JIA HE LI COMPANY LIMITED

Environmental Management Plan

Manufacturing of Soles for CMP Enterprises

Prepared by

Myanwei Environmental Solutions Company Limited

27-Sep-22

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Date: 27, 9, 2022

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect of Manufacturing of Outer and Inner Soles of Shoes by Jia He Li 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.

仰光嘉禾利股份有限公司
JIA HE LI COMPANY LIMITED
N0 (35-A) Mya Wa Di Min Gyi Street Industry Zone . South Dagon . 09-976901968 ,09675822778

Date: 27, 9, 2022

Dear: Director

Environmental Conservation Department

Nay Pyi Taw

Subject: Environmental Management Plan (EMP) Report in respect of Manufacturing of Shoes

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.

Jia He Li Company Limited will at all times comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that

MR. ZHOU JIMING
DIRECTOR
JIA HE LI COMPANY LIMITED

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Abbreviation

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

အစီရင်ခံစာအကျဉ်းချုပ်

နိဒါန်း

Jia He Li Company Limited ဖိနပ်အောက်ခံဆိုးလ်ပြားထုတ်လုပ်သည့် စက်ရုံသည် မြေကွက်အမှတ် (၃၅)၊ မြေတိုင်းရပ်ကွက်အမှတ် (၁၄၄)၊ စက်မှုဇုန်၊ ဒဂုံမြို့သစ်တောင်ပိုင်းမြို့နယ် ၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိသည်။ အဆိုပြုစီမံကိန်းသည် (၁၀၀%) နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှုဖြစ်ပါသည်။ အဆိုပြုစီမံကိန်းသည် ဖိနပ်ဆိုးလ်ပြားများအား ပြည်တွင်းရှိ CMP စနစ်ဖြင့် ဖိနပ်ထုတ်လုပ်မည့် လုပ်ငန်းများသို့ ထုတ်လုပ်ရောင်းချမည့် လုပ်ငန်းဖြစ်ပါသည်။ စီမံကိန်းဇရိယာသည် မြေဇရိယာစုစုပေါင်း ၁.၀၄ ဧက (၄၂၀၈.၇၃ စတုရန်းမီတာ) ကျယ်ဝန်းပါသည်။

အဆိုပြုစီမံကိန်းသည် ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၉ခုနှစ်၊ ဇူလိုင်လ၊ ၃၀ ရက်နေ့တွင် (အတည်ပြုမိန့်အမှတ်-ရကတ-၂၂၉/၂၀၁၉)ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

ထို့ကြောင့် Jia He Li Company Limited သည် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC)၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ၂၀၂၂ ခုနှစ်၊ စက်တင်ဘာလ၊ ၂၀ ရက်နေ့တွင် စာအမှတ်၊ ရက/EIA/ ၂ (၅) (၂၄၉၆/ ၂၀၂၂) ဖြင့် သဘောထားမှတ်ချက် ပြန်ကြားခဲ့ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Company Limited မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

အဆိုပြုစီမံကိန်းနှင့် စီမံကန်းပတ်ဝန်းကျင်အနေအထားကို အကဲဖြတ်ရန် စက်တင်ဘာလ ၂၅ ရက်၊ ၂၀၂၂ ပြည့်နှစ် တွင် စက်ရုံသို့ ကွင်းဆင်း ဆောင်ရွက်ခဲ့ပါသည်။ စီမံကိန်းဆိုင်ရာ အခြေခံစစ်တမ်းများ ကောက်ယူမှုကို စီမံကိန်းလည်ပတ်စဉ်အတွင်းတွင် ဆောင်ရွက်ခဲ့ပါသည်။ စစ်တမ်းကောက်ယူသည့် အဖွဲ့တွင် အကြံပေးပုဂ္ဂိုလ်များ၊ ပတ်ဝန်းကျင်အရည်အသွေးဆန်းစစ်သူများ ပါဝင်ပါသည်။

ရင်းနှီးမြှုပ်နှံသူ၏ အချက်အလက်

ရင်းနှီးမြှုပ်နှံသူ အမည်	Mr. Zhou Jiming
ID No.:	E63290640
နိုင်ငံသား	တရုတ်နိုင်ငံသား
မှတ်ပုံတင်သွင်းသည့် လိပ်စာ	Huangchuan Country, Henan Province, Zhangji, Fangang Village, Caiying Group, China

အဆိုပြုထားသော စီမံကိန်း၏ အဓိကလက္ခဏာများ

အဆိုပြုထားသော စီမံကိန်း	ဖိနပ်အောက်ခံဆိုးလ်ပြားများအား ပြည်တွင်းရှိ CMP စနစ်ဖြင့် ဖိနပ်ထုတ်လုပ်သည့်လုပ်ငန်းများသို့ ထုတ်လုပ်ရောင်းချမည့်လုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှုပုံစံ	၁၀၀ % နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှု
မြေနေရာပုံစံ	စက်မှုဇုန်မြေ
စုစုပေါင်းမြေကွက်ဧရိယာ	၁.၀၄ ဧက (၄၂၀၈.၇၃ စတုရန်းမီတာ)
စုစုပေါင်းအဆောက်အအုံဧရိယာ	တစ်ထပ်စက်ရုံအဆောက်အဦး (၃၆ မီတာ x ၇၂ မီတာ)
မြေငှားကာလ	ကနဦး ၃၀ နှစ်နှင့် ၁၀ နှစ်သက်တမ်းတိုး ၂ ကြိမ်
စီမံကိန်း တည်နေရာ	မြေကွက်အမှတ် ၃၅၊ မြေတိုင်း ရပ်ကွက်အမှတ် (၁၄၄) စက်မှုဇုန်၊ ဒဂုံမြို့သစ် (တောင်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
ဆက်သွယ်ရန် ဖုန်းနံပါတ်	သန္တာခိုင် (HR Manager) ဖုန်းနံပါတ် :၀၉၇၆၄၆၁၀၄၅၀ အီးမေးလ်လိပ်စာ : dg_helixiecai@163.com

ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ

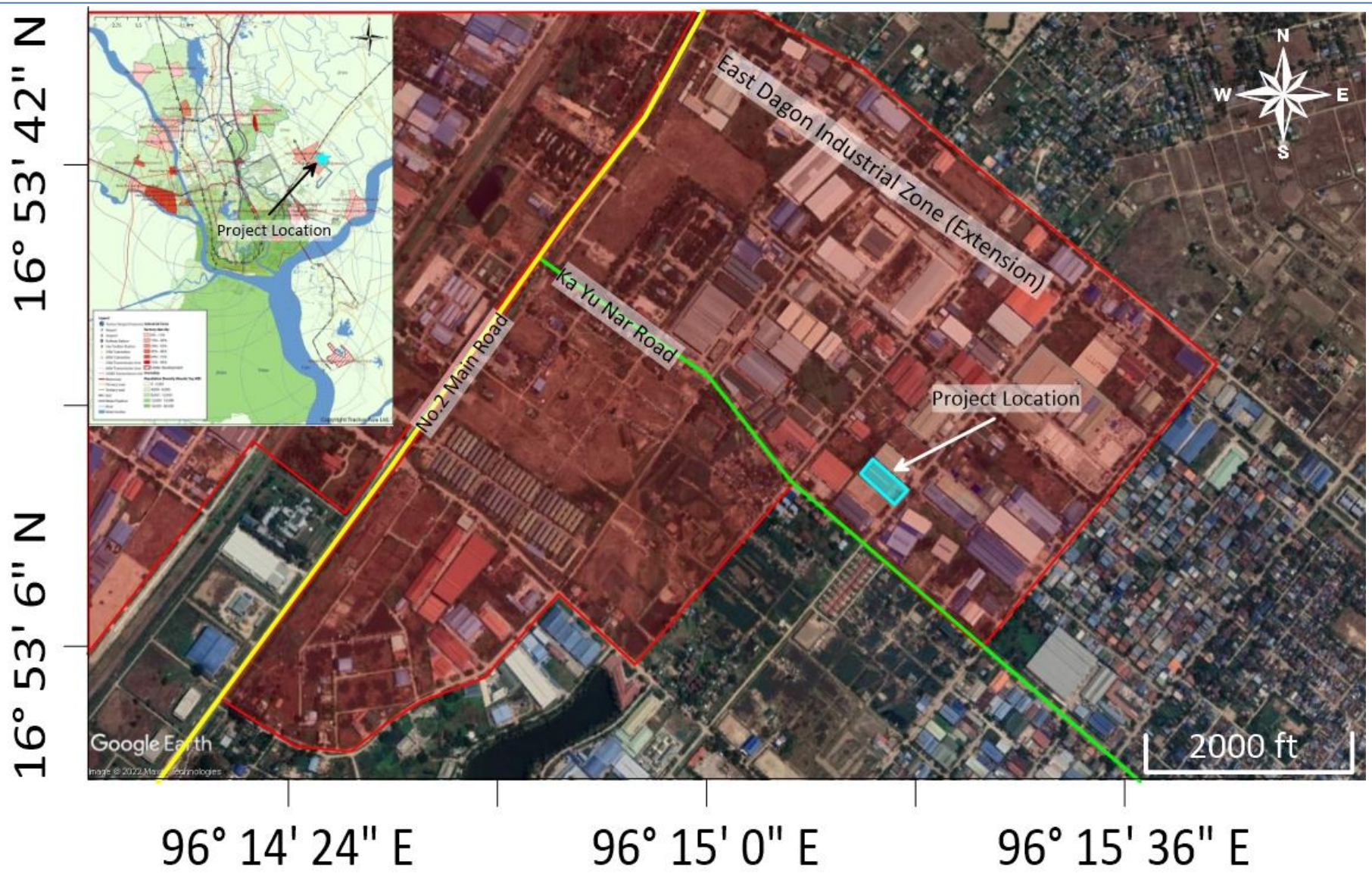
ဥပဒေနှင့် နည်းဥပဒေ အခန်းတွင် MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များအပြင် စက်ရုံနှင့်ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့်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

1. Constitution 2008
2. Environmental Conservation Law, 30 March 2012
3. Environmental Conservation Rules, 2014
4. Environmental Impact Assessment Procedure (December 2015)
5. National Environmental Quality (Emission) Guideline (NEQG) (December 2015)
6. National Environmental Policy of Myanmar (2019)
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law (1993)
11. Payment of Wages Law (2016)
12. The Amended Law for Factories Act, 1951 (2016)

13. The Private Industrial Enterprise Law, 1990
14. The Export and Import Law (2012)
15. The Prevention of Hazard from Chemical and Related Substances Law, 2013
16. Underground Water Act
17. Myanmar Fire Brigade Law (2015)
18. The Electricity Law (2014)
19. Boiler Law (2015)
20. Labor Dispute Settlement Law (28 March 2012 replacing 1929 version)
21. The Social Security Law (2012)
22. The Employment and Skill Development (2013)
23. The Worker's Compensation Act, 1923
24. The Payment of Wages Act, 1936
25. The Leave and Holidays Act, (1951, partially revised in 20140
26. The Minimum Wage Law (2013)
27. Public Health Law (1972)
28. Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)
29. Occupational Safety and Health Law (2019)
30. The Law on Standardization
31. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဝတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)
32. The Motor Vehicles Law (2015)
33. The Conservation of Water Resources and River Law (2006)
34. The Commercial Tax Law (1990) Amended 2014

<u>လုပ်ငန်းအကြောင်းအရာဖော်ပြချက်</u>

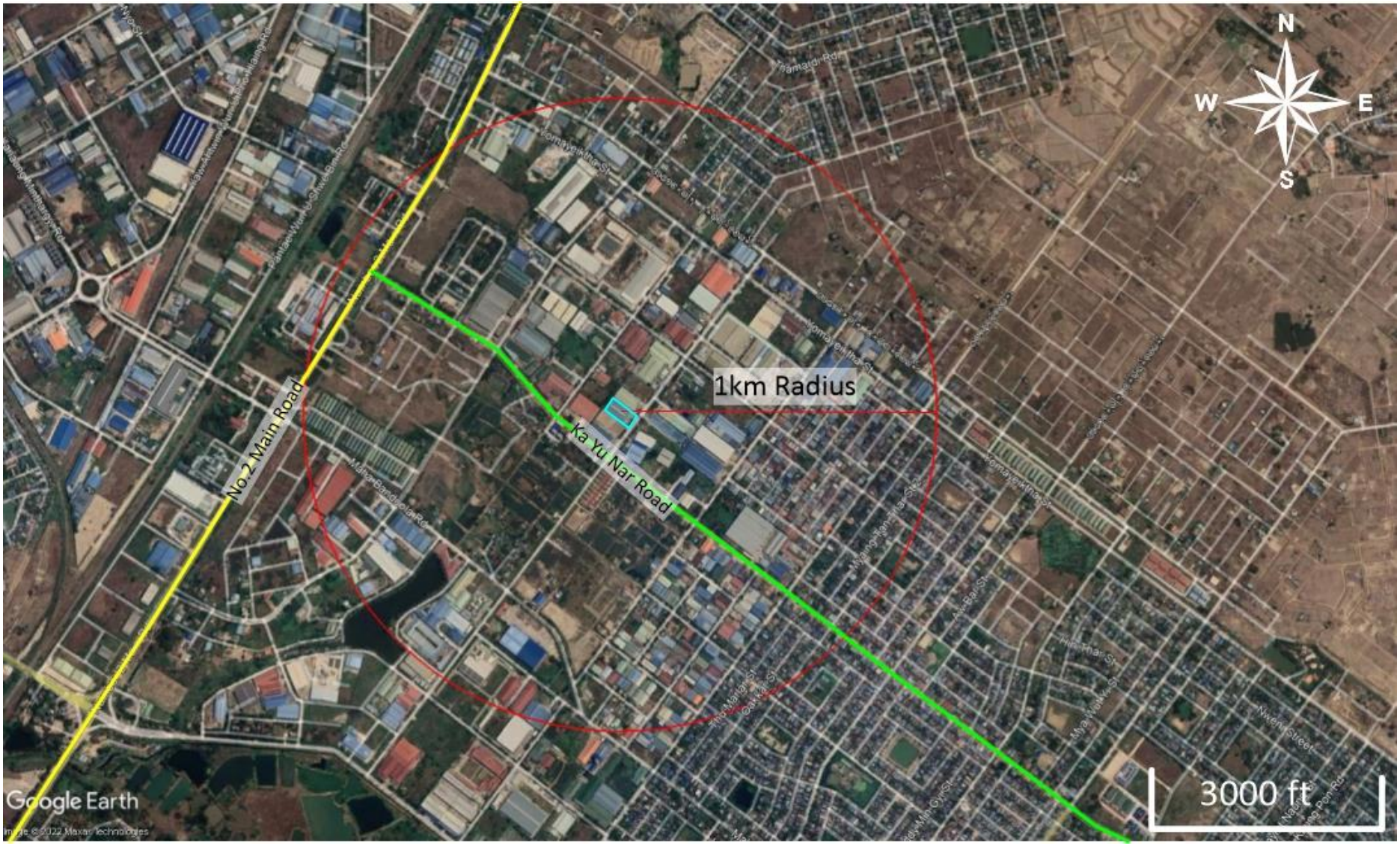
Jia He Li Co., Ltd စက်ရုံသည် မြေကွက်အမှတ် ၃၅၊ မြေတိုင်း ရပ်ကွက်အမှတ် (၁၄၄) စက်မှုဇုန်၊ ဒဂုံမြို့သစ် (တောင်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင်တည်ရှိပြီး မြေဧရိယာစုစုပေါင်း ၁.၀၄ ဧက (၄၂၀၈.၇၃ စတုရန်းမီတာ) ကျယ်ဝန်းပါသည်။ အဆိုပြုစီမံကိန်းမှ ထုတ်လုပ်ရရှိသော ဖိနပ်အောက်ခံဆိုးလ်ပြားများကို ပြည်တွင်းရှိ CMP စနစ်ဖြင့် ဖိနပ်ထုတ်လုပ်ခြင်းလုပ်ငန်းကို လုပ်ကိုင်ဆောက်ရွက်နေသည့် King Lead Ind Company Limited နှင့် Mountain Top Gobal Limited တို့အားရောင်းချသွားမည်ဖြစ်ပါသည်။



စီမံကိန်း တည်နေရာပြမြေပုံ


Drying Area
Toilet
Quality Check Area
Painting Area
Painting Material Storage Room
Packaging Area
Compound Mixing Area
Semi Product Storage Area
Pressing & Moulding Area
Raw Material Area
Canteen Area
Transformer
Generator Room
Security Gate

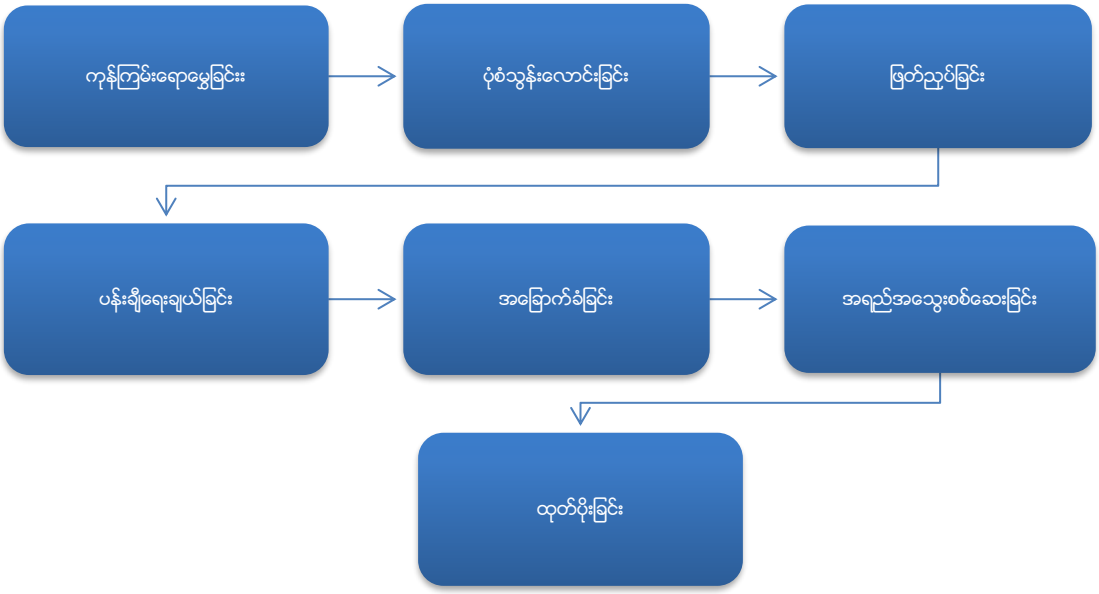
စက်ရုံ၏ တည်ဆောက်ပြမြေပုံ



စက်ရုံ၏ပတ်ဝန်းကျင်ပြမြေပုံ

Jia He Li Company Limited ၏ အဓိက ကုန်ကြမ်းမှာ TPR၊ ABS၊ PU နှင့် အခြားဆက်စပ်ပစ္စည်းများဖြစ်ပါသည်။ စက်နှင့် စက်ပစ္စည်းနှင့် ကုန်ကြမ်းပစ္စည်းများကို ထိုင်ဝမ်နှင့် တရုတ်ပြည်သူ့သမ္မတနိုင်ငံတို့မှ တင်သွင်းသွားမည်ဖြစ်ပါသည်။

Jia He Li Company Limited ၏ အဓိကထုတ်ကုန်မှာ ဖိနပ်အောက်ခံဆိုးလ်ပြားအမျိုးမျိုးဖြစ်ပါသည်။



ထုပ်လုပ်ပုံ လုပ်ငန်းအဆင့်ဆင့်

လုပ်ငန်းမှ ပထမနှစ်မှ ၁၀ နှစ်အတွင်း ဖိနပ်အောက်ခံဆိုးလ်ပြားပမာဏ (၆၀၅၀၀၀၀) မှ (၈၈၅၇၈၀၅)အထိ တိုးမြှင့်ထုတ်လုပ်သွားမည်ဖြစ်သည်။ နိုင်ငံခြားသားလုပ်သား (၁)ဦး နှင့် နိုင်ငံသား (ပြည်တွင်း)လုပ်သား (၄၀၀) ဦးဖြင့် ဆောင်ရွက်သွားမည်ဖြစ်သည်။

Warehouse

Compound Mixing Area

Pressing and Molding Area

Cutting Area

Painting Area

Drying Area

Q.C Area


Packaging Area

ထုတ်လုပ်ပုံအဆင့်ဆင့်




ထုတ်ကုန်ဓာတ်ပုံ

အနီးပတ်ဝန်းကျင်အခြေအနေဆိုင်ရာ ဖော်ပြချက်

လက်ရှိပတ်ဝန်းကျင်၏ ပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်၊ ပတ်ဝန်းကျင်အရည်အသွေး တိုင်းတာခြင်းများနှင့် သက်ရောက်မှုများကို ၂၀၂၂ ခုနှစ်၊ ဩဂုတ်လ၊ ၂၅ ရက်နေ့တွင် ပြုလုပ်ခဲ့ပါသည်။ ထို့အပြင် စက်ရုံတည်နေရာနှင့် သက်ဆိုင်သည့် အချက်အလက်များဖြစ်သော လူမှုစီးပွားအခြေအနေ၊ ရှုပပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များ အစရှိသည့်များကို ရန်ကုန်တိုင်းဒေသကြီး၊ ဒဂုံမြို့သစ်တောင်ပိုင်းမြို့နယ်မှ တရားဝင်ပြဌာန်းထားသော မြို့နယ်ဆိုင်ရာ အချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။

အဆိုပြုလုပ်ငန်း၏စစ်တမ်းကောက်ယူမှု

အမျိုးအစား	**ရလဒ်**
ရာသီဥတုအခြေအနေ	
အပူချိန်	၃၃.၅ °C
စိုထိုင်းဆ	၈၇ %
ဆူညံသံ	
ထုတ်လုပ်မှုဇရိယာအတွင်း	၇၂.၇၉ dBA
လေထုအရည်အသွေး	
PM 10	၁၅.၇၄ µg/m^3
PM 2.5	၉.၇၈ µg/m^3
SO_2	၁.၉၈ µg/m^3
NO_2	၂၁.၇၅ µg/m^3
O_3	၃၅၀ µg/m^3

အလင်းရောင်တိုင်းတာမှု	
ကုန်ကြမ်းရောမွှေခြင်းဇရိယာ	၁၇၄၈ Lux
ပုံစံသွန်းလောင်းခြင်းဇရိယာ	၁၂၄၄ Lux
ပုံစံသွန်းလောင်းခြင်းဇရိယာ ၂	၂၉၃ Lux

ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းနှင့် လျော့ချရေးနည်းလမ်းများ

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

အကဲဖြတ်ခြင်း	**အတိုင်းအတာ**				
	၁	၂	၃	၄	၅
ပမာဏ	မလုံလောက်သော	အနည်းငယ်နှင့် လုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	အသင့်အတင့်နှင့် အနည်းငယ် လုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	မြင့်မားနှင့် သိသာစွာလုပ်ငန်းခွင်ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	အလွန်မြင့်မားနှင့် အမြဲတမ်းလုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင်သော
အချိန်	၀-၁ နှစ်	၂-၅ နှစ်	၆-၁၅ နှစ်	လုပ်ငန်း လည်ပတ်စဉ် ကာလ တစ်လျှောက်	လုပ်ငန်းပိတ်သိမ်းခြင်းကာလအထိ
ကျယ်ပြန့်မှု	လုပ်ငန်းခွင်အတွင်း	ဒေသအတွင်း	မြို့နယ်အတွင်း	နိုင်ငံအတွင်း	နိုင်ငံတကာအတွင်း
ဖြစ်နိုင်ချေ	လုံး၀ မဖြစ်နိုင်သော	မဖြစ်နိုင်သော	ဖြစ်နိုင်သော	ဖြစ်နိုင်ချေမြင့် သော	အတိအကျ

သတ်မှတ်ချက် = (ပမာဏ+အချိန်+ကျယ်ပြန့်မှု)* ဖြစ်နိုင်ချေ

ပတ်ဝန်းကျင်ထိခိုက်မှုကိုအောက်ပါအတိုင်း ခွဲခြားနိုင်သည်။

သတ်မှတ်ချက်	**ထိခိုက်မှုအဆင့်**
<၁၅	အလွန်နိမ့်
၁၅ - ၂၉	နိမ့်
၃၀ - ၄၄	အလယ်အလတ်
၄၅ - ၇၅	မြင့်

၆၀	အလွန်မြင့်

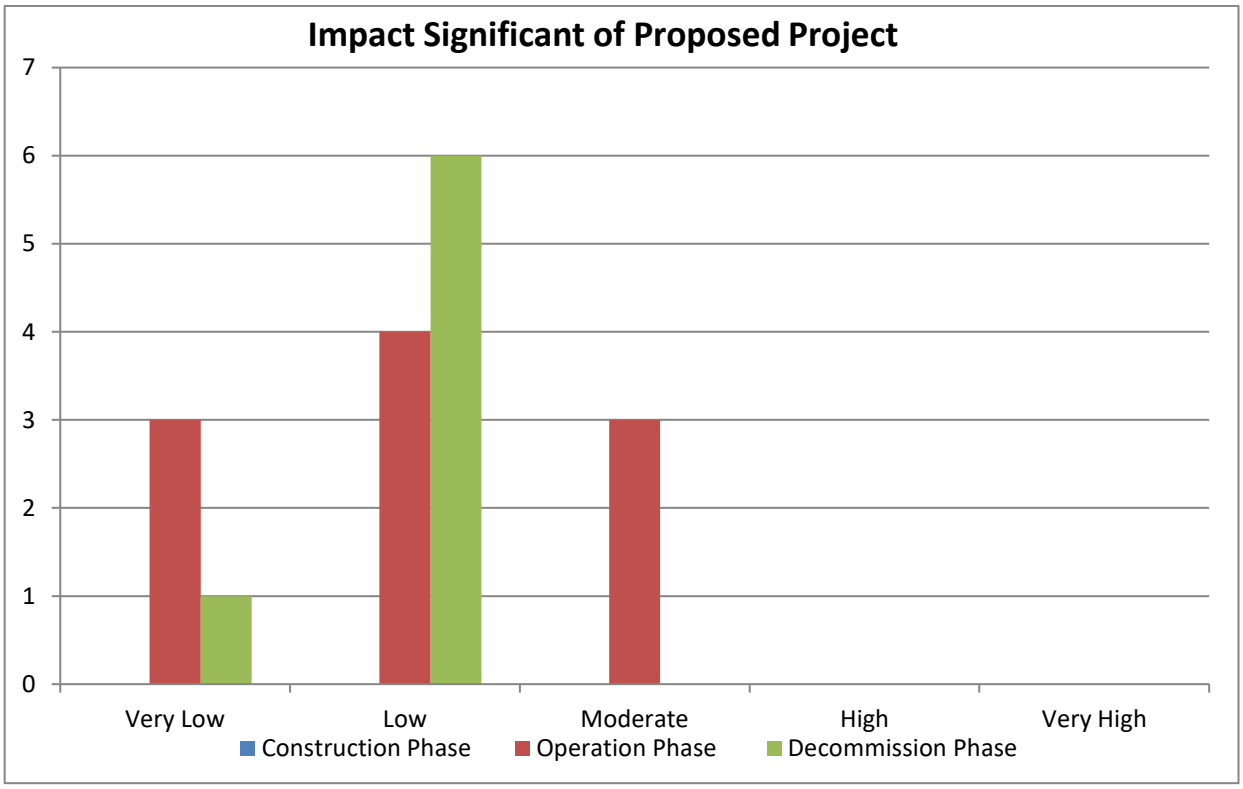
စီမံကိန်းလုပ်ဆောင်ချက်များကြောင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အရင်းအမြစ်များ၊ စီးပွားဆိုင်ရာ အရင်းအမြစ်များ၊ အမှိုက်စွန့်ပစ်မှု စသည့် သက်ရောက်မှုများဖြစ်ပေါ်လာနိုင်ပါသည်။ စီမံကိန်းလုပ်ဆောင်ချက်ကြောင့်သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းများ အကျဉ်းချုပ်ကို အောက်တွင်ဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
လေထုအရည်အသွေး	• သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုန့်နှင့် ဖန်လုံအိမ်ဓါတ်ငွေ့ထွက်ခြင်း • လုပ်ငန်းခွင်အတွင်းဖုန်မှုန် ထွက်ခြင်းအရေးပေါ် သုံး မီးစက်မှာ စွန့်ထုတ်အခိုးအငွေ့ ထွက်ခြင်း	• မီးစက် တို့တွင် မီးခိုးခေါင်းတိုင် တပ်ဆင်ခြင်းဖြင့် အခိုးအ ငွေ့ကြောင့် ပတ်ဝန်းကျင် ထိခိုက်မှုကို လျော့ချခြင်း၊ • စက်ရုံအတွင်းနှင့် အနီး အနားတွင် သစ်ပင်ပန်းမံ စိုက်ပျိုးခြင်းဖြင့် carbon ထွက်ရှိမှုကို လျော့ချပေးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
ရေအရည်အသွေး	• မီးဖိုချောင်သုံးမှထွက်ရှိခြင်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
ဆူညံသံ နှင့် တုန်ခါမှု	• မီးစက်၊ မော်တော်ယာဉ် အသုံးပြုမှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု	• ဆူညံသံများသောစက်ရုံလုပ်ငန်းနေရာများတွင် တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးပစ္စည်းများ တပ်ဆင်အသုံးပြုစေခြင်း။ • အသံထုတ်လွှတ်မှုနည်းသော စက်ပစ္စည်းများ အသုံးပြုခြင်းနှင့် မီးစက်ခန်း၊ ကွန်ပရက်ဆာခန်းများ သီးသန့်ထားရှိစေခြင်း။
ကုန်းနေ အပင်နှင့် သတ္တဝါများ၊ ရေနေသတ္တဝါများ	• အောက်ခံဆိုးလိပြားအမျိုးမျိုး ထုတ်လုပ်ခြင်း လုပ်ငန်း	• ထိခိုက်မှုလျော့ချရန်မလိုပါ။
မီးဘေးအန္တရာယ်	• ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျပ်စစ်သုံးစွဲ ပေါ့လျော့မှု	• စက်ရုံ၏မီးဘေးအန္တရာယ်ကာကွယ်ရန်အတွက် မီးသတ်ဗူး၊ မီးသတ်ပိုက်၊ မီးသတ်ခေါင်း များထားရှိခြင်း။ • မီးသတ်ဆိုင်ရာစက်ပစ္စည်းကိရိယာများကိုပုံမှန်စစ်ဆေးခြင်း၊အရေးပေါ် အခြေနေအတွက် မီးသတ်ရေကန်အဆင်သင့်ထားရှိခြင်း။ • စက်ရုံအတွင်းအရေးပေါ် အချက်ပေးစနစ်များထားရှိခြင်း။ • အရေးပေါ် ထွက်ပေါက်များတစ်လျှောက်တွင် ကုန်ပစ္စည်းများပိတ်ဆို့ခြင်းမရှိအောင်ရှင်းလင်းထားရှိခြင်း။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
လုပ်ငန်းခွင် ဘေးအန္တရာယ်	• စက်ပစ္စည်းများလည်ပတ်ခြင်းကြောင့် မတော်တဆထိခိုက်မှုများ ဖြစ်ပေါ်နိုင်ခြင်း။ • ပစ္စည်းတင်ချုပြုလုပ်ခြင်း၊ ဖြတ်တောက်ခြင်း၊ ရောနှောခြင်း၊ ဖိနှိပ်ခြင်း၊ ထုတ်ပိုးခြင်း။	• အရေးပေါ်အခြေအနေများအတွက် စက်ပစ္စည်းကိုင်တွယ်မှုသင်တန်းပေးခြင်း၊ ကြက်ခြေနီသင်တန်းပေးခြင်း၊ မီးသတ်သင်တန်းပေးခြင်း။ • လုပ်ငန်းခွင်တွင်း အလုပ်သမားများ အလင်းရောင်ကောင်းစွာရရှိစေရန်နှင့် အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကို လုံလောက်စွာထားရှိခြင်း။ • အလုပ်သမားများအတွက်တစ်ကိုယ်ရေကာကွယ်ရေး သုံးပစ္စည်းများဖြစ်သည့် နားကြပ်၊ လက်အိတ်၊ ဦးထုပ်၊ မျက်မှန် များ အသုံးပြုစေခြင်း။ • လျှပ်စစ်အန္တရာယ်မဖြစ်စေရန် နှင့် ပြုပြင်ထိန်းသိမ်းမှုများ ပြုလုပ်ရန်အတွက် ဝန်ထမ်းထားရှိ၍ ပုံမှန်စစ်ဆေးခြင်း။
ကျန်းမာရေး	• အရေးပေါ် မီးစက်များမှ ဆူညံသံများထွက်ပေါ်လာခြင်း။	• လုပ်သားများအတွက်ကျန်းမာရေးမထိခိုက်စေရန် ရေမြောင်းများကိုစနစ်တကျထားရှိခြင်း။ • လုပ်သားများအတွက် ရှစ်နာရီအတွင်းလက်ခံနိုင်သည့်အာမြင့်ဆုံး ဆူညံမှုနှုန်းမှာ 90dB(A) ဖြစ်သည်။ အသံဆူညံမှုအမြင့်ဆုံးနေရာများတွင် နားကြပ်များ တပ်ဆင်စေခြင်း။
စွန့်ပစ်အစိုင်အခဲ	• ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ရာဘာ အပိုင်းအစများ။ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ	• စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း။ • သတ်မှတ်ထားသောနေရာတွင် အမှိုက်စို၊ အမှိုက်ခြောက်များခွဲခြားစွန့်ပစ်ခြင်း။ တစ်ဖန်ပြန်လည်သုံးစွဲ၍ရသောစွန့်ပစ်ပစ္စည်းများအား ပြန်လည်သုံးစွဲခြင်း • အမှိုက်များကို ရန်ကုန်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။
စွန့်ပစ်အရည်	• နေအိမ်၊ စားသောက်ဆောင် တို့မှစွန့်ထုပ်ရေနှင့် မိလ္လာကန်စနစ်	• ဆီကန်၊ မိလ္လာကန်များ ကိုပုံမှန်စစ်ဆေးခြင်း၊ သန့်စင်ခြင်းများပြုလုပ်ခြင်းဖြင့် စွန့်ပစ်အရည်များ စိမ့်ဝင်မှုများကိုလျော့ကျစေနိုင်ခြင်း။
အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများ	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်းသိမ်းမှ ထွက်ရှိသည့်အမှိုက်များ	• အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများသိုလှောင်မှု အားထိန်းသိမ်းခြင်း စစ်ဆေးခြင်း။ • အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများကို ဒဂုံမြို့သစ်တောင်ပိုင်းမြို့နယ်စည်ပင်သာယာရေး

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
		(သို့မဟုတ်) လိုင်စင်ရ အမှိုက်စွန့်ပစ်ရေးဆိုင်ရာ အဖွဲ့အစည်းများ နှင့်ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။
သဘာဝဘေးအန္တရာယ် (ငလျင်၊ ရေကြီးရေလျှံ၊ မြေပြို၊ မုန်တိုင်း)		အရေးပေါ်အကြောင်းရင်းနှင့် အခြေအနေများအတွက် သက်ဆိုင်ရာမှတ်တမ်းများနှင့် ကိရိယာများကို ထိန်းသိမ်းခြင်း

လုပ်ငန်းလည်ပတ်စဉ်ကာလတွင် သတ်မှတ်ချက်များမှာ အလယ်အလတ် သတ်မှတ်ချက် ၃ခု (အစိုင်အခဲစွန့်ပစ်ပစ္စည်း၊ မီးဘေးအန္တရာယ်၊ လုပ်ငန်းခွင်ဘေးအန္တရာယ်)၊ နိမ့် သတ်မှတ်ချက် ၄ခု (စွန့်ပစ်အစိုင်အခဲ၊ လေထု၊ ဆူညံသံနှင့် တုန်ခါမှု၊ အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်း) နှင့် အလွန်နိမ့်သတ်မှတ်ချက် ၃ခု (ဂေဟဗေဒ၊ မြေထုညစ်ညမ်းမှု၊ ရေထုညစ်ညမ်းမှု) များနှင့် လုပ်ငန်းပိတ်သိမ်းစဉ်ကာလတွင် သတ်မှတ်ချက်များမှာ အလွန်နိမ့် ၁ခု (စွန့်ပစ်ပစ္စည်း) နှင့် နိမ့်သတ်မှတ်ချက် ၆ခု (လေထုအရည်အသွေး၊ ရေထုညစ်ညမ်းမှု၊ မြေဆီလွှာညစ်ညမ်းမှု၊ ဆူညံသံနှင့် တုန်ခါမှု၊ အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်း၊လုပ်ငန်းခွင်ဘေးအန္တရာယ်) တို့တွေ့ရှိရပြီး ၎င်းအားပုံနှင့်နှိုင်းယှဉ်ဖော်ပြထားပါသည်။



အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများ နှိုင်းယှဉ်ပြပုံ

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု ဆောင်ရွက်ချက်

စီမံကိန်းဖော်ဆောင်သည့် အချိန်အတွင်း ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများ၊ လျော့ချရေး နည်းလမ်းများ၊ အစီအစဉ်များ၊ တိုင်းတာမှုများ စသည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်များကို လုပ်ဆောင်ရပါသည်။ Jia He Li

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။

Jia He Li Company Limited ၏ လူထုအကျိုးပြုလုပ်ငန်းများဆောင်ရွက်မည့် အစီအစဉ်

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

စက်ရုံအတွက် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာလုပ်ဆောင်ချက်များသည် စက်ရုံသို့ကွင်းဆင်းလေ့လာခဲ့သော ကျွမ်းကျင်ပညာရှင်များမှ စက်ရုံ၏ဆောင်ရွက်ချက်များ၊ စက်ရုံဂန်ထမ်းများ၊ နယ်ပယ်ဆိုင်ရာအဖွဲ့အစည်းများ၏ အမြင်များ နှင့် စက်ရုံမှ သက်ဆိုင်သူများ၏တိုင်ပင်ဆွေးနွေးအကြံပြုချက်များအပေါ် အခြေခံ၍ ရေးဆွဲပြင်ဆင်ထားပါသည်။ ဖြစ်နိုင်ချေရှိသော ပတ်ဂန်းကျင်ထိခိုက်မှုများအပေါ် မူတည်၍ လိုအပ်သည့် သဘာဂပတ်ဂန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုလုပ်ဆောင်ချက်များမှာ အောက်ပါအတိုင်းဖြစ်ပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၂။ ဆူညံသံဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၃။ မီးဘေးအန္တရာယ် စီမံခန့်ခွဲမှုအစီအစဉ်

၄။ လုပ်ငန်းခွင်ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၅။ အစိုင်အခဲစွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲမှုအစီအစဉ်

၆။ စွန့်ပစ်အရည် (ရေဆိုး) စီမံခန့်ခွဲမှုအစီအစဉ်

၇။ အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲမှုအစီအစဉ်

၈။ အရေးပေါ်အခြေအနေဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

၉။ အရေးပေါ်တုံ့ပြန်မှုနှင့် သဘာဝဘေးအန္တရာယ်စီမံခန့်ခွဲမှုအစီအစဉ်

၁၀။ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုခြင်းနှင့် အစီရင်ခံခြင်း

၁၁။ သင်ကြားပို့ချမှု အစီအစဉ်

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်တွင် စက်ရုံ၏ EMP အစီရင်ခံစာ အကြောင်းကို ရှင်းလင်းတင်ပြခြင်းဖြစ်သည်။ တွေ့ဆုံပွဲကို နိုင်ငံရေးကြောင့်လည်းကောင်း ကျန်းမာရေးဆိုင်ရာ Covid - 19 စည်းကမ်းချက်များကြောင့် ၂၇ ရက်၊ စက်တင်ဘာလ၊ ၂၀၂၂ ခုနှစ်တွင် လူမှုကွန်ယက်မှပင် ကြေညာခြင်းပြုလုပ်ခဲ့ပါသည်။ အဆိုပါထုတ်ပြန်ကြေငြာခြင်းတွင် အဆိုပြုစက်ရုံဆိုင်ရာ အချက်အလက်များ၊ ပက်သက်သည်များ အကျဉ်းချုံးပြီး တင်ပြထားပါသည်။ အဆိုပြုစီမံကိန်း၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ အကျဉ်းကို ဤ https://drive.google.com/file/d/1HmwlvokukHRwgJKWeQt9n3BIEe8rwqw2/view?usp=drivesdk တွင် အသေးစိတ်ဝင်ရောက်ဖတ်ရှုနိုင်ပါသည်။

နိဂုံးနှင့် အကြံပြုချက်

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

အကြံပြုချက်များအရ-

- အစီရင်ခံစာတွင် ဖော်ပြထားသည့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် ကတိကဝတ်များကို စီမံကိန်း၏ သက်တမ်းတလျှောက်တွင် အကောင်အထည်ဖော် ဆောင်ရွက်ရမည်။
- အစိုင်အခဲနှင့် အရည် စွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်မြို့တော် စည်ပင်သာယာရေး၏ စည်းကမ်းများအတိုင်း စွန့်ပစ်ရမည်။
- အလုပ်သမားများအား သင့်တော်သော သင်တန်းများပေးခြင်း၊ လုပ်ငန်းခွင်အတွင်း တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ အသုံးပြုစေခြင်းများ ဆောင်ရွက်ရမည်။
- ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်များကို နေ့စဉ်၊ လစဉ်နှင့် နှစ်စဉ် လုပ်ငန်းခွင်အတွင်း လုပ်ဆောင်ရမည်။
- ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ် မှတ်တမ်းများကို သေချာသိမ်းဆည်း၍ တတိယအဖွဲ့အစည်း သို့ တင်ပြရမည်။

- ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ရ မည်။

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

EXECUTIVE SUMMARY

Introduction

Jia He Li Company Limited is located in Plot No. (35), Myay Taing Block No.144, Industrial Zone, Dagon Myo Thit (South) Township, Yangon Region Myanmar. The said project is 100% foreign direct investment of by Jia He Li Company Limited. The purpose of the investment is manufacturing and marketing of soles to be locally sold on CMP shoes business enterprise

Yangon Region Investment Committee (YRIC) issed the proposed project with endorsement No. YGN-229/2019 on 30 July, 2019 and comments the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project.

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). Therefore, Jia He Li Company Limited requires an Environmental Management Plan (EMP) to meet the environmental assessment as per the comments of Environmental Conservation Department (ECD) with Environmental Conservation Department notification no. YaKa/ EIA / 2 (5) (2496/2022) on 20 September 2022. Therefore, Myanwei Environmental Solutions Company Limited commissioned for EMP report study.

The proposed project conducted field survey to determine the existing condition of project surrounding environment on 25, August, 2022. Baseline survey of the project project was conducted during operation phase. Environmental baseline survey team includes Consultants, Environmental Impact Assessment Specialists.

Information of Investor

Investor Name:	Mr. Zhou Jiming
ID No.:	P.P No. E63290640
Citizenship:	Chinese
Address of Registration office:	Huangchuan Country, Henan Province, Zhangji, Fangang Village, Caiying Group, China

Salient Features of the Proposed Project

Type of Proposed Business	Manufacturing and Marketing of Soles to be locally sold on CMP shoes business enterprise
Type of investment	100% foreign investment
Type of land	Industrial Land
Total land area	1.040 Acres
Total building area	3 storey - Dormitory Building (23.2 m × 7.5 m) 2 storey – Factory Building (66.54 m × 133.15 m)
Land lease year	Initial 30 years (extendable and renewable for another 10 year 2 times)
Address	Plot No.35, Block No.144 Industrial Zone, Dagon Myothit (South) Township, Yangon.
Contact person	Thandar Khaing (HR Manager) Ph: 09764610450

	Email: dg_helixiecai@163.com

Policy, Legal and Institutional Framework

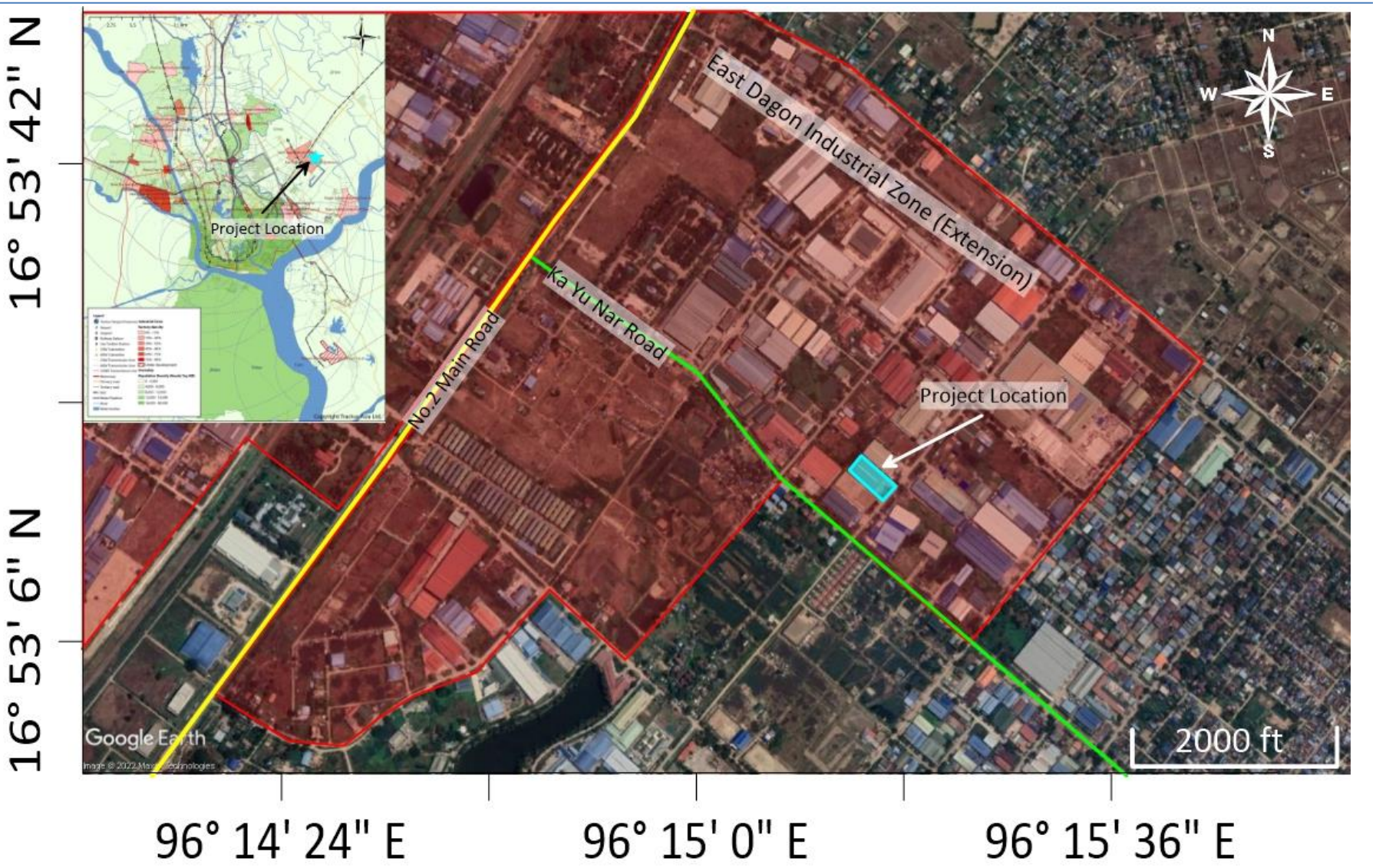
The brief summary of relevant national environmental legislations such as Environmental Impact Assessment Procedure (2015) and National Environmental Quality (emission) Guidelines, established by the Ministry of Natural Resources and Environmental Conservation (MONREC) and overview of current local and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

1. Constitution 2008
2. Environmental Conservation Law, 30 March 2012
3. Environmental Conservation Rules, 2014
4. Environmental Impact Assessment Procedure (December 2015)
5. National Environmental Quality (Emission) Guideline (NEQG) (December 2015)
6. National Environmental Policy of Myanmar (2019)
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law (1993)
11. Payment of Wages Law (2016)
12. The Amended Law for Factories Act, 1951 (2016)
13. The Private Industrial Enterprise Law, 1990
14. The Export and Import Law (2012)
15. The Prevention of Hazard from Chemical and Related Substances Law, 2013
16. Underground Water Act
17. Myanmar Fire Brigade Law (2015)
18. The Electricity Law (2014)
19. Boiler Law (2015)
20. Labor Dispute Settlement Law (28 March 2012 replacing 1929 version)
21. The Social Security Law (2012)
22. The Employment and Skill Development (2013)
23. The Worker's Compensation Act, 1923
24. The Payment of Wages Act, 1936
25. The Leave and Holidays Act, (1951, partially revised in 2014)
26. The Minimum Wage Law (2013)

27. Public Health Law (1972)
28. Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)
29. Occupational Safety and Health Law (2019)
30. The Law on Standardization
31. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဝတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)
32. The Motor Vehicles Law (2015)
33. The Conservation of Water Resources and River Law (2006)
34. The Commercial Tax Law (1990) Amended 2014

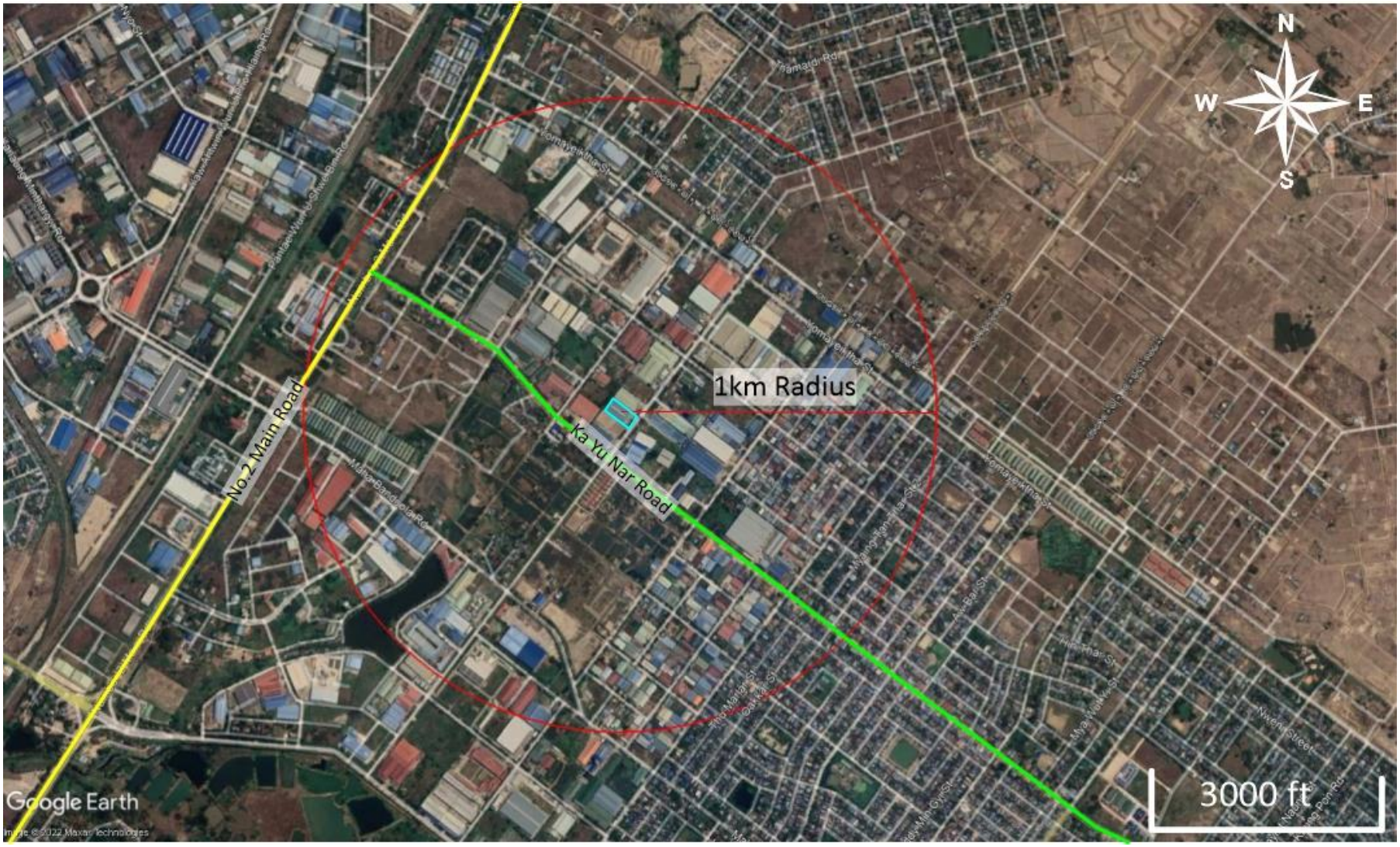
Project Description

Jia He Li Company Limited is located at Plot No. 35, Myay Taing Block No. (144), Industrial Zone, Dagon Township (South), Yangon Region and the total area of project site is 1.04 (4208.73). Within the boundary of the proposed project site, transformer room, generator room, chemical storage room and toilet rooms are separated by main factory building structure. Soles which are the main product of the proposed project are sold to locally manufacturing shoes business enterprise based on CMP that are King Lead Ind Company Limited and Mountain Top Global Limited.



Location Map of Proposed Project

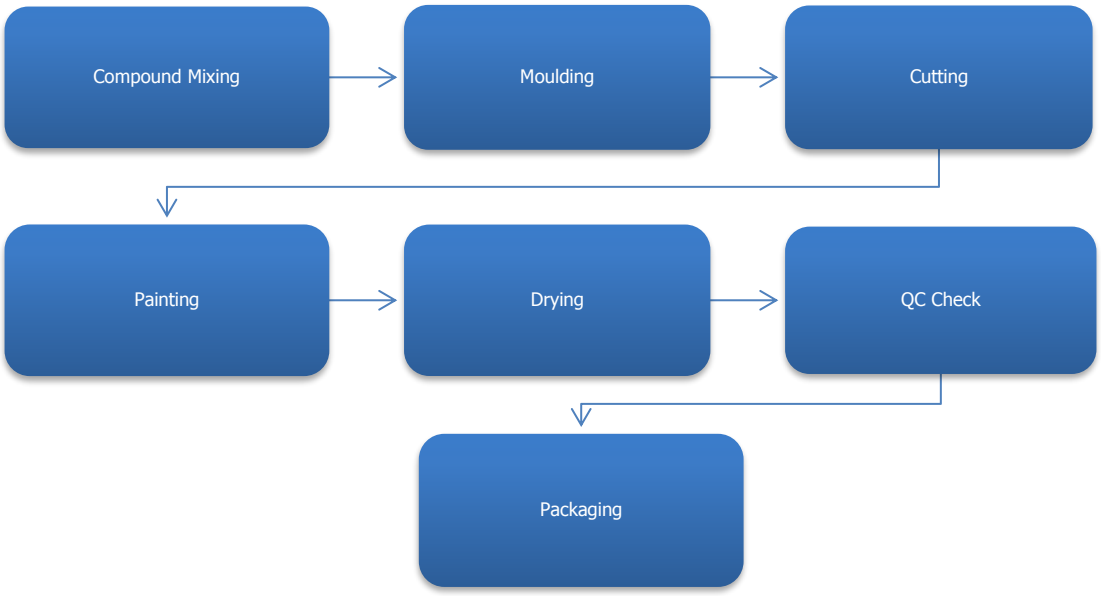
Factory Layout Map



Adjacent Location Map of Proposed Project

The main Raw Materials of Jia He Li Company Limited are TPR, ABS, PU and synthetic rubber which are imported from Taiwan and China and the finished products are exported to Europe.

The main product of the Jia He Li Company Limited is various kinds of soles.



Sole Manufacturing Process

Warehouse

Compound Mixing Area


Pressing and Molding Area


Cutting Area

Painting Area

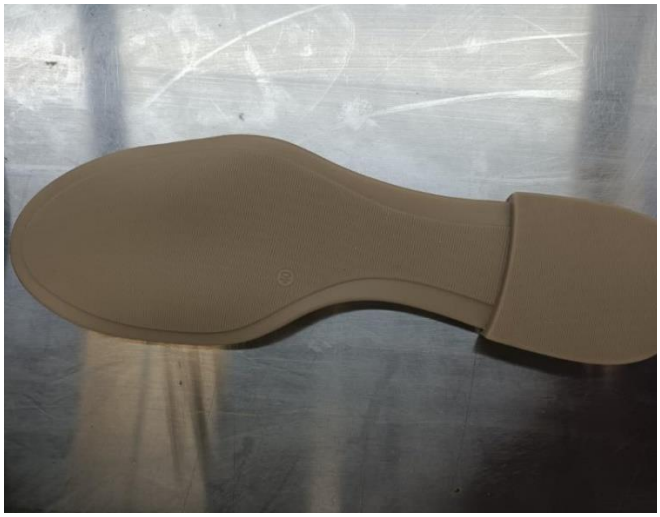

Drying Area

Q.C Area


Packaging Area

Production Process photos

Production rate of Jia He Li sole Factory is produced between first year of operation and ten years operation as 6,050,000 to 8,857,805 pairs annually. It is required of work force 1 foreigner technician and 400 local employees for first year operation to ten years operation.

Product Photos

Brief Description of Surrounding Environment

For environmental baseline, data were collected by onsite measurements analysis during operation phase on 25 August 2022. 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 Dagon (South) Township.

Survey Result in Proposed Project

Type	Result
Weather Condition	
Indoor temperature	33.5 °C
Humidity	87 (%)
Noise level	
Operation area	72.79 dBA
Air Quality	
PM 10	15.74 µg/m^3
PM 2.5	9.78 µg/m^3
SO_2	1.98 µg/m^3
NO_2	13.41 µg/m^3
O3	350 µg/m^3
Light	
Compoung Mixing Area	1748 Lux
Moulding Area	1244 Lux
Moulding Area 1	293 Lux

Risk Assessment and Mitigation Measure

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

Impact Assessment Parameter and Its Skill

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

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

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

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

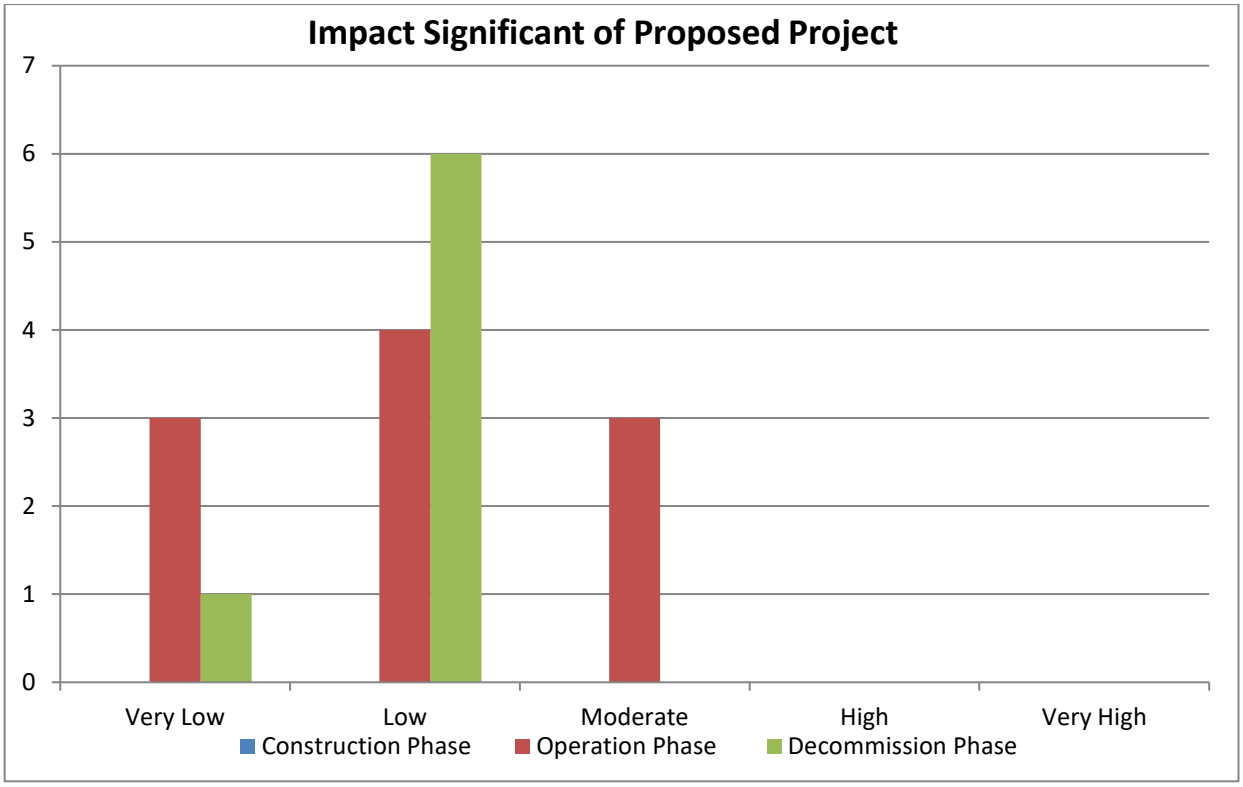
Significant Point (SP)	Impact Significance
<15	Very Low
15-29	Low
30-44	Moderate
45-59	High
60	Very high

Environmental Impact	Project Activities	Mitigation Measures
Operation Phase		
Air	Dust and GHGs emission from vehicles used for transporting raw materials and final products Emission of smoke from emergency diesel generator and vehicle movement	To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. Ensuring vehicles, compressor and generator are well maintained. The factory has planted trees to reduce carbon emission and minimize air pollution
Soil	Engine oil leaks, spills at diesel storage and during fuel refueling	No mitigation measure
Water	Dormitory Cleaning and Kitchen	No mitigation measure
Noise and vibration	Generating noise from the production machinery	Should be built individual room like as generator room Low noise equipment should be used Should be provided the noise covering equipment or personal protective equipment (PPE)
Flora and fauna on terrestrial and aquatic life	Operation of the outer soles factory	No Mitigation Measure
Fire	Poor electrical installations Waste disposed area raw materials and chemical storage	To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupational Safety	Accidental cases cause by operating machines. Unloading, cutting, and packaging activities. Accidental cases of thermic fluid heater	First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.
Health	Influx of people Noise from the generating of the emergency generators	Manage the drainage systems of the factory to prevent health risk of the workers. The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus,

Environmental Impact	Project Activities	Mitigation Measures
		adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.
Solid waste	Residual pieces of rubber sole from the production lines Waste from packaging materials Waste from kitchen, dormitory and office.	Provides separate garbage bins at each building. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area Final wastes should be disposed by using Bago municipal and local buyers.
Liquid waste	Septic system and sewage. Domestic liquid waste disposal from office, kitchen and dormitory.	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.	Proper inspection and maintenance in storage of hazardous waste. The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty
Natural Disaster (Earthquakes, Floods, landsides and cyclone)	-	Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency
Decommissioning Phase		
Air pollution	Decommissioning of buildings and related materials Transportation of demolished materials	Spray water twice a day Cover mesh trap around the decommission area Install shading net about 2 meters above temporary fence of decommission area Carry broken material with cover by canvas.
Water pollution	Sewage form decommissioning workers Demolition machinery equipment	Systematically demolish the septic tanks.
Soil Contamination	Decommissioning of buildings and related materials Transportation of demolished materials	Manage the spillage of oil and diesel and sewage.
Noise Pollution	Decommission activities Transportation of demolished materials	Carry out the activities during day time. Maintain the machines and vehicles to reduce noise pollution. Provide the ear plugs to the workers.
Waste disposal	Demolished debris such as bricks, concrete materials	Recyclable materials and dispose to the define areas.
Hazardous waste	Used lubricants from decommissioning vehicles and machines	Manage the disposal way of hazardous waste.

Environmental Impact	Project Activities	Mitigation Measures
Occupational Health and Safety (Accidents, Injuries)	Decommissioning activities Transportation of demolished materials	Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board. Clean up excessive waste debris and liquid spills regularly. Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.

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 human and waste generation (Fire, occupational safety and health). 4 low significant impacts on environmental resources and waste (air, noise, vibration, solid waste and hazardous waste). 3 very low significant impact on environmental resources, ecological, human and waste generation (soil, flora, fauna, liquid waste). In decommissioning phase 1 very low significant impact on environment and human (waste disposal). 6 low significant impacts on environmental and human (air, water pollution, soil contamination, noise and vibration, hazardous waste 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

Environmental Management Action

The Environmental Management Plan (EMP) formulated with the anticipated impacts, mitigation measures, management and monitoring plans during all phases are implemented. Jia He Li 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. Jia He Li Company Limited will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar.

CSR plan of Jia He Li 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. Energy Management plan
9. Emergency Response and Disaster Management Plan
10. Environmental Monitoring Schedule and Reporting
11. Capacity Building and Training Plan

Public Consulting

Public consultation meeting for Jia He Li Company Limited celebrated on social media. During the preparation of this report, the COVID-19 becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people by closely contacting and to prevent spreading of disease. Thus, the present condition, the project's environmental condition and the management plans are through the social media of Myanwei Environmental Solution Company Limited Facebook page https://drive.google.com/file/d/1HmwlvokukHRwgJKWeQt9n3BIEe8rwqw2/view?usp=drivesdk declared on 27th September 2022.

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

Conclusion and Recommendation

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

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to Yangon 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

To develop a country, infrastructure, education and economic sectors are very important. In the current moment, industrial zones as economic sector is becoming implemented. So, the factories are also increasing. The potential impacts from the factory are needed to assess. The positive impacts are beneficial to local and regional stages and also the negative impacts of the proposed projects which are affected on environment are required to mitigate. The management plan presented in this chapter needs to be implemented by the proposed expansion of Jia He Li Company Limited. The Environment Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the industry specific control measures, the proposed industry should adopt following guidelines.

1.1. AIM OF ENVIRONMENTAL MANAGEMENT PLAN

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

1.2. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

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

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

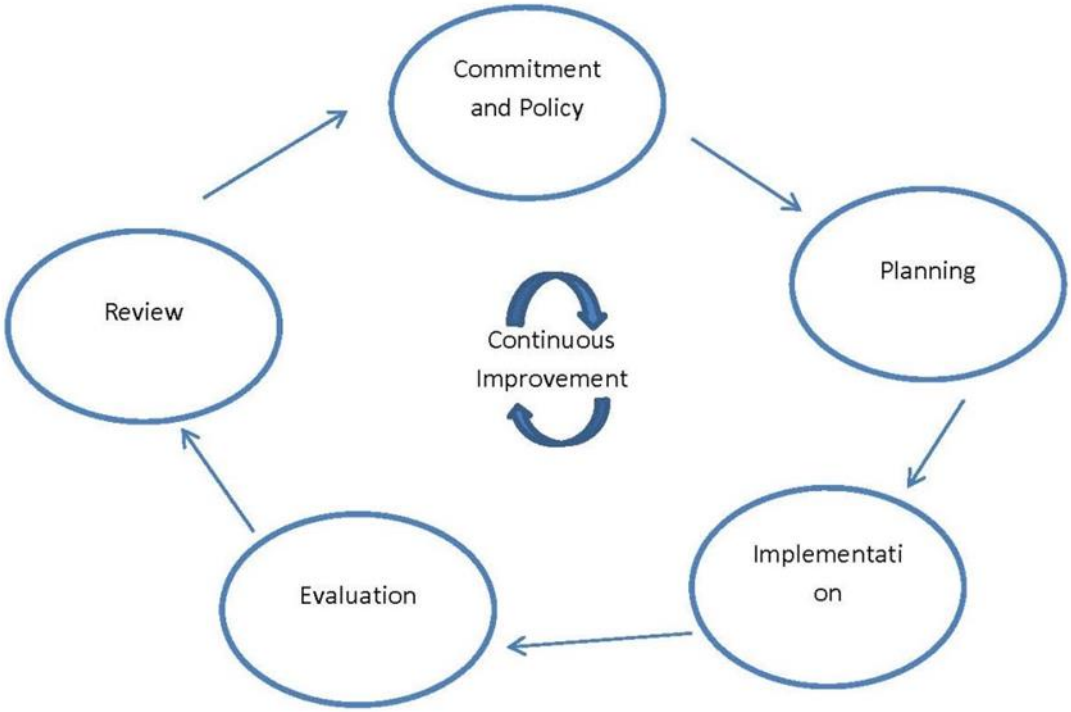


Figure 1-1 Continuous Improvement Circle

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

organization's values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

1.2.1. Institutional Requirement

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

1.2.2. Responsibilities of the EMP

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

Jia He Li 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 Jia He Li Company Limited for EMP implementation facilities.

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

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

1.2.3. Structure and Responsibilities for the EMP Development and Implementation

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

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

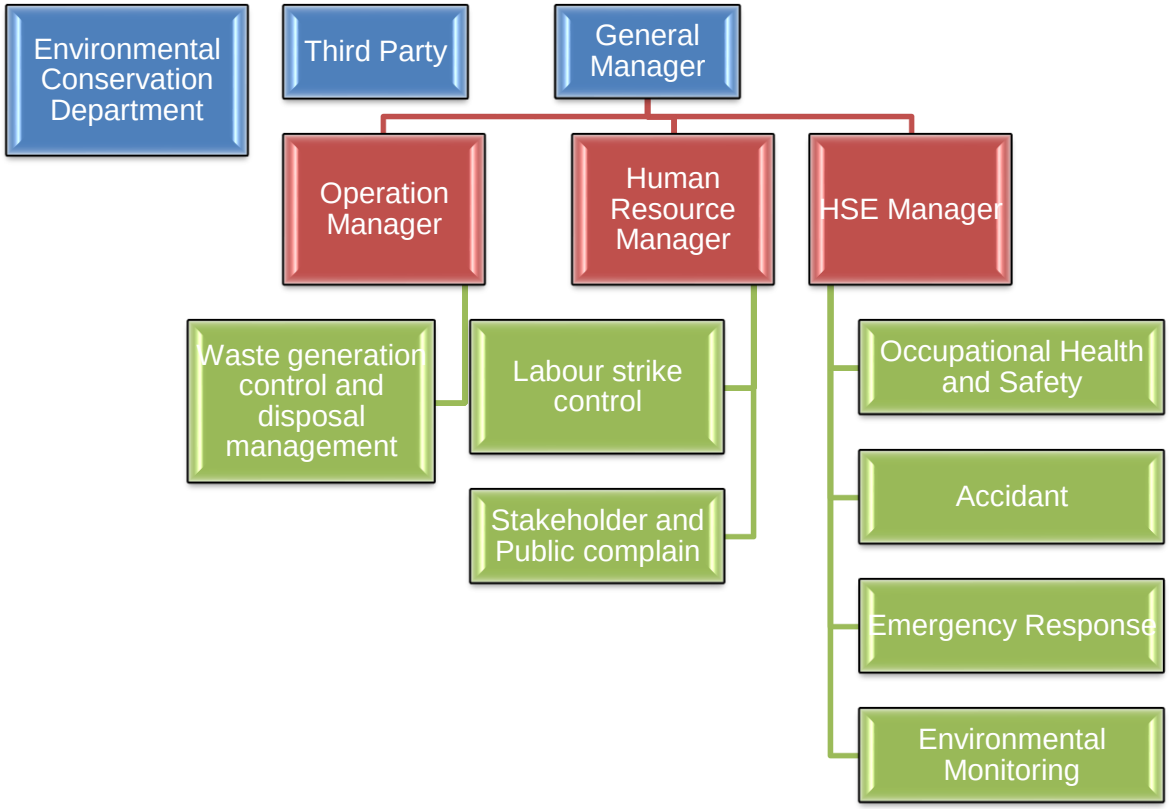


Figure 1-2 Organization Structure of Environmental Management Plan

Table 1-1 Responsibilities of HSE Members

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

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

1.3. PROJECT BACKGROUND

The proposed projects is to manufacture and market soles to be locally sold on CMP shoes business enterprise. The Yangon Region Investment Committee (YRIC) issues the project on 4 July 2019 with the Endorsement No. (YGN-229/2019). YRIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing of soles on Cutting, Making and Packaging (CMP) basis under the name of Jia He Li Company Limited.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. YaKa/ EIA / 2 (5) (2496/2022) on 20 September 2022. Therefore, Jia He Li Company Limited commissioned Myanwei Environmental Solutions Company Limited (Myanwei) for EMP report study.

1.4. PROJECT PROPONENT PROFILE

This is the information of project proponent from the MIC's registration that is describing in below Table 1-2 and Table 1-4.

Table 1-2 Information of Investor

Investor Name:	Mr. Zhou Jiming
Passport No:	E 63290640
Citizenship:	Chinese
Address of Registration office:	Huangchuan Country, Henan Province, Zhangji, Fangang Village, Caiying Group, China
E-mail	dg_helixiecai@163.com

Table 1-3 Director List

Name of Shareholder	Citizenship	Percentage
Mr. Zhou Jiming	Chinese	90%
Mr. Peng Wei	Chinese	5%
Mr. Xue Zhenjie	Chinese	5%

1.4.1. Investment Plan and Salient Features of the Project

The estimated authorized capital investment is 0.48 Million US Dollar. Organization chart of Jia He Li Company Limited is presented in Figure 1-3.

Table 1-4 Salient features of the project

Type of Proposed Business	Manufacturing and marketing of soles to be locally sole on CMP shoes business enterprise
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	1.040 acres (4208.73 sqm)
Total building area	1 storey - Building (36 m × 72 m)
Land lease year	Initial 30 years (Extendable and renewable for another 10 years 2 times
Address	Plot No.35, Block No.144 Industrial Zone, Dagon Myothit (South) Township, Yangon
Contact person	Thantar Khaing (HR Manager) Ph: 09764610450

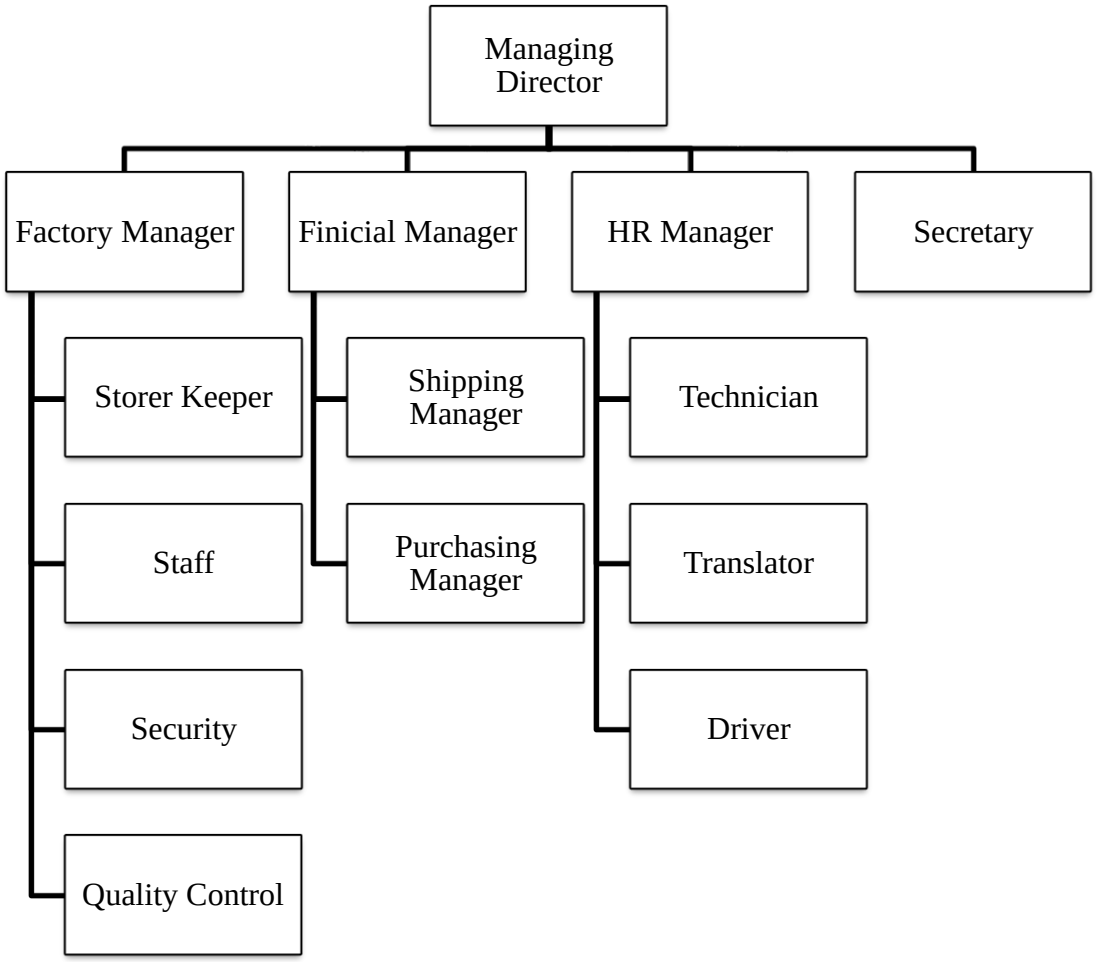


Figure 1-3 Organization chart of Jia He Li Company Limited

1.5. ENVIRONMENTAL CONSULT PROFILE

Myanwei Environmental Solutions Company Limited prepares the EMP for the proposed project. The environmental study was carried out by the study team and the following is a summary of team member's responsibilities during the study period.

Myanwei Environmental Solutions Company Limited	No. 49 (B), Inya Yeik Thar Street, Mayangone Township, Yangon, Myanmar.	01-501221 env@myanweiconsulting.com www.myanwweiconsulting.com.

Table 1-5 Member of EMP Study Team

Name	Qualification	Responsibility
Myanwei Environmental Solutions Company Limited	**Transition Consultant Registration Certificate No. 0069**	**EIA Organization**
Dr. Win Aung	M.B, B.S (Yangon), M.P.H (Mahidol University, Thailand)	Public Health and Health Management Expert
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public Health Consultant, Project Management
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment Certificate in Environmental Stainability TCR No. 0048	Project Director, Environmental Consultant, Project Management
Ms. Su Myat Hlaing	B.E. Civil Engineering B. Tech Civil Engineering	Environmental Engineer
Mr. Saw Yan Naung	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Si Yan Hein	B.Sc (Geology) Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Htun Lin Kyaw	B.Sc (Hons) Geology M.Sc (Geology)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Aung Kyaw Htet	B.Sc (Hons) Geology	Junior Environmental Consultant, Monitoring Measure, Document Administration

Mr. Naing Htay Linn	B.Sc (Forestry)	Junior Environmental Consultant, Monitoring Measure, Document Administration

2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

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

2.1. MYANMAR REGULATORY FRAMWORK

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

2.1.1. Laws and Regulations Related to Environmental and Social Considerations

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

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

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

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

Section 24	The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition include in prior permission, stipulated by the ministry, or not.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.
Environmental Conservation Rules, 2014	
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rules 61	The Ministry may approve and reply on the EIA report o IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Environmental Impact Assessment Procedure (December 2015)	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (a) of paragraph 102. The project proponent has to support, after consulting with effected persons by project, relevant government organization, government department and other related persons, to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under sub-paragraph (b) of paragraph 102 The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover, the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP and all conditions, under paragraph 103. The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104. The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105. The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106. The project proponent has to submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107. The project proponent has to submit the monitoring report dually or prescribed time by Ministry in line with the schedule of EMP, under paragraph 108.

	The project proponent has to prepare the monitoring report in accord with the rule 109. The project proponent has to show this monitoring report in public place such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy of this report, by email or other way which way agreed with the asked person, to any asked person or organization, under paragraph 110. The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work-place of project and other work-place related to this project in any time, under paragraph 113. The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirements related to social or environment or caused to it, under paragraph 115. The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.
Screening: Section 23	a) The project proponent shall submit the Project Proposal to the Ministry for Screening. b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment. c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1 ‗ Categorization of Economic Activities for Assessment Purposes', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry: i) An EIA Type Project, or ii) An IEE Type Project, or iii) A Non-IEE or EIA Type, and therefore not required to
National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)	
Objectives	To provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.
National Environmental Policy of Myanmar (2019)	
National Environmental Policy Vision & mission	Vision A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar. Mission To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all polices, laws, regulation, plans, strategic, programmes and projects in Myanmar.
Foreign Investment Law, 2012	
Section 8	(a) To support the primary objectives of the national economic development plan, and for businesses that cannot yet be run by the State and citizens or businesses that have insufficient funds and technology. (b) Development of employment activities (l) Protection and conservation of the environment. (q) Appearing the required modern services for the Union and citizens.
Section 17	(a) To abide by the existing laws of the Republic of the Union of Myanmar.

	(b) To carry out the business by forming a company under the existing laws of Myanmar by the investor. (h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business. (k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant enterprises, departments or organizations in accord with the contract.
Foreign Investment Rule, 2013	
Rule 54	The promoter or investor shall: (a) comply with Environmental Protection Law in dealing with environmental protection matters related to the business; (b) shall carry out socially responsible investment in the interest of the Union and its people; (c) shall co-operate with authorities for occasional or mandatory inspection; (d) shall exercise due diligence to be in conformity and harmony with norms and standards prescribed by relevant Union Ministry in conducting construction of factories, workshops, buildings, and other activities; (e) shall enforce Safety and Health
Myanmar Investment Rules, 2017	
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment
Rule 206.	The project proponent has to submit the passport, expert evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law
Myanmar Insurance Law (1993)	Section 15 - If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person. Section 16 - The project proponent has to ensure insurance to compensate for general damages because the project may cause damages to the environment and injury to the public.
Payment of Wages Law (2016)	
Section 3 & 4	The project proponent has to pay the wages in accord with section 3 and 4 of said law,
Section 5	The project proponent has to submit with the agreements of employees & reasonable ground to the department if it is difficult to pay because of force majeure included in a natural disaster
Section 7-13	The project proponent has to abide by the provisions of section 7 to 13 in the chapter (3) in respect of deduction from wages.
Section 14	The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours
The Amended Law for Factories Act, 1951 (2016)	
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.

Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
Basic Principles: Section 3	Private Industrial Enterprises shall be conducted in accordance with the following basic principles:- (a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise; (b) to acquire modern technical know-how for raising the efficiency of industrial enterprises and to establish the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market; (d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises; (e) to cause opening up of more employment opportunities; (f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution; (g) to cause the use of energy in the most economical manner.
The Export and Import Law (2012)	
Objectives	The objectives of this law are as follows: a) To enable to implement the economic principles of the State successfully. b) To enable to lay down the policies relating to export and import that supports the development of the State. c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards. d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.
Prohibitions: Section 5	No persons shall export or import restricted, prohibited and banned goods.
Prohibitions: Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Prohibitions: Section 5	A person who obtained any license shall not violate the conditions contained in the license.
The Prevention of Hazard from Chemical and Related Substances Law, 2013	
This law was enacted with the objectives of : a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances; b. To supervise systematically in performing the chemical and related substances business with permission for being safety; c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically; d. To perform the sustainable development for the occupational safety, health and environmental conservation. Regarding the chemical management and storage, currently, regulations governing chemicals management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.	
Underground Water Act	

The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to conserve and protect underground sources of water supply in the Union of Burma. This act prohibits sinking of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township Officer or sub-divisional officer had power to close a license tube after exercising jurisdiction over the local area concerned and the expense of such closure shall be recoverable from the owner of the tube as if it were an arrear of land-revenue.	
Myanmar Fire Brigade Law (2015)	
The Pyidaungsu Hluttaw enacted this law by Law No.11/2015 on the date of 17th March, 2015 with the following objectives: (a) to take precautionary and preventive measures and loss of state own property, private property, cultural heritage and the live and property of public due to fire and other natural disasters (b) to organize fire brigade systemically and to train the fire brigade (c) to prevent from fire and to conduct release work when fire disaster, natural disaster, epidemic disease or any kind of certain danger occurs (d) to educate, organize and inside extensively so as to achieve public corporation (e) to participate if in need for national security, peace for the citizens and law and order	
Section-8 Fire Safety Procedures	
Rule17	The relevant Government Department or organization shall, for the purpose of precaution and prevention obtain the approval of the Fire force Department before granting permission for the following cases: a. Constructing three-storied and above buildings market and condominium buildings, b. Operating hotel, motel, guest house enterprise c. Constructing factory, workshop, storage facilities and warehouse d. Operating business expose to fire hazard by using in inflammable materials or explosive materials e. Producing and selling fire-extinguishing apparatuses f. Doing transport business, public utility vehicles train, airplane, helicopter, vessel, ship, tonkin tug
Rule18	The relevant government department or organization shall obtain the opinion of the Fire Services Department for the purpose of fire precaution and prevention, when laying down plans for construction for town, village and downtown or village development plans
The Electricity Law (2014)	
In 2014, the new Electricity Law, a comprehensive piece of legislation covering licensing, a new regulatory commission, standards, inspection, tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity Law divides projects into “small” (up to 10 MW), “medium” (between 10 MW to 30 MW) and large (upwards of 30 MW); the states and regions can issue permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the Electricity Law, and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines in accordance with existing laws.	
Boiler Law (2015)	
Chapter (2) Objective	The objectives of this law are as follows: (a) To obtain boilers in compliance with Myanmar Standards or International Standards (b) To prevent the country and citizens from hazards caused by boiler accidents (c) To use boilers in compliance with Myanmar Standards or International Standards within the country (d) To develop boiler technology and to produce experts capable of manufacturing, handling, repair, and maintenance of boilers

	(e) To optimize the use of boilers through effective utilization of fuel energy (f) To reduce the environmental, social and health impacts through long-lasting use of boilers.
Chapter (3) 4. With the permission of the Ministry, the inspector general can:	Notify the inspection methods and instructions according to the national or international standards for safe operations of boilers in line with this law, procedures and instructions Only the results obtained from the prescribed boiler standards and inspection methods will be approved.
Chapter (4). Boiler Registration	5. Anybody who would like to use a boiler in any kind of business should be registered. 6. Boiler should be manufactured according to Myanmar Standards or International Standards. 7. Those who would like to apply for boiler registration according to Section 5 should apply to the inspector with the application, documents and vouchers related to boiler 8. If the application regarding registration of boiler according to Section 7, the Registration Officer should conduct necessary inspection and submit results of the findings to the Inspector General. 9. The Inspector General should assess and inspect the submission of the Registration Officer according to Section 8 and could allow or reject for registration of the boiler. 10. The Inspector General shall define boiler size according to heated surface area in accordance with adopted procedures.
Chapter (13) Prohibitions	59. According to Section 21, nobody must alter, change, deface, deform or make embossed registration unnoticeable illegitimately. 60. Nobody is allowed to repair a boiler without boiler repair certificate. 61. Nobody is allowed to maintain a boiler without boiler maintenance certificate. 62. Nobody must alter safety relief valve in order to exceed the allowable pressure due to his consent or direction given by the owner. 63. Nobody must manufacture boilers against Section 25, Subsection 25 (a) and (b) enacted.
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
The Pyidaungsu Hluttaw hereby enacts this Law for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly.	
The Social Security Law (2012)	
The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
Section 53(a)	The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
This law was enacted for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall form the workplace coordinating committee consisting of the representatives of workers and the representatives of employer.	
Section 23	A party, employer or worker, may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of

	such body in accord with stipulated manners, may apply to the competent court in person or by the legal representative.
Section 24	The relevant Conciliation Body shall, in respect of the collective dispute known or received by the complaint of either party, employer or worker, in respect of the dispute; information sent by the Minister or the Region or State Government or any other means, carry out as follows: (a) conciliating so as to be settled within three days, not including the official holidays, from the day of knowing or receipt of such dispute; (b) concluding mutual agreement if the settlement is reached in conciliating under sub-section (a), before the Conciliation Body.
Section 25	The Conciliation Body shall refer the collective dispute which does not reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute.
Section 38	No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.
Section 39	No employer shall alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Tribunal, to affect the interest of such workers immediately.
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal f violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.
Section 46	Any employer who violates any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.
The employment and skill development (2013)	
This law was enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Section 5	The project proponent has to appoint employees with the contract in line with the provision of section 5 of said law.
Section 14	Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
The Worker's Compensation Act, 1923	It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment, such as carpal tunnel syndrome.
The Payment of Wages Act, 1936	The Payment of Wage Act defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday, and allows legal action against delayed payment or un-agreeable deduction.
The Leave and Holidays Act (1951, partially revised in 2014)	This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leave and maternity leave.
The Minimum Wage Law (2013)	The minimum wage law, passed in March 2013, was replaced the 1949 Minimum Wage Act. The law provides a framework for minimum wage determination: the presidential office establishing a tripartite minimum wage committee shall decide

	minimum wage with industrial variation based on a survey on living costs of workers possibly every two years. This also stipulates equal payment.
Public Health Law (1972)	**Chapter 2; Prevention of Public Health**
Objectives	To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. This law focuses as follows The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law. The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law. The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.
Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
Chapter 2 Prevention	4. When a Principal Epidemic Disease of a Notifiable Disease occurs; Immunization and other necessary measures shall be undertaken by the Department of Health, in order to control the spread thereof; The public shall abide by measures undertaken by the Department of Health under sub-section (a).
Chapter 4 Environmental Sanitation	For prevention of the outbreak of Communicable Disease and effective control of Communicable Disease when it occurs, the public shall under the supervision and guidance of the Health Officer of the relevant area, undertake the responsibility of carrying out the following environmental sanitation measures;- Indoor, outdoor sanitation or inside the fence outside the fence sanitation; Well, ponds and drainage sanitation; Proper disposal o refuse and destruction thereof by fire; Construction and use of sanitary latrines; Other necessary environmental sanitation measures.
Occupational Safety and Health Law (2019)	
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.
Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.
The law on Standardization	
Objectives	The Objectives of this Law are as follows: to enable to determine Myanmar Standard to enable to support export promotion by enhancing quality of production organizations and their product, production processes and services

	to enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards to enable to support protection of environment related to products, production process and services from impact, and conservation of natural resources to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programe.
Chapter 7 Taking Action by Committee No. 19	The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order: warning suspending the certificate of certification for limited period cancelling the certificate of certification
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဥတ္တုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဥတ္တုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်၊ ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊ လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတက်သော ဥတ္တုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ ကြီးကြပ်နိုင်ရန်။
အခန်း ၇ တားမြစ်ချက်များ အမှတ် ၁၈	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်းမပြုရ။
အမှတ် ၁၉ (ခ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းခွင် ပေါက်ကွဲစေတက်သော ဥတ္တုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။
The Motor Vehicles Law (2015)	
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles • The project proponent has to promise to abide by the nearly all provisions of said law and rules, especially the provisions related to air pollution, noise pollution and life safety.
The Conservation of Water Resources and Rivers Law (2006)	
Aims	The aims of this Law are as follows: (a) to conserve and protect the water resources and rivers system for beneficial utilization by the public; (b) to smooth and safety waterways navigation along rivers and creeks;

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

2.2. **NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUILDLINES**

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

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

2.2.1. General Guidelines

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

2.2.1.1. Air emission

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

Table 2-2 NEQG's Air Quality Guideline

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

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

2.2.1.2. Wastewater

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

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

Table 2-3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges

Parameter	Unit	Guideline Values
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and grease	mg/l	10
pH	S.U.[a]	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulphide	mg/l	1

Parameter	Unit	Guideline Values
Temperature increase	°C	<3[b]
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

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

Table 2-4 Drinking Water Quality Standard (WHO Guidelines)

Parameter	Unit	Guideline Values
Colour	TCU	5
Turbidity	NTU	10
pH	mg/l	6.5 To 8.5
Total Hardness	mg/l	300
Calcium	mg/l	75
Magnesium	mg/l	30
Copper	mg/l	0.05
Iron	mg/l	0.3
Manganese	mg/l	0.1
Chlorides	mg/l	250
Sulphates	mg/l	150
Nitrates	mg/l	45
Fluoride	mg/l	0.6 To 1.2
Phenols	mg/l	0.001
Mercury	mg/l	0.001
Cadmium	mg/l	0.01
Selenium	mg/l	0.01
Arsenic	mg/l	0.05
Cyanide	mg/l	0.05
Lead	mg/l	0.1
Zinc	mg/l	5.0
Chromium	mg/l	0.05

2.2.1.3. Noise levels

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

Table 2-5 Noise Levels of National Environmental Quality (Emission) Guideline

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

[a] Equivalent continuous sound level in decibels

2.2.1.4. iIluminating Engineering Society of North America Lingting Handbook

Area / Task / Process	Illuminace 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

2.2.2. IFC EHS Guidelines

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

There are two kinds of guidelines, General EHS Guidelines and Industry Sector Guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors in the following section: (1) Environment, (2) Occupational Health and Safety, (3) Community Health and Safety and (4) Construction and Decommissioning. Table 2-6 shows the contents of the section of Community Health and Safety.

Table 2-6 Community health and safety contents

Contents	Brief Description
Water Quality and Availability	Drinking water sources should at all times be protected so that they meet or exceed applicable national acceptability standards or in their absence the current edition of WHO Guidelines for Drinking-Water Quality. Project activities should not compromise the availability of water for personal hygiene needs and should take account of potential future increases in demand. The overall target should be the availability of 100 liters per person per day.
Structural Safety of Project Infrastructure	Reduction of potential hazards is best accomplished during the design phase when the structural design, layout and site modifications can be adapted more easily. The following issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project (1) inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure (2) incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire, and (3) application of locally regulated or internationally recognized building codes, standards and regulations, and mitigation measures.
Traffic Safety	Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents.
Transport of Hazardous Materials	Projects should have procedures in place that ensure compliance with local laws and international requirements applicable to the transport of hazardous materials.
Disease Prevention	Recommended interventions against the communicable diseases at the project level include (1) providing surveillance and active screening and treatment of workers, (2) preventing illness among workers in local communities by undertaking health awareness and education initiatives, training health workers in disease treatment and conducting immunization programs for workers, and (3) providing treatment through standard case management in on-site or community health care facilities.
Emergency preparedness and Response	All projects should have an Emergency preparedness and Response Plan that is commensurate with the risks of the facility and that includes the following basic elements: (1) Administration (policy, purpose, distribution, definitions, etc.) (2) Organization of emergency areas (command centers, medical stations, etc. (3) Roles and responsibilities, (4) Communication systems, (5) Emergency response procedures, (6) Emergency resources, (7) Training and updating, (8) Checklists (role and action list and equipment checklist), and (9) Business Continuity and Contingency.

2.3. POLICY AND LEGAL FRAMEWORK INCLUDING INTERNATIONAL CONVENTIONS, TREARIES AND AGGREMENT, AND INTERNATIONAL STANDARDS, GUIDELINES

International Conventions, Treaties and Agreements Myanmar has signed a number of international treaties related to the environment which may have implications for the Project. These include:

a) Plant Protection Agreement for the Asia and Pacific Region; Vienna Convention for the Protection of the Ozone Layer; Montreal Protocol on Substances that Deplete the Ozone Layer;

b) London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer;

c) United Nations Framework Convention on Climate Change (UNFCCC); United Nations Convention to Combat Desertification;

d) International Civil Aviation Organization: ANNEX 16 Annex to the Convention on International Civil Aviation Environmental Protection Vol. I, II, Aircraft Noise;

e) Vienna Convention for the Protection of Ozone Layer;

f) Montreal Protocol on Substances that Deplete the Ozone Layer;

g) Convention Concerning the Protection of the World Cultural and Natural Heritage;

h) Convention on Biological Diversity (CBD); International Tropical Timber Agreement (ITTA);

i) Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

j) ASEAN Agreement on the Conservation of Nature and Natural Resources; Catagena Protocol on Bio-safety

k) Kyoto Protocol to the United Nations Framework Convention on Climate Change; Ramsar Convention on Wetlands; and

l) Copenhagen Amendment to Montreal Protocol on Substances that deplete the Ozone Layer.

United Nations Declaration on the Rights of Indigenous People

International Standards and Guidelines

The following international standards, guidelines, policies and procedures are referred to, in preparation of this Report:

a) UNEP Environmental Impact Assessment Training Resource Manual

b) European Bank for Reconstruction and Development (Sub-sectoral Environmental and Social Guidelines)

c) International Finance Corporation, World Bank Group (Environmental, Health, and Safety Guidelines)

d) NHS, Health, Scotland (Health Impact Assessment in Practice)

e) BS 14001:2004 Environmental management systems - Requirements with guidance for use

f) Principles of Environmental Impact Assessment Best Practice International Association for Impact Assessment

g) OHSAS 18001, Occupational Health and Safety Assessment

2.4. NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY

The National Sustainable Development Strategy (NSDS) is part of a broader programme of the UN Sustainable Development Commission set up after the World Summit on Sustainable Development in 2002.Every country, including Myanmar, that signed Agenda 21 at the Earth Summit in Rio de Janeiro in 1992, agreed to develop an NSDS by 2010 in line with the Millennium Development Goals (MDGs). UNEP provided funding for Myanmar to develop an NSDS. The main aim of the process was to develop an NSDS in line with international standards by meeting the MDGs and ensure that environmental and social impacts are mitigated when implementing development projects. Myanmar's NSDS was published in August 2009. The three goals described in Myanmar's NSDS are sustainable management of natural resources, integrated economic development and sustainable social development. Specific strategies are outlined under each goal. For example, the goal for Sustainable Management of Natural Resources suggests strategies for forest resource management, sustainable energy production and consumption, biodiversity conservation, sustainable freshwater resources management, sustainable management of land resources, sustainable management for mineral resources utilization, and so on.

2.5. PROJECT'S ENVIRONMENTAL AND SOCIAL STANDARD

Principle 17 of the Rio Declaration on Environment and Development stated; 'Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of competent national authority'.

2.6. THE EVOLVING SCOPE OF EIA PROCESS AND PRACTICE

In the early stages of EIA, only the biophysical impacts of proposals were considered (such as effects on air and water quality, flora and fauna, noise levels, climate and hydrological systems). Increasingly EIA processes are used to analyses a range of impact types within a single framework, include social, health, and economic aspects, e.g. social impact assessment (SIA), health impact assessment (HIA) and risk assessment. However, this trend toward integrated assessment for decision-making is by no means universal or uniform. Even in EIA systems where this trend is well established, the degree and extent of integration varies with legal requirements and accepted practice. Despite a lack of internationally consistent practice, integrated impact assessment, linking biophysical and socio-economic effects, is identified as an important priority in Agenda 21.

2.7. UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGEOUS PEOPLES

Myanmar has endorsed the United Nations Declaration on the Rights of Indigenous Peoples in September 2007 as one of 144 states. Article 32 describes indigenous peoples' right to free and prior informed consent (FPIC): "States shall consult and co-operate in good faith with the Indigenous Peoples concerned through their own representative institutions in order to obtain FPIC prior to approval of any project affecting their land or territories". Article 10 and Article 26 elaborate on forcible relocation of indigenous people, the need for FPIC and land rights. It is required to ensure conformance to all relevant international environmental and social conventions in relation to this project.

2.8. WORLD BANK CLASSIFICATION

World Bank Operational Directive on EIA, which is illustrative and provides a framework for screening.

Category A: for projects likely to have significant adverse environmental impacts that are serious (i.e., irreversible, affect vulnerable ethnic minorities, involve involuntary resettlement, or affect cultural heritage sites), diverse, or unprecedented, or that affect an area broader than the sites of facilities subject to physical works. A full EIA is required.

Category B: for projects likely to have adverse environmental impacts that are less significant than those of Category A projects, meaning that few if any of the impacts are likely to be irreversible, that they are site-specific, and that mitigation measures can be designed more readily than for Category A projects. Normally, a limited EIA will be undertaken to identify suitable mitigation and management measures, and incorporate them into the project.

Category C: for projects that are likely to have minimal or no adverse environmental impacts. No EIA is required.

2.9. DIRECTIVE 2011/92/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 13 DECEMBER 2011 ON THE ASSESSMENT OF THE EFFECTS OF CERTAIN PUBLIC AND PRIVATE PROJECTS ON THE ENVIRONMENT

The EIA Directive (85/337/EEC) has been in force since 1985 and applies to a wide range of defined public and private projects, which also respectively list projects subject to mandatory EIA and non-mandatory EIA.

Usually this kind of major projects, will warrant a full EIA, because they are known or considered to have potentially significant adverse impacts on the environment; for example, on human health and safety, rare or endangered species, protected areas, fragile or valued ecosystems, biological diversity, air and water quality, or the lifestyle and livelihood of local communities.

2.10. INSTITUTIONAL ARRANGEMENT

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

2.11. COMMITMENT OF JIA HE LI COMPANY LIMITED

Jia He Li Company Limited has made the commitments and responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of MONREC in which to conduct an EMP which describe the measure to

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

a) The accuracy and completeness of the EMP,

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

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

Jia He Li Company Limited shall be responsible for the environmental assessment of factory development as follows:

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

3. PROJECT DISCRIPTION

3.1. LOCATION OF PROPOSED PROJECT

The proposed project is located at Latitude 16°53'31.82"N and Longitude 96°15'3.91"E, Plot No. 35, Myay Taing Blocak No. 144, Industrial Zone, Dagon Myothit (South) Township, Yangon Region. The location map of the proposed project site is shown in Figure 3-1.

3.2. OBJECTIVES OF PROPOSED PROJECT

The proposed project intends to manufacture soles on CMP basic and to export 100% of the finished products. Jia He Li sole Factory will be imported raw materials from Taiwan and China and finished the products will be sole to locally sole business enterprises based on CMP.

3.3. SITE DESCRIPTION OF PROPOSED PROJECT SITE

The proposed project locates at the coordinates of Latitude 16°53'31.82"N and Longitude 96°15'3.91"E. The total area of project site is 1.04 acres (4208.73 sqm). One storey building (36 m × 72 m) is used for operation. The main structure is designed into store area and cutting area, pressing and moding area, material preparation area, painting area, canteen area, warehouse area, packing area and quality control area. Transformer room, generator room, chemical storage room and water treatment plant are separated by main factory building structure. The factory layout plan can be seen in Figure 3-2.

3.4. ADJACENT MAP OF PROPOSED PROJECT

Jia He Li Company Limited is located at Plot No.35, Block No.144 Industrial Zone, Dagon Myothit (South) Township, Yangon Region. The nearest main roads are Number-2 Main Road and the factory is located near the Myawaddy Minn Gyi street.

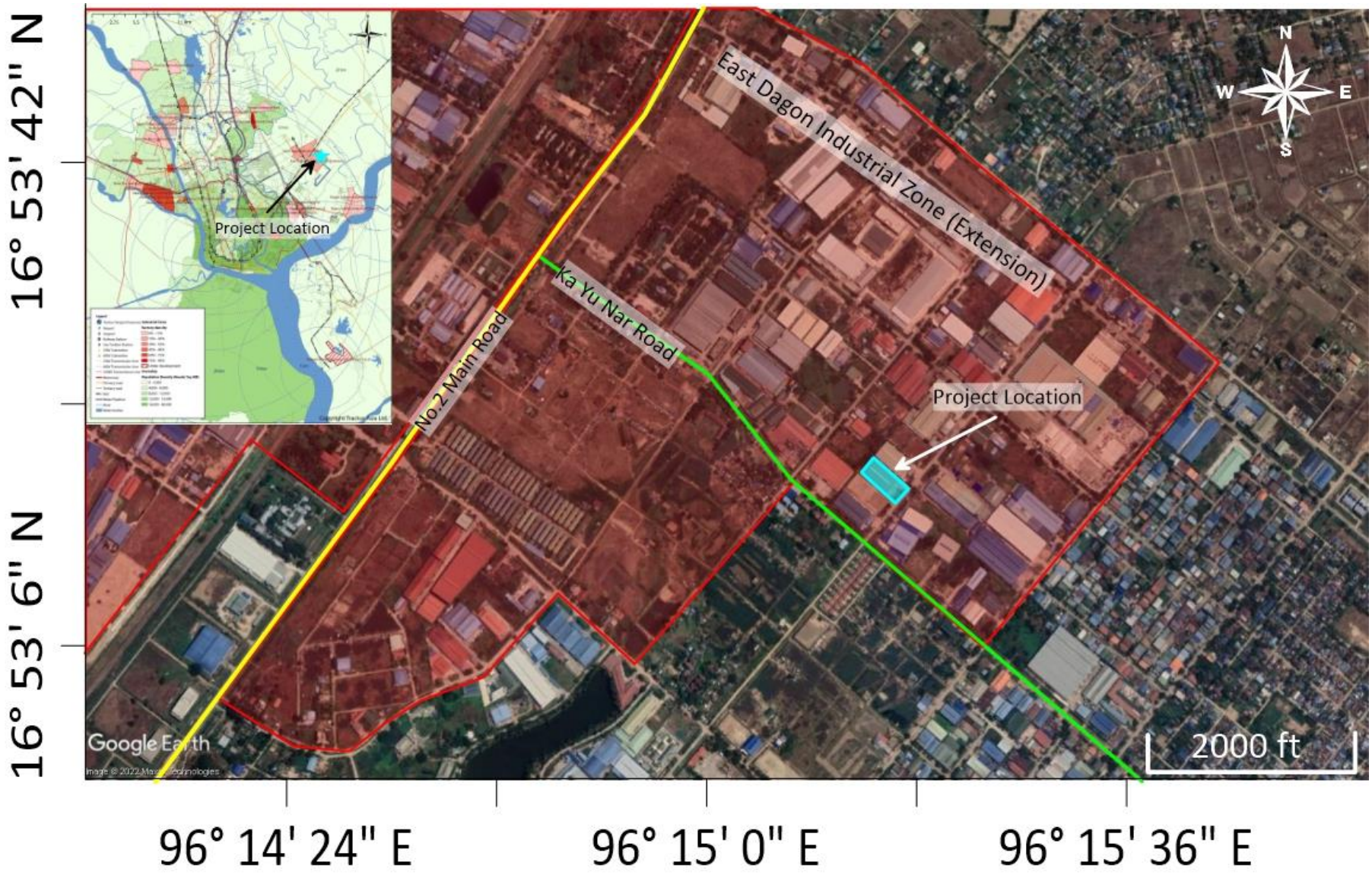


Figure 3-1 Location Map of Jia He Li Co., Ltd.

Figure 3-2 Factory Layout Map

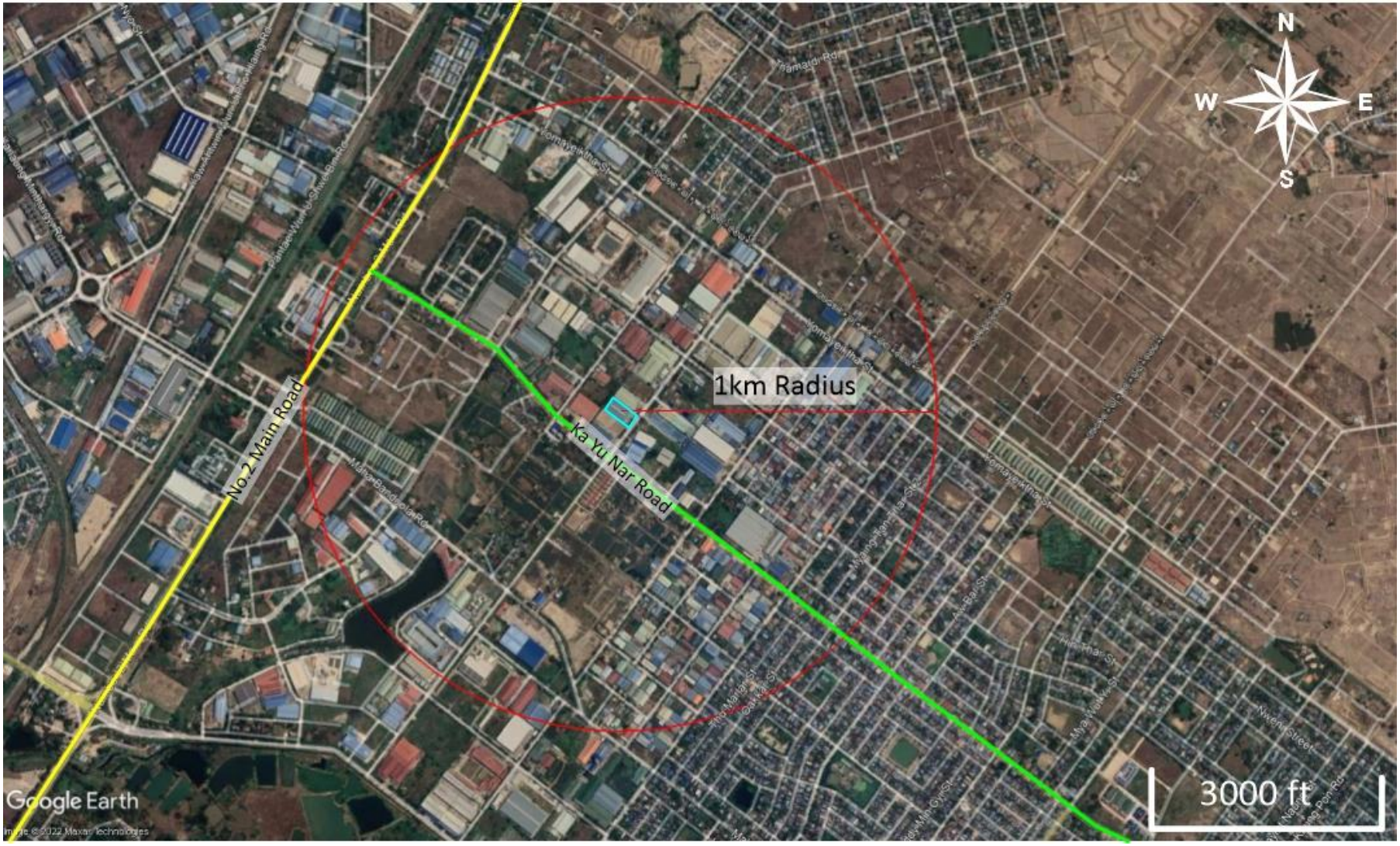
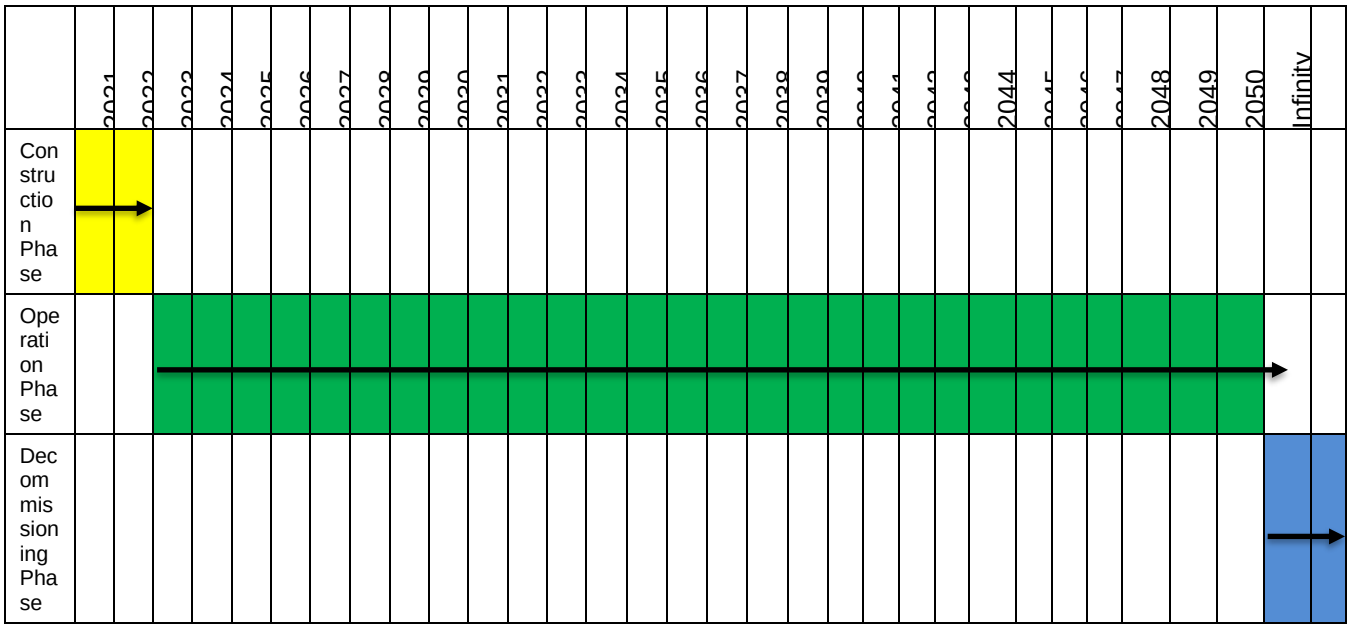


Figure 3-3 Adjacent Location Map of Proposed Project

3.5. PROJECT OPERATION

The operation phase of the factory is started from around July 2020 and the validity of endorsement is 30 years. Jia He Li Company Limited will close the factory as their MIC proposal.

Table 3-1 Jia He Li Company Limited's Project Life Span



3.5.1. Production Process

The proposed factory is to produce rubber soles. Production process of for rubber soles mainly consists of compound mixing, cutting, pressing and moulding. The required raw materials are imported from Thaiwan and China stored in warehouse. In the production of rubber soles, production plan starts mixing with TPR, ABS and PU which are the raw materials and synthetic rubber. And then, the materials produced from mixing are placed into the hopper which are designated for pressing and moulding by hydraulic system. After cutting the designated soles caming out from the mold into the required soles, the semi products are sent to painting room for painting color and then send to drying area. After passing the QC check, the finished products are packaged. The process flow chart for rubber soles production is shown in Figure 3-4.

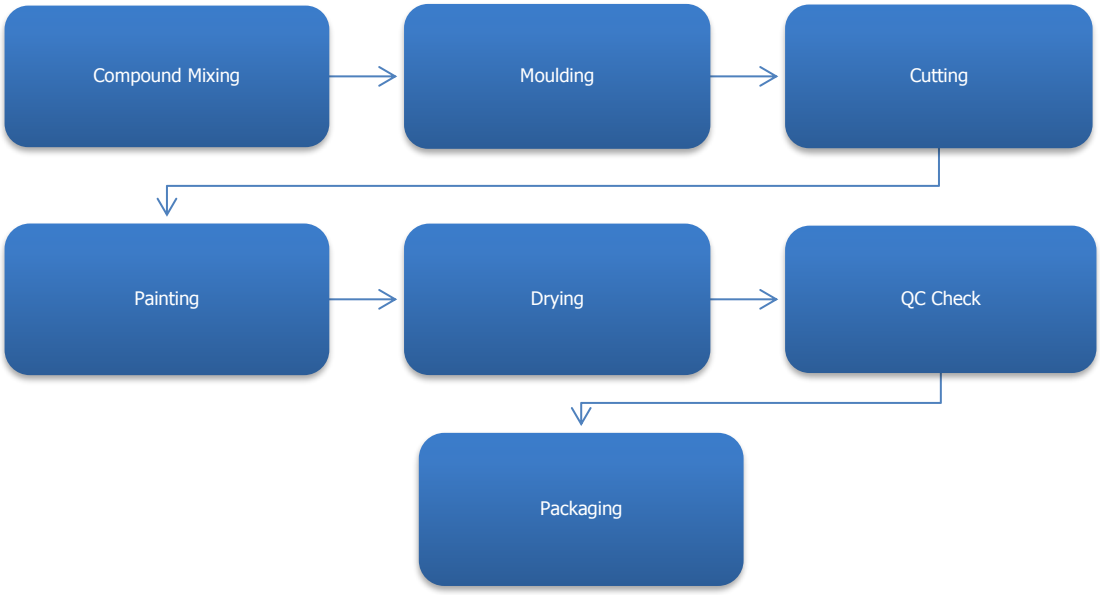


Figure 3-4 Production flow diagram of Jia He Li Factory

Warehouse

Heating and Mixing Area

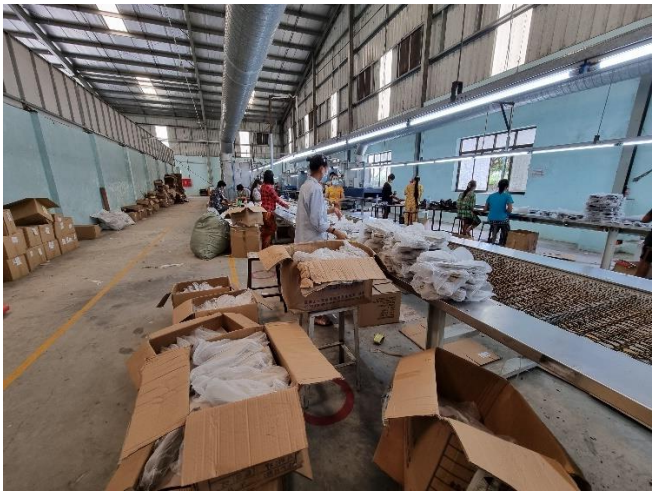
Pressing and Molding Area

Cutting Area

Pating Area

Drying Area

Q.C Area



Packaging Area

Figure 3-5 Production Photos

During operation, the proposed factory is expected to produce sole products as per Table 3-2.

Table 3-2 Annual Production Rate

No	Particular	Unit	Year - 1	Year - 2	Year - 3	Year - 4	Year - 5 to Year - 10
1	TR	Pair	450,000	495,000	544,500	598,950	658,845
2	TPR	Pair	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150
3	ABS	Pair	800,000	880,000	968,000	1,064,800	1,171,280
4	PU	Pair	400,000	440,000	484,000	532,400	585,640
5	TPU	Pair	600,000	660,000	726,000	798,600	878,460
6	RB	Pair	500,000	550,000	605,000	665,500	732,050
7	IP	Pair	800,000	880,000	968,000	1,064,800	1,171,280
8	PP	Pair	1,000,000	1,100,000	1,210,000	1,331,000	1,464,100

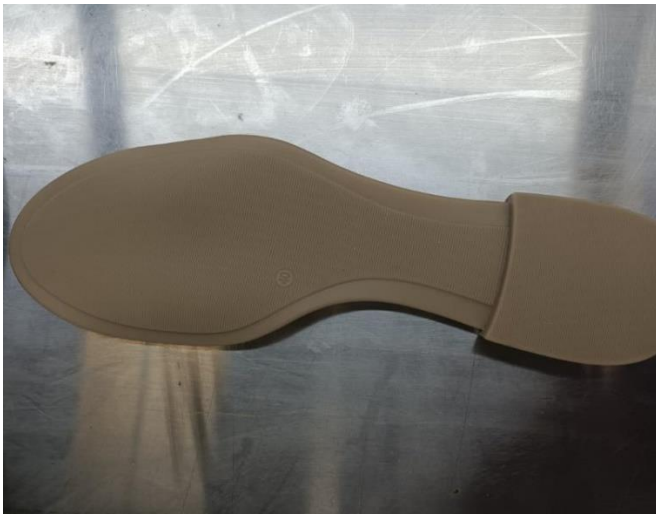


Figure 3-6 Finished Products Photo

3.6. UTILITIES

3.6.1. Raw Material

The main Raw Materials are TR, TPR, ABS, PU, TPU, RB, IP and PP which are imported from Taiwan and China and the finished products are market to King Lead Ind Company Limited based on CMP and Mountain Top Global Limited on CMP base which are local enterprise. List of raw materials are described in Table 3-3.

Table 3-3 List of Raw Materials Requirement

No	Particular	HS Code	Unit	Year - 1	Year - 2	Year -3	Year -4	Year -5 to Year -10
1	TR	40021913	g	135,000,000	148,500,000	163,350,000	179,685,000	197,653,500
2	TPR	40029911	g	675,000,000	742,500,000	816,750,000	898,425,000	988,267,500
3	ABS	39033090	g	144,000,000	158,400,000	174,240,000	191,664,000	210,830,400
4	PU	84807900	g	72,000,000	79,200,000	87,120,000	95,832,000	105,415,200
5	TPU	39071010	g	126,000,000	138,600,000	152,460,000	167,706,000	184,476,600
6	RB	40051000	g	262,500,000	288,750,000	317,625,000	349,387,500	384,326,250
7	IP	84807190.9	g	200,000,000	220,000,000	242,000,000	266,200,000	292,820,000
8	PP	39,021,000.9	g	120,000,000	132,000,000	145,200,000	159,720,000	175,692,000

3.6.2. Machinery and Equipment

List of machinery and equipment required for Jia He Li sole factory is following in Table 3-4.

Table 3-4 List of Machinery and Equipment

No	Description	HS Code	Unit	Quantity
1	Power Generator (425/387KVA)	8511509000	Set	1
2	Permanent magnet variable frequency screw air compressor	8414804090	Set	1

No	Description	HS Code	Unit	Quantity
3	Refrigerated Compressed Air Dryer	8419399090	Set	1
4	Air Tank	7311001000	Set	1
5	FUU-Automatic Rotary I-color TPR soles Injection molding machine	8477109000	Set	8
6	LIANYOU plastic INJECTION MOLDING MACHINE	8477109000	Set	8
7	Strong plastic crusher	8477800000	Set	2
8	Strong plastic crusher	8477800000	Set	1
9	Horizontal drying mixer	8477800000	Set	4
10	Sand-blasting machine	8424300000	Set	1
11	Cooling tower	8419500090	Set	2
12	Cutting machine	8461909000	Set	2
13	BENCH DRILL	8207509000	Set	1
14	Electric welding machine (welder)	8515110000	Set	2
15	Argon arc welding	8515390000	Set	2
16	Printing machinery	8443192101	Set	4
Total				41

3.6.3. Human Resource

Human resource required by foreign experts/technicians and local persons for administrative and production process are estimated about 150 persons for first year, 250 persons for second year, 250 persons for third year, 330 persons for fouth year and 400 persons within five year and ten years which are also described in Table 3-5. The numbers of foreign experts/ technicians is estimated one person for each operation year. Currently, local staff and foreign experts are 40 persons (18 number persons of male and 22 number persons of female) and 5 persons (male only). Working time is from 8:00 AM to 5:00 PM.

Table 3-5 Local Employment Statement of Jia He Li Company Limited

No.	Particular	Number of Employee				
		Year 1	Year 2	Year 3	Year 4	Year 5 to Year 10
1.	HR Manager	1	1	1	1	1
2.	Finance Manager	1	1	1	1	1
3.	Officer and accountant staff	5	5	5	5	5
4.	Translator	1	1	1	1	1
5.	Supervisor	2	2	2	3	3
6.	Leader	2	2	2	5	5
7.	Skill Labour	100	150	150	200	250

No.	Particular	Number of Employee				
		Year 1	Year 2	Year 3	Year 4	Year 5 to Year 10
8.	Unskill Labour	30	80	80	100	120
9.	Mechanic & Electrician	2	2	2	3	3
10.	Cleaner	2	2	2	3	3
11.	Security	2	2	2	4	4
12.	Driver	1	1	1	2	2
13.	Cooker	1	1	1	2	2
Total		**150**	**250**	**250**	**330**	**400**

3.6.4. Water Requirement

The water resource of the proposed project is ground water. Ground water is pumped and stored with tank which keeps the amount of 1000 gallons. The water pumped from ground water is used for production process, domestic use. The water required for firefighting system are storage with underground tank about 20000 gallons. 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 is ordered and consumed from the outsource seller of purified water. Estimated daily water consumption is about 5 cans (which is 20 litters) in the factory.

Figure 3-7 Water storage and drinking water supply

3.6.5. Electricity and Fuel Requirement

The proposed project is intended to get required electricity supply from Yangon City Electricity Supply Board (YESB) and distributed by 400 kVA of Transformer. Another source of energy is 750 kVA will also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Estimated electricity usage is about 3100 kWh per month.

The required petrol and diesel for generators are purchased from the nearest petrol station. The usuage amount of fuel for proposed Jia He Li Company Limited is about 4000 liters per month. To handle the leakage and spillage of the diesel, an interception with sand is kept under the tank.

Figure 3-8 Electricity Facilities

3.7. FACILITIES

3.7.1. Status of the Factory

Jia He Li 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.

By the proposed project, the potential impacts may be air polloution and noise pollution. Air pollution is due to gas emission from the operation of factory's machines and the usage of vehicles of the factory. And, noise pollution are also because the machines and generators required for the factory are operated.

Solid wastes such as broken and scraps from cutting stage are reused as recycle in the mixing raw materials with designated colors. 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.

3.7.2. Industrial Wastes facilities

Industrial wastes from facilities are generated from rubber sold molding stage, cutting and painting stage. Unformal sole desing are 50% of the factory's wastes. The scraps from cutting stage are about 40% and wastes from packaging stage are 10%. In addition, packing waste of plastic sheet, carton box are also generated from packing stage. Total amount of waste about maximum 10 tons per month are generated from operation process. These solid wastes disposal from each operation sectors are collected and disposed by connecting with the Yangon Municipal once a week. The recyclable wastes which are dispose from cutting stage will be reused in first stage that is a stage which rubber raw materials are mixed with colors. According to the waste management practice, Jia He Li Company Limited has provided the dedicated dustbins for paper wastes, plastic waste, production wastes and food wastes for the proper disposal of waste.

Figure 3-9 Solid Waste Disposal System

3.7.3. Human wastes facilities

There are about 400 numbers of staffs in the factory. They dispose wastes as daily uses. Solid waste generated from maximum number of operators and office staffs with assumption of waste generation rate at 156 kg/day was calculated based on solid waste generation rate of 0.39 kg/person/day.

Domestic wastewater generated by maximum amount of 200 persons with assumption rate at 40 m3/day was calculated based on domestic wastewater generated rate of 0.1 m3/person/day1. This water will be released in operation hour discharge to septic tank or factory drainage.

Figure 3-10 Drainage System of Factory

3.7.4. Fire hazards protect facility

For fire safety plan, Jia He Li Company Limited has a plan to keep sufficient amount of fire extinguishers, sand bags with the essential shovels, pith axes, hooks and flats ready at hand in every sub-section of the factory and for the case of emergency fire problems in factory building. Firefighting training plan is also prepared for all employees by using the instructions, techniques and guidelines in concern with fire emergency matters according to the guidelines of Myanmar Fire Services Department.

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

Moreover, smoking places are provided for smoking workers and smoking inside the building is strongly prohibited to avoid unwanted fire problems.

Figure 3-11 Emergency safety and fire management

3.7.5. Ventilation System

The factory ventilation systems consist of natural ventilation system and mechanical ventilation system. The mechanical ventilation system is provided in office room, production area, canteen and warehouse area. The natural ventilation system is provide in production area and painting area.

Figure 3-12 Ventilation System

3.7.6. Toilet facilities

There are total numbers of 10 factilities for toilet (individually 4 rooms for male and 6 rooms for female. In the factory, toilet facilities currently have hygienic toilets already provided and categorized by gender, marked distinctly for men and women by signs and symbols. In addition, toilet areas will also be provided with water sinks, necessary toiletries, and hand washing soaps, and waste bins. Toilet facilities are separated set up from main building.

Figure 3-13 Toilet Facilities Photos

3.7.7. Medical and Health facilities for employees

First aid kits boxes and medicines are provided for the employees of the factory and industrial accidents (such as minor injuries, sickness and emergency medical care). The factory has well plan for the emergency patients that is emergency patient are taken and gone to near the hospital and clinic. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.

3.8. DECOMMISSIONING PHASE

The investment duration of the proposed project is 30 years and extnedable and renewable for another 10 years two times. They will close out the project according to their MIC proposal.

4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

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

4.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

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

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

4.2. ENVIRONMENTAL BASELINE STUDY

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

Table 4-1 Location of the Survey Point

Type of Survey	Coordinates	Survey point	Description of survey point
Air Quality Measurement Point	16°53'26.35"N 96°15'0.50"E	Project site	Operation area of the factory
Noise Level (NL)	16°53'27.06"N 96°14'59.41"E	Project site	Production area of the factory

Figure 4-1 Monitoring Survey Map

4.3. PHYSICAL COMPONENT IN PROJECT AREA

4.3.1. Topography

Yangon area is the largest; most populated and urbanized area in Myanmar. There are thirty-three townships in Yangon city where located at the convergenceon the Yangon and Bago River region about 34 km away from the Gulf of Martaban. The proposed project area is situated at Industrial Zone, Dagon Myothit (South) Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

4.3.2. Geology

In Yangon area mainly composed of Pegu Group, Irrawaddy Formation and Alluvium. Alluvial deposits (Pliestocene to Recent), the non-marine fluvialtile sediments of Irrawady formation (Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene) underlie the Yangon area. Alluvial deposits are composed of gravel, clay, silts, sands and laterite which lie upon the eroded surface of the Irrawaddy formation at 3-4.6 m above mean sea level (MSL). The rock type in Yangon is mainly soft rocks, which consist of sandstone, shale, limestones and conglomerate. Geological map of Yangon Regional area is shown in Figure 4-2. [2]

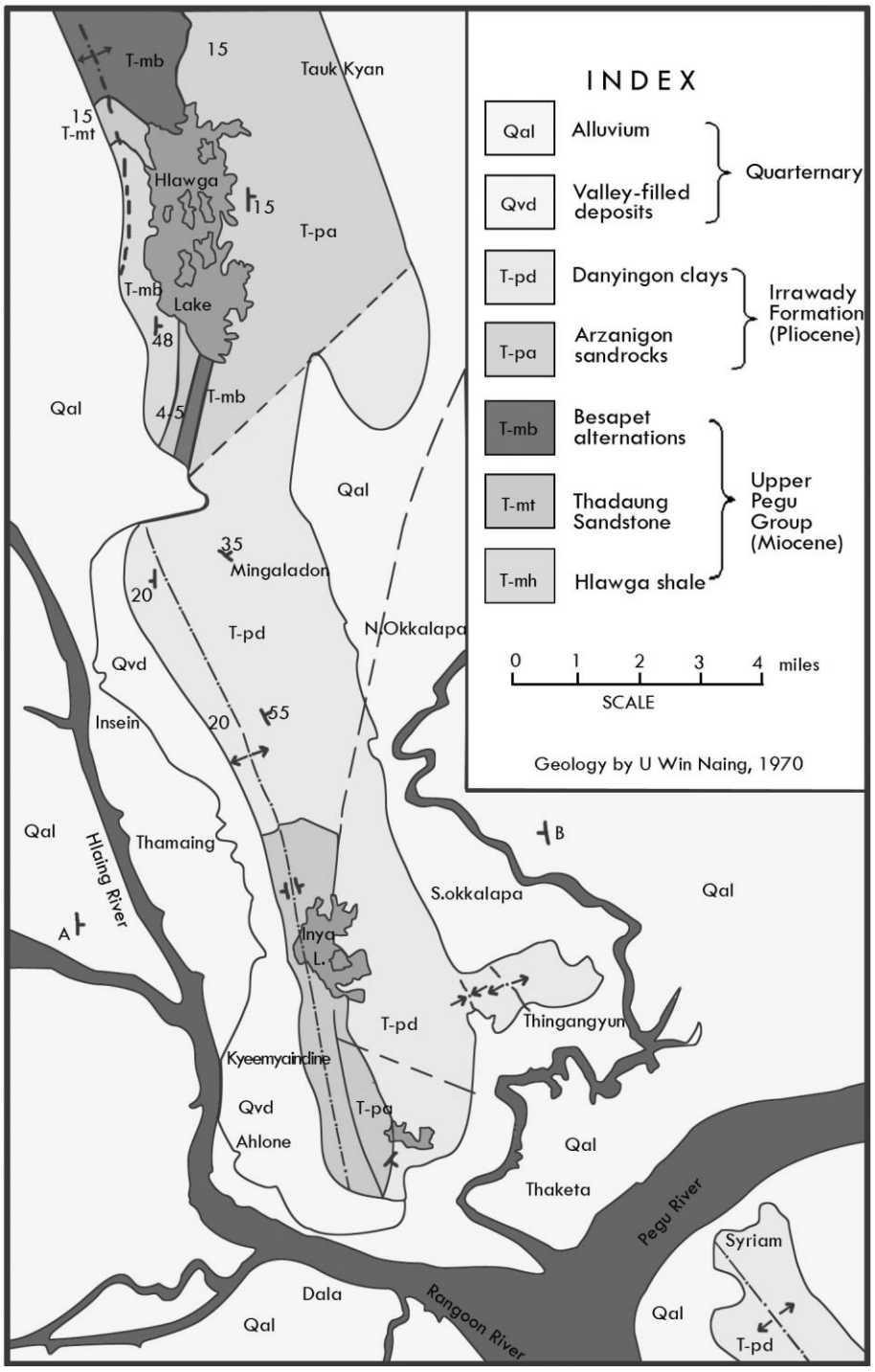


Figure 4-2 Geological Map of the Project Area

4.3.3. Hydrology

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

Groundwater: Groundwater availability is generally based on the distribution of permeable and relatively impermeable rocks. The nature of openings in the rocks determines permeability of rocks. Based on local geological considerations, potential groundwater source of Yangon can be roughly

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

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

Hydrology: The Project Site lies along the catchment of the Bago River which flows north to south. A small portion of the Bago River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Bago River joins the Yangon River and from there, flow towards the Southwestern direction into Andaman Sea.

4.3.4. Climate

In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year-round. Over the course of the year, the temperature typically varies from 67 °F to 97 °F and is rarely below 62 °F or above 101 °F. Climate of Yangon Region is shown in Figure 4-3 below.

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

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

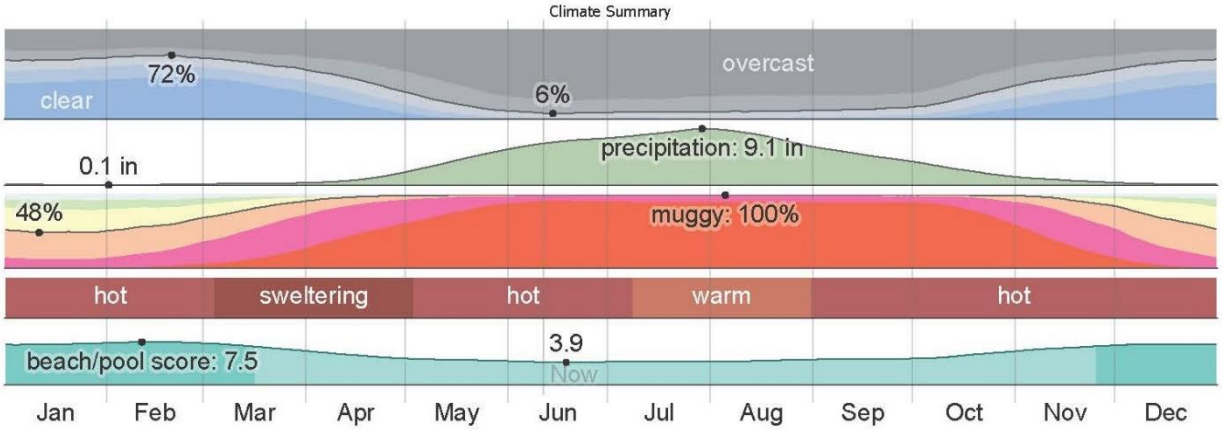


Figure 4-3 Climate Summery of Yangon Region

Table 4-2 Annual rainfall and temperature

Year	Rainfall		Temperature	
	Raining day	Rainfall value	Summer season Max (°C)	Winter season Min (°C)
2015-2016	105	84.91	34	30
2016-2017	116	85.89	34	30
2017-2018	97	86.70	38	30
2018-2019	69	1320	41	30

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

Table 4-3 Relative humidity and temperature measure at factory

Date and Time	Description	Result value	Environmental parameter air station guideline
25 August 2022 (10:00 am to 5:00 pm)	Relative Humidity RH %	87 (%)	Present condition
	Temperature	33.5 °C	Present condition

Figure 4-4 Humidity and Temperature Measurement Photo

4.3.5. Air Quality

To determine the existing baseline ambient air quality status within the project site on 25 August 2022, 8-hours of working period air pollutants level, which include dust PM_{10} and $PM_{2.5}$ and gases (SO_2, NO_2) were measured at the selected site using the AQM-09 air monitoring station. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission). The measurement location point is situated at latitude 16°53'26.35"N and longitude 96°15'0.50"E.

According to site survey, the air quality of particulate matter (PM_{10} and $PM_{2.5}$) and gases level of Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2) are within the National Environmental Quality (Emission) Guideline (NEQG). The Ozone parameter exceeds the index of National Environmental Quality (Emission) Guideline (NEQG). The course of higher value is the location of air monitoring point that it is placed near generator room and beside the entrance of factory.

Table 4-4 Observed air quality results

Parameters	Observed value	Guideline value	Unit	Organization	Working Period
PM_{10}	15.74	50	µg/m^3	NEQG	8 hrs
$PM_{2.5}$	9.79	25	µg/m^3	NEQG	8 hrs
SO_2	1.99	500	µg/m^3	NEQG	8 hrs
NO_2	13.42	200	µg/m^3	NEQG	8 hrs
O3	350.42	100	µg/m3	NEQG	8 hrs

NEQG = National Environmental Quality (Emission) Guideline

Figure 4-5 Air Quality Measurement Photos

4.3.6. Noise

The Noise level of the proposed project site was measured by using Digital Sound Level Meter for working hours on 25 August 2022. Duration time of noise quality survey is from 10:00 AM to 5:00 PM about 7 hours. The average noise level in the project site area is presented in Table 4-5 compared with NEQ guideline. The noise level of the proposed project site is exceed the NEQ guideline because the noise quality point was placed near the generator room.

Table 4-5 Noise level measurement result

Date and Time	Location	GPS Value	Result Value	NEQ Guideline
25 August 2022 (10:00 AM to 5:00 PM)	Operation area	16°53'27.06"N 96°14'59.41"E	72.79 dBA	70 dBA

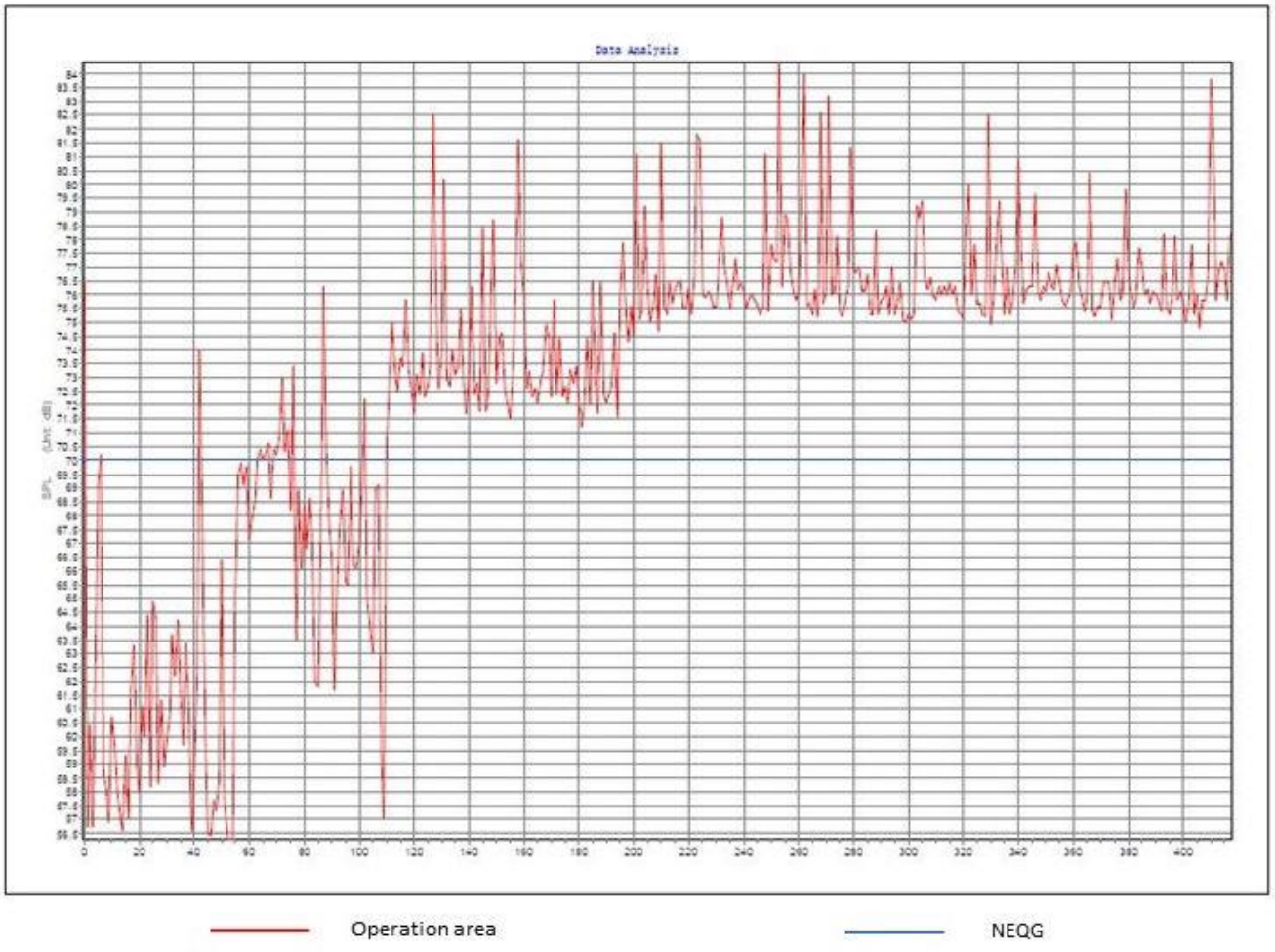


Figure 4-6 Noise level result graph

Figure 4-7 Sound level measurement photo

4.3.7. Light

Activities of the workers in the sole factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the sole factory is presented in Table 4-7. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in sole factory is provided in Table 4-6.

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 sole factory, like the inspection points (on-floor and in stores), sampling, and the finishing section, as these areas are crucial for the quality of the production. The tasks involved in these areas require high levels of worker focus and accurate lighting to ensure lower errors and defects passing on to the next stage.

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

Table 4-6 Recommended illumination and limiting glare index based on IES Code, 1968

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

Source: Koenigsberger, et al. 1975

Figure 4-8 Light quality measurement

Table 4-7 Result of light measurement in Jia He Li Sole Manufacturing Factory

No	Location	Measure value (Lux)	Standard*
1	Compound Mixing Area 1	1718	1000
2	Moulding Area	1244	600

No	Location	Measure value (Lux)	Standard*
3	Moulding Area 1	293	600

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

According to the monitoring results, Jia He Li Sole Manufacturing Factory light level is normal condition that's why some places need to reduce the light level and ought to put on the electricity bulb more over the higher places. On the other hand, some places are a bit lower 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

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

Ecological Resources	Existing condition
Fisheries, aquatic biology	Non existence
Wildlife	Non existence
Forests	Non existence
Rare or endangered species	Non existence
Protected areas	Non existence
Coastal resources	Non existence

4.5. SOCIO-ECONOMIC COMPONENT

4.5.1. Land Use

Information about land use was collected from secondary sources of South Dagon Township regional data. Classification of land use area in South Dagon Township is shown in Table 4-8.

Table 4-8 Land use information of Bago Township

No.	Land Items	Area (Acre)
1	Agricultural Land	5338
3	Industrial Land	236
4	Residential Land	11534
7	Bare land	2441

4.5.2. Population

Jia He Li Company Limited is located across South Dagon Township in Yangon Region. In 2019, the population of South Dagon Township is about 325,866 people as present in in Table 4-9

Table 4-9 Population of Males and Females at South Dagon Township (2019)

Item	Over 18 year			Under 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	106,153	118,586	224,739	50,210	50,937	101,147	156,363	165,523	325,866
Rural	-	-	-	-	-	-	-	-	-
Total	106,153	118,586	224,739	50,210	50,937	101,147	156,363	165,523	325,866

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

4.5.3. Religion

The different kinds of religion present in South Dagon Township are shown in Table 4-10. More than 90% of the people living in the township are Buddhists. [1]

Table 4-10 Religion in South Dagon Township (2019)

Township	Buddhist	Christian	Hindu	Muslim	Total
South Dagon Township	298,751	225	6,513	20,397	325,866

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

4.5.4. Local Economy

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

- post office
- beauticians
- butcher
- hairdressers
- furniture and electrical store
- restaurants
- cafes
- shoe and clothing shops
- industrial services
- pharmacy
- veterinarian
- bus service
- gift stores
- music store
- pubs and bars
- florist

4.5.5. Public Infrastructure and Access

4.5.5.1. Communication and Transportation

Major transportation route in South Dagon Township are railway, port, and car road as presented in Table 4-11.

Table 4-11 Transportation route

Categories	Township		Miles
	From	to	
Train Station	Toe Kyaung Kalay	Thanlyin Station	5
Bus Line (6, 7, 59, 60, 71)	South Dagon Township	Downtown Area	-
Highway Road	-	-	-

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

4.5.5.2. Education

. Location of major schools was situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S), basic education high school (B.E.H.S) and West Yangon Technological University, in the South Dagon Township. The name and the located village tract/ ward of schools are described in Table 4-12.

Table 4-12 List of major school in South Dagon Township

No.	Name of School	Location
1	The National University of Art and Culture	No (26) Ward
2	Economic University	Ywar Thar Gyi Yard
3	BEHS (1)	No (21) Ward
4	BEHS (2)	No (18) Ward
5	BEHS (3)	No (26) Ward
6	BEHS (4)	No (70) Ward
7	BEHS (5)	No (55) Ward
8	BEHS (6)	No (54) Ward
9	BEHS (Site Hmwe)	Site Hmwe Ward
10	Hta Kwe Lay Dauk Kan	Lay Dauk Kan
11	BEMS (1)	No (64) Ward
12	BEMS (2)	No (107) Ward
13	BEMS (3)	No (71) Ward
14	BEMS (4)	No (23) Ward
15	BEMS (5)	No (18) Ward
16	BEMS (6)	No (71) Ward
17	BEMS (7)	No (65) Ward

No.	Name of School	Location
18	BEMS (8)	No (107) Ward
19	BEMS (9)	No (57) Ward
20	BEMS (10)	No (22) Ward
21	BEMS (Branch) (1)	No (24) Ward
22	BEMS (Branch) (4)	No (21) Ward
23	BEMS (Branch) (8)	No (56) Ward
24	BEMS (Branch) (24)	No (104) Ward
25	BEMS (Branch) (27)	No (140) Ward
26	BEMS (Branch) Ywar Thar Gyi	Ywar Thar Gyi Yard
27	Pre School (1-6)	South Dagon Township
28	BEPS (1-12)	South Dagon Township
29	South Dagon KG School	No (18) Ward

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

4.5.5.3. Health Status

The diseases of high prevalence reported in 2013 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2014 of South Dagon Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 4-13.

Table 4-13 Common Diseases in the South Dagon Township

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

Table 4-14 Lists of hospital in the Bago Township

Hospital Name	Beds/Services	Responsible
Mental Health Hospital (Yangon)	Above 25 Beds	Government
General Hospital in South Dagon Township	16 Beds	Government

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

4.6. CULTURAL AND VISUAL COMPONENTS

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

5. ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

5.1. METHODOLOGY FOR THE ASSESSMENTS

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

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

Table 5-1 Impact assessment parameters and its scale

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

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

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

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

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

5.2. IMPACT IDENTIFICATION

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

5.2.1. Positive Impact

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

5.2.2. Negative Impact

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

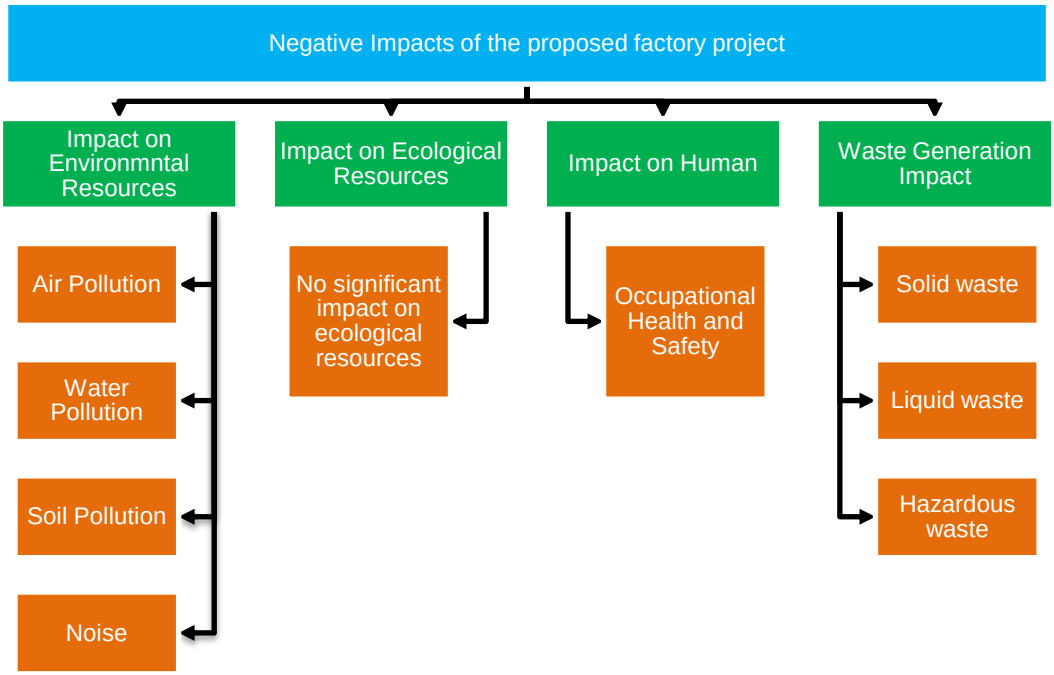


Figure 5-1 Potential negative impact affect from proposed factory project

5.3. POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION & DECOMMISSIONING PHASE

Construction phase: The project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located in industrial zone and already finished the construction, the potential impact on environment is not assessed and affected must be caused the construction period.

Decommissioning phase: The proposed duration of the investment shall be initial 30 years and extendable for 10 years in two times. The term of the Lease shall be initial 30 years and extendable for 10 years in two times commencing from the date of signing of the Lease Agreement between Local owner and Jia He Li Company Limited for proposed project site for 1.04 acres (4208.73 sqm) of land. 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

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.

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

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

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air	• Dust and GHGs emission from vehicles used for transporting raw materials and final products • Emission of smoke from emergency diesel generator and vehicle movement	3	4	1	3	24	Low	• Air pollution in atmosphere. • Inhaling them can increase the chance you'll have health problems. • People with heart or lung disease, older adults and children are at greater risk from air pollution.	• To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. • Ensuring vehicles, compressor and generator are well maintained.
Soil	• Engine oil leaks, spills at diesel storage and during fuel refueling.	1	4	1	1	6	Very Low (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	3	4	1	3	24	Low	• The factory not operate heavy machinery • the major noise source of CMP basic operation activities	➢ Should be build individual room like as generator room, ➢ Low noise equipment should be used

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								such as cutting, finishing and packaging by respective machines. • There is insignificant impact on surrounding environment.	➢ Should be provide the noise covering equipment or personal protective equipment (PPE)
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the shoe factory	1	4	1	1	6	Very Low Insignificant	• Not Significant Impact on Ecological Resources	• No Mitigation Measure
Impact on Human									
Fire	• Poor electrical installations • Waste disposed area raw materials and chemical storage	3	4	2	4	36	Moderate	• Serious damage to property and even injury and death	• To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. • Regular inspection for existing 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.

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									• The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupational Safety	• Accidental cases cause by operating machines. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate	• Accident in workplace (physical injuries or even death) can occur during operation.	• First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. • According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. • Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. • To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.
Health	• Influx of people	3	4	2	4	36	Moderate	• Overcrowded of population may be a	• Provide the hand-wash basin, hand sanitizer and face masks

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								fuel in infection of corona virus disease • Change in demographic structure, new diseases form immigrant workers • To cause a range of health problems ranging from stress, poor concentration, productivity losses in the workplace, and communication difficulties and fatigue from lack of sleep, to more serious issues	and then specify the social distancing. • Manage the drainage systems of the factory to prevent health risk of the workers.
Waste Generation Impact									
Solid Waste	• Residual pieces of rubber sole from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	3	4	1	3	24	Low	• Surrounding environmental pollution and soil contamination	• Provides separate garbage bins at each building. • All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area • Final wastes should be disposed by using YCDC's service.

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

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

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	S			
Air	Demolish of buildings and related materials Transportation of demolished materials	3	1	1	3	15	Low	Emissions of particulate matters and carbon dioxide gases into the air	Spray water twice a day Cover mesh trap around the decommission area Install shading net about 2 meters above temporary fence of decommission area Carry broken material with cover by canvas.
Water pollution	Sewage form decommissioning workers Demolition machinery equipment	3	1	1	3	15	Low	Contamination of surface water and ground water	Systematically demolish the septic tanks.
Soil	Demolish of buildings and related materials Transportation of demolished materials	3	1	1	3	15	Low	Contamination of soil	Manage the spillage of oil and diesel and sewage.
Noise and Vibration	Decommission activities Transportation of demolished materials	3	1	1	4	20	Low	Noise pollution to the surrounding	Carry out the activities during day time. Maintain the machines and vehicles to reduce noise pollution. Provide the ear plugs to the workers.
Waste disposal	Demolished debris such as bricks, concrete materials	2	1	1	3	12	Very Low	Dumping to the surrounding environment	Recyclable materials and dispose to the define areas.
Hazardous waste	Used lubricants from decommissioning vehicles and machines	3	1	1	3	15	Low	Spillage of lubricant	Manage the disposal way of hazardous waste.
Occupational Health and Safety	Decommissioning activities	3	1	2	3	18	Low	Injuries and accidents	Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	S			
(Accidents, Injuries)	Transportation of demolished materials								appropriate warning signs, marking and safety signs and installation of the lost time injury notice board. Clean up excessive waste debris and liquid spills regularly. Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.

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 human (Fire, occupational safety and health). 4 low significant impacts on environmental resources and waste (air, noise and vibration, solid waste and hazardous waste). 3 very low significant impact on environmental resources, ecological, human and waste generation (soil, flor and fauna, liquid waste). In decommissioning phase 1 very low significant impact on environment and human (waste disposal). 6 low significant impacts on environmental and human (air, water pollution, soil, noise and vibration, hazardous waste 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.

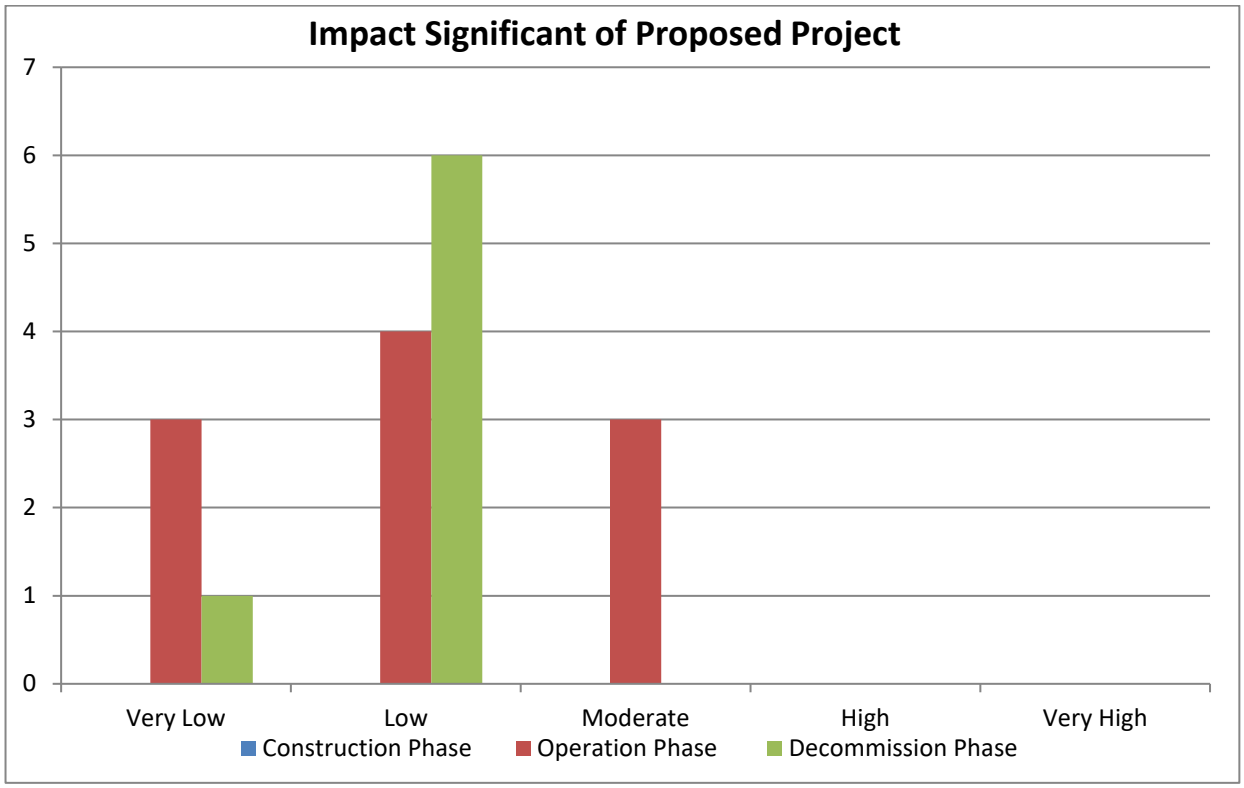


Figure 5-2 Comparison of Impact Significant of Proposed Project

6. ENVIRONMENTAL MANAGEMENT ACTION

The EMP for Jia He Li Company Limited has been prepared to added potential issues based upon discussion with factory management, workers, local community view, stakeholder consultation and the site visit. The EMP is additional to and compliments the factory's safety management system. The following environmental impact issues which require environmental management plans based upon the potential impacts activities of Jia He Li Company Limited are as follows:

6.1. AIR POLLUTION/ DUST MANAGEMENT PLAN

Objective	➢ To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement. ➢ To comply with relevant government rules	
Relevant Government Law and Rule	➢ National Environmental Quality (Emission) Guideline 2015, ➢ Motor Vehicles Act (2015),	
Time Frame	➢ Entire life spans of proposed project operation	
Management Action	➢ Must be plant around the proposed project to reduce carbon emission ➢ Should be prohibited burning of waste material at the proposed project site ➢ Must be control air pollution, the vehicles, generators and machineries have to check and maintain regularly. ➢ The factory should use chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment. ➢ Must be ensuring vehicles, compressor and generator are well maintained.	
Monitoring and Reporting	Frequency	Biannually
	Monitoring Point	Indoor and Outdoor of proposed project
	Parameters	$PM_{2.5}$, PM_{10}, SO_2, NO_2, O_3, CO
Estimated Cost	500,000 Kyats per year	
Responsible Person	Management of the proposed factory; ▪ Head of maintenance: Total implementation of above of air pollution management plan ▪ Production manager: Air quality in the production area is good enough ▪ Manager: To hire organization/ independent third-party testing air quality	

	▪ HSE officer: Monitor the hygiene of ambient air quality in surrounding of the factory

6.2. NOISE MANAGEMENT PLAN

Objective	➢ To maintain low noise exposures, such that human health and well-being are protected. The specific objectives of noise management are to develop criteria for the maximum safe noise exposure levels, and to promote noise assessment and control as part of environmental health programmes.	
Relevant Government Law and Rule	➢ National Environmental Quality (Emission) Guideline 2015	
Time Frame	➢ Throughout the project life	
Management Action	➢ Building fence to protect noise coming from generator room or Cover generator room and ensure satisfactory maintenance of relevant equipment ➢ Impose speed limit to track and vehicles at the transportation route. ➢ Provide sufficient personal protective equipment (PPE) at the work place ➢ All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.	
Monitoring and Reporting	Frequency	Biannually
	Monitoring Point	Two points in operation area (especially pressing and moulding)
	Parameters	Sound Decibel
Estimated Cost	300,000 Kyats per year	
Responsible Person	HSE officer or Environmental Management Team of Jia He Li Company Limited.	

6.3. FIRE MANAGEMENT PLAN

Objective	➢ To ensure that fire control practices are implemented on site to minimise the risk of fire from site operations and bush fires
Relevant Government Law and Rule	➢ Myanmar Fire Brigade Law 2015
Time Frame	➢ Entire life spans of proposed project operation

Management Action	➢ Must be provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. ➢ Must be indicated the emergency exit and assembly point in public area. ➢ Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire 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.
Monitoring and Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguish, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)
Estimated Cost	300,000 Kyats per month
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Jia He Li Company Limited.

6.4. OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PLAN

Objective	➢ To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.
Relevant Government Law and Rule	➢ Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. ➢ According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. ➢ Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department. ➢ To prevent electric shock hazards, electrical maintenance staffs (handyman) is to be assigned to do regular inspections and take preventive measures. ➢ Manage the drainage systems of the factory to prevent health risk of the workers.

	➢ The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.
Monitoring and Reporting	➢ Weekly check fire extinguishers and water hydrant in position ➢ Daily inspect that all fire exist are open ➢ Servicing fire extinguisher and records accidents
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Jia He Li Company Limited.

6.5. SOLID WASTE MANAGEMENT PLAN

Objective	➢ To assess the activities involved for the proposed and determine the type, nature and estimated volumes of waste to be generated ➢ To identify any potential environmental impacts from the generation of waste at the site
Relevant Government Law and Rule	➢ National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ Must be provides separate garbage bins at each building. ➢ All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area ➢ Final wastes should be disposed by using Yangon Region municipal service.
Monitoring and Reporting	➢ Daily waste has to be collected and handover to YCDC municipal waste collector ➢ The inventory record of waste disposal will be maintained as proof for proper management as designed
Estimated Cost	50,000 Kyats per month
Responsible Person	Manager (HR) ▪ Responsible for overall site cleanliness and waste management ▪ Regular waste collection to minimize excessive waste storage

6.6. LIQUID WASTE MANAGEMENT PLAN (WASTEWATER)

Objective	➢ To implementation plan for the management of liquid waste from collection, through treatment and resource recovery, to residual disposal	
Relevant Government Law and Rule	➢ National Environmental Quality (Emission) Guidelines (2015), Underground Water Act	
Time Frame	➢ Entire life spans of proposed project	
Management Action	➢ Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.	
Monitoring and Reporting	Frequency	Biannually
	Parameters	pH, Turbidity, Conductivity, Iron, Sulpahte, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically	
Estimated Cost	500,000 Kyats per year	
Responsible Person	Manager: To hire organization/ Independent third-party testing wastewater quality HSE officer: Monitor the condition of factory's drainage and sewerage system	

6.7. HAZARDOUS WASTE MANAGEMENT PLAN

Objective	➢ To avoid environmental pollution and adverse health effects due to its improper handing & disposal.
Relevant Government Law and Rule	➢ Explosive Ordnance Disposal Law (2018)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ Proper inspection and maintenance in storage of hazardous waste. ➢ Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements. ➢ The empty chemical containers will hand over to suppliers for recycle or appropriate disposal ➢ The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty

Monitoring and Reporting	Any hazardous materials purchased should include a Material Safety Data Sheet (MSDS), otherwise known as a Safety Data Sheet (SDS) or Product Safety Data Sheet (PSDS). By mandate of the World Health Organization's Inter-Organization Programme for the Sound Management of Chemicals (IOMC), all manufacturers of hazardous materials are required to provide a MSDS so that end users can treat the materials properly.
Estimated Cost	500,000 Kyats per year
Responsible Person	HSE Manager or Environmental Management Team of Jia He Li Company Limited

6.8. ENERGY MANAGEMENT PLAN

Objectives:	➢ To improve energy efficiency, reduce cost, optimize capital investment, reduce environmental and greenhouse gas emissions, and conserve natural resources
Relevant government law and rule	➢ National Energy Management Committee (Myanmar Energy Master Plan 2015)
Time Frame	Once in a year throughout the factory life
Management Action	➢ Installation of timers and thermostats to control heating and cooling ➢ Energy saving light installed in different area of the factory for saving energy ➢ Used of energy saving devices must be installed ➢ Ensure that good housekeeping measures such as turning off equipment and lights when not in use
Monitoring & Reporting	Conduct annual energy efficiency of adult to find out the scope for energy saving
Estimated cost	Approximately 1,000,000 Kyats per year
Responsibility	Manager ➢ To arrange energy, audit technical personnel ➢ To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises

6.9. EMERGENCY RESPONSE AND DISASTER MANAGEMENT PLAN

Objectives:	➢ To reduce the harmful effects of all hazards, including disasters. The World Health Organization defines an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming a disaster, which is even harder to recover from.
Relevant government law and rule	➢ The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)
Time Frame	➢ Entire life spans of the factory operation
Management Action	➢ The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm

	➢ Provision and inspection of firefighting equipment and fire hydrant system in all the sections ➢ A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers ➢ Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training. ➢ Regular fire drill operation is conducted ➢ Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training ➢ Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals. ➢ A medical team has been prepared for primary treatment (First Aid) ➢ Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy. ➢ Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management ➢ Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety
Monitoring & Reporting	Weekly check fire extinguishers and water hydrant in position Daily inspect that all fire exist are open Servicing fire extinguisher and records accidents,
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	Manager and EHS officer ➢ Arrange firefighting training after every 3 months ➢ Responsible for fire control and response ➢ Monitoring daily danger warning and bans

6.10. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

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

Table 6-1 Environmental Monitoring Process

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Operation Phase					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	1,800,000 Kyats	Environmental Management Team's Myanmar

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
					Jia He Li Company Limited
Air quality	SO2, NO2, O_3, PM2.5, PM10	Biannually monitoring and reporting to ECD (first 3 years after operation)	Outdoor and Indoor of proposed project	500,000 Kyats	Environmental Management Team's Jia He Li Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Weekly	Recycle house and waste house and at the factory office	100,000 Kyats	Environmental Management Team's Jia He Li Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	300,000 Kyats	Environmental Management Team's Jia He Li Company Limited
Noise	dBA	Biannually monitoring and reporting to ECD	Operation Area	300,000 Kyats	Environmental Management Team's Jia He Li Company Limited
Water Quality	pH, Turbidity, Conductivity, Iron, Sulpahte, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	Biannually	At the factory	500,000 Kyats	Environmental Management Team's Jia He Li Company Limited
Light intensity	Illuminance	Monthly	At the production line (especially cutting and QC)	300,000 Kyats	Environmental Management Team's Jia He Li Company Limited
Decommissioning Phase					
Air quality	SO2, NO2, CO, O_3, PM2.5, PM10	One time during this phase	One point in the demolishing area	1,000,000 Kyats	Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	500,000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner

6.11. CAPACITY BUILDING AND TRAINING PLAN

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

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

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

6.11.1. Assignment of Responsibilities

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

6.11.2. Emergency Procedures

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

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

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

6.11.3. Training for Emergencies

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

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

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

6.11.4. Fire Prevention and Protection

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

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

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

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

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

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

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

6.11.5. Fire Protection Equipment

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

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

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

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

6.11.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

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

Fire Safety Plans should include the following information:

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

- Exits
- Primary evacuation routes
- Secondary evacuation routes
- Accessible egress routes
- Areas of refuge
- Exterior area for assisted rescue
- Manual fire alarm boxes
- Portable fire extinguishers
- Occupant-use hose stations
- Fire alarm annunciators and controls

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

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

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

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

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

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

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

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

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

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

6.11.7. Site Fire Control

1. Alert other people through fire alarm

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

6.11.8. Employee Information and Training

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

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

6.11.9. Health and Safety Training Plan for Worker

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

Table 6-3 Training Plan Used in Jia He Li Company Limited

No.	Health and Safety Guidelines	Training needs
1.	Management	General fire and emergency response plan, evacuation. All training materials and procedures covering health and safety for workers and employees
2.	Machine safety and noise management	Training for machine operations to all operators Use of PPE and proper use of any necessary protection Maintenance and Emergency procedures
3.	Environment safety	Understanding and training on recognition and maintenance not to affect environment
4.	Material storage and safety	Safety use of related devices and machines Use of necessary protections in working areas Sanitation work

No.	Health and Safety Guidelines	Training needs
5.	Fire Safety	Firefighting and evacuating training and practices Firefighting materials/ devices use
6.	First Aid	first aid / CPR/ AED training from providers (Outsource) training on hazard of pathogens

6.12. 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 Jia He Li Company Limited sole factory consists of three main sectors; Health, Education and Community Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

Jia He Li Company Limited will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as on job training to be more qualified, language (Chinese) training on weekends with experienced teachers and providing necessary healthcare such as medical checkups and giving proper medical knowledge about deceases and its prevention. Part of our CSR activity such as donations will also contribute to public school around our factory Table 6-4.

Table 6-4 CSR plan at Jia He Li Company Limited

No	Particle	Contribution	Estimated Cost (Kyats)
1	Public school	0.5%	2,500,000/year
2	Non-profit training	1	5,000,000/year
3	Employees healthcare	0.5%	2,500,000/year

6.12.1. 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.

6.12.2. Non-profit Training

We will contribute 1% of our net profit for the trainings of our Employees. Our trainings include job-related trainings, language trainings and safety trainings. The main objective of our trainings is that we want our sole 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.

6.12.3. Healthcare

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

6.13. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain though Grievance Committee, which includes the responsible persons of Jia He Li Company Limited representative from Industrial Zone(Dagon Myothit South) and representative from General Administration Department (Dagon Myothit (South) 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 (Figure 6-1) show steps of Grievance Redress Mechanism of Proposed Factory Project.

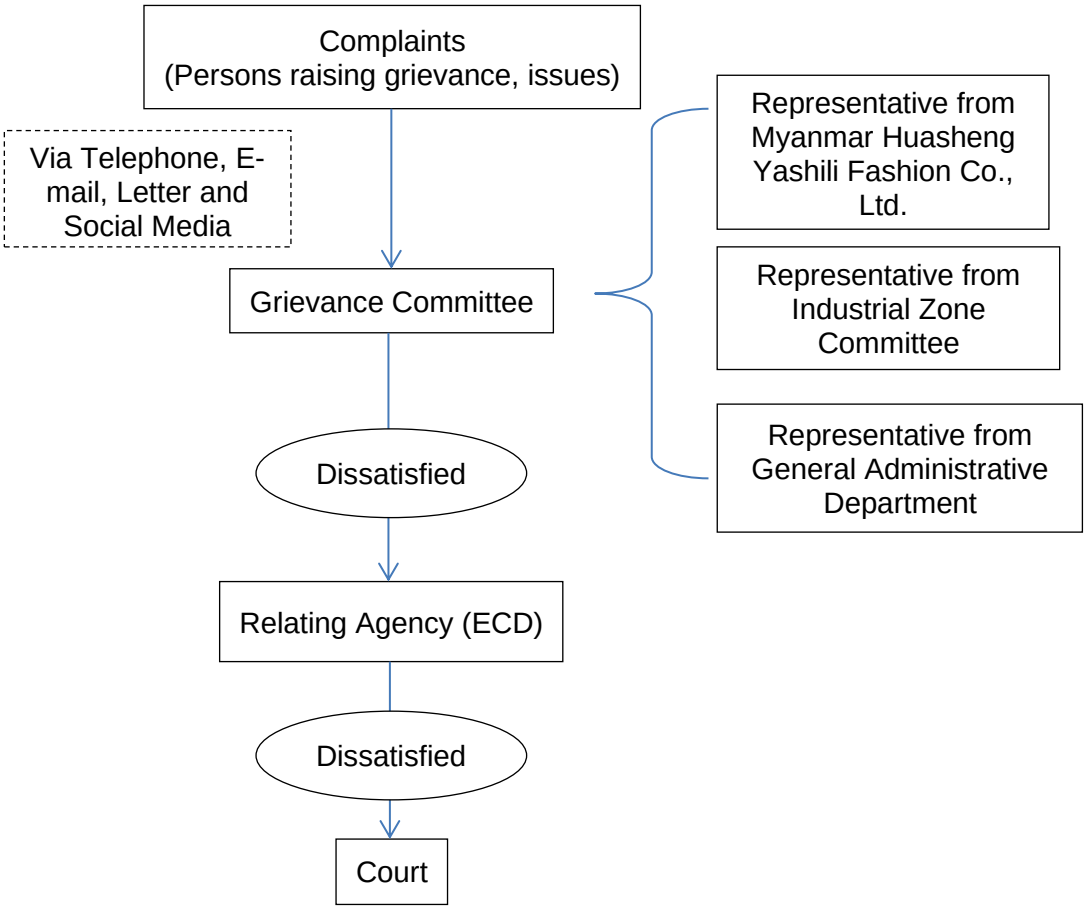


Figure 6-1 Grievance Redress Mechanism flow diagram

7. PUBLIC CONSULTATION DISCLOSURE

7.1. PUBLIC CONSULTATION PROCESS

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

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

1) Information the stakeholders about the Project, environmental and social issues related to project construction and operation, and mitigation measures to minimize environmental and social impacts;
2) Considering the views, concerns, and perceptions of stakeholders, communities and individuals that could be affected by the project or who otherwise have an interest in the project;
3) Participation and partnership where issues and needs are jointly discussed and assessed.

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

During the preparation of this report, the Covid-19 disease becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people to avoid close contact and to prevent spreading of disease. Thus, the project condition, the present environmental condition and the management plan are through the social media of Myanwei Environmental Solution Company Limited Facebook page https://drive.google.com/file/d/1HmwlvokukHRwgJKWeQt9n3BIEe8rwqw2/view?usp=drivesdk declared on 27th September, 2022 due to current situation. The suggestion, complain and comments from the public, organization and stakeholder are warmly welcome and accept via mailing, comment, telephoning and messengers.

Details of project information disclosure in the public consultation Power Point presentation **(Appendix D)** which is prepared in Myanmar language includes as follows;

- Objective of EMP
- Project Description
- Existing Environment and Monitoring
- Potential Impact and Mitigation measures
- Cooperative Social Responsibility (CSR)

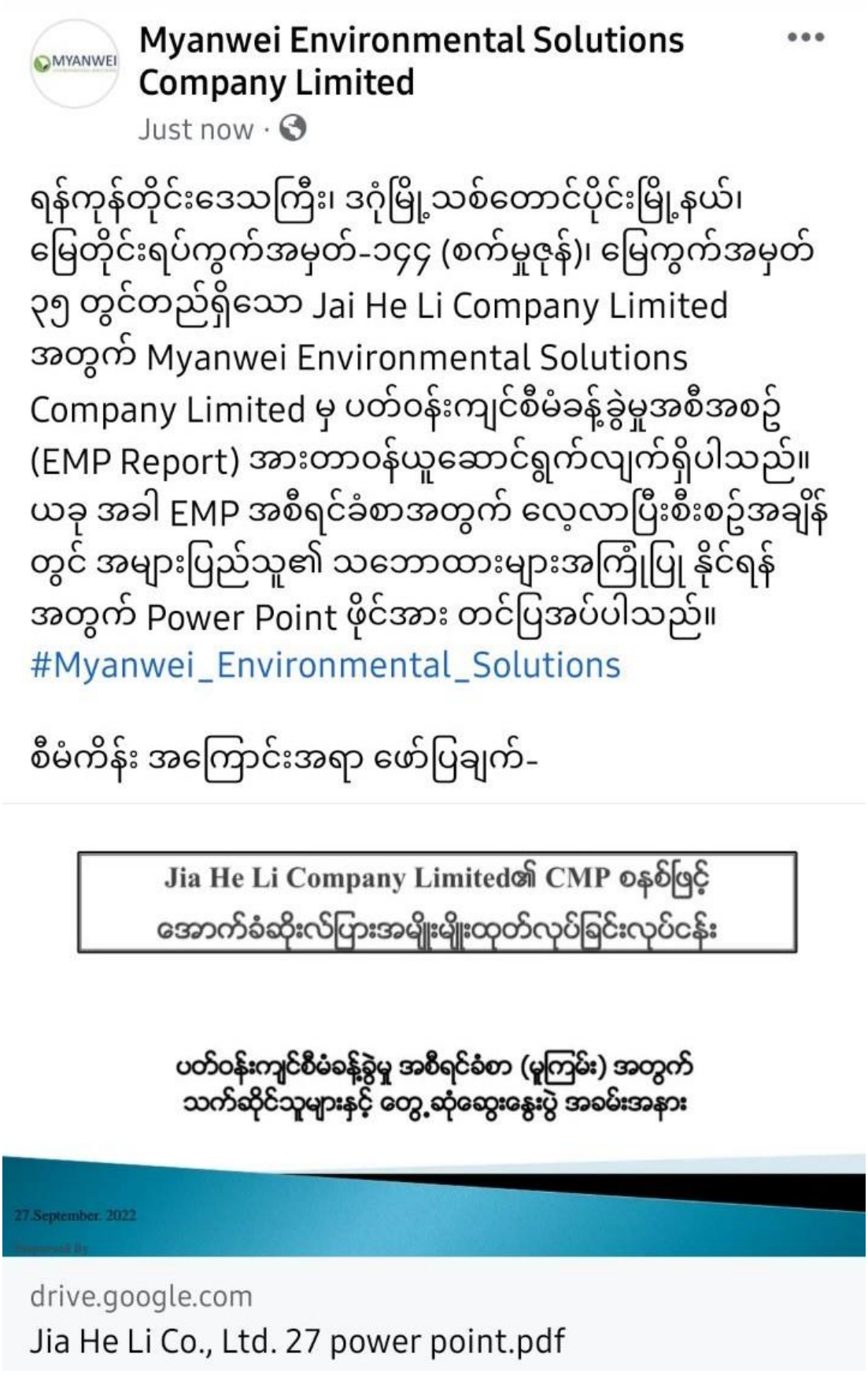


Figure 7-1 Announcement Post of Proposed Project at Social Media

8. CONCLUSION & RECOMMENTATION

8.1. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Jia He Li Company Limited factory is located at Plot No. 35, Myay Taing Blocak No.144, Industrial Zone, Dagon Myo Thit (South) Township, Yangon Region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An EMP has been carried out for the factory according to the requirement of the proponent as it has been made for sole 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 sole factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

8.2. RECOMMENTATION

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to 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 Project Proponent shall submit monitoring report to the Ministry every six (6) months, as provided in a schedule in the EMP. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

APPENDIX A
Company Document's Jia He Li Company Limited

Form (5-B)

THE REPUBLIC OF THE UNION OF MYANMAR

Yangon Region Investment Committee

ENDORSEMENT

Endorsement No. YGN-229/2019 Date 30 July 2019

This endorsement is issued by the Yangon Region Investment Committee accordance with Section 25 (d)of the Myanmar Investment Law-

(1) **Name of Investor** MR. ZHOU JIMING

(2) **Citizenship** CHINESE

(3) **Residence Address** HUANGCHUAN COUNTRY , HENAN PROVINCE, ZHANGJI, FANGANG VILLAGE, CAIYING GROUP, PEOPLE'S REPUBLIC OF CHINA.

(4) **Name and Address of Principal Organization** JIA HE LI COMPANY LIMITED PLOT NO(35), BLOCK NO.144(INDUSTRIAL ZONE), DAGON MYOTHIT(SOUTH) TOWNSHIP, YANGON REGION

(5) **Place of Incorporation** MYANMAR

(6) **Type of business** MANUFACTURING OF SOLES FOR CMP ENTERPRISES

(7) **Place(s) of investment Project** PLOT NO(35), BLOCK NO.144(INDUSTRIAL ZONE), DAGON MYOTHIT (SOUTH) TOWNSHIP, YANGON REGION

(8) **Amount of Foreign Capital** US$ 0.480 MILLION

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

(10) **Total Amount of Capital (Kyat)** EQUIVALENT IN KYAT OF US$ 0.480 MILLION

(11) **Construction/ Preparation Period** ONE YEAR

(12) **Validity of Endorsement** 30 YEARS

(13) **Form of Investment** WHOLLY FOREIGN OWNED

(14) **Name of Company Incorporated in Myanmar** JIA HE LI COMPANY LIMITED

YRIC 2292019

30/7/2019

(Phyo Min Thein)
Chairman

YANGON REGION YRIC INVESTMENT COMMITTEE

ပုံစံ (၅-ခ)

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ

အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ-၂၂၉ /၂၀၁၉ ၂၀၁၉ ခုနှစ် ဇူလိုင်လ ၃၀ ရက်

ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ဥပဒေ ပုဒ်မ-၂၅ (ဃ) အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

(၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR. ZHOU JIMING

(၂) နိုင်ငံသား CHINESE

(၃) နေရပ်လိပ်စာ HUANGCHUAN COUNTRY , HENAN PROVINCE, ZHANGJI, FANGANG VILLAGE, CAIYING GROUP, PEOPLE'S REPUBLIC OF CHINA

(၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ JIA HE LI COMPANY LIMITED မြေကွက် အမှတ်(၃၅) ၊ မြေတိုင်းရပ်ကွက် အမှတ် - ၁၄၄(စက်မှုဇုန်)၊ ဒဂုံမြို့သစ် တောင်ပိုင်း မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီး

(၅) ဖွဲ့စည်းရာအရပ် မြန်မာ

(၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား MANUFACTURING OF SOLES FOR CMP ENTERPRISES

(၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက် အမှတ်(၃၅) ၊ မြေတိုင်းရပ်ကွက် အမှတ် - ၁၄၄(စက်မှုဇုန်)၊ ဒဂုံမြို့သစ် တောင်ပိုင်း မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီး

(၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၀.၄၈၀ သန်း

(၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့် နေ့မှ ၁ နှစ် အတွင်း

(၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၀.၄၈၀ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁ နှစ်

(၁၂) အတည်ပြုမိန့်သက်တမ်း ၃၀ နှစ်

(၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု

(၁၄) မြန်မာနိုင်ငံတွင်ဖွဲ့စည်းမည့်ကုမ္ပဏီအမည် JIA HE LI COMPANY LIMITED

YRIC 2292019

(ဖြိုးမင်းသိန်း)

ဥက္ကဋ္ဌ

Confidential

THE REPUBLIC OF THE UNION OF MYANMAR

YANGON REGION INVESTMENT COMMITEE

Plot No. 49, Seinlae May Street,

Kabar Aye Pagoda Road Yankin Township, Yangon

Tel : 01 – 658263 Our ref : YRIC –1 /E–229/2019( )

Fax: 01 – 658264 Date : July 2019

Subject: Decision of the Yangon Region Investment Committee on the Endorsement for manufacturing of Soles for CMP enterprises under the name of Jia He Li Company Limited

Reference: Jia He Li Company Limited's Letter dated 24/7/2019

1. The Yangon Region Investment Committee, at its (12/2019) meeting held on 9/7/2019, approved the Endorsement for investment for manufacturing of Soles for CMP enterprises under the name of Jia He Li Company Limited submitted by Mr. Zhou Jiming (90%) ,Ms. Peng Wei (5%) and Mr. Xue Zhenjie (5%) from the People's Republic of China as a wholly foreign owned investment in accordance with the Myanmar Investment Law and Rules.

2. The terms and conditions of the Endorsement are as follows:

(a) The term of the Endorsed project shall be initially thirty (30) years and extendable for two times for ten(10) years commencing from the date of the issuance of the Endorsement by the Yangon Region Investment Committee.

(b) The term of the land and building lease Agreement shall be initially ten (10) year and extendable for two times for five(5) years commencing from the date of the agreement between U Maung Maung Hlaing (Lessor) and Jia He Li Company Limited (Lessee).

(c) The annual rent for the land and buildings shall be US$ 12303 (United States Dollar twelve thousand, three hundred and three only) calculated at the rate of US$ 2.8 per square meter per year

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THE REPUBLIC OF THE UNION OF MYANMAR

YANGON REGION INVESTMENT COMMITEE

Plot No. 49, Seinlae May Street,

Kabar Aye Pagoda Road Yankin Township, Yangon

Tel : 01 – 658263 Our ref : YRIC –1 /E–229/2019( )

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(c) The annual rent for the land and buildings shall be US$ 12303 (United States Dollar twelve thousand, three hundred and three only) calculated at the rate of US$ 2.8 per square meter per year

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of the business to any person during the investment period in accordance with Section 72 of Myanmar Investment Law and Rule 191 of the Myanmar Investment Rules.

(j) Jia He Li Company Limited shall submit an annual report in the prescribed form to the Myanmar Investment Commission within three (3) months of the end of the financial year in accordance with Rule 196 of the Myanmar Investment Rules and shall disclose a summary of the report on its website or the Myanmar Investment Commission's website.

(k) Jia He Li Company Limited must, during the operation period under the Endorsement of the Myanmar Investment Commission, submit its operating report quarterly in the prescribed form in accordance with Rule 197 of Myanmar Investment Rules.

3. Jia He Li Company Limited shall carry out in accordance with the laws, regulations and stipulations of relevant Union Ministries, governmental department and governmental organizations the obtaining of any license, permit or registration as per Section 65(d) of the Myanmar Investment Law.

4. Jia He Li Company Limited shall submit five (5) copies of all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and land Lease Agreement to the Yangon Region Investment Committee.

30/7/2019

(Phyo Min Thein)

Chairman

Jia He Li Company Limited

cc: 1. The Office of the Union Government
2. Ministry of the Government of the Republic of the Union of Myanmar
3. Ministry of Home Affairs
4. Office of the Myanmar Investment Commission

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5. Ministry of Natural Resources and Environmental Conservation
6. Ministry of Labour, Immigration and Population
7. Ministry of Industry
8. Ministry of Commerce
9. Ministry of Planning and Finance
10. Ministry of Investment and Foreign Economic Relations
11. Central Bank of Myanamr
12. Chairman, CMP Enterprises Supervision Committee
13. Director General, Department of Environmental Conservation
14. Director General, Directorate of Labour
15. Director General, Department of Immigration
16. Director General, Directorate of Industrial Supervision and Inspection
17. Director General, Department of Trade
18. Director General, National Archives Department
19. Director General, Customs Department
20. Director General, Internal Revenue Department
21. Director General, Directorate of Investment and Company Administration
22. Monitoring and Supervision Division , Directorate of Investment and Company Administration

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APPENDIX B
Transitional Consultant Registration Certificate

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10048 Date

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

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

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

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်အား (၀၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁-၃-၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်သက်တမ်း တိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

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

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Geology and Soil

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

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

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

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

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

THE REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 00068 Date 24 MAY 2019

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

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

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

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန

Director General

Environmental Conservation Department

Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted

(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

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

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန

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

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

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

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား(၁-၁-၂၀၂၂)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၂)
ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
25-3-2022
For Director General
(Soe Naing, Director)
Environmental Conservation Department

APPENDIX C
Mornitoring Result

Light Result

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

Project Name:	Jia He Li Company Limited
Project Location:	Plot No (35), Myay Taing block No.144, Industrial Zone, Dagon Myothit (South) Township, Yangon Region.
Sampling Date:	August 25,2022
Sampling Time:	10:00 am to 5:00 pm
Sampling Condition:	
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
Uni-T (Luminometer)	UT380 Series	100 times/second	16°53'27.06"N 96°14'59.41"E

No.	Measure area	Unit	Result	Standard	Remark
1	Compound Mixing Area	Lux	1718	1000	Above
2	Moulding Area	Lux	1244	600	Above
3	Moulding Area 1	Lux	293	600	Below

IEESNA Lighting Handbook

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

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

Noise result

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

Project Name:	Jia He Li Company Limited
Project Location:	Plot No (35), Myay Taing block No.114, Industrial Zone, Dagon Myothit (South) Township, Yangon Region.
Sampling Date:	August 25, 2022
Sampling Time:	10:00 am To 5:00 pm
Sampling Condition:	
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

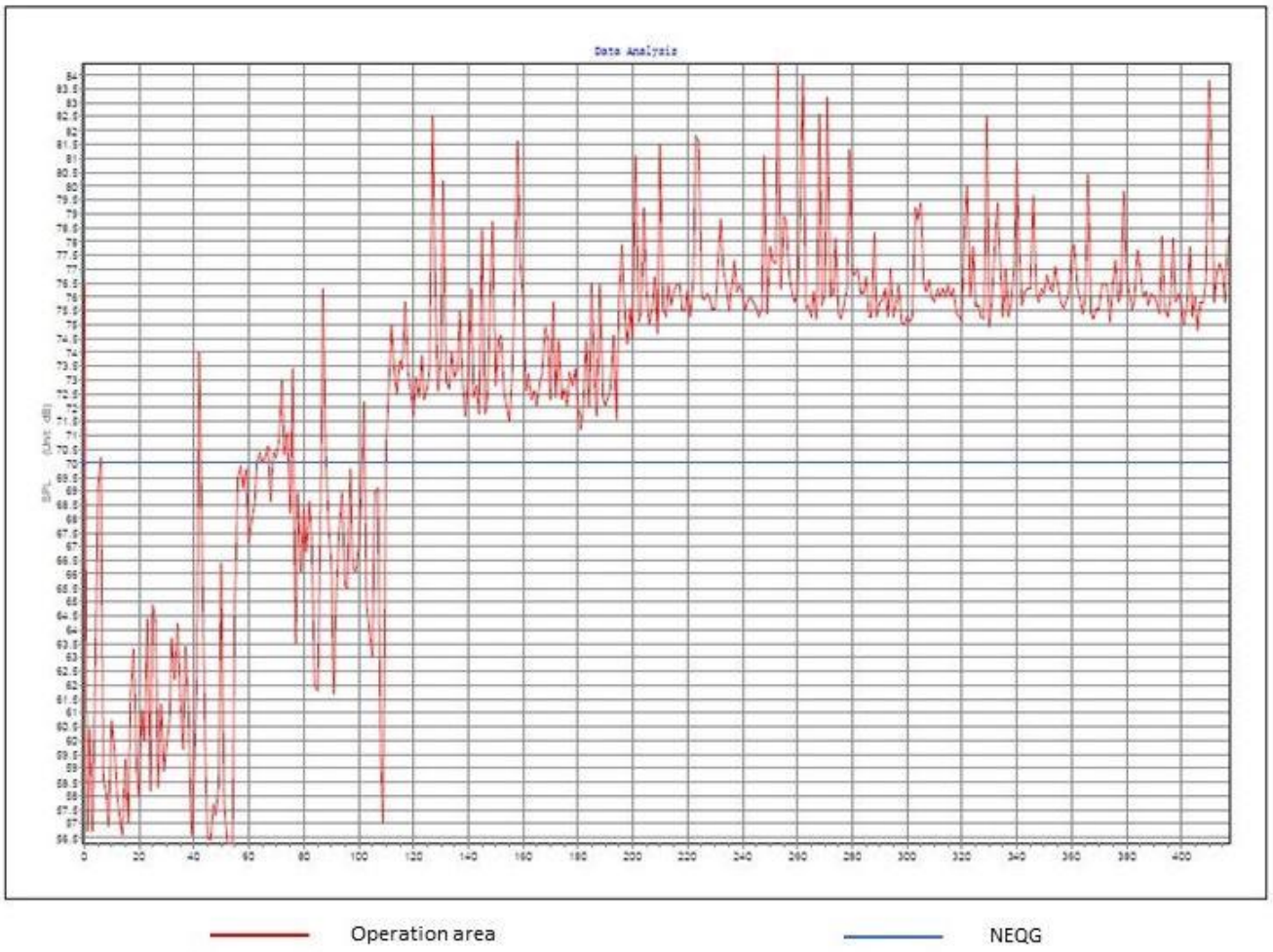
Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°53'27.06"N 96°14'59.41"E

No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	72.79	70 dBA	-

National Environmental Quality (Emission) Guideline

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

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.


Data Analysis
Operation area
NEQG

Air Quality results

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

Project Name:	Jia He Li Company Limited
Project Location:	Plot No (35), Myay Taing block No.144, Industrial Zone, Dagon Myothit (South) Township, Yangon Region.
Sampling Date:	August 25, 2022
Sampling Time:	10:00 am to 5:00 pm
Sampling Condition:	
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited

Instrument	Type	Sampling Rate	Location
OCEANUS-AQM-09	PM, O_3, NO_2, SO_2, CO Detector	0-999.9 ($\mu g/m^3$)	Operation Area

National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10[a]	1-year 24-hour	20 50	($\mu g/m^3$)
PM 2.5[a]	1-year 24-hour	10 25	($\mu g/m^3$)
O_3[a]	8-hour	100	($\mu g/m^3$)
NO_2[a]	1-year 1-hour	40 200	($\mu g/m^3$)
SO_2[a]	24-hour 10-min	20 500	($\mu g/m^3$)

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

Monitoring Result

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM_{10}	15.74	50	$\mu g/m^3$	NEQG	7 hours
$PM_{2.5}$	9.78	25	$\mu g/m^3$	NEQG	7 hours
SO_2	1.98	20	$\mu g/m^3$	NEQG	7 hours

NO_2	13.41	200	$\mu g/m^3$	NEQG	7 hours
O_3	350	100	$\mu g/m^3$	NEQG	7 hours
CO	0.49	-	ppm	-	7 hours
VOC	0.01	-	ppm		7 hours
Air Pressure	1005.33	-	hPa		7 hours
Wind Speed	0.63	-	m/s		7 hours
Wind Direction	105.97	-	°		7 hours
TSP	19.8	-	$\mu g/m^3$		7 hours
CO2	1	-	ppm		7 hours

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

APPENDIX D
Public Disclose Power Point Presentation

9/27/2022

Jia He Li Company Limitedတို့၏ CMP စနစ်ဖြင့်
အောက်ခံဆိုးလ်ပြားအမျိုးမျိုးထုတ်လုပ်ခြင်းလုပ်ငန်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာ (မူကြမ်း) အတွက်
သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနား

27 September 2022

Prepared By
Myanwei Environmental solutions Co., Ltd.

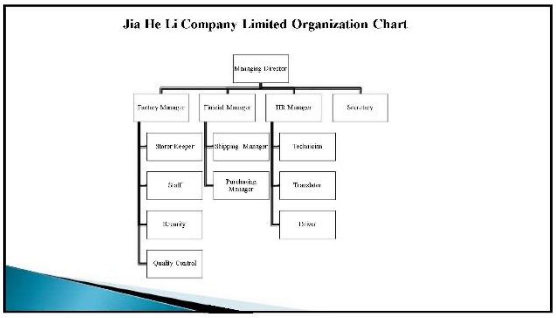
အစည်းအဝေး အကြောင်းအရာ

၁။ Jia He Li Company Limited အား မိတ်ဆက်ခြင်း
၂။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအား မိတ်ဆက်ခြင်း
၃။ သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့်
ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ
၄။ ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့်
ဖြေလျှော့ရေးနည်းလမ်းများ
၅။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် နှင့်
၆။ စက်ရုံ၏ဆောင်ရွက်ချက်များ

Jia He Li Company Limited

Jia He Li Company Limited

1

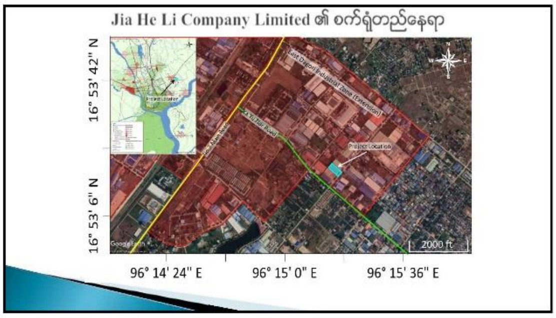


Jia He Li Company Limited

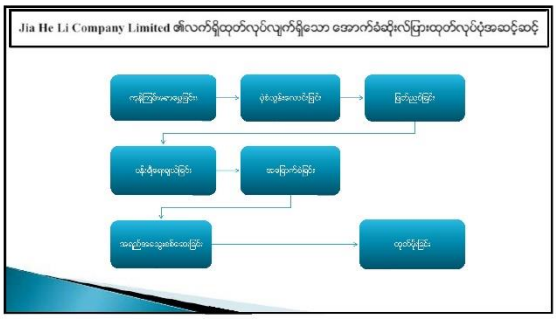
လုပ်ငန်းအမျိုးအစား	ဖိနပ်အောက်ခံဆိုးလ်ပြားများအား ပြည်တွင်းရှိ CMP စနစ်ဖြင့် ဖိနပ်ထုတ်လုပ်သည့်လုပ်ငန်းများသို့ ထုတ်လုပ်ရောင်းချမည့်လုပ်ငန်း
ခွင့်ပြုမိန့်အမှတ်	အတည်ပြုမိန့်အမှတ် (ရကတ -၂၂၉/၂၀၁၉)၂၀၁၉ ခုနှစ်၊ ဇူလိုင်လ ၃၀ ရက်။
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
မြေဧရိယာ	မြေဧရိယာစုစုပေါင်း = ၁.၀၄ဧက
အဆောက်အအုံ	တစ်ထပ်အဆောက်အအုံတစ်လုံး (၁၁၈x၂၃၆ စတုရန်းပေ)
ရင်းနှီးမြှုပ်နှံသည့်ကာလ	၃၀ နှစ်
စက်ရုံလိပ်စာ	မြေကွက်အမှတ် (၃၅) မြေတိုင်းရပ်ကွက်အမှတ်-(၁၄၄)၊ ဒဂုံမြို့သစ်(တောင်ပိုင်း)မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

လုပ်ငန်းလည်ပတ်ရန်အခြေခံလိုအပ်ချက်များ

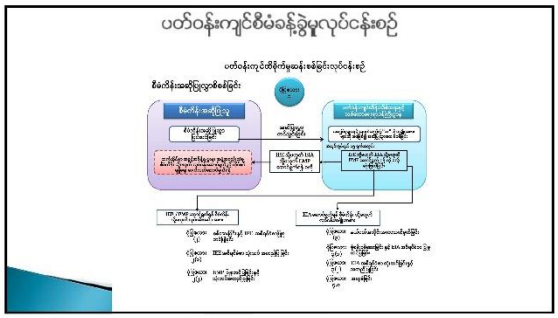
ရေအသုံးပြုမှုအခြေအနေ	
ရေအရင်းအမြစ်	မြေအောက်အဝီစိတွင်းရေ (၁ တွင်း)
လက်ရှိလူဦးရေ	၄၀ ဦး (ဒေသခံအလုပ်သမား) + ၅ဦး (နိုင်ငံခြားသားဒါရိုက်တာ)= စုစုပေါင်း ၄၅ဦး
အဓိကကုန်ကြမ်း	TR ၊TPR ၊ ABS ၊ PU ၊TPU၊ RB ၊IP ၊PP နှင့်အခြားဆက်စပ်ပစ္စည်းများ။
နှစ်စဉ်ထွက်ကုန်ပစ္စည်းပမာဏ	နှစ်စဉ် ပျမ်းမျှအောက်ခံဆိုးလ်အရေအတွက် ပထမနှစ်မှ၆နှစ်အတွင်း (၆,၀၅၀,၀၀၀) မှ (၈,၈၅၇,၈၀၅) အထိ။

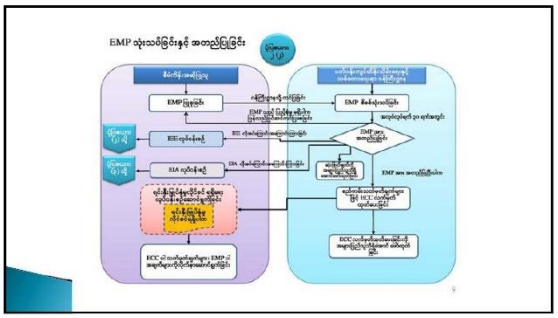


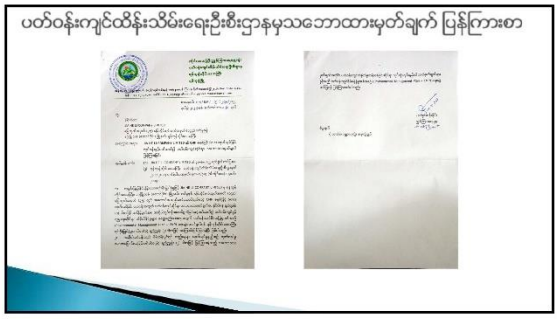
9/27/2022



ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား မိတ်ဆက်ခြင်း


ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုလုပ်ငန်းစဉ်


EMP သုံးသပ်ခြင်းနှင့် အတည်ပြုခြင်း


ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှသဘောထားမှတ်ချက် ပြန်ကြားစာ


ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီအတည်ပြုမိန့်

သက်ရောက်မှုဆန်းစစ်ခြင်းရလဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ

စိမ်ကိန်းပတ်ဝန်းကျင်အနေအထား

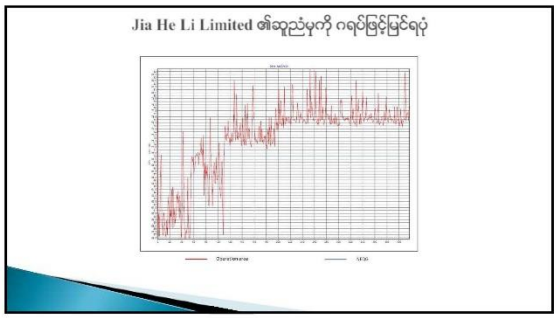
စဉ်	အကြောင်းအရာ	ဖော်ပြချက်
၁။	ဂျိုကြိန်တ်အမှတ်	မြောက်လတ္တီကျူ ၁၆°၅၃'၃၁.၉၂"နှင့် အရှေ့လောင်ဂျီကျူ ၉၆° ၁၅' ၃၀.၉၀"
၂။	ရာသီဥတုအခြေအနေ	ဒဂုံမြို့သစ်(တောင်ပိုင်း)မြို့နယ် နှစ်စဉ်ပျမ်းမျှအမြင့်ဆုံးအပူချိန် ၄၂°C၊ အနိမ့်ဆုံးအေးအချိန် ၁၅°C စက်မှုဇုန်း မိုးရေချိန်လက်မ ၁၀၈ နှင့် ၁၆၀ လက်မကြားတွင်ရှိလည်း။
၃။	စက်ရုံဧရိယာတွင်ပြေးသုံးရမှု	စက်ရုံလုပ်ငန်းနှင့်သက်ဆိုင်သောမြေအသုံးချုပ်ဝ (စက်မှုဇုန်)
၄။	လမ်းပန်းဆက်သွယ်ရေး	အမှတ်(၂) လမ်းမကြီးနှင့် ကရင်ကာလမ်း
၅။	အနီးဆုံးရေအရင်းအမြစ်	ပဲခူးမြစ်။
၆။	သစ်တောဧရိယာ	တပ်ပြရန်ဂရိပါ
၇။	တန်ဆိတ်ကာကွယ်ထားသော ဧရိယာ	မရှိ
၈။	တိုင်းတာမှုရလဒ်	❑ ဆူညံသံ တိုင်းတာခြင်း ❑ လေထုအရည်အသွေး တိုင်းတာခြင်း ❑ အပူချိန် နှင့် စိုထိုင်းမှု အရည်အသွေး တိုင်းတာခြင်း

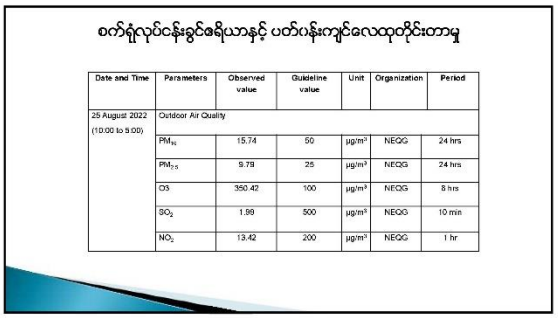
ဆူညံသံတိုင်းတာမှုရလဒ်

Date/ Time	Measurement Area	GPS value	Measurement Result	NEQ Guildline
25 August 2022 (10:00 to 5:00 pm)	Production area	16°53'27.06"N 96°14'59.41"E	72.79 dBA	70 dBA

အထက်ဖော်ပြပါ ဆူညံသံတိုင်းတာမှုရလဒ်များအရ
Jia He Li Company Limited၏ ဆူညံသံများမှာ National Emission Quality Guideline
၏သက်မှတ်အတိုင်းအတာအထက် အနည်းငယ်ခေတျက်လွန်နေသည်ကို တိုင်းတာရရှိပါသည်။

စက်ရုံတွင်းဆူညံသံတိုင်းတာမှုဆောင်ရွက်မှုပုံ


Jia He Li Limited ၏ဆူညံမှုကို ဂရပ်ဖြင့်ပြင်ရပုံ

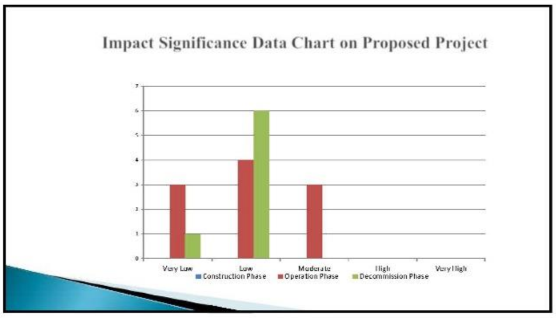

စက်ရုံလုပ်ငန်းခွင်ဇရိယာနှင့် ပတ်ပန်းကျင်လေထုတိုင်းတာမှု
Date and Time | Parameters | Observed value | Guideline value | Unit | Organization | Period
25 August 2022 (10:00 to 9:00) | Outdoor Air Quality
PM10 | 15.74 | 50 | µg/m³ | NEQG | 24 hrs
PM2.5 | 9.79 | 25 | µg/m³ | NEQG | 24 hrs
O3 | 350.42 | 100 | µg/m³ | NEQG | 8 hrs
SO2 | 1.99 | 500 | µg/m³ | NEQG | 10 min
NO2 | 13.42 | 200 | µg/m³ | NEQG | 1 hr

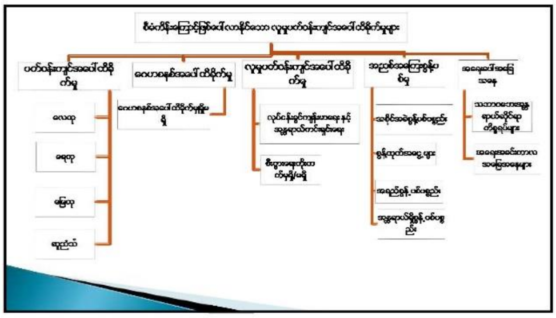

စက်ရုံဝင်းအတွင်းလေထုညစ်ညမ်းမှုတိုင်းတာခြင်းနှင့်
စက်ရုံပတ်ဝန်းကျင်အခြေအနေပြပုံ


လုပ်ငန်းခွင်အပူချိန်နှင့် စိုစွတ်မှုတိုင်းတာခြင်း
Jia He Li Limited ၏ လုပ်ငန်းခွင်ပျမ်းမျှစိုထိုင်းမှုမှာ ၈၇% နှင့် အပူချိန်တိုင်းတာမှုမှာ ၃၃.၅°C
ရှိပါသည်။

9/27/2022

ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျော့ရေးနည်းလမ်းများ





သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
ဆူညံသံ	▪ ကုန်ထုတ်လုပ်ခြင်းလုပ်ငန်းအဆင့်ဆင့်၊ မီးစက်နှင့် မော်တော် ယာဉ် အသုံးပြုမှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု	▪ အလုပ်ချိန်အတွင်း အကာအသတ်ဖြင့် စက်များ၊ လုပ်ငန်းများလည်ပတ်စေခြင်း။
မီးဘေးအန္တရာယ်	▪ ကုန်ကြမ်းသိုလှောင်မှု၊ စွန့်ပစ်မှု၊ လျှပ်စစ်နှင့်လောင်စာသုံးစွဲမှုပေါ့လျော့ခြင်း။	▪ ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း ▪ လျှပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း ▪ ထားရှိသင့်သည့် မီးဘေးကာကွယ်ပစ္စည်းများကို ကြိုတင်စီမံထားရှိပြင်ဆင်ထားခြင်း။
စွန့်ပစ်အမှိုက်	▪ ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ရာဘာအပိုင်းအစများ။	▪ စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပြီး သီးခြားစွန့်ပစ်စေခြင်း။
စွန့်ပစ်အရည်	▪ လူနေဆောင်၊ ကန်တင်းနှင့် သန့်စင်ခန်းတို့မှစွန့်ထုတ်ရေ	▪ စွန့်ပစ်အရည်များအားသီးခြားရေနုတ်မြောင်းဖြင့်စွန့်ပစ်ခြင်း။
အန္တရာယ်ရှိအမှိုက်	▪ စက်များမှဆီယိုစိမ့်မှုများ၊ အခြားမီးလောင်လွယ်သောအမှိုက်များနှင့် ဓါတုပစ္စည်းများ	▪ စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း။

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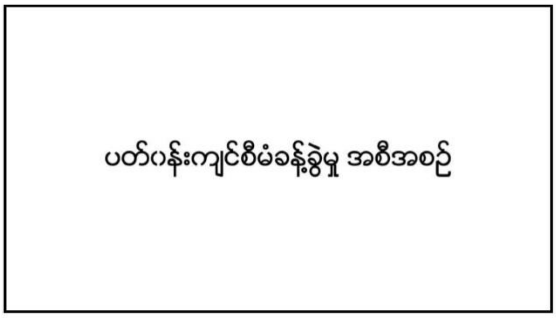
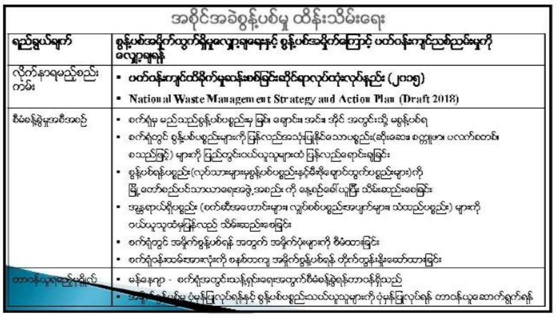


လေထုညစ်ညမ်းမှုလျှော့ချရေး အစီမံထားရှိခြင်း

ရည်ရွယ်ချက်	**စီမံကိန်းကြောင့် စက်ရုံမှ ထွက်သော ဓာတ်ငွေ့များနှင့် ယာဉ်များမှ ထွက်ရှိသော ဓာတ်ငွေ့များကြောင့် လေထုညစ်ညမ်းမှုကို လျှော့ချရန်**
လိုက်နာရမည့် လမ်းညွှန်ချက်များ	**အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)**
စီမံခန့်ခွဲမှု အစီအစဉ်	▪ စက်ရုံအတွင်းနှင့် စက်ရုံဝန်းကျင်တွင် သစ်ပင်ပန်းမန်စိုက်ပျိုးခြင်း ▪ စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းများအား မီးရှို့ဖျက်ဆီးခြင်း(Open Burning) ကို ရှောင်ရှားခြင်း ▪ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် နှာခေါင်းစည်း၊ ဦးထုပ်၊ လက်အိတ် စသည်တို့အားထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	▪ ပတ်ဝန်းကျင်စီမံအုပ်ချုပ်မှုအသင်း - လေထုညစ်ညမ်းမှုလျှော့ချရေးနည်းလမ်းများ ▪ ထုတ်လုပ်ရေးမန်နေဂျာ- လုပ်ငန်းခွင်လေထုသန့်ရှင်းရေး ▪ မန်နေဂျာ - ပတ်ဝန်းကျင်လေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

ဆူညံသံလျှော့ချရေး

ရည်ရွယ်ချက်	**စက်ရုံပတ်ဝန်းကျင်နှင့် စက်ရုံလုပ်ငန်းခွင်အတွင်းရှိ လုပ်သားများ ဆူညံမှုကြောင့်နားထိခိုက်ခြင်း၊ လုပ်ငန်းခွင်အနှောက်အယှက်မဖြစ်စေရန်။**
လိုက်နာရမည့် စည်းကမ်း	▪ **ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)** ▪ **အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)**
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ မီးစက်၊လေမှုတ်စက်တို့ကို ဆူညံသံထိန်းချုပ်နိုင်သော ခန်းဖွဲ့စည်းမှုပုံစံ တည်ဆောက်ထားခြင်း ▪ လုပ်ငန်းသုံးယာဉ်များကိုဆူညံသံလျှော့ချရန်သတ်မှတ်အရှိန်ထက်ကျော်လွန်မမောင်းစေခြင်း ▪ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများထောက်ပံ့ခြင်း၊ အလုပ်ချိန်အတွင်း လုပ်ငန်းများကို ဆောင်ရွက်စေခြင်းတို့ဖြင့် ဆူညံမှုကြာချိန်ကို လျော့ကျစေနိုင်သည်။
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	မန်နေဂျာ - ဆူညံသံတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်



အစိုင်အခဲစွန့်ပစ်မှု ထိန်းသိမ်းရေး

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

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စွန့်ပစ်အရည် ထိန်းသိမ်းရေး

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

စွမ်းအင်သုံးစွဲမှု ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	လုပ်ငန်းခွင်အတွင်း လျှပ်စစ်သုံးစွဲမှုကြောင့် အန္တရာယ်မရှိစေရန်
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ စနစ်တကျဖြင့် လျှပ်စစ်စွမ်းအင်သုံးစွဲခြင်း ▪ ကျွမ်းကျင်လျှပ်စစ်အင်ဂျင်နီယာအား ထိန်းချုပ်ကိုင်တွယ်စေခြင်း ▪ မီးစက်နှင့် လျှပ်စစ်ခါတ်အားပေးစနစ်ကို စနစ်တကျကိုင်တွယ်ခြင်း ▪ မီးကြိုးနှင့် အခြားအန္တရာယ်ဖြစ်စေနိုင်သည်များကို ပုံမှန်စစ်ဆေးခြင်း။
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ

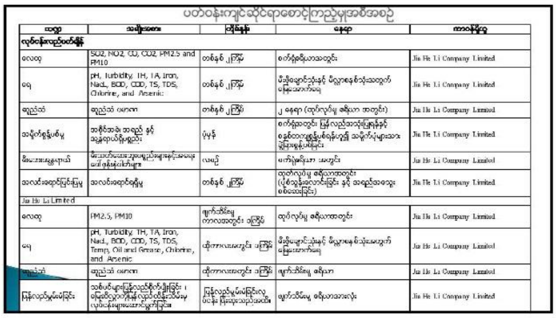
မြေအောက်ရေသုံးစွဲမှု

ရည်ရွယ်ချက်	ရေသုံးစွဲမှုလျှော့ချရေး
လိုက်နာရမည့်စည်းကမ်း	The Underground Water Act (1930)
စီမံခန့်ခွဲမှုအစီအစဉ်	▪ မြေအောက်ရေအရင်းအမြစ်ကို စနစ်တကျဖြင့် အလေအလွင့်နည်းအောင် သုံးစွဲခြင်း ▪ ဝန်ထမ်းများအားအသိပညာပေးခြင်းနှင့် လိုက်နာဆောင်ရွက်ရန် တိုက်တွန်းခြင်း ▪ စက်ရုံရှိတာဝန်ရှိပုဂ္ဂိုလ်များအား (Third Party) နေဖြင့်မြေအောက်ရေအကျိုးရှိရှိအသုံးချရန်စည်းကမ်းချက်နဲ့အညီ လမ်းညွှန်ထားခြင်း။
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	မန်နေဂျာ ▪ ရေ အသုံးပြုမှုစာရင်း စစ်ဆေးခြင်း ▪ ဝန်ထမ်းများလိုက်နာဆောင်ရွက်မှု စစ်ဆေးခြင်း

အရေးပေါ် အခြေအနေတုန့်ပြန်မှု

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

9/27/2022



ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှုအစီအစဉ်

ထွက်	အချက်အလက်	ကြိမ်နှုန်း	နေရာ	တာဝန်ရှိသူ
လုပ်ငန်းလည်ပတ်ချိန်				
လေထု	SO2, NO2, CO, CO2, PM2.5 and PM10	တစ်နှစ် ၂ကြိမ်	စက်ရုံဧရိယာအတွင်း	Jia He Li Company Limited
ရေ	pH, Turbidity, TH, TA, Iron, NaCL, BOD, COD, TS, TDS, Chlorine, and Arsenic	တစ်နှစ် ၂ကြိမ်	မိုးရေမြောင်းသုံးနှင့် မိလ္လာစနစ်သုံးအတွက် မြေအောက်ရေ	Jia He Li Company Limited
ဆူညံသံ	ဆူညံသံ ပမာဏ	တစ်နှစ် ၂ကြိမ်	၂ နေရာ (ထုတ်လုပ်မှု ဧရိယာ အတွင်း)	Jia He Li Company Limited
အမှိုက်စွန့်ပစ်မှု	အစိုင်အခဲ အရည် နှင့် အန္တရာယ်ရှိပစ္စည်း	ပုံမှန်	စက်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်နှင့် စနစ်တကျစွန့်ပစ်ရန်ဟူ၍ အမှိုက်ပုံများအား ခွဲခြားစွန့်ပစ်ခြင်း	Jia He Li Company Limited
မီးဘေးအန္တရာယ်	[illegible]	လစဉ်	စက်ရုံဧရိယာ အတွင်း	Jia He Li Company Limited
အလင်းရောင်ပြင်းပြမှု	အလင်းရောင်ရရှိမှု	တစ်နှစ် ၂ကြိမ်	ထုတ်လုပ်မှု ဧရိယာအတွင်း (ပုံစံသွန်းလောင်းခြင်း နှင့် အရည်အသွေး စစ်ဆေးခြင်း)	Jia He Li Company Limited
Jia He Li Limited				
လေထု	PM2.5, PM10	ဖျက်သိမ်းမှု ကာလအတွင်း ၁ကြိမ်	ထုတ်လုပ်မှု ဧရိယာအတွင်း	Jia He Li Company Limited
ရေ	pH, Turbidity, TH, TA, Iron, NaCL, BOD, COD, TS, TDS, Temp, Oil and Grease, Chlorine, and Arsenic	ထိုကာလအတွင်း ၁ကြိမ်	မိုးရေမြောင်းသုံးနှင့် မိလ္လာစနစ်သုံးအတွက် မြေအောက်ရေ	Jia He Li Company Limited
ဆူညံသံ	ဆူညံသံ ပမာဏ	ထိုကာလအတွင်း ၁ကြိမ်	ဖျက်သိမ်းမှု ဧရိယာ	Jia He Li Company Limited
ပြန်လည်ပျိုးထောင်ခြင်း	သစ်ပင်များပြန်လည်စိုက်ပျိုးခြင်း၊ မြေဆီလွှာကိုပြန်လည်ထိန်းသိမ်းမှု [illegible]	ပြန်လည်ပျိုးထောင်ခြင်းလုပ်ငန်း ပြီးဆုံးသည့်အထိ	ဖျက်သိမ်းမှု ဧရိယာအားလုံး	Jia He Li Company Limited

ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု ခန့်မှန်းကုန်ကျစရိတ်

စဉ်	အကြောင်းအရာ	အကြိမ်အရေအတွက်	ကုန်ကျစရိတ် (အမေရိကန်ဒေါ်လာ)
လျော့ချခြင်းအစီအစဉ်			
၁.	စက်ရုံအတွင်းလေထုညစ်ညမ်းမှုလျော့ချခြင်း	၁နှစ် တကြိမ်	နှစ်စဉ် ဒေါ်လာ ၂၀၀
၂.	စက်ရုံဧရိယာအတွင်း သစ်ပင်များစိုက်ပျိုးခြင်း၊ လေကောင်းလေသန့် ရရှိသော ပတ်ဝန်းကျင်ဖန်တီးပေးခြင်း။	စက်ရုံလည်ပတ်စဉ်ကာလ	နှစ်စဉ်ဒေါ်လာ ၅၀၀
၃.	အဆိုင်အခဲအမှိုက်ပစ်ခြင်း	၁၂ ကြိမ်	နှစ်စဉ် ဒေါ်လာ ၁၀၀၀
၄.	တစ်ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်းများဝယ်ယူခြင်း	၆ လ တကြိမ်	၆ လခြား ဒေါ်လာ ၁၅၀
၅.	ဆေးပစ္စည်းများနှင့် ကျန်းမာရေးစစ်ဆေးခြင်း	၁ နှစ် တကြိမ်	နှစ်စဉ် ဒေါ်လာ ၅၀၀
အရေးပေါ်အစီအစဉ်			
၁.	မီးသတ်ဆေးဘူး	၁လ တကြိမ်	လစဉ် ဒေါ်လာ ၃၀၀
၂.	မီးသတ်အချက်ပြ စနစ်	၁လ တကြိမ်	
၃.	ရှေးဦးသူနာပြု ပစ္စည်းများ	၁လ တကြိမ်	
စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်			
၁.	ရေဆိုးရေညစ်	၂ ကြိမ်	၁နှစ် ဒေါ်လာ ၂၀၀
၂.	ဆူညံသံ	၂ ကြိမ်	၁နှစ် ဒေါ်လာ ၃၀၀
၃.	စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ	၁ ကြိမ်	ဒေါ်လာ ၁၀၀၀

လူမှုအကျိုးတူပူးပေါင်း ပါဝင်မှု

Jia He Li Company Limitedတွင် CSR အတွက် အမြတ်ငွေ၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးတို့ အတွက် အသုံးပြုသွားမည် ဖြစ်ပါသည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	၀.၅ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	၀.၅ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	၁ %

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လျှပ်စစ်စွမ်းအင်ရရှိသုံးစွဲနိုင်ရန်အတွက်ပြင်ဆင်ထားရှိမှု

မီးဘေးအွန္တရာယ်အတွက် မီးသတ်ပိုက်လိုင်း၊ ရေကန်နှင့်မီးသတ်ပစ္စည်းများ အရံသင့်ထားရှိမှု

စက်ရုံရှိဝန်ထမ်းများအတွက် စီမံထားရှိမှုများ

စွန့်ပစ်အမှိုက်၊အရည်နှင့် မိလ္လာစနစ်သိမ်းဆည်းသိုလှောင်မှုဖါတ်ပုံများ

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