ENVIRONMENTAL MANAGEMENT PLAN

FOR

MYANMAR RUI XIN SHOES COMPANY LIMITED

PREPARED FOR:

MYANMAR RUI XIN SHOES COMPANY LIMITED

Plot No.(E-6), Myay Taing Block No. (21),

Mya Sein Yaung Industrial Zone,

Hlaing Thar Yar Township,

Yangon region,

Myanmar

July, 2022

စီမံကိန်းအဆိုပြုသူ၏ ကတိကဝတ်အတည်ပြုဝန်ခံချက်

၂၀၂၀ခုနှစ် ဖေဖော်ဝါရီလအတွင်းတွင် Myanmar Rui Xin Shoes Company Limited၏ ဖိနပ်အမျိုးမျိုးချုပ်လုပ်ခြင်းစက်ရုံအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan) ကို Myanmar Rui Xin Shoes Company Limited၏ စက်ရုံတာဝန်ရှိခေါင်းဆောင်များမှ တာဝန်ယူပြင်ဆင်ခဲ့ပါသည်။ စီမံကိန်းအဆိုပြုသူ အနေဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan) နှင့်ပတ်သတ်၍ အောက်ပါအချက်အလက်များမှန်ကန်ကြောင်းနှင့် တည်ဆဲဥပဒေလုပ်ထုံးလုပ်နည်းများ၊ နည်းဥပဒေများအတိုင်းလိုက်နာဆောင်ရွက်သွားမည်ဖြစ်ကြောင်း ကတိကဝတ်အတည်ပြုဝန်ခံပါသည်။

(က) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာသည် တိကျခိုင်မာ၍ လုပ်ငန်းဆိုင်ရာအချက်အလက်များသည် မှန်ကန်ပါသည်။

(ခ) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်းအပါအဝင် သက်ဆိုင်ရာ တည်ဆဲဥပဒေလုပ်ထုံးလုပ်နည်းများ၊ နည်းဥပဒေများအတိုင်း တိကျစွာလိုက်နာ၍ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အစီရင်ခံစာကိုရေးဆွဲထားပါသည်။

(ဂ) စီမံကိန်းသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာပါ ကတိကဝတ်၊ ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ချရေးလုပ်ငန်းများနှင့်အစီအစဉ်များကို အပြည့်အဝအစဉ်အမြဲ လိုက်နာဆောင်ရွက်မည်ဖြစ်ပါသည်။

(ဃ) လုပ်ငန်းလည်ပတ်ဆောင်ရွက်နေသည့်ကာလအတွင်း အတည်ပြုထားသည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား တိုးတက်နေသည့် နည်းညာများ၊ စနစ်များနှင့် လုပ်ငန်းလိုအပ်ချက်အပေါ်မူတည်၍ပိုမိုကောင်းမွန်သည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ဖြစ်စေရန်အတွက် ပြင်ဆင်ဖြည့်စွက်ရန် ညွှန်ကြားချက်များရှိလာပါက လိုက်နာဆောင်ရွက်သွားပါမည်။

(c) စီမံကိန်းအဆိုပြုသူအနေဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အားပြင်ဆင်ဖြည့်စွက်လိုပါက တင်ပြအတည်ပြုချက်ရယူ၍ ပြင်ဆင်ဆောင်ရွက်သွားပါမည်။

(စ) စီမံကိန်းလုပ်ငန်းများပြီးစီး၍ စီမံကိန်းလုပ်ငန်းပိတ်သိမ်းချိန်တွင် လူမှုဝန်းကျင်အပေါ် ထိခိုက်မှုအနည်းဆုံးဖြစ်စေရန် ဆောင်ရွက်မည်ဖြစ်ပြီး၊ ထိခိုက်မှုများရှိလာပါက ထိခိုက်မှုအနည်းဆုံးဖြစ်စေမည့်အစီအမံများ၊ လူမှုစီးပွားအကျိုးပြုပူးပေါင်းဆောင်ရွက်ချက်အစီအမံများ ချမှတ်ဆောင်ရွက်သွားပါမည်။

(စီမံကိန်းအဆိုပြုသူ)

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BOD	Biochemical Oxygen Demand
CFM	Cubic Feet per Minute
CMP	Cutting, Making and Packaging
COD	Chemical Oxygen Demand
dB	Decibel
Dept	Department
EMP	Environmental Management Plan
HOD	Head of Department
HR	Human Resource
LBS	Pound
MIC	Myanmar Investment Commission
NSRs	Noise Sensitive Receivers
NEQG	National Emitting Quality Guideline
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment
SLM	Sound Level Meter
MEMs	Mitigation Environment Measure
TDS	Total Dissolved Solid
TSS	Total Suspended Solid

အနှစ်ချုပ်အစီအရင်ခံစာ

၁။ နိဒါန်း

Myanmar Rui Xin Shoes Company Limited သည် မြန်မာကုမ္ပဏီများ အက်ဥပဒေအရ ဖွဲ့စည်းထားသော ပုဂ္ဂလိကကုမ္ပဏီလီမိတက်ဖြစ်သည်။ မြန်မာယွိရှင်း ဖိနပ်အမျိုးမျိုးထုတ်လုပ်ခြင်း ကုမ္ပဏီသည် ရင်းနှီးမြုပ်နှံမှုနှင့် ကုမ္ပဏီများ ညွှန်ကြားမှုဦးစီးဌာန (DICA)တွင် မှတ်ပုံတင်နံပါတ် (၁၂၁၇၄၉၈၅၈) ရရှိပြီးဖြစ်ပါသည်။ Myanmar Rui Xin Shoes Company Limited ၏ ရင်းနှီးမြုပ်နှံမှု အမျိုးအစားမှာ နိုင်ငံခြားရင်းနှီးမြုပ်နှံမှု 100% ဖြစ်ပြီး MIC ပါမစ်ရရှိထားပြီး ဖြစ်ပါသည်။ မြန်မာယွိရှင်းဖိနပ် အမျိုးမျိုးထုတ်လုပ်သည့်စက်ရုံသည် မြေကွက် အမှတ်(E-၆)၊မြေတိုင်းရပ်ကွက်အမှတ်(၂၁)၊ မြစိမ်းရောင် စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိသည်။ စီမံကိန်းအဆိုပြုသူမှ Myanmar Rui Xin Shoes Company Limited လုပ်ငန်းအတွက် ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွား ထိခိုက်မှုများအား ကာကွယ်ရန်နှင့် ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး လုပ်ငန်းစဉ်များ ဆောင်ရွက်နိုင်ရန် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာန(ရန်ကုန်) ထံသို့ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဆိုင်ရာသဘောထား တောင်းခံခဲ့သည်။ သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာန (ရန်ကုန်) က သဘာဝပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်ကို တင်ပြရန် မှတ်ချက်ပြုထားပြီး အကြောင်းပြန်စာ(ပုံ က)ဖြင့် ပြန်ကြားလာခဲ့ပါသည်။ ထို့ကြောင့် ၂၀၂၀ခုနှစ် ဒီဇင်ဘာလအတွင်းတွင် မြန်မာယွိရှင်းဖိနပ် အမျိုးမျိုးထုတ်လုပ်ခြင်း စက်ရုံအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (Environmental Management Plan) ကို Myanmar Rui Xin Shoes Company Limited ၏ တာဝန်ရှိသူများ၏ အကူအညီဖြင့် စုစည်းရေးသားပြုစုခြင်းဖြစ်ပါသည်။

စီမံကိန်းဧရိယာမှာ (၅.၀၉၀)ကေကျယ်ဝန်းပြီး ရုံး၊ စက်ရုံ၊ လုံခြုံရေးဂိတ်နှင့် ကုန်ကြမ်း သိုလှောင်သည့် နေရာများ ပါဝင်သည်။ စက်ရုံတည်ဆောက်မှုကို ၂၀၁၉ ခုနှစ်တွင် စတင်တည်ဆောက်ခဲ့ပြီး ၂၀၂၀ခုနှစ်တွင် အဆုံးသတ်ပြီးစီးခဲ့သည်။ ၂၀၂၀ခုနှစ် ဒီဇင်ဘာလ အတွင်းတွင် မြန်မာယွိရှင်းဖိနပ် အမျိုးမျိုးထုတ်လုပ်ခြင်း စက်ရုံအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (Environmental Management Plan) ကို Myanmar Rui

Xin Shoes Company Limited တာဝန်ရှိ စက်ရုံမှုတာဝန်ခံဌာနခေါင်းဆောင်များ၏ အကူအညီဖြင့် စုစည်း ရေးသားပြုစုခြင်းဖြစ်ပါသည်။

တိုင်းဒေသကြီးညွှန်ကြားရေးမှူးရုံး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး
ရန်ကုန်မြို့

မိုင်တိုင်အမှတ် (၁၃ / ၀) ၊ (၁၄၀) မှတ်တိုင်အနီး၊ အမှတ် (၂) လမ်းမကြီး၊ ရွာသာကြီး၊ ဒဂုံမြို့သစ်(တောင်ပိုင်း) မြို့နယ်
ဖုန်း - ၀၁ - ၃၅၈၅၄၅၆၊ ၀၉-၄၀၅၄၄၂၅၁၇၊ ၀၉-၇၇၅၆၅၂၆၄၃၊ အီးမေးလ် - ygnecd.moecaf@gmail.com

စာအမှတ်၊ရက-၁/၃/၄(အီးအိုင်အေ)(၉၇ /၂၀၂၀)
ရက်စွဲ၊ ၂၀၂၀ ပြည့်နှစ်၊ ဇန်နဝါရီလ ၁၃ ရက်

သို့
ဒါရိုက်တာ
Myanmar Rui Xin Shoes Company Limited
မြေကွက်အမှတ် - (E-၆)၊ မြေတိုင်းရပ်ကွက်အမှတ် - ၂၁
မြစ်မီးရောင် စက်မှုဇုန်(၃)၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

အကြောင်းအရာ။ **Myanmar Rui Xin Shoes Company Limited ၏ CMP စနစ်ဖြင့် ဖိနပ်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့်ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထားမှတ်ချက် ပြန်ကြားခြင်း**

ရည်ညွှန်းချက်။ (၁) Myanmar Rui Xin Shoes Company Limited ၏ ၁၆-၁၂-၂၀၁၉ ရက်စွဲပါ တင်ပြလာသောစာ
(၂) ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ ၂၄-၁၀-၂၀၁၉ ရက်စွဲပါ စာအမှတ်၊ ရက-၁/၃/၄(အီးအိုင်အေ)(၂၃၁၅/၂၀၁၉)

၁။ အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ Myanmar Rui Xin Shoes Company Limited မှ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်၊ မြစ်မီးရောင် စက်မှုဇုန်(၃)၊ မြေတိုင်းရပ်ကွက်အမှတ် -၂၁၊ မြေကွက်အမှတ် - (E-၆) တွင် ရာနိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုဖြင့် အကောင်အထည်ဖော် ဆောင်ရွက်လျက်ရှိသော CMP စနစ်ဖြင့် ဖိနပ်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့်စပ်လျဉ်း၍ ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုလုပ်ငန်းတစ်ရပ်အား အကောင်အထည်ဖော် ဆောင်ရွက်နိုင်ရန် အတွက် ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထားမှတ်ချက် ပြန်ကြားပေးနိုင်ပါရန် ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ ရည်ညွှန်း (၁) ပါစာဖြင့် တင်ပြတောင်းခံလာပါသည်။

၂။ အဆိုပြုစီမံကိန်းနှင့်ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားမှတ်ချက်အား ရန်ကုန်တိုင်း ဒေသကြီး၊ ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှတဆင့် ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနသို့ တင်ပြတောင်းခံခဲ့ပြီး ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (Environmental Management Plan - EMP) ရေးဆွဲတင်ပြရန် ရည်ညွှန်း (၂) ပါစာဖြင့် အကြောင်းပြန်ကြားထားသည်ကို စိစစ် တွေ့ရှိရပါသည်။

၃။ သို့ဖြစ်ပါ၍ Myanmar Rui Xin Shoes Company Limited ၏ CMP စနစ်ဖြင့် ဖိနပ်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထား မှတ်ချက်အား ရည်ညွှန်း (၂) ပါ သဘောထားပြန်ကြားချက်များနှင့်အညီ အောက်ပါအတိုင်း ပြန်ကြားအပ်ပါသည် -

(က) အဆိုပြုလုပ်ငန်းကြောင့် ပတ်ဝန်းကျင်နှင့် လူမှုရေးထိခိုက်မှု အနည်းဆုံးဖြစ်စေရေး အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan - EMP) အစီရင်ခံစာအား ရေးဆွဲရန်နှင့် ရေးဆွဲပြီးသည့် (EMP) အစီရင်ခံစာအား ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြရန်၊

(ခ) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အစီရင်ခံစာပြုစုခြင်းကို စီမံကိန်းအဆိုပြုသူ (လုပ်ငန်းရှင်) ကိုယ်တိုင် (သို့မဟုတ်) တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းကို ခန့်အပ်ဆောင်ရွက်နိုင်ရန်၊

(ဂ) တတိယပုဂ္ဂိုလ် (သို့မဟုတ်) အဖွဲ့အစည်းအားခန့်အပ်၍ ဆောင်ရွက်မည်ဆိုပါက ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနတွင် လုပ်ငန်းလိုင်စင် ရယူထားသော ပုဂ္ဂိုလ် (သို့မဟုတ်) အဖွဲ့အစည်းစာရင်းအား www.ecd.gov.mm/?q=third-party တွင် ဝင်ရောက်ကြည့်ရှု ခန့်အပ်ဆောင်ရွက်နိုင်ရန်၊

(ဃ) စီမံကိန်းနှင့်ပတ်သက်သည့် ပိုင်ရှင်ပြောင်းလဲခြင်း၊ အစီရင်ခံစာတွင် ဖော်ပြပါရှိသည့် ထုတ်လုပ်မှုပမာဏထက် ပိုမိုထုတ်လုပ်ခြင်း၊ လုပ်ငန်းလည်ပတ်မှုဒီဇိုင်းများ ပြောင်းလဲခြင်း၊ လုပ်ငန်းတည်နေရာ ပြောင်းလဲခြင်း၊ လုပ်ငန်းရပ်ဆိုင်းခြင်း (သို့မဟုတ်) ပိတ်သိမ်းခြင်းများ ပြုလုပ်မည်ဆိုပါက မပြုလုပ်မီ ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြသွားရန်၊

(င) ရန်ကုန်တိုင်းဒေသကြီးအစိုးရအဖွဲ့၏ ကြီးကြပ်ကွပ်ကဲမှုဖြင့် စီမံကိန်းလုပ်ငန်း ဆောင်ရွက်မည့် နေရာဒေသတွင် နေထိုင်သော ဒေသခံပြည်သူများ၏ ဆန္ဒနှင့် သဘောထားများကို ရယူဆောင်ရွက်ရန်။

(ခင်သီတာတင်)
ညွှန်ကြားရေးမှူး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး

မိတ္တူကို
ရုံးလက်ခံ၊ မျှောစာတွဲ၊ အမှုတွဲချုပ်

ပုံ (က). ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာန (ရန်ကုန်) သဘောထားမှတ်ချက်အကြောင်းပြန်စာ

ဇယား (က) Myanmar Rui Xin Shoes Company Limited ၏ လုပ်ငန်းဆိုင်ရာအချက်အလက်

စဉ်	လုပ်ငန်းဆိုင်ရာအချက်အလက်	**Description**
1	ကုမ္ပဏီအမည်	Myanmar Rui Xin Shoes Company Limited
2	ပရောဂျက်အမျိုးအစား	CMP စနစ်ဖြင့် ဖိနပ်များ ထုတ်လုပ်ခြင်း။
3	တည်နေရာ	မြေကွက်အမှတ်(E-၆) ၊မြေတိုင်းရပ်ကွက် အမှတ်(၂၁)၊ မြစ်မီးရောင်စက်မှုဇုန်၊ လှိုင်သာယာ မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီး

4	ရင်းနှီးမြှုပ်နှံမှု အမျိုးအစား	နိုင်ငံခြား
5	ရင်းနှီးမြှုပ်နှံမှုပမာဏနှင့် ကာလ	၁၅ နှစ်အတွက် အမေရိကန်ဒေါ်လာ (၃.၆၈၀) သန်း
6	စတင်တည်ဆောက်သည့်နှစ်/ ပြီးစီးသည့်နှစ်	2019/2020
7	စီမံကိန်းဧရိယာ	(၅.၀၉၀)ကေ
5	ရုံးလိပ်စာ	မြေကွက်အမှတ်(E-၆) ၊မြေတိုင်းရပ်ကွက် အမှတ်(၂၁)၊ မြစိမ်းရောင်စက်မှုဇုန်၊ လှိုင်သာယာ မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီး

ဇယား (ခ) Myanmar Rui Xin Shoes Company Limited ၏ စီမံကိန်းပိုင်ရှင်၏အချက်အလက်

စီမံကိန်းပိုင်ရှင်၏အချက်အလက်	**ဖော်ပြချက်**
စီမံကိန်းပိုင်ရှင်အမည်	Mr. Pan Yuxiang
နိုင်ငံသား	တရုတ်
ရာထူး	ဒါရိုက်တာ
ရုံးလိပ်စာ	မြေကွက်အမှတ်(E-၆) ၊မြေတိုင်းရပ်ကွက် အမှတ်(၂၁)၊ မြစိမ်းရောင်စက်မှုဇုန်၊ လှိုင်သာယာ မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီး
ဆက်သွယ်ရန်ဖုန်းနံပါတ်	09- 890092014/ emp.reporting.to.ecd@gmail.com

EMP အစီရင်ခံစာရေးသားတင်ပြသည့်အဖွဲ့တွင်အောက်ပါအဖွဲ့နှင့် ကဏ္ဍအလိုက် ဆောင်ရွက်သူများပါဝင်သည်။ ဤပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်အား ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းလုပ်ထုံးလုပ်နည်း (စာပိုဒ် ၇၆-၇၇-၈၂) ၏ သတ်မှတ်ချက်များနှင့်အညီ ကျိုးကြောင်းဆီလျော်သော ကျွမ်းကျင်မှု၊ ဂရုစိုက်မှုနှင့် လုံလဝီရိယတို့ဖြင့် လုပ်ဆောင်ထားပါသည်။ Myanmar Rui Xin Shoes Company Limited စက်ရုံ EMP အဖွဲ့တွင် အဓိကအဖွဲ့နှင့် ကဏ္ဍအလိုက် ပါဝင်သူများ ပါဝင်သည်။

ဇယား (၈) Myanmar Rui Xin Shoes Company Limited စက်ရုံပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအဖွဲ့

စဉ်	အဖွဲ့ဝင်အမည်	ရာထူး	တာဝန်ယူမှု နယ်ပယ်
1	ဦးအောင်မင်းကျော်	စက်ရုံမန်နေဂျာ	အစီရင်ခံခြင်းနှင့် ပြည်သူ့ဆက်ဆံရေး
2	ဦးပြည့်စုံဝင်း	စက်ရုံကြီးကြပ်ရေးမှူး	အစီရင်ခံခြင်းအစီအစဉ်
3	ဒေါ်သူဇာ	ဝန်ထမ်းရေးရာ	ဒေတာစုဆောင်းခြင်း။
4	ဦးဇော်ဇင်အောင်	ကြီးကြပ်ရေးမှူး	ဒေတာစုဆောင်းခြင်း။
5	ဒေါ်နမ်းအုမ်ခမ်း	ဝန်ဆောင်မှုနှင့် ဘာသာပြန်	ဒေတာစုဆောင်းခြင်း။

၂။ ဥပဒေသုံးသပ်ချက် ဥပဒေလိုအပ်ချက်များ

ကုမ္ပဏီ၏ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒMyanmar Rui Xin Shoes Company Limited သည် ကုမ္ပဏီ၏ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒကို လိုက်နာပါသည်။

• ပတ်ဝန်းကျင်ဆိုင်ရာတာဝန်ဝတ္တရားများ၊ ဥပဒေရေးရာကိစ္စရပ်များနှင့် စည်းမျဉ်းစည်းကမ်းများကို သိရှိနားလည်ပြီး ပွင့်လင်းမြင်သာစွာ လုပ်ဆောင်နိုင်ရမည်။

• သဘာဝပတ်ဝန်းကျင် ကာကွယ်ရေးကို လုပ်ငန်းဗျူဟာတွင် ပေါင်းစပ်ဖော်ပြရန်။

Myanmar Rui Xin Shoes Company Limited မှ ဥပဒေ၊ နည်းဥပဒေများနှင့် လုပ်ထုံးလုပ်နည်းများ မှာ အောက်ပါအတိုင်းဖြစ်သည်။

၁. မြန်မာ့ပတ်ဝန်းကျင်ဆိုင်ရာမူဝါဒ

၂. ပတ်ဝန်းကျင် ထိခိုက်မှု အကဲဖြတ်ခြင်း လုပ်ထုံးလုပ်နည်းများ

၃. သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဥပဒေ (၂၀၁၂)၊

၄. အမျိုးသား အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်

၅. အလုပ်အကိုင်နှင့် ကျွမ်းကျင်မှုဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ (၂၀၁၃)၊

၆. စက်ရုံ၊အလုပ်ရုံဥပဒေ (၁၉၅၁)၊

၇. အနည်းဆုံးအခကြေးငွေဥပဒေ (၂၀၁၃)၊

၈. မြန်မာနိုင်ငံမီးသတ်ဥပဒေ (၂၀၁၅)၊

၉. လုပ်ငန်းခွင်ဘေးကင်းရေးနှင့် ကျန်းမာရေးဥပဒေ (၂၀၁၉)

၁၀. အလုပ်သမားအဖွဲ့အစည်းဥပဒေ (၂၀၁၁)၊

၁၁။ အလုပ်သမားရေးရာ အငြင်းပွားမှုဖြေရှင်းရေးဥပဒေ (၂၀၁၂)၊

၁၂. ခွင့်နှင့်အားလပ်ရက်အက်ဥပဒေ (၁၉၅၁)၊

၁၃. ဓာတုနှင့်ဆက်စပ်ပစ္စည်းများအန္တရာယ်မှကာကွယ်ခြင်းဥပဒေ (၂၀၁၃)၊

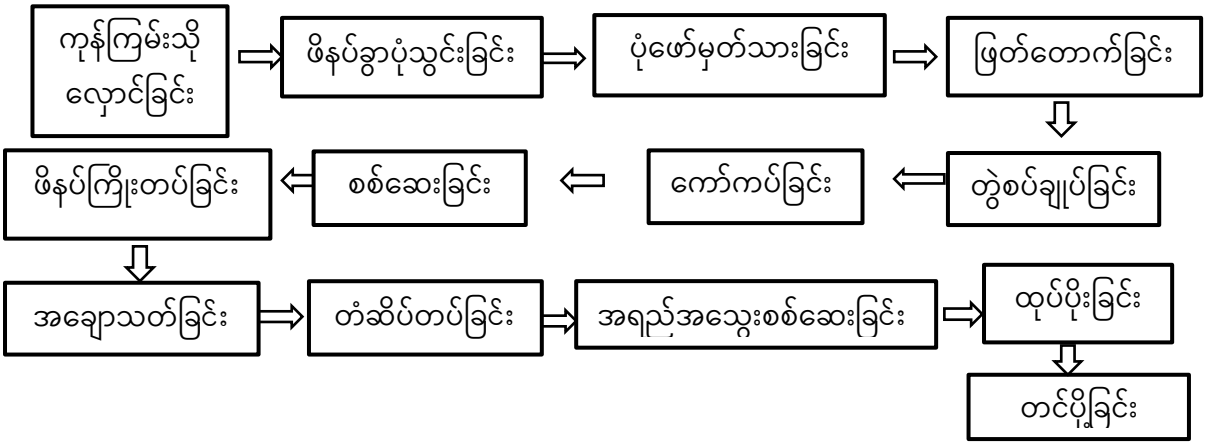
၁၄. ဆေးလိပ်သောက်ခြင်းနှင့် စားသုံးမှုထိန်းချုပ်ရေးဥပဒေ (၂၀၀၆)

၃။ မြန်မာယွိရှင်းဖိနပ်အမျိုးမျိုးထုတ်လုပ်ခြင်း လုပ်ငန်းအကြောင်းအရာဖော်ပြချက်

မြန်မာယွိရှင်းဖိနပ် အမျိုးမျိုးထုတ်လုပ်သည့်စက်ရုံသည် မြေကွက် အမှတ်(*E*-၆)၊မြေတိုင်းရပ်ကွက်အမှတ်(၂၁)၊ မြစိမ်းရောင် စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိသည်။ စီမံကိန်းရေယာမှာ (၅.၀၉၀)ကေကျယ်ဝန်းပြီး ရုံး၊ စက်ရုံ၊

လုံခြုံရေးဂိတ်နှင့် ကုန်ကြမ်း သိုလှောင်သည့် နေရာများ ပါဝင်သည်။ စက်ရုံတည်ဆောက်မှုကို ၂၀၁၉ ခုနှစ်တွင် စတင်တည်ဆောက်ခဲ့ပြီး ၂၀၂၀ခုနှစ်တွင် အဆုံးသတ်ပြီးစီးခဲ့သည်။

ပုံ (ခ) Myanmar Rui Xin Shoes Company Limited တည်နေရာပြမြေပုံ



ပုံ (က) မြန်မာယွိရှင်းဖိနပ်အမျိုးမျိုးထုတ်လုပ်ခြင်း ကုမ္ပဏီလီမိတက်၏ ပစ္စည်းများ ထုတ်လုပ်ခြင်း လုပ်ငန်းစဉ်

စက်ရုံတွင် အလုပ်သမား အင်အား (၈၁၅)ဦးခန့် ခန့်အပ်ရန် လျာထားမှုရှိပါသည်။ အဓိကထုတ်လုပ်မှုမှာ ပြည်ပမှတင်သွင်းထားသော ကုန်ကြမ်းများကို ဖြတ်တောက်ခြင်း၊ ဖိနပ်ခွာပုံသွင်းခြင်း၊ ကော်ကပ်ချုပ်လုပ်ခြင်း၊ ထုတ်ပိုးခြင်းလုပ်ငန်းစဉ်တို့ ပါဝင်သည်။ ထုတ်လုပ်မှုလုပ်ငန်းစဉ်တွင် စွန့်ပစ်အရည်ထွက်ရှိမှုမရှိပါ။ ဓာတ်ငွေ့ထုတ်လွှတ်မှုသည် လျှပ်စစ်ဓာတ်အားထုတ်ဂျန်နရေတာမှအနည်းငယ်ထွက်ရှိနိုင်ပါသည်။ ထိုအစိုင်အခဲစွန့်ပစ်ပစ္စည်းများကို၊ လှိုင်သာယာမြို့နယ်စည်ပင်သာယာရေးကော်မတီ၏ ခွင့်ပြုချက်ဖြင့် စွန့်ပစ်ရန် စီစဉ်ထားရှိသည်။

အခြေခံကုန်ကြမ်းအဖြစ် ရော်ဘာပုံစံနဲ့ သားရေအတုကိုသုံးတယ်။ အဆိုပါကုန်ကြမ်းများကို တရုတ်နိုင်ငံမှ တိုက်ရိုက်တင်သွင်းသည်။ ဓာတုပစ္စည်းအများစုကို ကော်အဖြစ်အသုံးပြုသည်။ ၎င်းတို့မှာ စေးကပ်ခွာ၊ သားရေမျက်နှာပြင် ပြင်ဆင်ခြင်း ကြားခံ၊ သန့်စင်ဆေး၊ ရော်ဘာရည်၊ ဆပ်ပြာဆီ၊ တိုလူအီး၊ အရောင်တင်ဆီ နှင့် dichloromethane တို့ဖြစ်သည်။ ဓာတုပစ္စည်းများကို မီးဘေးလုံခြုံရေးစနစ်ဖြင့် သီးသန့် သိုလှောင်ခန်းတွင် သိမ်းဆည်းထားသည်။

Myanmar Rui Xin Shoes Company Limited ၏ အဓိကထုတ်ကုန်များမှာ အမျိုးသား၊ အမျိုးသမီးနှင့် ကလေးဖိနပ် အမျိုးအစားအားလုံးကို ထုတ်လုပ်ပြီး အမေရိကနှင့် ဥရောပနိုင်ငံများသို့ တင်ပို့ရောင်းချပါသည်။ပထမလုပ်ငန်းလည်ပတ်သည့်နှစ်တွင် စုစုပေါင်း ဖိနပ်အရံပေါင်း (၄၈၅,၀၀) ထုတ်လုပ်ခဲ့သည်။

Myanmar Rui Xin Shoes Company Limitedသည် နိုင်ငံပိုင်လျှပ်စစ်ဖြန့်ဖြူးရေး လျှပ်စစ်ဓာတ်အားအရင်းအမြစ်မှ လျှပ်စစ်ဓာတ်အားကို ဝယ်ယူချိတ်ဆက်သုံးစွဲသည်။ စက်ရုံတွင် လျှပ်စစ်မီးရရှိရန်အတွက် 800 kVA ထရန်စဖော်မာ၊ 400 KVA ဒီဇယ်မီးစက်များ တပ်ဆင်အသုံးပြုထားပါသည်။ စက်ရုံ၏ လျှပ်စစ်ဓာတ်အားသုံးစွဲမှုသည် တစ်နှစ်လျှင် (၆၅၀,၀၀) KWh ဖြစ်သည်။ ဒီဇယ်မီးစက်အတွက် ဒီဇယ်လောင်စာအား ပြင်ပမှ တင်သွင်းသူထံမှ ဝယ်ယူခဲ့သည်။ ထို့ကြောင့် လောင်စာဆီ သိုလှောင်မှု ဧရိယာကို သီးသန့်သိုလှောင်သတ်မှတ်ထားခြင်း မရှိပါ။ ဒီဇယ်ဆီသုံးစွဲမှု ပမာဏမှာ တစ်နှစ်လျှင် ဂါလာ ၄၅၀၀ ဖြစ်သည်။ လောင်စာဘွိုင်လာများကို လက်ရှိကာလတွင် အသုံးမပြုပါ။

စက်ရုံတစ်ရုံလုံးတွင် လုပ်သားအင်အား (၈၀၀) ရှိပြီး နိုင်ငံခြားသားလုပ်သား (၁၅)ဦးခန့် ရှိသည်။ စုစုပေါင်း ဝန်ထမ်းအင်အား (၈၁၅) ဦး ရှိသည်။ စက်ရုံမှ အလုပ်သမားများအတွက် အလုပ်ချိန်သည် တနလ်ာမှ သောကြာ (၈) နာရီ ဖြစ်ပြီး စနေနေ့ (၄) နာရီသာ ရှိသည်။ စက်ရုံလည်ပတ်သည့်ရက်သည် ယေဘုယျအားဖြင့် (၂၈၈)ရက်/နှစ်ဖြစ်သည်။

၃။သက်ရောက်မှု ဆန်းစစ်ခြင်းနှင့် ကုစားခြင်း

မြန်မာယွှင်းဖိနပ်အမျိုးမျိုးထုတ်လုပ်ခြင်း လုပ်ငန်းစဉ်အဆင့်ဆင့်ပေါ်မူတည်၍ သက်ရောက်မှု ဆန်းစစ်ခြင်းနှင့် ကုစားခြင်းကိုအောက်ဖော်ပြပါ ဇယား (က)နှင့် (ခ) တွင် ဖော်ပြထားပါသည်။

ဇယား (ဃ) ပတ်ဝန်းကျင်အပေါ် သက်ရောက်စေမည့် အကြောင်းအချက်များနှင့် သက်ရောက်မှုများ

စဉ်	လုပ်ငန်းစဉ်	လုပ်ဆောင်ချက်	သက်ရောက်မှု
၁	ကုန်ကြမ်း၊ကုန်ချောပစ္စည်းများကိုင်တွယ်ထိန်းသိမ်းခြင်း	ဝန်ချီကားအသုံးပြု၍ ကုန်ကြမ်းကုန်ချောပစ္စည်းများအတင်အချ ပြုလုပ်ခြင်း	ရုပ်ပိုင်းဆိုင်ရာ အန္တရာယ်၊ ဝန်ချီကား အန္တရာယ်
		ကုန်ကြမ်းကုန်ချောပစ္စည်းများအားသိုလှောင်ထိန်းသိမ်းခြင်း	စွန့်ပစ်ပစ္စည်းထွက်ရှိခြင်း မီးဘေးအန္တရာယ်
၂	ဖိနပ်ခွာပုံသွင်းခြင်း	ပုံသွင်းစက် အသုံးပြုခြင်း လေတွန်းအားသုံးစက် အသုံးပြုခြင်း	စွန့်ပစ်ပစ္စည်းထွက်ရှိခြင်း ဆူညံသံ
၃	ဖိနပ်သားရေနှင့် နိုင်လွန်ပိတ်ဖြတ်ခြင်း	ဖြတ်စက် အသုံးပြုခြင်း	ရုပ်ပိုင်းဆိုင်ရာ အန္တရာယ်၊ စွန့်ပစ်ပစ္စည်းထွက်ရှိခြင်း
၄	ကော်ကပ်ခြင်း	ကော်များနှင့်ထိတွေ့ခြင်း	ဓါတုပစ္စည်းအန္တရာယ်
၅	ဖိနပ်ကြိုးတပ်ခြင်း	လုပ်သားအားအသုံးပြုခြင်း	စွန့်ပစ်ပစ္စည်းထွက်ရှိခြင်း

၆	အချောသတ်ခြင်း၊ တံဆိပ်တပ်ခြင်း	ချုပ်စက်အသုံးပြုခြင်း	ရုပ်ပိုင်းဆိုင်ရာ အန္တရာယ်၊ စွန့်ပစ်ပစ္စည်းထွက်ရှိခြင်း
၇	ထုတ်ပိုးခြင်း	စက္ကူသေတ္တာများအသုံးပြုခြင်း	စွန့်ပစ်ပစ္စည်းထွက်ရှိခြင်း

ဇယား (၄) ကုစားရန် နည်းလမ်းများ

သက်ရောက်မှု	ရင်းမြစ်	ကုစားခြင်း
မီးဘေးအန္တရာယ်	တားမြစ်နေရာတွင် ဆေးလိပ်သောက်ခြင်း	(၁) စက်ရုံဝင်းအတွင်း ဆေးလိပ်သောက်ခြင်းကို လုံးဝ ပိတ်ပင်တားမြစ်ခြင်း (၂) အရေးပေါ် ထွက်ပေါက်များကို ရှင်းရှင်း လင်းလင်း ဖော်ပြခြင်း (၃) ထွက်ပေါက်လမ်းများကို အမြဲသန့်ရှင်းအောင် ထားခြင်း (၄) မီးသတ်ဆေးဘူးများကို ပုံမှန်စစ်ဆေး၊ ဖြည့်တင်းခြင်း (၅) မီးငြိမ်းမှု ဇာတ်တိုက်လေ့ကျင့်ခန်းများ ပုံမှန်ပြုလုပ်ခြင်း
အစိုင်အခဲစွန့်ပစ်ပစ္စည်း	- ချည်ကြိုးအပိုင်းအစများ	(၁) စဉ်ဆက်မပြတ်နှင့် ပုံမှန်သန့်ရှင်းရေး လုပ်ရန်

	- ဖြတ်တောက်မှုအပိုင်းအစများ ၊ - ထုပ်ပိုးစွန့်ပစ်ပစ္စည်း - ပလပ်စတစ်အမှိုက်များ - အထွေထွေအမှိုက်များ	(၂) အိတ်များတွင် နိုင်လွန် အထည် စွန့်ပစ်ပစ္စည်း ထုပ်ပိုးထားခြင်း (၃) စွန့်ပစ်အိတ်များကို စနစ်တကျ သို လှောင်ခြင်း (၄) စွန့်ပစ်ပစ္စည်း စုဆောင်းသူကို ပုံမှန် ခေါ်ယူခြင်း (၅) အမှိုက်ပုံးများ လုံလောက်စွာ ထောက်ပံ့ပေးခြင်း
ထိခိုက်နိုင်မှု	- ကုန်ကြမ်း၊ ကုန်ချော ပစ္စည်းများ အတင်အချ ပြုလုပ်ခြင်း - အလေးချိန်ပိုသောပစ္စည်း များသယ်ဆောင်ခြင်းမှ ထိခိုက်မိခြင်း - ဖြတ်စက်ကိုင်တွယ် အသုံးပြုခြင်း - အပ်နှင့်ထိခိုက်မိခြင်း	(၁) ကုန်ပစ္စည်းများ အလွယ်တကူမ မရန် အထောက်အကူပြု သယ်ဆောင် ကိရိယာ အသုံးပြုခြင်း (၂) ထိခိုက်ပွန်းရှ နိုင်သည့် ပစ္စည်းများ ကိုင်တွယ်ရာတွင် လက်အိတ်အသုံး ပြုခြင်း (၃) စက်တွင် အကာအရံတပ်ဆင်ခြင်း
ဓါတုပစ္စည်း အန္တရာယ်	- ကော်များနှင့် ထိတွေ့ခြင်း	(၁)အလုပ်လုပ်သောအလုပ်သမား များအတွက်လက်အိတ်၊

		နှာခေါင်းစည်း၊ မျက်မှန်များကိုထောက်ပံ့ပေးခြင်း (၂) တကိုယ်ရေကာကွယ်ရေးပစ္စည်း များ အသုံးပြုခြင်းနှင့် ပတ်သတ်၍ ကော်ကပ် လုပ်သားများအား ပညာပေးခြင် (၃) တကိုယ်ရေကာကွယ်ရေးပစ္စည်း များ အသုံးပြုမှုကို ကြီးကြပ်ခြင်းနှင့် ပုံမှန် စစ်ဆေးခြင်း
ဆူညံသံ	- လေတွန်းအားသုံးစက် အသုံးပြုခြင်း၊ စက်များလည်ပတ်မောင်းနှင် ခြင်း	(၁) စက်ပစ္စည်းများအား ပုံမှန် ပြုပြင် ထိန်းသိမ်းမှုများ ပြုလုပ်ခြင်း (၂) လုပ်သားများအတွက် နားကြပ်များ အလုံအလောက် စီမံထားရှိခြင်း (၃) ဆူညံသံ မြင့်မားသည့် အလုပ် နေရာတွင် လုပ်သားများ နားကြပ် တပ်ဆင်မှုကို ပုံမှန်စစ်ဆေး ကြပ်မတ် ခြင်း

ဖုန်၊ အနံ့အသက်	ပစ္စည်းများနေရာချခြင်းကြောင့်ဖုန်၊အမှုန်အမွှားထွက်ရှိခြင်း	(၁) လုပ်သားများအတွက် နှာခေါင်းစည်းများ အလုံအလောက်စီစဉ်ထားရှိခြင်း (၂) အမှုန်အမွှားထွက်ရှိသည့် အလုပ်နေရာတွင် လုပ်သားများ နှာခေါင်းစည်းအသုံးပြုမှုကို ပုံမှန်စစ်ဆေး ကြပ်မတ်ခြင်း (၃) အမှုန်ထုတ်လွှတ်မှု တိုင်းတာသည့် ကိရိယာတပ်ဆင်ခြင်း (၄) အမှုန်ထုတ်လွှတ်မှု ၅၀ထက် ကျော်လွန် လျှင်လုပ်ငန်းအားလုံးကို ခေတ္တရပ်နား ထားခြင်း (၅) အမှုန်အမွှားစုပ်စက် အသုံးပြုခြင်း

၄။ လူထုညှိနှိုင်းမှုရလဒ်များ

ဌာနဆိုင်ရာတာဝန်ရှိသူများ၊ ဇုန်စီမံခန့်ခွဲမှုကော်မတီမှ တာဝန်ရှိသူများ၊ ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွား ထိခိုက်မှုမရှိစေရေးအတွက် နယ်မြေခံပြည်သူများနှင့် ပုံမှန်ဆွေးနွေးညှိနှိုင်းမှုများ ပြုလုပ်သွားမည်။

စက်ရုံ၏အပေါ် လုပ်ငန်းဆောင်ရွက်ချက်များအပေါ်အများသူငှာ အချိန်တိုင်းတုံ့ပြန်ချက်ပေးနိုင်ရန် အကြံပြုချက်စာပုံးတစ်ခုထားရှိပါမည်။ စက်မှုဇုန်ကော်မတီနှင့် သက်ဆိုင်ရာဌာနများ၏ လမ်းညွှန်ချက်များကို အမြဲတမ်းလိုက်နာဆောင်ရွက်သွားမည်ဖြစ်သည်။ စီမံကိန်း ကြေညာချက်များကို စက်မှုဇုန်ကော်မတီရုံးနှင့် စက်ရုံကြော်ငြာဘုတ်များတွင် အချိန်နှင့်တပြေးညီ ထုတ်ပြန်ပေးမည်ဖြစ်သည်။

Myanmar Rui Xin Shoes Company Limited ၏ CSR လှုပ်ရှားမှုများသည် လူမှုစီးပွားဘဝနှင့် လူပတ်ဝန်းကျင်အကျိုးစီးပွားဘဝများ ဖွံ့ဖြိုးတိုးတက်စေရန် စီမံဆောင်ရွက်ထားပါသည်။ ဤလုပ်ငန်း၏ရရှိမှု အသားတင်အမြတ်ကို လူမှုရေးဆိုင်ရာ တာဝန်ယူမှုအတွက် အသုံးပြုမည့်အကြောင်းအရာကို ဇယား(စ)တွင် ဖော်ပြထားသည်။

ဇယား (စ) CSR လှုပ်ရှားမှုလုပ်ဆောင်ရန် လျာထားချက်ရံပုံငွေတွက်ချက်ပြဇယားများ

စဉ်	CSR လှုပ်ရှားမှု	လျာထားချက်ရံပုံငွေ
၁	ပညာရေးအတွက် ပံ့ပိုးပေးခြင်း	၂၀%
၂	လမ်းပြင်ဆင်ရေးအတွက် ကူညီဆောင်ရွက်ပေးခြင်း။	၂၀%
၃	မြို့နယ်ဖွံ့ဖြိုးရေးအတွက် ပံ့ပိုးကူညီခြင်း။	၂၀%
၄	သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးနှင့် သန့်ရှင်းရေးအတွက် ပံ့ပိုးကူညီခြင်း။	၂၀%
၅	လူသားများအား စောင့်ရှောက်ရေးနှင့် ကယ်ဆယ်ရေးအတွက် ကူညီပံ့ပိုးပေးခြင်	၂၀%

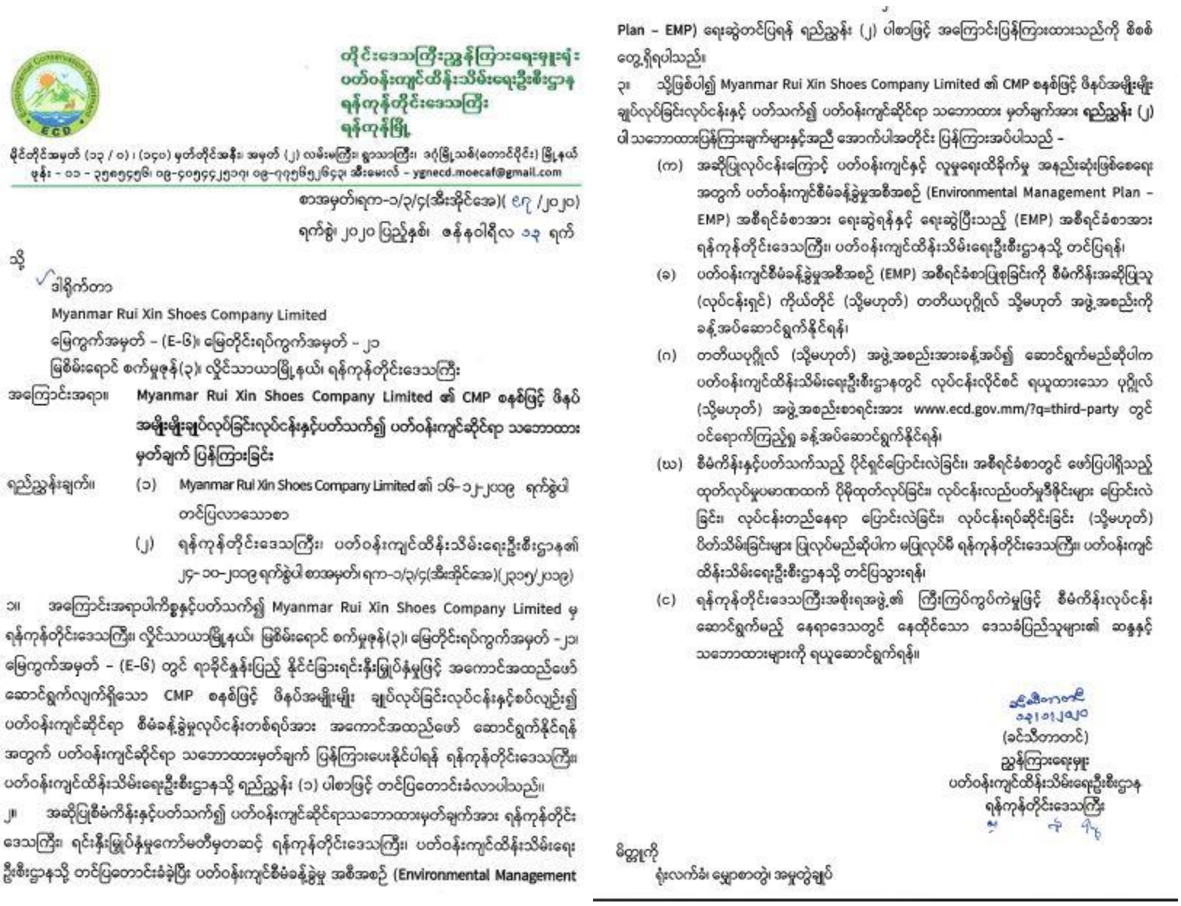
၅။ ကောက်ချက်များနှင့် အကြံပြုချက်များ

စီမံကိန်းလုပ်ဆောင်ချက်များမှ အဓိကသဘာဝပတ်ဝန်းကျင် ထိခိုက်နိုင်မှုခြောက်ခု ဖြစ်ပေါ်နိုင်ကြောင်းလေ့လာတွေ့ရှိခဲ့ရပါသည်။ Myanmar Rui Xin Shoes Company Limited အနေဖြင့် ဤပတ်ဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုများကို လျှော့ချပြီး စောင့်ကြပ်ကြည့်ရှုရေးလုပ်ငန်းစဉ်များကို ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ အခြားတစ်ဖက်တွင်မူ စက်ရုံ၏ CSR အစီအစဉ်ဖြင့် အလုပ်အကိုင်အခွင့်အလမ်းများ နှင့် ပတ်ဝန်းကျင်ကျေးရွာများကဲ့သို့သော အပြုသဘောဆောင်သည့် သက်ရောက်မှုများကို စုံစမ်းဖော်ထုတ်ရန် ကျန်ရှိနေမည်ဖြစ်ပါသည်။ ဤလုပ်ငန်း၏ အသားတင်အမြတ်ငွေ 2% ကို လူမှု-စီးပွာအကျိုးပြုရေးအတွက် အကောင်အထည်ဖော်တာဝန်ယူဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။

EXECUTIVE SUMMARY

1. Introduction

Myanmar Rui Xin Shoes Company Limited is a Private Company Limited incorporated under the Myanmar Companies Act. Myanmar Rui Xin Shoes Company Limited is a specialized company in Registration Department (DICA) with registration Number (121749858). Investment type of Myanmar Rui Xin Shoes Company Limited is 100% foreign and got done MIC permit. Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar.



တိုင်းဒေသကြီးညွှန်ကြားရေးမှူးရုံး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး
ရန်ကုန်မြို့

မိုင်တိုင်အမှတ် (၁၃ / ၀) ၊ (၁၄၀) မှတ်တိုင်အနီး၊ အမှတ် (၂) လမ်းမကြီး၊ ရွာသာကြီး၊ ဒဂုံမြို့သစ်(တောင်ပိုင်း) မြို့နယ်
ဖုန်း - ၀၁ - ၃၅၈၅၄၅၆၊ ၀၉-၄၀၅၄၄၂၅၁၇၊ ၀၉-၇၇၅၆၅၂၆၄၃၊ အီးမေးလ် - ygnecd.moecaf@gmail.com

စာအမှတ်၊ရကဘ-၁/၃/၄(အီးအိုင်အေ)(၉၇ /၂၀၂၀)
ရက်စွဲ၊ ၂၀၂၀ ပြည့်နှစ်၊ ဇန်နဝါရီလ ၁၃ ရက်

သို့
ဒါရိုက်တာ
Myanmar Rui Xin Shoes Company Limited
မြေကွက်အမှတ် - (E-၆)၊ မြေတိုင်းရပ်ကွက်အမှတ် - ၂၁
မြစိမ်းရောင် စက်မှုဇုန်(၃)၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

အကြောင်းအရာ။ Myanmar Rui Xin Shoes Company Limited ၏ CMP စနစ်ဖြင့် ဖိနပ်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့်ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထားမှတ်ချက် ပြန်ကြားခြင်း

ရည်ညွှန်းချက်။ (၁) Myanmar Rui Xin Shoes Company Limited ၏ ၁၆-၁၂-၂၀၁၉ ရက်စွဲပါ တင်ပြလာသောစာ
(၂) ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ ၂၄-၁၀-၂၀၁၉ ရက်စွဲပါ စာအမှတ်၊ ရကဘ-၁/၃/၄(အီးအိုင်အေ)(၂၃၁၅/ ၂၀၁၉)

၁။ အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ Myanmar Rui Xin Shoes Company Limited မှ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်၊ မြစိမ်းရောင် စက်မှုဇုန်(၃)၊ မြေတိုင်းရပ်ကွက်အမှတ် -၂၁၊ မြေကွက်အမှတ် - (E-၆) တွင် ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုဖြင့် အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိသော CMP စနစ်ဖြင့် ဖိနပ်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့်စပ်လျဉ်း၍ ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုလုပ်ငန်းတစ်ရပ်အား အကောင်အထည်ဖော် ဆောင်ရွက်နိုင်ရန်အတွက် ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထားမှတ်ချက် ပြန်ကြားပေးနိုင်ပါရန် ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ ရည်ညွှန်း (၁) ပါစာဖြင့် တင်ပြတောင်းခံလာပါသည်။

၂။ အဆိုပြုစီမံကိန်းနှင့်ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားမှတ်ချက်အား ရန်ကုန်တိုင်းဒေသကြီး၊ ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှတဆင့် ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြတောင်းခံခဲ့ပြီး ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (Environmental Management Plan - EMP) ရေးဆွဲတင်ပြရန် ရည်ညွှန်း (၂) ပါစာဖြင့် အကြောင်းပြန်ကြားထားသည်ကို စိစစ်တွေ့ရှိရပါသည်။

၃။ သို့ဖြစ်ပါ၍ Myanmar Rui Xin Shoes Company Limited ၏ CMP စနစ်ဖြင့် ဖိနပ်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထား မှတ်ချက်အား ရည်ညွှန်း (၂) ပါ သဘောထားပြန်ကြားချက်များနှင့်အညီ အောက်ပါအတိုင်း ပြန်ကြားအပ်ပါသည် -

(က) အဆိုပြုလုပ်ငန်းကြောင့် ပတ်ဝန်းကျင်နှင့် လူမှုရေးထိခိုက်မှု အနည်းဆုံးဖြစ်စေရေးအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan - EMP) အစီရင်ခံစာအား ရေးဆွဲရန်နှင့် ရေးဆွဲပြီးသည့် (EMP) အစီရင်ခံစာအား ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြရန်၊

(ခ) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အစီရင်ခံစာပြုစုခြင်းကို စီမံကိန်းအဆိုပြုသူ (လုပ်ငန်းရှင်) ကိုယ်တိုင် (သို့မဟုတ်) တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းကို ခန့်အပ်ဆောင်ရွက်နိုင်ရန်၊

(ဂ) တတိယပုဂ္ဂိုလ် (သို့မဟုတ်) အဖွဲ့အစည်းအားခန့်အပ်၍ ဆောင်ရွက်မည်ဆိုပါက ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနတွင် လုပ်ငန်းလိုင်စင် ရယူထားသော ပုဂ္ဂိုလ် (သို့မဟုတ်) အဖွဲ့အစည်းစာရင်းအား www.ecd.gov.mm/?q=third-party တွင် ဝင်ရောက်ကြည့်ရှု ခန့်အပ်ဆောင်ရွက်နိုင်ရန်၊

(ဃ) စီမံကိန်းနှင့်ပတ်သက်သည့် ပိုင်ရှင်ပြောင်းလဲခြင်း၊ အစီရင်ခံစာတွင် ဖော်ပြပါရှိသည့် ထုတ်လုပ်မှုပမာဏထက် ပိုမိုထုတ်လုပ်ခြင်း၊ လုပ်ငန်းလည်ပတ်မှုဒီဇိုင်းများ ပြောင်းလဲခြင်း၊ လုပ်ငန်းတည်နေရာ ပြောင်းလဲခြင်း၊ လုပ်ငန်းရပ်ဆိုင်းခြင်း (သို့မဟုတ်) ပိတ်သိမ်းခြင်းများ ပြုလုပ်မည်ဆိုပါက မပြုလုပ်မီ ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြသွားရန်၊

(င) ရန်ကုန်တိုင်းဒေသကြီးအစိုးရအဖွဲ့၏ ကြီးကြပ်ကွပ်ကဲမှုဖြင့် စီမံကိန်းလုပ်ငန်း ဆောင်ရွက်မည့် နေရာဒေသတွင် နေထိုင်သော ဒေသခံပြည်သူများ၏ ဆန္ဒနှင့် သဘောထားများကို ရယူဆောင်ရွက်ရန်။

(ခင်သီတာတင်)
ညွှန်ကြားရေးမှူး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး

မိတ္တူကို
ရုံးလက်ခံ၊ မျှောစာတွဲ၊ အမှတ်တွဲချုပ်

Figure A. Environmental Conservation Department (Yangon) Reply letter

The owner of the project requested an opinion from the Environmental Conservation Department (Yangon) to prevent environmental and socio-economic impacts and to carry out an environmental protection process. Environmental Conservation Department (Yangon) made a comment to submit the environmental management plan and reply letter is shown in figure A. Therefore, This Environmental Management Plan (EMP) was prepared by Departmental leaders of Myanmar Rui Xin Shoes Company Limited factory company organization itself.

This Environmental Management Plan has been done with reasonable skills, care and diligence in accordance with the stipulations of Environmental Impact Assessment Procedure (Paragraph 76-82). Myanmar Rui Xin Shoes Company Limited factory EMP team consists of the core team and sector-wise participants.

Table A List of the factory data of Myanmar Rui Xin Shoes Company Limited

No.	Project Data	Description
1	Company Name	Myanmar Rui Xin Shoes Company Limited
2	Project Type	Manufacturing of shoes on CMP basis
3	Location	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
4	Investment type	Foreign
5	Investment amount and period	US$ (3.680) million for 15 year
6	Construction started year/finished year	2019/2020
7	project area	(5.090) acres
5	Office Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar

Table B. Project Owner data of Myanmar Rui Xin Shoes Company Limited

Project Owner data	Description
Project Owner Name	Mr. Pan Yuxiang
Citizen	China
Position	Director
Office Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
Contact Phone No.	09- 890092014/ emp.reporting.to.ecd@gmail.com

Myanmar Rui Xin Shoes Company Limited was arranged for EMP study and reporting for Myanmar Rui Xin Shoes Company Limited factory. EMP team consists of the following team and sector-wise participants. This Environmental Management Plan has been done with reasonable skills, care and diligence in accordance with the stipulations of Environmental Impact Assessment Procedure (Paragraph 76-77-82). Myanmar Rui Xin Shoes Company Limited factory EMP team consists of the core team and sector-wise participants.

TableC. EMP Team Member

Sr.	Name	Position	Area of Responsibility
1	U Kaung Min Khant	Factory Manager	Reporting and Public relation
2	U Pyae Son Win	Factory Supervisor	Reporting Arrangement
3	Daw Thu Zar	HR Manager	Data Collection
4	U Zaw Zin Aung	Operation Supervisor	Data Collection
5	Daw Nam Ohmm Khan	Customer service and translator	Data Collection

Table D. Contact Data of Myanmar Rui Xin Shoes Company Limited

Company Name	Myanmar Rui Xin Shoes Company Limited
Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
Ph.no/E-mail	09- 977399258/ emp.reporting.to.ecd@gmail.com

2. Law and Legal Review

COMPANY ENVIRONMENTAL POLICY

Myanmar Rui Xin Shoes Company Limited is follow the company environmental policy.

• To be aware of environmental responsibilities, legal issues, and regulations, and to work openly.

• To describe the integration of environmental protection into business strategy.

The Laws, Rules and Procedures Should Be Compliance from Myanmar Rui Xin Shoes Company Limited is as follows.

1. Myanmar Environmental Policy

2. Environmental Impact Assessment Procedures
3. Environmental Conservation Law (2012)
4. National Quality (Emission) Guideline
5. Employment And Skill Development Law (2013)
6. Factory Act (1951)
7. Minimum Wages Law (2013)
8. Myanmar Fire Brigade Law (2015)
9. Occupational Safety and Health Law (2019)
10. The Labor Organization Law (2011)
11. The Settlement of Labor Dispute Law (2012)
12. The Leave and Holiday Act (1951)
13. The Prevention of Hazard from Chemical and Related Substances Law (2013)
14. The Control of Smoking and Consumption of Tobacco Product Law (2006)

3. Project Description

Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The project area is (5.090) acres of land and it include office, factory building, security gate, raw materials storage area, canteen and product storage area. The Factory construction operation was started in 2019 to 2020. Myanmar Rui Xin Shoes Company Limited is located at Plot Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The project area is (5.090) of land at latitude: 16°52’17.32”N,), longitude: 96°0’7.70”E). Layout Plan of Myanmar Rui Xin Shoes Company Limited is shown in following figure.

Figure (B) Location of Myanmar Rui Xin Shoes Company Limited

Table A List of the factory building data of Myanmar Rui Xin Shoes Company Limited

Main Building Size	**Number**
3 floor building (104×367) feet	3 storey building
1floor building (104×367) feet	1 office building

The factory produces variety of shoe with production scheme. Majority of the products are export. There are about (815) workers at the factory. Routine production works can be seen in the following flow diagram.

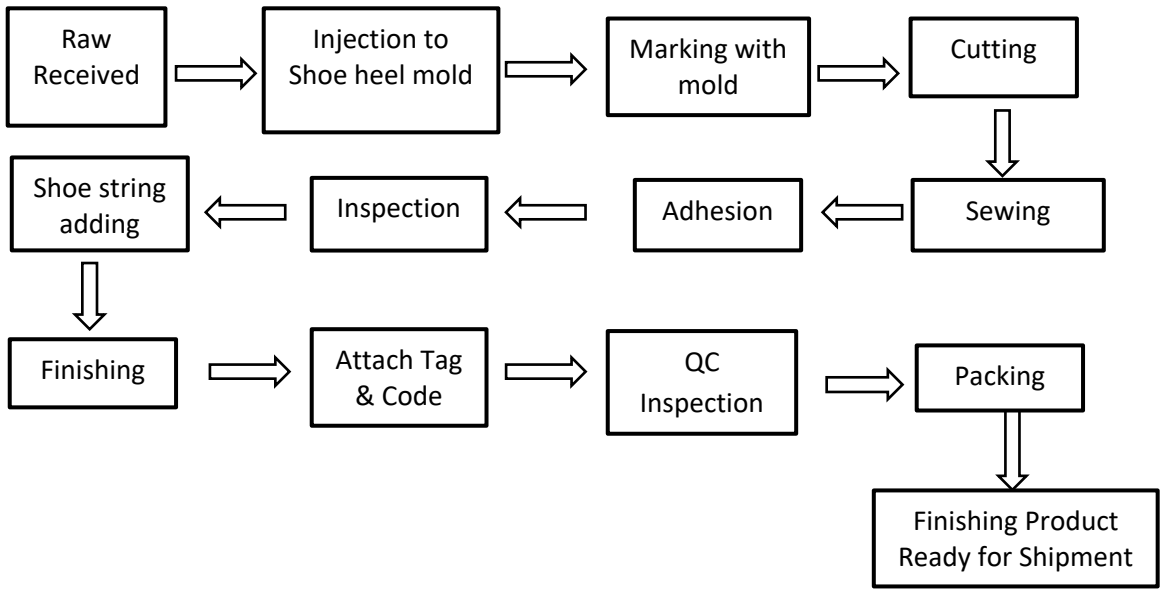


Figure (B) Process Flow Diagram for Myanmar Rui Xin Shoes Company Limited

The basic raw materials used rubber form and imitation leather. These raw materials are imported directly from China. The most chemical are use in adhesive process as glue. These are resin adhesive, surface treating agent, hardener, cleaning agent, rubber solution, detergent oil, toluene, toner and dichloromethane. Usage chemical are store in individual storage room with fire safety system.

The main products of Myanmar Rui Xin Shoes Company Limited is produced all kind of men, woman and kid shoes and export to America and European countries. The production rate of Myanmar Rui Xin Shoes Company Limited is show in appendix 6. Total production is produced (485,00) shoes pair in first operation year. The production rate was estimated for 10-year operation period.

Myanmar Rui Xin Shoes Company Limited Myanmar Rui Xin Shoes Company Limited purchase electricity from government power source. The plant installed 800 kVA transformers, 400 KVA diesel generators for supply electricity. The electrical power consumption of the factory is (650,00) KWh/year. Diesel fuel for diesel generator was bought from outside supplier. Therefore, the fuel storage area is not set individual. The amount of diesel fuel usage is 4500 gal per year. Fuel boilers are not currently in use.

The work force during operation for the entire plant is 800 members and foreigner labor is about (15) person. Total operational workforce is (815) person. The working hours for the worker from the plant were (8) hrs from Monday to Friday and only Saturday for (4) hr. The operation day of factory is generally (288) day/year.

Myanmar Rui Xin Shoes Company Limited solid wastes mainly comprised of rubber cuts and fabric cut. The general waste from Myanmar Rui Xin Shoes Company Limited is discharged by calling solid waste collector such as Hlaing Thar Yar Township City Development Committee. Systematic management of these solid wastes is of importance as mismanagement of the waste will lead critical occupational hazard including fire hazard.

Water supply for Myanmar Rui Xin Shoes Company Limited is obtains mainly from the tube well and storage with water tank. Water is extracted from one tube well usage is hand washing, bathing, toilets and kitchen. Tube well water sample is collected and analyzed at ISO Tech laboratory. The water has no color and odor. The pH of the water is 7.9, which is well within the limit of acceptable WHO drinking water value 6-9. The turbidity of the tube well water is 4 NTU. Iron (0.36, mg/l) is slightly greater than the acceptable limit of 0.3 mg/l (WHO) drinking water guideline. Tube well water usage is (1,400,000) gal/year. Drinking water for labor will be supply from outside supplier.

Waste water from Myanmar Rui Xin Shoes Company Limited of is only domestic waste water. Water is extracted from one tube well usage is hand washing, bathing, toilets and kitchen for labor. There has not water consumption in the production process. Therefore, industrial waste water is not generated. The plant has no water treatment unit. Factory kitchen and labor house are discharge as domestic waste water. This waste water is discharge to roadside drain. The sewage water is generated from factory toilet and discharged by calling solid waste collector such as Hlaing Thar Yar Township City Development Committee. The location of waste water collection from factory drain is shown in following figure.

One sample of waste water was collected at latitude (16°52'20.05"N) and longitude (96° 0'5.98"E) and analyzed at ISO TECH laboratory. The sampling point was the outlet of the drain of the plant. The pH of the water is 8.6. The suspended solid from the water can be seen about 188 mg/l, dissolved solids 270 mg/l. The BOD and COD result of waste water is in the range of NEQG about 24 and 64 mg/l.

The main sources of air emission from the project area are the operation of the machine operation, diesel generator and vehicles moment and human activities. These activities can be generating the few amounts of carbon dioxide and carbon monoxide. The cutting process and raw material storing can be generating particulate matter. Exhaust Fan are installed to get pleasure ventilation for labor.

CO, CO_2, NO_2, SO_2, O_3, PM_{10} and $PM_{2.5}$ are measured at the proposed project site. The site is in operation stage and the collected data shown below are due to the CMP activities.

Table B. Result of Air Quality

No	Parameters	Results		Avg. Period	Guideline value (NEQG)	Averaging Period
		Observed average value	Converted value			
1	Nitrogen dioxide NO_2	17 ppb	78.9(μg/m^3)	1-hour*	40 (μg/m^3) 200 (μg/m^3)	1-year 1-hour
2	Ozone (O_3)	23ppb	45(μg/m^3)	8-hour	100 (μg/m^3)	8-hour daily maximum
3	Particulate matter PM_{10}	23 (μg/m^3)		24-hour	20 (μg/m^3) 50 (μg/m^3)	1-year 24-hour
4	Particulate matter $PM_{2.5}$	15 (μg/m^3)		24-hour	10 (μg/m^3) 25 (μg/m^3)	1-year 24-hour
5	Sulfur dioxide SO_2	2 ppb	5.24(μg/m^3)	24-hour	20 (μg/m^3) 500 (μg/m^3)	24-hour 10 minute
6	Carbon dioxide CO_2	255 ppm		24-hour	-	
7	Carbon monoxide CO	3ppb		24-hour	-	
8	Relativity humidity	77 %		24-hour	-	
9	Temperature	26 °C		24-hour	-	24-hour
10	Win Direction	36°		24-hour	-	24-hour
11	Win speed	4.00 Kph		24-hour	-	24-hour

The noise level for the proposed factory was measured by TES- 52A Advanced Sound Level Meter. The measurement point is factory compound. According to the result, factory of noise level is within limit of NEQG. Since the place for measuring noise levels is a factory which produces sewing machine, the noises produced are governed by the sound of the machine operated and by the workers.

Table C. Average Values of Noise Level (dB) at the sampling point

Noise Sample Point	**Date/Time (31-8-2021)**	**Observed Noise Level (MeanValue) (dBA)**
NS	9: 00 -9:59	58.7
	10: 00-10: 59	47.1
	11: 00-11: 59	60.5
	12: 00-12: 59	50.3
	13: 00-13: 59	61.7
	14: 00-14: 59	56.8
	15: 00-15: 59	49.2
	16: 00-16: 59	54.9

4. Current condition of Surrounding Environment

Socio-economic factors are lifestyle components and measurements of both financial viability and social standing. They directly influence social privilege and levels of financial independence. Factors such as health status, income, environment and education are studied by sociologists in terms of how they each affect human behaviors and circumstances. Socio-economic data are reference based on data from the township profile of 2014 National Census Data.

The project area is located in Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The total number of households in Hlaing Thar Yar Township is 76,984 only. All the villages have significantly higher rate of population per household compared to that of Hlaing Thar Yar Township. The majority of the households in Hlaing Thar Yar Township are living in wooden houses (60.9%) followed by households in bamboo houses (15.3 %).

In Hlaing Thar Yar Township, 33.4 percent of the employed persons aged 15-64 are craft and related trades workers and is the highest proportion, followed by 27.1 percent in services and sales workers. Analysis by sex shows that 35.3 percent of males and 29.7 percent of females are craft and related trades workers. In Yangon Region, 22.9 percent are craft and related trades workers and 23.7 percent are in services and sales workers.

The study area is located in Hlaing Thar Yar Township of Yangon Region. The proposed factory is currently occupied by near villages, cultivated land. Therefore, the topography is no major differences in altitude. The climate of factory area is located in tropical wet and dry climate.

Biodiversity includes two portions, which are the study of vegetation (flora) and the study of living animals (fauna). There is no natural vegetation; wildlife and deforestation in project affect area within 1 kilometer.

5. Impact Assessment and Mitigation Management

Table D. Environmental Aspect and Impact

Sr.	Activity List	Aspect	Impact
1	Receiving	Overweight lifting	Injury from overweight lifting
		Packing waste	Solid waste generation

2	Injection to Shoe heel mold	Operation of molding Using air compressor	Solid waste generation, Noise
3	Nylon Fabric Cutting	Operation of cutting machine	Injury from cutting machine, Solid waste generation
2	Fabric and heel Adhesion	Contact with adhesive	Chemical hazard
4	String adding	Manually with labor	Solid waste generation
5	Finishing, Tag & Code	Pieces of thread cuts, needle cuts	Solid waste generation, Injure by needle
6	Packing	Packing waste	Solid waste generation
7	Storage	Pieces of plastic	Solid waste generation
		Overweight lifting	Injury from overweight lifting

Table E. Mitigation Measures Management

IMPACTS	Impact Source	Mitigation
Fire hazard	-Smoking in prohibited area	1. Strictly prohibit smoking within factory compound 2. Clearly define and notify emergency exits 3. Passage ways must always be kept clean and clear 4. Regularly check and refill fire extinguishers 5. Exercise fire drill regularly
Solid Waste	- Pieces of nylon fabric - Pieces of thread cuts, needle cuts - Packing waste - Plastic waste - General waste	1. Cleaning continuous and regularly 2. Packing nylon fabric waste in bags 3. Stacking waste bags systematically 4. Calling waste collector regularly 5. Providing adequate dust bins

Physical hazard	-Injury from overweight lifting - Contact with cutting machine - Injury by needle	1. Using necessary lifting and carrying aid apparatus and machinery 2. Using metal hand gloves for cutting machine operators 3. Installing needle guards
Chemical hazard	- Contact with adhesive	1. Providing hand gloves, mask and google for workers working in fabric adhesion process 2. Educating fabric adhesion workers about hazard of the process and usage of PPE 3. Supervising and regular inspection of the use of PPE
Noise	- Using air compressor - Operation machine	1. Carrying out regular maintenance works for all the equipment 2. Providing adequate ear muffs for workers 3. Regular inspection and supervision of the usage of ear muffs for the workers working at high noise areas
Emission dust	- Operation of fabric settling	1.Wearing necessary PPE (goggle, gloves) 2. Regular inspection and supervision of the usage of the masks for the workers working at odor producing areas 3. Installation of a particle monitoring meter 4. Temporarily stopping the works if PM 2.5 and PM 10 emission reached above 50 µg/m^3 in a day 5. Cleaning with dust collector

6. Environmental and Social Management Sub- Plan

An Environmental Management Team will be established for successful implementation of the environmental management plan. Myanmar Rui Xin Shoes Company Limited is responsible for complete implementation of the EMP and will carry out environmental

monitoring programme which is part of the EMP. The objectives of the Environmental Management Team are:

(a) To assure systematic implementation of EMP throughout project life, and

(b) To monitor and review effectiveness of EMP regularly

Table F. Environmental Management Team

Sr.	Representative	Number
1	Director	1
2	General Manager	1
3	Factory Manager	1
4	HR Manager	1
5	Production Manager	1
6	Supervisor	1

This plan describes the provisions of training to ensure that any people working for or on behalf of Myanmar Rui Xin Shoes Company Limited involved in the activities covered by the scope of the EMP are properly trained to carry out their assigned duties in a manner that will not cause deviation from company environmental policy.

This procedure applies to EMP related training for staff and any persons working for or on behalf of Myanmar Rui Xin Shoes Company Limited involved in the activities covered by the scope of the EMP Myanmar Rui Xin Shoes Company Limited will ensure that all people performing tasks for or on behalf of the organization have had an appropriate assessment for their potential to cause a significant environmental impact and the associated competence required.

Table G. Training Requirement

Sr.	Training Topics	Trainee	Duration
1	OSH Training	Supervisors, Operators, Workers and Security	40 hours
2	EMP Training	Environmental management team	40 hours
3	Emergency Response Training	All employee	16 hours
4	First Aid Training	All employee	20 hours

5	Fire Fighting Training	All employee	40 hours

7. Public Consultation and Disclosure

Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The project will include industrial zone management committee meetings; Compliance with departmental inspections; other departmental officials in the vicinity of the project; Special emphasis is placed on building good relationships with other business people and the public.

Departmental officials, officials from the Zone Management Committee; Regular consultations will be held with the people in the area and public opinion will be taken to ensure that there is no harm to the environment and the socio-economy.

The factory will have a suggestion box to provide public feedback on the project at all times. The guidelines of the Industrial Zone Committee and relevant departments will always be followed. Project announcements will be made in real time at the Industrial Zone Committee Office and the factory notice board.

CSR activities of Myanmar Rui Xin Shoes Company Limited are managed to develop socio-economic and humanity life. The net profit of this business is used for corporate social responsibility and table is shown in below. CSR activities of Myanmar Rui Xin Shoes Company Limited are as shown in appendix 8.

Table H. CSR Activities Myanmar Rui Xin Shoes Company Limited

No	Plan	Percent of CSR budgets
1	Supporting for education	20%
2	Supporting for road preparing	20%
3	Supporting for township development	20%
4	Supporting for environmental conservation and cleaning	20%
5	Supporting for human care and rescue	20%

8. Conclusions and Recommendations

Six key environmental impacts can be occurred from the project objectivities. Myanmar Rui Xin Shoes Company Limited should be reduced and monitored on these environmental impacts. On the other hand, there will be left to be investigated positive impacts such as Job Opportunities and surrounding villages can be developed by CSR program of the factory. The net profit 2% of this business is used for corporate social responsibility.

Environmental Management Plan
For
Myanmar Rui Xin Shoes Company Limited

1 INTRODUCTION

1.1 Project Background

Myanmar Rui Xin Shoes Company Limited is a Private Company Limited incorporated under the Myanmar Companies Act. Myanmar Rui Xin Shoes Company Limited is a specialized company in Registration Department (DICA) with registration Number (121749858) and certificate of incorporation is shown in appendix 3. Investment type of Myanmar Rui Xin Shoes Company Limited is 100% foreign and got done MIC permit and shown in appendix 3. Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The owner of the project requested an opinion from the Environmental Conservation Department (Yangon) to prevent environmental and socio-economic impacts and to carry out an environmental protection process. Environmental Conservation Department (Yangon) made a comment to submit the environmental management plan and reply letter is shown in figure 1. Therefore, This Environmental Management Plan (EMP) was prepared by Departmental leaders of Myanmar Rui Xin Shoes Company Limited factory company organization itself. This Environmental Management Plan has been done with reasonable skills, care and diligence in accordance with the stipulations of Environmental Impact Assessment Procedure (Paragraph 76-82). Myanmar Rui Xin Shoes Company Limited factory EMP team consists of the core team and sector-wise participants.

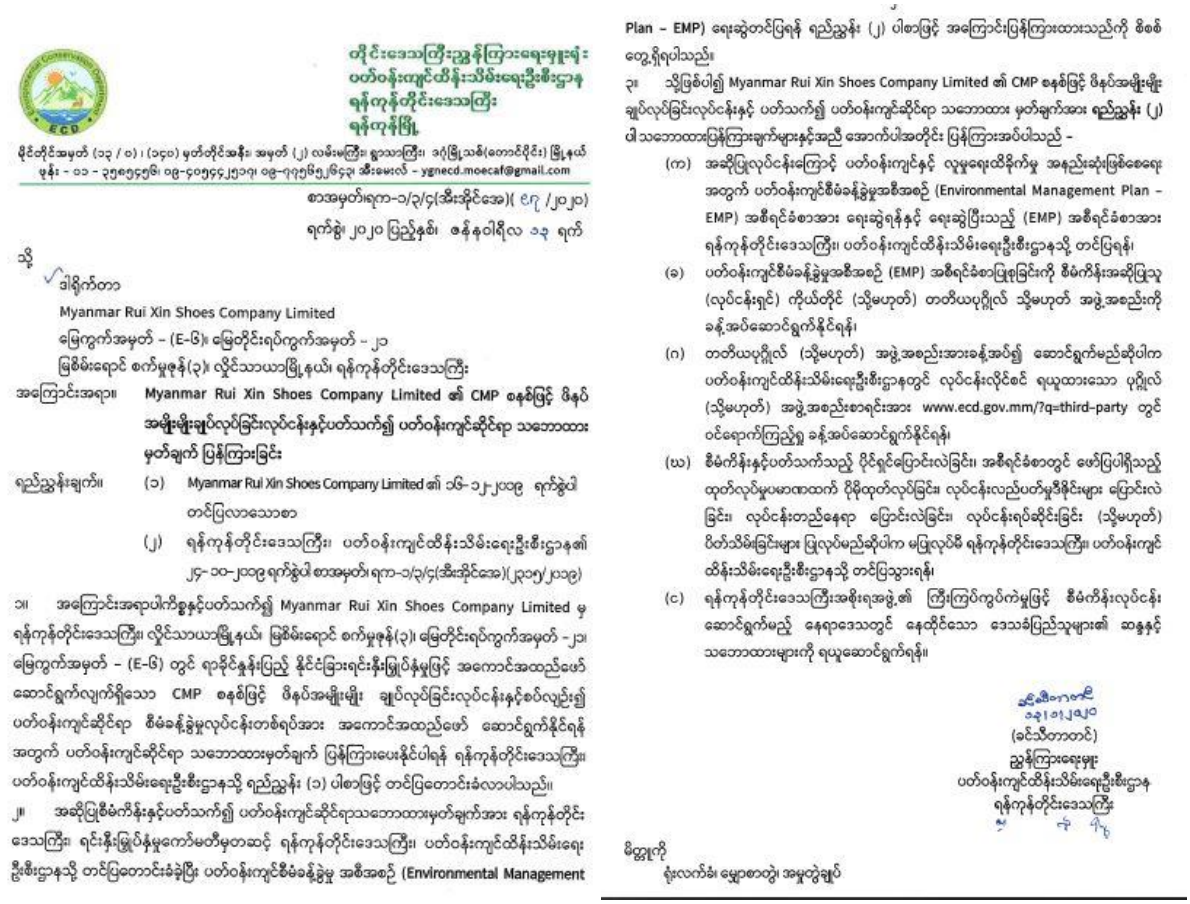


Figure 1. Environmental Conservation Department (Yangon) Reply letter

Table 1. List of the factory data of Myanmar Rui Xin Shoes Company Limited

No.	Project Data	Description
1	Company Name	Myanmar Rui Xin Shoes Company Limited
2	Project Type	Manufacturing of shoes on CMP basis
3	Location	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
4	Investment type	Foreign
5	Investment amount and period	US$ (3.680) million for 15 year
6	Construction started year/finished year	2019/2020
7	project area	(5.090) acres

5	Office Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar

Table 2. Project Owner data of Myanmar Rui Xin Shoes Company Limited

Project Owner data	**Description**
Project Owner Name	Mr. Pan Yuxiang
Citizen	China
Position	Director
Office Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
Contact Phone No.	09- 890092014/ emp.reporting.to.ecd@gmail.com

1.2 PROJECT OBJECTIVE

The project involves the production of a wide range of garments using the CMP system, which produces high-quality products of international standard by hand to international orders, in order to increase workers' skills. Just as the project owner, so does the state to receive relevant sector taxes and foreign currency. To provide employment opportunities to the people around the project; and 2% of business profits to support public development that follow CSR policy. As a result of this investment, the socio-economic development of the area around the factory can be improved and many employment opportunities can be created.

1.3 PRESENTATION OF THE ENVIRONMENTAL TEAM OF MYANMAR RUI XIN SHOES COMPANY LIMITED FACTORY

Myanmar Rui Xin Shoes Company Limited was arranged for EMP study and reporting for Myanmar Rui Xin Shoes Company Limited factory. EMP team consists of the following team and sector-wise participants. This Environmental Management Plan has been done with reasonable skills, care and diligence in accordance with the stipulations of Environmental Impact Assessment Procedure (Paragraph 76-77-82). Myanmar Rui Xin Shoes Company Limited factory EMP team consists of the core team and sector-wise participants.

Table 3. EMP Team Member

Sr.	Name	Position	Area of Responsibility
1	U Kaung Min Khant	Factory Manager	Reporting and Public relation
2	U Pyae Son Win	Factory Supervisor	Reporting Arrangement
3	Daw Thu Zar	HR Manager	Data Collection
4	U Zaw Zin Aung	Operation Supervisor	Data Collection
5	Daw Nam Ohmm Khan	Customer service and translator	Data Collection

Table 4. Contact Data of Myanmar Rui Xin Shoes Company Limited

Company Name	Myanmar Rui Xin Shoes Company Limited
Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
Ph.no/E-mail	09- 977399258/ emp.reporting.to.ecd@gmail.com

2 COMMITMENT

This Environmental Management Plan (EMP) for Myanmar Rui Xin Shoes Company Limited was prepared by company organization itself. This Environmental Management Plan has been done with reasonable skills, care and diligence in accordance with the stipulations of Environmental Impact Assessment Procedure (Paragraph 76-77-82). I hear by signed this report on behalf of the Myanmar Rui Xin Shoes Company Limited to certify that all the information in it is true and convincing to the best of our knowledge.

(a) The accuracy and completeness of the EMP;

(b) That the EMP has been prepared in strict compliance with applicable laws including the EIA Procedure; and

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

(d) Improving the environmental management plan approved during the period of operation; Depending on the systems and business requirements, instructions will be followed to make better environmental management plans.

(e) If the project proponent wants to amend the environmental management plan, we will get the approval and amendment.

(f) When the project is completed and closed, it will minimize the impact on the community. In the event of an accident, minimize the risk; Socio-economic cooperation plans will be made.

No	List of Commitment	Commitment description	Mention chapter
1	The accuracy and completeness	The environmental management plan is rigorous and comprehensive.	All chapter
2	strict compliance with applicable laws	That the EMP has been prepared in strict compliance with applicable laws including the EIA Procedure; and That the Project will at all times comply fully with the commitments, mitigation measures, and plans in the EMP Report	Chapter 2(Commitments), 3 (legal requirement)
3	Improving the environmental management plan approved during the period of operation	Improving the environmental management plan approved during the period of operation; Depending on the systems and business requirements, instructions will be followed to make better environmental management plans.	Chapter (8) Management and Monitoring plan
4	Amending the environmental management plan	If the project proponent wants to amend the environmental management plan, he/she will get the approval and amendment	Chapter 3 (legal requirement)
5	Factory decommissioning	When the project is completed and closed, it will minimize the impact	Chapter 10Environmental And Social Management Sub- Plan

		on the community. In the event of an accident, minimize the risk; Socio-economic cooperation plans will be made.	

3 LAW AND LEGAL REVIEW

3.1 COMPANY ENVIRONMENTAL POLICY

Myanmar Rui Xin Shoes Company Limited is follow the company environmental policy.

- To be aware of environmental responsibilities, legal issues, and regulations, and to work openly.
- To describe the integration of environmental protection into business strategy.

3.2 LAW AND LEGAL REQUIREMENTS

The Laws, Rules and Procedures Should Be Compliance From Myanmar Rui Xin Shoes Company Limited Is As Follows.

1. Myanmar Environmental Policy
2. Environmental Impact Assessment Procedures
3. Environmental Conservation Law (2012)
4. National Quality (Emission) Guideline
5. Employment And Skill Development Law (2013)
6. Factory Act (1951)
7. Minimum Wages Law (2013)
8. Myanmar Fire Bridgate Law (2015)
9. Occupational Safety And Health Law (2019)
10. The Labour Organization Law (2011)
11. The Settlement Of Labour Dispute Law (2012)
12. The Leave And Holiday Act (1951)
13. The Prevention Of Hazard From Chemical And Related Substances Law (2013)
14. The Control Of Smoking And Consumption Of Tobacco Product Law (2006)

3.3 Myanmar Environmental Policy

The Constitution of the Republic of the Union of Myanmar stipulates the Government to protect and conserve the natural environment and implies every citizen of Myanmar to assist the Government in environmental conservation.

National Environmental Policy (1994) is the basis for the integration of environmental consideration into development in Myanmar which proclaims the Government's commitment to sustainable development. It highlights the integration of environmental considerations with development process for a better quality of life of all citizens. The State has the responsibility to preserve its natural resources in the interest of present and future generations and that environmental protection should always be the primary objective in seeking development.

The Myanmar Agenda 21 was developed in 1997 for all-natural resource management and environmental conservation work in pursuit of activities relating to biodiversity conservation.

National Sustainable Development Strategy (NSDS) prepared in 2009 includes three goals: (i) sustainable management of natural resources; (ii) integrated economic development and (iii) sustainable social development. One of the Government's main priorities is to mainstream sustainable environmental considerations into the national development planning and to develop an effective safeguards system to prevent the social and environmental impacts associated with rapid economic growth.

3.4 Environmental Impact Assessment Procedures

Former MOECAF developed the Environmental Impact Assessment Procedures which were approved in December 2015. MOECAF is already applying the main principles of EIA Procedures before their approval. Under the Foreign Investments Rules, the environmental impact assessment and social impact assessment reports are needed to be attached together with the investment proposal. Capital intensive investment projects and designated businesses need to be assessed by the MOECAF in terms of environmental impacts and compliance. Under the EIA procedures, all projects undertaken in Myanmar that can cause significant adverse impacts are required to undertake an IEE or EIA and to obtain an Environmental Compliance Certificate (ECC).

3.5 ENVIRONMENTAL CONSERVATION LAW

Myanmar enacted the ***Environmental Conservation Law*** on 30th March, 2012 as Pyidaungsu Hluttaw Law No.9/2012. There are eight objectives of the law which stress on (i) implementation of Myanmar National Environmental Policy, (ii) integration of environmental conservation in sustainable development, (iii) emerging healthy and clean environment and conserving natural and cultural resources, (iv) reclaiming ecosystems, (v) sustainable and beneficial use of natural resources, (vi) promoting public awareness and cooperation, (vii) promoting international cooperation, (viii) and cooperation with government departments, INGOs, NGOs and individuals for the matters of environmental conservation. There are 42 paragraphs in 14 sections of the law.

Table 5. Relevant Stipulations in Environmental Conservation Law

Sr.	Paragraph	Stipulation
1	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.
2	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.
3	16	A person or organization operating business in the industrial estate or business in the special economic zone or category of business stipulated by the Ministry: (a) is responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste; (b) shall contribute the stipulated users' charges or management fees for the environmental conservation according to the relevant industrial estate, special

		economic zone and business organization; (c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, special economic zone or business.
4	39 (b)	If any terms and conditions of environmental conservation contained in the prior permission for a business is not complied with, the power to cancel the issued license, permit or register or suspend it for a limited period is granted for relevant government department, or government organization.

3.6 NATIONAL QUALITY (EMISSION) GUIDELINE

National Environmental Quality (Emission) Guidelines (NEQG) for waste water and noise levels are referenced in this EMP report. Followings are the environmental standards and guidelines adopted by EMP team.

Table 6. Environmental Standards for Wastewater Discharge (NEQG)

Sr.	Parameter	Unit	Guideline Value
1	5-day BOD	mg/l	50
2	COD	mg/l	250
3	Oil and grease	mg/l	10
4	pH	Standard unit	6-9
5	Temperature increase	°C	<3
6	Total coliform bacteria	100 ml	400
7	Total nitrogen	mg/l	10
8	Total phosphorus	mg/l	2
9	Total suspended solids	mg/l	50

Table 7. Noise Level Standard (NEQG)

Receptor	One Hour LAeq (dBA)	
	Daytime (7:00-22:00) (10:00-22:00 for public holidays)	Nighttime (22:00-7:00) (22:00-10:00 for public holidays)

Residential, institutional, educational	55	45
Industrial, commercial	70	70

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Table 8. Air Quality Standard (NEQG)

Sr.	Parameter	Averaging Period	Guideline Value µg/m^3
1	Nitrogen dioxide	1-year 1-hour	40 200
2	Ozone	8-hour daily Maximum	100
3	PM_{10}	1-year 24 hour	20 50
4	$PM_{2.5}$	1-year 24 hour	10 25
5	Sulfur dioxide	24-hour 10-minute	20 500

3.7 EMPLOYMENT AND SKILL DEVELOPMENT LAW

With the objectives to facilitate employment which is appropriate to the age and ability of the job seeker, to help workers obtain employment and to provide stability of employment and skills development for employees, to help employers obtain appropriate employees, the Employment and Skill Development Law came into force in late 2013. The law stipulates the facts required to be included and specified in the employment agreement between the employer and employee.

The law stipulates that a company must enter into written employment contracts with Myanmar citizens and foreign staff within 30 days of employment. A Standard Employment Contract is issued which is applicable to all employees, public and private, and shall be deemed to apply in all cases where the employee's written contract is silent. The Standard Employment Contract is largely provided for convenience. It allows employers and employees to vary the terms of the Standard Employment Contract so long as the variation is not in contravention of Myanmar's labor and employment laws.

Furthermore, an employment agreement may address issues such as job description, place of employment, working hours, wages and benefits, probation period, termination, and duration of the contract. Employee performance and work standards may be inserted into the employment contract too.

3.8 FACTORY ACT

The act outlines provisions for working hours for a week, interval between continuous working hours, maximum working hours per day, and working days per week. It also stipulates maximum overtime working hours, overtime wage, worksite safety and health measures as well as welfare measures for workers. Welfare measures includes washing and cleaning facilities, seats first aid boxes, factory clinic, recreation center and canteen and child nursery center.

3.8.1 Working hours

- Shall not exceed 8 working hours per day or 44 hours per week
- Shall not exceed 48 hours per week for the work which has to be done continuously
- There must be a minimum 30 minutes interval after each 5 working hours
- The combined working hours and interval time shall not exceed 10 hours per day
- The working days shall not exceed 6 days per week
- There must be one day holiday each week (Sunday). If Sunday service is required, there must be a substitution of another day.

3.8.2 Overtime

- Shall not exceed more than 16 hours per week or, for continuous work, 12 hours per week
- The overtime wage shall be calculated as double the basic wage
- Permission of Factories and the General Labour Law Inspection Department must be obtained for an approval of a constant overtime policy.

3.8.3 If working on days-off

- Comply in accordance with the overtime and general working hour provisions
- There must be substituted an alternative day-off.

3.8.4 Calculation of overtime wages

- For salary earners: Overtime wage per hour = {(salary x 12 month) / 52 week x 44 (48) hrs} x 2
- For daily wages worker: Overtime wage per hour = {(daily wage x 6 day) / 44 (48) hrs} x 2
- Piece-work labourers: Overtime wage per hour = {(daily average wage x 6 day) / 44 (48) hrs} x 2

3.8.5 Worksite Safety and Health Measures

- The factory must be kept clean and the workspace must be situated away from drains, latrines or other things which create a bad or unhealthy smell.
- There must be proper ventilation, light and heat.
- There must be no dust or smoke in the hall or factory.
- There must be clean drinking water in proper places for all workers.
- Population of workers must not be dense and there must be sufficient light.
- The latrines must be in suitable places.
- The generators and other auxiliary units must be kept undercover.
- There must be arrangements made for any emergency cut out of electricity service.
- In weaving or spinning machines, any female workers and any children must not be allowed to handle.
- Females and young workers are not allowed to lift heavy loads.
- Floors, stairs and paths must be well-built and hand rails are to be built and necessary covers must be placed.
- In every factory, the arrangement of escape routes and fire alarms must be kept.

3.8.6 Welfare

- There must be washing and cleaning facilities for workers.
- There must be sufficient seats for workers if a chance is given for sitting.
- There must be sufficient First Aid Boxes.
- If the workers in a factory exceed 250, doctors or nurses in clinic are to be appointed.
- If the workers of a factory exceed 100, recreation centers and canteens are to be kept for food.
- For factories with over 50 female workers, there must be a child nursery center available for the children under 6 year of age.

3.9 MINIMUM WAGES LAW

3.9.1 Duties of the Employer

- 3,600 kyats per 8-hour working day (450 kyat/hour) shall be the minimum wage paid to skilled employees of companies with more than 15 employees in all industries, throughout all of Myanmar.
- 50% of the minimum – 1,800 kyats per 8-hour working day (225 kyats/hour) – may be paid to completely unskilled newly hired workers engaged in a training/induction program up to a maximum of 3 months.
- 75% of the minimum – 2,700 kyats per 8-hour working day (338 kyats/hour) – may be paid to newly hired employees during their 2nd 3 months of employment, regarded as a 'probationary period'.

3.9.2 Penalty for violation

- If anybody violates the law they may be punished with a maximum of one year imprisonment or with a maximum of five hundred thousand kyats fine or with both
- If anybody violates the rules and orders they may be punished with a maximum of three months' imprisonment or with a fine or with both.

3.10 Myanmar Fire Brigade Law

Myanmar Fire Bridget Law was enacted in 13th waning of Taboung, 1376 M.E (17, March, 2015). The objectives of this law are as follows:

i. To prevent destruction of State-owned property, private property, cultural heritage and the lives and property of the public by fire and other natural disaster;
ii. To organize the fire brigade systematically and to train members of the fire brigade;
iii. To carry out extinguishing fire, prevention and search and rescue when fire, other natural disaster, epidemic disease or any kind of sudden disaster occurs;
iv. To educate, organize and incite extensively so as to achieve public cooperation when any disaster occurs;
v. To participate and help, if necessary, for the State safety, peace of the public and the rule of law.

3.11 OCCUPATIONAL SAFETY AND HEALTH LAW

The objectives of this Law are given hereunder:

a. to implement Occupational Safety and Health matters effectively in the respective Industries/Businesses;
b. to determine the duties of relevant persons applicable under this Law including Employers and Workers to lessen and mitigate occurrence of Occupational Diseases and Occupational Accidents;
c. to cause relevant persons applicable under this Law, Employers and Workers to take precaution and prevention against occupational hazards and Occupational Diseases;
d. to improve the productivity and health of Workers by preventing the occurrence of Occupational Accidents and Occupational Diseases for their safety;
e. to create Workplaces that are safe and good for health by prescribing the Occupational Safety and Health standards relevant to the Union's status after considering international and regional standards; and
f. to support and help research activities carried out for the development of Occupational Safety and Health matters.

3.12 THE LABOUR ORGANIZATION LAW

The objective of this law is to protect the rights of the workers, to have good relations among the workers or between the employer and the worker, and to enable to form and carry out the labor organizations systematically and independently.

The Law emphasized for the employer is as follows.

1. The employer shall recognize the labor organizations of his trade as the organizations representing the workers.
2. The employer shall allow the worker who is assigned any duty on the recommendation of the relevant executive committee to perform such duty not exceeding two days per month unless they have agreed otherwise. Such period shall be deemed as if he is performing the original duty of his work.
3. The employer shall assist as much as possible if the labour organizations request for help for the interest of his workers. However, the employer shall not exercise any acts designed to promote the establishment or functioning of labour organizations under his domination or control by financial or other means.

3.13 THE SETTLEMENT OF LABOUR DISPUTE LAW

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.

In any trade in which more than 30 workers are employed, the employer, with the view to negotiating and concluding collective agreement, shall:

(a) if there is any labor organization, form the Workplace Coordinating Committee with the view to make a collective bargaining as follows:

(i) two representatives of workers nominated by each of the labour organizations;

(ii) an equivalent number of representatives of employer;

(b) if there is no labor organization, form the Workplace Coordinating Committee as follows:

(i) two representatives of workers elected by them;

(ii) two representatives of employer.

3.14 THE LEAVE AND HOLIDAY ACT

3.14.1 Causal Leave (6) days

- Casual leave of 6 days with wages is to be provided
- Causal leave can be taken a maximum of 3 days at a time except in special cases
- Causal leave cannot be joined with any other leave
- Leave will be cancelled if it has not been used within a year

3.14.2 Earned leave (10) days

- For continuous service of 12 months and above, 10 days of ‘earned leave’ shall be entitled
- If the service day is not 24 days 1-day deduction from earned Leave is made; –
- Can be accumulated for up to 3 years.

3.14.3 Medical Leave (30) days

- Workers are entitled to 30 days of medical leave with full pay if 6 months service has been completed

- If 6 months service has not been completed, 'leave without pay' can be granted for medical needs
- Medical leave can be joined with Earned Leave
- If not taken within a year, medical leave is void or cancelled.

3.14.4 Maternity leave

- Workers requiring it are entitled to 6 weeks maternity leave before confinement and at least (8) weeks after confinement
- Can be entitled jointly with medical leave.

3.14.5 Public Holidays (21) days

- Workers can enjoy time off with full pay.
- If work is given on a public holiday, twice the rate of regular wages is required.

3.15 THE PREVENTION OF HAZARD FROM CHEMICAL AND RELATED SUBSTANCES LAW

Pyidaungsu Hluttaw Law (No, 28) The 5th Waning of Wagaung 1375 M.E (26th August, 2013and the Pyidaungsu Hluttaw hereby enacts Law on Prevention of Hazard from Chemical and Related Substances Law. This Law shall apply to all existing or new standard within the Union on the date of entry into force of this Law. The highlight of this Law is as follows:

(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.

3.16 THE CONTROL OF SMOKING AND CONSUMPTION OF TOBACCO PRODUCT LAW

This Law was enacted in 2006. The objectives of the Law are:

(a) To convince the public that health can be adversely affected due to smoking and consumption of tobacco product and to cause refraining from the use of the same;

(b) To protect from the danger which affects public health adversely by creating tobacco smoke- free environment;

(c) To obtain a healthy living style of the public including child and youth by preventing the habit of smoking and consumption of tobacco product;

(d) To uplift the health, economy and social standard of the public through control of smoking and consumption of tobacco product;

(e) To implement measures in conformity with the international convention ratified by Myanmar to control smoking and consumption of tobacco product.

3.17 THE ENVIRONMENTAL AND INTERNATIONAL CONVENTIONS, TREATIES AND AGREEMENTS RELATED TO THE MANUFACTURING OPERATIONS

We will comply with environmental and international conventions, treaties and agreements related to the manufacturing operations of this facility.

International conventions, treaties and agreements	**Signed date**	**Activation date**	**Member date**	**Cabinet activation date**
United Nations Framework Convention on Climate Change, New York, 1992 (UNFCCC)	11-6-1992	25-11-1994 (Ratification)		41/94 9-11-1994
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985		24-11-1993 (Ratification)	22-9-1994	46/93
Montreal Protocol on		24-11-1993 (Ratification)	22-9-1994	46/93

Substances that Deplete the Ozone Layer, Montreal, 1987				
London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London, 1990		24-11-1993 (Ratification)	22-9-1994	46/93
ASEAN Agreement on Transboundary Haze Pollution	10-6-2002	13-3-2003 (Ratification)		7/2003(27-2-2003)
Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal		6-4-2015 (Ratification)		

4 PROJECT DESCRIPTION

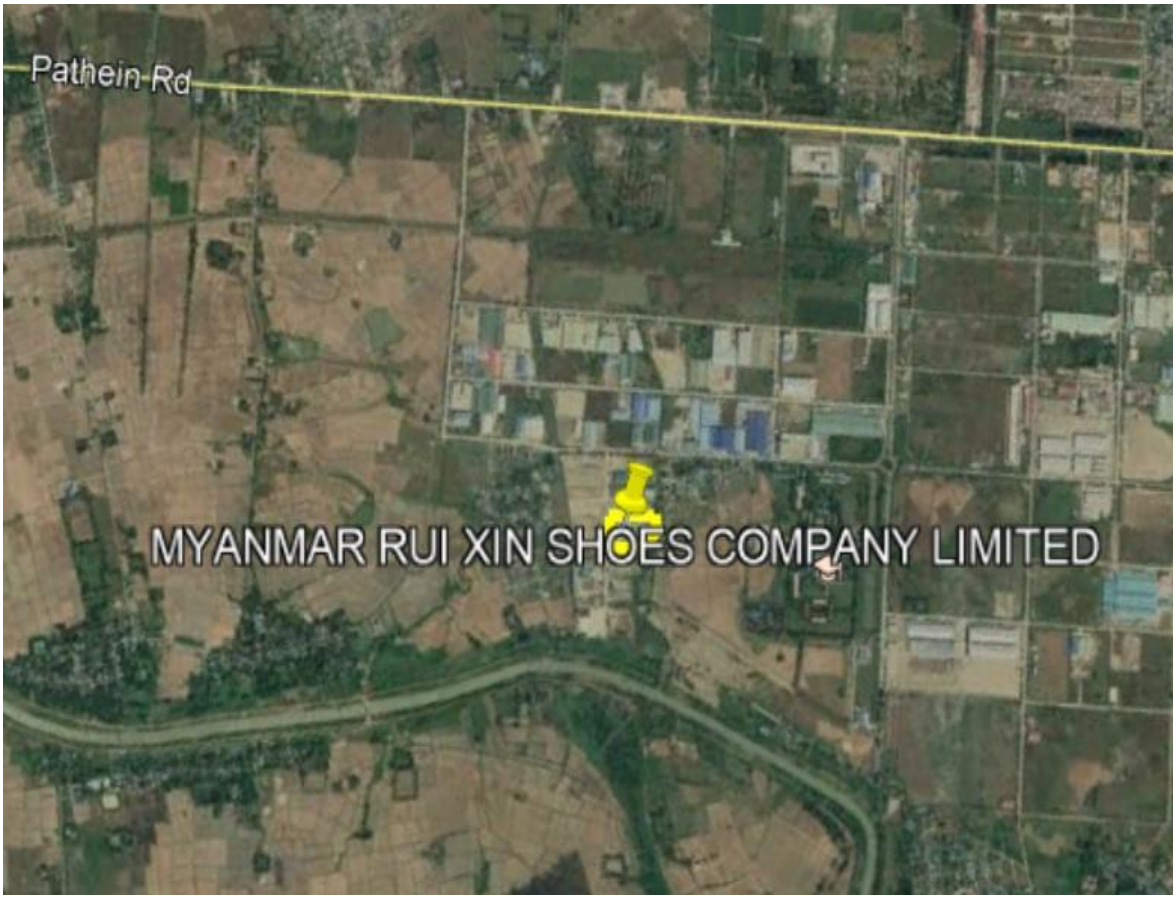
Myanmar Rui Xin Shoes Company Limited is a Private Company Limited incorporated under the Myanmar Companies Act. Myanmar Rui Xin Shoes Company Limited is a specialized company in Registration Department (DICA) with registration Number (121749858). The company is located at Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The list of Directors of the project owner is shown in following table. The estimated investment for the Myanmar Rui Xin Shoes Company Limited is US$ (3.680) million for 15 years.

Table 9. List of the Project Data of Myanmar Rui Xin Shoes Company Limited

No.	Project Data	Description
1	Company Name	Myanmar Rui Xin Shoes Company Limited
2	Project Type	CMP system with variety of shoes
3	Location	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
4	Project Owner	Mr. Pan Yuxiang
5	Office Address	Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar
7	Investment amount and period	US$ (3.680) million for 15 year

4.1 Project Location

Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The project area is (5.090) acres of land and it include office, factory building, security gate, raw materials storage area, canteen and product storage area. The Factory construction operation was started in 2019 to 2020.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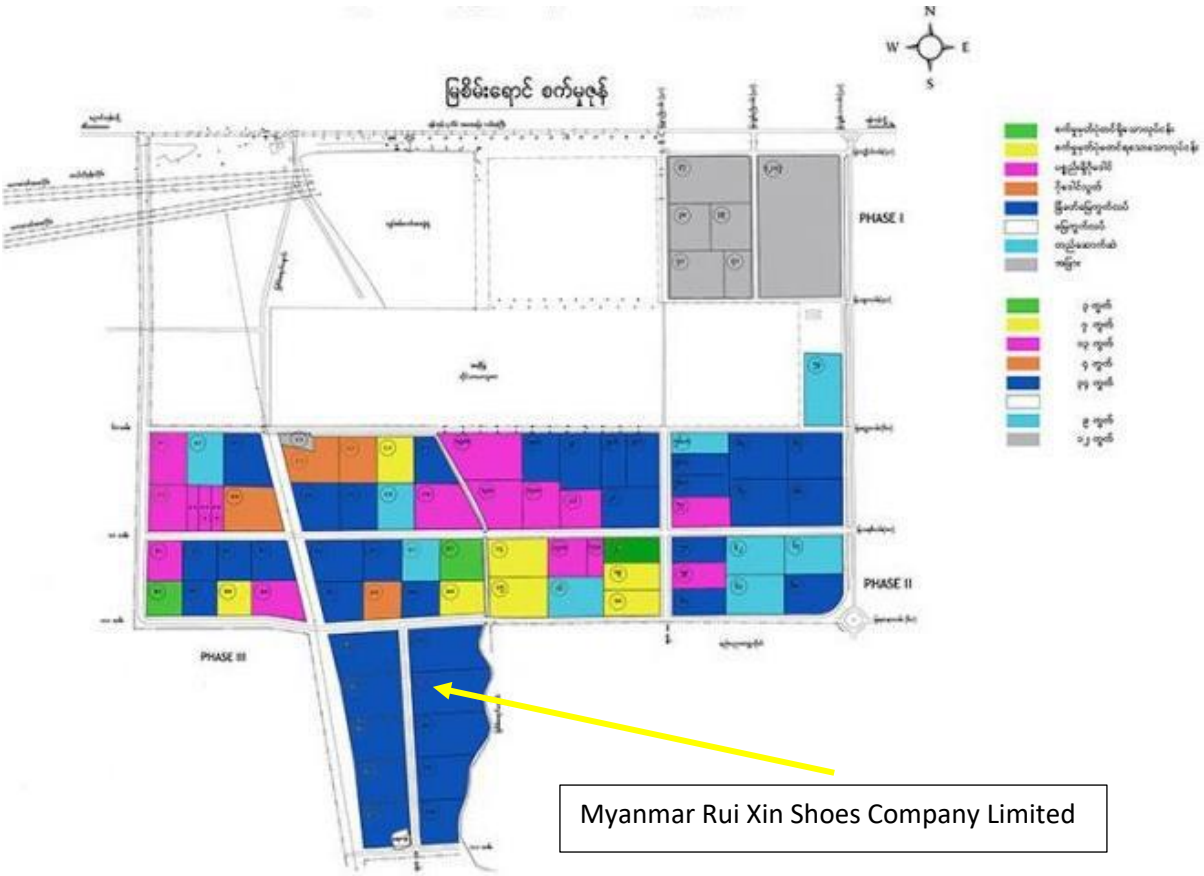
MYANMAR RUI XIN SHOES COMPANY LIMITED


N
W
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PHASE I
PHASE II
PHASE III
Myanmar Rui Xin Shoes Company Limited

Figure 2. Location of Myanmar Rui Xin Shoes Company Limited

4.2 Layout Plan And Building

Myanmar Rui Xin Shoes Company Limited is located at Plot Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The project area is (5.090) of land at latitude: 16°52'17.32"N,), longitude: 96°0'7.70"E). Layout Plan of Myanmar Rui Xin Shoes Company Limited is shown in following figure.

Table 10. List of the factory building data of Myanmar Rui Xin Shoes Company Limited

Main Building Size	**Number**
3 floor building (104×367) feet	3 storey building
1floor building (104×367) feet	1 office building

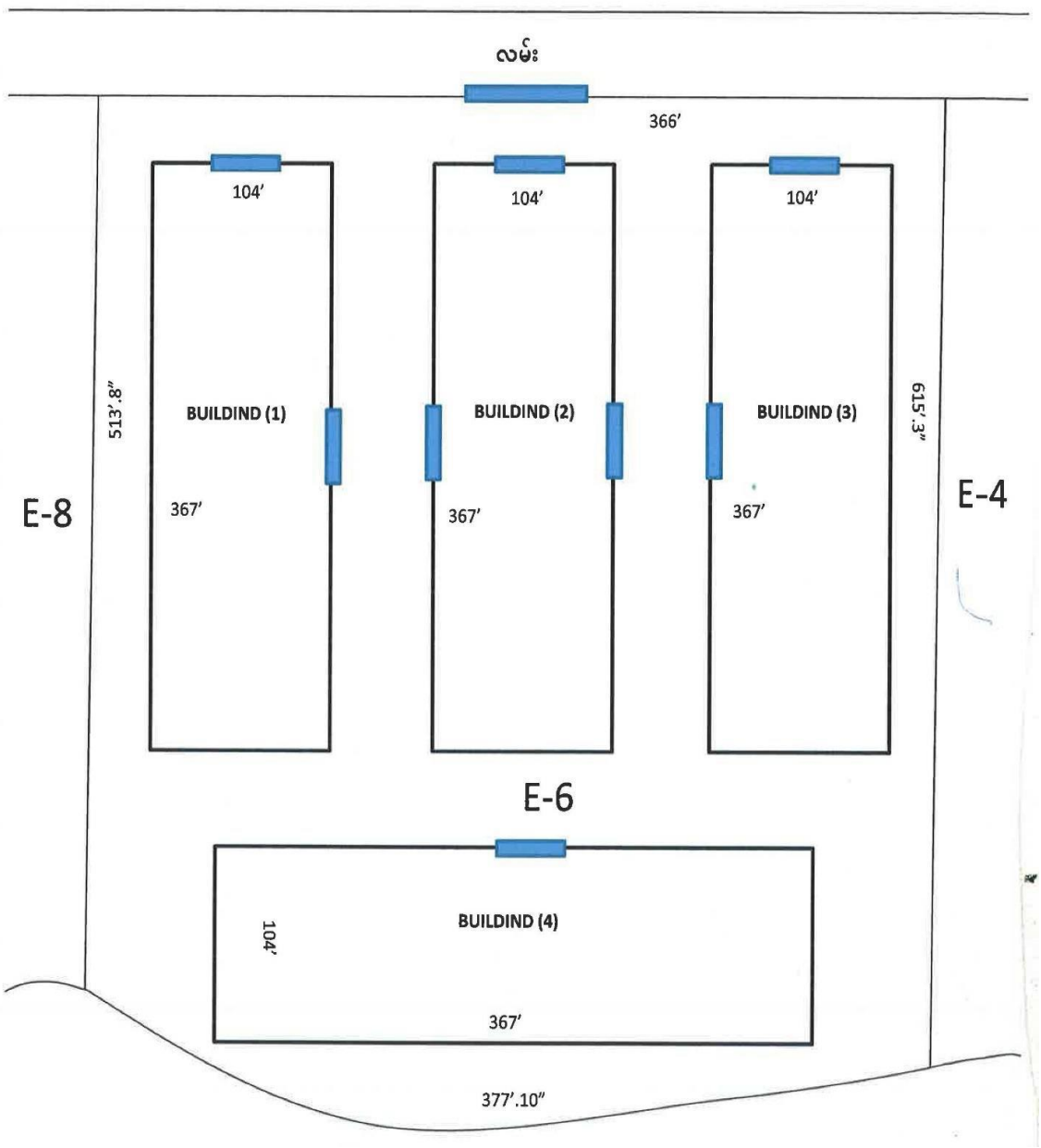

Figure 3. Layout Plan for Myanmar Rui Xin Shoes Company Limited

4.3 Project Operation

The factory produces variety of shoe with production scheme. Majority of the products are export. There are about (815) workers at the factory. Routine production works can be seen in the following flow diagram.

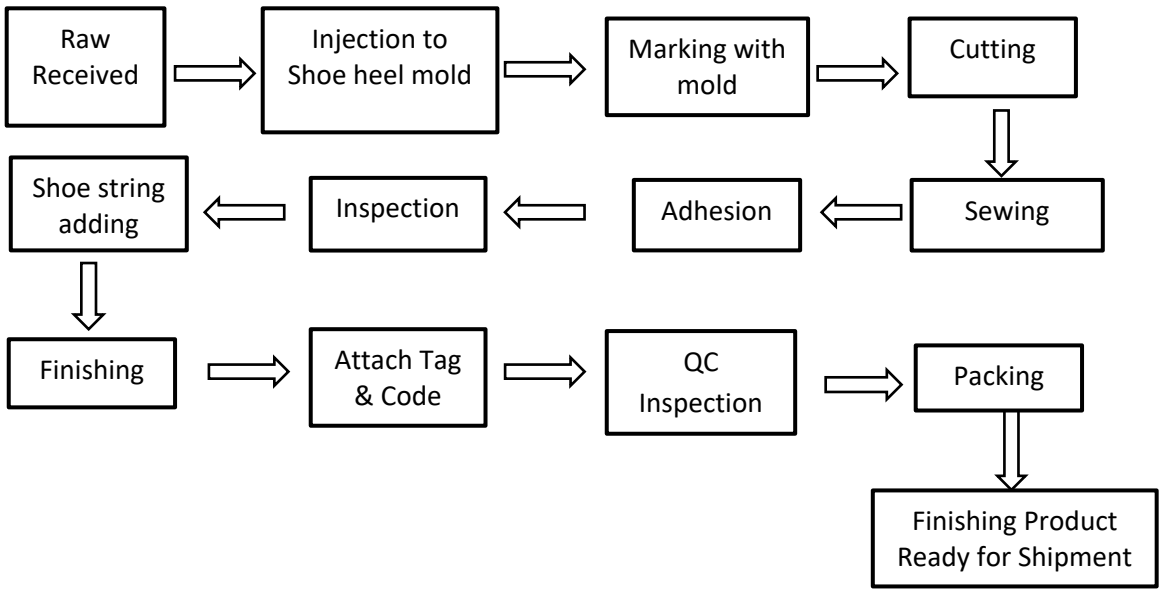

Figure 4. Process Flow Diagram for Myanmar Rui Xin Shoes Company Limited

4.3.1 Cutting

Primary production scheme is raw materials storing, cutting, adhesion, finishing and packing. The shoe production process starts with cutting the materials. Shoe parts are generally cut by steel dies in a hydraulic press. The cutting dies for shoe parts look like simple cookie cutters but they are very sharp. Every shoe part requires its own cutting die. Every part for every size needs its own die. These shoe parts are called the shoe pattern. To support the production of high-volume shoes in popular sizes, often many die sets are required. The cutting dies are placed on the leather or fabric materials by hand, then the press closes to make the cuts.

Figure 5. Cutting out sole and in sole in mold

4.3.2 Sewing

After the parts are cut a worker will carefully organize and stack the shoe parts. The parts will then be moved on to be processed before stitching. The parts will be marked for alignment or have logos added by the embroidery or printing departments. Once the parts are prepared, the shoe factory workers will organize the parts into kits for the stitching department.

Figure 6. Collecting and arranging shoe part

Once the shoe parts are processed and organized, the shoe factory stitching department takes over. In the stitching department, the operations are divided into simple steps. Each worker is given one task to complete. For example, one worker will sew the vamp parts to the mudguard then pass the shoe onto the next worker to attach the eyestay parts. With each operation assigned to one worker, the QC staff can quickly track any problems. The division of the operations also allows the worker to quickly master their operation.

Figure 7. Sewing shoe part

4.3.3 Adhesion

In the stitching department, the upper parts are assembled, the lining attached, and the foam for collars and tongues are inserted. The upper is completely assembled with the reinforcing parts added and heat molded into shape. Toe caps and heel counters are formed and ready for the final assembly operations.

Figure 8. Adhesion

4.3.4 Lasting and Assembly

This stage is to attach sole to finished upper then a complete shoe finished. With the stitching complete, the upper is ready to be bonded to the outsole. Before the outsole can be attached, the upper is drawn into a shoe lasts. Lasting is the operation that gives the shoe its' final shape. The upper is pulled tight over the last to set the shoe shape. Sneakers are made in two separate sections—the upper and sole. With the upper tight to the last, the outsole unit can be permanently cemented to the upper, then strong cement is used to bond the upper and sole together after first glue dry. They will be put in a press machine for around 12 seconds for a better bonding so that the upper and sole won't peel off. Also, back part molding machine is used for better back heel shape. Different to heel sandal making, the sock with padding was inserted inside of shoe before lasting assembly. Once sole attached finished, then a complete shoe finished. Our workers will check and clean the shoes piece by piece, then match in pair, ready for inspection.

4.3.5 Quality Control

When a complete shoe finished, final inspection is the most essential step. Quality control is a process which customers seek to ensure that product quality is maintained or

improved. Myanmar Rui Xin Shoes Company Limited team will do quality control for all products made, some of our clients will assign a third-party for final inspection after production ready. Quality control help you determine the overall quality of your order, and determine the need to issue corrective actions before any products leave the factory. It also minimizes the amount of costly product defects. Inspections can detect merchandise containing non-standard or non-compliant components. Myanmar Rui Xin Shoes Company Limited team recommends the International Inspection Standard to determine the number of units that will be randomly selected for evaluation. Shoes are checked against a detailed inspection plan for appearance, applicable functionality, packaging integrity, workmanship, and your specific requirements. Discovered defects are classified as major, minor, or critical depending on inspection plans. If you have your QC standard and procedure, we will concern to follow your documentation. And there are several types of inspections available throughout the production process. In-Process and Pre-Shipment inspections. As one of the longest serving inspection companies in Asia, one of our Inspection Manager are very capable to help choose the best source inspection service to fit your requirements.

4.3.6 Packing

After inspection finished, the completed pair of shoes is stuffed and wrapped with tissue paper and put in an appropriately labeled box. Cartons of boxes of the same style of shoe are packaged and prepared for shipment to the clients. Shoe packing varies from brand to brand, product to product, it provides protection against atmospheric moisture, dust, damage, shocks. A completed shoe packing is consisting of several item

The production process produces no liquid effluent and slightly gaseous emission from diesel generator. The process produce solid waste mainly consists of all process and these solid wastes are managed to collect by the government waste collector.

4.4 Equipment and Machinery List

Equipment and Machinery lists used in Myanmar Rui Xin Shoes Company Limited are described in Appendix 4.

4.5 Description of Raw Materials

The basic raw materials used rubber form and imitation leather. These raw materials are imported directly from China. Raw material lists and annually requirement is show in

appendix 5. The most chemical are use in adhesive process as glue. These are resin adhesive, surface treating agent, hardener, cleaning agent, rubber solution, detergent oil, toluene, toner and dichloromethane. Usage chemical are store in individual storage room with fire safety system. Usage chemical import list is show in appendix 5 and material safety data sheet is shown in Appendix 10.

Figure 9. Raw Storage Area

4.6 DESCRIPTION OF PRODUCTS

The main products of Myanmar Rui Xin Shoes Company Limited is produced all kind of men, woman and kid shoes and export to America and European countries. The production rate of Myanmar Rui Xin Shoes Company Limited is show in appendix 6. Total production is produced (485,00) shoes pair in first operation year. The production rate was estimated for 10-year operation period.

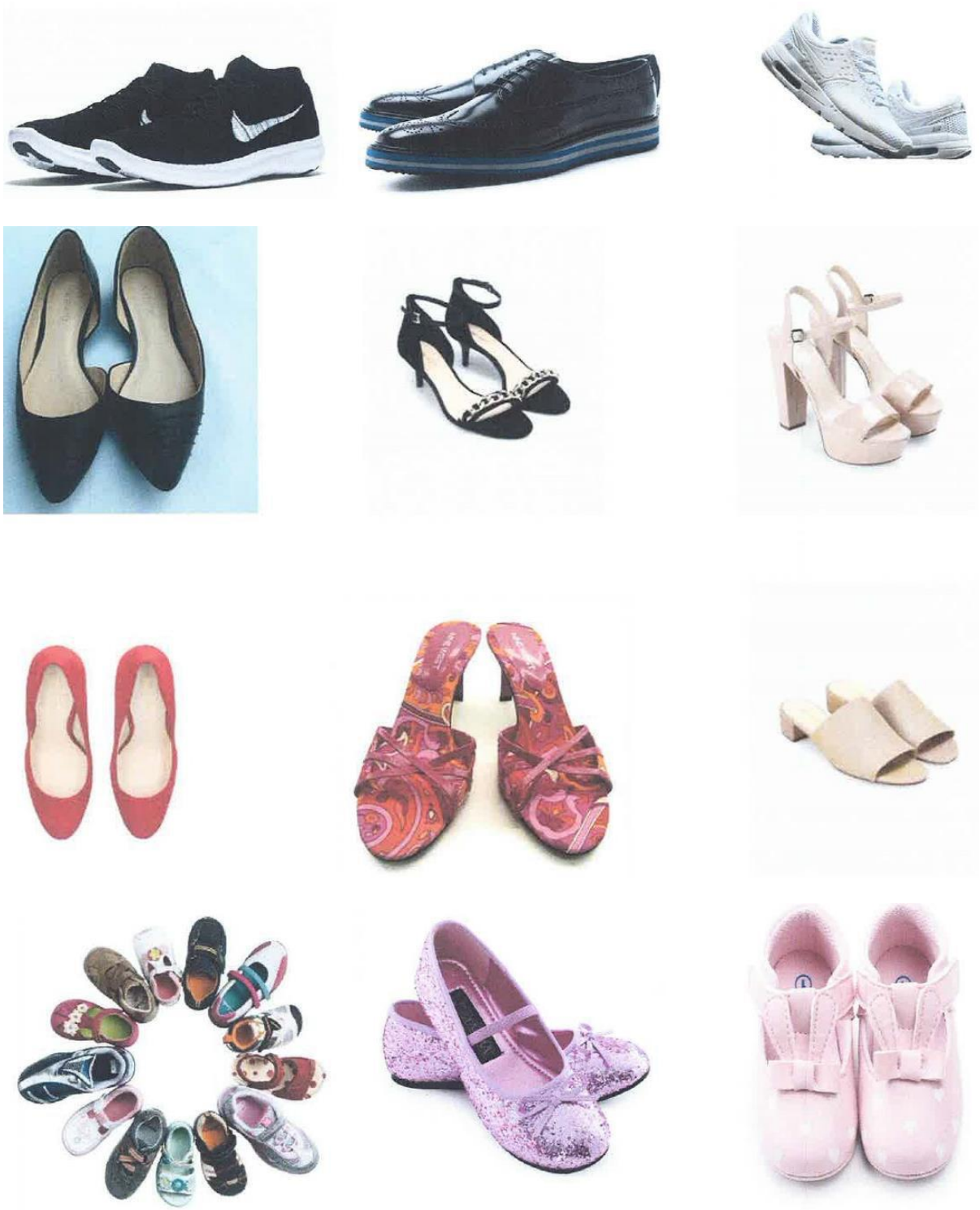

Figure 10. Sample Product

4.7 Electricity Supply

Myanmar Rui Xin Shoes Company Limited Myanmar Rui Xin Shoes Company Limited purchase electricity from government power source. The plant installed 800 kVA transformers, 400 KVA diesel generators for supply electricity. The electrical power consumption of the factory is (650,00) KWh/year. Diesel fuel for diesel generator was bought from outside supplier. Therefore, the fuel storage area is not set individual. The amount of diesel fuel usage is 4500 gal per year. Fuel boilers are not currently in use.

Figure 11. Generator and Electricity Transformer Storing Area

4.8 Water supply

Water supply for factory is obtains mainly from the tube well and storage with one concrete pool (1000gal) and (100 gal) upper steel tank. Water is extracted from one tube well usage is hand washing, bathing, toilets and kitchen for labor. There has not water consumption in the production process. Production process has not contained usage for process water. Daily usage of tube well water is (4000) gal and annually usage is (1,400,000) gal.

Figure 12. Water Collection from Tube Well Water Concret pool (Concret pool) and upper steel tank

4.9 Operational Workforce

The work force during operation for the entire plant is 800 members and foreigner labor is about (15) person. Total operational workforce is (815) person. The working hours for the worker from the plant were (8) hrs from Monday to Friday and only Saturday for (4) hr. The operation day of factory is generally (288) day/year. The employment list for the Myanmar Rui Xin Shoes Company Limited is shown in appendix 7.

4.10 Institutional Arrangements

There are seven departments such as HR Departments, Accounting, QC, Maintenance, Ware house and Production Department which are leaded by managing director and head of departments. This factory has one shift and security is day and night shift. A managing director is responsible for nurturing the whole plant to be in smooth operation.

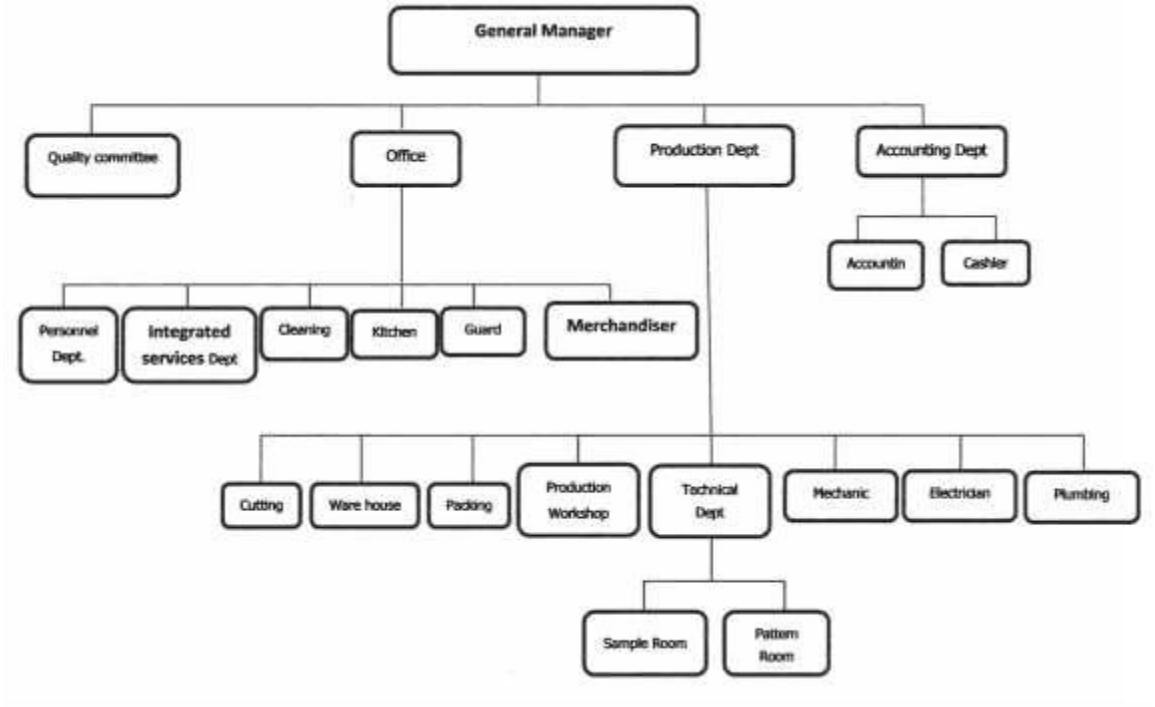

Figure 13. Organization Structure of Myanmar Rui Xin Shoes Company Limited

4.11 Solid Waste

Myanmar Rui Xin Shoes Company Limited solid wastes mainly comprised of rubber cuts and fabric cut. Solid waste generation and management system of Myanmar Rui Xin Shoes Company Limited can be seen in the following figure. The general waste from

Myanmar Rui Xin Shoes Company Limited is discharged by calling solid waste collector such as Hlaing Thar Yar Township City Development Committee. Domestic solid waste generation from Myanmar Rui Xin Shoes Company Limited is low. Systematic management of these solid wastes is of importance as mismanagement of the waste will lead critical occupational hazard including fire hazard.

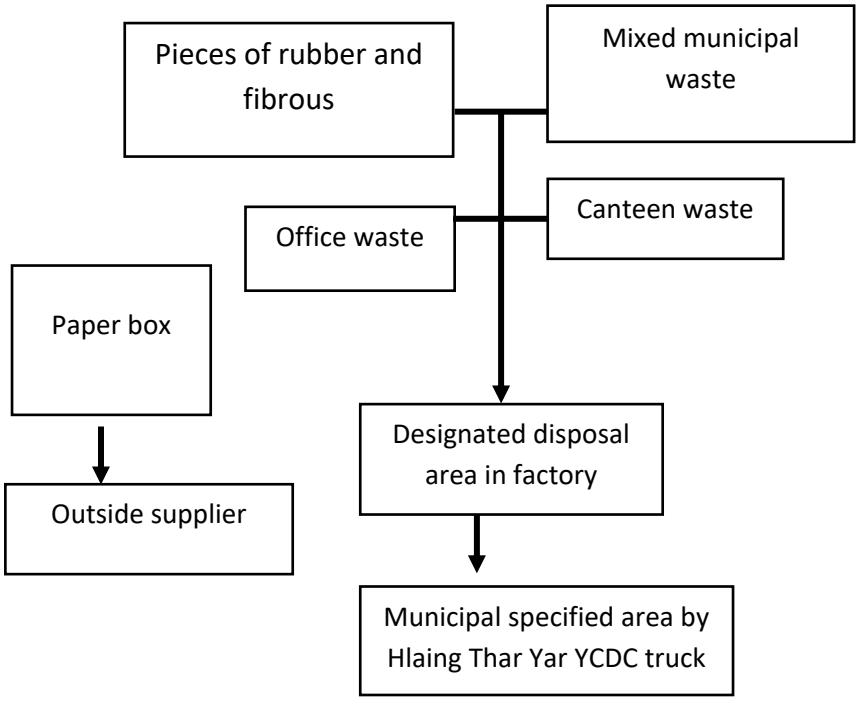

Figure 14. Waste Management System of Myanmar Rui Xin Shoes Company Limited

Table 11. Waste Generation from shoe Manufacturing

Sr.	Process	Waste Type	Waste Amount by Annually
1	Receiving	Packing waste	100 kg
2	Cutting	Rubber form cuts, leather cuts	500 kg
3	Sewing	Linen cuts, Thread cuts	
4	stitching	Metal waste, Thread cuts	10 kg
5	Tag and Code	Paper waste, Packing material	100 kg
6	Packing	Packing waste	18 kg

Figure 15. Solid Waste Collecting Area in Factory Compound

Figure 16. Transport to Municipal Specified Area by Hlaing Thar Yar YCDC Truck

4.12 Tube Well Water

Water supply for Myanmar Rui Xin Shoes Company Limited is obtains mainly from the tube well and storage with water tank. Water is extracted from one tube well usage is hand washing, bathing, toilets and kitchen. Tube well water sample is collected and analyzed at ISO Tech laboratory. The water has no color and odor. The pH of the water is 7.9, which is well within the limit of acceptable WHO drinking water value 6-9. The turbidity of the tube well water is 4 NTU. Iron (0.36, mg/l) is slightly greater than the acceptable limit of 0.3 mg/l (WHO)

drinking water guideline. Another parameter is shown in Table. Tube well water usage is (1,400,000) gal/year. Drinking water for labor will be supply from outside supplier.

Table 12. Tube well Water Quality Analysis Results

Sr	Particular	Unit	Tube Well Water	WHO Drinking Water guideline value (Geneva-1993)
1	pH	S.U	7.9	6.5 - 8
2	Colour	TCU	Nill	15
3	Turbidity	NTU	4	5
4	Total Hardness	mg/l as $CaCO_3$	1400	500
5	Calcium Hardness	mg/l as $CaCO_3$	934	-
6	Magnesium Hardness	mg/l as $CaCO_3$	466	-
7	Total Alkalinity	mg/l as $CaCO_3$	120	-
8	Phenolphthalein Alkalinity	mg/l as $CaCO_3$	Nill	-
9	Carbonate ($CaCO_3$)	mg/l as $CaCO_3$	Nill	-
10	Bicarbonate($HCaCO_3$)	mg/l as CaCO3	120	
11	TDS	mg/l	1999	1000
12	TSS	mg/l	7	1000
13	Iron	mg/l	0.36	0.3
14	Phosphate	mg/l	Nill	500
15	Magnesium	mg/l	500	-
16	Nitrate	mg/l	0.2	0.01
17	Calcium	mg/l	700	-

18	Phenolphthalein Acidity	mg/l	2	-
19	Methyl Orange Acidity	mg/l	Nill	-
20	Salinity	ppt	2.0	-
21	Copper	mg/l	Nill	2
22	Chloride	mg/l	2230	250
23	Sodium Chloride	mg/l	3680	-
24	Sulphate	mg/l	92	500
25	Manganese	mg/l	9.2	0.05
26	Conductivity	Micro S/cm	3998	-
27	Total solid	mg/l	2006	1500

Figure 17. Water Sampling Point from Tube well

4.13 Waste Water

Waste water from Myanmar Rui Xin Shoes Company Limited of is only domestic waste water. Water is extracted from one tube well usage is hand washing, bathing, toilets and kitchen for labor. There has not water consumption in the production process. Therefore, industrial waste water is not generated. The plant has no water treatment unit. Factory kitchen and labor house are discharge as domestic waste water. This waste water is discharge to roadside drain. The sewage water is generated from factory toilet and discharged by calling solid waste

collector such as Hlaing Thar Yar Township City Development Committee. The location of waste water collection from factory drain is shown in following figure.

One sample of waste water was collected at latitude (16°52'20.05"N) and longitude (96° 0'5.98"E) and analyzed at ISO TECH laboratory. The sampling point was the outlet of the drain of the plant. The pH of the water is 8.6. The suspended solid from the water can be seen about 188 mg/l, dissolved solids 270 mg/l. The BOD and COD result of waste water is in the range of NEQG about 24 and 64 mg/l. From the following table, pH, BOD, COD are within the range of NEQG guideline value.

Table 13. Waste water (domestic waste water) quality analysis results

Sr.	**Particular**	**Unit**	**NEQEG**	**Waste Water Result**
1	pH	-	6-9	8.6
2	BOD	mg/l	50	24
3	COD	mg/l	250	64
4	Total Suspended Solid (TSS)	mg/l	50	188
5	Total Dissolved Solid	mg/l		270
6	Total Solid	mg/l	-	458
7	Nitrate	mg/l	-	1.6
8	Ammonia Nitrogen	mg/l	-	1.22
9	Ammonium Nitrogen	mg/l	-	1.29

Figure 18. Waste Water Sampling Point

4.14 Air Emission Quality

4.14.1 Air Emission in Factory

The main sources of air emission from the project area are the operation of the machine operation, diesel generator and vehicles moment and human activities. These activities can be generating the few amounts of carbon dioxide and carbon monoxide. The cutting process and raw material storing can be generating particulate matter. Exhaust Fan are installed to get pleasure ventilation for labor.

4.14.2 Survey Methodology

Sampling and analysis of ambient air quality were conducted by referring to the recommendation of the United State Environmental Protection Agency (U.S. EPA). The Haz-Scanner Environmental Perimeter Air station (EPAS) was used to collect ambient air survey data. Sampling rate or air quality data were measured automatically every one minute and directly read and recorded onsite for measured parameter (NO_2, O_3, PM_{10}, $PM_{2.5}$, SO_2, CO_2, CO, Relativity humidity, win speed, win direction and temperature).

Table 14.Air analysis info

Sample site	Myanmar Rui Xin Shoes Company Limited	Sample I.D.	AS0921-01
Location (township)	Hlaing Thar Yar Township	Method	HAZ-SCANNER™ Model-EPAS

		Station height (elevation)	Ground
Location (Region / state)	Yangon	Latitude	16°52'15.00"N
		Longitude	96° 0'8.93"E
Name of client	Myanmar Rui Xin Shoes Company Limited	log on time (Date, Time)	8.12.2020 (09:00 AM)
Air Monitoring Date	8.12.2020	log off time (Date, Time)	9.12.2020 (09:00 AM)
		Logging Duration (hours)	24 hours

Figure 19. Air Sampling Point

4.14.3 Identification of Air Pollutants and Its Impacts

The proposed Myanmar Rui Xin Shoes factory is not operating the machines by the time monitoring the air quality. Therefore, the air station is set on to collect data of the current air quality impacted by operational works and moving vehicles for the transportation of loads. Therefore, the site has to measure the surrounding air quality to know whether SO_2, NO_2, CO_2, CO, H_2S, $PM_{2.5}$ and PM_{10} are exceeding the limiting amount of National Environmental Quality Emission Guideline or not. The impacts of pollutants are defined below.

Carbon Monoxide (CO) is a toxic gas that cannot be seen or smelled. All people are at risk for CO poisoning. Unborn babies, infants, the elderly, and people with chronic heart disease, anemia, or respiratory problems are generally more at risk than others. Breathing CO can cause headache, dizziness and vomiting nausea. If CO levels are high enough, unconscious or death may be become. Exposure to moderate and high levels of CO over long periods of time has also been linked with increased risk of heart disease.

Carbon Dioxide (CO_2) is the primary greenhouse gas pollutant, accounting for nearly three-quarters of global greenhouse gas emissions. Carbon pollution leads to long lasting changes in our climate, such as rising global temperatures, rising sea level, changes in weather and precipitation patterns and changes in ecosystems, habitats and species diversity. Children, older adults, people living in poverty may be at risk from the health impacts of climate change.

Nitrogen Dioxide (NO_2) is a nasty-smelling gas. The main effect of breathing in raised levels of nitrogen dioxide is the increased likelihood of respiratory problems. Nitrogen dioxide inflames the lining of the lungs, and it can reduce immunity to lung infections. This can cause problems such as wheezing, coughing, colds, flu and bronchitis. Increased levels of nitrogen dioxide can have significant impacts on people with asthma because it can cause more frequent and more intense attacks. Children with asthma and older people with heart disease are most at risk.

Sulfur Dioxide (SO_2) is an invisible gas and has a nasty, sharp smell. It reacts easily with other substances to form harmful compounds, such as sulfuric acid, sulfurous acid and sulfate particles. Sulfur dioxide affects human health when it is breathed in. It irritates the nose, throat and airways to cause coughing, wheezing, shortness of breath, or a tight feeling around the chest. The effects of sulfur dioxide are felt very quickly and most people would feel the worst symptoms in 10 or 15 minutes after breathing in. Those most at risk of developing problems if they are exposed to sulfur dioxide are people with asthma or similar conditions.

Ozone (O_3) has a strong odor. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. It can also reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue.

Particulate matter (PM) consists of microscopically small solid particles or liquid droplets suspended in the air. The smaller the particles, the deeper they can penetrate in to the respiratory system and the more hazardous they are to breathe. Long-term exposure to current ambient PM concentrations may lead to a marked reduction in life expectancy. The reduction in life expectancy is primarily due to increase cardio-pulmonary and lung cancer mortality. Increases

are likely in lower respiratory symptoms and reduced lung function in children, and chronic obstructive pulmonary disease and reduced lung function in adults.

4.14.4 Air Quality Measurement Comparing With the Air Quality Standard and Guidelines

CO, CO_2, NO_2, SO_2, O_3, PM_{10} and PM $_{2.5}$ are measured at the proposed project site. The site is in operation stage and the collected data shown below are due to the CMP activities. Air quality and noise result data report is described in appendix.

Table 15.Result of Air Quality

No	Parameters	Results		Avg. Period	Guideline value (NEQG)	Averaging Period
		Observed average value	Converted value			
1	Nitrogen dioxide NO_2	17 ppb	78.9(µg/m^3)	1-hour*	40 (µg/m^3) 200 (µg/m^3)	1-year 1-hour
2	Ozone (O_3)	23ppb	45(µg/m^3)	8-hour	100 (µg/m^3)	8-hour daily maximum
3	Particulate matter PM_{10}	23 (µg/m^3)		24-hour	20 (µg/m^3) 50 (µg/m^3)	1-year 24-hour
4	Particulate matter $PM_{2.5}$	15 (µg/m^3)		24-hour	10 (µg/m^3) 25 (µg/m^3)	1-year 24-hour
5	Sulfur dioxide SO_2	2 ppb	5.24(µg/m^3)	24-hour	20 (µg/m^3) 500 (µg/m^3)	24-hour 10 minute
6	Carbon dioxide CO_2	255 ppm		24-hour	-	
7	Carbon monoxide CO	3ppb		24-hour	-	
8	Relativity humidity	77 %		24-hour	-	
9	Temperature	26 °C		24-hour	-	24-hour
10	Win Direction	36°		24-hour	-	24-hour
11	Win speed	4.00 Kph		24-hour	-	24-hour

Figure 20. Exhaust Fan are Installed for Ventilation

4.15 Noise

4.15.1 Sources of the noise

The noise level for the proposed factory was measured by TES- 52A Advanced Sound Level Meter. The measurement point is factory compound. According to the result, factory of noise level is within limit of NEQG. Since the place for measuring noise levels is a factory which produces sewing machine, the noises produced are governed by the sound of the machine operated and by the workers.

4.15.2 Noise Measurement Method

Handheld quick assessment method is used for the sound level by measuring the sound pressure. A tripod is used for mounting the sound level meter (SLM) where the SLM is mounted and pointed towards the source of the noise. The noise level of the proposed factory was measured by using TES -52A Advanced Sound Level Meter.

Table 16.Result of Noise

National Emission Quality Guideline (NEQG) for Noise level

Receptor	**One Hour LAeq (dBA)a**	
	Daytime 07:00-22:00 (10:00-22:00 for Public holidays)	**Night time 22:00-07:00 (22:00-10:00 for Public holidays)**

Residential, institutional, educational	55	45
Industrial, commercial	70	70

Table 17. The location of Noise sample point

No	Sample	Accasette Garment Co., Ltd.		Location
		Latitude (N)	Longitude (E)	
1	Noise Sample Point (NS)	16°52'15.00"N	96° 0'8.93"E	Besides the factory building.

Table 18. Average Values of Noise Level (dB) at the sampling point

Noise Sample Point	Date/Time (31-8-2021)	Observed Noise Level (MeanValue) (dBA)
NS	9: 00 -9:59	58.7
	10: 00-10: 59	47.1
	11: 00-11: 59	60.5
	12: 00-12: 59	50.3
	13: 00-13: 59	61.7
	14: 00-14: 59	56.8
	15: 00-15: 59	49.2
	16: 00-16: 59	54.9

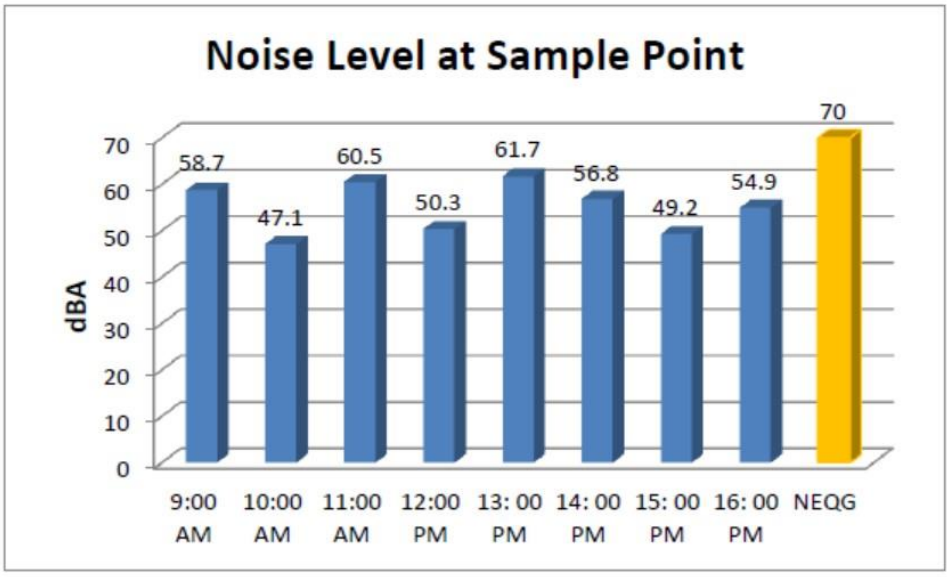

Figure 21. Air Quality Sampling Results Graph

Figure 22. Noise Level Meter for Measuring Noise Level

4.16 Soil Quality

One sample of soil was collected around the Myanmar Rui Xin Shoes Company Limited to record the current condition of soil. The location of soil sampling point was Latitude 16°52'16.77"N and Longitude 96° 0'10.65"E. The samples were analyzed for their physiochemical properties in Soil Laboratory, Land Use Department of Ministry of Agriculture and Irrigation. Typical issues relating to soil pH could be seen in the table below.

Potential negative impacts by the project relating to soil degradation may have occurred in the early project construction works. Such impacts include excavation, displacement or importation of soil, stockpiling, mixing, wetting, compaction and pollution of soil, Oil leakage and sedimentation. But the anticipated impacts on soil may have been occurred only to a limited area within the project compound.

According to test results, pH value of soil sample which was collected within the Myanmar Rui Xin Shoes Company Limited which are slightly alkaline conditions. Under this condition, following phenomena would occur:

• Above a pH of 7.0 there is an increase in the availability of Iron, Manganese, Zinc, Cobalt, and Copper

• Increased risk of ammonia volatilization

• First increasing availability of Phosphorus and Boron, but deficiencies may occur at higher pH values

• Insoluble Calcium-Phosphates may be formed at higher pH

• Electric conductivity is generally high at higher pH values

Table 19. Soil pH and Associated Impacts

pH value	Soil classification	Impact interpretation
≤ 5.5	Strongly acidic	• Possible Aluminum toxicity and excess availability of Cobalt, Cupper, Iron, Manganese, and Zinc • Deficient in Calcium, Potassium, Nitrogen, Magnesium, Phosphorous, and Sulphur • Boron deficiency below pH of 5 • Molybdenum becomes more available with decreasing pH • Bacterial and actinomycete activity is reduced along with a predominance of fungi • Mineralization of organic matter and nitrification are restricted • Below a pH of 3, functioning of cell membranes is impaired, resulting in leakage of elements
5.5 - 7.3	Moderately acidic, slightly acidic, and neutral soils	• Preferred pH range for most crops, lower end of range may be too acidic for some • pH between the range of 6.0 and 7.0 hampers phosphorous fixation • Neutral pH favors the fixation of molecular Nitrogen by free living soil microorganisms and by symbiotic microorganisms • Above a pH value of 7.0 the availability of Iron, Manganese, Zinc, Cobalt, and Cupper declines
7.3 - 8.5	Slightly alkaline and Moderately alkaline soils	• Above a pH of 7.0 there is an increase in the availability of Iron, Manganese, Zinc, Cobalt, and Copper • Increased risk of ammonia volatilization • First increasing availability of Phosphorus and Boron, but deficiencies may occur at higher pH values • Insoluble Calcium-Phosphates may be formed at higher pH • Electric conductivity is generally high at higher pH values

≥ 8.5	Strongly to very strongly alkaline	• Calcium and magnesium are liable to become unavailable to most crops • Often high sodium levels lead to toxicity and structural damage • Toxicity of bicarbonates and other anions • Possible Boron toxicity common in saline and or sodic soils • Availability of most micronutrients and of Iron, Manganese, Zinc, Copper, and Cobalt is reduced, except for Molybdenum • Decreased

Table 20. Results of Soil Quality Analysis

Sample	Moisture %	pH Soil: Water 1:2:5	Texture				Organic Carbon	Humus %	Total N	Exchangeable cations			Available Nutrients	
			Sand %	Silt %	Clay %	Total %				Ca	Mg	K	P	K_2O
SS-1	4.79	7.36	35.12	12.86	52.02	100.0	0.38	0.66	0.11	30.71	6.32	0.51	4.20	23.95

Table 21. Interpretation of Soil Quality Results

Sample	pH Soil: Water	Texture	Organic Carbon	Total N	Exchangeable cations			Available Nutrients	
					Ca	Mg	K	P	K_2O
SS-1	Slightly alkaline	Clay	Very Low	Low	High	High	High	Low	High

Figure 23. Soil Sampling Point from Myanmar Rui Xin Shoes Company Limited

5 CURRENT CONDITION OF SURROUNDING ENVIRONMENT

5.1 Socio-Economic Components

Socio-economic factors are lifestyle components and measurements of both financial viability and social standing. They directly influence social privilege and levels of financial independence. Factors such as health status, income, environment and education are studied by sociologists in terms of how they each affect human behaviors and circumstances. Socio-economic data are reference based on data from the township profile of 2014 National Census Data.

5.1.1 Living conditions

The project area is located in Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The total number of households in Hlaing Thar Yar Township is 76,984 only. The following table and figure show the household numbers in the study area. The average household size in the study area is shown in the following figure. All the villages have significantly higher rate of population per household compared to that of Hlaing Thar Yar Township. The majority of the households in Hlaing Thar Yar Township are living in wooden houses (60.9%) followed by households in bamboo houses (15.3 %).

Table 22. Type of household in the Study Area

Residence	Total	Apartment/ Condominium	Bungalow/ Brick house	Semi-pacca house	Wooden house	Bamboo house	Hut 2 - 3 years	Hut 1 year	Other
Total	76,984	4.3	6.3	9.2	60.9	15.3	1.1	0.9	2.0
Urban	76,984	4.3	6.3	9.2	60.9	15.3	1.1	0.9	2.0
Rural	-	-	-	-	-	-	-	-	-

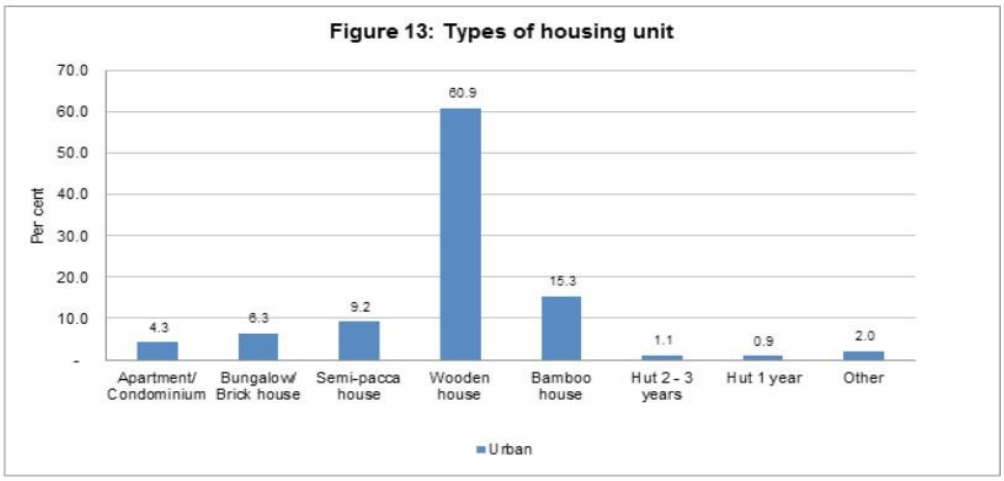

Figure 24. Types of housing unit in the Study Area

The majority of the households in Hlaing Thar Yar Township are living in wooden houses (60.9%) followed by households in bamboo houses (15.3%)

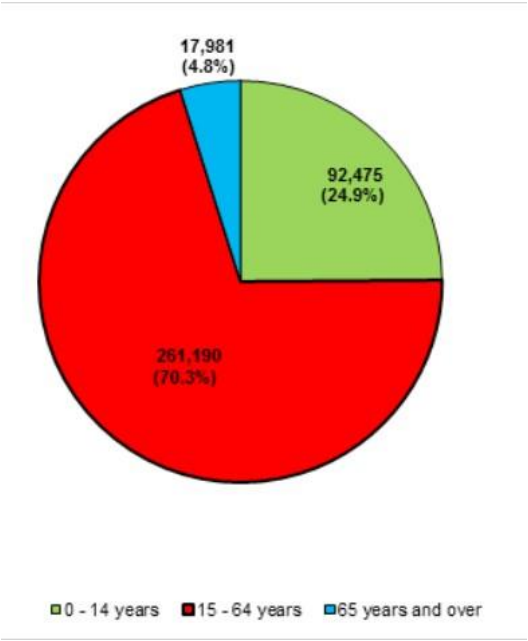

Figure 25. Population of the Study Area

The proportion of productive working population between 15 to 64 years of age in Hlaing Thar Yar Township is 70.3 per cent. The proportion of children aged 14 and below together with the proportion of the elderly aged 65 and over are less than the proportion of the working age group population. Fewer proportions of children and elderly reduce the dependency of those age groups on the working age population.

5.1.2 Employment

In Hlaing Thar Yar Township, 33.4 percent of the employed persons aged 15-64 are craft and related trades workers and is the highest proportion, followed by 27.1 percent in services and sales workers. Analysis by sex shows that 35.3 percent of males and 29.7 percent of females are craft and related trades workers. In Yangon Region, 22.9 percent are craft and related trades workers and 23.7 percent are in services and sales workers.

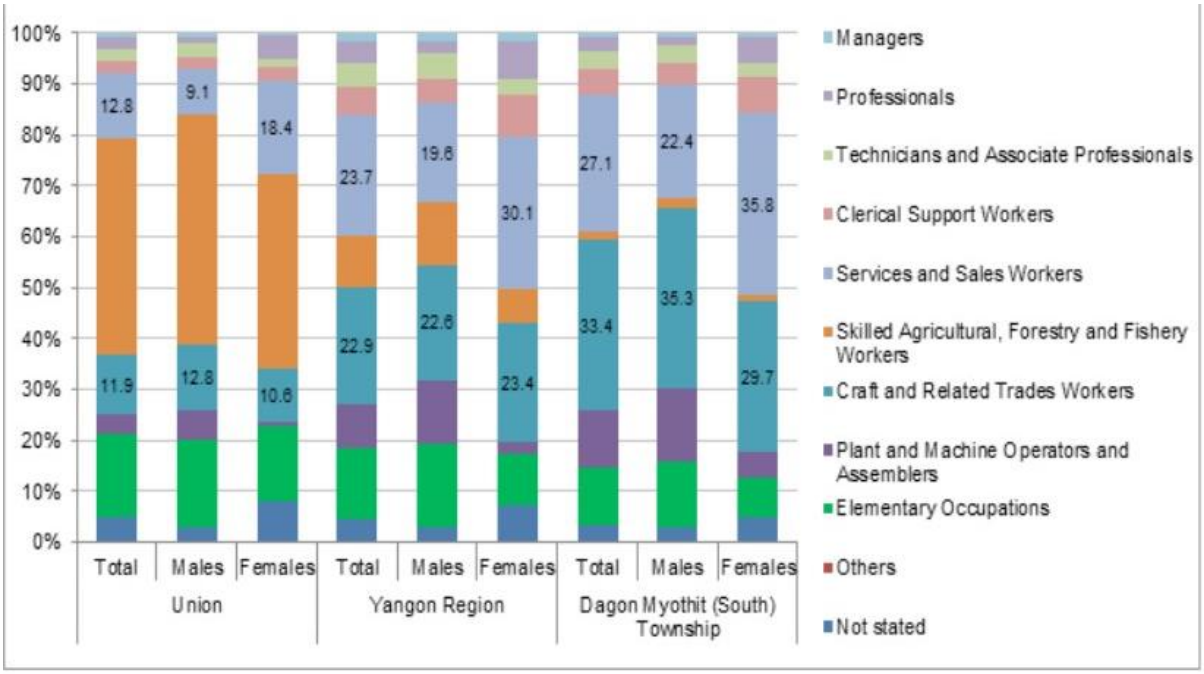

Figure 26. Employments in the Study Area

5.1.3 Religion Distribution

At the Union level, the composition of the population by religion is: 87.9% Buddhist, 6.2% Christian, 4.3% Islam, 0.5% Hindu, 0.8% Animist, and 0.2% other religion and 0.1% No religion. In Yangon Region, it is 91.0% Buddhist, 3.2% Christian, 4.7% Islam, 1.0% Hindu, 0.1% other religion, and less than 0.1% each for Animist and those with No religion respectively

5.1.4 Educational Attainment

The literacy rate of those aged 15 and over in Hlaing Thar Yar Township is 95.6 per cent. It is lower than the literacy rate of Yangon Region (96.6%) and higher than the Union (89.5%). Female literacy rate is 93.9 percent and for the males it is 97.5 per cent. • The literacy rate for youth aged 15-24 is 97.3 percent with 97.1 percent for females and 97.5 percent for males. Some 6.6 percent of the population aged 25 and over have never been to school. There are 4.2 percent of males aged 25 and over who have never attended school as against 8.7 percent for females. Among those aged 25 and over, 16.1 percent has completed primary school (grade 5) and only 12.3percent has completed university/college education.

	Total	None	% Never attended	Primary school		Middle school (grade 6 - 9)	High school (grade 10 - 11)	Diploma	University/ College	Post-graduate and above	Vocational training	Other
				(grade 1 - 4)	(grade 5)							
Total	202,930	13,302	6.6	27,419	32,684	59,761	42,352	584	24,955	919	524	430
Urban	202,930	13,302	6.6	27,419	32,684	59,761	42,352	584	24,955	919	524	430
Rural	-	-	-	-	-	-	-	-	-	-	-	-
Males	95,535	4,010	4.2	10,009	13,841	31,521	23,488	414	11,281	321	391	259
Females	107,395	9,292	8.7	17,410	18,843	28,240	18,864	170	13,674	598	133	171

Table 23. Population aged 25 and over by highest level of education completed, urban/rural and sex

5.2 Meteorology

5.2.1 Topography and Climate

The study area is located in Hlaing Thar Yar Township of Yangon Region. The proposed factory is currently occupied by near villages, cultivated land. Therefore, the topography is no major differences in altitude. The climate of factory area is located in tropical wet and dry climate.

5.2.2 Temperature

Yangon has a tropical monsoon climate with very wet summers due to the southwest monsoon which starts from mid-May and lasts until mid-October. The warmest month with the highest average high temperature is April (37˚C) and the month with the lowest average high temperature is August (29.6˚C). The month with the highest average low temperature is May (25˚C) and the coldest month with the lowest average low temperature is January (17.9˚C).

Table 24. Average Temperature of Yangon

Sr	Month	Average High Temperature	Average Low Temperature
1	January	32.2˚C	17.9˚C
2	February	34.5˚C	19.3˚C
3	March	36˚C	21.6˚C
4	April	37˚C	24.3˚C
5	May	33.4˚C	25˚C
6	June	30.2˚C	24.5˚C

7	July	29.7˚C	24.1˚C
8	August	29.6˚C	24.1˚C
9	September	30.4˚C	24.2˚C
10	October	31.5˚C	24.2˚C
11	November	32˚C	22.4˚C
12	December	31.5˚C	19˚C

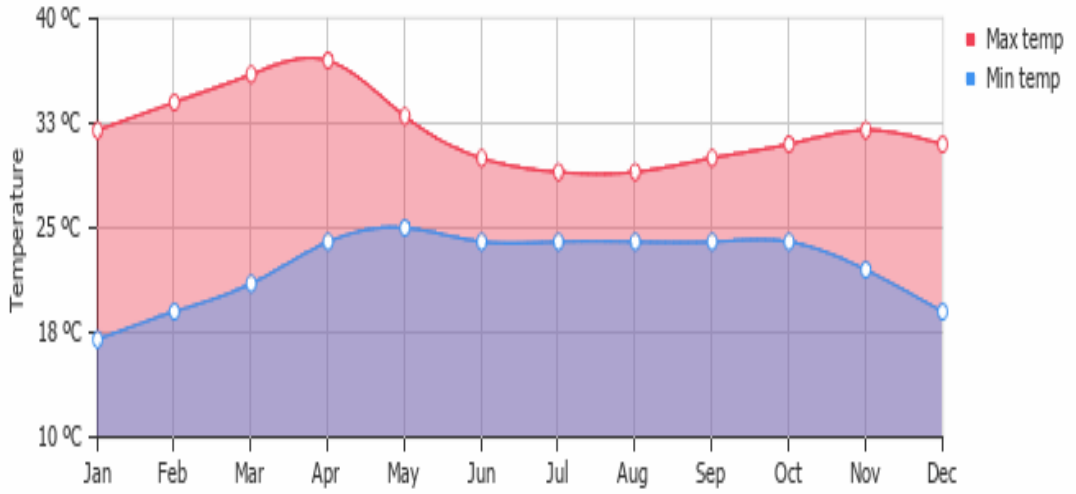

Figure 27. Temperature Graph of Yangon

5.2.3 Rainfall

A lot of rain falls in the months of May, June, July, August, September and October. Yangon has dry periods in December January, February, March and April. The wettest month with the highest rainfall is August (602 mm) and the driest month with the lowest rainfall is February (2 mm). The month with the highest number of rainy days is July (26.2 days) and the months with the lowest number of rainy days are January, February and December (0.2 days).

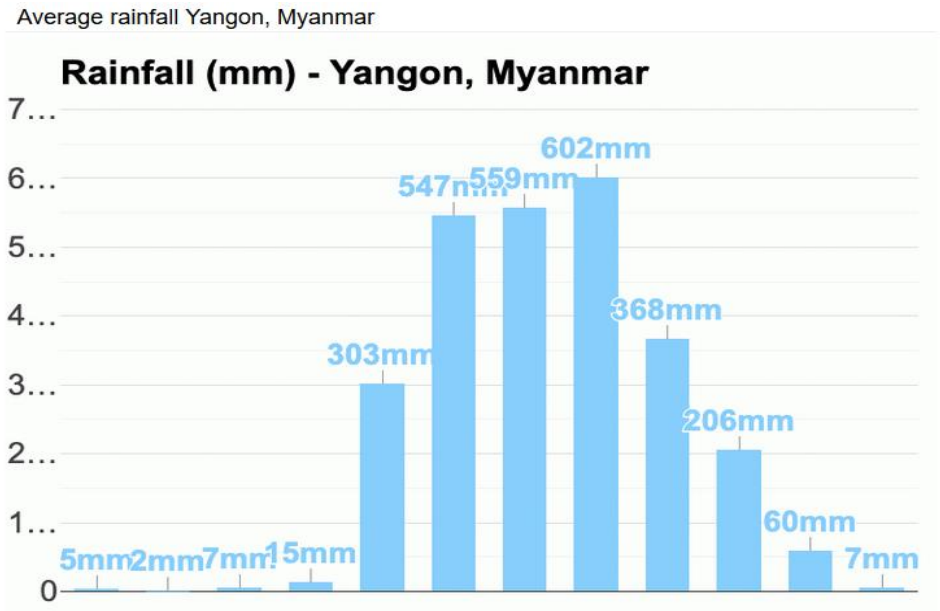

Figure 28. Rainfall Graph of Yangon

Table 25. Average Rainfall and Rainfall Days of Yangon

Sr	Month	Average Rainfall	Average Rainfall Days
1	January	5 mm	0.2 days
2	February	2 mm	0.2 days
3	March	7 mm	0.4 days
4	April	15 mm	1.6 days
5	May	303 mm	12.6 days
6	June	547 mm	25.3 days
7	July	559 mm	26.2 days
8	August	602 mm	26.1 days
9	September	368 mm	19.5 days
10	October	206 mm	12.2 days
11	November	60 mm	4.8 days
12	December	7 mm	0.2 days

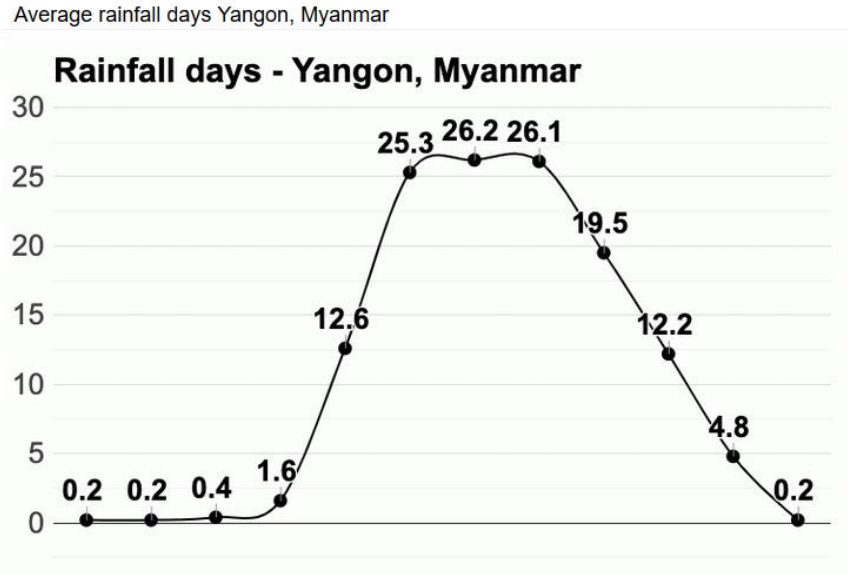

Figure 29. Rainfall Days Graph of Yangon

5.2.4 Humidity

In 2019, August is the most humid and January is the least humid month in Yangon. The month with the highest relative humidity is August (87%) and the lowest relative humidity is January (62%).

Table 26. Average Humidity of Yangon

Sr	Month	Average Relative Humidity
1	January	62%
2	February	66%
3	March	69%
4	April	66%
5	May	73%
6	June	85%
7	July	86%
8	August	87%
9	September	85%
10	October	78%
11	November	71%
12	December	65%

Average humidity Yangon, Myanmar

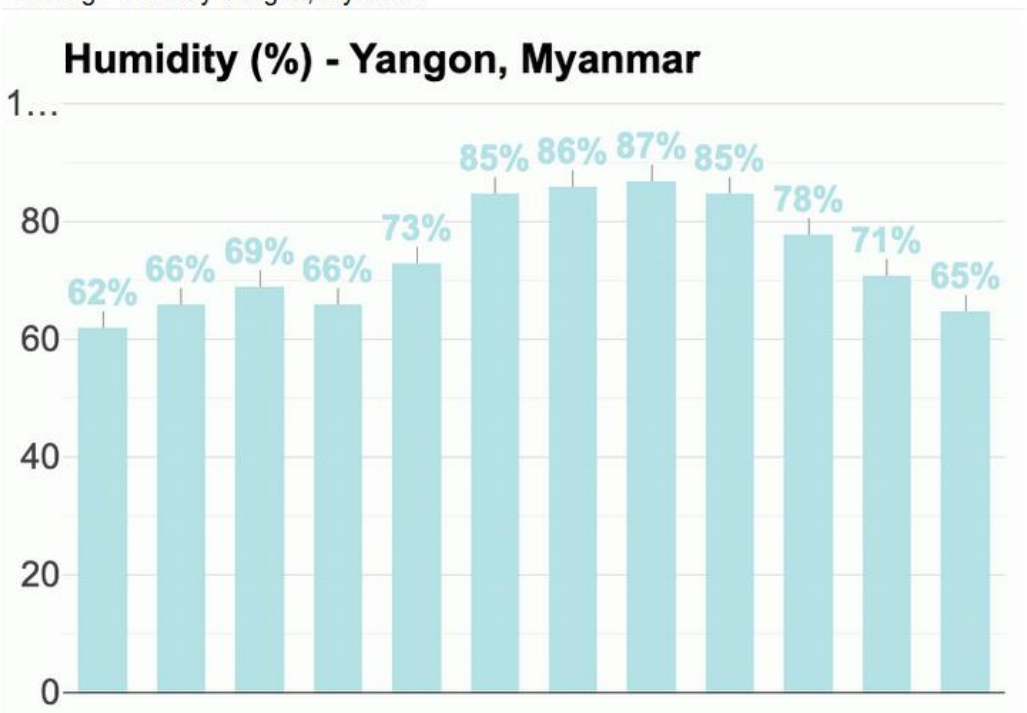

Figure 30. Humidity Graph of Yangon

5.2.5 Daylight/ Sunshine

Sunshine hours of Yangon are range from 2:29 daily in July to 9:44 to each day in January. The longest day of the year is 13:10 hr and the shortest day is 11:1 hr long. The longest day is 2:00 longer than the shortest day. The month with the longest day in June (average daylight: 13.1 h) and the month with the shortest day in December (average daylight: 11.1 h). Months with the most sunshine are January, February and April (average sunshine: 9.7 h) and the month with the least sunshine is July (average sunshine: 2.5 h).

Table 27. Average Daylight and Sunshine Hours of Yangon

Sr	Month	Average Daylight	Average Sunshine
1	January	11.3 hr	9.7 hr
2	February	11.6 hr	9.7 hr
3	March	12.1 hr	9.4 hr
4	April	12.5 hr	9.7 hr
5	May	12.9 hr	5.8 hr

6	June	13.1 hr	2.7 hr
7	July	13 hr	2.5 hr
8	August	12.7 hr	3 hr
9	September	12.2 hr	3.2 hr
10	October	11.8 hr	6.5 hr
11	November	11.3 hr	9.3 hr
12	December	11.1 hr	9.3 hr

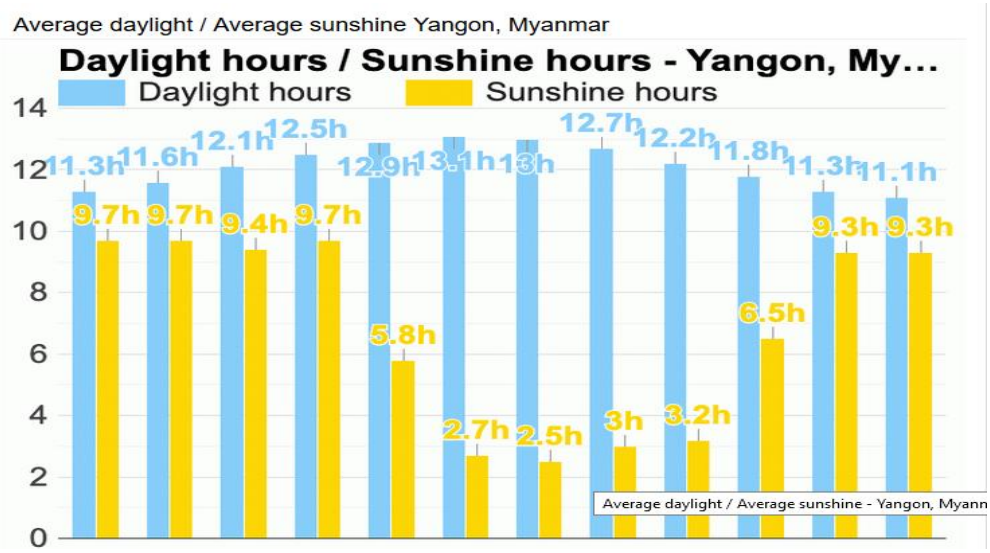

Figure 31. Day Light and Sunshine Hours graph of Yangon

5.2.6 UV Index

Months with the highest UV index of Yangon are March, April, May, June, July, August and September (UV index 12) and the month with the lowest UV index is December (UV index 8).

Table 28. Average UV Index of Yangon

Sr	Month	Average UV Index
1	January	9
2	February	11
3	March	12
4	April	12

5	May	12
6	June	12
7	July	12
8	August	12
9	September	12
10	October	11
11	November	9
12	December	8

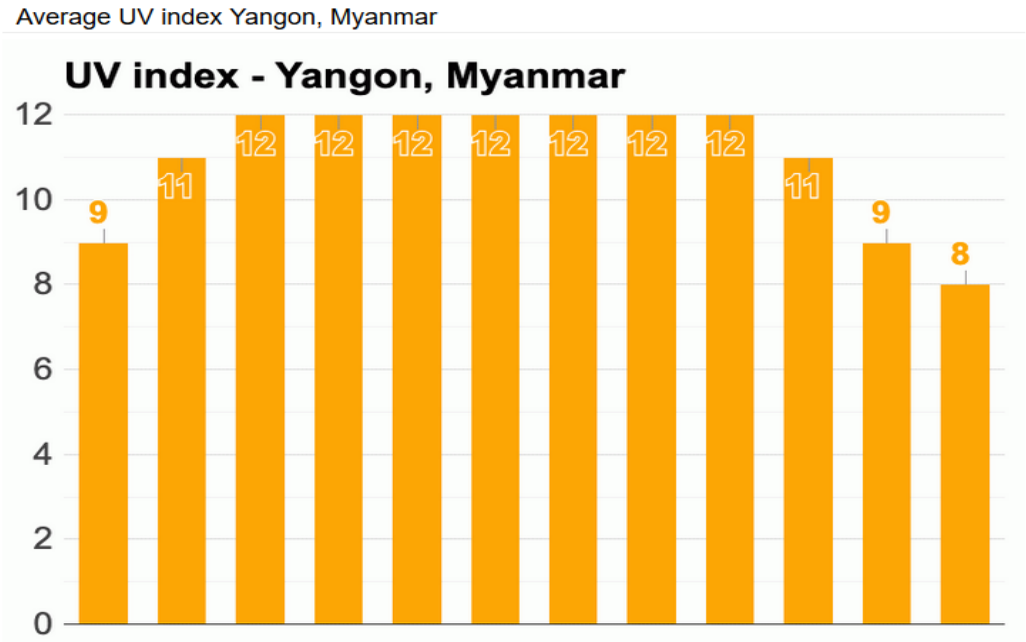

Figure 32. UV Index Graph of Yangon

5.3 Biodiversity

Biodiversity includes two portions, which are the study of vegetation (flora) and the study of living animals (fauna). There is no natural vegetation; wildlife and deforestation in project affect area within 1 kilometer.

6 IMPACT ASSESSMENT AND MANAGEMENT

Rating matrix method is used to assess the significance level of the identified environmental impacts of the Myanmar Rui Xin Shoes Company Limited on its environment. There are five parameters considered for the activities of the projects and the consequences resulted from the said activities. System of rating is described in detailed as follows.

Table 29. Impact Rating Table

Severity	Value	Duration	Value	Spatial Scope	Value	Frequency	Value	Probability	Value
Insignificant/non-harmful	1	One day to one month	1	Activity specific	1	Annual or less	1	Almost impossible	1
Small/potentially harmful	2	One month to one year	2	Within right of way/project compound	2	Bi-annual	2	Highly unlikely	2
Significant/slightly harmful	3	One year to ten years	3	Local area	3	Monthly	3	Unlikely	3
Great/ harmful	4	Life of operation	4	National	4	Daily Intermittence	4	Possible	4
Disastrous/ deadly harmful	5	Permanent	5	Global	5	Daily Continuous	5	Definitely	5

Table 30. Rating Matrix

	Consequence (Severity + Spatial Scope + Duration)														
Activity (Frequency + Probability)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150

Table 31. Significance Levels

Sr.	Color Code	Value	Rating
1		1-25	Very Low
2		26-50	Low
3		51-75	Low-Medium
4		76-100	Medium-High
5		101-125	High
6		126-150	Very High

Environmental aspect and impact are based on production process activity.

Table 32. Environmental Aspect and Impact

Sr.	Activity List	Aspect	Impact
1	Raw Receiving	Overweight lifting	Injury from overweight lifting
		Packing waste	Solid waste generation
2	Injection to Shoe heel mold	Operation of molding Using air compressor	Solid waste generation, Noise
3	Nylon Fabric Cutting	Operation of cutting machine	Injury from cutting machine, Solid waste generation
2	Fabric and heel Adhesion	Contact with adhesive	Chemical hazard
4	String adding	Manually with labor	Solid waste generation
5	Finishing, Tag & Code	Pieces of thread cuts, needle cuts	Solid waste generation, Injure by needle
6	Packing	Packing waste	Solid waste generation
7	Storage	Pieces of plastic	Solid waste generation
		Overweight lifting	Injury from overweight lifting

Characteristics of the impacts are evaluated based on eight particular basis, four of which are used in the assessment of the significance level of the impacts.

Table 33. Characteristics of the Impacts

IMPACTS	CHARACTERISTICS							
	Nature	**Impact Source**	**Impact Receptor**	**Severity**	**Duration**	**Spatial Scope**	**Frequency**	**Probability**
Physical hazard	Negative	-Injury from overweight lifting - Contact with cutting machine - Injury by needle - Ergonomics	Workers	Impact severity is significant for operation workers	Physical hazard will occur in project life	Physical hazard will occur at the project area of activity	Activity that cause the impact occurs daily intermittently	Physical hazards are possible
Chemical hazard	Negative	- Contact with adhesive	Workers	Impact severity is significant for operation workers	Chemical hazard will occur in project life	Chemical hazard will occur at the project area of activity	Activity that cause the impact occurs daily intermittently	Chemical hazards are possible

Fire hazard	Negative	-Smoking in prohibited area - Wire shock by continuous electricity usage - Diesel storage for driving generator	Workers and the whole plant	Impact severity is harmful	Fire hazard will occur the whole project life	If a fire broke out, the whole project is likely to be affected	Fire hazard can occur daily intermittently	A fire hazard is possible
Solid Waste	Negative	- Pieces of nylon fabric - Pieces of thread cuts, needle cuts - Packing waste Plastic waste - General waste	Workers and local environment	Impact severity is potentially harmful if solid wastes are discharged systematically	Impact from solid waste will occur in project life	Local area could be affected by solid waste mismanagement	Solid waste impact occurs daily intermittently	Impact from solid wastes are possible
Noise	Negative	- Using air compressor - Operation machine	Workers	Impact severity is potentially small occurs almost continuously and most of the workers are subjected to exposure	Noise hazard will occur in project life	Noise hazard will occur within the whole project compound	Activity that cause the impact occurs daily intermittently	Noise hazard are unlikely

Emission dust	Negative	- Operation of fabric settling	Workers	Impact severity is slightly harmful if air emissions are out of NEQG limit	Air emission will occur in project life	Air emission could spread to project compound	Air emissions occur daily Intermittence operation	According to current condition, air emission out of NEGQ limit is possible to occurs

Table 34. Assessment of the Significance of the Impacts without MEMs

Sr	Impact	Severity	Duration	Spatial Scope	Frequency	Probability	Total Rating	Significance Level
1	Fire hazard	4	4	2	4	4	80	Medium-High
2	Solid waste	2	4	3	4	4	72	Low-Medium
3	Physical hazard	3	4	1	4	4	64	Low-Medium
4	Chemical hazard	3	4	1	4	4	64	Low-Medium
5	Noise	2	4	1	4	3	49	Low
6	Emission dust	3	4	2	4	4	72	Low- Medium

6.1 Summary of Impacts and Mitigation Management

Table 35. Mitigation Measures for Anticipated Impacts

IMPACTS	Impact Source	Mitigation
Fire hazard	-Smoking in prohibited area	1. Strictly prohibit smoking within factory compound 2. Clearly define and notify emergency exits 3. Passage ways must always be kept clean and clear 4. Regularly check and refill fire extinguishers 5. Exercise fire drill regularly
Solid Waste	- Pieces of nylon fabric - Pieces of thread cuts, needle cuts - Packing waste - Plastic waste - General waste	1. Cleaning continuous and regularly 2. Packing nylon fabric waste in bags 3. Stacking waste bags systematically 4. Calling waste collector regularly 5. Providing adequate dust bins
Physical hazard	-Injury from overweight lifting - Contact with cutting machine - Injury by needle	1. Using necessary lifting and carrying aid apparatus and machinery 2. Using metal hand gloves for cutting machine operators 3. Installing needle guards
Chemical hazard	- Contact with adhesive	1. Providing hand gloves, mask and google for workers working in fabric adhesion process 2. Educating fabric adhesion workers about hazard of the process and usage of PPE 3. Supervising and regular inspection of the use of PPE
Noise	- Using air compressor	1. Carrying out regular maintenance works for all the equipment

	- Operation machine	2. Providing adequate ear muffs for workers 3. Regular inspection and supervision of the usage of ear muffs for the workers working at high noise areas
Emission dust	- Operation of fabric settling	1.Wearing necessary PPE (goggle, gloves) 2. Regular inspection and supervision of the usage of the masks for the workers working at odor producing areas 3. Installation of a particle monitoring meter 4. Temporarily stopping the works if PM 2.5 and PM 10 emission reached above 50 µg/m^3 in a day 5. Cleaning with dust collector

7 MANAGEMENT PLAN

Management and Monitoring Plans are to address and satisfy directly for all applicable environmental management and monitoring issues which are

1. Fire hazard
2. Solid waste
3. Physical hazard
4. Chemical hazard
5. Noise
6. Emission dust

7.1 Fire Hazard

Fire is the greatest threat for all factories around the world. Raw material used in shoe factory, rubber and fabric, is highly flammable. Fire can easily break out with any sparking source. Moreover, fire hazard is greater if emergency exit is poorly provided. Blockages in passage ways by stacks of raw materials and products will add a greater fire hazard.

Table 36. Objective and Legal Requirements for Fire Hazard

1	Objectives	To prevent and reduce fire hazard by the implementation of a systematic management and monitoring plan
2	Legal Requirements	1. Myanmar Fire Brigade Law Paragraph (14 C, 25)
3	Mitigation Measure	1. Strictly prohibit smoking within factory compound
		2. Clearly define and notify emergency exits
		3. Passage ways must always be kept clean and clear
		4. Regularly check and refill fire extinguishers
		5. Exercise fire drill regularly

Table 37. Management Actions for Fire Hazard

Sr.	Mitigation Measures	Management Actions
1	Strictly prohibit smoking within factory compound	Regular inspection and supervision
2	Clearly define and notify emergency exits	Regular inspection and supervision
3	Passage ways must always be kept clean and clear	Regular inspection and supervision
4	Regularly check and refill fire extinguishers	Regular inspection
5	Exercise fire drill regularly	Regular inspection and supervision

Table 38. Implementation Plan for Fire Hazard

Sr.	Management Action	Frequency	Duration	Responsibility
1	Strictly prohibit smoking within factory compound	Daily	Project life	HR Dept
2	Clearly define and notify emergency exits	Daily	Project life	HR Dept

3	Passage ways must always be kept clean and clear	Daily	Project life	HR Dept
4	Regularly check and refill fire extinguishers	Daily	Project life	HR Dept
5	Exercise fire drill regularly	3 times/yr	Project life	HR Dept

7.2 Physical Hazard

Primary physical hazard issues related to Myanmar Rui Xin Shoe factory is: overweight lifting at receiving raw materials and transporting products; hazard for injury from cutting machines and sewing needles; Ergonomic injury from prolong standing or sitting.

Table 39. Objective and Legal Requirements for Physical Hazard

1	Objectives	To prevent and reduce occupational hazard by the implementation of a systematic OSH management and monitoring plan
2	Legal Requirements	1. Myanmar Fire Brigade Law Paragraph (14 C, 25) 2. 1951 Factory Act (Chapter 3, Chapter 4) 3. OSH Law (Chapter 8, Paragraph 34 and 49)
3	Mitigation Measure	1. Using necessary lifting and carrying aid apparatus and machinery
		2. Using metal hand gloves for cutting machine operators
		3. Installing needle guards
		4. Regular maintenance of exhaust and ceiling fan

Table 40. Management Actions for Physical Hazard

Sr.	Mitigation Measures	Management Actions
1	Using necessary lifting and carrying aid apparatus and machinery	Regular inspection and supervision

2	Using metal hand gloves for cutting machine operators	Regular inspection and supervision
3	Installing and regular maintenance of needle guards	Regular inspection and replacement
4	Regular maintenance of exhaust and ceiling fan	Annually inspection and maintenance of exhaust and ceiling fan

Table 41. Implementation Plan for Physical Hazard

Sr.	Management Action	Frequency	Duration	Responsibility
1	Using necessary lifting and carrying aid apparatus and machinery	Once	Project Life	HR Dept
2	Using metal hand gloves for cutting machine operators	Monthly	Project life	Maintenance
3	Installing needle guards	Once	Project Life	HR Dept
4	Regular maintenance of exhaust and ceiling fan	Annually	Project life	Maintenance

7.3 Solid Waste

The shoes factory produces solid wastes mainly comprised of nylon fabric cuts and rubber cuts. These wastes are valuable for reuse in places such as stuffing for pillow and doll. But the solid waste from Myanmar Rui Xin Shoe factory is discharged by calling solid waste collector. Systematic management of this solid waste is of importance as mismanagement of the waste will lead critical occupational hazard including fire hazard. Following table depicts waste generation from the whole production process.

Table 42. Waste Generation from Garment Manufacturing

Sr.	Process	Waste
1	Receiving	Packing waste

2	Shoe heel molding and Cutting	Linen cuts, rubber cuts
3	Sewing	Linen cuts, Thread cuts
4	Shoe string adding	String pieces
5	Tag and Code	Paper waste, Thread cuts, Packing material
6	Packing	Packing waste

Table 43. Objective and Legal Requirements for Solid Waste

1	Objectives	To prevent and reduce environmental impacts from solid waste by providing a systematic management plan
2	Legal Requirements	1. Environmental Conservation Law Paragraph (14, 15) 2. 1951 Factory Act Paragraph (14A)
3	Mitigation Measure	1. Cleaning continuous and regularly
		2. Packing nylon fabric waste in bags
		3. Stacking waste bags systematically
		4. Calling waste collector regularly
		5. Providing adequate dust bins

Table 44. Management Actions for Solid Waste

Sr.	Mitigation Measures	Management Actions
1	Cleaning continuous and regularly	Regular inspection and supervision
2	Packing nylon fabric waste in bags	Regular inspection and supervision
3	Stacking waste bags systematically	Regular inspection and supervision
4	Calling waste collector regularly	Regular inspection and supervision
5	Providing adequate dust bins	Providing 20 dust bins

Table 45. Implementation Plan for Solid Wastes

Sr.	Management Action	Frequency	Duration	Responsibility
1	Cleaning continuously and regularly	Daily	Project life	Production Dept
2	Packing nylon fabric waste in bags	Daily	Project life	Production Dept
3	Stacking waste bags systematically	Daily	Project life	Production Dept
4	Calling waste collector regularly	Weekly	Project life	Production Dept
5	Providing 20 dust bins	Once	Project life	Plant Manager

7.4 Chemical Hazard

Glue is used in the production process. As precautionary measures, washing hands thoroughly after handling and wearing protective gloves, eye protection and face protection are necessary for workers working in fabric adhesion section.

Table 46. Objective and Legal Requirements for Chemical Hazard

1	Objectives	To prevent and reduce harmful effect of chemical and related materials on workers and environment
2	Legal Requirements	1. Environmental Conservation Law Paragraph (14, 15) 2. Prevention from the Hazard of Chemicals and Related Materials Law Paragraph (15 B, 16 B, 16 C, 16 D, 16 H, 16 K)
3	Mitigation Measure	1. Providing hand gloves, mask and google for workers working in fabric adhesion process 2. Educating fabric adhesion workers about hazard of the process and usage of PPE 3. Supervising and regular inspection of the use of PPE

Table 47. Management Actions for Chemical Hazard

Sr.	Mitigation Measures	Management Actions
1	Providing hand gloves, mask and goggle for workers working in fabric adhesion process	1. Providing necessary PPE for workers handling adhesive
		2. Providing training for systematic use of PPE
2	Educating fabric adhesion workers about hazard of the process and usage of PPE	1. Providing orientation and training for workers about hazard of the adhesion process and usage of PPE
3	Supervising and regular inspection of the use of PPE	Regular inspection and supervision of the use of PPE

Table 48. Implementation Plan for Chemical Hazard

Sr.	Management Action	Frequency	Duration	Responsibility
1	Providing necessary PPE for workers handling adhesive	Monthly	Project life	HR Dept
2	Providing training for systematic use of PPE	Once	Project life	HR Dept
3	Providing orientation and training for workers about hazard of the adhesion process and usage of PPE	Once	Project life	HR Dept
4	Regular inspection and supervision of the use of PPE	Daily	Project life	HR Dept

7.5 Noise

Some parts of the factory are subjected to noise for certain activities such as cutting. High noise areas are air compressor and operation machine. Workers in these areas are needed to be provided with necessary PPE such as ear muffs.

Table 49. Objective and legal requirements noise

1	Objectives	To prevent and reduce occupational hazard from noise by implementing a systematic management plan
2	Legal Requirements	1. NEQG paragraph (1.3)
3	Mitigation Measure	1. Carrying out regular maintenance works for all the equipment 2. Providing adequate ear muffs for workers 3. Regular inspection and supervision of the usage of ear muffs for the workers working at high noise areas

Table 50. Management Actions for Noise

Sr.	Mitigation Measures	Management Actions
1	Carrying out regular maintenance works for all the equipment	1. Installing a noise level meter 2.Carrying out regular noise level measurement 3. Carrying out annual overall maintenance work
2	Providing adequate ear muffs for workers	1. Providing ear muffs for workers
3	Regular inspection and supervision of the usage of ear muffs for the workers working at high noise areas	1. Regular inspection and supervision of the usage of ear muffs for the workers working at high noise areas

Table 51. Implementation plan for Noise

Sr.	Management Action	Frequency	Duration	Responsibility
1	Installing a noise level meter	Once	Project life	Plant Manager
2	Carrying out noise level measurement regularly	Weekly	Project life	Assistance Plant manager
3	Carrying out annual overall maintenance work	Annually	Project life	Plant Manager
4	Providing ear muffs for workers	As required	Project life	Plant Manager

5	Regular inspection and supervision of the usage of ear muffs	Daily	Project life	Assistance Plant manager

7.6 EMISSION DUST

Type of dust and odor generated from raw material storing, cutting area. Minimal requirement such as wearing necessary PPE (mask and hand glove) and carrying out regular sweeping at the area have to be carried out.

Table 52. Objective and Legal Requirements for dust management

1	Objectives	To provide adequate dust and particulate control system so that occupational health hazard relating to dust is minimal
2	Legal Requirements	1. Environmental Conservation Law Paragraph (14, 15) 2. NEQG Paragraph (1.1)
3	Mitigation Measure	1.Wearing necessary PPE (goggle, gloves) 2. Regular inspection and supervision of the usage of the masks for the workers working at odour producing areas 3. Installation of a particle monitoring meter 4. Temporarily stopping the works if PM 2.5 and PM 10 emission reached above 50 µg/m3 in a day 5. Cleaning with dust collector

Table 53. Management Actions for dust emission

Sr.	Mitigation Measures	Management Actions
1	Wearing necessary PPE (goggle, gloves, mask)	1. Providing face mask for workers working at metal melting process
2	Regular inspection and supervision of the usage of the masks for the workers working at odour producing areas	1. Educating workers about workplace safety practices and use of PPE 2. Regular inspection and supervision of face mask usage

3	Installation of a particle monitoring meter	1. Installation of a particle monitoring meter
4	Temporarily stopping the works if PM 2.5 and PM 10 emission reached above 50 µg/m3 in a day	1. Setting alarm level of meter to 50 µg/m^3 2. Temporarily stopping the resin laying works if dust emission reached above 50 µg/m^3 3. Reporting to plant manager
5.	Cleaning with dust collector	1. Providing dust collector

Table 54. Implementation plan for dust management

Sr.	Management Action	Frequency	Duration	Responsibility
1	Providing face mask for workers working at metal melting process	Monthly	Project life	Plant manager
2	Educating workers about workplace safety practices and use of PPE	Annually	Project life	Plant Manager,
3	Regular inspection and supervision of face mask usage	Daily	Project life	Plant manager
4	Installation of a particle monitoring meter	once	Project life	Plant manager
5	Temporarily stopping the resin laying works if dust emission reached above 50 ppm	If require	Project life	Plant manager
6	Providing dust collector	Once	Project life	Plant manager
7	Regular inspection and supervision of moistening dust heap area	Weekly	Project life	Plant manager

8 MONITORING PLAN

8.1 Fire Hazard

Table 55. Monitoring Plan for Fire Hazard

Sr.	Parameter	Location	Frequency	Method	Responsibility
1	Strictly prohibit smoking within factory compound	Within factory compound	Daily	Visual inspection	HR Dept
2	Clearly define and notify emergency exits	Factory compound	Daily	Inspection	HR Dept
3	Passage ways must always be kept clean and clear	Passage ways	Daily	Visual inspection	HR Dept
4	Regularly check and refill fire extinguishers	Fire extinguisher within the factory compound	Daily	Inspection	HR Dept
5	Exercise fire drill regularly	Fire drill within the factory compound	3 times/yr	Inspection	HR Dept

Table 56. Projected Budget for OSH

Sr.	Management Actions	Budget
1	Strictly prohibit smoking within factory compound	-
2	Clearly define and notify emergency exits	-
3	Passage ways must always be kept clean and clear	-
4	Regularly check and refill fire extinguishers	2,100,000/3 yrs
5	Exercise fire drill regularly	-

8.2 Physical Hazard

Table 57. Monitoring Plan for Physical Hazard

Sr.	Parameter	Location	Frequency	Method	Responsibility
1	Using necessary lifting and carrying aid apparatus and machinery	Loading/ Unloading area	Daily	Inspection	HR Dept
2	Using metal hand gloves for cutting machine operators	Production lines	Daily	Inspection	HR Dept
3	Installing needle guards	Production lines	Monthly	Inspection	Maintenance
4	Regular maintenance of exhaust and ceiling fan	Exhaust fans	Monthly	Inspection	Maintenance

Table 58. Projected Budget for Physical Hazard

Sr.	Management Actions	Budget
1	Using necessary lifting and carrying aid apparatus and machinery	-
2	Using metal hand gloves for cutting machine operators	300,000/yr
3	Installing needle guards	300,000
4	Regular maintenance of exhaust and ceiling fan	300,000/yr

8.3 Solid Waste

Table 59. Monitoring Plan for Solid Wastes

Sr.	Parameter	Location	Frequency	Method	Responsibility
1	Cleaning continuously and regularly	The whole plant	Daily	Inspection	Production Dept

2	Packing nylon fabric waste in bags	Inspection	Daily	Inspection	Production Dept
3	Stacking waste bags systematically	Inspection	Daily	Inspection	Production Dept
4	Calling waste collector regularly	Inspection	Weekly	Inspection	Production Dept
5	Providing 20 dust bins	Inspection	Once	Record	Plant Manager

Table 60. Projected Budget for Solid Wastes

Sr.	Management Actions	Budget
1	Cleaning continuously and regularly	-
2	Packing nylon fabric waste in bags	-
3	Stacking waste bags systematically	-
4	Calling waste collector regularly	-
5	Providing 20 dust bins	100,000

8.4 Chemical Hazard

Table 61. Monitoring Plan for Chemical Hazard

Sr.	Parameter	Location	Frequency	Method	Responsibility
1	Providing necessary PPE for workers handling adhesive	HR record	Once	Inspection	HR Dept
2	Providing training for systematic use of PPE	HR record	Once	Inspection	HR Dept
3	Providing orientation and training for workers about	Training record	Once	Inspection	HR Dept

	hazard of the adhesion process and usage of PPE				
4	Regular inspection and supervision of the use of PPE	HR record	Daily	Inspection	HR Dept

Table 62. Projected Budget for Chemical Hazard

Sr.	Management Actions	Budget
1	Providing necessary PPE for workers handling adhesive	100,000/yr
2	Providing training for systematic use of PPE	-
3	Providing orientation and training for workers about hazard of the adhesion process and usage of PPE	-
4	Regular inspection and supervision of the use of PPE	-

8.5 Noise

Table 63. Monitoring plan for Noise

Sr.	Parameter	Location	Frequency	Method	Responsibility
1	Carrying out noise level measurement regularly	within plant compounds	Monthly	Handheld noise level meter	General Manager
2	Carrying out annual overall maintenance work	Factory record	Annually	Inspection	Plant manager
3	Checking workplace daily	The whole plant	Weekly	Visual Inspection	General Manager
4	Providing earmuffs	Workers at high noise area	As required	Inspection	General Manager
5	Regular inspection and supervision of	Workers at high noise area	Weekly	Visual Inspection	Plant manager

	the usage of ear muffs				

Table 64. Projected budget for Noise

Sr.	Management Actions	Budget
1	Installing a noise level meter	60,000
2	Regular noise level measurement at workplaces	-
3	Carrying out annual overall maintenance work	500,000/yr
4	Checking workplace daily	-
5	Providing earmuffs	100,000/yr
6	Regular inspection and supervision of the usage of ear muffs	-

8.6 EMISSION DUST

Table 65. Monitoring plan for emission of dust

Sr.	Parameter	Location	Frequency	Responsibility
1	$PM_{2.5}$	Within plant compound	Bi-annually	Plant Manager
2	Regular inspection	Within plant compound	Daily	Assistance Plant manager

Table 66. Projected budget for emission to dust

Sr.	Management Actions	Budget
1	Providing face mask and helmet adequately for workers working at material handling areas	120,000/yr
2	Providing dust collector	200,000

8.7 Projected Budgets

Projected budget for implementation of EMP management actions and monitoring requirements could be summarized from detailed particulars described in previous section of the report. Myanmar Rui Xin Shoe Factory will allocate (660,000) kyats total of one-time cost and (2,120,000) kyat of annual recurring cost for successful implementation and monitoring of the EMP. If the estimated budget isn't enough, Myanmar Rui Xin Shoes Company Limited will be used by adding the enough budgets as necessary.

Table 67. Project Budgets for Implementation and Monitoring of EMP

Sr.	Management Actions	Budget
1	Regularly check and refill fire extinguishers	2,100,000/3 yrs (700000/yr)
2	Using metal hand gloves for cutting machine operators	300,000/yr
3	Installing needle guards	300,000
4	Regular maintenance of exhaust and ceiling fan	300,000/yr
5	Providing 20 dust bins	100,000
6	Providing necessary PPE for workers handling adhesive	100,000/yr
7	Installing a noise level meter	60,000
8	Regular noise level measurement at workplaces	-
9	Carrying out annual overall maintenance work	500,000/yr
10	Checking workplace daily	-
11	Providing earmuffs	100,000/yr
12	Regular inspection and supervision of the usage of ear muffs	-
13	Providing face mask and helmet adequately for workers working at material handling areas	120,000/yr
14	Providing dust collector	200,000
Total One Time Cost		660,000
Total Recurring Cost		2,120,000

9 ENVIRONMENTAL AND SOCIAL MANAGEMENT SUB- PLAN

9.1 Environmental And Social Management Team

An Environmental Management Team will be established for successful implementation of the environmental management plan. Myanmar Rui Xin Shoes Company Limited is responsible for complete implementation of the EMP and will carry out environmental monitoring programme which is part of the EMP. The objectives of the Environmental Management Team are:

(c) To assure systematic implementation of EMP throughout project life, and

(d) To monitor and review effectiveness of EMP regularly

Table 68. Environmental Management Team

Sr.	Representative	Number
1	Director	1
2	General Manager	1
3	Factory Manager	1
4	HR Manager	1
5	Production Manager	1
6	Supervisor	1

9.2 ROLES AND RESPONSIBILITIES

9.2.1 General Manager

General Manager is responsible for overall achievement of environmental management objectives. He has to report to Managing Director for regular progress, compliance, non-compliance and corrective actions for the course of implementation of EMP. He has to lead the regular EMP review process together with the environmental management team so that effectiveness of EMP is assured.

9.2.2 Heads of Departments

Heads of Departments (HODs) are responsible for carrying out day to day activities of the EMP. They have to direct employees or carrying out inspection works of the implementation of EMP and report back to Managing Director and General Manager for

progress, compliance, non-compliance and corrective actions for the course of implementation of EMP.

9.3 Training, Awareness and Competence

This plan describes the provisions of training to ensure that any people working for or on behalf of Myanmar Rui Xin Shoes Company Limited involved in the activities covered by the scope of the EMP are properly trained to carry out their assigned duties in a manner that will not cause deviation from company environmental policy.

This procedure applies to EMP related training for staff and any persons working for or on behalf of Myanmar Rui Xin Shoes Company Limited involved in the activities covered by the scope of the EMP Myanmar Rui Xin Shoes Company Limited will ensure that all people performing tasks for or on behalf of the organization have had an appropriate assessment for their potential to cause a significant environmental impact and the associated competence required.

The HODs shall ensure that people working for or on behalf of the company within the scope of EMP are competent on the basis of appropriate education, training or experience. The General Manager shall identify training needs for people working for or on behalf of the company to ensure individual competence to implement the EMP effectively.

Table 69. Training Requirement

Sr.	Training Topics	Trainee	Duration
1	OSH Training	Supervisors, Operators, Workers and Security	40 hours
2	EMP Training	Environmental management team	40 hours
3	Emergency Response Training	All employee	16 hours
4	First Aid Training	All employee	20 hours
5	Fire Fighting Training	All employee	40 hours

9.4 Emergency Preparedness and Response Plan

9.4.1 Emergency of Fire Hazard

9.4.1.1 Sources of Fire Hazard

Fire is a rapid chemical in which oxygen combines with another substance in the presence of a source of heat energy. Heat, fuel, and oxygen have to be present in sufficient quantities before a fire can start. If one of these elements is removed, the fire will go out. Heat acts as the source of ignition and anything that gives off heat can start a fire. The source of ignition is not necessarily a flame, a spark or fires itself, but the heat they give off. Heat can be generated by welding torches, soldering irons, hot plates, ovens, electric fires, light bulbs, electric irons, and smoking. Fuel can be anything combustible, such as paper, wood, petrol vapor, natural gas, and propane (bottled gas).

The oxygen essential for combustion is usually supplied from the surrounding air. Fires are classified into five categories according to the fuel type. The classification serves as a basis for identifying the means of extinguishing different types of fire:

- Class A

These are fires involving solid materials, normally of an organic nature, such as paper, wood, coal and natural fibers. These fires usually produce burning embers.

- Class B

These are fires involving flammable liquids or liquefied solids, such as petrol, oil, greases, fats and paints.

- Class C

These are fires involving gases or liquefied gases, such as methane, propane, and mains gas.

- Class D

These are fires where the fuel is a metal such as aluminum, sodium, potassium or magnesium.

- Class F

These are fires fueled by cooking fats, as in the case of deep fat frying.

9.4.1.2 Pre-Conditions

1. Mark out all location susceptible to fire outbreak

2. The work place is equipped appropriate fire-fighting equipment, fire detectors, and alarms and that any non-automatic fire-fighting equipment is easily accessible, simple to use and indicated by signs.
3. Appropriate measures are taken for fire-fighting and training of workers to implement those measures, and the arranging of contacts with external emergency services.
4. The emergency routes are kept clear and comply with any rules or regulations relating to routes, doors and signs.
5. There is a suitable system of maintenance for fire precautions in relation to workplace procedures in general and to specific equipment and devices, which must be kept in good working order and repair.
6. Hot works must be done in a standard workshop.
7. Store flammable liquids/gases properly and under the supervision of a competent person.
8. Standardize waste materials and residues management so that they do not contribute to a fire emergency.

9.4.1.3 Preparation for Emergencies

9.4.1.4 Training

All people at the production unit shall be trained on emergency situations in accordance with the standard of Myanmar fire bridge department.

9.4.1.5 Fire Drills

Fire drills are important requirement that serve to prepare and educate the staff in the event of a fire. Staff is expected to participate in fire drills and respond according to department expectations and institutional policy. Fire drills are critiqued and opportunities for improvement are identified and addressed. In addition, equipment and system problems and failures are reported immediately for correction.

Fire drills include the following:

- Simulated and actual removal of patients, staff and visitors from affected area
- Fire alarm activation
- Reporting event by calling 911
- Fire and smoke containment observation
- Review of evacuation procedures

- Fire suppression procedures

9.4.1.6 Pre-Drill Assessment

The drill coordinator should conduct a pre-drill assessment of the evacuation routes and assembly points. This assessment will verify condition of egress components and ensure that occupants may use these facilities in a safe manner. Ensure exit passageways are clear, free of obstructions and that exit doors work properly.

9.4.1.7 Evacuation

Evacuation shall be started by an acoustic signal. This signal can be activated by hand and also automatically by fire detection.

9.4.1.8 Responsibilities of Fire Emergency Coordinator and Fire Emergency Teams

The Emergency Coordinators are Responsible for: Review of the evacuation plan before a drill and identifying any modifications necessary as the result of changes in operations, facility, staff or occupants.

Trigger the evacuation signal (fire alarm) system and evaluate personnel response in terms of the following:

- Actions taken to shutdown processes and machineries.
- Using the prescribed route by the emergency procedure during evacuation.
- The ability of the occupant to provide assistance to visitors or individuals who are experiencing difficulty.
- Be familiar with the building evacuation plan and the basic emergency procedures.
- Know where the unit's first aid kit is located.
- The occupants' judgment in taking evasive action if the means of egress that is selected is determined to be unsafe.
- The occupant ability to report to the assembly area monitors using the prescribed emergency, safe exit (lifts must not be used in the event of a fire emergency) at the assigned assembly point.
- The Emergency Teams are Responsible for: Assessment of the means of exit
- Program the police services emergency number on the cell phone and have the phone readily available.

9.4.1.9 Emergency Equipment

The Followings equipment/PPE is mandatory when any hot work has to be performed:

- Hands-free welding mask;
- Steel toe safety boot;
- Fire Extinguisher;
- Fire blanket;
- Fire Hydrant system;
- Willkie Talkie
- Fire detection system.

Figure 33. Fire extinguishers, fire hose cabinets and fire alarm is provided for emergency cases

Figure 34. Assembly Point for Emergency Condition

9.4.1.10 First Aid

First aid is a part of the total health care for workers. Its application will depend to a large extent on persons present at the time of an accident, whether co-workers or formally trained medical personnel. Any comprehensive occupational safety and health programme should include first aid, which contributes to minimizing the consequences of accidents and is therefore one of the components of tertiary prevention.

9.4.1.11 First Aid Treatment for Burns

Generally, a burn is considered as severe if it involves:

- More than 5% of the casualty's Total Body Surface Area (TBSA) i.e. a surface area more than five times the size of his palm
- The casualty's mouth, throat, eyes, ears and/or genitals

A. Minor burns

For mild (1st degree) burns involving less than 5% of the casualty's body surface, the following procedure will suffice:

- Cool the burn with running cool (not cold) water for at least 5 minutes. Do not overcool. If the person starts to shiver, stop the cooling process.
- A cool compress or clean wet cloth placed over the burn area helps relieve pain and swelling and compress in 5 to 15 minutes intervals. Try not to use excessively cold compresses because they may irritate the burn more.
- Remove rings or other tight items from the burned area. Try to do this quickly and gently, before the area swells.
- Don't break small blisters (no bigger than your little fingernail). If blisters break, gently clean the area with mild soap and water, apply an antibiotic ointment, and cover it with a nonstick gauze bandage.
- Apply moisturizer or Aloe Vera lotion or gel, which may provide relief in some cases.
- Honey may help heal a minor burn when applied topically. Honey is an anti-inflammatory and naturally anti-bacterial and anti-fungal.
- If needed, take an over-the-counter pain reliever, such as ibuprofen (Advil, Motrin IB, others), naproxen sodium (Aleve) or acetaminophen (Tylenol, others).
- Consider a tetanus shot. Make sure that your tetanus booster is up to date.

B. Severe burns

For 2nd degree burns i.e. burns involving more than 5% of the casualty's body surface:

Follow this procedure stated below:

1. Cool the affected part under cold running water or immerse it in cold water for at least 10 minutes; for chemical burns, wash off the chemicals
2. Constricting accessories such as bracelets, rings, watches or clothing are to be gently removed from the injured area before it starts to swell
3. Cover the burned/scalded area with sterile dressing
4. Call the Medical Emergency Number for an ambulance

The burn is often associated with other traumata such as fractures, wounds, electrocution, etc. which may complicate the medical condition of the victim, if not treated in good time. Take immediately to nearby health facility burn victims with the following signs:

- First degree burns with sizeable area;
- 2nd and 3rd degree burns;
- If the victim is drowsy, restless and has breathing problem;
- If the victim has burns on his face, eye, extremities, joints and around genital organs;
- Immediate care and first aid treatment according to "4C Procedures" stated above may be required before adequate medical treatment is administered. The Emergency Coordinator must always ensure that trained personnel and adequate First Aid supplies are readily available.

9.4.1.12 Emergency Treatment of Burned Body Parts

In the case of a fire victim with burned body parts, to prevent burn lesions from deteriorating, it is essential to do the following:

a. Not to burst any blisters, or remove the epidermis. Exposure of the dermis only increases the loss of body fluids and heat, besides increasing pain and the risk of infection;
b. To cool the burned parts with water or wet cloth. This stops the action of the thermal agent and considerably reduces pain. Very extensive burns must be treated either by immersing the part in water at room temperature or by covering the part with damp cloth. The cooling operation should generally not exceed 20 minutes. It should be guided by the patient's general condition and the degree of pain relief achieved. Cooling a patient must be stopped if he begins to shiver, as this can lead to hypothermia. Children and elderly persons and those in a state of shock must be treated with even greater care,

with less energetic and shorter cooling. Non-extensive burns can be soothed with ice-packs or by placing the part under a running tap;

c. Flush chemical burns with water until all burning pain has stopped. Remove all contaminated clothes.
d. To use clean plastic bags, if available, to wrap burned hands and feet, or to spread out like adhesive flaps over burns on the thorax, limbs, etc;
e. To wrap burned parts or the entire body in a freshly laundered dry sheet, towel or cotton or linen cloth, and not to apply dressings as these would cause constriction as the burn oedema (a condition characterized by an excess of watery fluid collecting in the cavities or tissues of the body) increases;

9.4.2 Emergency of Electric Shock

9.4.2.1 Sources of Electric Hazard

Electricity flows through conductors. Conductors include metals, water, earth and the human body. Electric shock occurs when electricity flows through the human body by means of contact. Electric currents may also heat external and internal tissue sufficiently to induce structural damage through electrical burns. Electrical burns affect human health through actions on both excitable (e.g. cardiac, nervous) and non-excitable (e.g. Skin, blood vessels) tissues. Depending on the resistance encountered, the nature of the source, the strength of the current and the contact time, the heat generated (Joule effect) may produce serious external and internal burn injuries and even death. Deep-tissue burns may occur anywhere along the path a current travel through the body. Evident surface burns may only comprise a small portion of the overall burn injury, and an injury's full extent may not be immediately apparent. Harm can be caused to any person when they are exposed to 'live parts' that are either touched directly or indirectly by means of some conducting object or material. Voltages over 50 volts AC or 120 volts DC are considered hazardous. Maintenance Personnel, machine operators and production personnel are quite prone to electrocution if proper trainings and strict preventive measures against electrical hazard are not established. Electrical hazards may be constituted by any or combination of the following:

- Improper grounding
- Exposed electrical parts
- Inadequate wiring
- Overhead power lines

- Damaged insulation
- Overloaded circuits
- Wet conditions
- Damaged tools and equipment

The severity of injury from electrical shock depends on the amount of electrical current and the length of time the current passes through the body. Even if the current is as low as 0.5mA and a person comes in contact for just 2 seconds, this is enough to cause death.

The lower the resistance, the greater the current flow will be. Dry skin may have a resistance of 100,000 ohms or more. Wet skin may have a resistance of only 1,000 ohms. Wet working conditions or broken skin will drastically reduce resistance. The low resistance of wet skin allows current to pass into the body more easily and give a greater shock.

9.4.2.2 Pre-Conditions

1. All high voltage equipment shall be on an inventory list with the following information:
   - Identification (tag)
   - Voltage Rating
   - Caution sign
2. Implement Preventive Organizational Measures which must incorporate the following:
   - Provisions according to basic protection requirements such as insulations
   - Electrical fault protection requirements which normally involves an automatic disconnection of supply (ADS) using overcurrent protective devices.
   - All high voltage equipment must be installed with barriers and enclosures such that they are completely inaccessible to unauthorized persons. The barriers and enclosures must maintain adequate clearances from the live parts.
   - Safe Work Permit for jobs requiring high voltage
   - Identification and provision of required PPEs including electrical rated hand gloves
   - Specific Training to Operators and Maintenance Crew on Machine Safety procedure

9.4.2.3 Preparation for Emergencies

9.4.2.3.1 Training

An emergency expert or rescuer may be qualified for some kinds of emergencies and unqualified for others. Having the knowledge and skill to install and/or maintain electrical systems and equipment does not guarantee that the person is fully familiar with the hazards

involved. Special training, and ability to use special equipment, is necessary for those emergency service personnel who carry out emergency and rescue tasks close to live electrical equipment. Training is key in determining who is considered a qualified emergency responder. A qualified electrical emergency responder is one who has been specifically trained on electrical hazards and emergency response and is qualified to carry out a rescue or emergency response. All people at the production unit shall be trained on emergency situations.

9.4.2.3.2 Electrical Injury Simulations

Electrical injury simulations must be done at least once a year to build experience; enable psychological preparation for emergency and to test; evaluate and improve overall preparedness with regards to the Emergency Response. The Emergency response team for electrical related emergencies must consist of trained personnel equipped to carry out a planned response plan on what should be done in the event of an electrical emergency.

9.4.2.3.3 Direct Contact with Electricity

The primary electrical injury that accompanies an electric shock as a result of contact with electricity is burns. It takes about 30 mA of current to cause respiratory paralysis. Currents greater than 75mA cause ventricular fibrillation (very rapid, ineffective heartbeat). This condition will cause death within a few minutes unless a special device called a defibrillator is used to save the victim. Heart paralysis occurs at 4 amps, which means the heart does not pump at all. Tissue is burned with currents greater than 5Amp.

9.4.2.3.4 Indirect Contact

The most destructive indirect injury occurs when a victim becomes part of an electrical arc. Arc-blasts occur when powerful, high-amperage currents arc through the air. An electrical arc is a current spark formed between two objects of differing potential that are not in contact with each other, usually a highly charged source and a ground. Because the temperature of an electrical arc is approximately 2500° C, it causes very deep thermal burns at the point where it contacts the skin. In arcing circumstances, burns may be caused by the heat of the arc itself, electro thermal heating due to current flow, or by flames that result from the ignition of clothing. Protection against indirect contact is based on combining measures affecting both the characteristics of the equipment and the building of the installation. High sensitivity residual current devices are the most effective way of protecting against the risk of indirect contact.

9.4.2.3.5 Emergency Equipment

The Followings equipment/PPE are mandatory when any work with electrical hazards has to be performed:

- Electrical safety insulating latex hand gloves
- Electrical safety composite gloves
- Fire Extinguisher
- Safety boots ("EH" rated)

Protective devices such as overcurrent circuit breakers, thermal overload relays, and ground fault detectors must be installed as a preventive measure against electric hazards.

9.4.2.3.6 Rescue Procedure

Electrical shocks always need emergency medical attention even if the person seems to be fine afterward. The emergency responder is expected to do the following:

If low voltage electricity is involved;

- Separate the Person from the power or current's source
- Turn off power via circuit breaker, fuse box, or outside switch i.e. complete isolation
- If you can't turn off power, stand on something dry and non-conductive, such as dry newspapers, telephone book, or wooden board.
- Try to separate the person from current using non-conductive object such as wooden or plastic broom handle, chair, or rubber doormat.

If high voltage line or power line is involved:

High voltage electricity of 500V and above has the ability to 'jump' or 'arc' up to distances of 18 meters or over. If faced with a casualty resulting from high voltage electricity, the following procedures should be followed by a trained electrical emergency rescuer

1. Do not approach! Stay at least 25 meters away from the casualty until the power has been switched off by an official agency. Do not try to separate the person from current if you feel a tingling sensation in your legs and lower body
2. Insulate yourself from the ground with books / newspapers / rubber matting
3. Use an object of low conductivity i.e. a wooden broom or rolled up newspaper to push away the power source. If a power line falls on a car, instruct the passengers to stay inside unless explosion or fire threatens.

4. Once an electrical emergency rescuer has ascertained that the victim is no longer in contact with electrical conductors, the following checks may be carried out:
5. Quickly access the level of response of the victim. A rapid assessment will allow effective treatment to be administered and will also allow for accurate information to be passed on to the ambulance service. Access the level of response of the victim by:

Check whether the casualty is conscious

- Ask “hello, can you hear me” and call the name if you know it.
- Ask in both the casualty’s ears to open their eyes.
- Pinch an ear lobe or gently tap the shoulders.
- Shout for HELP!
- DO NOT move the casualty unless the environment or situation is dangerous.

9.4.2.3.7 First Aid Treatment

For an unresponsive casualty open the airway

- Look in the mouth to ensure there are no obvious obstructions.
- Open the airway by lifting the chin and tilting the head back.
- This will free the tongue from the back of the throat
- If neck/spinal injury is suspected, put one hand on the stomach to feel if it rises and falls. This indicates normal breathing.

Assess for breathing by doing the following:

- LOOK for the rise and fall the chest.
- LISTEN for sounds of breathing.
- FEEL for air on your cheek.
- Carry this out for up to 10 seconds.

Condition 1: If the victim is breathing normally;

If breathing is present do the following:

- Check for any other obvious injuries.
- Remove sharp objects from pockets.
- Turn the casualty into the recovery position.
- Place the nearest arm at a right angle to the body.
- Draw the furthest arm across the chest and place the back of the hand across the cheek.
- Keep this here whilst you raise the furthest leg by grasping the top of the knee.
- Gently pull on the knee so that the casualty pivots over onto their side facing you.

- The casualty should be fully over and stable.
- Re-check the airway, breathing and circulation.
- Draw up the leg at a 90-degree angle
- Check for continued breathing.
- Call the Emergency Medical Services

Condition 2: Victim is not breathing;

If the casualty is not breathing normally, commence full Cardio-Pulmonary Resuscitation (CPR). Call for medical emergency services while you commence CPR (Cardio-Pulmonary Resuscitation). To commence CPR for an unresponsive casualty;

- Ensure the casualty is on a firm, flat surface
- Place your hands one on top of the other in the center of the casualty's chest
- Compress the chest (up to a maximum depth of approximately 4-5cm) 30 times at a rate of 100 compressions per minute. The compressions and releases should take an equal amount of time
- After 30 compressions, open the airway again using head tilt/chin lift
- Seal the nostrils with your thumb and forefinger.
- Blow steadily into the mouth until you see the chest rise, take about a second to make the chest rise.

It is advisable to have resuscitation equipment at this stage such as a face shield.

- Remove your mouth to the side and let chest fall. Inhale some fresh air, when breathing for the casualty
- Repeat so you have given 2 effective rescue breaths in total
- If chest does not rise after the second breath, go back to 30 compressions then try again with 2 breaths.
- Return your hands to the correct position on the chest and give a further 30 chest compressions.

Continue with CPR until:

1. The casualty shows signs of recovery
2. Emergency services arrive
3. You become exhausted and unable to continue
4. The situation changes and you are now in immediate danger.

9.4.2.3.8 Burns

Exposure to electricity can cause burns to the skin and, in severe cases, internal organs. In such cases the electricity may, for example, enter via a hand and leave via the feet causing 'entry' and 'exit' burns.

A. Conscious casualties

   Cool burns for a minimum of 10 minutes under cold water.

B. Unconscious casualties

   Cool the burn with wet dressings after placing them in the recovery position.

- Burst any blisters
- Apply adhesive dressings
- Remove damaged skin
- Apply ointments/creams
- Cover with 'fluffy' dressings
- Affix dressing too tightly
- Apply butter/fats/margarine
- Remove damaged clothing
- Apply ice

9.4.3 Emergency of Chemical hazard

Many hazardous chemicals such as acids, caustic soda, etc. are used in our production processes for cleaning, sterilization, and for other purposes. A chemical emergency occurs when these hazardous chemicals come in contact with the human skin or when certain amount is inhaled. Most times, industrial chemical accident is never intentional. For example, a chemical burn may result from rubbing the eyes after handling chemicals.

1. Procedures for chemical substance acceptance must be documented and followed
2. Conditions for safe storage, including any incompatibilities and specific storage requirements of the chemicals must be reviewed at least yearly or as contained in the MSDS according
3. All containers must be labelled with the following information:
   - Name of the chemical
   - Concentration (strength) of the chemical

- Information about hazards associated with the chemical (For example, skin irritant and emergency information in case chemical gets in eyes) must be provided.
- The manufacturer's name.
- The date of manufacture (chemicals can degrade over time)

4. Safe handling instructions and minimum PPE required for handling of hazardous chemicals must be provided
5. Access control must be implemented to restrict entry of unauthorized personnel into areas containing hazardous chemicals
6. The Material Safety Data Sheet of all chemicals must contain at least the physical and chemical properties of the chemical;

• Appearance such as the physical state, color, etc.;
• Upper/lower flammability or explosive limits;
• Odor;
• Vapor pressure;
• Odor threshold;
• Vapor density;
• pH;
• Relative density;
• Melting point/freezing point;
• Solubility;
• Initial boiling point and boiling range;
• Flash point;
• Evaporation rate;
• Flammability (solid, gas);
• Partition coefficient: n-octanol/water;
• Auto-ignition temperature;
• Decomposition temperature; and
• Viscosity.

For highly corrosive chemicals the description of the delayed, immediate, or chronic effects from short- and long-term exposure must be available to all as contained in the MSDS

9.4.3.1 Preparation for Emergencies

All workers should be thoroughly trained regarding the risks of chemical attack. All workers working in areas with highly corrosive substances must be specifically trained on safe handling of these hazardous materials before starting any work involving the material. All activities shall be carefully planned in advance, and all planned procedures shall be carefully followed. Material safety data sheet for using chemical are attached in appendix.

9.4.3.2 Volatile Organic Compound Emission hazard

All suspected inhalation injuries require medical attention.

- Do not make a rescue attempt that puts your own life at risk
- Never enter a room filled with fumes
- Do not go into a fume-filled building without proper gear
- Call for medical help by dialing the Emergency Numbers
- Remove from source of exposure
- Monitor for responsiveness and breathing
- Treat chemical burns if present
- If victim can sit upright, ask him or her to take slow, deep breaths
- Check for other injuries while waiting for help

9.4.3.3 PPE Requirement for Chemical Handling

- The following PPE is mandatory to be used when handling chemicals
- Safety goggles
- Safety shoes/ boots
- Protective suit (disposable coverall or jacket and pants).
- Clothing that protects the torso against chemicals, fires and other hazards
- Chemical resistant hand gloves
- Face Shield

  Additional Safety Measures
- Safety showers and eyewashes shall be installed in the direct vicinity (i.e. 10 seconds or 30 m) of areas where operators handle hazardous chemicals
- Safety showers shall be accessible without any obstruction

9.5 Natural Disaster Preparedness

Practical and comprehensive action plans should be prepared for the following situations and types of activities to ensure effective implementation in times of emergency: Mitigating natural disaster risks includes measures to prevent loss of life and property during natural disasters (such as the construction of modulating lakes and reservoirs to prevent disasters caused by heavy rainfall and flooding in rivers, construction of sufficient fire breaks to prevent forest fires from spreading into urban areas) as well as precautionary and mitigating measures (such as planting trees as wind breakers and breakwaters, planting rows of trees and groves to reduce damage, using fire-proof materials as much as possible in construction to reduce fire hazards, and using earthquake resistant designs to reduce damage caused by earthquakes). In planning mitigating measures, the type of disasters that can affect the disaster-prone areas, the scale (large or small) and the population density (densely populated or sparsely populated) should first be studied and the disaster risk reduction measures prioritized according to the potential damage identified.

Natural disaster preparedness should include planning based on the characteristics of natural disasters, preparedness to overcome them and where it is not possible to overcome them, making preparations for evacuation and shelter. The following steps are generally involved:

1. Early Warning systems. Setting up systems for horizontal and vertical communications.
2. Providing management, and conducting rehearsals and drills for the Interdepartmental Relief Team to enable it to provide assistance during natural disasters from the nearest location in the field.
3. Providing training from the grassroots level organizations to the Township/Division/State to ensure preparedness for emergency activities during natural disasters; brainstorming possible solutions for different scenarios during training.
4. Including natural disaster management and preparedness activities for the individuals, groups, households, wards or neighborhoods in the school curriculum, newspaper/journals in order to raise awareness for everyone and issuing further warnings especially in disaster-prone times of the year.
5. Building safe shelters, artificial mounds and high embankments for use in times of emergency, and making evacuation plans and conducting drills.

6. Stockpiling food, water, clothing, supplies, construction materials, shelter and ready-made tents, tools, etc. that will be necessary during emergencies or arranging access to them and designating transportation routes.
7. Forming emergency supervisory teams and conducting rehearsals.
8. Identifying vulnerable areas for each type of natural disasters and conducting awareness-raising activities, identifying and communicating do's and don'ts and precautionary measures that should be taken for each type of natural disasters.
9. Preparing and conducting drills for measures to be taken during disasters and in the post-disaster period. Activities to be conducted during disasters include emergency relief, preliminary care and protection, emergency medical treatment, and evacuation to safe locations. Activities to be conducted in the post disaster period include provision of health care, water, food, clothing, and shelter.
10. As planning is required for these activities, projects should be in place for the provision of education and training to the grassroots level.

9.6 Factory Decommissioning Management Plan

9.6.1 Production Area Decommissioning Management Plan

The DMP for production area will consist of the following actions

- All products will be sent for suitable re-use, recovery, treatment or disposal.
- Shutting off unnecessary services to the building. Heating and ventilation capability would be maintained.
- The instrumentation will be disconnected and rendered safe.
- Cleaning and decontamination of all floor drains.
- All remaining specialized equipment will be sent for suitable re-use or sold to an interested party. Obsolete equipment will be recycled where possible or otherwise disposed of.

9.6.2 Utilities Area Decommissioning Management Plan

The DMP for the utilities area would consist of shutting down the following systems

- Removal of any associated chemicals, oils or any other materials used in the utilities area for redistribution, return to vendor or disposal.

- Waste oils, lubricants and diesel will be sent for suitable re-use, recovery, treatment or disposal as appropriate. Any hazardous waste arising from the plant and utilities areas will be removed from site and disposed of.

9.6.3 Warehouse Area Decommissioning Management Plan

The DMP for the stores warehouse would consist of the following actions

- Cancellation of all orders for incoming materials to the site.
- Negotiation with other plants with a view to distribution of unused materials.
- Negotiation with relevant suppliers to return unused materials to supplier.
- Dispatch of opened containers and non-returnable or out-of-date goods for appropriate treatment or disposal. Cleaning and decontamination of the storage areas.

9.6.4 Site Decommissioning Management Plan

The following actions would be required to ensure the implementation of the site DMP

- Cessation of any construction project work on site so that the site is left in a safe and orderly condition. Contractors will be required to decommission any construction compounds and remove all construction equipment, construction materials and waste, storage units and temporary offices from the site at the completion of construction projects.
- Disbandment of contract personnel, facilities and equipment.
- Termination of all non-essential maintenance and other contracts.
- Removal from site any temporary offices or storage areas.
- Rationalization of the site electricity supply. This would involve removing transformers from service, allowing remaining site operations to run from one transformer.

The boilers onsite will be decommissioned.

10 COMMUNICATION

This plan ensures a consistent and efficient approach to internal communication and external complaints relating to the environment. The procedure applies to all documents established under the EMP of Myanmar Rui Xin Shoes Company Limited. The documents under the EMP include but are not limited to:

- EMP Report
- Mitigation Measures and Management Actions
- Environmental Monitoring Programme

- Registers of Legal and Other Requirements
- External documents including legislation, professional guides and code of practices, etc.

10.1 PUBLIC CONSULTATION AND DISCLOSURE

Myanmar Rui Xin Shoes Company Limited is located at Plot No. (E-6), Myay Taing Block No. (21), Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon region, Myanmar. The project will include industrial zone management committee meetings; Compliance with departmental inspections; other departmental officials in the vicinity of the project; Special emphasis is placed on building good relationships with other business people and the public.

10.2 RESULTS OF PUBLIC CONSULTATION

Departmental officials, officials from the Zone Management Committee; Regular consultations will be held with the people in the area and public opinion will be taken to ensure that there is no harm to the environment and the socio-economy.

10.3 DISCLOSURE OF INFORMATION ON PUBLIC CONSULTATION; THE PLAN WILL BE IMPLEMENTED IN ACCORDANCE WITH THE REQUIREMENTS

The factory will have a suggestion box to provide public feedback on the project at all times. The guidelines of the Industrial Zone Committee and relevant departments will always be followed. Project announcements will be made in real time at the Industrial Zone Committee Office and the factory notice board.

10.4 CSR ACTIVITIES OF MYANMAR RUI XIN SHOES COMPANY LIMITED

CSR activities of Myanmar Rui Xin Shoes Company Limited are managed to develop socio-economic and humanity life. The net profit of this business is used for corporate social responsibility and table is shown in below. CSR activities of Myanmar Rui Xin Shoes Company Limited are as shown in appendix 8.

Table 70. CSR Activities Myanmar Rui Xin Shoes Company Limited

No	Plan	Percent of CSR budgets
1	Supporting for education	20%
2	Supporting for road preparing	20%
3	Supporting for township development	20%
4	Supporting for environmental conservation and cleaning	20%
5	Supporting for human care and rescue	20%

10.5 RESPONSIBILITY

- The General Manager is responsible for dealing with complaints.
- The communication from cooperate affairs is responsible for ensuring that all communications relating to the environment are processed correctly.
- All staffs are responsible for putting forward suggestions on environmental matters.

10.5.1 External Communications

Communications to be handled according to this procedure include correspondence, conservations and meeting with relevant interested parties.

The person receiving the communication shall be noted the time and date, relevant address/telephone number and details of communication. Details shall be passed to the General Manager who will determine the response and whether the corrective action is required upon consultation with HR Department. If the communication is significant, the General Manager shall inform the supply chain director as soon as possible.

General Manager shall be responsible for maintaining records, responses and corrective action in a separate file designated for that purpose. In order to have more understanding the environment management practices by the EMP team and to have more transparent, local authorities and Communities leaders shall be invited to the process once in a year to share update environment management procedures.

10.5.2 Internal Communications

The primary means of communication is through team briefings, supported as appropriate by use of notice boards and memos. Suggestions for environmental improvements are made through the company suggestion scheme.

11 CONCLUSIONS AND RECOMMENDATIONS

Six key environmental impacts can be occurred from the project objectivities. Myanmar Rui Xin Shoes Company Limited should be reduced and monitored on these environmental impacts by following specifically the impacts management and monitoring plan described in section 5. On the other hand, there will be left to be investigated positive impacts such as Job Opportunities and surrounding villages can be developed by CSR program of the factory. The net profit 2% of this business is used for corporate social responsibility.

12 MANAGEMENT REVIEW

A process that will review the results of the implementation of EMP by the analysis of the monitoring results to ensure that the mitigation measures and management actions are fully satisfied with the minimum side effects to the environment is required. The SHE manager shall work with all HODs to carry out analysis and evaluation of monitoring results in compliance with set environmental standard values. The SHE manager has the overall responsibility for ensuring that this EMP is implemented to ensure the project operation is in compliance with applicable environmental legislations.

The HR Manager of Myanmar Rui Xin Shoes Company Limited will be the responsible person of management review process. She shall be supported by all HODs and various functional heads.

References

- Environmental conservation law and rules
- Environmental impact assessment
- Myanmar Information Management Unit (http://themimu.info)
- Myanmar law library
- Department of Meteorology and Hydrology (https://www.moezala.gov.mm)
- OSHE (Occupational Safety, Health, Environmental guideline)

APPENDIX 1

Water Result

ISO TECH LABORATORY

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

ISO 9001:2015 Cert. No. 688600

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

W0820 045

WATER QUALITY TEST RESULTS FORM

Client	Myanmar Ruixin Shoes Co.,Ltd.
Nature of Water	Tube Well Water
Location	Hlaing Thar Yar Township
Date and Time of collection	5.8.2020
Date and Time of arrival at Laboratory	5.8.2020
Date and Time of commencing examination	6.8.2020
Date and Time of completing	8.8.2020

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
Temperature (°C)	25.0	°C	
Fluoride (F)		mg/l	1.5 mg/l
Lead (as Pb)		mg/l	0.01 mg/l
Arsenic (As)		mg/l	0.01 mg/l
Nitrate ($N.NO_3$)	0.2	mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)		mg/l	
Chemical Oxygen Demand (COD)		mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)		mg/l	
Cyanide (CN)		mg/l	0.07 mg/l
Zinc (Zn)		mg/l	3 mg/l
Copper (Cu)	Nil	mg/l	2 mg/l
Calcium (Ca)	700	mg/l	
Magnesium (Mg)	500	mg/l	
Silica (Si)		mg/l	

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

Tested by

Signature:

Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO TECH Laboratory

Approved by

Signature:

Name: Soe Thit
B.E (Civil) 1980,
Technical Officer
ISO TECH Laboratory

ISO TECH LABORATORY

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

ISO 9001:2015 Cert. No. 688600

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

W0820 046

WATER QUALITY TEST RESULTS FORM

Client	Myanmar Ruixin Shoes Co.,Ltd.
Nature of Water	Wastewater
Location	Hlaing Thar Yar Township
Date and Time of collection	5.8.2020
Date and Time of arrival at Laboratory	5.8.2020
Date and Time of commencing examination	6.8.2020
Date and Time of completing	8.8.2020

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	8.6		6.5 - 8.5
Colour (True)		TCU	15 TCU
Turbidity		NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron		mg/l	0.3 mg/l
Chloride (as CL)		mg/l	250 mg/l
Sodium chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	500 mg/l
Total Solids	458	mg/l	1500 mg/l
Total Suspended Solids	188	mg/l	
Total Dissolved Solids	270	mg/l	1000 mg/l
Manganese		mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

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

Tested by
Signature: Hein
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
(a division of WEG Co.,Ltd.) ISO TECH Laboratory

Approved by
Signature:
Name: See Thit
B.E (Civil) 1980,
Technical Officer
ISO TECH Laboratory

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ISO TECH LABORATORY

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

ISO 9001:2015 Cert. No. 688600

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

W0720 472

WATER QUALITY TEST RESULTS FORM

Client	Myanmar Rui Xin Shoes Company Limited
Nature of Water	Tube Well Water
Location	Hlaing Thar Yar Township
Date and Time of collection	14.7.2020
Date and Time of arrival at Laboratory	14.7.2020
Date and Time of commencing examination	15.7.2020
Date and Time of completing	17.7.2020

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	7.9		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	4	NTU	5 NTU
Conductivity	3998	micro S/cm	
Total Hardness	1400	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	934	mg/l as $CaCO_3$	
Magnesium Hardness	466	mg/l as $CaCO_3$	
Total Alkalinity	120	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	120	mg/l as $CaCO_3$	
Iron	0.36	mg/l	0.3 mg/l
Chloride (as CL)	2230	mg/l	250 mg/l
Sodium Chloride (as NaCL)	3680	mg/l	
Sulphate (as SO_4)	92	mg/l	500 mg/l
Total Solids	2006	mg/l	1500 mg/l
Total Suspended Solids	7	mg/l	
Total Dissolved Solids	1999	mg/l	1000 mg/l
Manganese	9.2	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	2	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	2.0	ppt	

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

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

Approved by
Signature:
Name: Soe Thit
B.E (Civil) 1980,
Technical Officer
ISO TECH Laboratory

ISO TECH LABORATORY

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

ISO 9001:2015 Cert. No. 688600

WTL-RE-002
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

WW0720 067

WASTEWATER QUALITY TEST RESULTS FORM

Client	Myanmar Rui Xin Shoes Company Limited
Nature of Water	Wastewater (Outlet)
Location	Shwe Pyi Thar Township
Date and Time of collection	14.7.2020
Date and Time of arrival at Laboratory	14.7.2020
Date and Time of commencing examination	15.7.2020
Date and Time of completing	20.7.2020

Results of Wastewater Analysis

Parameters	Results	
pH		
Biochemical Oxygen Demand (BOD) (mg/l) (5 days at 20 °C)	24	
Chemical Oxygen Demand (COD) (mg/l)	64	
Dissolved Oxygen (DO) (mg/l)		
Total Solids (mg/l)		
Total Suspended Solids (mg/l)		
Total Dissolved Solids (mg/l)		
Nitrate (mg/l)	1.6	
Ammonia Nitrogen (NH_3) (mg/l)	1.22	
Ammonium Nitrogen (NH_4) (mg/l)	1.29	
Phosphate (mg/l)		

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

Tested by

Signature: Hein

Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO TECH Laboratory

Approved by

Signature:

Name: Soe Thit
B.E (Civil) 1980,
Technical Director
ISO TECH Laboratory

APPENDIX 2

Soil Result

DEPARTMENT OF AGRICULTURE (LAND USE)

SOIL INTERPREATATION OF RESULTS

Myanmar Rui Xin Shoes Company Limited (14.7.2020)

Division – Yangon

Towship – Hlaing Thar Yar

Sheet No. 1

Sr No. S 1/ 19-20

Sr No.	Sample	pH Soil:Water 1:2.5	Texture	Organic Carbon	Total N	Exchangeable Cations			Available Nutrients	
						Ca^{++}	Mg^{++}	K^{+}	P	K_2O
1	Sample	Slightly alkaline	Clay	Very low	Low	High	High	High	Low	High

(ဒေါက်တာသန္တာညီ)

လက်ထောက်ညွှန်ကြားရေးမှူး

ဓာတ်ခွဲခန်းတာဝန်ခံ

မြေအသုံးချရေးဌာနခွဲ

DEPARTMENT OF AGRICULTURE (LAND USE)

SOIL ANALYTICAL DATA SHEET

Myanmar Rui Xin Shoes Company Limited (14.7.2020)

Division – Yangon

Towship – Hlaing Thar Yar

Sheet No. 1

Sr No. S 1/ 19-20

Sr No.	Sample	Moisture %	pH Soil:Water 1:2.5	Texture				Organic Carbon %	Humus %	Total N %	Exchangeable Cations meq/100gm			Available Nutrients	
				Sand %	Silt %	Clay %	Total %				Ca^{++}	Mg^{++}	K^{+}	P ppm (Olsen)	K_2O mg/100gm
1	Sample	4.79	7.36	35.12	12.86	52.02	100.00	0.38	0.66	0.11	30.71	6.32	0.51	4.20	23.95

(ဒေါက်တာသန္တာညီ)

လက်ထောက်ညွှန်ကြားရေးမှူး

ဓာတ်ခွဲခန်းတာဝန်ခံ

မြေအသုံးချရေးဌာနခွဲ

APPENDIX 3

Certificate of Incorporation

ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်

Certificate of Incorporation

MYANMAR RUI XIN SHOES COMPANY LIMITED
Company Registration No. 121749858

မြန်မာနိုင်ငံကုမ္ပဏီများဥပဒေ၂၀၁၇ အရ
MYANMAR RUI XIN SHOES COMPANY LIMITED
အား ၂၀၁၉ ခုနှစ် ဩဂုတ်လ ၁၅ ရက်နေ့တွင်
အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ
အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့်ပြုလိုက်သည်။

This is to certify that
MYANMAR RUI XIN SHOES COMPANY LIMITED
was incorporated under the Myanmar Companies Law 2017 on 15 August 2019 as a Private Company Limited by Shares.

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ
Registrar of Companies
ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန
Directorate of Investment and Company Administration

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MyCO)

HOME | MYCO GUIDES | COMPANY SEARCH | HELP | LOGOUT | WELCOME, MYANMAR RUI XIN SHOES COMPANY LIMITED

COMPANY PROFILE

+NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
MYANMAR RUI XIN SHOES COMPANY LIMITED		121749858	15/08/2019
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	Yes	-
Annual Return Due Date			
15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

Document No.	Form/Filing Type	Filing Date	Effective Date
14081240010	D-1 - Particulars of directors and secretary	05/09/2019	05/09/2019
13894610012	A-1 - Application for incorporation as a private company limited by shares	15/08/2019	15/08/2019

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MYCO)

HOME | MYCO GUIDES | COMPANY SEARCH | HELP | LOGOUT | WELCOME, MYANMAR RUI XIN SHOES COMPANY LIMITED

COMPANY PROFILE

+NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
MYANMAR RUI XIN SHOES COMPANY LIMITED		121749858	15/08/2019
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	Yes	-
Annual Return Due Date			
15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

Type	Address	Effective Date
Principal Place Of Business In Union	Myanmar	15/08/2019
Registered Office In Union	Survey Block No (21) Plot No (E-6), Phase (III) Mya Sein Yaung Industrial Zone, Hlaing Thar Yar Township, Yangon, Myanmar	15/08/2019

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MyCO)

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COMPANY PROFILE

+NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
MYANMAR RUI XIN SHOES COMPANY LIMITED		121749858	15/08/2019
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	Yes	-
Annual Return Due Date			
15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

Name	Type	Nationality	N.R.C. (For Myanmar Citizens)	Effective Date
MR. PAN YUXIANG	Director	China	ED0331634	15/08/2019
MR. WANG JIANHUA	Director	China	E49743693	05/09/2019

Officer Details

Close

Officer Type
Director

Appointment Date
15/08/2019

Effective Date
15/08/2019

Full Name in English
MR. PAN YUXIANG

Former Name in English

Full Name in Myanmar

Former Name in Myanmar

Nationality
China

N.R.C (for Myanmar citizens)/Passport(for foreign individuals)
ED0331634

Other Nationalities, if applicable

Business Occupation
DIRECTOR

Gender
Male

Date of Birth
12/01/1983

Phone number
+86 13736363666

Email address
shaun.pan@ruixingshoes.net

Address
Lane (130), Shuixin Road, Songtai Street
No (10)
Wenzhou, Zhejiang Province, Lucheng
District, China

Officer Details

Close

Officer Type
Director

Appointment Date
15/08/2019

Effective Date
05/09/2019

Full Name in English
MR. WANG JIANHUA

Former Name in English

Full Name in Myanmar

Former Name in Myanmar

Nationality
China

N.R.C (for Myanmar citizens)/Passport(for foreign individuals)
E49743693

Other Nationalities, if applicable

Business Occupation
DIRECTOR

Gender
Male

Date of Birth
11/08/1971

Phone number
+86 13597551825

Email address
Wjh687195@163.com

Address
Baota Avenue
504 Juntai Residence
Huanggang City, Hubei Province, Huangzhou
District, China

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MyCO)

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COMPANY PROFILE

+NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
MYANMAR RUI XIN SHOES COMPANY LIMITED		121749858	15/08/2019
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	Yes	-
Annual Return Due Date			
15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

Total Shares Issued by Company	Currency of Share Capital
3680000	USD

ULTIMATE HOLDING COMPANY

Company Name	Registration Number	Jurisdiction of Incorporation

SHARE CAPITAL STRUCTURE

Share Class	Class Title	Total No. Shares	Total Amount Paid	Total Amount Unpaid
ORD	Ordinary	3,680,000	3,680,000	0

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MyCO)

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COMPANY PROFILE

+NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
MYANMAR RUI XIN SHOES COMPANY LIMITED		121749853	15/08/2019
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	Yes	-
Annual Return Due Date			
15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

Account Number	Account Name	Status	Request Date	Authority Start Date	Authority End Date	
113729000	MYANMAR RUI XIN SHOES COMPANY LIMITED	Active	15/08/2019	15/08/2019		Revoke

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MyCO)

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COMPANY PROFILE

+NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
MYANMAR RUI XIN SHOES COMPANY LIMITED		121749858	15/08/2019
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	Yes	-
Annual Return Due Date			
15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

Individual Members

Name	Nationality	N.R.C / Passport Number
MR. PAN YUXIANG	China	ED 0331634
MR. WANG JIANHUA	China	E49743693

Corporate Members

Name	Registration Number	Jurisdiction Of Incorporation

Member Details

Close

Full Name in English
MR. PAN YUXIANG

Full Name in Myanmar

Nationality
China

N.R.C (for Myanmar citizens)/Passport(for foreign individuals)
ED 0331634

Other Nationalities, if applicable

Gender
Male

Date of Birth
12/01/1983

Phone

Email address

Address
Lane 130. Shuixin Road. Songtai Street
No (10)
Wenzhou. Zhejiang Province. Lucheng
District. China

Shareholdings

Share Class	Class Description	Total No. Shares	Total Amount Paid	Total Amount Unpaid
ORD	Ordinary	3,312,000	3,312,000	0

Member Details

Close

Full Name in English
MR. WANG JIANHUA

Full Name in Myanmar

Nationality
China

N.R.C (for Myanmar citizens)/Passport(for foreign individuals)
E49743693

Other Nationalities, if applicable

Gender
Male

Date of Birth
11/08/1971

Phone

Email address

Address
Baota Avenue
504 Kuntai Residence
Huangggang City, Hubei Province,
Huangzhou District, China

Shareholdings

Share Class	Class Description	Total No. Shares	Total Amount Paid	Total Amount Unpaid
ORD	Ordinary	368,000	368,000	0

DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION

Myanmar Companies Online (MyCO)

HOME | MYCO GUIDES | COMPANY SEARCH | HELP - | LOGOUT | WELCOME, MYANMAR RUI XIN SHOES COMPANY LIMITED

COMPANY PROFILE

+ NEW FILING | ORDER DOCUMENTS | PRINT CERTIFICATE

Company Name (English) MYANMAR RUI XIN SHOES COMPANY LIMITED	Company Name (Myanmar)	Registration Number 121749858	Registration Date 15/08/2019
Company Type Private Company Limited by Shares	Status Registered	Foreign Company Yes	Small Company -
Annual Return Due Date 15/10/2019			

FILING HISTORY | ADDRESSES | OFFICERS | SHAREHOLDINGS | COMPANY AUTHORITY | MEMBERS | DOCUMENTS

	Type	Form	Date
	Copy of Officers IDs	D-1 - Particulars of directors and secretary	05/09/2019
	Copy of Officers IDs	A-1 - Application for incorporation as a private company limited by shares	15/08/2019
	Certificate of Incorporation	A-1 - Application for incorporation as a private company limited by shares	15/08/2019

APPENDIX 4

Factory Accessories/Operating Machinery

စီမံကိန်းတွင်သုံးစွဲမည့် စက်ပစ္စည်းပြဇယား

MYANMAR RUI XIN SHOES COMPANY LIMITED

No. (21) / (E-6), Mya Sein Yaung Industrial Zone(3), Hlaing Thar Yar Township, Yangon, Myanmar

MYANMAR RUI XIN SHOES CO., LTD

List of Machineries (To Be Imported) Brand New

Sr No.	Machine	Voltage	Power	Volume/MM	Weight/ KG	A/U	Quantity	Unit Price (USD)	Total Amount (USD)	HS CODE
1	Punch (XCLP3-2C)	380V	2.2KW	2300*1100*15000	1780	Set	57	1,000	57,000.00	84490090
2	Hot drilling rig (MG-881)	220v	2.8kw	1300*800*1600	95	Set	21	1,500	31,500.00	84249000
3	Ironing machine (MG-500)	220v	6kw	2100*1050*1100	222	Set	4	1,200	4,800.00	84532000
4	High frequency (MG-510)	380v	18kw	1200*1700*1700	500	Set	12	600	7,200.00	85184000
5	Port treasure machine (MG-551)	220v	0.025kw	320*290*350	8	Set	3	3,000	9,000.00	84669390
6	Peeling machine (MG-801)	220v	0.8kw	970*450*1150	70	Set	21	350	7,350.00	84629990
7	Fancy Machine (RX-1310)	220V	550W	1220*840*1320	183	Set	45	12,200	549,000.00	85365090
8	Puncher/Single Hole (YS-806)	-	-	600*430*1400	36	Set	30	3,200	96,000.00	82051000
9	Folding machine (BM-810A)	220V	750W	730*1380*1250	110	Set	5	1,000	5,000.00	84440090
10	Four-pin six-wire machine (BM-5160)	220V	370w	1160*600*1320	120	Set	5	1,000	5,000.00	94059900
11	Double-sided overglue machine (BM-352)	220V	180W	830*400*1290	85	Set	4	1,300	5,200.00	73089090
12	Lola A (MB-1591)	220V	0.6KW	710*370*685	71	Set	400	50	20,000.00	64035990
13	Lola Car B (XFS-891SH)	220V	550V	1100*600*900	92.5	Set	404	55	22,220.00	64035990
14	Shrink machine (LY-3822A)	220V	550W	700*1200*1200	75	Set	16	700	11,200.00	84224000
15	Small oven (BM-250)	220V	2400w	600*600*750	37	Set	62	850	52,700.00	84641010
16	Edge machine (BM-335)	220V	370W	650*260*600	52.5	Set	9	5,000	45,000.00	84522900
17	La Bon Machine (BM-600)	220V	370W	700*600*700	37.5	Set	27	700	18,900.00	85429000
18	Hammer flat (BM-625)	220V	250w	600*450*1320	80	Set	21	2,000	42,000.00	95069190
19	Lola double pin (XFS-892SH)	220V	550W	1100*600*900	92.5	Set	11	2,000	22,000.00	85446090
20	Sewing machine (YL-618)	220V	550W	1240*600*1330	140.5	Set	9	250	2,250.00	84529099
21	Man word flat car / 2 pin (BM-1530)	220V	550W	700*260*620	50	Set	14	300	4,200.00	40169990
22	Human word flat car / 3 pin (BM1533)	220V	550W	700*260*620	50	Set	8	1,000	8,000.00	40169990
23	Human word bag edge machine (BM-730)	220V	550W	650*260*600	52.5	Set	6	1,000	6,000.00	84522900
24	Pinch roller (KD-298)	220V	750W	1240*600*1330	154.2	Set	6	1,500	9,000.00	84835090
25	Shoe-eye machine (BM-95)	220V	550W	850*580*1560	250	Set	3	2,000	6,000.00	84419000
26	Cold-hearted belt machine (XQ-998)	220V	700W	560*420*410cm	26	Set	4	3,000	12,000.00	33049990

စီမံကိန်းတွင်သုံးစွဲမည့် စက်ပစ္စည်းပြဇယား

MYANMAR RUI XIN SHOES COMPANY LIMITED

No. (21) / (E-6), Mya Sein Yaung Industrial Zone(3), Hlaing Thar Yar Township, Yangon, Myanmar

MYANMAR RUI XIN SHOES CO., LTD

List of Machineries (To Be Imported) Brand New

Sr No.	Machine	Voltage	Power	Volume/MM	Weight/ KG	A/U	Quantity	Unit Price (USD)	Total Amount (USD)	HS CODE
27	Sewing machine (KD-296)	220V	750W	1240*610*1230	137	Set	16	250	4,000.00	84529099
28	Front line (QX-930A)	220V	0.37KW	20000*1120*750	2000	Meters	160	500	80,000.00	87149990
29	Mid-segment assembly line (QX-931A)	220V	0.37KW	28000*1120*750	2800	Meters	224	300	67,200.00	84314990
30	Rear assembly line (QX-932A)	220V	0.37KW	24000*1120*750	2400	Meters	192	120	23,040.00	82055990
31	Infrared oven (QX-936)	380V	9KW	2000*1200*400	400	Pcs	56	350	19,600.00	84172000
32	Swing belt (QX-9037)	220V	1.5KW	50000*450*200	1200	Meters	400	50	20,000.00	40103999
33	Overhead (single) hanging blue heating training machine (QX-925A)	380V	15KW	8000*1600*1600	2800	1set	8	6500	52,000.00	84818090
34	Overhead (single) hanging blue heating training machine (QX-925B)	380V	15KW	8000*1600*1600	2800	1set	8	3200	25,600.00	84818090
35	Overhead (single) hanging blue sterilization oven (QX-925C)	380V	6KW	3000*1600*1600	800	1set	8	70	560.00	85166000
36	Overhead hanging blue heating training machine (QX-925D)	380V	12KW	6000*1600*1600	2000	Pcs	8	650	5,200.00	84818090
37	Hammer flat (QX-327)	380V	0.4KW	550*700*1300	90.00	Set	10	30	300.00	82079090
38	Insole Machine (QX-330)	220V	3KW	520*580*1250	45.00	Set	8	4,000	32,000.00	84539090
39	Needle assembly line (QX-9039)	380V	1.5KW	20000*3000*2600	1500	Meters	1200	50	60,000.00	84798999
40	Dasher (QX-178A)	220V	0.5KW	700*500*1600	45	Set	8	3,000	24,000.00	95030090
41	Toe-shaping Machine (QX-561A)	220V	4KW	1150*1050*1920	550	Set	8	1,600	12,800.00	84532000
42	Heeled set-up machine (QX-562B)	220V	3.6KW	1000*750*1800	580	Set	8	5,000	40,000.00	95069190
43	Two-cylinder hoe-shaper (QX-312A)	220V	3KW	620*900*1760	250	Set	2	3000	6,000.00	84471290
44	Front help machine (LD-687)	220V	1.5KW	1750*950*1950	1100	Set	4	6500	26,000.00	39219099
45	Back-up machinen (LD-689C)	220V	1.5KW	1100*760*1600	500	Set	8	3200	25,600.00	87089900
46	Steaming wetter (YS-686)	380V	2.4KW	610*600*1290	130	Set	12	1,000	12,000.00	73242900
47	Barrel press (FX-812)	220V	1KW	860*630*1150	185	Set	9	600	5,400.00	73269099
48	All-round press (C2)	220V	2.2KW	1150*1200*1950	1030	Set	8	500	4,000.00	94036000
49	Spray ertoa (YS-332)	220V	2.2KW	370*780*740	45	Set	9	800	7,200.00	73182990
50	Big hairdryer (YS-687)	220V	6.8KW	480*620*1700	80	Set	10	100	1,000.00	85167100
51	Grinding machine (YS-655)	220V	1.1KW	720*650*760	66	Set	5	120	600.00	84594010

စီမံကိန်းတွင်သုံးစွဲမည့် စက်ပစ္စည်းပြဇယား

MYANMAR RUI XIN SHOES COMPANY LIMITED

No. (21) / (E-6), Mya Sein Yaung Industrial Zone(3), Hlaing Thar Yar Township, Yangon, Myanmar

MYANMAR RUI XIN SHOES CO., LTD

List of Machineries (To Be Imported) Brand New

Sr No.	Machine	Voltage	Power	Volume/MM	Weight/ KG	A/U	Quantity	Unit Price (USD)	Total Amount (USD)	HS CODE
52	Nail checker (JZD-7515)	220V	0.12KW	1500*1150*550	200	Set	8	650	5,200.00	96020020
53	Iron-bottomed over glue machine (YS-321)	220V	2.74KW	540*470*950	74	Set	9	500	4,500.00	73269099
54	High temperature and high humidity hydrolysator (GT-7005)	220V	3KW	1000*860*500	131	Set	1	9,000	9,000.00	38089340
55	Yellow-resistant (GT-7035)	220V	200W	500*400*600	80	Set	1	1,000	1,000.00	32159090
56	Servo System Rally (AI-700-SA)	220V	500W	750*840*2350	285	Set	1	1,000	1,000.00	84779000
57	Aging machine (GT-7024-NA1)	220V	2.5KW	750*1400*530	70	Set	1	2,000	2,000.00	84798999
58	Finished twisting machine (GT-7011-SA)	220V	500W	950*720*650	240	Set	1	500	500.00	84663090
59	Air compressor (QX-50P)	380V		1500*1000*1350	1000	Set	2	2,500	5,000.00	84149090
60	Dryer (QX-50A)	220V		1000*600*1000	200	Set	2	900	1,800.00	85163300
61	Gas tanks (QX-2000)	-	-	950*950*2300	300	Set	2	1,000	2,000.00	87089900
62	Brushing machine (QX-245)	220V	50HZ	400*400*780	45	Set	1	800	800.00	84799090
63	Generator (JNC-500)	380V	500KW	4000*1600*2300	4600	Set	2	3,500	7,000.00	85030010
64	Forklift (5 Ton)	-	-	-	-	Unit	3	2,000	6,000.00	84312090
65	Forklift(3Ton)	-	-	-	-	Unit	2	1,500	3,000.00	84312090
	Grand Total								**1,661,420.00**	

1.661

မှတ်ချက် ။ ။ စက်ပစ္စည်းများကို China, Indonesia နှင့်Thai နိုင်ငံများမှ တင်သွင်းမည်ဖြစ်ပါသည်။

洋玉祥

Mr. Pan Yuxiang

Director

Myanmar Rui Xin Shoes Co., Ltd.

စက်ပစ္စည်းကိရိယာများ

Myanmar Rui Xin Shoes Co., Ltd

Machine Photo

Punch

Hot drilling rig

Ironing machine

High frequency

Port treasure machine

Port treasure machine

Fancy Machine

Puncher/Single Hole

Folding machine

Four-pin six-wire machine

Double-sided overglue machine

Lola A

Lola Car B

Shrink machine

Small oven

Edge machine

La Bon Machine

Hammer flat

Lola double pin

Sewing machine

Man word flat car / 2 pin

Human word flat

Human word bag edge machine

Pinch roller

Shoe-eye machine

Cold-hearted belt machine

Sewing machine

Front line

Mid-segment assembly line

Rear assembly line

Infrared oven

Swing belt

Overhead (single) hanging blue heating training machine

Overhead (single) hanging blue heating training machine

Overhead (single) hanging blue sterilization oven

စက်ပစ္စည်းကိရိယာများ

Overhead hanging blue heating training machine

Hammer flat

Insole Machine

Needle assembly line

Dasher

Toe-shaping Machine

Heeled set-up machine

Two-cylinder hoe-shaper

Front help machine

Back-up machine

Steaming wetter

Barrel press

All-round press

Spray ertoa

Big hairdryer

Grinding machine

Nail checker

Iron-bottomed over glue machine

High temperature and high humidity

Yellow-resistant

Servo System Rally

Aging machine

Finished twisting machine

Air compressor

Dryer

Gas tanks

Brushing machine

Generator

Forklift (3 Ton)

Forklift (5 Ton)

APPENDIX 5

Raw Material Requirement

နှစ်အလိုက် ကုန်ကြမ်းပစ္စည်းလိုအပ်ချက်အခြေအနေပြဇယား

MYANMAR RUI XIN SHOES CO., LTD

Annual Raw Material List (to be imported)

No	Name	A/U	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 to Year 10
1	Resin adhesive	KG	32010	32650	33303	33969	34649	35342
2	Surface treating agent	KG	169750	173145	176608	180140	183743	187418
3	hardener	KG	51895	52933	53992	55071	56173	57296
4	cleaning agent	KG	18430	18799	19175	19558	19949	20348
5	rubber solution	KG	16005	16325	16652	16985	17324	17671
6	detergent oil	KG	23280	23746	24221	24705	25199	25703
7	toluene	KG	23280	23746	24221	24705	25199	25703
8	dichloromethane	KG	43650	44523	45413	46322	47248	48193
9	screen printing ink water	KG	23280	23746	24221	24705	25199	25703
10	TPR	Pair	40255	41060	41881	42719	43573	44445
11	ABS Heel	Pair	15035	15336	15642	15955	16274	16600
12	ABS Plastic particle	KG	29585	30177	30780	31396	32024	32664
13	mould	Piece	14550	14841	15138	15441	15749	16064
14	rubber granule	KG	43165	44028	44909	45807	46723	47658
15	TPR particle	KG	2425	2474	2523	2573	2625	2677
16	toner	KG	43165	44028	44909	45807	46723	47658
17	foamer	KG	50925	51944	52982	54042	55123	56225
18	rubber	Pair	7275	7421	7569	7720	7875	8032
19	EVA	yard	14550	14841	15138	15441	15749	16064
20	latex foam	yard	7275	7421	7569	7720	7875	8032
21	Jersey	yard	20370	20777	21193	21617	22049	22490
22	Cotton	yard	24250	24735	25230	25734	26249	26774
23	chemical fabric	yard	7275	7421	7569	7720	7875	8032
24	non woven	yard	37830	38587	39358	40145	40948	41767
25	tape	yard	19400	19788	20184	20587	20999	21419
26	white latex	KG	29100	29682	30276	30881	31499	32129
27	glue	KG	7275	7421	7569	7720	7875	8032
28	paper pipe	Piece	24250	24735	25230	25734	26249	26774
29	polyester	yard	73235	74700	76194	77718	79272	80857
30	Acrylic	yard	63050	64311	65597	66909	68247	69612
31	Elastane	yard	4850	4947	5046	5147	5250	5355
32	imitation leather (Sanative)	yard	14550	14841	15138	15441	15749	16064
33	webbing	yard	19400	19788	20184	20587	20999	21419
34	elastic	yard	14550	14841	15138	15441	15749	16064
35	non woven fabric	yard	14550	14841	15138	15441	15749	16064
36	roving tape	yard	55775	56891	58028	59189	60373	61580
37	nylon thread	yard	12125	12368	12615	12867	13124	13387
38	packing paper	Piece	33950	34629	35322	36028	36749	37484
39	shoe tree	Piece	7275	7421	7569	7720	7875	8032
40	super dry	bag	14550	14841	15138	15441	15749	16064
41	poly bag	bag	59655	60848	62065	63306	64572	65864
42	label	Piece	43650	44523	45413	46322	47248	48193
43	snap button	Piece	27645	28198	28762	29337	29924	30522
44	hang tag	Piece	49955	50954	51973	53013	54073	55154
45	hook	Piece	5820	5936	6055	6176	6300	6426
46	stitching needle	bag	38800	39576	40368	41175	41998	42838
47	cutting die	Piece	10670	10883	11101	11323	11550	11781
48	brush	Piece	19400	19788	20184	20587	20999	21419
49	plastic board	Piece	23765	24240	24725	25220	25724	26238

နှစ်အလိုက် ကုန်ကြမ်းပစ္စည်းလိုအပ်ချက်အခြေအနေပြဇယား

MYANMAR RUI XIN SHOES CO., LTD

Annual Raw Material List (to be imported)

No	Name	A/U	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 to Year 10
50	sand paper	yard	89240	91025	92845	94702	96596	98528
51	double sided tape	roll	61595	62827	64083	65365	66672	68006
52	masking tape	roll	39285	40071	40872	41690	42523	43374
53	sealing tape	roll	55290	56396	57524	58674	59848	61045
54	silver pen	Piece	63535	64806	66102	67424	68772	70148
55	time sheet	Piece	21825	22262	22707	23161	23624	24097
56	chopped fabric	kg	36375	37103	37845	38601	39373	40161
57	ornamental buckles	Piece	54805	55901	57019	58160	59323	60509
58	zipper	Piece	81965	83604	85276	86982	88722	90496
59	shoe lace	Piece	69840	71237	72662	74115	75597	77109
60	last	Pair	35405	36113	36835	37572	38324	39090
61	texon cardboard	Piece	7275	7421	7569	7720	7875	8032
62	pig leather (Sanative)	yard	24250	24735	25230	25734	26249	26774
63	goat suede	yard	87300	89046	90827	92643	94496	96386
64	cow suede	yard	106700	108834	111011	113231	115496	117805
65	goat leather(Sanative)	yard	58200	59364	60551	61762	62998	64258
66	cow leather(Sanative)	yard	79055	80636	82249	83894	85572	87283
67	high pile knitted fabric	yard	22795	23251	23716	24190	24674	25168
68	short pile knitted fabric	yard	59655	60848	62065	63306	64572	65864
69	paper	KG	19400	19788	20184	20587	20999	21419
70	foamex	KG	130950	133569	136240	138965	141744	144579
71	PU	KG	11640	11873	12110	12352	12600	12852
72	PVC	KG	4901895	4999933	5099932	5201930	5305969	5412088
73	primer	KG	17460	17809	18165	18529	18899	19277
74	ABS	KG	46075	46997	47936	48895	49873	50871
75	TPU	KG	21825	22262	22707	23161	23624	24097
76	TPE	KG	17460	17809	18165	18529	18899	19277
77	PP	KG	48500	49470	50459	51469	52498	53548
78	PE	KG	33950	34629	35322	36028	36749	37484
79	CCU	KG	9700	9894	10092	10294	10500	10710
80	TPR	KG	19400	19788	20184	20587	20999	21419
81	dyestuff	KG	5820	5936	6055	6176	6300	6426
82	paint	KG	14550	14841	15138	15441	15749	16064
83	conditioner	KG	22310	22756	23211	23676	24149	24632
84	cloth	KG	9700	9894	10092	10294	10500	10710
85	carton	Piece	19400	19788	20184	20587	20999	21419
86	box	Piece	73720	75194	76698	78232	79797	81393

မှတ်ချက်။ ။ ကုန်ကြမ်းများကို တရုတ်နိုင်ငံမှ တင်သွင်းပြီး ထွက်ရှိသည့် ကုန်ချောပစ္စည်းများကို China, Thai, USA, Europe, Japan နိုင်ငံများသို့ တင်ပို့မည်ဖြစ်ပါသည်။

洋玉祥

Mr. Pan Yuxiang

Director

Myanmar Rui Xin Shoes Co., Ltd.

ကုန်ကြမ်းပစ္စည်းနမူနာများ

Cleaning Agent

Rubber

Detergent Oil

Dichloromethane

Foamer

Latex foam

Resin Adhesive

Hardener

Rubber

Screen Printing Water

Rubber Solution

Surface Treating Agent

APPENDIX 6
Poduction Rate

နှစ်အလိုက် ကုန်ချောထွက်ရှိမှု အခြေအနေပြဇယား

Myanmar Rui Xin Shoes Co., Ltd

Production & Sale Account

Sr.No	Particular	A/U	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10
	Total Production	Pcs	485000	494700	504594	514686	524980	535479	546189	557113	568255	579620
	(I) Export Sale (100%)											
	All kinds of shoes											
1	All Kinds of shoes for men	Pair	170000	173400	176868	180405	184013	187694	191448	195277	199182	203166
2	All Kinds of shoes for Women	Pair	150000	153000	156060	159181	162365	165612	168924	172303	175749	179264
3	All Kinds of shoes for kid	Pair	165000	168300	171666	175099	178601	182173	185817	189533	193324	197190
	(II) CMP Charges											
	All kinds of shoes											
1	All Kinds of shoes for men	US$ / Pair	4.00	4.00	4.20	4.20	4.50	4.50	4.50	4.50	4.50	4.50
2	All Kinds of shoes for Women	US$ / Pair	4.50	4.50	4.70	4.70	4.90	4.90	4.90	4.90	4.90	4.90
3	All Kinds of shoes for kid	US$ / Pair	4.00	4.00	4.20	4.20	4.50	4.50	4.50	4.50	4.50	4.50
	(III) Value (i x ii)											
	All kinds of shoes											
1	All Kinds of shoes for men	US$ / ML	680000.00	693600.00	742845.60	757702.51	828060.60	844621.81	861514.25	878744.54	896319.43	914245.81
2	All Kinds of shoes for Women	US$ / ML	675000.00	688500.00	733482.00	748151.64	795587.64	811499.39	827729.38	844283.97	861169.65	878393.04
3	All Kinds of shoes for kid	US$ / ML	660000.00	673200.00	720997.20	735417.14	803705.88	819780.00	836175.60	852899.11	869957.09	887356.23
	Export Sale in US$	US$ / ML	2015000.00	2055300.00	2197324.80	2241271.30	2427354.12	2475901.20	2525419.23	2575927.61	2627446.16	2679995.09

洋玉祥

Mr. Pan Yuxiang
Director
Myanmar Rui Xin Shoes Co., Ltd.

APPENDIX 7

Staff list

ပြည်တွင်းဝန်ထမ်းခန့်ထားမည့်အခြေအနေပြဇယား

MYANMAR RUI XIN SHOES COMPANY LIMITED

No. (21) / (E-6), Mya Sein Yaung Industrial Zone(3), Hlaing Thar Yar Township, Yangon, Myanmar

Myanmar Rui Xin Shoes Co., Ltd

List Of Local Employee

Sr. No.	Designation	Number Of Person	Salaries/Month Kyat	Monthly-Kyat	Yearly-Kyat
1	General Manager	1	500,000	500,000	6,000,000
2	HR Manager	1	450,000	450,000	5,400,000
3	Secretary	1	400,000	400,000	4,800,000
4	Production Dept	100	350,000	35,000,000	420,000,000
5	Store Supervisor	4	300,000	1,200,000	14,400,000
6	Translator	6	300,000	1,800,000	21,600,000
7	Technican	30	200,000	6,000,000	72,000,000
8	Quality Contorl(QC)	30	180,000	5,400,000	64,800,000
9	Store Keeper	20	150,000	3,000,000	36,000,000
10	Skill and Semiskill Workers	500	180,000	90,000,000	1,080,000,000
11	Unskilled Workers	86	150,000	12,900,000	154,800,000
12	Driver	5	200,000	1,000,000	12,000,000
13	Security Staff	6	150,000	900,000	10,800,000
14	Cleaner	10	150,000	1,500,000	18,000,000
	TOTAL	800	3,660,000	160,050,000	1,920,600,000

မှတ်ချက်။ ။ ဝန်ထမ်းများခန့်အပ်သည့်အခါတွင် လုပ်ခလစာများကို ပြဌာန်းထားသော သတ်မှတ်စံနှုန်းများအတိုင်း ပေးမည်ဖြစ်ပါသည်။

洋玉祥

Mr. Pan Yuxiang
Director
Myanmar Rui Xin Shoes Co., Ltd.

နိုင်ငံခြားသားဝန်ထမ်းခန့်ထားမည့်အခြေအနေပြဇယား

MYANMAR RUI XIN SHOES COMPANY LIMITED

No. (21) / (E-6), Mya Sein Yaung Industrial Zone(3), Hlaing Thar Yar Township, Yangon, Myanmar

Myanmar Rui Xin Shoes Co., Ltd

List Of Overseas Employee

Sr.No	Designation	Number of Person	Salaries / Month US $	Monthly- US $	Yearly - US $
1	Factory Manager	1	1,000	1,000	12,000
2	HR Manager	1	800	800	9,600
3	Purchasing Manager	1	800	800	9,600
4	Quality Control,QC	1	800	800	9,600
5	Production Dept	9	800	7,200	86,400
6	Store Supervisor	1	600	600	7,200
7	Store Keeper	1	400	400	4,800
	TOTAL	15	5,200	11,600	139,200

Note: Full Time Oversease Employee

洋玉祥

Mr. Pan Yuxiang
Director
Myanmar Rui Xin Shoes Co., Ltd.

APPENDIX 8

Corporate Social Responsibility Plan

ဝန်ထမ်းသက်သာချောင်ချိရေးအစီအစဉ်

(Social Welfare Plan)

နိဒါန်း

၁။ ဝန်ထမ်းများ၏ လူမှုဘဝသက်သာချောင်ချိစေရေးအတွက် ဝန်ထမ်းသက်သာချောင်ချိရေး အစီအစဉ် အား ရေးဆွဲထားရှိပါသည်။

ရည်ရွယ်ချက်

၂။ မိမိဝန်ထမ်းများ၏လူမှုဘဝတိုးတက်မြင့်တင်နိုင်ရေးနှင့် ဝန်ထမ်းမိသားစုများ၏ ပညာရေး၊ လူမှုရေး၊ စားဝတ်နေရေးတို့အား အထောက်အကူပြုနိုင်စေရန် ရေးဆွဲထားခြင်း ဖြစ်ပါသည်။

သက်သာချောင်ချိရေးရန်ပုံငွေ တည်ထောင်ခြင်း

၃။ သက်သာချောင်ချိရေးအတွက် ရန်ပုံငွေတစ်ရပ်တည်ထောင်ပြီး ချေးငွေထုတ်ပေးခြင်း၊ ပညာရေး၊ ကျန်းမာရေးဆိုင်ရာကိစ္စရပ်များထောက်ပံ့ပေးနိုင်ရေးတို့အတွက် အောက်ဖော်ပြပါ သက်သာချောင်ချိရေး ရန်ပုံငွေအဖွဲ့အား ဖွဲ့စည်းဆောင်ရွက်သွားပါမည်-

(က)	မန်နေးဂျင်းဒါရိုက်တာ	ဥက္ကဋ္ဌ
(ခ)	အထွေထွေမန်နေဂျာ	အတွင်းရေးမှူး
(ဂ)	မန်နေဂျာ	ဘဏ္ဍာရေးမှူး
(ဃ)	စာရင်းကိုင်	စာရင်းကိုင်

သက်သာချောင်ချိရေးရန်ပုံငွေ သုံးစွဲခြင်း

၄။ သက်သာချောင်ချိရေးရန်ပုံငွေအား အောက်ဖော်ပြပါလုပ်ငန်းရပ်များအတွက် တွင် ရန်ပုံငွေအဖွဲ့ ဆုံးဖြတ်ချက်ဖြင့် သတ်မှတ်နှုန်းထားများအတိုင်း ထောက်ပံ့သုံးစွဲသွားပါမည် -

(က) ဝန်ထမ်းများ၏ ပျော်ပွဲရွှင်ပွဲများ၊ အားကစားပွဲများဆောင်ရွက်ခြင်း

(ခ) ဝန်ထမ်းတစ်ဦးခြင်းစီ၏ ထိမ်းမြှားမင်္ဂလာပြုခြင်း၊ မီးဖွားခြင်း၊ ကျန်းမာရေးချို့တဲ့မှုကြောင့် ဆေးရုံးတက်ခွဲစိတ်ကုသခြင်းများတွင် ထောက်ပံ့ခြင်း

(ဂ) ဝန်ထမ်းသေဆုံးမှု နာရေးများတွင်သတ်မှတ်နှုန်းထားများအတိုင်း ထောက်ပံ့မှုငွေအဖြစ် ထုတ်ပေးခြင်း

(ဃ) နေထိုင်ရေးအတွက် အထောက်အပံ့များဆောင်ရွက်ပေးခြင်း

(င) ဝန်ထမ်းများနှင့် ၎င်းတို့၏ သားသမီးများ၏ ပညာရေးဆိုင်ရာ ထူးချွန်ထက်မြက်မှုများအတွက် ချီးမြှင့်ခြင်း

နိဂုံး

၅။ ဝန်ထမ်းသက်သာချောင်ချိရေးစီမံချက်အား အကောင်အထည်ဖော်ဆောင်ရွက်၍ ငွေကြေးအခက်အခဲရှိသောဝန်ထမ်းများ အတိုးနှုန်းချိုသာစွာဖြင့် ထုတ်ချေးပေးခြင်း၊ ဝန်ထမ်းများ၏ သာရေး၊ နာရေး နှင့် ပျော်ပွဲရွှင်ပွဲများတွင် ထောက်ပံ့ငွေများ ထုတ်ပေးခြင်းဖြင့် ဝန်ထမ်းများ၏ လူမှုဘဝပြည့်စုံကောင်းမွန်အောင် ဆောင်ရွက်ပေးခြင်းဖြင့် ကုမ္ပဏီအကျိုး၊ နိုင်ငံတော်အကျိုးကို သယ်ပိုးဆောင်ရွက်ရာတွင် စိတ်အေးချမ်းသာစွာ ဆောင်ရွက်နိုင်ရန် သက်သာချောင်ချိရေးအစီအစဉ်ဖြင့် ပံ့ပိုးဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

APPENDIX 9

Social Welfare Plan

ဝန်ထမ်းသက်သာချောင်ချိရေးအစီအစဉ်

(Social Welfare Plan)

နိဒါန်း

၁။ ဝန်ထမ်းများ၏ လူမှုဘဝသက်သာချောင်ချိစေရေးအတွက် ဝန်ထမ်းသက်သာချောင်ချိရေး အစီအစဉ် အား ရေးဆွဲထားရှိပါသည်။

ရည်ရွယ်ချက်

၂။ မိမိဝန်ထမ်းများ၏လူမှုဘဝတိုးတက်မြင့်တင်နိုင်ရေးနှင့် ဝန်ထမ်းမိသားစုများ၏ ပညာရေး၊ လူမှုရေး၊ စားဝတ်နေရေးတို့အား အထောက်အကူပြုနိုင်စေရန် ရေးဆွဲထားခြင်း ဖြစ်ပါသည်။

သက်သာချောင်ချိရေးရန်ပုံငွေ တည်ထောင်ခြင်း

၃။ သက်သာချောင်ချိရေးအတွက် ရန်ပုံငွေတစ်ရပ်တည်ထောင်ပြီး ချေးငွေထုတ်ပေးခြင်း၊ ပညာရေး၊ ကျန်းမာရေးဆိုင်ရာကိစ္စရပ်များထောက်ပံ့ပေးနိုင်ရေးတို့အတွက် အောက်ဖော်ပြပါ သက်သာချောင်ချိရေး ရန်ပုံငွေအဖွဲ့အား ဖွဲ့စည်းဆောင်ရွက်သွားပါမည်-

(က)	မန်နေးဂျင်းဒါရိုက်တာ	ဥက္ကဋ္ဌ
(ခ)	အထွေထွေမန်နေဂျာ	အတွင်းရေးမှူး
(ဂ)	မန်နေဂျာ	ဘဏ္ဍာရေးမှူး
(ဃ)	စာရင်းကိုင်	စာရင်းကိုင်

သက်သာချောင်ချိရေးရန်ပုံငွေ သုံးစွဲခြင်း

၄။ သက်သာချောင်ချိရေးရန်ပုံငွေအား အောက်ဖော်ပြပါလုပ်ငန်းရပ်များအတွက် တွင် ရန်ပုံငွေအဖွဲ့ ဆုံးဖြတ်ချက်ဖြင့် သတ်မှတ်နှုန်းထားများအတိုင်း ထောက်ပံ့သုံးစွဲသွားပါမည် -

(က) ဝန်ထမ်းများ၏ ပျော်ပွဲရွှင်ပွဲများ၊ အားကစားပွဲများဆောင်ရွက်ခြင်း

(ခ) ဝန်ထမ်းတစ်ဦးခြင်းစီ၏ ထိမ်းမြှားမင်္ဂလာပြုခြင်း၊ မီးဖွားခြင်း၊ ကျန်းမာရေးချို့တဲ့မှုကြောင့် ဆေးရုံးတက်ခွဲစိတ်ကုသခြင်းများတွင် ထောက်ပံ့ခြင်း

(ဂ) ဝန်ထမ်းသေဆုံးမှု နာရေးများတွင်သတ်မှတ်နှုန်းထားများအတိုင်း ထောက်ပံ့မှုငွေအဖြစ် ထုတ်ပေးခြင်း

(ဃ) နေထိုင်ရေးအတွက် အထောက်အပံ့များဆောင်ရွက်ပေးခြင်း

(င) ဝန်ထမ်းများနှင့် ၎င်းတို့၏ သားသမီးများ၏ ပညာရေးဆိုင်ရာ ထူးချွန်ထက်မြက်မှုများအတွက် ချီးမြှင့်ခြင်း

နိဂုံး

၅။ ဝန်ထမ်းသက်သာချောင်ချိရေးစီမံချက်အား အကောင်အထည်ဖော်ဆောင်ရွက်၍ ငွေကြေးအခက်အခဲရှိသောဝန်ထမ်းများ အတိုးနှုန်းချိုသာစွာဖြင့် ထုတ်ချေးပေးခြင်း၊ ဝန်ထမ်းများ၏ သာရေး၊ နာရေး နှင့် ပျော်ပွဲရွှင်ပွဲများတွင် ထောက်ပံ့ငွေများ ထုတ်ပေးခြင်းဖြင့် ဝန်ထမ်းများ၏ လူမှုဘဝပြည့်စုံကောင်းမွန်အောင် ဆောင်ရွက်ပေးခြင်းဖြင့် ကုမ္ပဏီအကျိုး၊ နိုင်ငံတော်အကျိုးကို သယ်ပိုးဆောင်ရွက်ရာတွင် စိတ်အေးချမ်းသာစွာ ဆောင်ရွက်နိုင်ရန် သက်သာချောင်ချိရေးအစီအစဉ်ဖြင့် ပံ့ပိုးဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

APPENDIX 10

Material Safety Data Sheet for Using Chemicals

SAFETY DATA SHEET
HARDENER

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	HARDENER
PRODUCT NO.	EXH300, EXH900, EXH904, EXH905, EXH906, EXH001
INTERNAL ID	C
APPLICATION	Activator
SUPPLIER	TETROSYL LIMITED BEVIS GREEN WORKS WALMERSLEY BURY BL9 6RE 0161 764 5981 0161 797 5899 info@tetrosyl.com

2 HAZARDS IDENTIFICATION

May cause fire. Irritating to eyes. May cause sensitisation by skin contact.

CLASSIFICATION Xi;R36. R43. O;R7.

PHYSICAL AND CHEMICAL HAZARDS

The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures.

HUMAN HEALTH

See section 11 for additional information on health hazards.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
BENZOYL PEROXIDE	202-327-6	94-36-0	30-60%	E;R2 R43 Xi;R36

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS

The Data Shown is in accordance with the latest EC Directives.

4 FIRST-AID MEASURES

GENERAL INFORMATION

Remove affected person from source of contamination. Get medical attention immediately!

INHALATION

Move injured person into fresh air immediately. Call an ambulance. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Bring these instructions. Place unconscious person on the side in the recovery position and ensure breathing can take place.

INGESTION

Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and take these instructions.

SKIN CONTACT

Remove contaminated clothing immediately and wash skin with soap and water. Consult a physician for specific advice. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

EYE CONTACT

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Immediately transport to hospital or eye specialist.

HARDENER

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use fire-extinguishing media appropriate for surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES

No specific fire fighting procedure given.

SPECIFIC HAZARDS

Acrid smoke/fumes of : Carbon dioxide (CO_2).

PROTECTIVE MEASURES IN FIRE

Leave danger zone immediately.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

For personal protection, see section 8. In case of spills, beware of slippery floors and surfaces.

ENVIRONMENTAL PRECAUTIONS

The product should not be dumped in nature but collected and delivered according to agreement with the local authorities.

SPILL CLEAN UP METHODS

For waste disposal, see section 13. When dealing with a spillage, please consult the section relating to suitable protective measures. Provide ventilation and confine spill. Do not allow runoff to sewer. Absorb spillage with non-combustible, absorbent material. Contact Health and Safety department on 6147 or 6695 for further assistance.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Read and follow manufacturer's recommendations. Always remove grease with soap and water or skin cleaning agent, never use organic solvents. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Do not eat, drink or smoke when using the product.

STORAGE PRECAUTIONS

Keep away from heat, sparks and open flame. Store in tightly closed original container in a dry, cool and well-ventilated place.

STORAGE CLASS

Flammable liquid storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	TWA - 8 hrs		STEL - 15 min		Notes
BENZOYL PEROXIDE	WEL		5 mg/m3			

WEL = Workplace Exposure Limit.

PROTECTIVE EQUIPMENT

PROCESS CONDITIONS

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

ENGINEERING MEASURES

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined workplace exposure limit is not exceeded.

RESPIRATORY EQUIPMENT

Wear suitable respiratory protection. Check that mask fits tight and change filter regularly.

HAND PROTECTION

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Protection against this substance requires special consideration.

HARDENER

EYE PROTECTION

Wear tight-fitting goggles or face shield.

OTHER PROTECTION

Provide eyewash station. AVOID ALL SKIN AND RESPIRATORY CONTACT!

HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash at the end of each work shift and before eating, smoking and using the toilet.

SKIN PROTECTION

Protection suit must be worn.

9 PHYSICAL AND CHEMICAL PROPERTIES

RELATIVE DENSITY	1.02 - 1.04

10 STABILITY AND REACTIVITY

STABILITY

No particular stability concerns.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition. Oxidising, avoid contact with reducing agents.

11 TOXICOLOGICAL INFORMATION

INHALATION

No specific health warnings noted.

INGESTION

Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

SKIN CONTACT

No specific health warnings noted.

EYE CONTACT

Irritating to eyes.

HEALTH WARNINGS

This chemical can be hazardous when inhaled and/or touched. This chemical may cause skin/eye irritation and burns (corrosive). May cause severe internal injury. Vapour from this chemical can be hazardous when inhaled.

ROUTE OF ENTRY

Inhalation. Ingestion. Skin and/or eye contact. Skin absorption.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Dangerous for the environment if discharged into watercourses.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Only experts should be permitted to carry out disposal of this material.

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements. Absorb spillage with non-combustible, absorbent material.

14 TRANSPORT INFORMATION

GENERAL	Full protective clothing should be worn when handling this product.

UK ROAD CLASS	5.2		
PROPER SHIPPING NAME	ORGANIC PEROXIDE, TYPE E, SOLID; (DIBENZOYL PEROXIDE)		
UN NO. ROAD	3108	UK ROAD PACK GR.	P1
ADR CLASS NO.	5.2	ADR CLASS	Class 5.2: Organic peroxides.
IMDG CLASS	N5.2		

15 REGULATORY INFORMATION

LABELLING

Irritant

Oxidising

CONTAINS BENZOYL PEROXIDE

RISK PHRASES

R7	May cause fire.
R36	Irritating to eyes.
R43	May cause sensitisation by skin contact.

SAFETY PHRASES

S2	Keep out of the reach of children
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37	Wear suitable gloves.
S46	If swallowed, seek medical advice immediately and show this container or label.
S56	Dispose of this material and its container to hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. System of specific information relating to Dangerous Preparations. 2001/58/EC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

16 OTHER INFORMATION

REVISION COMMENTS

NOTE: Lines within the margin indicate significant changes from the previous revision.

ISSUED BY

HS&E Manager.

REVISION DATE 19/09/2005

REV. NO./REPL. SDS GENERATED 8

HARDENER

RISK PHRASES IN FULL

R2	Risk of explosion by shock, friction, fire or other sources of ignition.
R36	Irritating to eyes.
R43	May cause sensitisation by skin contact.

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Dichloromethane ≥ 99,5%, for synthesis

article number: **8424**
Version: **3.0 en**
Replaces version of: 2018-08-07
Version: (2)

date of compilation: 2016-04-08
Revision: 2020-04-02

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Identification of the substance	**Dichloromethane**
Article number	8424
Registration number (REACH)	01-2119480404-41-xxxx
Index No	602-004-00-3
EC number	200-838-9
CAS number	75-09-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: laboratory chemical
laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet: : Department Health, Safety and Environment

e-mail (competent person): **sicherheit@carlroth.de**

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Centre Beaumont Hospital	Beaumont Road	Dublin 9	01 809 2166	https://www.poisons.ie/

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS

Section	Hazard class	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Irrit. 2)	H319

Classification acc. to GHS			
Section	**Hazard class**	**Hazard class and category**	**Hazard statement**
3.6	carcinogenicity	(Carc. 2)	H351
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	(STOT SE 3)	H336

The most important adverse physicochemical, human health and environmental effects

Narcotic effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word **Warning**

Pictograms

GHS07, GHS08

Hazard statements

H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer

Precautionary statements

Precautionary statements - prevention

P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves/eye protection.

Precautionary statements - response

P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

For professional users only

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Warning**

Symbol(s)

H351	Suspected of causing cancer.
P280	Wear protective gloves/eye protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Dichloromethane
Index No	602-004-00-3
Registration number (REACH)	01-2119480404-41-xxxx
EC number	200-838-9
CAS number	75-09-2
Molecular formula	CH_2Cl_2
Molar mass	84,93 $^{g}/_{mol}$

Impurities and additives, classification acc. to EU regulation

Name of substance	Identifier	Conc.	Classification acc. to 1272/2008/EC
Amylene	CAS No 513-35-9 EC No 208-156-3	20 – 60 ppm	Flam. Liq. 2 / H225 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Muta. 2 / H341 Carc. 2 / H351 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off contaminated clothing.

Following inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth. Do not induce vomiting. Aspiration hazard. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Vertigo, Nausea, Vomiting, Narcosis, Cough, Dizziness, Drowsiness, Dyspnoea, Corneal opacity

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO_2)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

The product itself does not burn.

Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO_2), hydrogen chloride (HCl), phosgene

5.3 Advice for firefighters

Vapours are heavier than air. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Do not breathe vapour/spray. Avoid contact with skin and eyes. Use personal protective equipment as required. Provide adequate ventilation.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. Avoid exposure. When not in use, keep containers tightly closed.

Advice on general occupational hygiene

Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Source
EU	methylene chloride (dichloromethane)	75-09-2		IOELV	100	353	200	706			2017/164/EU
IE	dichloromethane	75-09-2		OELV	100	353	200	706			S.I. No. 619 of 2001

Notation

Ceiling-C	Ceiling value is a limit value above which exposure should not occur
STEL	Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

• human health values

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	706 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	176 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	12 mg/kg bw/ day	human, dermal	worker (industry)	chronic - systemic effects

• environmental values

Endpoint	Threshold level	Environmental compartment
PNEC	0,27 $^{mg}/_{l}$	water
PNEC	0,31 $^{mg}/_{l}$	freshwater
PNEC	0,031 $^{mg}/_{l}$	marine water
PNEC	26 $^{mg}/_{l}$	sewage treatment plant (STP)
PNEC	2,57 $^{mg}/_{kg}$	freshwater sediment
PNEC	0,26 $^{mg}/_{kg}$	marine sediment
PNEC	0,33 $^{mg}/_{kg}$	soil

• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Amylene	513-35-9	PNEC	0,37 $^{mg}/_{l}$	freshwater
Amylene	513-35-9	PNEC	0,37 $^{mg}/_{l}$	marine water
Amylene	513-35-9	PNEC	5,77 $^{mg}/_{l}$	sewage treatment plant (STP)
Amylene	513-35-9	PNEC	8,1 $^{mg}/_{kg}$	freshwater sediment
Amylene	513-35-9	PNEC	8,1 $^{mg}/_{kg}$	marine sediment
Amylene	513-35-9	PNEC	1,44 $^{mg}/_{kg}$	soil

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

FKM: fluoro-elastomer

• material thickness

0,7mm.

• breakthrough times of the glove material

>120 minutes (permeation: level 4)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: AX (gas filters and combined filters against low-boiling point organic compounds, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid (fluid)
Colour	colourless
Odour	mild sweet
Odour threshold	250 ppm

Other physical and chemical parameters

pH (value)	(neutral)
Melting point/freezing point	-95 °C at 101,3 kPa
Initial boiling point and boiling range	40 °C at 101,3 kPa
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)

Explosive limits	
• lower explosion limit (LEL)	13 vol%
• upper explosion limit (UEL)	22 vol%
Explosion limits of dust clouds	not relevant
Vapour pressure	475 hPa at 20 °C
Density	1,33 $^{g}/_{cm^3}$ at 20 °C
Vapour density	2,93 (air = 1)
Bulk density	Not applicable
Relative density	Information on this property is not available.
Solubility(ies)	
Water solubility	~ 20 $^{g}/_{l}$ at 20 °C
Partition coefficient	
n-octanol/water (log KOW)	1,25 (pH value: 7, 20 °C) (ECHA)
Auto-ignition temperature	605 °C
Decomposition temperature	no data available
Viscosity	
• dynamic viscosity	0,43 mPa s at 20 °C
Explosive properties	Shall not be classified as explosive
Oxidising properties	none

9.2 Other information

Temperature class (EU, acc. to ATEX)	T1 (Maximum permissible surface temperature on the equipment: 450°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

May cause decomposition by long-term light influence.

10.3 Possibility of hazardous reactions

Danger of explosion: Alkali metals, Nitric acid, Aluminium, Amines, Nitrogen oxides (NOx), Nitric acid, Oxygen, Sodium, Potassium,
Exothermic reaction with: Alkaline earth metal, Metal powder, Amide

10.4 Conditions to avoid

Direct light irradiation.

10.5 Incompatible materials

plastic and rubber, Light metals, Steel

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Exposure route	Endpoint	Value	Species	Source
oral	LD50	>2.000 $^{mg}/_{kg}$	rat	ECHA
dermal	LD50	>2.000 $^{mg}/_{kg}$	rat	ECHA

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Carcinogenicity:
Suspected of causing cancer

• Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, nausea, aspiration hazard

• If in eyes

Causes serious eye irritation, corneal opacity

• If inhaled

vertigo, dizziness, fatigue, narcosis

• If on skin

causes skin irritation

Other information

Other adverse effects: Circulatory collapse, Dyspnoea, Blood pressure drop, Unconsciousness, Liver and kidney damage

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Endpoint	Value	Species	Exposure time
LC50	193 $^{mg}/_{l}$	fish	96 h

Aquatic toxicity (chronic)

Endpoint	Value	Species	Source	Exposure time
LC50	471 $^{mg}/_{l}$	fish	ECHA	8 d
EC50	2.590 $^{mg}/_{l}$	microorganisms	ECHA	40 min
NOEC	357 $^{mg}/_{l}$	fish	ECHA	8 d

12.2 Process of degradability

The substance is readily biodegradable.
Theoretical Oxygen Demand: 0,3768 $^{mg}/_{mg}$
Theoretical Carbon Dioxide: 0,5182 $^{mg}/_{mg}$

Process	Degradation rate	Time
biotic/abiotic	5 – 26 %	28 d
oxygen depletion	68 %	28 d

Degradability of components of the mixture

Name of sub-stance	CAS No	Process	Degradation rate	Time
Amylene	513-35-9	oxygen depletion	7 %	28 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	1,25 (pH value: 7, 20 °C)
BCF	39 (ECHA)

12.4 Mobility in soil

Henry's law constant	0,002 $^{Pa\ m^3}/_{mol}$ at 24,8 °C

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	**1593**
14.2	UN proper shipping name	**DICHLOROMETHANE**
	Hazardous ingredients	Dichloromethane
14.3	Transport hazard class(es)	
	Class	6.1 (toxic substances)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number	1593
Proper shipping name	DICHLOROMETHANE
Particulars in the transport document	UN1593, DICHLOROMETHANE, 6.1, III, (E)
Class	6.1
Classification code	T1

Packing group	III
Danger label(s)	6.1

Special provisions (SP)	516, 802(ADN)
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	60

• International Maritime Dangerous Goods Code (IMDG)

UN number	1593
Proper shipping name	DICHLOROMETHANE
Particulars in the shipper's declaration	UN1593, DICHLOROMETHANE, 6.1, III
Class	6.1
Marine pollutant	-
Packing group	III
Danger label(s)	6.1

Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-A
Stowage category	A
Segregation group	10 - Liquid halogenated hydrocarbons

• International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	1593
Proper shipping name	Dichloromethane
Particulars in the shipper's declaration	UN1593, Dichloromethane, 6.1, III
Class	6.1
Packing group	III
Danger label(s)	6.1

Excepted quantities (EQ)	E1
Limited quantities (LQ)	2 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant provisions of the European Union (EU)

• Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

Not listed.

• Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

Not listed.

• Regulation 850/2004/EC on persistent organic pollutants (POP)

Not listed.

• Restrictions according to REACH, Annex XVII

Name of substance	CAS No	Wt%	Type of registration	Conditions of restriction	No
Dichloromethane	75-09-2	100	1907/2006/EC annex XVII	R59	59
Dichloromethane		100	1907/2006/EC annex XVII	R3	3

Legend

R3

1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
- can be used as fuel in decorative oil lamps for supply to the general public, and,
- present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
(b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

Legend

R59 1. Paint strippers containing dichloromethane in a concentration equal to or greater than 0,1 % by weight shall not be:
(a) placed on the market for the first time for supply to the general public or to professionals after 6 December 2010;
(b) placed on the market for supply to the general public or to professionals after 6 December 2011;
(c) used by professionals after 6 June 2012.
For the purposes of this entry:
(i) 'professional' means any natural or legal person, including workers and self-employed workers undertaking paint stripping in the course of their professional activity outside an industrial installation;
(ii) 'industrial installation' means a facility used for paint stripping activities.
2. By way of derogation from paragraph 1, Member States may allow on their territories and for certain activities the use, by specifically trained professionals, of paint strippers containing dichloromethane and may allow the placing on the market of such paint strippers for supply to those professionals.
Member States making use of this derogation shall define appropriate provisions for the protection of the health and safety of those professionals using paint strippers containing dichloromethane and shall inform the Commission thereof.
Those provisions shall include a requirement that a professional shall hold a certificate that is accepted by the Member State in which that professional operates, or provide other documentary evidence to that effect, or be otherwise approved by that Member State, so as to demonstrate proper training and competence to safely use paint strippers containing dichloromethane.
The Commission shall prepare a list of the Member States which have made use of the derogation in this paragraph and make it publicly available over the Internet.
3. A professional benefiting from the derogation referred to in paragraph 2 shall operate only in Member States which have made use of that derogation. The training referred to in paragraph 2 shall cover as a minimum:
(a) awareness, evaluation and management of risks to health, including information on existing substitutes or processes, which under their conditions of use are less hazardous to the health and safety of workers;
(b) use of adequate ventilation;
(c) use of appropriate personal protective equipment that complies with Directive 89/686/EEC.
Employers and self-employed workers shall preferably replace dichloromethane with a chemical agent or process which, under its conditions of use, presents no risk, or a lower risk, to the health and safety of workers.
Professional shall apply all relevant safety measures in practice, including the use of personal protective equipment.
4. Without prejudice to other Community legislation on workers protection, paint strippers containing dichloromethane in concentrations equal to or greater than 0,1 % by weight may be used in industrial installations only if the following minimum conditions are met:
(a) effective ventilation in all processing areas, in particular for the wet processing and the drying of stripped articles: local exhaust ventilation at strip tanks supplemented by forced ventilation in those areas, so as to minimise exposure and to ensure compliance, where technically feasible, with relevant occupational exposure limits;
(b) measures to minimise evaporation from strip tanks comprising: lids for covering strip tanks except during loading and unloading; suitable loading and unloading arrangements for strip tanks; and wash tanks with water or brine to remove excess solvent after unloading;
(c) measures for the safe handling of dichloromethane in strip tanks comprising: pumps and pipework for transferring paint stripper to and from strip tanks; and suitable arrangements for safe cleaning of tanks and removal of sludge;
(d) personal protective equipment that complies with Directive 89/686/EEC comprising: suitable protective gloves, safety goggles and protective clothing; and appropriate respiratory protective equipment where compliance with relevant occupational exposure limits cannot be otherwise achieved;
(e) adequate information, instruction and training for operators in the use of such equipment.
5. Without prejudice to other Community provisions concerning the classification, labelling and packaging of substances and mixtures, by 6 December 2011 paint strippers containing dichloromethane in a concentration equal to or greater than 0,1 % by weight shall be visibly, legibly and indelibly marked as follows:
'Restricted to industrial use and to professionals approved in certain EU Member States - verify where use is allowed.'

Name acc. to inventory	CAS No	Wt%	Listed in	Remarks
dichloromethane	75-09-2	100	Annex X	

Legend

annex X List of priority substances in the field of water policy

• Restrictions according to REACH, Title VIII

None.

• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

not listed

• Seveso Directive

2012/18/EU (Seveso III)			
No	**Dangerous substance/hazard categories**	**Qualifying quantity (tonnes) for the application of lower and upper-tier requirements**	**Notes**
	not assigned		

• Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

VOC content	100 % 1.330 $^{g}/_{l}$

Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	100 %
VOC content	1.330 $^{g}/_{l}$

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)	Threshold for releases to water (kg/year)	Threshold for releases to land (kg/year)
Dichloromethane	75-09-2		1 000	10	10

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

Name acc. to inventory	CAS No	Listed in	Remarks
dichloromethane	75-09-2	Annex X	

Legend
annex X List of priority substances in the field of water policy

Regulation 98/2013/EU on the marketing and use of explosives precursors

not listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

not listed

National inventories

Substance is listed in the following national inventories:

Country	National inventories	Status
AU	AICS	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relev-ant
2.2		Pictograms: change in the listing (table)	yes
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes
8.1		• human health values: change in the listing (table)	yes
8.1		• relevant PNECs of components of the mixture: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	hazardous to the aquatic environment - chronic hazard
Asp. Tox.	aspiration hazard
BCF	bioconcentration factor
Carc.	carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Flam. Liq.	flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Muta.	germ cell mutagenicity

Abbr.	Descriptions of used abbreviations
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
S.I. No. 619 of 2001	Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
STEL	short-term exposure limit
STOT SE	specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	highly flammable liquid and vapour
H302	harmful if swallowed
H304	may be fatal if swallowed and enters airways
H315	causes skin irritation
H319	causes serious eye irritation
H336	may cause drowsiness or dizziness
H341	suspected of causing genetic defects
H351	suspected of causing cancer
H411	toxic to aquatic life with long lasting effects

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

SAFETY DATA SHEET
GRIPSO RUBBER SOLUTION

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name GRIPSO RUBBER SOLUTION

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Supplier
Caswell and Company Ltd
6 Princewood Road
Earlstrees Industrial Estate
Corby, Northants NN17 4AP
+44 (0) 1536 464800
+44 (0) 1536 464801
Technical
info@caswell-adhesives.co.uk

Contact Person IN CASE OF EMERGENCY TELEPHONE: 01536 464800. OFFICE HOURS: MON - THUR 9 AM - 5 PM, FRI 9 AM - 3P M

1.4. Emergency telephone number

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xi;R38. F;R11. N;R50/53. R67.

Environment

Contains a substance which causes risk of hazardous effects to the environment. The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Physical and Chemical Hazards

The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures.

2.2. Label elements

Labelling


Irritant


Highly flammable


Dangerous for the environment

Risk Phrases

R11	Highly flammable
R38	Irritating to skin.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Safety Phrases

S57	Use appropriate containment to avoid environmental contamination.
S60	This material and its container must be disposed of as hazardous waste.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.
S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S24	Avoid contact with skin.
S37	Wear suitable gloves.
S51	Use only in well-ventilated areas.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

CYCLOPENTANE		1-5%
CAS-No.: 287-92-3	EC No.: 206-016-6	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Aquatic Chronic 3 - H412	R52/53

HEPTANE		30-60%
CAS-No.: 142-82-5	EC No.: 205-563-8	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Skin Irrit. 2 - H315	Xn;R65
STOT SE 3 - H336	Xi;R38
Asp. Tox. 1 - H304	R67
Aquatic Acute 1 - H400	N;R50/53
Aquatic Chronic 1 - H410	

HEXANE MIXTURE OF ISOMERS (MAX 5% n-HEXANE (203-777-6))		10-30%
CAS-No.: -	EC No.: -	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Skin Irrit. 2 - H315	Xn;R65
STOT SE 3 - H336	Xi;R38
Asp. Tox. 1 - H304	R67
Aquatic Chronic 2 - H411	N;R51/53

HEXANE-norm		1-5%
CAS-No.: 110-54-3	EC No.: 203-777-6	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Skin Irrit. 2 - H315	Repr. Cat. 3;R62
Repr. 2 - H361f	Xn;R48/20,R65
STOT SE 3 - H336	Xi;R38
STOT RE 2 - H373	R67
Asp. Tox. 1 - H304	N;R51/53
Aquatic Chronic 2 - H411	

METHYLCYCLOHEXANE		5-10%
CAS-No.: 108-87-2	EC No.: 203-624-3	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Skin Irrit. 2 - H315	Xn;R65
STOT SE 3 - H336	Xi;R38
Asp. Tox. 1 - H304	R67
Aquatic Chronic 2 - H411	N;R51/53

PENTANE		1-5%
CAS-No.: 109-66-0	EC No.: 203-692-4	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F+;R12
EUH066	Xn;R65
STOT SE 3 - H336	R66
Asp. Tox. 1 - H304	R67
Aquatic Chronic 2 - H411	N;R51/53

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Move injured person into fresh air and keep person calm under observation. If necessary, seek hospital and bring these instructions.

Ingestion

DO NOT induce vomiting. Get medical attention immediately.

Skin contact

Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring these instructions.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

HIGHLY FLAMMABLE! Severe explosion hazard when vapours are exposed to flames. Forms explosive mixtures with air.

Specific hazards

The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours.

Protective equipment for fire-fighters

Use air-supplied respirator during fire fighting.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

In case of inadequate ventilation, use respiratory protection. Do not smoke, use open fire or other sources of ignition. Do not breathe vapour. Avoid inhalation of vapours and contact with skin and eyes.

6.2. Environmental precautions

Do not allow ANY environmental contamination. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers. Collect in containers and seal securely.

6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Keep away from heat, sparks and open flame. Eliminate all sources of ignition. Wear full protective clothing for prolonged exposure and/or high concentrations.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Keep containers tightly closed. Keep separate from food, feedstuffs, fertilisers and other sensitive material. Keep in original container. Store in closed original container at temperatures between 5°C and 25°C.
Storage Class

Flammable liquid storage.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
HEPTANE	WEL	500 ppm				
HEXANE-norm	WEL	20 ppm	72 mg/m3			
PENTANE	WEL	600 ppm	1800 mg/m3			

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment

Process conditions

Use engineering controls to reduce air contamination to permissible exposure level.

Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

Eye protection

Goggles/face shield are recommended.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.

Colour	Light brown.
Odour	Hydrocarbon.
Initial boiling point and boiling range (°C)	66
Vapour pressure	17.2 kPa 20°C
Viscosity	29500 cP 20°C
Flash point (°C)	-26 TCC (Tag closed cup).

9.2. Other information

Volatility Description	Highly volatile.
Volatile Organic Compound (VOC)	approx 880 g/litre

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Inhalation

Vapours may irritate throat and respiratory system and cause headache, dizziness and dullness.

Ingestion

Liquid irritates mucous membranes and may cause abdominal pain if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Skin contact

Repeated exposure may cause skin dryness or cracking.

Eye contact

Extreme irritation of eyes and mucous membranes, including burning and tearing.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Acute Fish Toxicity

Very toxic to aquatic organisms.

12.2. Persistence and degradability

Degradability

The product is biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product is not bioaccumulating.

12.4. Mobility in soil

Mobility:

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Contact specialist disposal companies.

Waste Code

Hazardous waste

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	1133
UN No. (IMDG)	1133
UN No. (ICAO)	1133

14.2. UN proper shipping name

Proper Shipping Name	ADHESIVES

14.3. Transport hazard class(es)

ADR/RID/ADN Class	3
ADR/RID/ADN Class	Class 3: Flammable liquids.
ADR Label No.	3
IMDG Class	3
ICAO Class/Division	3

Transportlabels

14.4. Packing group

ADR/RID/ADN Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-E, S-D
Emergency Action Code	3Y

Hazard No. (ADR)	30

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

Revision Date	12.02.15
Revision	8
SDS No.	10844
Safety Data Sheet Status	Approved.
Date	12.02.15
Risk Phrases In Full	
R12	Extremely flammable.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65	Harmful: may cause lung damage if swallowed.
R11	Highly flammable
R38	Irritating to skin.
R62	Possible risk of impaired fertility.
R66	Repeated exposure may cause skin dryness or cracking.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard Statements In Full	
H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs <<Organs>> through prolonged or repeated exposure.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.
H410	Very toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

APPENDIX 11
Air Report

2020

AIR & NOISE

DATAS

[Myanmar Rui Xin Shoes Company Limited]

Myanmar Rui Xin Shoes Company Limited

1. Air Analysis

1.1 Air Analysis Info

Sample site	Myanmar Rui Xin Shoes Company Limited	Sample I.D.	AS0921-01
Location (township)	Hlaing Thar Yar Township	Method	HAZ-SCANNER™ Model-EPAS
		Station height (elevation)	Ground
Location (Region / state)	Yangon	Latitude	16°52'15.00"N
		Longitude	96° 0'8.93"E
Name of client	Myanmar Rui Xin Shoes Company Limited	log on time (Date, Time)	8.12.2020 (09:00 AM)
Air Monitoring Date	8.12.2020	log off time (Date, Time)	9.12.2020 (09:00 AM)
		Logging Duration (hours)	24 hours

Figure 1.1 Air Sample Point

1.2. Air sampling result

The findings of the air quality sampling monitored data and the applicable national standards used for comparison for the project are shown in the following Table and air result data report is described.

Table - Air Quality Result

No	Parameters	Results		Avg. Period	Guideline value (NEQG)	Averaging Period	Remarks
		Observed value	Converted value				
1	Nitrogen dioxide NO_2	17 ppb	78.9(μg/m^3)	1-hour*	40 (μg/m^3) 200 (μg/m^3)	1-year 1-hour	
2	Ozone (O_3)	23 ppb	45 (μg/m^3)	8-hour	100 (μg/m^3)	8-hour daily maximum	
3	Particulate matter PM_{10}	23 (μg/m^3)		24-hour	20 (μg/m^3) 50 (μg/m^3)	1-year 24-hour	
4	Particulate matter $PM_{2.5}$	15 (μg/m^3)		24-hour	10 (μg/m^3) 25 (μg/m^3)	1-year 24-hour	
5	Sulfur dioxide SO_2	2 ppb	5.24(μg/m^3)	24-hour	20 (μg/m^3) 500 (μg/m^3)	24-hour 10 minute	
6	Carbon dioxide CO_2	255 ppm		24-hour	-		
7	Carbon monoxide CO	3 ppb		24-hour	-		

* One hour in Max. Value of 24 hrs. period

2. Noise Level

The noise levels for the proposed site were measured by TES-52A Advanced Sound Level Meter.

TES-52A Advanced Sound Level Meter

Table - National Emission Quality Guideline (NEQG) for Noise Level

Receptor	**One Hour LAeq (dBA)a**	
	Daytime 07:00-22:00 (10:00-22:00 for Public holidays)	**Night time 22:00-07:00 (22:00-10:00 for Public holidays)**
Residential, institutional, educational	55	45
Industrial, commercial	70	70

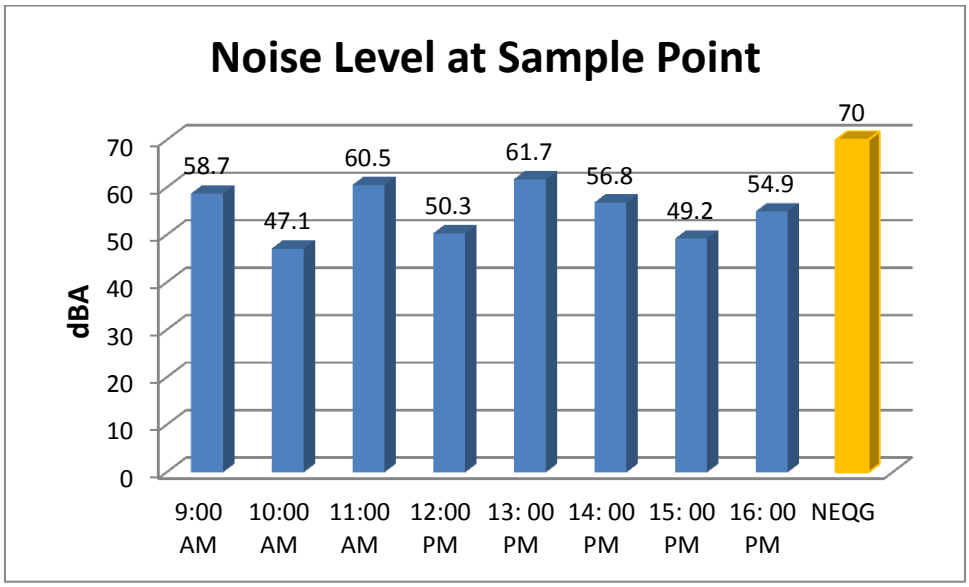
2.1. The location of Noise sample point of the Project

No.	Sample Name	Myanmar Rui Xin Shoes Co.Ltd		Location
		Latitude (N)	Longitude (E)	
1.	Noise Sample Point (NS)	16°52'15.00"N	96° 0'8.93"E	Besides the factory building.

2.2. Noise Level Result

Table 5.7 Average Values of Noise Level (dB) at the sampling point

Noise Sample Point	**Date/Time (31-8-2021)**	**Observed Noise Level (MeanValue) (dBA)**
NS	9: 00 -9:59	58.7
	10: 00-10: 59	47.1
	11: 00-11: 59	60.5
	12: 00-12: 59	50.3
	13: 00-13: 59	61.7
	14: 00-14: 59	56.8
	15: 00-15: 59	49.2
	16: 00-16: 59	54.9



Air Result Report

Main | Preferences | Header | Data | Report

ENVIRONMENTAL REPORT

Session location:
Session site:
Organizational affiliation: EDC
Session environment: Outdoors
Session type: Ambient
Session environment:
Session Description:
Logger Serial Number: **915096**
Logging began on: 8.12.2020 (09:00 AM)
Logging stopped on: 9.12.2020 (09:00 AM)
Data uploaded on: 11.12.2020 (09:00 AM)
Samples were averaged and saved every: 1 Minute
Report was averaged: 10 Minute
Total samples in this upload: 145

SENSOR	UNITS	LO LIM	HI LIM

* indicates no limit was set

City: Hlaing Thar Yar Township
State: Yangon
Country: Myanmar
Longitude: Deg. Min. W
Latitude: Deg. Min. N
Elevation:

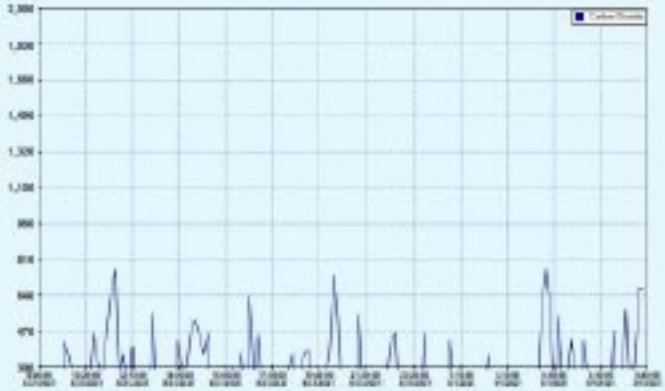
Logger ID 915096 Record Count 145

Sensor ID

Carbon Dioxide

Range: 0 to 5000 ppm

Min	Ave	Max	Std. Dev		Hi Limit	% Above Hi	Lo Limit	% Below Lo
15	255.00	756	173.76	ppm		0.00%		0.00%

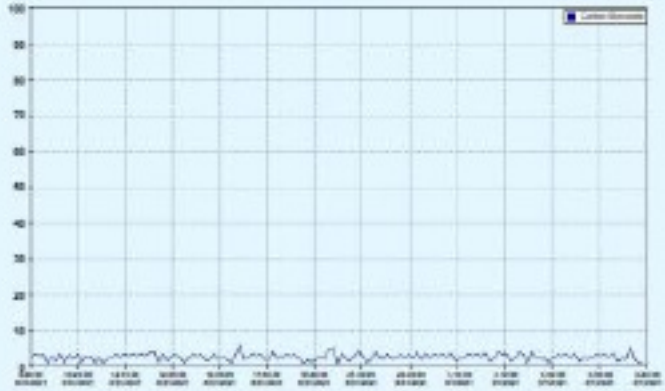


Sensor ID

Carbon Monoxide

Range: 0 to 10000 ppb

Min	Ave	Max	Std. Dev		Hi Limit	% Above Hi	Lo Limit	% Below Lo
1	3.00	5.9	1.00	ppb		0.00%		0.00%



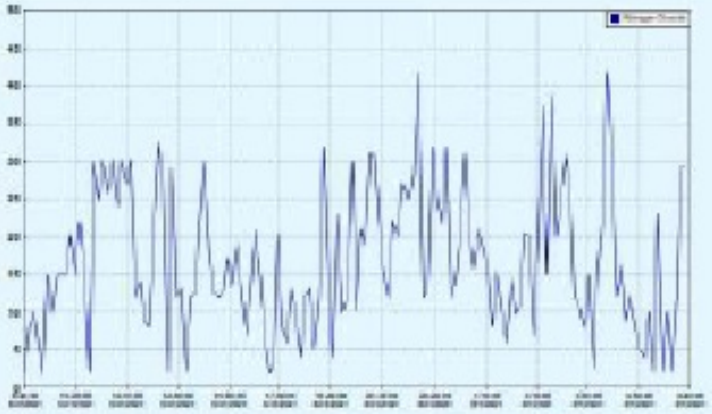
Logger ID 915096 Record Count 145

Nitrogen Dioxide

Sensor ID

Range: 0 to 5000 ppb

Min	Ave	Max	Std. Dev		Hi Limit	% Above Hi	Lo Limit	% Below Lo
2	17.00	42	9.38	ppb		0.00%		0.00%

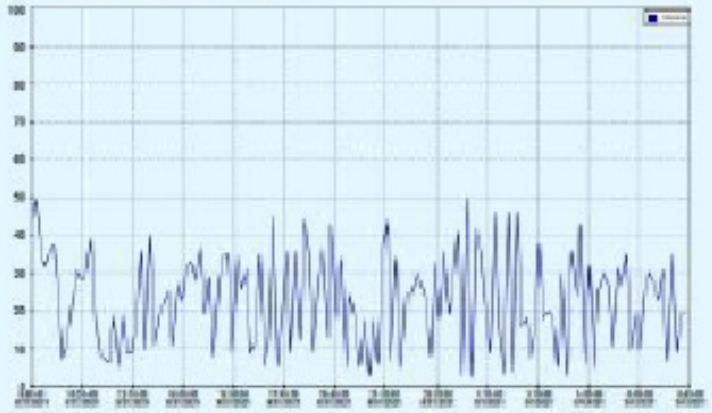


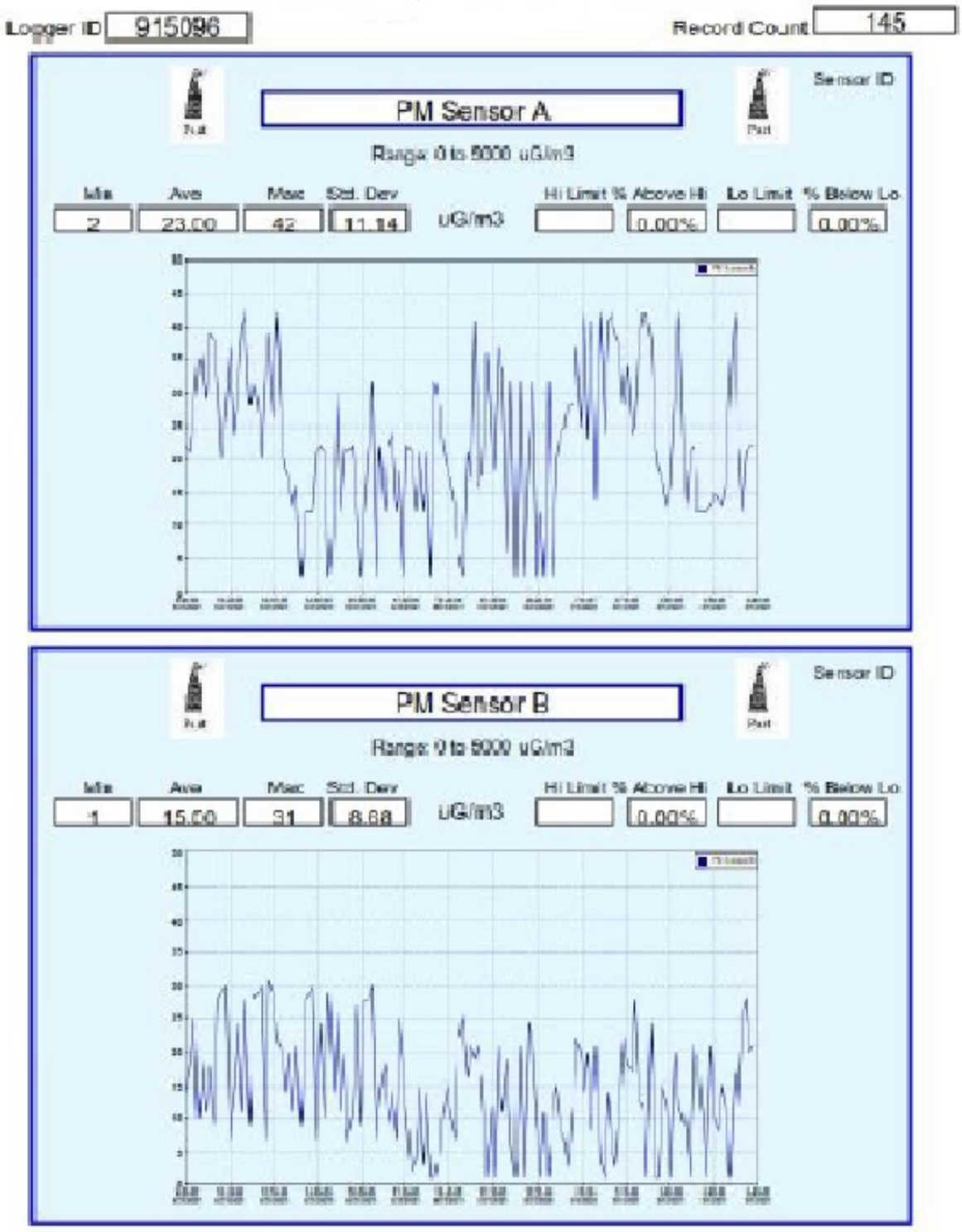
Ozone

Sensor ID

Range: 0 to 150 ppb

Min	Ave	Max	Std. Dev		Hi Limit	% Above Hi	Lo Limit	% Below Lo
2.8	23.00	50	12.79	ppb		0.00%		0.00%




Logger ID 915096
Record Count 145
PM Sensor A
Sensor ID
Range 0 to 9000 uG/m3
Min Ave Max Std. Dev
2 23.00 42 11.14
uG/m3
Hi Limit % Above Hi Lo Limit % Below Lo
0.00% 0.00%
PM Sensor B
Sensor ID
Range 0 to 9000 uG/m3
Min Ave Max Std. Dev
1 15.00 31 8.88
uG/m3
Hi Limit % Above Hi Lo Limit % Below Lo
0.00% 0.00%

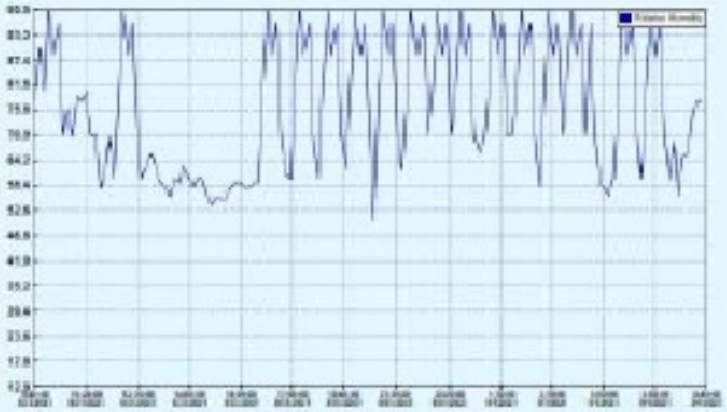
Logger ID: 915096 Record Count: 145

Relative Humidity

Sensor ID: R.H.

Range: 0 to 100 %

Min	Ave	Max	Std. Dev		Hi Limit	% Above Hi	Lo Limit	% Below Lo
50	77.00	99	15.06	%		0.00%		0.00%

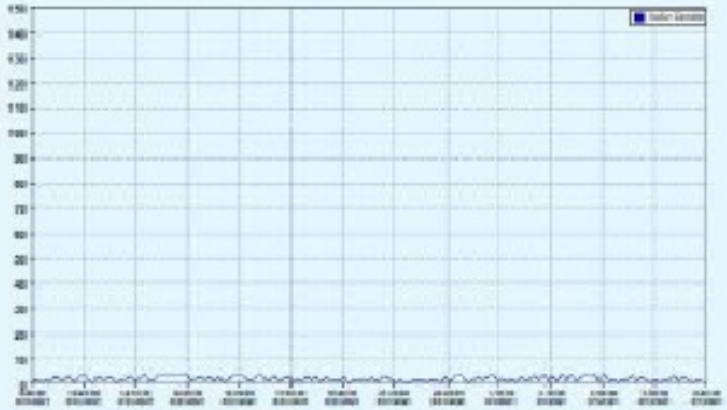


Sulfur Dioxide

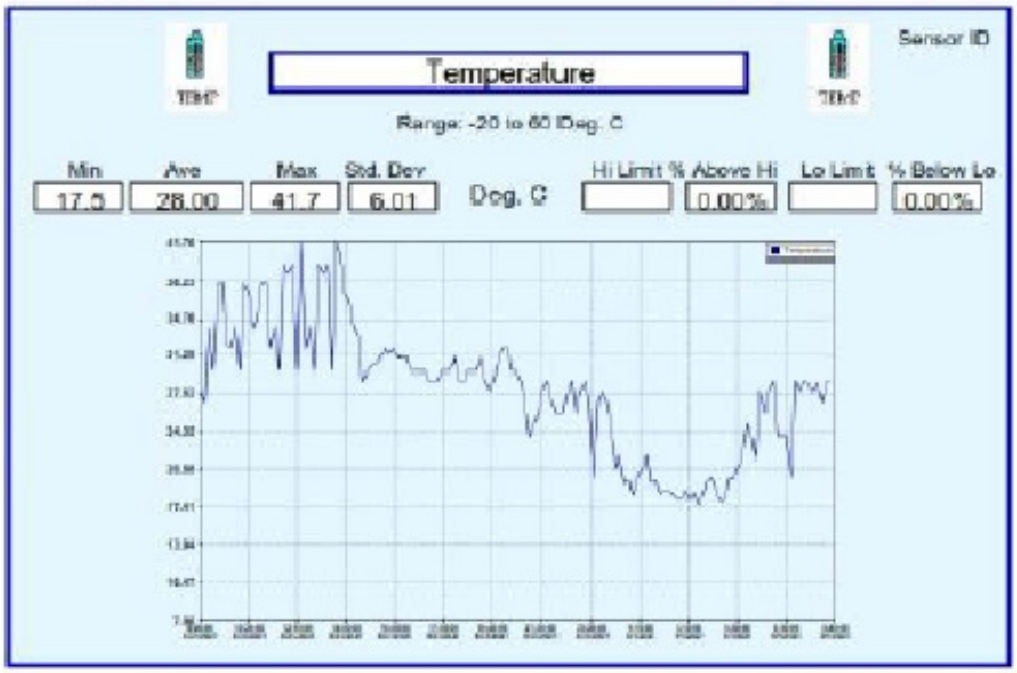
Sensor ID: SO2

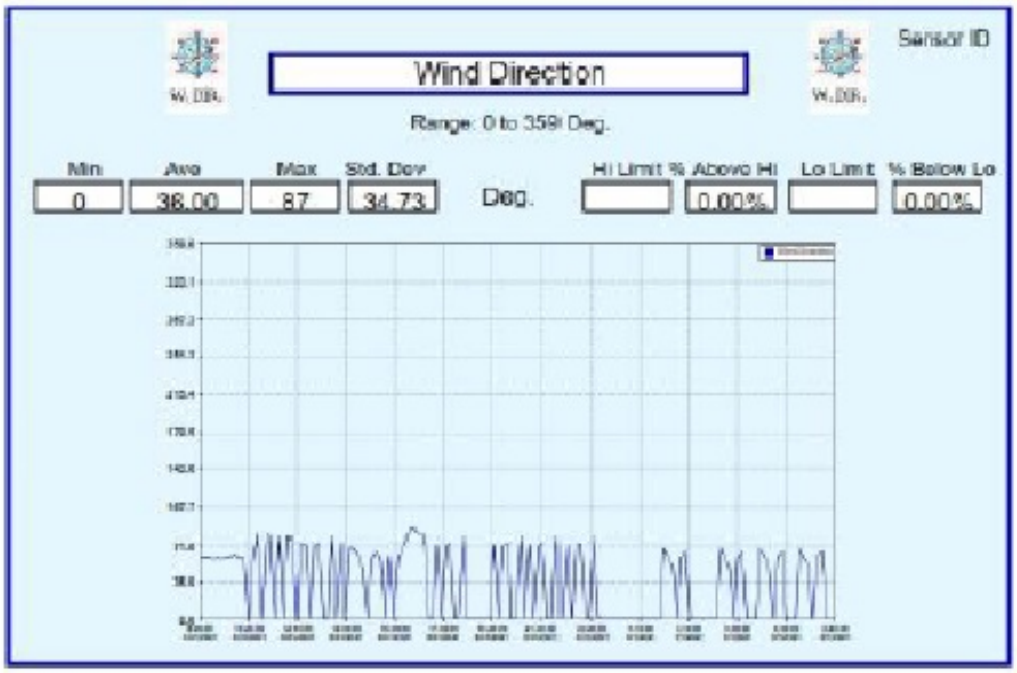
Range: 0 to 5000 ppb

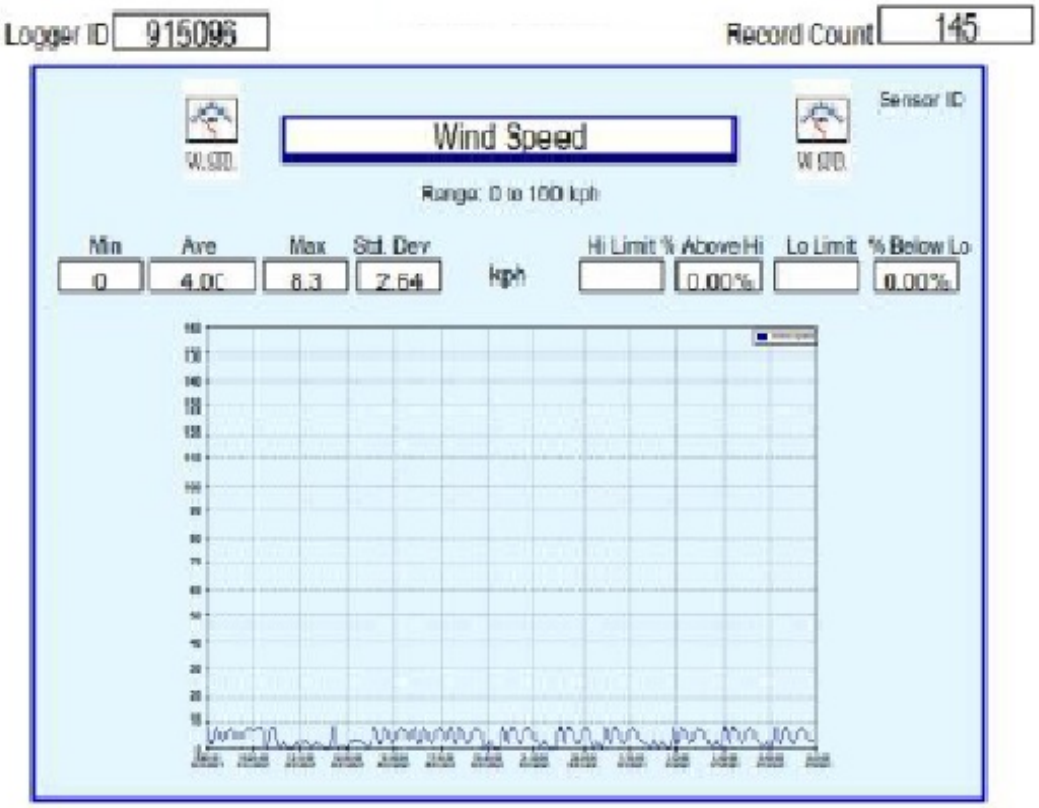
Min	Ave	Max	Std. Dev		Hi Limit	% Above Hi	Lo Limit	% Below Lo
1	2.00	4.5	0.97	ppb		0.00%		0.00%



Logger ID 915096 Record Count 145






Logger ID 915096
Record Count 145
Wind Speed
Sensor ID
Range: 0 to 100 kph
Min
Ave
Max
Std. Dev
kph
Hi Limit
% Above Hi
Lo Limit
% Below Lo
0
4.0C
8.3
2.64
0.00%
0.00%

Main | Preferences | Header | Data | Report

Record Cnt 145

Environmental Report

	BarM mBar	CO2 ppm	CO ppb	H2S ppb	CH4 ppm	NO2 ppb	O3 ppb	PMA uG/m3	PMB uG/m3	RH %	SO2 ppb	SLRR W/m2	TmpC Deg. C	WDir Deg.	WSpM kph	Pwr V
Ave	1010.19	254.365	2.78551	0	0	16.5489	22.9317	22.5655	14.0827	76.8331	2.24206	1.75655	28.1972	35.6482	4.84275	10.7379
Max	1040	700	3.9	0	0	42	50	42	31	99	4.5	5.6	41.7	87	8.3	11
Min	1003	15	1	0	0	2	2.5	2	1	50	1	0	17.5	0	0	10.3
EPAS	1010.19	254.365	2.78551	0	0	16.5489	22.9317	22.5655	14.0827	76.8331	2.24206	1.75655	28.1972	35.6482	4.84275	10.7379
Header ?	1040	700	3.9	0	0	42	50	42	31	99	4.5	5.6	41.7	87	8.3	11
	1003	15	1	0	0	2	2.5	2	1	50	1	0	17.5	0	0	10.3
Daily	1009.74	249.509	2.66172	0	0	10.7301	23.1498	21.6107	13.7939	78.1393	2.27204	2.10339	31.4268	42.4523	4.82159	10.7516
Tue, Aug 31, 2021	1024	764	3.9	0	0	42	49	42	31	99	4.5	5.6	41.7	87	8.3	11
	1003	20	1	0	0	2	2.5	2	1	50	1	0	20	0	0	10.3
Ave Period 10	1010	117	3.3	0	0	4	45.5	20	15	80	1	1	29	60	0	10.9
0:40:00 8/31/21	1010	117	3.3	0	0	4	45.5	20	15	80	1	1	29	60	0	10.9
	1010	117	3.3	0	0	4	45.5	20	15	80	1	1	29	60	0	10.9
Ave Period 10	1010	100	2.5	0	0	2	44	22	14	78	2	2	28	60	7.5	10.9
8:50:00 8/31/21	1010	100	2.5	0	0	2	44	22	14	78	2	2	28	60	7.5	10.9
	1010	100	2.5	0	0	2	44	22	14	78	2	2	28	60	7.5	10.9
Ave Period 10	1010	39	3.6	0	0	6	49	21	15	90	2	1	27	61	2.3	10.7
9:00:00 8/31/21	1010	50	3.6	0	0	6	49	21	15	90	2	1	27	61	2.3	10.7
	1010	50	3.6	0	0	6	49	21	15	90	2	1	27	61	2.3	10.7
Ave Period 10	1010	111	2.9	0	0	10	37	26	25	80	1	2	34	60	7.6	10.9
9:10:00 8/31/21	1010	111	2.9	0	0	10	37	26	25	80	1	2	34	60	7.6	10.9
	1010	111	2.9	0	0	10	37	26	25	80	1	2	34	60	7.6	10.9
Ave Period 10	1010	40	3.4	0	0	6	32.1	34	16	99	2	1	30	59	5.2	10.7
9:20:00 8/31/21	1010	40	3.4	0	0	6	32.1	34	16	99	2	1	30	59	5.2	10.7
	1010	40	3.4	0	0	6	32.1	34	16	99	2	1	30	59	5.2	10.7
Ave Period 10	1010.2	100	1	0	0	2	36	37	26	99	1	2.0	36	60	2.3	10.9
9:30:00 8/31/21	1010.	100	1	0	0	2	36	37	26	99	1	2.0	36	60	2.3	10.9
	1010.	100	1	0	0	2	36	37	26	99	1	2.0	36	60	2.3	10.9