyein Chan Siat Linn Myo (Fire Safety	Industrial management assessment, fire safety training and	
Manager)	management study	
BSc Physics		
DMEI (Diploma in Mechanical		
Engineering) (UK) (INTI)		
Mr. Sai Poeng Saing Kham (Member)	Report writing, secondary data study	
B.A History		
Ms. Nan Htet Myintzu	Report writing, secondary data study	
BSc (Hons) Geology		
Mr. Sai Thiha Maung	Baseline data monitoring, site surveying,	
BSc Geology	Communication with stakeholder in project area	
Mr. Kyaw Win Han (Member)	Baseline data monitoring, site surveying	
B.E. Chemical Engineering	Communication with stakeholder in project area	
B. Tech Chemical Engineering		
Mr. Aung Kyaw Moe (Member)	Report writing, secondary data study	
B.E. Chemical Engineering		
B. Tech Chemical Engineering		
Mr. Saw Yan Naung (Member)	Baseline data monitoring, site surveying,	
B.E. Chemical Engineering	Communication with stakeholder in project area	
B. Tech Chemical Engineering		
Mr. Myat Ko Ko (Member)	Baseline data monitoring, site surveying,	
B.Sc.(Hons) Geology	Communication with stakeholder in project area	
M.Sc.Geology (Economic and Mining)		
Ms. Ei Ei Khin Myo	Report writing, secondary data study	
B.Sc. Geology		



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# 1.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the P-D-C-A cycle (Figure 1-2). Environmental management consists of four related tasks as described below:

Plan (P) – What need to be done

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

> Do (D) – Implement the plan

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

> Check I – Monitor and evaluate the results of implementation

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

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

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



Figure 1-2 PDCA cycle

# 1.1.1. Institutional Requirement

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

### 1.1.2. 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:

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

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

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

# 1.1.3. 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 nonconformances with the EMP and require the HR supervisor to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP;

The 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 Environmental Management Plan (EMP) is prepared for the proposed project covers the anticipated impacts of the said project, mitigation measures, management and monitoring plans during the life of operation.



Figure 1-3	Organization Structure	of Environmental	Management Plan
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### Table 1-4 Responsibilities of HSE members

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

Roles	Responsibilities	
HSE Officer	The HSE Officer will be the key person in charge of all environmental matters pertaining to t site. The HSE Officer will be responsible for:	
	<ul> <li>Coordinating the implementation of environmental programs, including monitoring of the project site environmental performance</li> </ul>	
	<ul> <li>Performing periodic internal environmental audits and inspections to ensure compliance with the legal environmental requirements</li> </ul>	
	<ul> <li>Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;</li> </ul>	
	<ul> <li>Carry out a thorough initial site inspection of environmental controls prior to work commencement;</li> </ul>	
	• Record and provide a written report to the General Manager and production team of non- conformances with the EMP and require the HR Manager to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.	

# 1.1.4. This EMP documents aims

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

# 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.

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.
Envir	onmental 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	<ul><li>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;</li><li>(d) to reclaim ecosystems as may be possible which are starting to degenerate and disappear;</li></ul>
	(e) to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;
Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities;
	(b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the
	environment;
	(c) To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances;
	(j) To prescribe the terms and conditions relating to effluent treatment in industrial estates and other necessary places and buildings and emissions

 Table 2-1
 List of Myanmar's Law relating to environmental management

	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	The Ministry may, with the approval of the Union Government and the	
Environmental Quality Standards: Section10	<ul> <li>(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;</li> </ul>	
	(b) water quality standards for coastal and estuarine areas;	
	(c) underground water quality standards;	
	(d) atmospheric quality standards;	
	(e) holse and vibration standards; (f) emissions standards:	
	(g) effluent standards;	
	(h) solid wastes standards;	
	(i) other environmental quality standards stipulated by the Union Government.	
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.	
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.	
Section 16	A person or organization operating business in the industrial estate or business in the SEZ or category of business stipulated by the Ministry:	
	(a) is responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste;	
	(b) shall contribute the stipulated users 'charge s or management fees for the environmental conservation according to the relevant industrial estate, SEZ and business organization;	
	(c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.	
Section 24	The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition include in prior permission, stipulated by the ministry, or not.	
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.	
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.	
Environmental Conservation Rules, 2014		
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from	

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	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 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.
Environmen	tal Impact Assessment Procedure (December 2015)
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (a) of paragraph 102.
	The project proponent has to support, after consulting with effected persons by project, relevant government organization, government department and other related persons, to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under sub-paragraph (b) of paragraph 102
	The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover, the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP and all conditions, under paragraph 103.
	The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104.
	The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105.
	The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106.
	The project proponent has to submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107.
	The project proponent has to submit the monitoring report dually or prescribed time by Ministry in line with the schedule of EMP, under paragraph 108.
	The project proponent has to prepare the monitoring report in accord with the rule 109.
	The project proponent has to show this monitoring report in public place such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy of this report, by email or other way which way agreed with the asked person, to any asked

	person or organization, under paragraph 110.	
	The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work-place of project and other work-place related to this project in any time, under paragraph 113.	
	The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirements related to social or environment or caused to it, under paragraph 115.	
	The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.	
Screening: Section 23	a) The project proponent shall submit the Project Proposal to the Ministry for Screening.	
	b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment.	
	c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1 _ Categorization of Economic Activities for Assessment Purposes ', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry:	
	i) An EIA Type Project, or	
	ii) An IEE Type Project, or	
	iii) A Non IEE or EIA Type, and therefore not required to	
National Environmer	Ital 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.	
Natio	nal Environmental Policy of Myanmar (2019)	
	Vision	
National Environmental Policy	A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar.	
Vision & mission	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	<ul> <li>(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.</li> <li>(b) Development of employment activities</li> <li>(l) Protection and conservation of the environment.</li> <li>(q) Appearing the required modern services for the Union and citizens.</li> </ul>	
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.	

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	(k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant Basis, 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;	
	Myanmar Investment Bules 2017	
Pule 202 The project properent has to comply with the conditions of the normality		
	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	
Bago Municipal Law (2016)		
အခန်း(၂)	၃။(က)ပြည်သူများကရွေးချယ်ပေးသည့် စည်ပင်သာယာရေးကော်မတီအဆင့်ဆင့်၏	
ရည်ရွယ်ချက်	ဦးဆောင်မှုဖြင့် မြို့၊ မြို့ပြ၊ ဒေသများ စဉ်ဆက်မပြတ်ဖွံ့ဖြိုးတိုးတက်၍ ပြည်သူများ၏ လူနေမှုအဆင့်အတင်းပြောင်းလဲတိုးတက်လာစေရန်။	
	(ခ)စည်ပင်သာယာရေးဆိုင်ရာ အခွန်အရပ်ရပ်ကို သတ်မှတ်စံနူန်းထားများအတိုင်း	
	အပြည့်အဂ ရရှိစေရန်နှင့် တာဂန်ယူမှု၊ တာဂန်ခံမှု၊ ပွင့်လင်းမြင်သာမှုရှိသည့် ပြည်သူဗဟိုပြု စီမံခန့်ခွဲမှုစနစ်ပေါ် ထွန်းလာစေရန်။	

အခန်း(၄)	၈။(င)စည်ပင်သာယာရေးနယ်နိမိတ်အတွင်းရှိ ဟိုတယ်ဇုန်၊ ကျောက်မျက်ဇုန်၊ စက်မှုဇုန်၊ မွေးမြူရေးဇုန် စသည့်လုပ်ငန်းသဘောသဘာဂ တူညီရာများ စုစည်းဆောင်ရွက်မည့်ဒေသများကို အစိုးရ အဖွဲ့၏ သတ်မှတ်ချက်နှင့်အညီ စီစဉ်ဖော်ထုတ်ရာတွင် ပါဂင်ဆောင်ရွက်ခြင်း၊ စီမံခန့်ခွဲခြင်း။	
အခန်း(၈)	၂၃။မြို့နယ်စည်ပင်သာယာရေးဌာနသည် ကော်မတီ၏ကြီးကြပ်မှုဖြင့် စည်ပင်သာယာရေးနယ်နမိတ်အတွင်းရှိ ရေတွင်း၊ ရေကန်၊ ရေမြောင်း၊ မိလ္လာအညစ်အကြေးတို့နှင့် စပ်လျဉ်း၍ အောက်ပါကိစ္စရပ်များကို သက်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းကမ်းများနှင့်အညီ လိုက်နာဆောင်ရွက်စေရန် ပိုင်ရှင် သို့မဟုတ် မြေပိုင်ရှင် သို့မဟုတ် လက်ရှိနေထိုင်သူအားညွှန်ကြားနိုင်သည်- (ဂ)စက်ရုံ၊ အလုပ်ရုံ၊ အဆောက်အအုံနှင့် မြေပေါ်မှစီးဆင်းသည်	
	ရေကြောင့်အများပြည်သူနှင့် သက်ဆိုင်သောလမ်းအားလည်းကောင်း၊ တစ်စုံတစ်ဦး၏ အိမ်ခြံမြေအတွင်းသို့လည်းကောင်း(ဥပမာ-သောက်ရေအိုးစင်၊ အများပြည်သူနားနေရန် ခုံတန်းလျား စသည့်) ထိခိုက်ပျက်စီးခြင်းမျိုးမရှိစေရန်နှင့် ရေစီးရေလာကောင်းမွန်စေရန် ရေတံလျှောက်၊ ရေဆင်းပိုက်၊ အုတ် ရေမြောင်းစသည်တို့ကို ပြုလုပ်စေခြင်း သို့မဟုတ် ပြုပြင်စေခြင်း။	
အခန်း(၁၉)	မည်သူမှု စည်ပင်သာယာရေး နယ်နိမိတ်အတွင်း မြို့နယ်၊ မြို့စည်ပင်သာယာရေးအဖွဲ့၏ ခွင့်ပြုချက်မရှိလျှင် သို့မဟုတ် ခွင့်ပြုချက်ပါ သတ်မှတ်ချက်များနင့်ဖြစ်စေ၊ ထုတ်ပြန်ထားသည့် စည်းကမ်းများနင့်ဖြစ်စေညီညွှတ်မှုမရှိလျှင်-	
	၆၆။မည်သူမှု စည်ပင်သာယာရေးနယ်နိမိတ်အတွင်း မြို့နယ်၊ မြို့စည်ပင်သာယာရေးအဖွဲ့၏ ခွင့်ပြုချက်မရှိလျှင် သို့မဟုတ် ခွင့်ပြုချက်ပါ သတ်မှတ်ချက်များနှင့်ဖြစ်စေ၊ ထုတ်ပြန်ထားသည့် စည်းကမ်းများနှင့် ဖြစ်စေညီညွှတ်မှု မရှိလျှင်-	
	(ဃ)အမှိုက်၊ မိလ္လာ၊ အညစ်အကြေး၊ ရေဆိုးရေပုပ် စသည်တို့ကို လမ်းပေါ် သို့မဟုတ် စွန့်ပစ်ရန် သတ်မှတ်မပေးထားသော နေရာတွင် စွန့်ပစ်ခြင်းမပြုရ။	
The J	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.	
Th	The Private Industrial Enterprise Law, 1990	
Basic Principles: Section 3	Private Industrial Basis shall be conducted in accordance with the following basic principles: -	
	<ul> <li>(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 Basis which are related to the industrial enterprise;</li> <li>(b) to economic matching the formulation the</li> </ul>	
	(b) to acquire modern technical know-how for raising the efficiency of industrial Basis 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 Basis;
	(e) to cause opening up of more employment opportunities;
	(f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution;
	(g) to cause the use of energy in the most economical manner.
The Export and Import Law (2012)	
Objectives	The objectives of this law are as follows:
	a) To enable to implement the economic principles of the State successfully.
	b) To enable to lay down the policies relating to export and import that supports the development of the State.
	c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards.

d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.

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

### The Prevention of Hazard from Chemical and Related Substances Law, 2013

This law was enacted with the objectives of:

a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances;

b. To supervise systematically in performing the chemical and related substances business with permission for being safety;

c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically;

d. To perform the sustainable development for the occupational safety, health and environmental conservation.

Regarding the chemical management and storage, currently, regulations governing chemicals management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.

### **Underground Water Act**

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

### Myanmar Fire Brigade Law (2015)

The Pyidaungsu Hluttaw enacted this law by Law No.11/2015 on the date of 17th March, 2015 with the following objectives:

(a) to take precautionary and preventive measures and loss of state own property, private property, cultural

heritage and the live and property of public due to fire and other natural disasters

(b) to organize fire brigade systemically and to train the fire brigade

(c) to prevent from fire and to conduct release work when fire disaster, natural disaster, epidemic disease or any kind of certain danger occurs

(d) to educate, organize and inside extensively so as to achieve public corporation

(e) to participate if in need for national security, peace for the citizens and law and order

Section-8 Fire Safety Procedures		
Rule17	The relevant Government Department or organization shall, for the purpose of precaution and prevention obtain the approval of the Fire Force Department before granting permission for the following cases:	
	a. Constructing three-storied and above buildings market and condominium buildings,	
	b. Operating hotel, motel, guest house enterprise	
	c. Constructing factory, workshop, storage facilities and warehouse	
	d. Operating business expose to fire hazard by using in inflammable materials or explosive materials	
	e. Producing and selling fire-extinguishing apparatuses	
	f. Doing transport business, public utility vehicles train, airplane, helicopter, vessel, ship, tonkin tug	
Rule18	The relevant government department or organization shall obtain the opinion of the Fire Services Department for the purpose of fire precaution and prevention, when laying down plans for construction for town, village and downtown or village development plans	
The Electricity Law (2014)		
In 2014, the new Electricity Law, commission, standards, inspection,	a comprehensive piece of legislation covering licensing, a new regulatory tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity	

commission, standards, inspection, tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity Law divides projects into "small" (up to 10 MW), "medium" (between 10 MW to 30 MW) and large (upwards of 30 MW); the states and regions can issue permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the Electricity Law, and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines in accordance with existing laws.

Boiler Law (2015)		
Chapter (2) Objective	The objectives of this law are as follows:	
	(a) To obtain boilers in compliance with Myanmar Standards or International Standards	
	(b) To prevent the country and citizens from hazards caused by boiler accidents	
	(c) To use boilers in compliance with Myanmar Standards or International Standards within the country	
	(d) To develop boiler technology and to produce experts capable of manufacturing, handling, repair, and maintenance of boilers	
	(e) To optimize the use of boilers through effective utilization of fuel energy	
	(f) To reduce the environmental, social and health impacts through long-lasting use of boilers.	
Chapter (3)	Notify the inspection methods and instructions according to the national or	
4. With the permission of the Ministry, the inspector general	international standards for safe operations of boilers in line with this law, procedures and instructions	
can:	Only the results obtained from the prescribed boiler standards and inspection methods will be approved.	

Chapter (4). Boiler Registration

	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.
	<ul><li>60. Nobody is allowed to repair a boiler without boiler repair certificate.</li><li>61. Nobody is allowed to maintain a boiler without boiler maintenance certificate.</li></ul>
	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 en- between employer and workers and by settling the dispute of employer a	acts this Law for safeguarding the right of workers or having good relationship I making peaceful workplace or obtaining the rights fairly, rightfully and quickly and worker justly.
	The Social Security Law (2012)
The Social Security Law, enacted formation and implementation of so	in 2012, was amended the Social Security Act in 1954. It stipulates the cial security systems.
Section 53(a)	The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Labor Dispute	Settlement Law (28 Mar 2012 replacing 1929 version)
This law was enacted for safeguar workers and making peaceful work of employer and worker justly. It stip the workplace coordinating commit employer.	ding the right of workers or having good relationship between employer and place or obtaining the rights fairly, rightfully and quickly by settling the dispute pulates that employer in which more than 30 workers are employed shall form the consisting of the representatives of workers and the representatives of
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

5. Anybody who would like to use a boiler in any kind of business should be

	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.	
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 or 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 Contro	ol 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 there of; 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 refuse and destruction there of by fire;	
	Construction and use of sanitary latrines;	
	Other necessary environmental sanitation measures.	
Occupational Safety and Health Law (2019)		
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;	
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.	
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.	
Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.	
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.	
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.	
	The law on Standardization	
Objectives	The Objectives of this Law are as follows:	
	to enable to determine Myanmar Standard	
	to enable to support export promotion by enhancing quality of production organizations and their product, production processes and services	

	to enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards	
	to enable to support protection of environment related to products, production process and services from impact, and conservation of natural resources	
	to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment	
	to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade	
	to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.	
Chapter 7 Taking Action by Committee No. 19	The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order:	
	warning suspending the certificate of certification for limited period	
	cancelling the certificate of certification	
လုပ်ငန်းခွင်သုံး	ပေါက်ကွဲစေတက်သောပတ္တုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ပတ္တုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်၊	
	ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအွန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊	
	လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတက်သော ဂတ္တုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ ကြီးကြပ်နိုင်ရန်။	
အခန်း ၇ တားမြစ်ချက်များ	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်းမပြုရ။	
အမှတ် ၁၈		
အမှတ် ၁၉ (စ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းနွင် ပေါက်ကွဲစေတက်သော ၊တ္တုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။	
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။	
The Motor Vehicles Law (2015)		
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles	
	<ul> <li>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.</li> </ul>	
The Conser	vation of Water Resources and Rivers Law (2006)	
Aims	The aims of this Law are as follows:	
	utilization by the public;	

	to smooth and safety waterways navigation along rivers and creeks;
	to contribute to the development of State economy through improving water resources and river system; to protect environmental impact.
Chapter 5 Prohibitions	No person shall:
No. 8	<ul> <li>(a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks.</li> </ul>
	(b) cause the wastage of water resources wilfully.
No. 10	No person shall anchor the vessels where vessels are prohibited from anchoring in the rivers and creeks.
No.11 (a)	No person shall: dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.
No. 12	No person shall carry out growing of garden, digging, filling, silt trapping, closing pond, dyke building or erecting spur in the river-creek boundary, bank boundary and waterfront boundary without the permission of the relevant government department and organization.
No. 15	No person shall carry out the construction of switchback, dockyard, wet dockyard, water-tight dockyard, building of jetty, pier, landing stage or vessel landing by drainage in the river-creek boundary, bank boundary and waterfront boundary without the permission of the Directorate.
The	Commercial Tax Law (1990) Amended 2014
Chapter 5 Registration and Intimation of Commencement of Enterprise 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimidation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly Payment of Tax and Sending of Three-Monthly Return 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
12 (b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if there is cause to consider that
	he has taxable proceed of sale or receipt from service within a year.
12 (c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may, based on the information received, estimate and claim the tax payable or the additional tax payable.
12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
12 (e)	The tax payable on goods imported under sub-section (c) of section 4 of the Law shall be collected together with the customs duties by the Customs Department in accord with the manner of collecting customs duties.

Based on the Myanmar Environmental Guidelines and International Best Practices, the ultimate Scoping Report for YCP was developed and got approval from ECD. Specifically, the Environmental Impact Assessment for this project will follow not only the national regulations such as the Environmental Conservation Law, Environmental Conservation Rules and relevant regulations of the Government of the Republic of the Union of Myanmar but also International Guidelines such as WHO standards, IFC Environmental Health and Safety Guidelines for environmental and social considerations.

# 2.2.1. IFC Environmental, Health and Safety (EHS) Guidelines (2007)

The World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines) are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). 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. The General EHS Guideline contains information on crosscutting Environmental, Health, and Safety issues potentially applicable to all industry sectors. It should be used together with the relevant industry sector guideline(s). When the host country (Myanmar) regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent.

# 2.2.2. IFC Guidelines on Water and Sanitation, (2007)

The EHS Guidelines for Water and Sanitation include information relevant to the operation and maintenance of potable water treatment and distribution systems, and collection of sewage in centralized systems (such as piped sewer collection networks) or decentralized systems (such as septic tanks subsequently serviced by pump trucks) and treatment of collected sewage at centralized facilities.

# 2.2.3. IFC Guidelines on Waste Management Facilities (2007)

The EHS Guidelines for Waste Management cover facilities or projects dedicated to the management of municipal solid waste and industrial waste, including waste collection and transport; waste receipt, unloading, processing, and storage; landfill disposal; physicochemical and biological treatment; and incineration projects. Industry-specific waste management activities applicable, for example, to medical waste, municipal sewage, cement kilns, and others are covered in the relevant industry-sector EHS Guidelines, as is the minimization and reuse of waste at the source.

# 2.2.4. WHO Guidelines for Drinking Water Quality (2011)

The WHO guideline on drinking water quality includes:

- Drinking-water safety, including minimum procedures and specific guideline values and how these are intended to be used;
- Approaches used in deriving the guidelines, including guideline values;
- Microbial hazards, which continue to be the primary concern in both developing and developed countries. Experience has shown the value of a systematic approach to securing microbial safety. It also builds on the preventive principles on ensuring the microbial safety

of drinking water through a multiple-barrier approach, highlighting the importance of source water protection;

- Climate change, which results in changing the water temperature and rainfall patterns, severe and prolonged drought or increased flooding, and its implications for water quality and water scarcity, recognizing the importance of managing these impacts as part of water management strategies;
- Chemical contaminants in drinking water, including information on chemicals not considered previously, such as pesticides used for vector control in drinking water; revisions of existing chemical fact sheets, taking account of new scientific information; and, in some cases, reduced coverage in the Guidelines where new information suggests a lesser priority;
- Those key chemicals responsible for large-scale health effects through drinking water exposure, including arsenic, fluoride, lead, nitrate, selenium, and uranium, providing guidance on identifying local priorities and management;
- The important roles of many different stakeholders are essential in ensuring drinking-water safety. This edition furthers the discussion introduced in the third edition of the roles and responsibilities of key stakeholders in ensuring drinking-water safety;
- Guidance in situations other than traditional community supplies or managed utilities, such as rainwater harvesting and other non-piped supplies or dual piped systems.

# 2.2.5. WHO Protecting Groundwater for Health (2006)

Groundwater is the water contained beneath the surface in rocks and soil and is the water that accumulates underground in aquifers. Groundwater constitutes 97 percent of global freshwater and is an important source of drinking water in many regions of the world. In many parts of the world, groundwater sources are the single most important supply for the production of drinking water, particularly in areas with limited or polluted surface water sources. For many communities, it may be the only economically viable option. This is in part because groundwater is typical of more stable quality and better microbial quality than surface waters. Groundwater often requires little or no treatment to be suitable for drinking whereas surface waters generally need to be treated, often extensively. There are many examples of groundwater being distributed without treatment. It is vital therefore that the quality of groundwater is protected if public health is not to be compromised.

# 2.3. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUIDELINES

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

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

# 2.3.1. General Guidelines

# 2.3.1.1. Air Emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in concentrations that reach or exceed national ambient quality guidelines and standards, or in their absence current World Health Organization (WHO) Air Quality 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.

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

Table 2-2WHO's air quality guideline

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

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

# 2.3.1.2. Wastewater

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

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

Table 2-3	Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (general
	application) <sup>1</sup>

Parameter	Unit	Guideline Values
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
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
рН	S.U.ª	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulphide	mg/l	1

<sup>&</sup>lt;sup>1</sup> Pollution prevention and abatement handbook. 1998. Toward cleaner production. World Bank Group in collaboration with United Nations Environment Programme and the United Nations Industrial Development Organization.

Sudey Industrial Myanmar Company Limited

Temperature increase	°C	<3°
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

a Standard Unit

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

# 2.3.2. 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.

# 2.3.2.1. 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 nmª, 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 <sup>b</sup>
рН	S.U. °	6-9
Phenol	mg/l	0.5
Sulfide	mg/l	1
Temperature increase	°C	<3 <sup>d</sup>
Total coliform bacteria	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50

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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

### 2.3.2.2. Air Emission Levels

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

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<sup>3</sup> for volatile organic compounds classified as carcinogenic or mutagenic with mass flow greater than or equal to 10 g/hr; 20 mg/Nm<sup>3</sup> for discharges of halogenated volatile organic compounds with a mass flow equal or greater than 100 g/hr; 50 mg/ Nm<sup>3</sup> for waste gases from drying of large installations (solvent consumption > 15 tons/year); 75 mg/Nm<sup>3</sup> for coating application processes for large installations (solvent consumption > 15 tons/year); 100 mg/Nm<sup>3</sup> for small installations (solvent consumption < 15 tons/year); if solvent is recovered from emissions and reused, the guideline value is 150 mg/Nm<sup>3</sup>

# 2.3.3. IFC EHS Guidelines

The EHS Guidelines<sup>1</sup> 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 2-4shows the contents of the section of Community Health and Safety.

	community neutrinana 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	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

 Table 2-4
 Community health and safety contents

Contents	Brief Description
Infrastructure	issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project (1) inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure (2) incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire, and (3) application of locally regulated or internationally recognized building codes, standards and regulations, and mitigation measures.
Traffic Safety	Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who 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 onsite or community health care facilities.
Emergency preparedness and Response	All projects should have an Emergency preparedness and Response Plan that is commensurate with the risks of the facility and that includes the following basic elements: (1) Administration (policy, purpose, distribution, definitions, etc.) (2) Organization of emergency areas (command centers, medical stations, etc. (3) Roles and responsibilities, (4) Communication systems, (5) Emergency response procedures, (6) Emergency resources, (7) Training and updating, (8) Checklists (role and action list and equipment checklist), and (9) Business Continuity and Contingency.

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

# 2.1. MYANMAR GOVERNMENT INSTITUTIONAL FRAMEWORK

# 2.1.1. Arrangement at National and Sector Level

At national Level, Environmental Conservation Committee (ENCC) serves as a mechanism for inter-ministerial coordination. Authorities and functions of ENCC are prescribed in Articles 7 to 13 of the EC Rules of the Republic of the Union of Myanmar.

One of ENCC's main functions related to this project is to oversee the management of the EIA process by MOECAF through ECD. ECD will serve as a coordinator among various departments in relevant sectors to ensure that the EIA and implementation of EMP will address environment and social issues of concerns by departments in relevant sectors.

The EIA process for this project will be administered by the central ECD in coordination with the regional ECD and varies governmental organizations at the regional, township, and district levels.

# 2.2. COMMITMENT OF SUDEY INDUSTRIAL MYANMAR COMPANY LIMITED

Sudey Industrial Myanmar Company Limited shall be responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of Natural Resources and Environmental Conservation (MONREC) in which to conduct an EMP which describe the measure to be taken for preventing, mitigation and

monitoring significant environment impacts resulting from the implementation and operation of proposed project or business or activity has to be prepared and submitted and to perform activities in accordance with this EMP and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures.

- 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 at all times comply fully with the commitments, mitigation measures, and plans in the EMP Report.

Sudey Industrial Myanmar shall be responsible for the environmental assessment of factory development as follows:

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

# **3. PROJECT DESCRIPTION**

# 3.1. LOCATION

Sudey Industrial Myanmar factory is located at Latitude 17°23'24.44"N and longitude 96°31'6.53"E U Paing No (10/1+11/4), Plot No. (649), Kali(TatKalay)Village, Bago Region. Location map is as shown in Figure 3-1.

# 3.2. SITE DESCRIPTION

The total area of project site is 7.01 acres (28,368.49 Sq meter). There are three buildings in this factory. In these, two factory building ( $152 \times 54 \times 12$ ) m is the factory for manufacturing of Garment on CMP basic and two storey dormitory ( $52 \times 16.4 \times 6.6$ ) m. Main structure is designed into office, linking section, QC department, sewing department and iron department. Transformer room and generator room are separated by main factory building structure. The factory layout map and location can be seen in Figure 3-2 and Figure 3-3.



96° 29' 24" E 96° 29' 42" E 96° 30' 0" E 96° 30' 18" E 96° 30' 36" E 96° 30' 54" E 96° 31' 12" E 96° 31' 30" E 96° 31' 48" E

Figure 3-1 Location map of Sudey Industrial Myanmar Factory

### Sudey Industrial Myanmar Company Limited

#### **Environmental Management Plan**



Google Earth 1.Security Gate 2.Ferry Gate 3.Office 4.Canteen 5.Water Tank 6.Boiler room and Generator Room 7.Toilets 8.Sewing and Cutting Area 9.Warehouse 10.Operation Area

Figure 3-2 Factory layout map

30-Dec-21



# Sudey Industrial Myanmar Company Limited

# Environmental Management Plan



Figure 3-3 Factory Layout Drawing

# 3.3. PROJECT OPERATION

Construction phase of the factory is started in June 2019 according to the BRIC's Endorsement. The operation phase of the factory is started from the last week of July 2020 and the duration of project is 50 years. Sudey Industrial Myanmar Co., Ltd. will close the factory as their BRIC proposal.

Table 3-1	Sudev In	dustrial M	vanmar Co.	. Ltd.'s F	Project Life Spa	an
				,		

	2019	2021	202	2025	2021	2029	2031	19 <sup>55</sup>	205	2057	2039	2041	2043	2045	2047	249	2051	P.	255	2051	D.	2061	263	265	261	2009	29690
Construction Phase	-	<b>→</b>																									
Operation Phase																										<b></b>	
Decommissioning Phase																											<b>→</b>

# 3.3.1. Machinery and equipment

The machinery running day is 262 days in a year.Lists of machinery and equipment required for the Sudey Industrial Myanmar factory is following in Table 3-2.

Table 3-2 List of machinery
-----------------------------

No.	Particular	HS Code	Unit	Quantity
1.	Direct Drive Interated Semi-Oil Lockstitch Sewing Machine(Digital Nipper)	8452219000	Set	1000
2.	Intelligent High Speed Semi-Oil Lockstitch Sewing Machine	8452219000	Set	500
3.	Ultra High-Speed Electric Automatic Five-Wire Sewing Machine	8452219000	Set	80
4.	Ultra High-Speed Electric Automatic Three-Wire Sewing Machine	8452219000	Set	50
5.	Direct Drive Double Needle Heavy Material Lockstitch with Split Needle Bar	8452219000	Set	40
6.	Direct Drive Double Needle Heavy Materical Lockstitch with Trimmer and Split Needle Bar	8452219000	Set	40
7.	High Speed Direct Electronic Lockstitch Bar-Tacking Sewing Machine for Light Materials	8452219000	Set	20
8.	Computer Button Sewing Machine(Multi Function)	8452219000	Set	20
9.	High-Speed Double Needle Chain-Stitch Sewing Machine	8452219000	Set	20
10.	Edge Sewing Machine	8452219000	Set	10
11.	Flat Seaming Machine	8452213000	Set	20
12.	Direct Drive Lockstitch with Edge Cutter and Folder	8452219000	Set	60
13.	Zigzag Machine	8452219000	Set	20
14.	Electronic Big Buckle	8452219000	Set	20
15.	Electronic Round Head Keyhole Machine	8452219000	Set	2
16.	Electronic Flat Nose Keyhole Machine	8452219000	Set	10
17.	Programmable Electronic Pattern Machine with LCD	8452219000	Set	2
18.	Outrigger Rotary and Independent Driving Pattern Sewing Machine	8452219000	Set	24

No.	Particular	HS Code	Unit	Quantity
19.	Automatic Template Machine	8452219000	Set	24
20.	Long Arm Machine	8452219000	Set	20
21.	Automatic Template Machine	84659900	Set	1
22.	Cutting Machine for Pattern and Template	84659900	Set	1
23.	Economic Hot Knife	8451500000	Set	1
24.	Fusing Press Machine	8451300000	Set	6
25.	Small Fusing Press Machine	8452219000	Set	6
26.	Clotgh Inspecting Machine	8451500000	Set	1
27.	Small Ironing Table	845180090	Set	30
28.	Ironing Table	845180090	Set	30
29.	Steam Iron	8451300000	Set	60
30.	Steam Floated Bench Plate	8451900000	Set	60
31.	Automatic Computerized Cutting Machine	8451500000	Set	3
32.	Cloth Paving Machine	8451500000	Set	3
33.	Breakage Machine	8451500000	Set	6
34.	Loosening Machine	8451500000	Set	2
35.	Cloth Cutting Machine	8444009000	Set	2
36.	Scale(weight)	8423819090	Set	2
37.	Light Box	9027500000	Set	1
38.	Tape Dispenser	3926100000	Set	2
39.	Computerized Accurate Tape Tension Controlller	9032899090	Set	1
40.	Snap Testing Machine	8205590000	Set	1
41.	Metal Gloves	7323990000	Set	20
42.	Dryer(Washing)	8422190000	Set	2
43.	Washer	8450112000	Set	2
44.	Boiler 2000 kgs	8420119000	Set	1
45.	Water Softener Machine(for Boiler)	8421219990	Set	1
46.	Compressor	8414809090	Set	1
47.	Generator(624 KVA)	8501330000	Set	1
48.	Generator(200 KVA)	8501330000	Set	1
49.	Purified Water Equipment	8421219990	Set	1
50.	Power Transformer	8504220000	Set	1
51.	Air Compressor	8414200000	Set	2
52.	Sewing Needle	8452300000	Set	5000
53.	Plastic Basket	3923900000	Set	1000
54.	Trolley Cart(all department)	7326909000	Set	60
55.	Trolley Cart(for sewing machine)	7326909000	Set	10

No.	Particular	HS Code	Unit	Quantity
56.	Material Cage	3926909090	Set	100
57	Thread Rack	3923400000	Set	20
58.	Scissors	84672990	Set	2000
59.	Production Ticket		Set	200
60.	Steam hose	3917310000	Set	100
61.	Steam Valve	8481804090	Set	100
62.	Steam Trap	8481804090	Set	10
63.	Steam Trap Fro Steam Iron	8481803990	Set	60
64.	Steam Pipe	3917320000	Metre	200
65.	Angle Iron	7216210000	Set	500
66.	Clothing Cardboard	4804310090	Set	2000
67.	Cardboard	4804310090	Set	2000
68.	Chalk	9609900000	Set	500
69.	Digital Thermometer	9025110000	Set	3
70.	Cutting Stock Car	8441100000	Set	400
71.	Storage Rack	7308900000	Set	100

### 3.3.2. Work force

Human resource required by foreign experts/technicians and local persons for administrative and production process are about 1562 persons which are also described in Table 3-3.Currnetly there are 189 employees. Working hour starts from 8:30 am to 5:00 pm and 24 working days in a month. The lunch time is from 11:50 am to 12:30 pm. Ferries are provided to all staff and employee by the company. Foreign experts and technicians stay at dormitory of the factory and the meals for such experts are also provided.

No	Position	Local Person	Foreign Technicians
1.	Manager	2	
2.	HR Manager	1	
3.	Admin Manager	2	
4.	Interpreter	2	
5.	Purchase Executive	1	
6.	Production Manager	1	
7.	Production Supervisor	5	
8.	Engineer/Mechanic supervisor	20	2

 Table 3-3
 Employment Schedule of Sudey Industrial Myanmar garment factory
#### Sudey Industrial Myanmar Company Limited

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No	Position	Local Person	Foreign Technicians		
9.	Account Executive	5			
10.	Office Staff(Account/Admin)	35			
11.	Supervisor(Production)	25			
12.	Assistant Supervisor(Production)	10			
13.	Quality Control	10			
14.	Assistant Quality Control	8			
15.	Marketing Staff	8			
16.	Wearhouse Executive	5			
17.	Skill Worker	8			
18.	Semi Skill Worker	250			
19.	Semi Skill Worker	450			
20.	Un Skill Worker	660			
21.	Cutting Operator	3			
22.	Security	10			
23.	Delver	5			
24.	Cleaner	15			
25.	Factory Manager		1		
26.	Financial Controller		1		
27.	Engineer/Mechanic Manager		2		
28.	Quality Assurance Manager		10		
29.	Cutting Manager		1		
30.	Technician(Production)		2		
31.	Technician(Quality Assurance)		2		
	Total	1541	21		
		1562			

# 3.3.3. Utilities

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

# 3.3.3.1. Water

Kali (TatKalay) village has no centralized water supply system and the factory gets water from the tube wells installed inside the factory compound. The factory has two tube wells. Estimated water consumption for the whole factory is 3313.877 gallons per day, 11923.41 gallons per month and 1450681.0126 gallons per year The tube well water is treated by sedimentation tank, filers in overhead tank and lastly water treatment system including sand filter, carbon filter, water softener and reverse osmosis (RO) system before distribution through the pipe lines.

Groundwater from this tube well is pumped in the storage tanks for the factory and domestic use. The main water use in the proposed project is for domestic usage such as for personal washing, food preparation, and washing of utensils. Drinking water will be provided by outsource suppliers. Figure 3-4 is described by water storage tank and drinking water supply for Sudey Industrial Myanmar garment factory.



Figure 3-4 Water storage tank and drinking water supply

# 3.3.3.2. Electricity and fuel requirement

The proposed project is intended to get required electricity supply form Bago City Electricity Supply Board (BESB) and distributed by 1000 kVA of Transformer. Another source of energy 624 kVA and 200 kVA generator will 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. Only diesel is stored in a tank of 29500 gallons/ liters beside the generator room. To handle the leakage and spillage of the diesel, an interception with sand is kept under the tank. Annual fuel requirement of the project is shown in Table 3-4.

No.	Fuel Use	Unit	Year-1	Year-2	Year-3	Year 4-10
1.	Diesel for vehicle	gallons	147.5	147.5	147.5	147.5
2.	Diesel for generator	gallons	2800	2800	2800	2800

 Table 3-4
 Annual Fuel Requirement

#### Sudey Industrial Myanmar Company Limited

A

#### **Environmental Management Plan**





Figure 3-5 Electricity facility at project site

### 3.3.3.3. Drainage System

The proposed project does not produce wastewater from the operation stage. The domestic water is discharged into the drain and the compound area of the project area. The drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. The factory plans to use separate septic type toilet system and discharge by cooperate with Bago Municipal to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory have to maintain and clean regularly. Spillage and leakages of oil and grease should also be minimized. Water effluent levels should be within acceptable limit of the National Environmental Quality (Emissions) Guidelines values.

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

# Sudey Industrial Myanmar Company Limited Environmental Management Plan



Figure 3-6 Drainage System in project site

### 3.3.4. Stream boiler

The factory has DZL2-1.25-N1, wood boiler is used in ironing process for manufacturing process and the rejected fabric and cotton scrip are reused as fuel. About 952.544 kg of wastes which are generated from the operation process is used as fuel daily. The size of the stack is about one ft in diameter and 65 ft in height. Ash collector has already installed in the stack. The boiler uses 269.013 gallons of water per day and the amount of blow down water is 10 gallons per day which is discharged into the underground water pipe and flow into the nearest drainage. Specification of boiler is presented in Table 3-5 and installed photo is shown in Figure 3-7.

**Technical Features:** 

Equipped with water tube structure, small volume and capacity, high safety, easy operation and easy for maintenance.

This series is made with advanced technology, easy operation, fast start and energy saving.

Unique fins and dash shaped designed to facilitate absorption of heat. Besides the discharge of smoke meets the national standard.

Equipped with imported burner to make fuel burn fully. Auto fire detection, which can stop working and warm when fire distinguished.

The dryness of high quality steam is above 96%.

Equipped with multiple safety control system of pressure, temperature and water level.

Model No	DZL2-1.25-N1			
Brand Name	TAIAN CITY ZHONG TIAN GUOLU			
Brief Description	Easy operation automatic control, high efficiency good evaporation, high safety devices for water level pressure			
Rated Working Pressure	1.25 Mpa			

#### Table 3-5Specification of Boiler

Rated Steam Output	2 t/H
Туре	Industrial Boiler
Structure	Fire Tube
Application	Industrial
Style	Vertical
Rated Steaming Temperature	193°C
Fuel	Wood Fired
Kind	Once Through
Product ID	1904201
Device Code	110010D1720
License Number	TS 2110D17-2021





Figure 3-7 Steam boiler

# 3.4. PRODUCTION PROCESS

# 3.4.1. Raw Material

The main Raw Materials are fabric, lining, interlining and hook which are imported from China. Raw materials require for a piece of product is described in Table 3-6.

No.	Particulars	Unit	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6-10
1	Fabric	М	3,836,250	3,836,250	3,836,250	4,219,875	4,219,875	4,219,875
2	Lining	М	2,678,750	2,678,750	2,678,750	2,946,625	2,946,625	2,946,625
3	Interlining	М	1,355,000	1,355,000	1,355,000	1,490,500	1,490,500	1,490,500
4	Hook	Pc	475,000	475,000	475,000	522,500	522,500	522,500
5	Synthesis leather	SQM	22,000	22,000	22,000	24,750	24,750	24,750
6	Padding roll	М	7,500	7,500	7,500	8,250	8,250	8,250

 Table 3-6
 List of Annual Raw Material

No.	Particulars	Unit	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6-10
7	Poly padding	Gram	26,470,000	26,470,000	26,470,000	29,117,000	29,117,000	29,117,000
8	Rivert	Pc	150,000	150,000	150,000	165,000	165,000	165,000
9	Eyelet	Pc	2,800,000	2,800,000	2,800,000	3,080,000	3,080,000	3,080,000
10	Cord adjuster	Pc	15,000	15,000	15,000	165,000	165,000	165,000
11	Sleeve metal badge	Pc	275,000	275,000	275,000	302,500	302,500	302,500
12	Metal stopper	Pc	825,000	825,000	825,000	907,500	907,500	907,500
13	Elastic cord	М	37,500	37,500	37,500	41,250	41,250	41,250
14	Cotton piping cord	М	390,000	390,000	390,000	429,000	429,000	429,000
15	Cotton string	М	183,750	183,750	183,750	202,125	202,125	202,125
16	Cotton cord	М	75,000	75,000	75,000	82,500	82,500	82,500
17	Real fur	Pc	150,000	150,000	150,000	165,000	165,000	165,000
18	Fake fur	М	22,500	22,500	22,500	24,750	24,750	24,750
19	Elastic thread	М	600,000	600,000	600,000	660,000	660,000	660,000
20	Lining 2	М	247,500	247,500	247,500	272,250	272,250	272,250
21	Down	Gram	120,750,000	120,750,000	120,750,000	132,825,000	132,825,000	132,825,000
22	Fleece for pocketing	М	11,250	11,250	11,250	12,375	12,375	12,375
23	Metal zipper	Pc	75,000	75,000	75,000	82,500	82,500	82,500
24	Vislon zipper	Pc	150,000	150,000	150,000	165,000	165,000	165,000
25	Metal badge	Pc	75,000	75,000	75,000	82,500	82,500	82,500
26	Main label	Pc	2,175,000	2,175,000	2,175,000	2,392,500	2,392,500	2,392,500
27	Size label	Pc	1,550,000	1,550,000	1,550,000	1,705,000	1,705,000	1,705,000
28	Down label	Pc	225,000	225,000	225,000	247,500	247,500	247,500
29	Country of origin label	Pc	225,000	225,000	225,000	247,500	247,500	247,500
30	Importer name label	Pc	75,000	75,000	75,000	82,500	82,500	82,500
31	Care label	Pc	3,550,000	3,550,000	3,550,000	3,905,000	3,905,000	3,905,000
32	Hangtag	Pc	2,250,000	2,250,000	2,250,000	2,475,000	2,475,000	2,475,000
33	Hangtag string	Pc	1,800,000	1,800,000	1,800,000	1,980,000	1,980,000	1,980,000
34	Elastic string	М	390,000	390,000	390,000	429,000	429,000	429,000
35	Plastic adjuster	Pc	150,000	150,000	150,000	165,000	165,000	165,000
36	String adjuster	Pc	150,000	150,000	150,000	165,000	165,000	165,000
37	Import fur hangtag	Pc	75,000	75,000	75,000	82,500	82,500	82,500
38	Down hangtag	Pc	75,000	75,000	75,000	82,500	82,500	82,500
39	Spare button bag	Pc	150,000	150,000	150,000	165,000	165,000	165,000
40	Zipper	Pc	3,675,000	3,675,000	3,675,000	4,042,500	4,042,500	4,042,500
41	Embroidery badge	Pc	525,000	525,000	525,000	577,500	577,500	577,500

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No.	Particulars	Unit	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6-10
42	Snap button	Pc	5,450,000	5,450,000	5,450,000	5,995,000	5,995,000	5,995,000
43	PU belt	Pc	75,000	75,000	75,000	82,500	82,500	82,500
44	Plastic buckle	Pc	200,000	200,000	200,000	220,000	220,000	220,000
45	Plastic button	Pc	1,500,000	1,500,000	1,500,000	1,650,000	1,650,000	1,650,000
46	Alarm tag	Pc	225,000	225,000	225,000	247,500	247,500	247,500
47	String for label	Pc	75,000	75,000	75,000	82,500	82,500	82,500
48	PE Bag	Pc	1,950,000	1,950,000	1,950,000	2,145,000	2,145,000	2,145,000
49	Rib	Set	345,000	345,000	345,000	379,500	379,500	379,500
50	Таре	М	19,000	19,000	19,000	20,900	20,900	20,900
51	Fringe tape	М	13,500	13,500	13,500	14,850	14,850	14,850
52	Padding	М	168,750	168,750	168,750	185,625	185,625	185,625
53	Shoulder pad	Prs	150,000	150,000	150,000	165,000	165,000	165,000
54	Toggle button	Pc	225,000	225,000	225,000	247,500	247,500	247,500
55	PU tape	Prs	600,000	600,000	600,000	660,000	660,000	660,000
56	PU	М	42,000	42,000	42,000	46,200	46,200	46,200
57	PU strap	Set	300,000	300,000	300,000	330,000	330,000	330,000
58	Polyester satin tape	М	62,250	62,250	62,250	68,475	68,475	68,475
59	Polyester elastic tape	М	292,500	292,500	292,500	321,7501	321,7501	321,7501
60	Elastic tape	М	60,000	60,000	60,000	66,000	66,000	66,000
61	Cotton tape	М	112,500	112,500	112,500	123,750	123,750	123,750
62	Fusing tape	М	52,500	52,500	52,500	57,750	57,750	57,750
63	Anti-theft clasp	Set	850,000	850,000	850,000	935,000	935,000	935,000
64	Metal wire for hood edge	М	48,750	48,750	48,750	53,625	53,625	53,625
65	Carton slicer	Pc	175,000	175,000	175,000	192,500	192,500	192,500
66	Metal chain	Pc	150,000	150,000	150,000	165,000	165,000	165,000
67	Button	Pc	2,725,000	2,725,000	2,725,000	2,997,500	2,997,500	2,997,500



Figure 3-8 Raw Materials Storage Photo

## 3.4.2. Garment Production Process

The process flow diagram for Garment manufacturing is shown in Figure 3-10. The sewing was operated one and two-needle sewing machine after fabric cutting and checked by quality control supervisor on each sewing line. The ironing process is before QC process. Then garment packing is completed and prior to shipping to its destinations.



Figure 3-9 Process Flow Diagram of CMP garment manufacturing

### 3.4.1. Description of Production Process

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

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

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

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

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





Cutting Section



**Raw Material** 

Sewing Section



**Ironing Section** 



**Quality Control** 



Packing

# Figure 3-10 Production process photo of Sudey Industrial Myanmar garment factory

### 3.4.2. Products

The products of the Sudey Industrial Myanmar garment factory are jacket, dress, coat, etc... Table 3-7 is described in annual production rate.

No.	Particulars	Unit	Yr – 1	Yr – 2	Yr – 3	Yr 4-5	Yr 6-10
	TOTAL PRODUCTION	Pcs	2,075,000	2,075,000	2,075,000	2,225,000	2,225,000
1	Lady's woven polyester down coat	Pcs	75,000	75,000	75,000	82,500	82,500
2	Lady's PU jacket	Pcs	75,000	75,000	75,000	82,500	82,500
3	Lady's woven nylon padded jacket	Pcs	75,000	75,000	75,000	82,500	82,500
4	Lady's woven cotton dress	Pcs	100,000	100,000	100,000	110,000	110,000
5	Lady's woven cotton jacket	Pcs	75,000	75,000	75,000	82,500	82,500
6	Lady's woven nylon + wool down jacket	Pcs	75,000	75,000	75,000	82,500	82,500
7	Lady's fake fur coat	Pcs	75,000	75,000	75,000	82,500	82,500
8	Lady's woven wool jacket	Pcs	75,000	75,000	75,000	82,500	82,500
9	Lady's woven fancy wool/Polyester mixed coat	Pcs	75,000	75,000	75,000	82,500	82,500
10	Lady's woven nylon down jacket	Pcs	75,000	75,000	75,000	82,500	82,500
11	Lady's woven polyester padded jacket	Pcs	75,000	75,000	75,000	82,500	82,500
12	Kid's woven nylon down jacket	Pcs	75,000	75,000	75,000	82,500	82,500
13	Lady's woven polyester down coat	Pcs	75,000	75,000	75,000	82,500	82,500
14	Lady's woven cotton trench coat	Pcs	75,000	75,000	75,000	82,500	82,500
15	Lady's polyester bonded with fake fur jacket	Pcs	75,000	75,000	75,000	82,500	82,500
16	Lady's woven nylon/cotton mixed	Pcs	75,000	75,000	75,000	82,500	82,500
17	Lady's tencel /cotton mixed	Pcs	75,000	75,000	75,000	82,500	82,500
18	Lady's woven	Pcs	100,000	100,000	100,000	82,500	82,500

Table 3-7Annual production rate

No.	Particulars	Unit	Yr – 1	Yr – 2	Yr – 3	Yr 4-5	Yr 6-10
	polyester /viscose mixed pant						
19	Lady's woven polyester /viscose mixed skirt	Pcs	100,000	100,000	100,000	82,500	82,500
20	Lady's woven polyester + padding quilted jacket	Pcs	75,000	75,000	75,000	82,500	82,500
21	Men's woven wool padded coat	Pcs	75,000	75,000	75,000	82,500	82,500
22	Lady's woven cotton shirt	Pcs	100,000	100,000	100,000	82,500	82,500
23	Lady's knit cotton /polyester/spandex mixed shirt	Pcs	100,000	100,000	100,000	82,500	82,500
24	Men's woven polyester padded coat	Pcs	75,000	75,000	75,000	82,500	82,500
25	Lady's knit acrylic/polyester /Spandex mixed shirt	Pcs	75,000	75,000	75,000	82,500	82,500
26	Man's woven nylon/cotton mixed down coat	Pcs	75,000	75,000	75,000	82,500	82,500
27	Lady's knit polyester dress	Pcs	75,000	75,000	75,000	82,500	82,500



Figure 3-11 Products Photo

#### 3.1. GENERATION OF WASTE, EMISSION AND DISTURBANCES

#### 3.1.1. Status of the Factory

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

The major pollution caused by the factory's operation are water pollution by discharging liquid waste generated in wet process i.e. air pollution by generator's effluent gas emission, noise pollution created during the operation of generator and other machines.

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

#### 3.1.2. Waste Generation

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

Waste		Type of wastes	Estimated waste amount	Source of generation
Solid waste Re-usable		Residual pieces of fabric scraps	10% a roll of fabric (kg)	Production line and cutting line
		Raw material cutting wastes	90 kg / month	
		Disposed packaging materials, paper or plastic wrapping	900 kg / month	Materials store and supply packaging
	Non re-usable	Food residues, domestic waste	352.17 kg / day*	Canteen, Kitchens, dormitory
Liquid waste		Sanitary discharge water	90.3 m <sup>3</sup> /day*	Toilet facility, kitchen and canteen
Hazardous waste		Oil leakage and spills	-	Operation of generator and movements of vehicles

 Table 3-8
 Waste Generation & Waste Amount

\*The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m3 per person per day (Metcalf & Eddy, 2004

### 3.1.3. Industrial Wastes

Wastes generated from the garment factory are cloth scraps of 50% from cutting section, 35% from linking section and 15% from packing section. In addition, packing waste of plastic sheet, carton box and fabric paper tube are generated from cutting line and packing section. Total amount of waste about maximum 50 kg per day are generated from operation process.

#### 3.1.4. Human wastes

The number of staff and workers required in the day shift for the factory is maximum 1562 persons during operation. Solid waste generated from maximum amount of operators and office staffs with assumption of waste generation rate at 518.7 kg/day was calculated based on solid waste generation rate of 0.39 kg/person/day2.

Domestic wastewater generated by maximum amount of 1562 persons with assumption rate at 156.2 m3/day was calculated based on domestic wastewater generated rate of 0.1 m3/person/day3. This water will be released in operation hour discharge to septic tank or factory drainage.

<sup>&</sup>lt;sup>3</sup> The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m3 per person per day (Metcalf & Eddy, 2004)

# 4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

The purpose of this Chapter is to predict how environmental and socio-economic conditions will affect because of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the project site, which Surrounding Environment 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 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 Social economic condition, physical/biological environment, and weather data are collected from official township data of Bago Township, Bago Region.

# 4.2. PHYSICAL COMPONENT IN PROJECT AREA

# 4.2.1. Topography

The proposed project area is situated in Kai(TatKalay)Village, Bago Region and its topographic condition is flat. Physiographical, the study area is located on Central Lowland, which is underlain by fluvial and deltaic deposition. The area is originally a regional slope with a gentle inclination to the east and in some places has scarp slopes. Flood plains are mostly situated at the east of Bago City and in the west, there are hilly terrains. The trend of the hill rocks encountered in this region is generally NNS. Based on Google Earth data, elevation of the Indagaw industrial zone ranged from 15 to 28m above mean sea level.

# 4.2.2. Geology

The Bago area is mainly composed of bluish gray silts and clay of Younger alluvium (recent). The alluvial soil occurred in the eastern part of the study area. Younger alluvium consists of stream deposits, gravel deposits, silty clay and light colour sandy soils. Younger alluvium overlies the older alluvium of Quaternary, followed by Irrawaddy Formation of Pliocene age. Older alluvium is composed of silty clay, silty sand, sand and lateritic clay. Irrawaddy Formation is mainly exposed at the north western part of the project area. This Formation is characterized by alteration of mudstone and sandstone, sandy mudstone. The sandstone is underlying the mudstone and medium to coarse grain, highly loose and friable, grit and conglomerate with the subordinate bluish grey shale. Mudstone is of bluish grey color, moderately jointed, stiff and compact. Geological map of Yangon-Bago Regional area is shown in Figure 4-1.



Figure 4-1 Geological Map of Bago Region

## 4.2.3. Tectonics

Bago is situated in the southern part of the Central Lowland which is one of the three major tectonic provinces of Myanmar. The Taungnio Range of the Gyophyu catchments area of Taikkyi District, north of Yangon, through the Thanlyin Ridge, south of Yangon forming a series of isolated hills probably resulted from the progressive deformation of the Upper Miocene rocks as the eastern continuation of the subduction or stretching and compression along the southern part of the Central Basin and regional uplifting of the Pegu Yoma (Aung Lwin 2012).<sup>[2]</sup>

### 4.2.4. **Soil**

The underlying soil type at the Project Site and its surroundings is characterized as the Meadow and Meadow Alluvial Soil. Meadow Soil is soil which occurs near the river plains exposed to occasional tidal floods, is non-carbonate and usually contains a large amount of salt. Both materials mainly comprise silty clay loam and neutral soil rich in plant nutrient. The upper layers (approximately 0 to 7 m) of the soil at the Project Site comprise largely of cohesive layers with traces of sand and gravel, followed by sand layers with low silt content and trace gravel from 7 to 35 m. The lower layers comprise denser silt layer with traces of sand and gravel from approximately 57 to 70 m. Standard Penetration Test (SPT) results obtained from testing at the Project Site indicate that the soil strength generally increases with depth. The STP results showed that the current soil quality can accommodate the construction of the Project.<sup>[2]</sup>

# 4.2.5. Hydrogeology

The main river of Bago is organized from Bago mountain range. It flows within the north-south direction, through Bago-Yangon. There are several tributaries of this river, and generated other water source in the area. Kolukwal Chaung, Latpan Chaung, Aungmya Chaung, Shwelaung Chaung and

Salu Chaung are organized from North of Bogo Yoma range. There are tributaries flow in the Bago River.

#### 4.2.6. Climate

The proposed project is located at Kali(TakKalay)Village, Bago Region. The climate condition of Bago Township is the dry season of area in which the project lies starts in December and ends in March. The raining season starts in June and ends in September and the cold season follow with the cooler, drier months of October to January. The highest temperature ranging 39.8°C and low range 16.4°C reference from Township Meteorology data, Regional Data of Bago Township. 2019 data of rainfall and temperature is presented in Table 4-1.

Year	Rainfall		Temperature			
	Raining day	Rainfall value	Summer season Max (°C)	Winter season Min (°C)		
2016	136	126.38	41.5 °C	14 °C		
2017	140	148.62	39.3 °C	13 °C		
2018	131	123.47	40.2 °C	13 °C		
2019	111	101.1	42.2 °C	14.7 °C		

 Table 4-1
 Annual rainfall and temperature

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

#### 4.3. BASELINE ENVIRONMENTAL MONITORING

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

### 4.3.1. Air Quality

To determine the existing baseline ambient air quality status within the project site on 3,February 2020, 8-hours of working period air pollutants level, which include dust (PM<sub>10</sub> and PM<sub>2.5</sub>) and gases (CO, CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>2</sub>) were measured at the selected site using the HAZSCANNER 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 and international ambient air quality standard (NAAQS, ACGIH) guidelines. The measurement location point is situated at latitude 17°23'25.46"N and longitude 96°31'6.43"E.

It was observed that the air quality of NO<sub>2</sub> and SO<sub>2</sub> concentration level are within the limit of NEQ (emission) guideline but particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>) and gases level of Nitrogen Dioxide (NO<sub>2</sub>) are also within the National Environmental Quality (Emission) Guideline.

Parameters	Observed value	Guideline value	Unit	Organization	Period
NO <sub>2</sub>	398.23	200	µg/m³	NEQG	8 hrs
SO <sub>2</sub>	70.96	500	µg/m³	NEQG	8 hrs
PM <sub>10</sub>	44.4	50	µg/m³	NEQG	8 hrs
PM <sub>2.5</sub>	34.4	25	µg/m³	NEQG	8 hrs

Table 4-2Observed air quality results

NEQ = National Environmental Quality (Emission) Guideline NAAQS = National Ambient Air Quality Standards were developed by the U.S. EPA ACGIH = the American Council of Governmental Industrial Hygienists recommends



Figure 4-2 Air quality measurement at the project site

#### 4.3.2. Weather Condition

The weather condition during 3 February 2020 shows the average temperature of 34.6 °C while the average humidity is 34.8 % and its sunny day. There was no raining on the day between 11:00 am and 2:00 pm.



Figure 4-3 Temperature and Humidity Measurement Photo

#### 4.3.3. Noise

The Noise level was measured by using Digital Sound Level Meter for working hours on 3 February 2020. The average noise level in the project site area is presented in Table 4-3 compared with NEQ guideline. However, according to the Noise source monitoring at operation area (inside the production sector) of noise level is a little exceeding the acceptable level of National Environmental Quality (Emission) Guideline.

Table 4-3	Noi	se level measurement result	
Date and Time		Location	GPS value

Date and Time	Location	GPS value	Result value	NEQ Guideline
3 February 2020 (11:00 am to 2:00 pm)	Operation area (Sewing section)	17°23'35.24"N 96°30'56.33"E	73.835 dBA	70 dBA







Figure 4-5 Sound level measurement photo

### 4.3.4. Light

Activities of the workers in the garment factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the garment factory is presented in Sudey Industrial Myanmar Company Limited

#### Environmental Management Plan

Table 4-5. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in garments factory is provided in Table 4-4.

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

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

Table 4-4	Recommended illumination and limiting glare index based on IES Code, 1968
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Visual test	Illumination (lux)	Glare index
Casual seeing	100	28
Rough task with large detail	200	25-28
Ordinary task medium detail	400	25
Fairly severe task, small detail (e.g. drawing office, sewing)	600	19-22
Severe, prolonged task, very small detail (e.g. fine assembly, hand tailoring)	900	16-22
Very severe, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300 -2,000	13-16

Source: Koenigsberger, et al. 1975



Figure 4-6 Light quality measurement

Table 4-	Table 4-5         Result of light measurement in Sudey Industrial Myanmar Factory					
No	Location	Measure value (Lux)	Standard*			
1.	Warehouse	599	1000			
2.	Cutting Area	1089	600			
3.	Sewing Line 1	994	600			
5.	Sewing Line 2	986	400			
6.	Q.C	1572	400			
7.	Ironing Area	979	600			
8.	Packing Area	977	1000			

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

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

### 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 Kai(TatKalay)Village. The Project Site is a built-environment and the species of flora surveyed at the site are native species not uncommon to the Bago area. There were no protected species or species of conservation value identified.

### 4.5. SOCIO-ECONOMIC COMPONENT

#### 4.5.1. Population

Sudey Industrial Myanmar factory is located across Bago Township in Bago Region. In 2019, there are about people 439,622 in Bago Township as shown in Table 4-6.

	ropulation of males and remains at bago rownship (2013)								
Item	Older 18 year			Younger 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	59548	72436	131984	43423	45080	88503	102971	117516	220487
Rural	66190	67559	133749	40268	45118	85386	106458	112677	219135
Total	125738	139995	265733	83691	90198	173889	209429	230193	439622

Table 4-6 Population of Males and Females at Bago Township (2019)

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

### 4.5.2. Religion

The different kinds of religion present in Bago townships are shown in Table 4-7. More than 90% of the people living in the townships is Buddhists.

Township	Buddhist	Christian	Hindu	Muslim	Other	Total
Bago	411380	17135	6137	2925	2045	439622
Phaya Gyi	18941	35	40	460	76	19552
Inntagaw	24569	700	275	114	40	25698
Total	411380	17135	6137	2925	2045	439622

<b>-</b>	<b>D</b> 11 1 1	-	<b>-</b>	(0040)
lable 4-7	Religion II	n Bago	Iownship	(2019)

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

## 4.5.3. Local Economy

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

- Store
- Gold Shop
- Electrical Store
- Mobile/Service Store
- Book Shop
- Pharmacy
- Restaurants
- Tea Shop
- Hardware Store
- Agricultural Shop
- Construction Material Shop
- Services
- Rice Shop
- Fashion Shop
- Pagoda & Monastery Donation Accessories Shop

### 4.5.4. Public Infrastructure and Access

### 4.5.4.1. Communication and Transportation

Major transportation route in Bago Township are railway, port, and car road as presented in Table 4-8.

#### Table 4-8Transportation route

Catagorias	Точ	vnship	Distance	No
Categories	From	to	Distance	NO
Railway (Pegu-Mandalay railway)	Pegu	Mandalay	40/1.2miles	12
Railway (Pegu-Mawlamyaing railway)	Pegu	Mawlamyaing		3

Cotogovico	Τον	vnship	Distance	Na
Categories	From	to	Distance	NO
Inland Waterway(Pegu-Kin Paing kyong)	Pegu	Kin Paing Kyong	12miles	
Inland Waterway(Pegu-Lat Pan Khone)			7miles	
Inland Waterway(Baw Net Kyi-Zaung Tu)	Baw Net kyi,	Zaung Tu	25miles	
Bus Line (No-1 University)	Yan Kin Thar Hin Thar Kone Yan Kin Thar Malar Kyi	Ka Li University		77
Bus Line (Kyan Tine Aung)	Bago	Yangon		11
Three Wheels Bus Line No-3	Hin Thar kone	University Ba Htu Mahar Pagoda		55
Bus Line (Oke Thar)	Bago	Yangon		12
Bus Line(5)	Nyaung lay Pin-Bago	Yangon-(Dagon Ayar) Yangon Nyaung lay Pin		282
Bus Line(6)	Bago – Yangon	Kyite Hto		291
Bus Line (Phyo)	Bago	Yangon		21
Bus Line(8)	Bago	Khayan Kamar Sae		16
Bus Line(9)	Bago	One Nhae		1
Bus Line (Princess Express)	Bago	Taung Ngoo (Technological University)		13
Bus Line (11)	Bago	Zaung Tu Htan Taw Gyi		5
Three Wheels Bus Line (12)	Shwe Maw Daw Sein Thar Hlyaung So Shae lit 25	University Ba Htu Mahar Pagoda Oke Thar Golf Club Kyite Pa Dain That Nap Pin		213
Bus Line (13)	Bago	Htone Kyi		2
Three Wheels Bus Line (14)	Phat Tan-Pin Si A Way Pyay- Phat Tan	Shwe Thar Hlyaung Phat Tan University		50
Three Wheels Bus Line (15)	Kama Net-Ki Li	University Mahar Kyi Mahar Pagoda		110

# Sudey Industrial Myanmar Company Limited

Catagoria	Точ	vnship	Distance N	Na
Categories	From	to	Distance	NO
Three Wheels Bus Line (15) (Kyan Tine Aung)	Construction Gate-Phayar Kyi	University Ki Li- A Wine Baw Net kyi		105
Bus Line (17)	Pyin Pone Kyi- Bago	Yangon		1
Three Wheels Bus Line (Phyo)	Shan Ywar Kyi	Bago Market		6
Bus Line (Hein Thit)	Baw Net Kyi Rd Junction- Pharyar Kyi	Pegu Industrial Zone		42
Bus Line (Han Thar Waddy)	Wan Bel Inn (Day Soon Pr)-Bago	Inn Ta Kaw		48
Bus Line (Aye Chan Aung)	Inn Ta kaw- Bago University- Myo Shaung Rd-A Wine Village	Pharyar Kyi		17
Road (Yangon-Taung Ngoo-Mandalay)	32/6	70/0	37 miles  7 furlongs	
Road (Yangon-Mawlamyaing-Myeik)	60/5	63/6	3miles 1farlon	
Road (Pegu Myo Shaung Lan)	0/0	11/3.	11miles 3farlon	
Road (Pharyar Kyi-Baw Net Kyi-Zaung Tu-Tite Kyi Rd)			42miles 1farlons	
Road (Tite kyi-Phaung Kyi-Pegu Rd)			11miles 4farlons	
Road (Inn Takaw-Htone Kyi-Kawa-Ohn Hnan Rd)			7miles 7farlons	
Road (Pegu-Thatnap Pin-Khayan-Thanlynn Rd)			4miles 4farlons	
Road (Government Ward Rd)			3miles 3farlons	
Bridge (Yangon- Mandalay)(4/50)			360ft	
Bridge (Pegu Myo Shaung Rd)(1/10)			486ft	
Bridge (Pegu Myo Shaung Rd)(8/11)			306ft	
Bridge (Pharyar Kyi-Baw Net Kyi-Zaung Tu-Tite Kyi Rd)				
Bridge (1/15 Salu Stream)			270ft	
Bridge (6/22 Shwe Laung)			240ft	
Bridge (1/29 Ko lu Kwe)			340ft	
Bridge (1/42 Htawei stream)			360ft	

Catagorian	Τον	vnship	Distance	No	
Categories	From	to	Distance	NO	
Bridge (under 180 ft)				9	

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

#### 4.5.4.2. Education

Location of major schools were situated in Bago Region i.e. basic education primary school (B.E.P.S.), monastery teaching school, basic education middle school (B.E.M.S), basic education high school (B.E.H.S) and university, in the Bago Township. The name and located village tract/ ward of schools are described in Table 4-9.

No.	Name of School	Location
1	BAGO University	Oth Thar (8)
2	BEHS (1) BAGO	Office Ward
3	BEHS (2) BAGO	Market Ward
4	BEHS (3)BAGO	Zaine/ North
5	BEHS (4)BAGO	Okethar Myo Thit
6	BEHS (5)BAGO	Nan Taw Yar
7	BEHS (6)BAGO	Kalyar Ni
8	BEHS (7)	Yone Kyi
9	BEHS (8)	Him Thar Kone
10	BEHS (9)	Inn Takaw
11	BEHS (Phayar Kyi)	Pha Yar Kyi
12	BEHS (Pyin Pone Kyi)	Pyin Pone Kyi
13	BEHS (Htone Kyi)	Htone Kyi
14	BEHS (Kyaut Tan)	Kyout Tan
15	BEHS (Baw Net Kyi)	Baw Net Kyi
16	BEHS (Htan Taw Kyi)	Htan Taw Kyi
17	BEHS (Okkan)	Pha Yar Kyi City
18	BEHS (Zaung Tu)	Zaung Tu
19	BEHS (Branch)Wan Bal Inn	Wan Bal Inn Village
20	BEHS (Branch)(5)	Ma Zin Ward
21	BEHS (Branch)(8)	Ward No 7
22	BEHS (Branch)(1)	Kyaut Kyi Su
23	BEHS (Branch)Lat Pan Win	Lat Pan Win Village
24	BEHS (Branch)(7)	Ward No 3
25	BEHS (Branch)(4)	Shin Saw Pu
26	BEHS (Branch)Sar lay Kwin)	Sar Lay kwin
27	BEHS (Branch)(Myo A Naut- Kha)	Butterfly Lake

#### Tahlo 4-9 List of major school in Bago Townshin

No.	Name of School	Location
28	BEHS (Branch)(Pan Hlaing)	Pan Hlaing
29	BEHS (Branch)Inn Wa	Shin Saw Pu
30	BEHS (Branch)(Net King)	Phayar Kyi
31	BEHS (Branch) (Ka Twin Cham)	Ka Twin Cham
32	BEHS (Branch)(Kamar Net)	Kamar Net
33	BEMS (Mone Tine)	Mone Tine
34	BEMS(Pone Nar Su)	Pone Nar Su
35	BEMS (Kam Myint)	Kam Myint
36	BEMS (Phayar Thone Sue)	Phayar Thone Sue
37	BEMS (Branch)( Ba Yint Naung )	Hantharwaddy
38	BEMS (Branch)(Sein Tun)	Sein Tun
39	BEMS (Branch)(Han Thar Kone)	Han Thar Kone
40	BEMS (Branch)(Myo Twin kyi)	Myo Twin Kyi
41	BEMS (Branch)(Ba Ho Si)	Ba Ho Si
42	BEMS (Branch)(Mon San Pay)	Him Thar Kone
43	BEMS (Branch)(Oke Thar)	Nan Taw Yar
44	BEMS (Branch)( Hmaw Kan)	Shin Saw Pu
45	BEMS (Branch)(Ywar Thit)	Ywar Thit
46	BEMS (Branch)(Butterfly Lake)	Butterfly Lake
47	BEMS (Branch)(Phaung Taw Oo)	Zaine /South
48	BEMS (Branch)(Oke Thar-3)	Okethar Myo Thit
49	BEMS (Branch)(Phayar Thone Sue)	Phayar Thone Sue
50	BEMS (Branch)(Oke Thar-2)	Okethar Myo Thit
51	BEMS (Branch)(Ma Zin-Ka)	Kalyar Ni
52	BEMS (Branch)(Wall Street)	Phayar Kyi
53	BEMS (Branch)(Inn Takaw)	Sat Pine
54	BEMS (Branch)(Aww Takaw Law Ka)	Phayar Thone Sue
55	BEMS (Branch)(Zaine/South)	Zaine/ South
56	BEMS (Branch)(Oke Thar-4)	Kyout Taing Kan
57	BEMS (Branch)( Tap Ka Lay)	Tap Ka Lay)
58	BEMS (Branch) (Ka Li)	Ka Li)
59	BEMS (Branch)(Shan Ywar Kyi)	Shan Ywar Kyi
60	BEMS (Branch)(Ohe Bo)	Ohe Bo
61	BEMS (Branch)(A Wine)	A Wine
62	BEMS (Branch)(Mae Khone)	Mae Khone
63	BEMS (Branch)(Out Si Te-Ya)	Out Si Te
64	BEMS (Branch)(Out Si Te-Na)	Out Si Te

No.	Name of School	Location			
65	BEMS (Branch) (Zae Nyaung Pin)	Zae Nyaung Pin			
66	BEMS (Branch)(Kwe Tan Shae)	Kwe Tan Shae			
67	BEMS (Branch)(Kin Paing Kyong)	Kin Paing Kyong			
68	BEMS (Branch)(Tar Wa Station)	Tar Wa Station			
69	BEMS (Branch)(Kwan Pound)	Kwan Pound			
70	BEMS (Branch) (Pyin Ma Ngu)	Puin Ma Ngu			
71	BEMS (Branch)(Kawt Chae)	Kawt Chae			
72	BEMS (Branch)(Htone Kyi)	Htone Kyi			
73	BEMS (Branch)(Thar Yar Kone)	Thar Yar Kone			
74	BEMS (Branch)(Kone Than Dine)	Kone Than Dine			
75	BEMS (Branch)( Ten Mile Knoe)	Ten Mile Kone			
76	BEMS (Branch)(Sar Tha Nge)	Sar Tha Nge			
77	BEMS (Branch)Tha Yet Kone)	Tha Yet Kone			
78	BEMS (Branch)(Win Ka Baw)	Win Ka Baw)			
79	BEMS (Branch)(Baw Net Kyi)	Baw Net Kyi			
80	BEMS (Branch)(Pauk Taw-Ae)	Pauk Taw			
81	BEMS (Branch)(Shwe Min Gan)	Shwe Min Gan			
82	BEMS (Branch)(Yamin Ywar Ma)	(Yamin Ywar ma)			
83	BEMS (Branch)	Lat Pan			
84	BEMS (Branch)(Zee Taw)	Zee Taw			
85	BEMS (Branch)	Chin Su			
86	BEMS (Branch)(Khone Tine)	Khone Tine			
87	BEMS (Branch)(King Chaung)	King Chaung			
88	BEMS (Branch)(Kyite Day Yone)	Kyite Day Yone			
89	BEMS (Branch)(Tha Htay Kone)	Tha Htay Kone			
90	BEMS (Branch)(Shwe Tan)	Shwe Tan			
91	BEMS (Branch)(Kha Ma Ya-8)	Wan Bal Inn			
92	BEMS (Branch)(Kan Baei)	Wan Bal Inn			
93	BEMS (Branch)(Phayar Kalay)	Phayar Kalay			
94	BEMS (Branch)(Pyin Pone Ywar Thit)	Pyin Pone Ywar Thit			
95	BEMS (Branch)(Tha Man Kone)	Tha Man Kone			
96	BEMS (Branch)(Nyaung Inn)	Nyaung Inn			
97	BEMS (Branch)(Hlaw Kar)	Hlaw Kar			
98	BEMS (Branch)(A Sate Taung)	A Sate Taung			
99	BEMS (Branch)(Kan Myint)	Kan Myint			
100	BEMS (Branch)(Tamar Pin)	Tamar Pin			
101	BEMS (Branch)(Than So Pin)	Than So Pin			

No.	Name of School	Location
102	BEMS (Branch)(Under World)	Under World
103	BEMS (Branch(War Paing)	War Paing
104	BEPS(Post) (121 nos)	Bago
105	BEPS(5 nos)	Bago
106	Pre School(16 nos)	Bago
107	Monastery Teaching School(Mingalar Yarma)	Nan Taw Yar
108	Monastery Teaching School(Mahar Pa Du Ma)	Kalyar Ni
109	Monastery Teaching School(Kyay Ni Kan-Oke)	Kalyar Ni
110	Monastery Teaching School(Kyay Ni Kan-Kyat)	Kalyar Ni
111	Monastery Teaching School(A Thaw Ka)	Zaine/North
112	Monastery Teaching School(Mahar Gu Ni Kar)	Inn Takaw
113	Monastery Teaching School(Sagaing)	Inn Takaw
114	Monastery Teaching School(Aung Pagoda)	Myo Thit
115	Monastery Teaching School(Gold Mountain)	Zaine/North
116	Monastery Teaching School(Nan Oo Shwe Pagoda)	Oke Thar 8
117	Monastery Teaching School(Dahmma Yadanar)	Zaung Tu
118	Monastery Teaching School(Aung Pyi Thar)	Ma Zine
119	Monastery Teaching School(Shwe Kyoung Kone)	Ma Zine
120	Monastery Teaching School(Dat Khi Na Yarma)	Phayar Kyi
121	Monastery Teaching School(Aye Say Ti)	Phayar Kalay
122	Monastery Teaching School(Pan Chan Kone)	Pan Chan Kone
123	Monastery Teaching School(Wae Lu Won)	Kyout tan
124	Monastery Teaching School(Ma Ni Yarma)	Wan Bae Inn
125	Monastery Teaching School(Aung Bawdi Pin)	Dae Soon Par
126	Monastery Teaching School(Ngar Kyi Inn)	Htone Kyi
127	Monastery Teaching School(Thike Kone)	Okethar Myo Thit
128	Monastery Teaching School(Paw Taw Mu)	Nan Taw Yar
129	Monastery Teaching School(Yadanar Aung)	Zaine/North
130	Monastery Teaching School(Thiri Zayar)	Zaine/South
131	Monastery Teaching School(Nan Oo Pone Nya Shin)	Sin Phyu Kwin
132	Monastery Teaching School(Mahar Bawdi)	A Kyut A Lut
133	Monastery Teaching School(That Da Ma Gone Yi)	Nyaung Inn

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

#### 4.5.4.3. Health Status

The diseases of high prevalence reported in 2013 are Tuberculosis (TB), followed by Diarrhea, TB and snakebites. With reference to the Township Health Profile 2014 of Bago Township,

no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 4-10 and Table 4-11.

Table 4-10 Common Diseases in the project area, 2013								
Disease	Bago Township							
Disease	Morbidity	Mortality						
Malaria (Per 100000P)	9	1						
Dysentery	308	-						
Diarrhea (Per 100000P)	942	1						
TB (Sputum+)(Per 10000P)	442	-						
Hepatitis	-	-						

#### Table 4-10 Common Diseases in the project area, 2019

Table 4-11Lists of hospital in the Bago Township

Hospital	Beds/Services	Responsible
Pegu General Hospital	500	Government
Zaung Tu District Hospital	16	Government
Htan Taw Kyi District Hospital	16	Government
Phayar Kyi District Hospital	16	Government
Pharkalay District Hospital	16	Government
Joe Thein	25	Private
Myin Kyar	16	Private
Thamardi	16	Private
Aung	16	Private
Swal Taw	16	Private

### 4.6. CULTURAL AND VISUAL COMPONENTS

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

# 5. ENVIRONMENTAL IMPACT ASSESMENT AND MITIGATION MEASURE PLAN

# 5.1. IMPACT IDENTIFICATIONS

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

### 5.1.1. Positive Impact

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

### 5.1.2. Negative Impact

The following 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

#### 5.2. METHODOLOGY FOR THE ASSESSMENTS

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

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

Accomment	Scale										
ASSESSMEIN	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						

 Table 5-1
 Impact Assessment Parameters and Its Scale

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

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

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

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

# 5.3. POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION PHASE & DECOMMISSIONING PHASE

Construction phase: The project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located in Bago industrial zone and

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already finished the construction, the potential impact on environment is not assessed and affected must be caused the construction period.

Decommissioning phase: The proposed duration of the investment shall be 50 years. The term of the Lease shall be initial 20 years commencing from the date of signing of the Lease Agreement between Local owner and Sudey Industrial Myanmar Company Limited for proposed project site for 7.01 acres (28,368.46 Sq meter) of land and extendable for ten years three times after expiry of (20) years term of lease. The project of land and building will be restitution to land owner after close the operation. Therefore, the assessment study cannot be need for environmental impact assessment during decommission phase.

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

# 5.4. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS AND MITIGATION MEASURE

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.

	1 11400								
Categories	Source of	Significant of Potential Impacts				f	Impact Significanc	Beason	Mitigation
	Impact	м	D	Е	Ρ	S P	е		Measure
Impact on Er	vironmental Res	sour	ce						
Air	<ul> <li>Dust and GHGs emission from vehicles used for transportin g raw materials and final products</li> <li>Emission from emergency diesel generator, boiler and</li> </ul>	2	4	2	3	24	Low	<ul> <li>Air pollution in atmosphere.</li> <li>Inhaling them can increase the chance you'll have health problems.</li> <li>People with heart or lung disease, older adults and children are at greater risk from air pollution.</li> </ul>	<ul> <li>To control air pollution, the vehicles, generators and machineries have to check and maintain regularly.</li> <li>Ensuring vehicles, compressor, boiler and generator are well maintained.</li> </ul>

# Table 5-2Evaluation and Predication of Significant Impacts and mitigation measure on Operation<br/>Phase

Categories	Source of	Significant of Potential Impacts					Impact Significanc	Reason	Γ	Mitigation
	impact	м	D	Е	Ρ	S P	е			weasure
	vehicle movement								•S e s fi b	Smoke mission hould be tted with the bag filter.
Water	<ul> <li>Dormitory Cleaning and Kitchen</li> </ul>	2	4	2	1	8	Very Low	The factory not generated wastewater from production process on CMP basic	•	No Mitigation measures
Soil	<ul> <li>Engine oil leaks, spills at diesel storage and during fuel refueling.</li> </ul>	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 machinery	2	4	2	1	8	Very Low	<ul> <li>The factory not operate heavy machinery</li> <li>the major noise source of CMP basic operation activities such as cutting, stitching/finish ing and packaging by respective machines.</li> <li>There is insignificant impact on surrounding environment.</li> </ul>	•	No Mitigation Measure
Impact on Ec	ological Resour	ces			_	_				
Flora and	Operation of	1	4	1	1	6	Insignificant	Not	•	No

Categories Source of		Significant of Potential Impacts			f	Impact Significanc	Reason	Mitigation	
	Impact	м	D	Е	Ρ	S P	е		measure
fauna on terrestrial and aquatic life	the garment factory							Significant Impact on Ecological Resources	Mitigation Measure
Impact on Hu	uman	•	1	I		T		1	
Fire	<ul> <li>Poor electrical installation s</li> <li>Waste disposed area raw materials</li> </ul>	3	5	2	4	40	Moderate	Serious damage to property and even injury and death	<ul> <li>To provide fire extinguishe rs, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases.</li> <li>Regular inspection for existing firefighting equipment must be done. In case of fire emergency , water storage tank for fire frightening.</li> <li>The emergency fire alarms are installed at the factory for alerting the workers in case of fire.</li> <li>The main entrances and route for</li> </ul>

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Categories	Source of Impact	Significant of Potential Impacts					Impact Significanc	Reason	Mitigation Measure
		М	D	Е	Ρ	S P	е		MedSure
									emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupationa I Safety	<ul> <li>Accidental cases cause by operating machines.</li> <li>Unloading, cutting, and packaging activities.</li> <li>Accidental cases of thermic fluid heater</li> </ul>	3	4	1	4	32	Moderate	<ul> <li>Accident in workplace (physical injuries or even death) can occur during operation.</li> </ul>	<ul> <li>First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.</li> <li>According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the</li> </ul>

Categories	Source of Impact	Significant of Potential Impacts					Impact Significanc	Reason	Mitigation
		М	D	Е	Ρ	S P	е		Measure
									<ul> <li>workers.</li> <li>Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department</li> <li>To prevent electric shock hazards, electrical maintenan ce staff (handyman ) is to be assigned to do regular inspections and take preventive measures.</li> </ul>
Health	<ul> <li>Influx of people</li> <li>Noise from the generating of the emergency generators</li> </ul>	2	4	1	2	14	Very Low	<ul> <li>Change in demographic structure, new diseases form immigrant workers</li> <li>To cause a range of health prob lems ranging from stress, poor concentration, productivity losses in the</li> </ul>	<ul> <li>Manage the drainage systems of the factory to prevent health risk of the workers.</li> <li>The maximum allowable noise level for workers is 90dB(A)</li> </ul>
Categories	Source of	Significant of Potential Source of Impacts		Impact Significanc	Reason	Mitigation			
-------------	---	---	---	-----------------------	--------	------------	----------	---	---
-	μημασι	М	D	Е	Ρ	S P	е		เพีย่สอนไซ
								workplace, and communicatio n difficulties and fatigue from lack of sleep, to more serious issues	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 Gener	ation Impact								
Solid Waste	<ul> <li>Residual pieces of fabric scraps from the production lines</li> <li>Waste from packaging materials</li> <li>Waste from kitchen, dormitory and office.</li> </ul>	3	4	1	4	32	Moderate	Surrounding environmental pollution and soil contamination	<ul> <li>Provides separate garbage bins at each building.</li> <li>All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area</li> <li>Final wastes should be disposed by using Bago Municipal's</li> </ul>

Categories	Source of	Sig Po Im	gnifi ten pac	icar tial ts	nt of	f	Impact Significanc	Reason	Mitigation Measure	
	Impact	М	D	Е	Ρ	S P	е			
									service.	
Liquid Waste	<ul> <li>Septic system and sewage.</li> <li>Domestic liquid waste disposal from office, kitchen and dormitory.</li> </ul>	2	4	2	2	16	Low	<ul> <li>Contaminatio n of soil, surface water, ground water</li> </ul>	• Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminat ions.	
Hazardous Waste	Used oil and lubricant discharged from the maintenan ce of vehicles and machines.	2	4	1	2	14	Very Low	<ul> <li>Reduce the risk of contamination from fuels, oils and hazardous wastes</li> <li>Response effectively to incident and accident</li> </ul>	<ul> <li>Proper inspection and maintenan ce in storage of hazardous waste.</li> <li>Dispose of hazardous chemicals and containers in accordanc e with occupation al health, safety and environme ntal requiremen ts.</li> <li>The empty chemical containers will hand over to suppliers</li> </ul>	

Categories	Source of	Siq Po Im	gnifi teni pac	icar tial ts	nt of	f	Impact Significanc	e Reason	Mitigation
	Impact	М	D	Е	Ρ	S P	е		Measure
									for recycle or appropriate disposal • The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (eg., DOWA and Bago Municipal)

# Table 5-3Evaluation and Predication of Significant Impacts and Mitigation Measure on<br/>Decommissioning Phase

Environmenta	Project Activities	e Po	Sign tent	ifica tial l	ant o mpa	of acts	pact jnifi nce	Reason	Mitigation Measure
Timpact	-	М	D	Е	Ρ	S	lm  Siç caı		
Air pollution	<ul> <li>Demolish of buildings and related materials</li> <li>Transportation of demolished materials</li> </ul>	3	1	1	4	20	Low	• Emissions of particulate matters and carbon dioxide gases into the air	<ul> <li>Spray water twice a day</li> <li>Cover mesh trap around the decommission area</li> <li>Install shading net about 2 meters above temporary fence of decommission area</li> <li>Carry broken material with cover by canvas.</li> </ul>
Water pollution	<ul> <li>Sewage form decommissioning workers</li> <li>Demolition machinery equipment</li> </ul>	3	1	1	3	15	Low	Contamin ation of surface water and ground water	<ul> <li>Systematically demolish the septic tanks.</li> </ul>
Soil	Demolish of	3	1	1	3	15	Low	Contamin	Manage the spillage of oil and

Environmenta	Project Activities		Sign tent	ifica ial l	ant o mpa	of acts	pact jnifi nce	Reason	Mitigation Measure
Timpact		М	D	Е	Ρ	S	Siç		
Contamination	<ul> <li>buildings and related materials</li> <li>Transportation of demolished materials</li> </ul>							ation of soil	diesel and sewage.
Noise Pollution and Vibration	<ul> <li>Decommission activities</li> <li>Transportation of demolished materials</li> </ul>	3	1	1	3	15	Low	<ul> <li>Noise pollution to the surroundin g</li> </ul>	<ul> <li>Carry out the activities during day time.</li> <li>Maintain the machines and vehicles to reduce noise pollution.</li> <li>Provide the ear plugs to the workers.</li> </ul>
Waste disposal	<ul> <li>Demolished debris such as bricks, concrete materials</li> </ul>	2	1	1	3	12	Very Low	Dumping to the surroundin g environme nt	<ul> <li>Recyclable materials and dispose to the define areas.</li> </ul>
Hazardous waste	Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low	<ul> <li>Spillage of lubricant</li> </ul>	<ul> <li>Manage the disposal way of hazardous waste.</li> </ul>
Occupational Health and Safety (Accidents, Injuries)	<ul> <li>Decommissioning activities</li> <li>Transportation of demolished materials</li> </ul>	3	1	2	3	18	Low	• Injuries and accidents	<ul> <li>Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board.</li> <li>Clean up excessive waste debris and liquid spills regularly.</li> <li>Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.</li> </ul>

## 6. PUBLIC CONSULTATION

## 6.1. PUBLIC CONSULTATION PROCESS

This chapter presents results of public consultation and information disclosure conducted for the Sudey Industrial Myanmar garment factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made.

Public consultation during preparation of EMP report was conducted on 13, December 2019, following the EIA procedure.

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

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

Relevant key office at the regional level is Bago Municipal, General Administrative Department, Fire Department, Factories and General Labor Law Inspection Department, Public Health Department, Industrial Supervision and Inspection Department.

Public consultation carried out after the presentation on the project, followed by questions, answers and discussion. U Aung Kyaw Moe presented EMP study and findings from Myanwei, after the presentation following question and answer section. Summary of public consultation meeting is presented Table 6-1. Is shown the consultation meeting photo.

Time and Date	Friday,6 March 2020 10:30-12:30
Venue	U Paing No (10/1+11/4),Plot No. (649),Kali(TatKalay)Village,Bago Region .
Agenda	Presentation on the Background Information of Project, Project Description, Impact Assessment, Environmental Mitigation Environmental Management Plan and Monitoring Plan Received and Answer from feedback of participants

 Table 6-1
 Summary of public consultation meeting

## 6.2. RECOMMEND SUGGESTION AND COMMENT

After the presentation, the floor opened for questions and answers. There is question and comment for presentation and EMP draft report, because the project is sample manufacturing of garment on CMP basis. In addition, ECD were suggesting for the occupational health and safety, during project implementation about project planning and environmental issues. The following listed is suggestion of government officer.

Suggestion; Daw Aye Aye Soe; Officer (Environmental Conservation Department)

- To encourage the employee to use Personal Protective Equipment (PPE)
- To discuss with municipal authority about how to manage the waste products
- To apply the license for Chemical Safety Data Sheet

- To put more fire safety data in EMP report
- To install tube well because of using large amount of water for washing process
- To get enough space for each worker

Suggestion; U Tin Moe Hlaing; Assistant Director (Bago Municipal)

• To describe the waste water is safe for surrounding habitation

Suggestion; Daw Tin Mar Tun Myint; Assistant Director (Industrial Management Committee)

- To build the toilets facility sufficient to the amount of employee
- To install the chimney for steam boiler
- To get the general worker have training and knowledge sharing for production and fire safety , health, etc.

Suggestion; U Zaw Min Ohn; Deputy Director (Environmental Conservation Department)

- To get the generator machinist put on safety products when operate the generator
- To have the environmental engineer for health, safety and environmental problem









## Sudey Industrial Myanmar Company Limited Environmental Management Plan



Figure 6-1 Public consultation meeting

## 6.1. 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 Sudey Industrial Myanmar garment factory consists of three main sectors; Health, Education and Community Development Sector. CSR activities are conducted in compliance with BRIC's guideline for implementation of CSR program.

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

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

 Table 6-2
 CSR plan at Sudey Industrial Myanmar Company Limited

## 6.1.1. 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.

## 6.1.2. Non-profit Training

We will contribute 1% of our net profit for the trainings of our Employees. Our trainings include job-related trainings, language trainings and safety trainings. The main objective of our trainings are that we want our garment with their work but also improving their other skills such as language and

promoting knowledge about safety measures and occupational health employees to be not only become more productive and more qualified.

### 6.1.3. Healthcare

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

## 7. ENVIRONMENTAL MANAGEMENT ACTION

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

## 7.1. AIR POLLUTION/DUST MANAGEMENT PLAN

Objectives:	<ul> <li>To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement.</li> <li>To comply with relevant government rules</li> </ul>
Relevant government law and rule	<ul> <li>National Environmental Quality (Emission) Guidelines (2015)</li> <li>Motor Vehicles Act, (2015)</li> <li>Boiler Law (2015)</li> </ul>
Time Frame	Entire life spans of the factory operation.
Management Action	<ul> <li>The factory has planted trees in its premises which reduce the carbon emission by the factory and minimize the air pollution</li> <li>Periodic maintenance of generator is conducted</li> <li>There is no open burning of waste materials at the site</li> <li>Workers are provided mask during working in any dusty area.</li> </ul>
Monitoring & Reporting	- Biannually monitor the ambient air quality including CO, NO <sub>2</sub> , SO <sub>2</sub> , $PM_{2.5}$ , $PM_{10}$
Estimated cost	Approximately 10 million kyats (annually)
Responsibility	<ul> <li>Management of the factory;</li> <li>Head of maintenance-Total implementation of above of air pollution management plan</li> <li>Production manager-Air quality in the production area is good enough</li> <li>Manager -To hire organization/independent third party testing air quality</li> <li>EHS officer-Monitor the hygiene of ambient air quality in surrounding of the factory</li> </ul>

## 7.2. NOISE MANAGEMENT PLAN

Objectives:	<ul> <li>To avoid nuisance noise to nearby residents generated from generator and other machineries.</li> <li>To comply with noise standard of National Environmental Quality (Emission) Guideline</li> </ul>
Relevant government law and rule	<ul> <li>National Environmental Quality (Emission) Guidelines (2015)</li> </ul>
Time Frame	Throughout the project life

Management Plan	Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment
	<ul> <li>Impose speed limit to track and vehicles at the transportation route.</li> </ul>
	Provide sufficient personal protective equipment (PPE) at the work place
	• All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.
Monitoring & Reporting	Monitor the work place noise level (dB) biannually
Estimated cost	Approximately 5 million kyats (annually)
Responsibility	Manager
	To hire organization/independent third party testing noise level
	Ensure that all workers use PPE during operation

## 7.3. SOLID WASTE MANAGEMENT PLAN

Objectives:	• To minimize waste generation by developing strategies for the management and disposal of all waste in a manner that is sustainable and sensitive to the environment
	To comply government waste management policy
Relevant	Bago Municipal Law (2016)
law and rule	National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	Entire life spans of the factory operation
Management Plan	• The factory does not dispose any kind of solid waste on the factory premises or not dump in the surface water like local pond, canal or river, etc.
	• The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs, empty chemical container are 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 workers hand over to Bago 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.
Monitoring & Reporting	Daily waste have to be collected and hand over to Bago Municipal waste collector
	• The inventory record of waste disposal will be maintained as proof for proper management as designed
Estimated cost	Approximately 24 million kyats (annually)
Responsibility	Manager (HR)
	Responsible for overall site cleanliness and waste management

• Regular waste collection to minimize excessive waste storage

## 7.4. WASTEWATER MANAGEMENT PLAN

Objectives:	Prevent pollution underlying groundwater sources
Relevant government law and rule	<ul> <li>National Environmental Quality (Emission) Guidelines (2015)</li> </ul>
Time Frame	Entire life spans of the factory operation
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.
	<ul> <li>Clean the factory's drainage to avoid odor emission and to avoid the block of water flow</li> </ul>
	Regularly monitor and check the discharge temperature from boiler wastewater before directly discharge into factory's final drainage
Monitoring & Reporting	Proper maintenance of drainage and sewerage system will be conducted periodically
Estimated cost	Approximately 8 million kyats (annually)
Responsibility	• Manager -To hire organization/independent third party testing wastewater quality
	• EHS officer-Monitor the condition of factory's drainage and sewerage system

## 7.5. WATER CONSUMPTION MANAGEMENT PLAN

Objectives:	The water consumption management is aimed at minimizing ground water use		
Relevant government law and rule	The Underground Water Act (1930)		
Time Frame	Once in a year throughout the factory life		
Management Plan	<ul> <li>Install water meter for internal control of water consumption</li> <li>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</li> <li>The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles</li> <li>Trees plantation surrounding the factory</li> </ul>		
Monitoring & Reporting	Daily visual inspections		
Estimated cost	Approximately 5 million kyats (annually)		
Responsibility	<ul><li>Manager</li><li>Arrange audit on water usage controls environmental officer</li></ul>		

## 7.6. ENERGY MANAGEMENT PLAN

Objectives:	<ul> <li>The energy management is aimed at minimizing electricity use results from si equipment and working lighting.</li> <li>Comply with the standard of energy use.</li> </ul>	
Relevant government law and rule	National Energy Management Committee (Myanmar Energy Master Plan 2015)	
Time Frame	Once in a year throughout the factory life.	
Management Plan	<ul> <li>Installation of timers and thermostats to control heating and cooling</li> <li>Energy saving light installed in different area of the factory for saving energy</li> <li>Used of energy saving devices must be installed</li> <li>Ensure that good housekeeping measures such as turning off equipment and lights when not in use</li> </ul>	
Monitoring & Reporting	<ul> <li>Conduct annual energy efficiency of adult to find out the scope for energy saving</li> </ul>	
Estimated cost	Approximately 5 million kyats (annually)	
Responsibility	<ul> <li>Manager</li> <li>To arrange energy audit technical personnel</li> <li>To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises</li> </ul>	

## 7.7. EMERGENCY RESPONSE AND DISASTER MANAGEMENT PLAN

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

	from displaced reptiles (Snake) or other animals.	
	A medical team has been prepared for primary treatment (First Aid)	
	• Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy.	
	• Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management	
	• Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety	
Monitoring &	Weekly check fire extinguishers and water hydrant in position	
Reporting	Daily inspect that all fire exist are open	
	Servicing fire extinguisher and records accidents,	
Estimated cost	Approximately 25 million kyats (annually)	
Responsibility	Manager and EHS officer	
	Arrange firefighting training after every 3 months	
	Responsible for fire control and response	
	Monitoring daily danger warning and bans	

## 7.8. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

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

Issues	Parameter	Frequency	Area to be monitored	Responsible Organization
		<b>Operation Phase</b>	e	
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	Environmental Management Team's Sudey Industrial Myanmar Company Limited.
Air quality	SO2, NO2, CO, CO2, PM2.5, PM10	Biannually monitoring and reporting to ECD (first 3 years after operation)	Outdoor and Indoor of proposed project	Environmental Management Team's Sudey Industrial Myanmar Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	weekly	Recycle house and waste house and at the factory office	Environmental Management Team's Sudey Industrial Myanmar Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	Environmental Management Team's

Table 7-1	Environmental	Monitoring	Process
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Issues	Parameter	Frequency	Area to be monitored	Responsible Organization	
				Sudey Industrial Myanmar Company Limited	
Light intensity	Illuminance	Monthly	At the production line (especially cutting and QC)	Environmental Management Team's Sudey Industrial Myanmar Company Limited	
Decommissioning Phase					
Air quality	SO2, NO2, CO, CO2, PM2.5, PM10	One time during this phase	One point in the production area	Land Owner	
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	Land Owner	
Rehabilitati on	Recovering and Revegetation		All decommissioning area	Land Owner	

## 7.9. BUDGET PLAN FOR ENVIRONMENTAL MANAGEMENT AND MONITORING

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

The following table shows the expenditures for the implementation of Environmental Management Plan for operation phase annually. Estimation cost for EMP implementation is presented in

Table 7-2	Cost Estimation for EMP Implementation
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No	Item	Frequency/Times	Cost (MMK)		
Mitiga	ation Plan				
1	Maintenance of air ventilation system	Once per year	500,000 per year		
2	Grass plantation within the area of factory compound	Once per three months	100,000 per three months		
3	Solid waste disposal	12	50,000 per month		
4	Purchase of Personal Protective Equipment (PPE)	Once per half a year	80,000 per month		
5	Medical Check-up and Health Insurances	Once per year	500,000 per year		
Monit	Monitoring Plan				
1	Air Quality	2	500,000 per year		
3	Light level	2	50,000 per year		
4	Environmental Monitoring report	1	500,000 lump sum		

## 7.10. CAPACITY BUILDING AND TRAINING PLAN

The emergency preparedness is vital, as quick and correct response is necessary in case of emergency to reduce injuries, harm and other damage. Care should be given for during processing

activities in order to prevent synthetic errors and accidental cases (e.g., electricity shock and fire hazards).

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

## 7.10.1. Assignment of Responsibilities

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

## 7.10.2. Emergency Procedures

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

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

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

## 7.10.3. Training for Emergencies

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

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

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

## 7.10.4. Fire Prevention and Protection

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

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

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

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

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

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

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

## 7.10.5. Fire Protection Equipment

- 1. Explosion Suppression Systems: Explosion suppression systems should be used in unusually hazardous areas such as elevator legs, boots and head, or in areas such as bins, distributors and tanks.
- 2. Portable Fire Extinguishers: All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:
  - Correct type of extinguisher to use on different classes of fire
  - Proper techniques for use of the equipment to extinguish a fire
- 3. Standpipes and Hoses: All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.
- 4. Automatic Sprinkler Systems: Automatic sprinkler systems are recommended in areas containing combustible materials.
- 5. Fire Hydrants: All grain and feed mill facilities should have adequate public or private fire hydrants on site. Each fire hydrant should have an adequate water supply.

## 7.10.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

- Emergency escape routes must be clearly shown on floor plans and workplace maps
- Employers must know that their employees know the emergency escape routes
- o 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.

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

#### Table 7-3 American National Fire Fighting Association (NFFA) Standards

**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.

### 7.10.7. Site Fire Control

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

## 7.10.8. Employee Information and Training

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

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

## 7.10.9. Health and Safety Training Plan for Worker

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

	-	
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

Table 7-4	Training Plan Used in Sude	y Industrial Myanm	ar Company Limited
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		to affect environment
4.	Material storage and safety	Safety use of related devices and machines Use of necessary protections in working areas Sanitation work
5.	Fire Safety	Firefighting and evacuating training and practices Firefighting materials/ devices use
6.	First Aid	first aid / CPR/ AED training from providers (Outsource) training on hazard of pathogens

## 7.11. 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 Sudey Industrial Myanmar Company Limited representative from Bago Industrial Zone and representative from General Administration Department (Bago Township). Small issues will be solved at the Grievance Committee stage and other unsolved problems will be submitted to higher responsible authorities and finally the responsible person decided by the court in legal terms. The following diagram show steps of Grievance Redress Mechanism of Proposed Factory Project.



Figure 7-1 Grievance Redress Mechanism Flow Diagram

## 7.12. CORPORATE SOCIAL RESPONSIBILITY (CSR) PLAN

The CSR activities have the objective to uplift quality of life and gain favorable relations from all communities in the operation area. The CSR program for Sudey Industrial Myanmar Company Limited consists of three main sectors; Health, Education and Communities Development Sector. CSR activities are conducted in compliance with BRIC's guideline for implementation of CSR program.

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

Table 7-5	CSR plan at Sudey Industrial Myanmar Company Limited
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	-		
Area	Priority item	Contribution (%)	Detail Targets

Health	Healthcare for employees and their family	0.5 %	One of our main concerns is the well-being of our employees. We will contribute 0.5 % of our net profit for the healthcare which includes medical checkup for the employees and providing health education to our workers.
Education	Raising awareness education level and human right	0.5%	We will contribute 0.5 % of our net profit to the public school near the factory to be a part of creating the better community. We will also work together with the school to understand more about the needs and we will also ensure that our contributions will be used in the most effective and efficient way for the society.
Community development	Donation to local community	1 %	Donate to local charities with a worthy cause Actively participate in community events Encourage staff to participate, and to form a community engagement team to actively support community events Embedding understanding and consciousness about human rights issues among the employees Development of sexual harassment and power harassmentll (workplace bullying & harassment) prevention efforts

## 8. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Sudey Industrial Myanmar garment factory is located at U Paing No(10/1+11/4), Plot No.(649), Kali(TatKalay)Village,Bago Region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An EMP has been carried out for the factory according to the requirement of the proponent as it has been made for garment manufacturing factory.

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

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

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

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

## 9. RECOMMENDATION

This is recommended that;

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

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

## APPENDIX A

# Company Document's Sudey Industrial Myanmar Company Limited

	ENDORSEMENT
Endorser	nent No. BGO-020/2019 Date 2% June 2019
Th	is endorsement is issued by the Bago Region Investment Committee
accordin	g to the section 25 (d) of the Myanmar Investment Law-
(1)	Name of Investor MR. YUAN ZHONGHENG
(2)	Citizenship CHINESE
(3)	Residence Address 21 NINGNAN STREET, 501, BUILDING A YUHUA
	DISTRICT, NANJING, CHINA.
(4)	Name and Address of Principal Organization
(5)	Place of Incorporation
(6)	Type of business MANUFACTURING OF GARMENTS ON CMP BASIS
(7)	Place(s) of investment Project PLOT NO.(10/1+11/4), KWIN NO.(649/KALI
	EAST NORTH), KALI (TAP KALAY) VILLAGE TRACT, BAGO TOWNSHIP.
(8)	Amount of Foreign Capital US \$ 4.838 MILLION
(9)	Period for Foreign Capital to be brought in WITHIN ONE YEAR FROM
	THE DATE OF ISSUANCE OF BRIC ENDORSEMENT
(10)	Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF US\$ 4.838
	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 Myanmar SUDEY INDUSTRIAL
	MYANMAR COMPANY LIMITED

of the Union of

Sr.No.

Date.

## THE REPUBLIC OF THE UNION OF MYANMAR BAGO REGION INVESTMENT COMMITTEE

Bago Region Government Office Compound, Taungoo Street, Yone Gyee Quarter, Bago

Bago Region Government Once C	Compound, Taungoo Street, Tone Oyee Quarter, Bago		
Tel: 052-2201747	Our ref: 22/ 49/ 10 ( 534 /2019)		
Fax: 052-2201748	Date : 28 <sup>th</sup> June 2019		

Subject: Decision of the Bago Region Investment Committee on the Endorsement for manufacturing of garments on CMP basis under the name of Sudey Industrial Myanmar Company Limited

Reference: Sudey Industrial Myanmar Company Limited letter dated 28th May 2019

1. The Bago Region Investment Committee, at its meeting ( 4 /2019 ) held on 18<sup>th</sup> June 2019, approved the Endorsement for investment in manufacturing of garments on CMP basis under the name of Sudey Industrial Myanmar Company Limited submitted by Mr. Yuan Zhongheng ( 60 %) and Mr. Lin Jianyong (40 %) from People Republic of China as a wholly foreign own 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 fifty (50) years and extendable two times for five years commencing from the date of the issuance of the Endorsement by the Bago Region Investment Committee.
- (b) The term of the Lease Agreement for land shall be fifty (50) years and extendable two times for five years commencing from the date of signing of the Lease Agreement between Glory Top Bago Company Limited (Lessor) and Sudey Industrial Myanmar Company Limited (Lessee).
- (c) The annual rent for the land shall be (50%) Ks. 525,750,000/- (Kyats Five Hundred Twenty Five Million Seven Hundred Fifty Thousand Only), (40%)
   Ks. 420,600,000/- (Kyats Four Hundred Twenty Million Six Hundred

- 2 -

Thousand Only), (10%) Ks. 105,150,000/– (Kyats One Hundred Five Million and One Hundred Fifty Thousand Only) for the total area of the land measuring 28,368.49 square meters (7.01 acres).

- (d) Sudey Industrial Myanmar Company Limited, which has obtained this endorsement to receive benefits relating to the right to use exemptions and reliefs under sections 75, 77 and 78 of the Chapter XVIII of Myanmar Investment Law, may submit the application form.
- (e) Sudey Industrial Myanmar Company Limited shall use its best efforts to achieve a timely realization of the work states in the endorsement application.
- (f) Sudey Industrial Myanmar Company Limited shall obey and respect the responsible of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.
- (g) Sudey Industrial Myanmar 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) Sudey Industrial Myanmar Company Limited shall submit to the Commission of 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) Sudey Industrial Myanmar Company Limited which has benefitted from the Endorsement or exemption and reliefs shall submit an annual report in the prescribed form to the Commission 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) Sudey Industrial Myanmar Company Limited must, during the operation period under the endorsement of the Commission, submit its operating

report quarterly in the prescribed form in accordance with rule 197 of Myanmar Investment Rules.

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

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

(Win Thein) Chairman

#### Sudey Industrial Myanmar Company Limited

cc: 1. Ministry of Home Affairs

- 2. Ministry of Government of the Republic of the Union of Myanmar
- 3. Ministry of Natural Resources and Environmental Conservation
- 4. Ministry of Labour, Immigration and Population
- 5. Ministry of Industry
- 6. Ministry of Commerce
- 7. Ministry of Investment and Foreign Economic Relation
- 8. Myanmar Investment Commission
- 9. Chairman, CMP Enterprises Supervision Committee
- 10. Office of the Bago Region Government
- 11. Director General, Department of Environmental Conservation
- 12. Director General, Directorate of Labour
- 12 Director General Department of Immigration

- 4 -

14. Director General, Directorate of Industrial Supervision and Inspection

15. Director General, Department of Trade

- 16. Director General, Directorate of Investment and Company Administration
- 17. Director General, National Archives Department
- 18. Director General, Customs Department
- 19. Director General, Internal Revenue Department
- 20. Director, Investment Monitoring Section, Directorate of Investment and Company Administration
- 21. Bago Region Office, Directorate of Investment and Company Administration

## APPENDIX B Transitional Consultant Registration Certificate



EXTENSION သက်တန်းတိုးမြှင့်ခြင်း The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019) ອ້ານດ້ອງດ້ອງສາ (ວ-ດ-ບາດອາ) ရດ້ວຍອຸຍ ດ້າວອາສາດ ຫຍັງຍ້ອງການ ເພິ່ງ ເພິ່ງ ເພິ່ງ ຄຸດກອງສອດ ຫຍັງຍ້ອງການ ເພິ່ງ ເພິ່ງ ເພິ່ງ ຄຸດກອງສອດ ຫຍັງຍ້ອງການ ຄຸດກອງສອດ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ຄຸດກອງສອດ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ຄຸດກອງສອດ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ຄຸດກອງສອດ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ຄຸດກອງສອດ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ເພິ່ງ ໂດຍ ເພິ່ງ ເພິ

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

## Areas of Expertise Permitted (ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Geology and Soil

	EXTENSION
TI	he VALIDITY of this certificate is extended
fo	or six month from (1.1.2021) to (30.6.2021)
~~	ရက်နေ့အထိ (၆)ရာ သက်ရွာမ်းတိုးမြှင့်သည်။
	Northington General
	(Soe Naing, Director)
	Environmental Conservation Department

EXTENSION သက်တမ်းတိုးမြှင့်ရြင်း The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019) ဤလက်မှတ်အား (ວ-၄-၂၀၁၉) ရက်နေမှ (၃၀.၁၂.၂၀၁၉) ရက်နေအထိ (၉)လသက်တမ်း တိုးမြှင့်သည်။ For Director General (Soe Naing, Director) Environmental Conservation Department

#### EXTENSION သက်တစ်းတိုးဖြင့်ခြင်း 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 တစ်နှစ်သက်တစ်းတိုးမြှင့်သည်။ For Director General (Soe Naing, Director) Environmental Conservation Department

Series



## THE REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation



## Environmental Conservation Department

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION (ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No.	0068	Date	2 4 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)
- (b) Name of the representative in the organization (အဖွဲ့ အစည်းကိုယ်စားလှယ်၏အမည်)
- (c) Citizenship of the representative in the organization
   (အဖွဲ့ အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား)
- (d) Identity Card /Passport Number of the representative person in the organization (အဖွဲ့ အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်)
- (e) Address of organization (ဆက်သွယ်ရန်လိပ်စာ)
- (f) Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)
- (g) Duration of validity (သက်တမ်းကုန်ဆုံးရက်)

Myanwei Consulting Co., Ltd.

U Nyan Lynn Aung

Myanmar

12/Sakhana(N)056196

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Organization

31 December 2019

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

## Areas of Expertise Permitted (ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

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

Nº P.



EXTENSION သတိတစ်းတိုးမြှင့်ခြင်း The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021) ຫຼາດທີ່မှတ်အား(ວ-ວ-ປວປວ) ရက်နေ့မှ (၃ဝ-၆-ປວປວ) ရက်နေအထိ (၆)လ သက်တွန်းတိုးမြှင့်သည်။ For Director General (Soe Naing, Director) Environmental Conservation Department

#### EXTENSION သက်တစ်းတိုးမြှင့်ခြင်း The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020) ဤလတ်မှတ်အား(၁-၁-၂၀၂၀) ရက်နေ့အထိ တစ်နှစ်သွက်တမ်းတိုးမြှင့်သည်။ ရက်နေ့အထိ တစ်နှစ်သွက်တမ်းတိုးမြှင့်သည်။ For Director General (Soe Naing, Director) Environmental Conservation Department

## **APPENDIX C Monitoring Results**

### Air Quality Result



Plot No. (36, 38), Room No. 9A, 9<sup>th</sup> 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: Project Location:	Sudey Industrial Myanmar Company Limited U Paing No (10/1+11/4),Plot No. (649),Kali(TatKalay)Village,Bago Region.	-
Sampling Date:	3 February 2020	
Sampling Time:	11:00 am to 2:00 pm	
Sampling Condition:	Good	
Sampling By:	Environmental Team Represented by Myanwei Consulting Group Company Limited	

Instrument	Туре	Sampling Rate	Location
Haz-Scanner	Environmental	1 second to 21	Operation Area
	Perimeter Air Station	weeks	(Indoor)

No	Parameter	Unit	Result	Standard	Remark
1	PM10	(µg/M <sup>3</sup> )	44.4	50	Normal
2	PM <sub>2.5</sub>	(µg/M <sup>3</sup> )	34.4	25	Normal
3	SO <sub>2</sub>	(µg/M <sup>3</sup> )	70.96	500	Normal
4	NO <sub>2</sub>	(µg/M <sup>3</sup> )	398.23	200	Normal

#### National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10b	1-year 24-hour	20 50	(µg/M <sup>3</sup> )
PM 2.5b	1-year 24-hour	10 25	(µg/M <sup>3</sup> )
NH3		-	
CO	-		
NO2	1-year 1-hour	40 200	19. 19.
SO2	24-hours 10 minute	20 500	
VOC	-	2/20/50/75/100/1 150 c,d	mg/Nm <sup>3</sup>

212U/SU/15/10U/11SU C, d mg/Nm3
 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 vaste 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); if solvent is recovered from
 emissions and reused, the guideline value is 150 mg/Nm3



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Project Name: Project Location:	Sudey Industrial Myanmar Company Limited U Paing No (10/1+11/4),Plot No. (649),Kali(TatKalay)Village,Bago Region.
Sampling Date:	3 February, 2020
Sampling Time:	11:00 am to 2:00 pm
Sampling Condition:	Normal
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Туре	Sampling Rate	Location
Uni-T (Luminometer)	UT380 Series	100 times/second	17°23'35.24'' <b>N</b> 96°30'56.33''

No	Measure area	Unit	Result	Standard	Remark
1	Warehouse	Lux	599	2000	
2	Cutting Area	Lux	1089	2000	
3	Sewing Line 1	Lux	994	300	
4	Sewing Line 2	Lux	986	2000	
5	Q.C	Lux	1572	2000	
6	Ironing Area	Lux	979	1000	
7	Packing Area	Lux	977	1000	

#### **IESNA Lighting Handbook**

Area / Task / Process	llluminace levels (lux)
Exterior calculating, walkways, stores, main entrances and exit roads, car parking, internal factory roads, etc.	20-50
Boiler house, transformer yards, furnace rooms, entrances, corridors, stairs, etc.	70-100
Calculation area in industry, stores, stock rooms and canteen.	100-150
Coarse Work	200-300
Medium work	300-500
Fine Work	500-1500
Very fine minute and precise work	1500-3000

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

Lin Htet Sein Environmental Consultant Myanwei Consulting Co., Ltd.



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Project Name: Project Location:	Sudey Industrial Myanmar Company Limited U Paing No (10/1+11/4),Plot No. (649),Kali(TatKalay)Village,Bago Region.
Sampling Date:	3 February, 2020
Sampling Time:	11:00 am to 2:00 pm
Sampling Condition:	Normal Condition
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Туре	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	17°23'35.24''N and 96°30'56.33''

No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	73.835 dBA	70 dBA	Normal

National Environmental Quality (Emission) Guideline

	One Hour Laeq (dBA)	Guideline value	
Recentor	Daytime	Nighttime	
Receptor	7:00 - 22:00 (10:00 -	22:00 - 07:00 (22:00 -	
2	22:00 for Public holidays)	10:00 for Public holidays)	
Residential,			
Institutional,	55	45	
Educational			
Industrial,	70	70	
Commercial	,0	,0	

Lin Htet S Environm al Co Myanwei Consulting Co.
## Noise Graph



## Drinking Water Result

ing S.E(Delft) Lecturer of YIT ( EF, Water quality monitorir	Retd). Consultant (Y.C.D.C), LWSE 001.	WTL-RI
SULTS FORM	W1219 094	Issue Date - 01-12 Effective Date - 01-12 Issue No - 1.0/Page
	SHY Myanmar Water	
and the second second	Filter Water	
	Bago - Su Dey Industria	Myanmar Co.,Ltd.
	2.12.2019	and the second
	3.12.2019	
nation	4.12.2019	E
	6,12.2019	the second second
	WHO	Drinking Water Guidelin (Geneva - 1993)
6.8		6.5 - 8.5
Nil	TCU	15 TCU
1	NTU	5 NTU
368	micro S/cm	
8	mg/l as CaCO <sub>2</sub>	500 mg/l as CaCOa
6	mg/l as CaCO <sub>2</sub>	
2	mg/l as CaCO <sub>3</sub>	
32	mg/l as CaCO <sub>3</sub>	
Nil	mg/l as CaCO <sub>3</sub>	
Nil	mg/l as CaCO <sub>3</sub>	
32	mg/l as CaCO <sub>3</sub>	
0.12	mg/l	0.3 ma/l
109	mg/l	250 ma/l
180	mg/l	
10	mg/l	500 mg/l
186	mg/l	1500 mg/l
2	mg/l	•
184	mg/l_	1000 mg/l
Nil	mg/l	0.05 mg/l
	and the second design of the s	
Nil	mg/l	
Nil 3	mg/l mg/l	
Nil 3 Nil	mg/l mg/l mg/l	
	6.8 Nil 1 368 8 6 2 32 Nil Nil 32 0.12 109 180 10 186 2 184	SHY Myanmar Water   Filter Water   Bago - Su Dey Industria   2.12.2019   3.12.2019   nation 4.12.2019   6.12.2019   6.12.2019   6.12.2019   6.12.2019   6.12.2019   0.12.2019   WHO   6   8   mg/l as CaCO3   6   7   8   1   368   micro S/cm   8   1   368   mg/l as CaCO3   1   32   mg/l as CaCO3   32   mg/l as CaCO3   32   mg/l as CaCO3   32   mg/l as CaCO3   32   mg/l   109   mg/l   180   mg/l   186   mg/l   186   mg/l   184   mg/l

## APPENDIX D Fire Safety Training and First Aid Certificate





The geinst. ¢ ate this G K လက်မှတ် Cled Contract 02 9600 966 20 80996h466-60 of geosegeggs MG19190-90 EIShqisch-bo ယာဝန်းကုမ္မောန်းသိမ်းရေးဗိုးနီး ငြ ၅၃ ရေဝဝပ် 09-43084602 09.252543042 ဆက်သွယ်ရန် တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း ลี้เล่าสาย เกราง เกราง เกราง เกราง เกราง ontyled wing stagenary?. Saga garas ဌာန / အဖွဲ့ အစည်း ц Ses 11 -300 22 Elmilli w ဥ အိယလက်တောက် ဦးမိုးမျှုင ဒု ၊ လက်တောက် ဒု.တိ. မှု။ 2- @: @ n. w. BIL: P: 8: np3 S: S: mold ~16 53 21~ sher bet and Silver Big ရာတူး နေရွိးျမင္လြန္ပုက်ရ စုလာ ၂၀၁၉ ခုနှစ် ورا مراجع المراجع g.earue: 25: al an: 030: 030: 0: al o mon ၈. ဒေါ်ပန်မျှက်ချပS 6ST Aggo 69 g: 059 0; and geneder 36 Co., Ltd. ဒေါ်ခင်ရတနာ Consulting အမည် 3 S ź 5 5 à U 0 5 Wyanwer

APPENDIX E Public Consultation Meeting

တွေ့ဆုံဆွေးနွေးပွဲ အစမ်းအနားသို့ တက်ရောက်သူများစာရင်း

လို	•				
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