TAE HYUN (MYANMAR) INDUSTRY COMPANY LIMITED

Environmental Management Plan

MANUFACTURING OF WEARING APPERAL (VARIOUS KINDS OF JACKETS AND CAP) ON (CMP) BASIS

Prepared by



MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED 31-Mar-23



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Commitment

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To our knowledge, all information contained in this report is accurate and truthful presentation of all findings as relating to the project.

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ကတိကဝတ်

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- စက်ရုံပိတ်သိမ်းမည်ဆိုပါက ပတ်ဝန်းကျင်နှင့်လူမှုရေးဆိုင်ရာများ မထိခိုက်စေရန် အစီအစဉ်များ ချမှတ် ဆောင်ရွက်မည်ဖြစ်ကြောင်း၊

Mr. Koo Ja Yong Promoter Tae Hyun (Myanmar) Industry Co., Ltd.

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Abbreviation

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

အစီရင်ခံစာအကျဉ်းချုပ်

၁။ နိဒါန်း

ဤအစီရင်ခံစာသည် CMP စနစ်ဖြင့် အမျိုးမျိုးသော ဂျာကင်နှင့် ဦးထုပ်များ ထုတ်လုပ်သည့် Tae Hyun (Myanmar) Industry Company Limited ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာမှ တွေ့ရှိချက်များအား ဖော်ပြထားခြင်း ဖြစ်ပါသည်။ ဤအစီရင်ခံစာ၏ အဓိကရည်ရွယ်ချက်မှာ စီမံကိန်းကြောင့် ဖြစ်ပေါ်နိုင်သော ဆိုးကျိုးများအား လျော့နည်း စေရန်အတွက် ထိရောက်သော ဆောင်ရွက်ချက်များနှင့်အတူ စီမံကိန်းအကောင်အထည်ဖော်ခြင်းကြောင့် ပတ်ဝန်းကျင် အပေါ် အဓိက အကျိုးသက်ရောက်နိုင်မှုများကို ဖော်ထုတ်ရန်အတွက် ဖြစ်ပါသည်။

အဆိုပြုစီမံကိန်းလုပ်ငန်းသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာ ရေးဆွဲတင်ပြရမည်ဖြစ်ကြောင်း ၂၀၁၉ ခုနှစ်၊ အောက်တိုဘာလ၊ ၈ ရက် ရက်စွဲပါစာအမှတ်၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၂၂၀၀/၂၀၁၉) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန၊ ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် Tae Hyun (Myanmar) Industry Company Limited မှ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာအတွက် Myanwei Environmental Solutions Company Limited အား တာဝန်ယူရေးဆွဲစေခဲ့ပါသည်။

ရင်းနှီးမြှုပ်နှံသူ၏ အမည်	ဒေါ်ငြိမ်းငြိမ်းစော်	
ID No:	12/KAMAYA (N) 047513 ၁၂/ကမရ(နိုင်) ၀၄၇၅၁၃	
နိုင်ငံသား	မြန်မာ	
ဖုန်းနံပါတ်	၀၉-၄၂၀၂၀၅၆၄၅	
အီးမေးလ်	maqin522@gmail.com	
မှတ်ပုံတင်ထားသည့်ရုံးလိပ်စာ	မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် အပိုင်း (၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့ နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး	

ရင်းနှီးမြှုပ်နှံသူ၏ အချက်အလက်များ

စီမံကိန်း၏ လက္ခဏာများ

အဆိုပြုစီမံကိန်းအမျိုးအစား	CMP စနစ်ဖြင့် အမျိုးမျိုးသော ဂျာကင်များ၊ ဦးထုပ်များ ထုတ်လုပ်ခြင်း	
ရင်းနှီးမြှုပ်နှံမှုပုံစံ	မြန်မာနိုင်ငံသားရင်းနှီးမြှုပ်နှံမှု	
ရင်းနှီးမြှုပ်နှံမှုအမျိုးအစား	ဖက်စပ်လုပ်ကိုင်ခြင်း (မြန်မာနိုင်ငံသား ၆၅%၊ နိုင်ငံခြားသား ၃၅%)	
မြေအမျိုးအစား	စက်မှုဇုန်မြေ	
မြေဧရိယာစုစုပေါင်း	၀.၉၇၇ ဧက (၃၉၅၃.၇၇၈၇ စတုန်ရန်းမီတာ)	
အဆောက်အဦအရေအတွက် (၈၀ ပေ × ၁၈၀ ပေ) စက်ရုံအဆောက်အဦ		
	(၈၀ ပေ × ၂၀ ပေ) နှစ်ထပ်ရုံးခန်းအဆောက်အဦ	

	(၁ဂ ပေ × ၄ဂ ပေ) နှစ်ထပ် ဝန်ထမ်းအိမ်ရာ		
	(၁၀ ပေ × ၁၀ ပေ) နှစ်ထပ်လုံခြုံရေးဂိတ်		
ရင်းနှီးမြှုပ်နှံမှု ပမာဏ စုစုပေါင်း မြန်မာကျပ်ငွေ သန်း ၁,၂၄၅			
ခွင့်ပြုမိန့်ကာလ	၂၅ နှစ်		
ပြင်ဆင်ရေးကာလ	၁ နှစ်		
မြေငှားသက်တမ်း	ငှားသက်တမ်း ၂၅ နှစ်		
စက်ရုံလိပ်စာ	မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် အပိုင်း (၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့ နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး		
ဆက်သွယ်ရန် ပုဂ္ဂိုလ်	ဒေါ်ယမင်းမာလာ ရုံးဝန်ထမ်း		
	၊၉-၉၅၀၄၅၀၃၈၉ yamin5551995@gmail.com မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် အပိုင်း (၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့ နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး		

MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED မှ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာအား Tae Hyun (Myanmar) Industry Company Limited အတွက် ရေးဆွဲပြုစုပေးပါသည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာရေးဆွဲမည့် MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED ၏ အဖွဲ့ဝင်များ၏ အချက်အလက်များအား **အခန်း (၁) ၊ အပိုဒ် (၁.၄)** တွင် အသေးစိတ်ဖော်ပြထားပါသည်။

၂။ မူဝါဒ၊ ဥပဒေနှင့် မူဘောင်များ

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) နှင့် သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာနမှ ထုတ်ပြန်ထားသော အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ အပါအဝင် ဒေသတွင်းနှင့် နိုင်ငံတကာမှ ထုတ်ပြန်ထားသော အောက်ပါ ပတ်ဝန်းကျင်နှင့်လူမှုရေးရာ မူဝါဒများအား ခြံငုံသုံးသပ်ခြင်း ဖြစ်ပါသည်။

၁။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ၊ ၂၀၁၂

၂။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနည်းဥပဒေ၊ ၂၀၁၂

၃။ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ ၂၀၁၅

၄။ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ၊ ၂၀၁၅

၅။ မြန်မာနိုင်ငံ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒ၊ ၂၀၁၉

ဂု။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေ၊ ၂၀၁၆

၂၈။ မြန်မာနိုင်ငံမီးသတ်ဥပဒေ၊ ၂၀၁၅ ၂၉။ မြန်မာနိုင်ငံမီးသတ်တပ်ဖွဲ့ဥပဒေ၊ ၂၀၁၅ ၃၀။ ရှေးဟောင်း အဆောက်အအုံများ ကာကွယ်ထိန်းသိမ်းရေး ဥပဒေ၊ ၂၀၁၅ ၃၁။ ရေအရင်းအမြစ်နှင့် မြစ်ချောင်းများ ထိန်းသိမ်းရေး ဥပဒေ၊ ၂၀၁၆

- ၂၇။ အင်ဂျင်နီယာကောင်စီဥပဒေ၊ ၂၀၁၃
- ၂၆။ ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးဥပဒေ၊ ၂၀၁၈
- ၂၅။ သဘာဝဘေးအန္တရာယ်ဆိုင်ရာ စီမံခန့်ခွဲမှု ဥပဒေ၊ ၂၀၁၃
- ၂၄။ လုပ်ငန်းခွင်ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာဥပဒေ၊ ၂၀၁၉
- ၂၃။ ကူးစက်ရောဂါများကာကွယ်နှိမ်နင်းရေးဥပဒေ၊ ၂၀၁၁
- ၂၂။ ပြည်သူ့ကျန်းမာရေးဥပဒေ၊ ၁၉၇၂
- ၂၁။ ခွင့်နှင့် အားလပ်ရက်ဆိုင်ရာ ဥပဒေ၊ ၂၀၁၄
- ၂၀။ အနည်းဆုံးအခကြေးငွေပေးချေရေးဥပဒေ၊ ၂၀၁၃
- ၁၉။ အခကြေးငွေပေးချေရေးဥပဒေ၊ ၂၀၁၆
- ၁၈။ အလုပ်သမားလျှော်ကြေးအက်ဥပဒေ၊ ၁၉၂၃
- ၁၇။ အလုပ်အကိုင်နှင့်ကျွမ်းကျင်မှု ဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ၊ ၂၀၁၃
- ၁၆။ အလုပ်သမားရေးရာ အငြင်းပွားမှု ဖြေရှင်းရေးဥပဒေ၊ နည်းဥပဒေ၊ ၂၀၁၂
- ၁၅။ လူမှုဖူလုံရေးဥပဒေ၊ ၂၀၁၂
- ၁၄။ အလုပ်သမားအဖွဲ့ အစည်းဥပဒေ၊၂၀၁၁
- ၁၃။ စံချိန်စံညွှန်းသတ်မှတ်ခြင်းဆိုင်ရာဥပဒေ၊ ၂၀၁၄
- ၁၂။ ပုဂ္ဂလိကစက်မှုလုပ်ငန်းဥပဒေ၊ ၂၀၁၈
- ၁၁။ ကုန်သွယ်လုပ်ငန်းခွင်ဥပဒေကို ပြင်ဆင်သည့် ဥပဒေ၊ ၂၀၁၄
- ၁၀။ မြန်မာ့အာမခံလုပ်ငန်းဥပဒေ၊ ၁၉၉၃
- ၉။ ပို့ကုန်သွင်းကုန်ဥပဒေ၊ ၂၀၁၂
- ၈။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုနည်းဥပဒေ၊ ၂၀၁၃
- Tae Hyun (Myanmar) Industry Company Limited Environmental Management Plan

၃၂။ မြေအောက်ရေအက်ဥပဒေ၊ ၁၉၃၀

၃၃။ လျှပ်စစ်ဥပဒေ၊ ၂၀၁၄ ၃၄။ အမျိုးသား မြေအသုံးချမှု မူဝါဒ ၊၂၀၁၆ ၃၅။ အလုပ်ရေးရာအငြင်းပွားမှုဖြေရှင်းရေးဥပဒေ ၂၀၁၂

၃၆။ မော်တော်ယာဉ်ဥပဒေ ၂၀၁၅

၃၇။ လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဝတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ

၃။ လုပ်ငန်းအကြောင်းအရာဖော်ပြချက်

Tae Hyun (Myanmar) Industry Company Limited သည် မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် အပိုင်း (၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့ နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး၊ မြောက်လတ္တီကျ ၁၆°၅၁'၂၂.၅၂'' နှင့် အရှေ့ လောင်ဂျီကျ ၉၆°၃'၃၂.၇၇'' တွင် တည်ရှိပါသည်။ မြေဧရိယာစုစုပေါင်း ၀.၉၇၇ ဧက (၃၉၅၃.၇၇၈၇ စတုန်ရန်းမီတာ) ကျယ်ဝန်းပြီး လှိုင်သာယာက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိပါသည်။ စက်ရုံနှင့် အနီးဆုံး ရေအရင်းအမြစ်မှာ ပန်းလှိုင်မြစ်ဖြစ်ပြီး စက်ရုံ၏ အနီးဝန်းကျင်တွင် သရဖူစိုးမြင့်ကုမ္ပဏီနှင့် ပြည့်ဖြိုးအောင်ကုမ္ပဏီတို့ တည်ရှိပါသည်။ စက်ရုံ၏ အနီးရှိ အဓိကလမ်းများမှာ ကင်းဝန်မင်းကြီးလမ်းနှင့် ဦးတရုတ်လမ်းတို့ ဖြစ်ပါသည်။

စက်ရုံတည်နေရာပြမြေပုံ



Tae Hyun (Myanmar) Industry Company Limited Environmental Management Plan

Go

ale Earth



စက်ရုံအနီးဝန်းကျင်တည်နေရာပြမြေပုံ



စက်ရုံ၏ ဖွဲ့စည်းတည်ဆောက်ပုံ

Tae Hyun (Myanmar) Industry Company Limited ၏ အဓိက ကုန်ကြမ်းမှာ fabric, interlining, zipper, thread, label, sticker, button နှင့် အခြားဆက်စပ်ပစ္စည်းများဖြစ်ပြီး တရုတ်နိုင်ငံမှ အဓိကမှာယူတင်သွင်းပါသည်။ ကုန်ကြမ်းများကို ကုန်ကြမ်းသိုလှောင်ခန်းတွင် စနစ်တကျ သိုလှောင်ထားရှိပါသည်။ Tae Hyun (Myanmar) Industry Company Limited ၏ အဓိက ထုတ်ကုန်မှာ ဂျာကင်အမျိုမျိုးနှင့် ဦးထုပ်အမျိုးမျိုး ဖြစ်ပါသည်။

လုပ်ငန်းပထအဆင့်မှာ ဂျာကင်နှင့် ဦးထုပ်များအတွက် ပထမအဆင့်မှာ ပုံစံဖော် ဖြတ်တောက်ခြင်းဖြစ်ပြီး ၎င်းမှာ အခြေခံအဆင့်ဖြစ်ပါသည်။ ချုပ်လုပ်ခြင်းလုပ်ငန်းစဉ်တွင် fabrics, leather, furs နှင့် အခြားလိုအပ်သော ကုန်ကြမ်းပစ္စည်း များအား အပ်များ၊ အပ်ချည်များဖြင့် ချုပ်လုပ်ခြင်းဖြစ်ပါသည်။ အရည်အသွေးစစ်ဆေးခြင်းဌာနတွင် ထုတ်ကုန်များ၌ ချို့ ယွင်းမှုပါ/မပါ လူအားဖြင့် စစ်ဆေးပါသည်။ အရည်အသွေးစစ်ဆေးပြီး ကုန်ချောများအား မီးပူတိုက်ပါသည်။ ထို့နောက် ထုပ်ပိုးခြင်းအပိုင်းသို့ ရောက်ရှိပြီး ဝယ်သူများထံသို့ ကုန်ချောပစ္စည်းများအား ထုပ်ပိုးပြီး ပို့ဆောင်ပါသည်။



ထုတ်လုပ်ပုံ လုပ်ငန်းအဆင့်ဆင့်

နှစ်စဉ် ကုန်ကြမ်း သုံးစွဲမှု အား ကုန်ကြမ်းအမျိုးအစားအလိုက် ၁,၁၁၀,၀၀၀ ကိုက်မှ ၂၀၇,၀၀၀,၀၀၀ ကိုက် အထိ အသုံးပြုသွားမည် ဖြစ်ပါသည်။ နှစ်စဉ် ကုန်ချော ထွက်ရှိမှုမှာ ၁,၄၀၀,၀၀၀ ထည်ခန့် ဖြစ်ပါသည်။ ကုန်ချော များအား အမေရိကန်နိုင်ငံသို့ အဓိကတင်ပို့ပြီး ဝယ်သူများ၏ ညွှန်ကြားချက်များအတွင်း ပေးပို့ပါသည်။

စက်ရုံလုပ်ငန်းလည်ပတ်ရန်အတွက် လိုအပ်သော စက်ပစ္စည်းများမှာ Squee machines, Single needle machines, Two needle machines, Button hole machines, Hand Knife machines, Packing machines အစရှိသည် တို့ဖြစ်ပါသည်။ လက်ရှိအချိန်တွင် အလုပ်သမားဦးရေ ၁၅၄ ဦးဖြင့် လုပ်ငန်းလည်ပတ်လျက်ရှိပါသည်။ စက်ရုံမှ အလုပ်သမားများအတွက် ထမင်းစားဆောင်၊ ဝန်ထမ်းအိမ်ရာနှင့် အိမ်သာတို့ ထားရှိပေးထားပါသည်။ တစ်နှစ် အလုပ်လုပ်ရက် စုစုပေါင်းမှာ ၂၆၅ ရက်ဖြစ်ပါသည်။

ကုန်ချောဓာတ်ပုံများ

၄။ အနီးပတ်ဝန်းကျင်အခြေအနေ

ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံအချက်အလက်များအတွက် အချက်အလက်များစုဆောင်းကောက်ယူခြင်းအား ၂၀၂၀ခုနှစ်၊ ဇူလိုင်လ ၁၇ ရက်နေ့တွင် အဆိုပြုစီမံကိန်းအတွင်း တိုင်းတာဆန်းစစ်ကောက်ယူခဲ့ပါသည်။ အဆိုပြုစီမံကိန်း ၏ အပူချိန်နှင့်စိုထိုင်းဆအခြေအနေ၊ လေအရည်အသွေး၊ ဆူညံသံနှင့် အလင်းရောင်ရရှိမှုတို့အား တိုင်းတာခြင်း၊ နမူနာ ကောက်ယူခြင်းများ ဆောင်ရွက်ခဲ့ပါသည်။ အဆိုပြုစီမံကိန်းဧရိယာအနီးရှိ လူမှုစီးပွား အခြေအနေများ၊ ရုပ်ပိုင်းဆိုင်ရာ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များအား လှိုင်သာယာမြို့နယ်မှ ရယူထားရှိပါသည်။

အဆိုပြုစီမံကိန်းအတွက် ကွင်းဆင်းကောက်ယူခဲ့မှု ရလဒ်များ

အမျိုးအစား	ရလဒ်	လမ်းညွှန်ချက်တန်ဖိုး		
ရာသီဥတုဆိုင်ရာအခြေအနေများ				
စီမံကိန်းအတွင်း အပူချိန်	રઉ.૧ °C	-		
ပျမ်းမျှ စိုထိုင်းဆ	റ്റെ.၉ %	-		





Environmental M	Management Plan
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လေအရည်အသွေး		
PM10	ວຄ.ວ µg/m³	ეი
PM _{2.5}	၁၂.၂ μg/m³	Jŋ
СО	၁.၈၂၅ μg/m³	00
NO ₂	၉၂.၇ μg/m³	၂၀၀
SO ₂	၃၆၅.၈ μg/m³	၅၀၀
ဆူညံသံ		
စီမံကိန်းဧရိယာ	၇၃.၆၄ dBA	၇၀ dBA
အလင်းရောင်တိုင်းတာမှု		
Warehouse	၂၉၅ Lux	၂၀၀
Cutting Line	၁၂၄၅ Lux	၉၀၀
Sewing Line	၁၁၅၉ Lux	၆၀၀
QC	၁၂၆၉ Lux	၉၀၀
Ironing	၁၀၅၉ Lux	၆၀၀
Packing	၁၁၅၃ Lux	၂၀၀၀

စက်ရုံ၏ အထွေထွေသုံးရေစစ်ဆေးချက်အား နောက်ဆက်တွဲ (ဂ)တွင် ဖော်ပြထားပါသည်။

လေထုအရည်အသွေးတိုင်းတာခြင်းတွင် CO ပါဝင်မှုနှုန်းမှာ လက်ခံနိုင်သော အခြေအနေတွင် ရှိပြီး PM₁₀, PM₂₅ ၊ NO₂₁ SO₂ တိုင်းတာမှုများမှာလည်း အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်အတွင်း ရှိပါသည်။ လုပ်ငန်းခွင်အတွင်း အလင်းရောင်ရရှိမှုတိုင်းတာခြင်းမှာလည်း စံချိန်စံညွှန်းများအတွင်း ရှိပါသည်။ လုပ်ငန်းခွင် ဆူညံသံတိုင်းတာမှုမှာ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များထက် အနည်းငယ်ကျော်လွန်နေသည်ကို တွေ့ရှိရပါသည်။ အဆိုပြုစီမံကိန်းသည် အထည်ချုပ်လုပ်ခြင်းစက်ပစ္စည်းများ အများ အပြား အသုံးပြုရခြင်းကြောင့် လုပ်ငန်းခွင် ဆူညံသံထွက်ရှိမှုမှာ လမ်းညွှန်ချက်ထက် ကျော်လွန်နေရခြင်း ဖြစ်ပါသည်။ ဆူညံသံထွက်ရှိသော ချုပ်လုပ်ခြင်းပစ္စည်းများဖြင့် လုပ်ဆောင်ရသော ဝန်ထမ်းများအတွက် တစ်ကိုယ်ရေးသုံး ကာကွယ်ရေး ပစ္စည်းများ၊ နားကြပ်များ ထားရှိ၍ လုပ်ငန်းလုပ်ဆောင်စေပါသည်။

အဆိုပြုစီမံကိန်း၏ ဖွံ့ဖြိုးတိုးတက်မှုသည် ရုပ်ပိုင်းဆိုင်ရာ၊ ဇီဝပိုင်းဆိုင်ရာနှင့် လူမှုစီးပွားရေး ရှုထောင့်များနှင့် ပတ်သက်၍ အပြုသဘောနှင့် အပျက်သဘောဆောင်သော အကျိုးသက်ရောက်မှု နှစ်ခုစလုံးအပေါ် အခြေခံ၍ ဒေသတွင်း ပတ်ဝန်းကျင်တွင် ပြောင်းလဲမှုများ ဖြစ်ပေါ်နိုင်ဖွယ်ရှိပါသည်။ အဆိုပြုစီမံကိန်း၏ လုပ်ဆောင်မှုများကြောင့် ဖြစ်ပေါ် လာနိုင်သော ပတ်ဝန်းကျင်ဆိုင်ရာ အကျိုးသက်ရောက်မှု အလားအလာများအား ကွင်းဆင်းစစ်ဆေးခြင်း၊ စီမံကိန်း

အဆိုပြုသူ၊ စီမံကိန်းမန်နေဂျာ၊ တာဝန်ရှိသူများနှင့်တွေ့ဆုံဆွေးနွေးခြင်းများပြုလုပ်၍ အမျိုးအစား ခွဲခြားပြီး ဆန်းစစ်ရမည် ဖြစ်ပါသည်။

၅။ အကျိုးသက်ရောက်မှုများအား အမျိုးအစားခွဲခြားခြင်းနှင့် လျှော့ချရေးနည်းလမ်းများ

အကျိုးသက်ရောက်မှုတစ်ခုချင်းစီအတွက် အမျိုးအစားခွဲခြားခြင်းအား လုပ်ငန်းလုပ်ဆောင်နေသည့် အချိန် ကာလအတွင်း သက်ရောက်မှုများ၏ ပမာဏ၊ ကြာချိန်၊ အတိုင်းအတာနှင့် ဖြစ်နိုင်ခြေများအပေါ် မူတည်၍ တွက်ချက် သွားမည်ဖြစ်ပါသည်။

အကဲဖြတ်ခြင်း	အတိုင်းအတာ				
300360360	Э	J	9	9	ງ
ഗറാന്ത	မလုံလောက်သော	အနည်းငယ် နှင့် လုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင် သော	အသင့်အတင့်နှင့် အနည်းငယ် လုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	မြင့်မားနှင့် သိသာစွာ လုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင်သော	အလွန်မြင့်မားနှင့် အမြဲတမ်း လုပ်ငန်းခွင် ပြောင်းလဲမှု ဖြစ်စေနိုင်သော
အချိန်	ဂ-၁နှစ်	၂-၅နှစ်	၆-၁၅နှစ်	လုပ်ငန်းလည်ပတ်စဉ် ကာလ တစ်လျှောက်	လုပ်ငန်းပိတ်သိမ်း ခြင်းကာလအထိ
ကျယ်ပြန့်မှု	လုပ်ငန်းခွင်အတွင်း	ဒေသအတွင်း	မြို့နယ်အတွင်း	နိုင်ငံအတွင်း	နိုင်ငံတကာအတွင်း
ဖြစ်နိုင်ချေ	လုံးဝမဖြစ်နိုင်သော	မဖြစ်နိုင်သော	ဖြစ်နိုင်သော	ဖြစ်နိုင်ခြေ မြင့်သော	အတိအကျ

သတ်မှတ်ချက် = (ပမာဏ + အချိန် + ကျယ်ပြန့်မှု) x ဖြစ်နိုင်ချေ

ပတ်ဝန်းကျင်ထိခိုက်မှုကို အောက်ပါအတိုင်း ခွဲခြားနိုင်သည်။

သတ်မှတ်ချက်	ထိခိုက်မှုအဆင့်
<ാറ്റ	အလွန်နိမ့်
၁၅ - ၂၉	နိုင့်
ک ه - کک	အလယ်အလတ်
୨୦ ⁻ ୨୦	မြင့်
ତତ	အလွန်မြင့်

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျှော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာင	ง။ ပတ်ဝန်းကျင်ထိခိုက်မှု လေ့လာချိန်တွ ကြောင့် ဤကာလကို ထည့်သွင်းမစဉ်		က်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော
လုပ်ငန်းလည်ပတ်ခြင်း	ကာလ		
လေထုညစ်ညမ်းမှု	 လုပ်ငန်သုံး ကုန်ကြမ်း၊ ကုန်ချော၊ သယ်ယူပို့ဆောင်ရေး ယာဉ်များမှ ဖုန်နှင့် ဖန်လုံအိမ်ဓာတ်ငွေ့များ ထွက်ရှိခြင်း၊ အရေးပေါ် မီးစက်များနှင့် စက် ပစ္စည်းများမှ မီးခိုးများထွက်ရှိခြင်း 	အသင့်အတင့်	 လေထုညစ်ညမ်းမှုကို ထိန်းချုပ်နိုင်ရန် မီးစက်နှင့် စက်ပစ္စည်းများအား ပုံမှန် စစ်ဆေး ပြုပြင်ထိန်းသိမ်းခြင်း၊ စက်ပစ္စည်းများ၊ လုပ်ငန်းခွင်သုံး စက် ကိရိယာများနှင့် မီးစက်များအားကောင်း မွန်စွာ ထိန်းသိမ်းခြင်း၊ ကာဗွန်ထွက်ရှိမှုကို လျှော့ချနိုင်ရန်နှင့် လေထုညစ်ညမ်းမှုကို လျှော့ချနိုင်ရန် စက်ရံအတွင်း သစ်ပင်များ စိုက်ပျိုး ထားခြင်း၊
မြေဆီလွှာညစ်ညမ်းမှု	 စက်သုံးဆီများ ဖြည့်နေစဉ် စက် ဆီများယိုဖိတ်ခြင်း၊ ဒီဇယ်ယိုဖိတ် ခြင်း 	အလွန်နည်း	 စက်ရံဝန်းအတွင်း ကွန်ကရစ်များ ခင်း ကျင်းထားသဖြင့် မြေထုအတွင်းသို့ ယို စိမ့်နိုင်မှုမရှိပါ။
ရေထုညစ်ညမ်းမှု	 စက်ရုံ၏ လုပ်ငန်းစဉ်အတွင်း ရေ သုံးစွဲမှု မရှိပါ။ 	အလွန်နည်း	• လျှော့ချရန်မလိုပါ။
ဆူညံသံနှင့် တုန်ခါမှု	• လုပ်ငန်းသုံးစက်ကိရိယာများမှ ဆူညံသံထွက်ရှိခြင်း	အနည်းငယ်	 မီးစက်များအား သီးသန့်အခန်းဖြင့် ထား ရှိခြင်း၊ ဆူညံသံထွက်ရှိမှုများသော စက်ကိရိ ယာများဖြင့် လုပ်ကိုင်နေရသော ဝန် ထမ်းများအတွက် နားကြပ်များ၊ တစ် ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်းများ ထားရှိပေးခြင်း၊ စက်ရုံအတွင်းမှ ဆူညံသံများသည် ပတ်ဝန်းကျင်သို့ ပျံ့လွင့်မှု မရှိပါ
ကုန်းမြေပေါ် နှင့် ရေထဲရှိ အပင်နှင့် တိရစ္ဆာန်များအား ထိခိုက်နိုင်မှု	• စက်ရုံ၏ လုပ်ငန်းလုပ်ဆောင် ချက်များ	အလွန်နည်း	 စက်ရံလုပ်ငန်း လည်ပတ်မှုကြောင့် အပင်နှင့် တိရစ္ဆာန်များအား ထိခိုက်နိုင်မှု မရှိပါ။
မီးဘေးအန္တရာယ်	• လျှပ်စစ်သွယ်တန်းအသုံးပြုမှု အားနည်းခြင်း	အသင့်အတင့်	 မီးသတ်ဆေးဘူးများနှင့်မီးသတ်ကိရိယာ များအား အရေးပေါ်မီးဘေးအန္တရာယ်

	• စွန့်ပစ်ပစ္စည်းများအား စနစ်တကျ စွန့်ပစ်ခြင်း		ဖြစ်ပေါ် ပါက အသုံးပြုနိုင်ရန် စက်ရုံ အတွင်း အဆင်သင့်ထားရှိခြင်း၊ • မီးသတ်ဆေးဘူးနှင့် မီးသတ်ကိရိယာ များအား ပုံမှန်စစ်ဆေးလဲလှယ်ခြင်း၊ အရေးပေါ် မီးငြိမ်းသတ်ရန်အတွက် မီး သတ်ရေကန်ထားရှိခြင်း၊ • မီးဘေးအန္တရာယ်အချက်ပေး ခေါင်း လောင်းများအား စက်ရုံအတွင်း တပ် ဆင်ထားခြင်း၊ • အရေးပေါ် ထွက်ပေါက်များတွင် ကုန် ပစ္စည်းများနှင့် စက်ကိရိယာများ ပိတ်ဆို့ မှု မရှိစေရေး ဂရုပြု ဆောင်ရွက်ခြင်း၊
လုပ်ငန်းခွင် အန္တ ရာယ် ကင်းရှင်းရေး	 လုပ်ငန်းသုံး စက်ပစ္စည်းများ ကြောင့် မတော်တဆ ထိခိုက်မှု များ ဖြစ်ပွားနိုင်ခြင်း (ကုန်ပစ္စည်း အတင်အချပြုလုပ်ခြင်း၊ ပိတ်ဖြတ် တောက်ခြင်း၊ ထုပ်ပိုးခြင်းလုပ်ငန်း များ) 	အသင့်အတင့်	 အရေးပေါ်သူနာပြုသင်တန်းများ၊ အန္တ ရာယ်ကင်းရှင်းရေး သင်တန်းများ၊ မီး ဘေးအန္တရာယ်ကာကွယ်ရေး သင်တန်း များနှင့် စက်ပစ္စည်း စနစ်တကျ ကိုင် တွယ်အသုံးပြုနိုင်ရေး သင်တန်းများအား ဝန်ထမ်းများအား သင်တန်းပေးခြင်း၊ လုပ်ငန်းခွင်အတွင်း အမြင်အာရုံရှင်း လင်းနိုင်စေရန်နှင့် အန္တရာယ်ကင်းစွာ စက်ပစ္စည်းများအား အသုံးပြုနိုင်ရန် လုံ လောက်သော အလင်းရောင်ရရှိရန် ဆောင်ရွက်ပေးထားခြင်း၊ လျှပ်စစ်ဓာတ်လိုက်ခြင်းများ မဖြစ်ပေါ် စေရန် စက်ပစ္စည်းများအား ပုံမှန်စစ် ဆေးခြင်းနှင့် ကာကွယ်ရေးနည်းလမ်း များ ထားရှိပေးခြင်း၊
ကျန်းမာရေး	 လူဦးရေထူထပ်ခြင်း အရေးပေါ်မီးစက်များနှင့် စက်ကိ ရိယာများမှ ဆူညံသံများ ထွက်ရှိ ခြင်း၊ 	အလွန်နည်း	 စက်ရုံမှ အလုပ်သမားများအတွက် တစ် ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်းများ ဝတ်ဆင်ပြီးမှသာ လုပ်ငန်းလုပ်ဆောင် စေခြင်း၊ စက်ရုံအား အလုပ်သမား အရေ အတွက်၊ စက်ပစ္စည်း အရေအတွက်နှင့် ကိုက်ညီမှုရှိအောင် တည်ဆောက်ထား ခြင်း၊ စက်ရုံရှိ အလုပ်သမားများအတွက် အလုပ်ချိန် (၈)နာရီအတွင်း သင့်တော် သော ဆူညံသံထွက်ရှိမှု ပမာဏမှာ ၉၀ dB(A) ဖြစ်ပါသည်။ စက်ရုံမှ ဆူညံသံ

			ထွက်ရှိမှုများသော စက်ကိရိယာများနှင့် လုပ်ငန်းလုပ်ဆောင်ရသော အလုပ် သမားများအား နားကြပ်များ၊ ဆူညံသံ ကာကွယ်ရေးပစ္စည်းများ ထားရှိပေးခြင်း
လူမှုစီးပွားအခြေ အနေ	• ဒေသခံပြည်သူများအတွက် အလုပ်အကိုင် အခွင့်အလမ်းများ ရရှိစေခြင်း	ကောင်းမွန်သော သက်ရောက်မှု	
စွန့်ပစ်အမှိုက်	 ထုတ်လုပ်ရေးလုပ်ငန်းမှ ထွက်ရှိ သော ပိတ်ဖြတ်စများ၊ ဆေးသုတ်ခြင်းအပိုင်းမှ သုတ် ဆေးဗူးအခွံများ၊ စားသောက်ဆောင်၊ နားနေ ဆောင်နှင့် ရုံးခန်းမှ အမှိုက်များ 	အသင့်အတင့်	 လုပ်ငန်းစဉ်တစ်ခုချင်းစီတွင် အမှိုက်ပုံး များ ထားရှိပေးခြင်း၊ အမှိုက်များအား အမျိုးအစားခွဲခြား၍ ယာယီသိမ်းဆည်းခြင်း၊ စွန့်ပစ်ခြင်း၊ ရန်ကုန်စည်ပင်သာယာရေးကော်မတီ နှင့် ချိတ်ဆက်၍ အမှိုက်စွန့်ပစ်ခြင်း၊
စွန့်ပစ်အရည်	 နေအိမ်၊ စားသောက်ဆောင် တို့မှ စွန့်ထုတ်ရေ၊ မိလ္လာကန်စနစ် 	အနည်းငယ်	 ပုံမှန်စစ်ဆေးခြင်း၊ သန့်ရှင်းရေး ပြုလုပ်ခြင်း၊ သိုလှောင်ရုံနှင့် စွန့်ပစ်ပစ္စည်းများအတွက် လုံလောက် သော ဖုံးအုပ်မှုများ ထားရှိစေခြင်း၊
လုပ်ငန်းပိတ်သိမ်းခြင်	းကာ		
လေထုညစ်ညမ်းမှု	• အဆောက်အဦများ ဖြိုချမှုများ၊ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	 ဖုန်ထွက်ရှိမှု လျှော့နည်းစေရန် တစ်နေ့ နှစ်ကြိမ် ရေဖြန်းပေးခြင်း၊ ဖြိုချပစ္စည်းများအား စနစ်တကျ ဖုံးအုပ် ထားခြင်း၊ ပိတ်သိမ်းမှုဧရိယာအတွင်း ခြံစည်းရိုး များ အပေါ်တွင် အမြင့် ၂ မီတာရှိ အရိပ် ရ ပိုက်များ တပ်ဆင်ထားခြင်း၊ ဖြိုချပစ္စည်းများ သယ်ယူရာတွင် စနစ် တကျ ဖုံးအုပ်၍ သယ်ဆောင်ခြင်း၊
ရေညစ်ညမ်းမှု	• ဖျက်သိမ်းရေး အလုပ်သမားများမှ အထွေထွေ စွန့်ထုတ်ရေများ၊ မိလ္လာစနစ်၊	အနည်းငယ်	 စွန့်ထုတ်ရေလှောင်ကန်များနှင့် မိလ္လာ စနစ်များ ဖျက်သိမ်းရာတွင် အစီအစဉ် တကျ ဖျက်သိမ်းဆောင်ရွက်ခြင်း၊ ရန်ကုန်စည်ပင်သာယာနှင့် ချိတ်ဆက်၍ စနစ်တကျ စွန့်ပစ်ခြင်း၊
မြေဆီလွှာ ညစ်ညမ်းမှု	 အဆောက်အဦနှင့် ဆက်စပ် ပစ္စည်းများ ဖြိုချပစ္စည်းများ သယ်ယူမှုများ 	အနည်းငယ်	 စွန့်ထုတ်ရေ၊ မိလ္လာများ၊ စက်ဆီ၊ ဒီဇယ် ဆီများ ယိုဖိတ်မှု မရှိအောင် စီမံ ဆောင် ရွက်ခြင်း၊

ဆူညံသံနှင့် တုန်ခါမှု	 ဖြိုချဖျက်သိမ်းခြင်း လုပ်ငန်းများ၊ ဖြိုချပစ္စည်းများအား သယ်သူ ဝို့ဆောင်ခြင်း 	အနည်းငယ်	 ဖြိုချဖျက်သိမ်းခြင်းလုပ်ငန်းများအား နေ့အချိန်တွင်သာ ဆောင်ရွက်စေခြင်း၊ ဆူညံသံထွက်ရှိမှု လျော့နည်းစေရန် စက်ပစ္စည်းများနှင့် ယာဉ်ယန္တရားများ ,အား ပုံမှန်စစ်ဆေး ထိန်းသိမ်းခြင်း အလုပ်သမားများအား နားကြပ်များ၊ တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်း များ တပ်ဆင်ဆောင်ရွက်စေခြင်း၊
အမှိုက်စွန့်ပစ်မှု	• ဖြိုချပစ္စည်းများဖြစ်သော အုတ် အကျိုးအပဲ့များ၊ ကွန်ကရစ် အ စိတ်အပိုင်းများ၊	အလွန်နည်း	 ပြန်လည်အသုံးပြု၍ရသော ပစ္စည်းများ နှင့် ခွဲခြားစွန့်ပစ်ရမည့် ပစ္စည်းများဟူ၍ ခွဲခြားစွန့်ပစ်ဆောင်ရွက်ခြင်း၊
လုပ်ငန်းခွင် ကျန်းမာ ရေးနှင့် ဘေးအန္တ ရာယ်ကင်းရှင်းရေး	• ဖျက်သိမ်းရေးလုပ်ငန်းစဉ်များ • ဖြိုချပစ္စည်းများသယ်ယူခြင်း	အနည်းငယ်	 အကာအကွယ်စည်းရိုးများ၊ သတိပေး ဆိုင်းဘုတ်များ၊ လုံခြုံရေးဆိုင်းဘုတ် များ ချိတ်ဆွဲထားခြင်း၊ ဖြိုချ စွန့်ပစ်ပစ္စည်းများအား သန့်ရှင်း ရေး ပုံမှန်ပြုလုပ်ခြင်း, တတိယအဖွဲ့အစည်းမှ ကျွမ်းကျင်သူ အား ငှားရမ်း၍ အန္တရာယ်ရှိ စွန့်ပစ် ပစ္စည်းများနှင့် ဖြိုချပစ္စည်းများ ရှင်းလင်း ရာတွင် အန္တရာယ်ကင်းရှင်းမှု ရှိစေရေး ကြီးကြပ်စေခြင်း၊



၆။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို သတ်မှတ်ထားသော အကျိုးသက်ရောက်မှုများ၊ လျှော့ချမှု၊ တိုင်းတာမှု များ၊ စီမံခန့်ခွဲမှုနှင့် စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်များပေါ် မူတည်၍ အကောင်အထည်ဖော်ခဲ့ပါသည်။ အဆိုပြုစီမံကိန်း၏ ပတ်ဝန်းကျင်ဆိုင်ရာတိုးတက်မှုများနှင့် ပြုပြင်ပြောင်းလဲမှုများအတွက် အောက်ဖော်ပြပါ အစီအစဉ်များ ပြီးမြောက်ရန်၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား သုံးသပ်ရန်အတွက် Tae Hyun (Myanmar) Industry Company Limited မှ စက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအဖွဲ့အား ဖွဲ့စည်းထားရှိပါသည်။ ပတ်ဝန်းကျင်လေထုအရည်အသွေး၊ ဆူညံသံ၊ ရေအရည်အသွေး၊ အညစ်အကြေးနှင့် အစိုင်အခဲစွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ခြင်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအဖွဲ့၏ ခေါင်းဆောင်မှ စောင့်ကြပ်ကြည့်ရှုသွားမည်ဖြစ်ပါသည်။ စီမံကိန်းအဆိုပြုသူမှ လူမှုရေးတာဝန်ယူ ဆောင်ရွက်မှု အစီအစဉ်

- လထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- ရေအသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- ရေဆိုးစွန့်ပစ်မှု စီမံခန့်ခွဲမှုအစီအစဉ်
- ဆူညံမှုထိန်းချုပ်ခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- အစိုင်အခဲစွန့်ပစ်ပစ္စည်းဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- 🔹 မီးဘေးအန္တရာယ် စီမံခန့်ခွဲမှုအစီအစဉ်
- လုပ်ငန်းခွင်ဘေးကင်းလုံခြုံရေးနှင့် ကျန်းမာရေး စီမံခန့်ခွဲမှုအစီအစဉ်
- စွမ်းအင်အသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- အရေးပေါ် တုံပြန်ရေးနှင့် သဘာဝဘေးဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- စွမ်းဆောင်ရည်မြှင့်တင်ရေးနှင့် လေ့ကျင်ရေးဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်
- 🔹 မကျေနပ်မှုများဆိုင်ရာ ဖြေရှင်းမှု နည်းလမ်း
- လူမှုရေးဆိုင်ရာ တာဝန်ယူဆောင်ရွက်မှု အစီအစဉ်

အထက်ဖော်ပြပါ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုဆိုင်ရာ အစီအစဉ်များအား **အခန်း (၆)** တွင် အသေးစိတ် ရှင်းလင်း ဖော်ပြထားပါသည်။ အဆိုပြုစီမံကိန်း၏ ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်၊ အချိန်ဇယားနှင့် ငွေကြေး အစီအစဉ်များအား **အခန်း (၆) ၊ အဝိုဒ် (၆.၁၂) ၊ ဇယား (၆-၂) နှင့် အဝိုဒ်ခွဲ (၆.၁၀.၁) ၊ ဇယား (၆-၃)** တွင် အသေးစိတ် ဖော်ပြထားရှိပါသည်။

စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်နှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်အတွက် ခန့်မှန်းကုန်ကျစရိတ်

စဉ်	အမျိုးအစား	အကြိမ်ရေ	ကုန်ကျစရိတ် (ကျပ်)		
လျှော့	လျှော့ချရေးနည်းလမ်းများ				
Э	စက်ရုံ၏ လေဝင်လေထွက်စနစ်အား ပြုပြင် ထိန်းသိမ်းခြင်း	တစ်နှစ် (၁)ကြိမ်	တစ်နှစ်လျှင် ၁,၂၀၀,၀၀၀		
J	စက်ရုံဝန်းအတွင်း သစ်ပင်ပန်းပင်များ စိုက်ပျိုးခြင်း	(၃)လလျှင် (၁)ကြိမ်	(၃)လလျှင် ၂၀၀,၀၀၀		
9	အစိုင်အခဲအမှိုက်စွန့်ပစ်မှု	လစဉ်	(၁)လလျှင် ၂၀၀,၀၀၀		
9	တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်းများဝယ်ယူခြင်း	(၆)လလျှင် (၁)ကြိမ်	တစ်လလျှင် ၂၀၀,၀၀၀		
၅	ကျန်းမာရေးစစ်ဆေးပေးခြင်းနှင့် ကျန်းမာရေး အာမခံ	တစ်နှစ်လျှင် (၁)ကြိမ်	တစ်နှစ်လျှင် ၁,၀၀၀,၀၀၀		
အရေး	းပေါ် အခြေအနေပြင်ဆင်ထားရှိမှု				
э	မီးသတ်ဆေးဘူး	တစ်လလျှင် (၁)ကြိမ်			
J	မီးဘေးအချက်ပြစနစ်	တစ်လလျှင် (၁)ကြိမ်	တစ်လလျှင် ၅၀၀,၀၀၀		
9	First Aid Fits	တစ်လလျှင် (၁)ကြိမ်			
စောင့်	စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်				
э	လေအရည်အသွေး	တစ်နှစ် (၂)ကြိမ်	တစ်နှစ်လျှင် ၁,၀၀၀,၀၀၀		
J	စွန့်ထုတ်ရည်အရည်အသွေး	တစ်နှစ် (၂)ကြိမ်	တစ်ကြိမ်လျှင် ၈၀၀,၀၀၀		
9	ဆူညံသံ	တစ်နှစ် (၂)ကြိမ်	တစ်နှစ်လျှင် ၁၀၀,၀၀၀		
9	အမှိုက်စွန့်ထုတ်မှု	အပတ်စဉ်	တစ်နှစ်လျှင် ၂၀၀,၀၀၀		
ე	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးကင်းလုံခြုံရေး	လစဉ်	တစ်နှစ်လျှင် ၅၀၀,၀၀၀		
ତ	ပတ်ဝန်းကျင်လိုက်နာမှုဆိုင်ရာ စစ်ဆေးခြင်း	(၁)ကြိမ်	၆୦୦,୦୦୦		

အဆိုပြုစီမံကိန်းသည် လှိုင်သာဘာစက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိသော ကြောင့် စီမံကိန်းမှ ဒေသခံပြည်သူများအား ထိခိုက်နိုင်ချေ မရှိပါ။ အဆိုပြုစီမံကိန်း၏ အကြောင်းအချက်များနှင့် ဤပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာအား အများပြည်သူနှင့် သက်ဆိုင်သူများမှ အောက်ဖော်ပြပါ Website၊ Facebook Page များတွင် ဝင်ရောက်လေ့လာ ကြည့်ရှုနိုင်ပါသည်။

Myanwei website: www.myanweiconsulting.com

https://www.facebook.com/Myanwei-Environmental-Solutions-Company-Limited.

၇။ အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးခြင်း

အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးခြင်းအား အစီရင်ခံစာရေးသားပြုစုသည့်အချိန်တွင် ကိုဗစ်-၁၉ ရောဂါများ ကြောင့် ပြုလုပ်ကျင်းပနိုင်ခဲ့ခြင်းမရှိဘဲ Myanwei Environmental Solutions Company Limited ၏ Facebook page ၌ တင်ပြခဲ့ပြီး အကြံပြုချက်များတောင်းခံခဲ့ပါသည်။ အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာနသို့ အတည်ပြု ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီရင်ခံစာအား တင်ပြသည့်အချိန်တွင် ထည့်သွင်းဖော်ပြ သွားမည် ဖြစ်ပါသည်။

၈။ နိဂုံးနှင့်အကြံပြုချက်

နိဂုံးချုပ်အားဖြင့် အများပြည်သူနှင့် တွေ့ဆုံဆွေးနွေးပွဲတွင် မှတ်တမ်းတင်ထားသော ဒေသခံပြည်သူများ၏ အကြံပြုချက်များ၊ လိုလားမှုများနှင့် လိုအပ်ချက်များအားလုံးကို ကောင်းစွာ ကိုင်တွယ်ဖြေရှင်းနိုင်ခဲ့ပြီး ပတ်ဝန်းကျင်စီမံခန့်ခွဲ မှုအစီရင်ခံစာ ရေးဆွဲရာတွင် ထည့်သွင်းအသုံးပြုထားပါသည်။ Tae Hyun (Myanmar) Industry Company Limited မှ ဒေသခံပြည်သူများအား အလုပ်အကိုင်အခွင့်အလမ်းများ ဖန်တီးပေးနိုင်ပြီး ဝန်ထမ်းများ၏ လုပ်နိုင်စွမ်းရည်နှင့် အလုပ်ကျွမ်းကျင်မှုများအား မြင့်တင်ပေးနိုင်ကြောင်း တွေ့ရှိရပါသည်။ ထို့ကြောင့် ဒေသခံပြည်သူများ၏ လူမှုစီးပွားရေး စံနှုန်းများ တိုးတက်ကောင်းမွန်စေရန်အတွက် တင်ပြထားသည့် လူမှုရေးဆိုင်ရာ တာဝန်ယူဆောင်ရွက်မှုအစီအစဉ်အတိုင်း ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။ ဒေသခံပြည်သူများနှင့် နိုင်ငံဖွံ့ဖြိုးတိုးတက်ရေးအတွက် ဤစီမံကိန်းမှ အပြုသဘော ဆောင်သော အကျိုးသက်ရောက်မှုများ ရရှိနိုင်ပါသည်ဟု ကောက်ချက်ချနိုင်ပါသည်။

- · အစီရင်ခံစာတွင် ဖော်ပြထားသည့်ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် ကတိကဝတ်များကို စီမံကိန်း၏ သက်တမ်းတလျှောက်တွင် အကောင်အထည်ဖော် ဆောင်ရွက်ရမည်။
- · အစိုင်အခဲနှင့်အရည်စွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ၏ စည်းကမ်း များ အတိုင်းစွန့်ပစ်ရမည်။
- · အလုပ်သမားများအား သင့်တော်သော သင်တန်းများပေးခြင်း၊ လုပ်ငန်းခွင်အတွင်း တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ အသုံးပြုစေခြင်းများ ဆောင်ရွက်ရမည်။
- · ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်များကို နေ့စဉ်၊ လစဉ်နှင့် နှစ်စဉ် လုပ်ငန်းခွင်အတွင်း လုပ်ဆောင်ရမည်။
- · ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ် မှတ်တမ်းများကို သေချာသိမ်းဆည်း၍ တတိယအဖွဲ့ အစည်း သို့တင်ပြရမည်။
- · ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသောမူဝါဒ လမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ရမည်။

အချုပ်အားဖြင့်ဆိုသော် အဆိုပြုသူသည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနမှ ညွှန်ကြားလာသော အဆိုပြု ချက်များ၊ အကြံပြုချက်များကို လိုက်နာဆောင်ရွက်ရမည်။ ထိရောက်သော ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုကို အဆိုပြုသူမှ

ဆောင်ရွက်ရမည်။ အဆိုပြုသူသည် ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များ အတိုင်းလိုက်နာ ဆောင်ရွက်ရ မည်။

စီမံကိန်းဖော်ဆောင်မှုကြောင့် စက်မှုကဏ္ဍဖွံ့ဖြိုးတိုးတက်မှုများ၊ လူမှုစီးပွားတိုးတက်မှုများ၊ အလုပ်အကိုင် အခွင့် အလမ်းများ ရရှိစေနိုင်ပါသည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ရေးဆွဲခြင်းဖြင့် စီမံကိန်းအပေါ် သက်ရောက်မှုများကို လျော့ချနိုင်ခြင်း နှင့် စောင့်ကြပ်ကြည့်ရှုမှုများကို တစ်နှစ်လျှင် ၂ကြိမ် ပြုလုပ်ရမည် ဖြစ်ပါသည်။

EXECUTIVE SUMMARY

1. Introduction

This report describes the findings of the Environmental Management Plan (EMP) for the Manufacturing of various kinds of apparel (jacket and cap) on CMP Basic by Tae Hyun (Myanmar) Industry Company Limited. The main objective of this report is to identify the major environmental impacts due to implementation of the project along with the effective measures to mitigate the potential adverse impacts.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. Yaka- 1/3/4 (EIA) (2200/2019) on 8th October 2019. Therefore, Tae Hyun (Myanmar) Industry Company Limited commissioned MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED for EMP report study.

Information of investor	
Investor Name:	Daw Nyein Nyein Zaw
ID No.:	12/KAMAYA (N) 047513
Citizenship:	Myanmar
Phone No:	09-420205645
Email	maqin522@gmail.com
Address of Registration office:	Plot No.139, Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.

Information of Investor

Salient features of the project

Type of Proposed Business	Manufacturing of Apparel (Such as Various Kinds of Jacket and Cap) on CMP Basis
Type of investment	Myanmar Citizen Investment
Type of Share	Joint Venture (Myanmar Citizen Share 65% + Foreign Share 35 %)
Type of land	Industrial Land
Total land area	0.977 acres (3953.7787 sq m)
Total building area	One Factory Building (80 ft × 180 ft) Two Storey Office Building (80 ft × 20 ft) Two Storey Dormitory (10 ft × 40ft) Two Storey Security Gate (10 ft × 10 ft)
Investment Period	25 years
Operation Starting Date	1 st October 2019
Construction period	1 year
Address	Plot No.139, Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.

Contact person	Daw Yamin Marlar Office Staff 09-950450389
	yamin5551995@gmail.com Plot No.139, Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.

Environmental Consultant Profile of Myanwei Environmental Solutions Company Limited is described and shown detail in **Chapter 1, Section 1.4**.

2. Policy, Legal and Institutional Framework

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

- 1. The Environmental Conservation Law, 2012
- 2. The Environmental Conservation Rules, 2014
- 3. Environment Impact Assessment Procedure, 2015
- 4. National Environmental Quality (Emission) Guidelines, 2015
- 5. National Myanmar Environmental Policy, 2019
- 6. Myanmar Investment Law, 2016
- 7. Myanmar Investment Rules, 2016
- 8. The Export and Import Law, 2012
- 9. Myanmar Insurance Law, 1993
- 10. Commercial Tax Law (1990) Amended 2014
- 11. The Amended Law for Factories Act, 1951
- 12. The Private Industrial Enterprise Law, 1990
- 13. The Law on Standardization, 2014
- 14. Labor Organization Law, 2011
- 15. Social Security Law, 2012
- 16. Labor Dispute Settlement Law, 2012
- 17. Employment and Skill Development Law, 2013
- 18. Workmen's Compensation Act, 1923
- 19. Payment of Wages Law, 2016
- 20. The Minimum Wages Law, 2013
- 21. The Leaves and Holiday Act, 1951
- 22. Public Health Law, 1972
- 23. Prevention and Control of Communicable Diseases Law, 1995
- 24. Occupational Safety and Health Law, 2019
- 25. Natural Disaster Management Law, 2013
- 26. Yangon City Development Committee Law, 2018
- 27. Myanmar Engineering Council Law, 2013
- 28. Myanmar Fire Force Law, 2015
- 29. Myanmar Fire Brigade Law, 2015
- 30. The Protection and Preservation of Ancient Monument Law, 2015
- 31. The Conservation of Water Resources and Rivers Law, 2006

MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED

- 32. Underground Water Act, 1983
- 33. The Electricity Law, 2014
- 34. National Land Use Policy, 2014
- 35. Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)
- 36. The Motor Vehicles Law (2015)
- 37. လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတတ်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ (၂၀၁၈)

3. Project Description

Tae Hyun (Myanmar) Industry Company Limited is located at Plot No. (139), Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The proposed factory locates at the coordinates of North Latitude 16°51'22.52"N and Longitude 96° 3'32.77"E. The total area of project site is 0.977 acres (3953.7787 sq m). Tae Hyun (Myanmar) Industry Company Limited is located at Hlaing Thar Yar Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The nearest water source is Pann Hlaing River and Thayaphu Soe Myint Co., Ltd. and Pyae Phyo Aung Co., Ltd. is located at near of the factory. The main streets of the proposed project are Kin Win Min Gyi street and U Ta Yote Street.



96°2'6"E 96°2'24"E 96°2'42"E 96°3'0"E 96°3'18"E 96°3'36"E 96°3'54"E 96°4'12"E 96°4'30"E

Location Map of Tae Hyun (Myanmar) Industry Company Limited

MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED


Adjacent Location of Proposed Project



Ariel Layout Map of Tae Hyun (Myanmar) Industry Company Limited

The main raw materials of Tae Hyun (Myanmar) Industry Company Limited are fabric, interlining, zipper, thread, label, sticker, button and other accessories and raw materials are imported from China.

The first stage in the manufacturing of wearing apparel (such as jacket and cap) is the cutting and for that pattern, making is the base. Once the marker is made, pattern pieces must be cut out of the specified fabric. The process of sewing involves fastening of fabrics, leather, furs or similar other flexible materials with the help of needle and threads. Stitching is the process of passing threaded needle in and out of a material to make a specific design pattern. Quality control (QC) checks for any error. Quality control was done manually. After completion of QC Process, Ironing is a sheet metal forming process that uniformly thins the workplace in a specific area. The QC passed units are sent to packing as a final production process. This step sends packed units for distribution to the customers. These packed units are sent to the countries per customer's specification. Packing process was done manually by manpower.



Production Flow Diagram

. Annually raw materials require about 1,110,000 yards to 207,000,000 yards according to raw materials types. Annual production rate is about 1,400,000 pieces of jacket and cap. Finished products will be exported mainly to USA according to the customer's orders.

Necessary machinery equipment are Squee machines, Single needle machines, Two needle machines, Button hole machines, Hand Knife machines, Packing machines. Currently there are total 154 employees. Factory provide canteen, dormitory and toilets for employees. Total running day is 265 days per year.



Product Photos

4. Brief Description of Surrounding Environment

For environmental baseline, data were collected by onsite measurements analysis during operation phase on 17th July 2020. On-site measurement was taken by Temperature & Humidity, Air quality, Noise level and operation light condition at the factory. Moreover, secondary data collection of proposed project site area such as socio-economic condition, physical/ biological environment, weather data were collected from official township data was obtained from Regional Data of Hlaing Thar Yar Township.

Туре	Results	Guideline Value
Weather Condition		
Indoor Temperature	36.7 °C	-
Relative Humidity	84.9 %	-
Air Quality	·	
PM ₁₀	18.1 μg/m ³	50
PM _{2.5}	12.2 μg/m ³	25

Survey Result in Proposed Project

1.825 μg/m ³	10		
92.7 μg/m ³	200		
365.8 μg/m ³	500		
	-		
73.64 dBA	70 dBA		
Light			
295 Lux	200		
1245 Lux	900		
1159 Lux	600		
1269 Lux	900		
1059 Lux	600		
1153 Lux	2000		
	92.7 μg/m ³ 365.8 μg/m ³ 73.64 dBA 295 Lux 1245 Lux 1159 Lux 1269 Lux 1059 Lux		

Factory' domestic wastewater testing results are shown in APPENDIX C.

The contents of CO concentration level are acceptable and particulate matter (PM₁₀, PM_{2.5}) and gases level of Nitrogen Dioxide (NO₂) and Sulfur dioxide (SO₂) are also within the National Environmental Quality (Emission) Guideline. Noise source monitoring at the project site overall level of noise in the workshop area is a little exceed when compared with National Environmental Quality (Emission) Guideline because the factory generates heavy machines and equipment. To minimize noise level, factory provides earmuffs and ear plugs to those workers near the noisy machines.

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

5. Risk Assessment and Mitigation Measure

The assessment of each impact is based on consideration of the magnitude, duration, extent and probability of activities, which are going to be carried out during operation phases.

Assessment			Scale		
Assessment	1	2	3	4	5
Magnitude (M)	Insignificant	small and will have no effect on working environment	Moderate and will result in minor changes	High and will result in significant changes on	Very high and will result in permanent changes on

Impact Assessment Parameter and Its Skill

Assessment		Scale				
Assessment	1	2	3	4	5	
			on working environment	working environment	working environment	
Duration (D)	0 - 1 year	2 - 5 year	6 - 15 year	Life of operation	Post Closure	
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International	
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite	

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

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

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

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

In operation phase, there are 5 moderate significance impact, 3 low significant impacts and 5 very low significant impacts. In decommission phase, there are 4 low significant impacts and 2 very low significant impacts. All of the impacts during operation phases can be minimized by using mitigation measures and implementing Environmental Management Plan that is described detail in **Section** Error! Reference source not found.

Evaluation and Prediction of Significant Impacts and Mitigation Measure

Environmental Impact	Project Activities	Impact Significance	Mitigation Measure
Operation Phase Air	 Dust and GHGs emission from vehicles used for transporting raw 		 To control air pollution, the vehicles, generators and
	materials and final productsEmission of smoke from		machineries have to check and maintain regularly.
	emergency diesel generator and vehicle movement	moderate	 Ensuring vehicles, compressor and generator are well maintained.
			 The factory has planted trees to reduce carbon emission and minimize air pollution.

Environmental Impact	Project Activities	Impact Significance	Mitigation Measure
Soil	Engine oil leaks, spills at diesel storage and during fuel refueling.	Very Low (Insignificant)	No Mitigation Measure
Water	Operation area	Very Low (Insignificant)	No Mitigation Measure
Noise and Vibration	Generating noise from the production machinery	Very Low (Insignificant)	 Should be built individual room like as generator room, Should be provided the noise covering equipment or personal protective equipment (PPE) Should be provided the noise covering equipment or personal protective equipment (PPE) for the workers operated in noisy area.
Flora and fauna on terrestrial and aquatic life	Operation of the garment structure factory	Very Low (Insignificant)	No Mitigation Measure
Fire	 Poor electrical installations Waste disposed area raw materials and paint containers 	Moderate	 To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupational Safety	 Accidental cases cause by operating machines. Unloading and loading, cutting, welding and drilling activities. 	Moderate	 First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. According to the observed light intensity values, the

Environmental Impact	Project Activities	Impact Significance	Mitigation Measure
			 proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.
Health	 Influx of people Noise from the generating of the emergency generators 	Very Low (Insignificance)	 Operating only after wearing personal protective equipment for workers at the factory; factory area is large enough for the amounts of workers The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.
Social-economic Condition	Job opportunities for local people	Positive Impact	
Solid Waste	 Residual pieces of fabric scraps from the production lines Waste from coating area Waste from canteen, dormitory and office. 	Moderate	 Provides separate garbage bins at each place. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area Final wastes should be disposed by using YCDC's service.
Liquid Waste	Septic system and sewage.	Low	Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal

Environmental Impact	Project Activities	Impact Significance	Mitigation Measure
	• Domestic liquid waste disposal from office, canteen and rest camp.		areas can decrease these contaminations.
Decommission P	hase		
Air	 Demolish of buildings and related materials Transportation of demolished materials 	Low	 Spray water twice a day Cover mesh trap around the decommission area Install shading net about 2 meters above temporary fence of decommission area Carry broken material with cover by canvas.
Water pollution	 Sewage form decommissioning workers Demolition machinery equipment 	Low	Systematically demolish the septic tanks.
Soil	 Demolish of buildings and related materials Transportation of demolished materials 	Low	Manage the spillage of oil and diesel and sewage.
Noise and Vibration	 Decommission activities Transportation of demolished materials 	Low	 Carry out the activities during day time. Maintain the machines and vehicles to reduce noise pollution. Provide the ear plugs to the workers.
Waste disposal	Demolished debris such as bricks, concrete materials	Very Low	Recyclable materials and dispose to the define areas.
Hazardous waste	Used lubricants from decommissioning vehicles and machines	Very Low	Manage the disposal way of hazardous waste.
Occupational Health and Safety (Accidents, Injuries)	 Decommissioning activities Transportation of demolished materials 	Low	 Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board. Clean up excessive waste debris and liquid spills regularly.

Environmental Impact	Project Activities	Impact Significance	Mitigation Measure
			 Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.



Modified method of Institute of Environmental Management and Assessment (IEMA) from United Kingdom is applied in this report to assess the significance of the impacts. Results of analysis mention that most of the project activities are very low/low significant and some are moderate significant to be improved for environmental performance. Social and economic developments are positive impacts of the proposed project.

6. Environmental Management (Action) Plan

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

- Air Pollution/Dust Management Plan
- Water Consumption Management Plan
- Wastewater Management Plan

- Noise Management Plan
- Solid Waste Management Plan
- Fire Management Plan
- Occupational Safety and Health Management Plan
- Energy Management Plan
- Emergency Response and Disaster Management Plan
- Capacity Building and Training Plan
- Grievance Redress Mechanism (GRM)
- Corporate Social Responsibility (CSR) Plan

Chapter 6 provides a detailed explanation of the above-mentioned environmental management programs. The environmental monitoring plan, schedule and budget plans of Tae Hyun (Myanmar) Industry Company Limited are described and shown detail in Chapter (6), Section (6.10), Table (6-1) and Sub Section (6.10.1) Table (6-2).

Cost estimation for EMP implementation

No	Item	Frequency/Times	Cost (MMK)		
Mitig	Mitigation Plan				
1	Maintenance of air ventilation system	Once per year	1200,000 per year		
2	Tree plantation within the area of factory compound	Once per three months	200,000 per three months		
3	Solid waste disposal	Monthly	200,000 per month		
4	Purchase of Personal Protective Equipment (PPE)	Once per half a year	200,000 per month		
5	Medical Check-up and Health Insurances	Once per year	1,000,000 per year		
Eme	Emergency Preparedness				
1	Fire extinguisher	Once per month			
2	Fire alarm system	Once per month	500,000 per month		
3	First Aid Fits	Once per month			
Moni	itoring Plan				
1	Air Quality	Biannually	1,000,000 per year		
2	Water Quality	Biannually	800,000 per year		
3	Noise level	Biannually	100,000 per year		
4	Waste generation (Solid)	weekly	200,000 per year		
5	Occupational health and safety	Monthly	500,000 per year		
6	Environmental compliance auditing	1	600,000 lump sum		

The project is located at Hlaing Thar Yar Industrial Zone, Hlaing Thar Yar Township, Yangon Division and there are no affected local people by project. The project information and this EMP will be accessible to public and stakeholders via.

Myanwei Website: www.myanweiconsulting.com

Myanwei Facebook Page: https://www.facebook.com/Myanwei-Environmental-Solutions-Company-Limited.

7. Public Consulting

The public meeting was posted on the Facebook page of Myanwei Environmental Solutions Company Limited and requested recommendations during Covid-19 pandemic. Public consultation meeting will be conducted and reported when the approved environmental management plan is reported to Environmental Conservation Department.

8. Conclusion & Recommendation

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

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

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

There are many positive impacts such as industrial development, social development, job opportunities for the regional people due to project implementation. And environmental management

planning for the factory can mitigate the impacts on environment due to project and monitoring plan will also be always check and do for 2 times per year.

1. INTRODUCTION

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

1.1. PROJECT BACKGROUND

The project is new investment for manufacturing of wearing apparel (such as various kinds of jacket and cap) on Cutting, Making and Packaging (CMP) Basis. Yangon Region Investment Committee (YRIC) issues the project on 29 October 2019 with the Endorsement No. (YGN-277/2019). According to the YRIC Endorsement which confidential was issued in Section 19, Tae Hyun (Myanmar) Industry Company Limited shall responsible for the preservation of the environment and around the area of the project site. In addition to this, it shall carry out as per instructions made by Ministry of the Natural Resources and Environmental Conservation (MONREC) under Environmental Conservation Department (ECD) in which to conduct an Environmental Management Plan (EMP). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. Yaka- 1/3/4 (EIA) (2200/2019) on 8 October 2019. It has to prepare, submit, perform activities in accordance with this EMP, and abide by the environmental policy, Environmental Conservation Law and other environmental related rules and procedures. Therefore, Tae Hyun (Myanmar) Industry Company Limited commissioned Myanwei Environmental Solutions Co., Ltd. (Myanwei) for EMP report study.

This EMP report is prepared based on the impact identified in EIA procedure (2015). The EMP is prepared provide additional guidance on the means, methods and mechanisms by which such mitigation measures will be implemented. The EMP is one of the most important outputs of the environmental assessment process. The EMP is the synthesis of all proposed mitigate and monitoring actions, set to a timeline with specific responsibility assigned and follow up actions defined. The EMP can be prepared at different times of the project life. Operation environmental management plan is developed to ensure that appropriate environmental practices are followed during a project's operation and decommissioning phases. As the factory is already built operation environmental management plan is designed for this factory.

1.2. OBJECTIVES OF PROPOSED PROJECT

The proposed project intends to manufacture wearing apparel (various kinds of jackets and cap) on CMP basic and to export 100% of the finished products. Tae Hyun (Myanmar) Industry factory will be imported raw materials from China and finished the good products exported to United State of America according to the customer's orders.

1.3. PROJECT PROPONENT PROFILE

This is the information of project proponent from the YRIC's registration that is describing in below. The estimated authorized capital investment is 1245.000 Million Myanmar Kyats. Organization chart of Tae Hyun (Myanmar) Industry Company Limited is presented in Figure 1-1.

Investor Name:	Daw Nyein Nyein Zaw
ID No.:	12/KAMAYA (N) 047513
Citizenship:	Myanmar
Phone No:	09-420205645
Email	maqin522@gmail.com
Address of Registration office:	Plot No.139, Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.

Table 1-1Information of Investor

Table 1-2 Salient features of the project

Type of Proposed Business	Manufacturing of Apparel (Such as Various Kinds of Jacket and Cap) on CMP Basis
Type of investment	Myanmar Citizen Investment
Type of Share	Joint Venture (Myanmar Citizen Share 65% + Foreign Share 35 %)
Type of land	Industrial Land
Total land area	0.977 acres (3953.7787 sq m)
Total building area	One Factory Building (80 ft × 180 ft) Two Storey Office Building (80 ft × 20 ft) Two Storey Dormitory (10 ft × 40ft) Two Storey Security Gate (10 ft × 10 ft)
Investment Period	25 years
Operation Starting Date	1 st October 2019
Construction period	1 year
Address	Plot No.139, Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Contact person	Daw Yamin Marlar Office Staff 09-950450389 yamin5551995@gmail.com Plot No.139, Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.





1.4. ENVIRONMENTAL CONSULT PROFILE

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

Myanwei Environmental Solutions Company Limited	No. 49 (B), Inya Yeik Thar Street, Mayangone Township, Yangon Region, The Republic of the Union of Myanmar. Office: (+95) 95185776, Mobile: (+95) 9421137569; env@myanweiconsulting.com	1. 2. 3. 4. 5.	Facilitation of meeting Land use Legal analysis Geology and soil Occupational Safety and Health
	env@myanweiconsulting.com www.myanweiconsulting.com	6.	Health Public Health

Table 1-3 Member of EMP Study Team

Name	Qualification	Responsibility
Myanwei Environmental Solutions Company Limited	Transition Consultant Registration Certificate No. 0069	EIA Organisation

Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment TCR No. 0048	Project Director, Environmental consultant, project management
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public health consultant, project management
Ms. Wah Wah Zaw	B.E Material and Metallurgy Engineering Diploma in Environmental Planning and Management M.S Environmental Planning and Management	Senior Environmental Consultant, Social and Environmental Research, Quality control, Environmental planning and Management
Ms. Su Myat Hlaing	B.E. Civil Engineering B. Tech Civil Engineering	Environmental Engineer
Mr. Kyaw Win Han	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Team leader of baseline survey, monitoring measure
Mr. Myat Ko Ko	B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, monitoring measure, document administration
Mr. Htoo Nanda Aung	B.Sc (Forestry)	Junior Environmental Consultant, monitoring measure, document administration
Mr. Si Yan Hein	B.Sc (Geology) Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, monitoring measure, document administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, monitoring measure, document administration

1.5. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The primary purpose of the EMP is to provide an easily interpreted reference document which ensures that the project environmental commitments, safeguards and mitigation measures from the environmental planning documents, project approvals and project implementation. It aims to minimized impacts associated with the operation of the project. The purpose of operational EMP is to:

- Define details of who, what, where and when environmental management and mitigation measures are to be implemented
- Provide government and their stakeholders batter on-site environmental management control over the life of operation
- Ensure that the commitments made as a part of the project's EMP are implemented throughout the project life

• Ensure the environmental management detail is captured and documented at all stages of the project

1.5.1. This EMP Documents Aims

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

2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

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

2.1. MYANMAR REGULATORY FRAMWORK

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

2.1.1. Laws and Regulations Related to Environmental and Social Considerations

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

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

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

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

Law and Regulation	Description
	(b) shall contribute the stipulated users' charge s or management fees for the environmental conservation according to the relevant industrial estate, SEZ and business organization;
	(c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.
Chapter X Prior Permission Section 24	The Ministry may, in issuing the prior permission, stipulate terms and conditions relating to environmental conservation. It may conduct inspection whether or not it is performed in conformity with such terms and conditions or inform the relevant Government departments, Government organizations to carry out inspections.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.
Chapter XIII Offences and Penalties Section 32	Whoever violates any prohibition contained in the rules, notifications, orders, directives and procedures issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year, or with fine, or with both.
	Environmental Conservation Rules, 2014
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rules 61	The Ministry may approve and reply on the EIA report o IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Chapter XIII Prohibitions Section 69	(a) Any person shall not emit, cause to emit, dispose, cause to dispose, pile and cause to pile, by any means, the pollutants to environment and the hazardous waste or hazardous material stipulated by notification under the Law and any of these rules at any place which may affect the public directly or indirectly.
	(b) Any person shall not carry out the actions which can be damaged to natural environment which is changing due to ecosystem and such system, except the permission of the relevant Ministry in order to the interest of the public.
Enviro	onmental Impact Assessment Procedure (December 2015)
Screening: Section 23	 a) The project proponent shall submit the Project Proposal to the Ministry for Screening. b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment.
	c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1 Categorization of Economic Activities for Assessment Purposes', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry:

Law and Regulation	Description
	i) An EIA Type Project, or
	ii) An IEE Type Project, or
	iii) A Non-IEE or EIA Type, and therefore not required to
CHAPTER VIII.	The Project Proponent shall bear full legal and financial responsibility for:
Responsibility for all Adverse Impacts Section 102	a) all of the Project Proponent's actions and omissions and those of its contractors, subcontractors, officers, employees, agents, representatives, and consultants employed, hired, or authorized by the Project acting for or on behalf of the Project, in carrying out work on the Project; and
	b) PAPs until they have achieved socio-economic stability at a level not lower than that in effect prior to the commencement of the Project, and shall support programs for livelihood restoration and resettlement in consultation with the PAPs, related government agencies, and organizations and other concerned persons for all Adverse Impacts.
Section 103	The Project Proponent shall fully implement the EMP, all Project commitments, and conditions, and is liable to ensure that all contractors and subcontractors of the Project comply fully with all applicable Laws, the Rules, this Procedure, the EMP, Project commitments and conditions when providing services to the Project.
Section 104	The Project Proponent shall be responsible for, and shall fully and effectively implement, all requirements set forth in the ECC, applicable Laws, the Rules, this Procedure and standards.
Section 105	The Project Proponent shall timely notify and identify in writing to the Ministry, providing detailed information as to the proposed Project's potential Adverse Impacts.
CHAPTER IX.	The Project Proponent shall, during all phases of the Project (pre-construction,
Monitoring Section 106	construction, operation, decommissioning, closure and post-closure), engage in continuous, proactive and comprehensive self-monitoring of the Project and activities related thereto, all Adverse Impacts, and compliance with applicable laws, the Rules, this Procedure, standards, the ECC, and the EMP.
Section 107	The Project Proponent shall notify and identify in writing to the Ministry any breaches of its obligations or other performance failures or violations of the ECC and the EMP as soon as reasonably possible and in any event, in respect of any breach which would have a serious impact or where the urgent attention of the Ministry is or may be required, within not later than twenty-four (24) hours, and in all other cases within seven (7) days of the Project Proponent becoming aware of such incident.
Section 108	The Project Proponent shall submit monitoring reports to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP, or periodically as prescribed by the Ministry.
Section 109	The monitoring reports shall include:
	a) documentation of compliance with all conditions;
	b) progress made to date on implementation of the EMP against the submitted implementation schedule;
	c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;
	 d) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;
	e) accidents or incidents relating to the occupational and community health and safety, and the environment; and
	f) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required.

Law and Regulation	Description
Section 110	Within ten (10) days of completing a monitoring report as contemplated in Article 108 and Article 109 in accordance with the EMP schedule, the Project Proponent shall make such report (except as may relate to National Security concerns) publicly available on the Project's website, at public meeting places (e.g., libraries, community halls) and at the Project offices. Any organization or person may request a digital copy of a monitoring report and the Project shall, within ten (10) days of receiving such request, submit a digital copy via email or as may otherwise be Tae Hyun (Myanmar) Industry Company Limitedeed upon with the requestor.
Section 113	 For purposes of monitoring and inspection, the Project Proponent: a) shall grant to b) the Ministry and/or its representatives, at any time during normal working hours, access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed; and b) from time to time as and when the Ministry may reasonably require, shall grant the Ministry access to the Project's offices and to the Project site and any
•	other location at which the Project activities or activities related to the Project are performed.
Section 115	In the event of an emergency, or where, in the opinion of the Ministry, there is or may exist a violation or risk of violation of the compliance by the Project with all applicable environmental and social requirements, the Project shall grant full and immediate access to the Ministry at any time as may be required by the Ministry.
Section 117	The Project Proponent shall further ensure that the Ministry's rights of access hereunder shall extend to access by the Ministry to the Project's contractors and subcontractors.
CHAPTER VIII.	The monitoring reports shall include:
Monitoring	a) documentation of compliance with all Conditions;
Section 102	b) progress made to date on implementation of the EMP against the submitted implementation schedule;
	c)difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;
	d)number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;
	e) accidents or incidents relating to the occupational and community health and safety, and the environment; and
	f) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required
National Envi	ronmental Quality (Emission) Guidelines (NEQG) (December 2015)
Objectives	To provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.
Scope of Application	Provisions of the general and applicable industry-specific Guidelines shall be reflected in project environmental management plan (EMP) and environmental compliance certificate (ECC) and together constitute a project's commitment to take necessary measures to avoid, minimize and control adverse impacts to human health and safety, and the environment through reducing the total amount of emissions generation; to adopting process modifications, including waste minimization to lower the load of pollutants requiring treatment; and as necessary, to apply treatment techniques to further reduce the load of contaminants prior to release or discharge.

Law and Regulation	Description
CHAPTER II Implementation Procedures	As specified in the EIA Procedure, all projects are obliged to use, comply with and refer to applicable national guidelines or standards or international standards adopted by the Ministry. These Guidelines will hence forth be applied by the Ministry in satisfying this requirement until otherwise modified or succeeded by other guidelines or standards
Section 10	As specified in the EIA Procedure, following project approval a project shall commence implementation strictly in accordance with the project EMP and any additional requirements set out in the project ECC, which will encompass conditions relating to 3 emissions. In this regard, the Ministry will require that projects adhere to general and applicable industry guidelines asset outing Annex 1.
Section 11	While these Guidelines generally apply to all projects subject to the EIA Procedure, it is the prerogative of the Ministry to decide how the Guidelines should be applied to existing projects as referred to in the EIA Procedure, as distinguished from new projects. At the Ministry's discretion less stringent levels or measures than provided in these Guidelines may be specified as appropriate, and a timeframe Tae Hyun (Myanmar) Industry Company Limitedeed for a project to fully comply with these Guidelines.
Section 12	As specified in the EIA Procedure, projects shall engage in continuous, proactive and comprehensive self monitoring of the project and comply with applicable guidelines and standards. For purposes of these Guidelines, projects shall be responsible for the monitoring of their compliance with general and applicable industry-specific Guidelines as specified in the project EMP and ECC.
Section 13	Air emissions, noise, odor, and liquid/effluent discharges will be sampled admeasured points of compliance as specified in the project EMP and ECC.
Na	ational Environmental Policy of Myanmar (2019)
National Environmental	Vision
Policy Vision & mission	A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar.
	<u>Mission</u> To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all polices, laws, regulation, plans, strategic, programmes and projects in Myanmar.
	Myanmar Investment Law, 2016
Chapter II	The objectives of this Law are as follows:
Objective Section 3	(a) to develop responsible investment businesses which do not cause harm to the natural environment and the social environment for the interest of the Union and its citizens;
	(b) to protect the investors and their investment businesses in accordance with the law;
	(c) to create job opportunities for the people;
	(d) to develop human resources;
	(e) to develop high functioning production, service, and trading sectors.
	(f) to develop technology, Tae Hyun (Myanmar) Industry Company Limitediculture, livestock and industrial sectors;
	(g) to develop various professional fields including infrastructure around the Union;
	(h) to enable the citizens to be able to work alongside with the
	international community;
	(i) to develop businesses and investment businesses that meet

Law and Regulation	Description
	international standards.
Chapter XIII	The investor:
Employment of Staff and	(a) may appoint of any citizen who is a qualified person as senior
Workers Section 51	manager, technical and operational expert, and advisor in his investment within the Union in accordance with the Laws;
	(b) shall appoint them to replace, after providing for capacity building programs in order to be able to appoint citizens to different level positions of management, technical and operational experts, and advisors;
	(c) shall appoint only citizens for works which does not require skill;
	(d) shall appoint skilled citizen and foreign workers, technicians, and staff by signing an employment contract between employer and employee in accordance with the labor laws and rules;
	(e) shall ensure to obtain the entitlements and rights in the labor laws and rules, including minimum wages and salary, leave, holiday, overtime fee, damages, compensation of the workman, social welfare, and other
	insurance relating to workers in stipulating the rights and duties of employers and employees and occupational terms and conditions in the employment contract;
	(f) shall settle disputes arising among employers, among workers, between employers and workers, and technicians or staff in the investment in accordance with the applicable laws.
Chapter XVI	The Investor:
Responsibilities of Investors Section 65	(f) shall not make any significant alteration of topography or elevation of the land on which he is entitled to lease or to use, without the approval of the Commission;
	(g) shall abide by applicable laws, rules, procedures and best standards practiced internationally for this investment so as not to cause damage, pollution, and loss to the natural and social environment and not to cause damage to cultural heritage;
	(i) shall close and discontinue the investment only after payment of compensation to employees in accordance with applicable laws for any breach of employment contracts, closure of investment, sale and transfer of investment, discontinuation of investment, or reduction of workforce;
	(j) shall pay wages and salaries to employees in accordance with applicable laws, rules, procedures, directives and so forth during the period of suspension of investment for a credible reason;
	(k) shall pay compensation and indemnification in accordance with applicable laws to the relevant employee or his successor for injury, disability, disease and death due to the work;
	(I) shall supervise foreign experts, supervisors and their families, who employ in their investment, to abide by the applicable laws, rules, orders and directives, and the culture and traditions of Myanmar;
Chapter XVII	The investor shall ensure the types of insurance stipulated in the provision of the
Insurance	rules at any insurance enterprise which is entitled to carry out insurance businesses within the Union.
Section 73	
	Myanmar Investment Rules, 2017
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment

Law and Regulation	Description
Rule 206.	The project proponent has to submit the passport, expert evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law
	The Export and Import Law, 2012
Chapter II	The objectives of this law are as follows:
Objectives	a) To enable to implement the economic principles of the State successfully.
Section 3	b) To enable to lay down the policies relating to export and import that supports the development of the State.
	c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards.
	d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.
Chapter IV	
Prohibitions Section 5	No persons shall export or import restricted, prohibited and banned goods.
Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Section 7	A person who obtained any license shall not violate the conditions contained in the license.
Chapter V Offences and penalties Section 8	Whoever violates the prohibition contained in section 5 or section 6, on conviction, shall be punished with imprisonment for a term not exceeding three years or with fine or with both.
Section 9	A person who obtained any permit violates the prohibition contained in section 7, on conviction, shall be punished with imprisonment for a term not exceeding three years or with fine or with both.
Section 10	A person attempts to commit or abets in the commission of any offence contained in this Law shall be punished in the same manner as if he had been committed such offence and the exhibits shall also be confiscated.
	Myanmar Insurance Law, 1993
Chapter II	The Myanmar Insurance is established with the following aims: -
Establishment and Aim Section 4	social and economic losses which the people may encounter, due to common perils;
	(b) to promote the habit of savings individually by effecting life assurance, thus contributing to the accumulation of resource, of the State;
	(c) to win the trust and confidence of the people in the insurance system by providing effective insurance safeguards which may become necessary in view of the social and economic developments.
Chapter VI	Owners of motor vehicles shall affect compulsory Third Party Liability Insurance
Effecting Insurance and Granting of Benefits	with the Myanmar Insurance.
Section 15	
Section 16	An entrepreneur or an organization operating an enterprise which may cause loss to State-owned property or which may cause damage to the life and property of the public or which may cause pollution to the environment shall affect compulsory General Liability Insurance with the Myanmar Insurance.

Law and Regulation	Description
	The Commercial Tax Law (1990) Amended 2014
Chapter 5 Registration and Intimation of Commencement of Enterprise Article 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimidation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly Payment of Tax and Sending of Three- Monthly Return Article 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
Article 12 (b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if there is cause to consider that he has taxable proceed of sale or receipt from service within a year.
Article 12 (c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may, based on the information received, estimate and claim the tax payable or the additional tax payable.
Article 12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
Article 12 (e)	The tax payable on goods imported under sub-section (c) of section 4 of the Law shall be collected together with the customs duties by the Customs Department in accord with the manner of collecting customs duties.
	The Amended Law for Factories Act, 1951 (2016)
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.
	The Private Industrial Enterprise Law, 1990
Chapter II Basic Principles	Private Industrial Enterprises shall be conducted in accordance with the following basic principles: -
Section 3	(a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise;
	(b) to acquire modern technical know-how for raising the efficiency of industrial enterprises and to establish the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market;
	(d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises;
	(e) to cause opening up of more employment opportunities;

Law and Regulation	Description
	(f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution;
	(g) to cause the use of energy in the most economical manner.
Chapter III	(a) Any person desirous of conducting any private industrial enterprise;
Registration of Private Industrial Enterprises Section 4	(b) Any person conducting any private industrial enterprise on the day this Law is enacted; by using any type of power which is three horsepower and above or manpower of ten wage-earning workers and above shall register under this Law.
Chapter VI	The duties of the entrepreneur are as follows: -
Duties and Rights of the	(b) shall abide by the terms and conditions of the registration certificate;
Entrepreneur Section 13	 (I) shall shift the place of enterprise, change the nature of enterprise, amalgamate enterprises and split up enterprises only with the approval of the Directorate;
	(g) shall abide by the orders and directives issued from time to time by the Ministry and the Directorate;
	The Law on Standardization (2014)
Chapter (II)	The objectives of this Law are as follows:
Objectives	(a)to enable to determine Myanmar Standards;
Section 3	(b)to enable to support export promotion by enhancing quality of production organizations and their products, production processes and services;
	(c)to enable to protect the consumers and users by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards;
	(d)to enable to support protection of environment related to products, production processes and services from impact, and conservation of natural resources;
	(e)to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment;
	(f)to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade.
	(g)to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.
Chapter 7 Taking Action by Committee	The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order:
No. 19	warning suspending the certificate of certification for limited period cancelling the certificate of certification
Chapter (VI) Application for and Issue of Certification Section 17	A person desirous of obtaining certificate of certification shall apply to the department and organization which has obtained the accreditation.
Chapter (VII)	The Committee may, if it is found out that holder of certificate of certification
Taking Action by Committee	violates any term or condition contained in the relevant recommendation, pass any of the following administrative orders:
Section 19	(a)warning;
	(b)suspending the certificate of certification for limited period;
	(c)cancelling the certificate of certification
Chapter (IX) Offences and Penalties Section 26	If any person who obtained certificate of certification uses standardization mark on the product which is not in conformity with the relevant standard or relating to

Law and Regulation	Description
	service shall be punished with imprisonment for a term not exceeding one year or with fine not more than one million Kyats or with both.
	The Labour Organization Law, 2011
Chapter V Rights and Responsibilities of the Labour Organization Section 17	The labour organizations shall have the right to carry out freely in drawing up their constitution and rules, in electing their representatives, in organizing their administration and activities or in formulating their programmes. The Labour Organizations have the right to negotiate and settle with the employer if the workers are unable to obtain and enjoy the rights of the workers contained in the labour laws and to submit demands to the employer and claim in accord with the relevant law if the Tae Hyun (Myanmar) Industry Company Limitedeement cannot be reached.
Section 18	The labour organization has the right to demand the relevant employer to re- appoint a worker if such worker is dismissed by the employer and if there is cause to believe that the reasons of such dismissal were based on labour organization membership or activities, or were not in conformity with the labour laws.
Section 19	The labour organizations have the right to send representatives to the Conciliation Body in settling a dispute between the employer and the worker. Similarly, they have the right to send representatives to the Conciliation Tribunals formed with the representatives from the various levels of labour organizations.
Section 20	In discussing with the Government, the employer and the complaining workers in respect of worker's rights or interests contained in the labour laws, the representatives of the labour organization also have the right to participate and discuss.
Section 21	The labour organizations have the right to participate in solving the collective bargains of the workers in accord with the labour laws.
Section 22	The labour organizations shall carry out peacefully in carrying out holding of meetings, going on strike and carrying out other collective activities in accord with their procedures, regulations, by-laws and any directives prescribed by the relevant Labour Federation.
	The Social Security Law (2012)
The Social Security Law, ena formation and implementatio	acted in 2012, was amended the Social Security Act in 1954. It stipulates the n of social security systems.
Chapter II	The objectives of this Law are as follows:
Objectives Section 3	(a) to support the development of the State's economy through the development of production by causing to enjoy more security in social life and health care by the workers who are major productive force of the State by the collective guaranty of the employer, worker and the State;
	(b) to enjoy more security in social life and medical care by the public by effecting their insurance voluntarily;
	(c) to raise public confidence upon the social security scheme by providing benefits which are commensurate with the realities;
	(d) to have the right to draw back some of the contributions paid by the employers and the workers as savings, in accord with the stipulations;
	(e) to obtain the right to continued medical treatment, family assistance benefit, invalidity benefit, superannuation benefit, survivors' benefit, unemployment benefit, the right to residency and ownership of housing after retirement in addition to health care and pecuniary benefit for sickness, maternity, death, employment injury of the workers.

Law and Regulation	Description
Chapter V Social Security System and Benefits Section 11	(a) The following establishments shall be applied with the provisions for compulsory registration for social security system and benefits contained in this Law if they employ minimum number of workers and above determined by the Ministry of Labour in co-ordination with the Social Security Board:
	 (i) production industries doing business whether or not they utilize mechanical power or a certain kind of power, works of production, repairing or services, or engineering works, mills, warehouses, establishments;
	(ix) works carried out with foreign investment or citizen investment or joint ventured businesses;
	(b) Any establishment which is applied with the provisions of compulsory registration under sub-section (a) shall continue to be applied by this Law even though any of the following situations occurs if it continues to carry out such work:
	(i) carrying out work by employing under stipulated minimum number of workers but more than one worker;
	(ii) changing the employer or changing the type of business.
Social Security System Section 13	The Social Security Board shall manage and keep the following social security systems in accord with the stipulations that insured persons may enjoy social security benefits:
	(b) Family Assistance Insurance System:
	 education allowance benefit for the children of insured persons who earn below the specified amount of income;
	ii) health care and aid benefit in time of natural disaster;
	iii) suitable benefit for dependent family members.
Section 15	(a) The following funds are included in the Social Security Fund:
	(i) health and social care fund;
	(ii) family assistance fund;
	(iii) invalidity benefit, superannuation pension benefit, and survivors' benefit fund;
	(iv) unemployment benefit fund;
	(v) other social security fund for social security system of compulsory registration and contribution specified by the Ministry of Labour, in co-ordination with the Social Security Board, according to clause (2) of subsection (e) of section 13;
	 (vi) other social security fund specified as to which contribution may be paid after voluntary according to clause (2) of sub-section (e) of section 13; (vii) fund for Social Security Housing Plan;
Section 18	(b) The employer shall deduct contributions to be paid by worker from his remuneration and pay to the social security fund together with contribution to be paid by him. The employer shall also bear the expenses for such contribution.
Chapter VI Application to Employment Injury Benefit Insurance System, Employment Injury Benefit Fund and Benefits	The provisions contained in this Law relating to the employment injury benefit insurance system shall apply to the following workers:
	(a) workers at establishments which are applied to social security system who have registered compulsorily in accord with sub-section (a)of section 16 and contributed to the social security funds contained in clauses (1), (3), (4) and (5) of sub-section (a) of section 15;
Section 45	(b) workers specified as being applied to provisions of compulsory registration for employment injury benefit insurance system by notification of the Ministry of Labour, in co-ordination with the Social Security Board with the approval of the Union Government.

Law and Regulation	Description
Section 48	(a) The employer shall affect insurance by registering for employment injury benefit insurance system contained
	in section 45 at the relevant township social security office and pay contribution to employment injury benefit fund in accord with stipulations in order that workers applied to provisions of compulsory registration may obtain the employment injury benefits;
	(b) The employers may affect insurance by registering voluntarily for insurance of the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system, by paying stipulated contribution to employment injury benefit insurance fund;
	(c) When registering to effect insurance for employment injury benefit in accord with sub-sections (a) and (b), the worker shall submit medical certificate.
Section 49	Non-application to the Workmen's Compensation Act
	(a) The employers and insured persons of establishments where the employer had registered compulsorily in
	accordance with sub-section (a) of section 48 or where the employer had registered voluntarily in accord with sub-section (b) of section 48 who have paid contribution to employment injury benefit fund shall not apply to the provisions contained in the Workmen's Compensation Act as regards the employment injury benefit;
	(b) The insured persons who has affected insurance for employment injury benefit in accord with sub-sections
	(a) and (b) of section 48 shall be entitled only to the employment injury insurance benefits contained in this Law.
Section 53	(a) The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Section 75	The employer of establishments applied by this Law:
	(a) shall prepare and keep the following records and lists correctly and submit to the relevant township social security office in accord with the stipulations:
	i) records and lists of workers' daily attendance;
	ii) records of appointing new worker, employing worker by changing of work, suspension from work, dismissal from work and resignation from work;
	iii) records of promotion and paying remuneration;
	iv) records and lists of employers, managers, and administrators; and records o changes of them;
	(b) shall inform the relevant township social security office if the following matters arise:
	i) change in number of workers and address of establishment;
	ii) change of employer, change of business, suspension from work, and termination of work;
	iii) employment injury, employment death, and occupational diseases;
	(c) shall produce work records and lists on requirement of inspection team or official assigned duty under this Law by the Social Security Head Office and various Regional Social Security Offices.
	The Employment and Skill Development Law, 2013
This law was enacted for sa	afeguarding the right of workers or having skillful of workers and making peaceful
workplace or obtaining the	rights fairly, rightfully and quickly by settling the dispute of employer and worker

justly. Employer shall conduct occupational training to enhance the skills of workers.

Law and Regulation	Description
Chapter (2) Employment and Employment Seeking Section 3	The Ministry shall manage the facilities and measures to help for selection of employment, obtaining employment for employment seeker suitable according to the age and strength; tenure in employment and skill development, and to help employers for obtaining workers suitable for the employment
Chapter (3) Making Contract of Employment Section 5	 (a)(1) After the employer has employed a worker for any job, he shall within 30 days of so doing, sign a Contract of Employment with the worker. This clause however shall not apply to permanent workers of government departments and organizations. (2) If prior to employment, the worker is required to attend any peremployment training for a period or appointed on probation for a period, subsection (1) shall not apply for that period. (c) The workplace rules in the Employment Contract shall conform to the rules made under existing laws and the rights of the workers in the Contract shall not
Chapter (5) Implementing Training Programs and Skills Development of Workers Section 14	be less than those in existing laws. Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
Chapter (8) Establishing and Utilizing Workers' Skills Development Fund Section 30	(a) The employers of Industrial and Service Enterprises shall pay contribution to the fund every month without fail amounting to not less than below 0.5% of the payroll of his workers up to the level of supervisors of the workers.(b) The employer shall not deduct the contribution paid under sub-section (a) to the fund from the wages of the workers.
	The Worker's Compensation Act, 1923
It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment, such as carpal tunnel syndrome.	
Chapter IV Determining the Categories of Work Section 6	The National Committee shall determine, by notification, commercial, production and service, Tae Hyun (Myanmar) Industry Company Limitedicultural and livestock breeding business which shall be applied by the provisions relating to minimum wage contained in this Law, in the whole country or relevant Union, Region or State. Moreover, it may amend the said businesses in accord with the changing situation from time to time.
Chapter VII The Duties of the Employer Section 12	The employer: (a) shall not pay wage to the worker less than the minimum wage stipulated under this Law; (b) may pay more than the minimum wage stipulated under this Law; (c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law; (d) shall pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific benefits, interests or opportunities are to be paid, it may be paid in cash or partly in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker; (e) in paying minimum wage to the workers working in the Tae Hyun (Myanmar) Industry Company Limitedicultural and livestock business, some cash and some property at prevailing regional price may be paid jointly according to local custom or desire of the majority of workers or collective Tae Hyun (Myanmar) Industry Company Limitedeement. Such payment shall be

Law and Regulation	Description
	for any personal use and benefit of the worker and his family and the value shall also be considerable and fair.
Section 13	The employer:
	(a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;
	(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;
	(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;
	(d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;
	 (e) shall allow the entry and inspection of the inspection officer to the commercial, production and service businesses, Tae Hyun (Myanmar) Industry Company Limitedicultural and livestock breeding workplaces and give necessary assistances;
	(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;
	(g) if the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.
Chapter IX	The inspection officer:
Assigning Duty to the Inspection Officer, Inspection and Taking Action Section 18	(a) has the right to enter and inspect the relevant commercial, production and service workplaces, Tae Hyun (Myanmar) Industry Company Limitedicultural and livestock breeding workplaces and inspect whether or not they comply with and carry out in accord with the rules, notifications, orders, directives and procedures under this Law, whether or not the lists, schedules and documents, wages relating to the workers are prepared correctly, and whether or not such lists, schedules and documents are reported to the Department in accord with the stipulations;
	(b) may summon, inspect the relevant persons under the assignment of duty by the Department, asking and copying for the relevant lists, schedules and documents.
	(c) if there are outside workers at employer, has the right to inspect information relating to such outside workers, their names and addresses and the right to ask for and copy their lists and documents and lists relating to minimum wage;
	(d) in carrying out under sub-section (a), (b) and (c) relating to inspection, if required by the employer to produce the document, shall show the civil service identify card issued by the relevant department;
	(e) report to the Department in accord with the stipulations relating to the finding under sub-sections (a), (b) and (c), and documents and papers called for.
	Payment of Wages Law, 2016
administration. It stipulates th	efines the payment obligation to the workers employed in the factories or railway ne method of payment stating that the payment should be made in cash on a egal action against delayed payment or un- Tae Hyun (Myanmar) Industry uction.
Chapter II	The employer:
Methods and Time of Payment of Wages Section 3	(a) shall pay wages to the workers employing in his business in local currency or foreign currencies stipulated by the Central Bank of Myanmar. Such payment may be paid in cash or cheque or deposit into the bank account of the worker with the Tae Hyun (Myanmar) Industry Company Limitedeement between the employer and the worker.

Law and Regulation	Description
	(b) In paying such wages:
	(i) if it is necessary to pay particular benefit, profits and opportunities for workers working in commerce, production and service businesses, it may be paid in cash or some in cash and some in things set up by local price on own volition of workers in accordance with the stipulations.
	(ii) For workers employing in Tae Hyun (Myanmar) Industry Company Limitediculture and livestock breeding business, it may be paid some wage in cash and something set up by local price according to custom, or on the volition of majority of worker or by collective Tae Hyun (Myanmar) Industry Company Limitedeement. In paying so, it shall be for personal use and the interest of his family, and shall be appropriate and equitable.
	(c) If any worker is conscripted under the Public Military Service Law, the (60) days of wages shall be paid as a special right
Section 4	The employer:
	(a) shall pay wages at the end of the work or at the time Tae Hyun (Myanmar) Industry Company Limitedeed to pay to the worker for hourly, daily, weekly or other part time work, or temporary or piece work;
	(b) shall not exceed one month than the period Tae Hyun (Myanmar) Industry Company Limitedeed with the worker under sub-section (a) to pay wages;(c) shall pay the wages for the permanent work monthly. In making such payment:
	 (i) if workers are not more than 100, wages shall be paid at the end of the period for payment of wage;
	(ii) If workers are more than 100, it shall be paid no later than five days after the end of the period for payment of wage;
	(d) shall pay the due wages within two working days from the date of termination, if a worker is terminated;
	(e) shall pay the wages at the end of the period for payment of wages, if a worker resigns on his own volition by sending prior written notice of resignation;
	(f) shall pay the due wages to a legal heir within two working days after the decease, if a worker is deceased;
	(g) shall pay all wages on a working day
Section 5	If an employer encounters difficulty to make payment under sub-section(c) of the Section 4 due to any unexpected condition, including natural disaster, the employer shall submit that which date has been altered for the payment of wages with the consent of the workers to the Department on reasonable ground.
Chapter III	The employer:
Deduction from Wages Section 13	(a) may deduct from wages, except leaves which are entitled wages under the relevant law and public holidays, for the absent period from work;
	(b) may detect expenses which are allowance accommodation and ferry service are arranged by the employer, meal allowance, electricity charges, water service charges and income taxes liable to be paid by worker and cash paid in excess under a mistake, which are not included in the expression of wages under this Law;
	(c) may deduct advance payment or reimburse or savings for the worker or any contribution under any law demanded by a worker from wages;
	(d) may deduct from the wages of the worker under a decision of a Court or Arbitration Council or Arbitration Body.
Chapter IV Overtime Wages Section 14	The worker has the right to enjoy overtime wages stipulated by the law if he works over time.

Law and Regulation	Description
	The Minimum Wage Law, 2013
a framework for minimum wa committee shall decide minim	sed in March 2013, was replaced the 1949 Minimum Wage Act. The law provides ge determination: the presidential office establishing a tripartite minimum wage num wage with industrial variation based on a survey on living costs of workers s also stipulates equal payment.
Chapter VII	The employer:
The Duties of the Employee	(a)shall not pay wage to the worker less than the minimum wage stipulated under this Law
Section 12	(b)may pay more than the minimum wage stipulated under this Law;
	(c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law;
	(d) shall pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific, benefits, interests or opportunities are to be paid, it may be paid in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker;
	(e) in paying minimum wage to the workers working in the Tae Hyun (Myanmar) Industry Company Limitedicultural and live stock business, some cash and some property at prevailing regional price may be paid jointly according to local customer desire of the majority of workers or collective Tae Hyun (Myanmar) Industry Company Limitedeement. Such payment shall be for any personal use and benefit to the worker and his family and the value shall also be considerable and fair.
Section 13	The employer:
	(a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;
	(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;
	(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;
	(d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;
	 (e) shall allow the entry and inspection of the inspection officer to the commercial, production and service businesses, Tae Hyun (Myanmar) Industry Company Limitedicultural and livestock breeding workplaces and give necessary assistances;
	(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;
	(g) if the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.
Chapter VIII	A worker working in any establishment relating to this Law:
The Rights of the Workers Relating to the Minimum	(a) has the right to obtain the minimum wage stipulated under this Law or, if the employer pay more than the said wage;
Wage Section 14	(b) has the right to continue to enjoy the pay paid more, if the pay received is more than the minimum wage stipulated under this Law, before the coming into force of this Law;
	(c) has the right to enjoy the minimum wage stipulated under this Law, if the minimum

Law and Regulation	Description	
	wage contained in the employment Tae Hyun (Myanmar) Industry Company Limitedeement is less than the minimum wage stipulated under this Law;	
	(d) has the right to enjoy not less than the minimum wage stipulated for each work where he is working when working in two or more works;	
	(e) has the right to enjoy the stipulated minimum wage for the time worked in the part-time job, hourly job;	
	(f) has the right to enjoy a holiday per week with pay in the salary-paid work. If he is employed in such holiday, he shall have the right to obtain over-time fee in accord with the existing law;	
	(g) if working less than the working hours per day stipulated in a daily-waged job is not due to reduced working according to the desire of the worker, or if work has to be paused due to the failure of employer to give job, the full wage shall be paid as if the work is done full-time;	
	(h) has the right to enjoy the stipulated minimum wage without discriminating between man and woman;	
	(i) has the right to enjoy the minimum wage in cash, if he is a worker working in the commercial, production and service business. Moreover, if the specific benefits, interests or opportunities are to be paid, it may be paid in cash or partly in cash and partly in property at prevailing regional price jointly according to the desire of the worker;	
	(j) if he is a worker working in the Tae Hyun (Myanmar) Industry Company Limitedicultural and livestock breeding business, the minimum wage may be enjoyed in some cash and some property at prevailing regional price jointly according to local custom or desire of the majority of workers or collective Tae Hyun (Myanmar) Industry Company Limitedeement for the worker and his family in accord with the stipulations.	
Chapter X	Any employer:	
Prohibitions and Penalties	(a) shall not fail to pay the workers the minimum wage stipulated under this Law;	
Section 22	(b) shall not pay to the workers less than the minimum wages and other benefits which is entitled by the worker under section 14;	
	(c) relating to the accounts, schedules, documents and lists of wage of the workers:	
	(i)shall not make false entry, deceitful recording or false and deceitful reporting;(ii)shall not fail to report to the relevant department in accord with the stipulations;	
	(iii)shall not fail to produce when required by the inspection officer;	
	(d) shall not fail to go and accept inspection when summoned by the inspection officer;	
	(e) shall not obstruct or interfere with the inspection officer who comes and inspects on duty.	
Section 24	Any employer:	
	(a) shall not violate any term and condition contained in the minimum wage notification;	
	(b) shall not fail to inform the workers relating to the rates of minimum wage concerning to his workers among the rates of minimum wage stipulated under this Law and announce at the place where the workers are able to see it in the work centre and workplace;	
The I	eave and Holiday Rules (1951, partially revised in 2018)	
This act has been used as th 2006 and 2014. This defines	e basic framework for leaves and holidays for workers with minor amendment in the public holidays that every employee shall be granted with full payment. It also r workers including medical leave, earned leave and maternity leave.	
Law and Regulation	Description	
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Chapter (3) Leave Section 23	A worker has the right to take leave with respective wages or with respective salary according to the type of leave and designated period set-up by the law. However, workers are entitled to take earned leave with respective average wages or average salary.	
Section 24	Workers have the right to take casual leave, medical leave or maternity leave within the probation period.	
Section 25	For days in which a worker is not in the workplace after the end of a period of leave, such days shall not be counted as leave.	
Section 26	If there are holidays just before or right after one's leave commences, these days cannot be counted as part of the leave period.	
Section 27	Subjecting a worker to relocation, suspension of duty, reduction of salary or termination within their leave period is not allowed.	
Chapter (4)	The worker	
Duties and Responsibilities of Worker	(a) must ask for leave from the employer or the manager or from an authorized person with Form	
Section 49	(1) within the normal working hours.	
	(b) must report to the employer or to the manager or to an authorized person when the worker is back in the workplace after taking leave.	
	(c) must inform employer or manager or authorized person, by phone or any other method, if the worker is unable to return to the workplace from their current location by the end of leave due to natural disaster or unforeseen happenings or accident occurring within the leave period.	
Chapter (5)	The employer	
Duties and Responsibilities of an Employer Section 50	(a) must provide the worker casual leave, medical leave and maternity leave with respective wages or salary. Moreover, must allow the worker earned leave with respective average wages or average salary. If the employer normally pays the cost of living, then the cost of living must also be included.	
	(b) must provide the worker with earned leave starting from the day of entitlement within 12 months, with respective average wages or with average salary, and also must advance the entitled wage prior to the worker taking leave.	
	(c) must announce the number of entitled earned leave calculations within three months starting from the last day of the 12-month period or entitled earned leave. In this way, workers can take leave by turns (alternatively). Moreover, to fix the eligibility period within which workers can take earned leave.	
	(d) if the worker resigns or is terminated or in case of death, has to pay the respective wages/salary within two business/working days starting from the date of incidence.	
	(e) has to pay the eligible wage/salary for earned leave to his/her official representative (if the worker is deceased).	
	(f) has to pay for the respective earned leave period if there is a temporary or permanent shutdown.	
	has to allow eligible earned leave if the nature of work is less than twelve months.	
	(g) is not allowed to suspend, to reduce the salary, to relocate or to terminate a worker due to the worker taking maternity leave or medical leave.	
	(h) has to fill up Form (1), (2), (3), (4), (5) and (6) according to the law. These forms shall be easily accessible from the Inspector. The employer must maintain these documents for up to twelve months' period.	
	(i) has to record the leave taken in Form (7) and submit to the Inspector not later than every seventh day of each month.	
	(j) wants the worker to work on a gazette holiday, the employer must receive consent from the worker. The employer must submit Form (8) to the Inspector for approval.	

Law and Regulation	Description
	Public Health Law, 1972
Chapter 2 Prevention of Public Health Objectives	To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. This law focuses as follows:
Objectives	The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law.
	The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law.
	The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.
Prevention and	Control of Communicable Disease Law 1995 (Amendment in 2011)
Chapter 2 Prevention and Response Section 3	(a) In order to prevent the outbreak of communicable diseases, the Department of Health shall implement the following activities systematically under the guidance of the Ministry of Health:
	(i) immunization of children by injection or orally;
	(ii) immunization of those who have attained eligible target group including adult by injection or orally, when necessary;
	(iii) carrying out health education activities relating to communicable
	disease;
	(iv) carrying out the activities of surveillance, prevention and control
	concerning communicable disease;
	(v) carrying out the activities of medical examination for prevention of communicable disease in cross-border entrance and exit of the country, international airport, seaport, other necessary airport, seaport and bus terminal;
	(vi) prohibition or restriction of movements at home, hotel, motel and guest house;
	(vii) isolation of infected person of communicable disease or suspect of being infected there with;
	(viii) carrying out the activities of spraying, immunization by injection or orally and environmental sanitation necessary for prevention and control according to communicable diseases;
	(ix) giving advice to and coordinating with relevant Government departments, organizations and non-governmental organizations for
	construction of healthy housing, obtaining safe drinking water and fresh water for use, proper waste disposal in order to prevent occurrence of communicable disease for workers who are carrying out activities of social and economic development;
	(x) carrying out other functions prescribed by the Ministry of Health, from time to time.
Section 4	The public shall comply with the measures undertaken by the Ministry of Health and the Department of Health under section 3 in respect of prevention of the occurrence and spread of communicable disease and control thereof."
Section 9	Sub-sections (d) and (e) contained in section 11 of the Prevention and Control of Communicable Diseases Law shall be substituted as follows:
	"(d) other necessary investigation;
	(e) prohibition of the right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."
Section 11	After sub-section (e) of section 14 of the Prevention and Control of Communicable Diseases Law, sub-section (f) shall be inserted as follows:

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	"(f) right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."		
	Occupational Safety and Health Law, 2019		
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;		
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.		
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.		
Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.		
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines any parts of the machines, vehicles, electricity and other substances being used at the workplace.		
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.		
	Natural Disaster Management Law (2013)		
Chapter II Objectives Section 3	The objectives of this Law are as follows:(a) to implement natural disaster management programmes systematically and expeditiously in order to reduce disaster risks;(b) to form the National Committee and Local Bodies in order to implement		
	natural disaster management programmes systematically and expeditiously; (c) to coordinate with national and international government departments and organizations, social organizations, other non-government organizations or international organizations and regional organizations in carrying out natural disaster management activities;		
	(d) to conserve and restore the environment affected by natural disasters;(e) to provide health, education, social and livelihood programmes in order to bring about better living conditions for victims.		
Chapter VI Natural Disaster Management Section 13	The department, organization or person that has been assigned responsibility under this Law:		
	(a) shall undertake the following functions after laying down the plan in accord with the natural disaster management plans in order to reduce damage and losses that are likely to be caused by natural disaster;		
	(i) preparatory and preventive measures for natural disaster risk reduction in pre-disaster period;		
	 (ii) emergency responses including search and rescue during natural disaster; (iii) rehabilitation and reconstruction activities for improving better living standard in post disaster period and conservation of the environment that has been affected by natural disaster; 		
	(b) shall give priority and protect infants, the elderly, the disabled and women (especially pregnant women or mothers and suckling mother) in carrying out the functions contained in sub-section (a);		
	(c) shall refrain from the act that causes injuring human dignity in supporting the victims.		
Chapter VIII Offence and Penalties Section 25	Whoever, if the natural disaster causes or is likely to be caused by any negligent act without examination or by willful action which is known that a disaster is		

Law and Regulation	Description	
	likely to strike, shall be punished with imprisonment for a term not exceeding three years and may also be liable to fine.	
Section 26	Whoever interferes, prevents, prohibits, assaults or coerces any natural disaster management to the department, organization or person assigned by this Law shall, on conviction, be punished with imprisonment for a term not exceeding two years or with fine or with both.	
Section 27	Whoever misinforms about the natural disaster for the purpose of dread to the public shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both.	
Section 28	Any department, organization or person assigned by this Law commits any of the following acts or omissions shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both:	
	(a) falsification of data on damage and losses caused by natural disasters dishonestly;	
	(b) willful failure to perform assigned responsibility.	
Section 29	Whoever violates any prohibition contained in rules, notifications and orders issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both.	
Section 30	Whoever commits any of the following acts or omissions shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both:	
	 (a) willful failure to comply with any of the directives of the department, organization or person assigned by this Law to perform any of the natural disaster management; 	
	(b) entering into the area or building affected by natural disaster without permission;	
	(c) utilizing, trading, preventing or destroying food, relief items and rehabilitation materials provided for victims dishonestly;	
	(d) making a false application for food, relief items and rehabilitation materials or cash assistance to the department, organization or person assigned by this Law as it is affected by natural disaster.	
Section 31	Whoever fails willfully to comply with the direction of remove or evacuation from an area or building at risk natural disaster to the public in such place for the purpose of reduction of damage and losses when the natural disaster strikes or it will be a natural disaster and for the purpose of no obstruction to the prevention and reduction activities of the natural disaster shall, on conviction, be punished with imprisonment for a term not exceeding one month or with fine or with both.	
	Myanmar Engineering Council Law, 2013	
Chapter 2	The Objectives of this law are as follows:	
Objectives Section 3	(a) to develop the dignity, ethical principles and ability of Myanmar citizen engineers, graduate technologists and technicians who are working in the engineering services	
	(b) to explore beneficial, useful and good methods to research and develop the State's natural resources and human resources with the least environmental impact by a combination of engineering technology and information technology;	
	(c) to guide, control, maintain and take necessary action with regard to specified standards and norms relating to specified subjects, systematic methods, safety and ethical principles and duties in teaching engineering subjects and in technological research and services;	
	(d) to perform engineering and technological activities of the State and tasks assigned by the relevant ministry or organization from time to time;	

Law and Regulation	Description	
Chapter 13 Prohibitions and Penalties Section 37	No one shall perform any engineering work and technological work which are specified as being dangerous to the public by a rule enacted under this law without having received a registration certificate issued by the council, except for engineers appointed in a government department or an organization in the performance of their duties.	
Section 37	No engineer, graduate technologist and technician shall use, together with his name, a title which is not compatible with his status.	
Section 38	No registered engineer, graduate technologist and technician- (a) shall transfer his registration certificate to anyone or allow it to be used by anyone;	
	(b) shall fail to return his registration certificate to the council within 30 days from the day on which a decision is passed, or an administrative action is taken, under this law to cancel the registration certificate.	
Section 39	Anyone convicted of having violated the prohibition contained in section 37 shall be punished with imprisonment for not more than 2 years or with a fine or with both.	
Section 40	any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in section 38 shall be punished with imprisonment of not more than 1 year or with a fine or with both.	
Section 41	Any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in 39 shall be punished with imprisonment of not more than 1 year or with a fine or with both.	
Section 42	Any registered engineer, graduate technologist or technician convicted of having violated any prohibition under this law shall be punished with imprisonment of not more than 6 months or with a fine or with both.	
	The Myanmar Fire Force Law (2015)	
Purpose	To ensure to prevent the fire, to provide the precautionary material and apparatuses, if the fire caused in the project area to be defeated because the project is business in which electricity and any inflammable materials such as petroleum are used. So, the project owner has to institute the specific fire service in line with the above law.	
Section 25	 (a) The project proponent has to institute the specific fire services. (b) The project owner has to provide materials and apparatuses for fire precaution and prevention. 	
	Myanmar Fire Brigade Law, 2015	
Chapter II	The objectives of this Law are as follows:	
Objectives Section 3	(a) 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;	
	(b) to organize the Fire brigade systematically and to train members of the fire brigade;	
	(c) to carry out extinguishing fire, prevention and search and rescue when fire, other natural disaster, epidemic disease or any kind of sudden disaster occurs;	
	(d) to educate, organize and incite extensively so as to achieve public cooperation when any disaster occurs;	
	(e) to participate and help, if necessary, for the State safety, peace of the public and the rule of law	
Chapter VIII	The different levels of Fire Safety Body shall:	
Activities for Fire Safety Section 15	(a) perform the activities for fire safety in accord with the procedures laid down by the Central Body;	
	(b) organize and educate to obtain the cooperation of the public in the activities for fire safety;	

Law and Regulation	Description	
	(c) supervise as may be necessary the participation of all the relevant members of fire brigade in accord with the work programmes laid down by the Central Body when fire hazard, other natural disaster, epidemic disease or sudden disaster occurs;	
	(d) appoint fire safety warning groups in coordination with the relevant administrative organizations.	
Section 16	The person-in-charge of the Township Fire Services Department shall:	
	(a) issue, from time to time, the directives on fire safety to be abided by the residents in the city, ward or village - tract;	
	(b) inspect or cause to inspect in accord with the stipulations whether the residents in the city, ward or village - tract abide by the directives issued under sub-section (a) and arrange to enable warning or taking action, as may be necessary, against those who do not abide by.	
Chapter XI Prohibitions Section 24	No person shall fail to abide by the directives of fire safety issued under section 16 by the head of the relevant Township Department of Fire Services.	
Section 25	The owner or manager of the factory, workshop, bus terminal, airport, port, hotel, motel, lodgings, condominium, market, department, organization or business exposed to fire hazard shall, in accord with the directive of the Department of Fire Services:	
	(a) not fail to form the Reserve Fire Brigade;	
	(b) not fail to provide fire safety equipment.	
Section 26	No person shall, knowing that there is no outbreak of fire, report fraudulently the outbreak of fire to the Fire brigade.	
Section 25	No person shall, without cause, obstruct, block, disturb, or attack the members of the fire brigade and vehicles which departed to extinguish the fire and direct by any means to the place which is not related to the outbreak of fire.	
	otection and Preservation of Ancient Monument Law (2015)	
Purpose	To ensure the protection of the ancient monument and information about it if it was in the project area. This law focuses as follows;	
Section 12	(a) The project proponent has to report to the village-tract or ward administrators if the project proponent will find any ancient monument under the ground or on the ground or under the water.	
Section 15	The project proponent has to obtain the prior permission of the Department of Ancient Research Museum if the project area is in the prescribed area of the Ancient monument.	
Sub-section (f) of section 20	(b) The project proponent has to obtain the prior permission, by written, of Department of Ancient Research and National Museum if the project proponent disposes of the chemical and solid waste in the Ancient Monument.	
С	onservation of Water Resources and River Law (2016)	
Chapter II	The aims of this Law are as follows:	
Aims Section 3	(a) to conserve and protect the water resources and rivers system for beneficial utilization by the public;	
	(b) to smooth and safety waterways navigation along rivers and creeks;	
	(c) to contribute to the development of State economy through improving water resources and river system;	
	(d) to protect environmental impact.	
Chapter V	No person shall:	
Prohibitions Section 8	(a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks.	
	(b) cause the wastage of water resources wilfully.	

Law and Regulation	on Description	
Section 11	No person shall:	
	(a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.	
	(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.	
	(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.	
Section 11	11. No person shall:	
	(a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.	
	(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.	
	(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.	
Section 19	No one shall dispose of any substance into the river-creek that may cause damage to waterway or change of watercourse from the bank or vessel which is plying, vessel which has berthed, anchored, stranded or sunk.	
Section 22	No one shall, without the permission of the directorate, pile sand, shingle and other heavy materials for business purposes in the bank area and waterfront area.	
Chapter VI	Whoever attempts or conspires or abets in the commission of an offence under	
Penalties	this Law shall be punished with the punishment provided for such offence in this	
Section 29	Law.	
Chapter VII	Any government department and organization or any person desirous of	
Miscellaneous	constructing drainage, utilizing river water intake, constructing bridges spanning	
Section 30	rivers, connecting underground pipe, connecting underground electric power cable, connecting underground telecom cable or digging in rivers and creeks, bank boundary and waterfront boundary, under the requirement of work, shall in order not to adversely affect the water resources and rivers and creeks, carry out only after obtaining the approval of the Ministry of Transport.	
	Underground Water Act (21st June, 1930)	
protect underground source purpose of obtaining underg by the water officer. Townsh exercising jurisdiction over t	enacted on the date of 21st June in 1930 whereas it is expedient to conserve and s of water supply in the Union of Burma. This act prohibits sinking of a tube for the round water except under and in accordance with the terms of a license granted ip Officer or sub-divisional officer had power to close a license tube after he local area concerned and the expense of such closure shall be recoverable s if it were an arrear of land-revenue.	
Section 3	No person shall sink a tube for the purpose of obtaining underground water	
	except under and in accordance with the terms of a licence granted by the water officer.	
	Every person owning a tube which was in existence before the extension of this Act to the local area concerned shall apply to the water officer for a licence for the said tube, and such licence shall be granted free of charge.	
Section 5	Every person obtaining or attempting to obtain underground water shall supply the water officer with such information as the President of the Union may by rule prescribe.	
Section 6	The President of the Union may make rules 1-	

Law and Regulation	Description	
	(a) prescribing the conditions subject to which licences may be granted by the water officer under section 3;	
	(b) prescribing the form of and the procedure for granting such licences and the fees payable for the issue thereof;	
	(c) prescribing the information to be supplied to the water officer under sect The Electricity Law (2014)	
commission, standards, ins Law divides projects into "sr 30 MW); the states and reginot connected to the national authorities have a legal righ	Law, a comprehensive piece of legislation covering licensing, a new regulatory pection, tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity mall" (up to 10 MW), "medium" (between 10 MW to 30 MW) and large (upwards of ions can issue permits for small and medium power plants. In case these plants are al grid, the Union Government Ministry is not the primary authority involved. The t to use land for the purpose of power plants under the Electricity Law, and have ntain their facilities. The law also provides that the authorities can build lance with existing laws.	
Purpose	To ensure compliance with the conditions of permission for productions of in line with the above law.	
Section 10 (b)	The project proponent will implement the project with the best practices to reduce the damages on the environment, health and socio-economy also will pay compensation for the damages and will pay the fund for environmental conservation.	
Section 18	The project proponent has to take the certificate of electric safety, issued by the chief-inspector, before the commencement of power generation.	
Section 21 (a)	The project proponent has to be liable for damages to any person or enterprise by failure to abide by the quality standards or rules, regulation, by-law, order, and a directive issued	
Section 22 (a)	The project proponent has to be liable for damages to any person or enterprise by the negligence of project owner.	
Section 26 (a, b)	The project owner has to comply with the permission for electric searching and generation.	
Section 27	The project proponent will inform promptly to chief-inspector and head officer of related office while occurring of accident in electricity generation.	
Section 40	The project proponent will comply with the standards, rules, and procedure. Moreover, will allow the inspection by respected governmental department and organization if it is necessary.	
Section 68	The project proponent will pay the compensation to anyone who is injured or caused to death in electric shock or fire caused by the negligence or omitting of the project owner or representative of the project owner.	
	National Land Use Policy, 2014 October	
Chapter I Basic Principles of the National Land Use Policy	In terms of the National Land Use Policy: (a) It shall use the land resources of the State sustainably and systematically by conserving and protecting them for the interest of	
Section 8	 all peoples of the State; (b)It shall enact the National Land Law which harmonize the existing laws relating to use of land resources and land tenures in the whole country including rural and urban areas and which may be implemented systematically; (c) It shall cause to decide the matters relating to land disputes arisen between the land users and the stakeholders transparently and truly in accord with the National Land Law 	
Section 8	National Land Law; In implementing the continued entry of the foreign direct investments, sustainable economic development, effectiveness of the environmental conservation and protection, social harmonization, firmness of land tenures, immoveable property right and settlement of land dispute: (a) It shall increase responsible undertaking and respect the rule of law; 	

Law and Regulation	Description	
	(b)It shall strengthen the clean governance system by carrying out land use management, land tenure management in accord with law systematically and truly;	
	 (c) It shall establish modernized systems to enable to have access to correct information relating to land use management and land tenure management; (d)It shall establish the land dispute settlement mechanism which is easily implementable and impartial; 	
	(e) It shall arrange and carry out coordination process with the Stakeholder's transparently.	
Chapter II The Situation of the Existing Land Management Mechanism Section 12	The State has arranged and carried out to expand Tae Hyun (Myanmar) Industry Company Limitedicultural land use by the State-owned organizations, cooperative societies, associate ones, joint ventures, other organizations which acquire Tae Hyun (Myanmar) Industry Company Limitedicultural land for businesses and individual Tae Hyun (Myanmar) Industry Company	
	Limitediculturalists after forming the Vacant, Fallow and Virgin Lands Management Central Committee under the Notification 44/91 dated 13 th November, 1991.	
Labor Dis	spute Settlement Law (28 Mar 2012 replacing 1929 version)	
relationship between employe	eby enacts this Law for safeguarding the right of workers or having good er and workers and making peaceful workplace or obtaining the rights fairly, ng the dispute of employer and worker justly.	
	spute Settlement Law (28 Mar 2012 replacing 1929 version)	
workers and making peacefu dispute of employer and work	eguarding the right of workers or having good relationship between employer and I workplace or obtaining the rights fairly, rightfully and quickly by settling the ker justly. It stipulates that employer in which more than 30 workers are employed rdinating committee consisting of the representatives of workers and the	
Section 23	A party, employer or worker, may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of such body in accord with stipulated manners, may apply to the competent court in person or by the legal representative.	
Section 24	The relevant Conciliation Body shall, in respect of the collective dispute known or received by the complaint of either party, employer or worker, in respect of the dispute; information sent by the Minister or the Region or State Government or any other means, carry out as follows: (a) conciliating so as to be settled within three days, not including the official holidays, from the day of knowing or receipt of such dispute; (b) concluding mutual agreement if the settlement is reached in conciliating under sub-section (a), before the Conciliation Body.	
Section 25	The Conciliation Body shall refer the collective dispute which does not reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute.	
Section 38	No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.	
Section 39	No employer shall alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Tribunal, to affect the interest of such workers immediately.	
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal	
Section 51	The project proponent has to pay the compensation decided by Tribunal f violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.	
Section 46	Any employer who violates any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.	
Objectives	The Motor Vehicles Law (2015)	
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles	

Law and Regulation	Description		
	• The project proponent has to promise to abide by the nearly all provisions of said law and rules, especially the provisions related to air pollution, noise pollution and life safety.		
လုပ်ငန်	းခွင်သုံးပေါက်ကွဲစေတက်သောပတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)		
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ပတ္တုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊		
	တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်၊ ယမ်းဘီလူးနှင့်		
	ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊		
	လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတက်သော ပတ္တုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ		
	ကြီးကြပ်နိုင်ရန်။		
အခန်း ဂု	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချပ် သို့မဟုတ်		
တားမြစ်ချက်များ အမှတ် ၁၈	စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်းမပြုရ။		
အမှတ် ၁၉ (ခ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့ ၏ အတည်ပြုချက်မရရှိဘဲ		
	လုပ်ငန်းခွင် ပေါက်ကွဲစေတက်သော ပတ္ထုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။		
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊		
	အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။		

2.2. INTERNATIONAL GUIDELINES

Organization's Guidelines, World Bank Safeguard Policies, IFC Performance Standards and National Environmental Quality (Emission) Guidelines (2015) are referred for EMP of the proposed factory project.

2.3. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUIDELINES

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

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

2.3.1. General Guidelines

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

2.3.1.1. Air emission

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

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

Table 2-2	NEQG's Air Quality	y Guideline

^a Particulate matter 10 micrometers or less in diameter

^b Particulate matter 2.5 micrometers or less in diameter

2.3.1.2. Wastewater

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

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

Parameter	Unit	Guideline Values		
5-day Biochemical oxygen demand	mg/l	50		
Ammonia	mg/l	10		
Arsenic	mg/l	0.1		
Cadmium	mg/l	0.1		
Chemical oxygen demand	mg/l	250		
Chlorine (total residual)	mg/l	0.2		
Chromium (hexavalent)	mg/l	0.1		
Chromium (total)	mg/l	0.5		
Copper	mg/l	0.5		
Cyanide (free)	mg/l	0.1		
Cyanide (total)	mg/l	1		
Fluoride	mg/l	20		
Heavy metals (total)	mg/l	10		
Iron	mg/l	3.5		
Lead	mg/l	0.1		
Mercury	mg/l	0.01		
Nickel	mg/l	0.5		
Oil and grease	mg/l	10		
рН	S.U.ª	6-9		
Phenols	mg/l	0.5		
Selenium	mg/l	0.1		
Silver	mg/l	0.5		
Sulphide	mg/l	1		
Temperature increase	°C	<3 ^b		
Total coliform bacteria	100 ml	400		
Total phosphorus	mg/l	2		
Total suspended solids	mg/l	50		
Zinc	mg/l	2		

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

b At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is

not defined, use 100 meters from the point of discharge

¹ Pollution prevention and abatement handbook. 1998. Toward cleaner production. World Bank Group in collaboration with United Nations Environment Programme and the United Nations Industrial Development Organization.

2.3.1.3. Noise levels

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

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

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

^a Equivalent continuous sound level in decibels

2.3.2. IFC EHS Guidelines

The EHS Guidelines1 by International Finance Cooperation (IFC) are technical reference documents with general and industry–specific examples of Good International Industry practice (GIIP), as defined in IFC's Performance Standard 3: Resources Efficiency and Pollution Prevention. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology.

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

 Table 2-5
 Community health and safety contents

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

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

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

2.4. ENVIRONMENTAL CONSERVATION POLICY OF TAE HYUN (MYANMAR) INDUSTRY COMPANY LIMITED.

Tae Hyun (Myanmar) Industry Company Limited shall be responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of Natural Resources and Environmental Conservation (MONREC) in which to conduct an EMP which describe the measure to be taken for preventing, mitigation and monitoring significant environment impacts resulting from the implementation and operation of proposed project or business or activity has to be prepared and submitted and to perform activities in accordance with this EMP and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures. Tae Hyun (Myanmar) Industry Company Limited shall be responsible for the environmental assessment of factory development as follows:

- Monitoring the factory area operations according to EMP and Environmental Monitoring Plan (EMoP)
- Submitting environmental monitoring reports to ECD
- Planning and implementation of CSR activities
- To set up welfare plan such as staff medical checkup, training program and public talk for getting knowledge, risk prevention, bonus and social security services

• To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees

Mr. Koo Ja Yong Promoter Tae Hyun (Myanmar) Industry Co., Ltd

3. PROJECT DESCRIPTION

3.1. LOCATION OF PROPOSED PROJECT

The proposed project is located at Latitude 16°51'22.52"N and Longitude 96° 3'32.77"E, Plot No. (139), Myay Taing Block No. Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The location map of the proposed project size is shown in

Figure 3-1. The proposed project intends to manufacture of wearing apparel (such as various kinds of jacket and cap) on CMP basic and to export 100% of the finished products. Raw materials for jacket and cap products in the People Republic of China.

3.1.1. Project Implementation

Implementation of the proposed project includes (1) construction of factory and office buildings, and warehouses, (2) installation of machinery and equipment, and (3) operation of the said factory. The construction phase of the proposed factory initiated in October 2019 and then commercial running operation stage start in October 2020. The proposed duration of the investment shall be 25 years. When the project began, the buildings were not rebuilt. There are 4 buildings already built up by land owner. The equipment needed to operate the project was installed during preparation phase. When the land lease years are expired, the project proponent will assess the impacts of project, mitigate the impacts and then return the project site to the land owner.

3.1.2. Adjacent Condition of Project Site

Kin Wun Min Gyi street was situated at the front of the factory & U Tayoke street was situated the beside of factory compound. List and map of adjacent condition of project site is shown in Table 3-1 and Figure 3-2.

Table 3-1	Adjacent Factories of the Project Site
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Nature of Factory	Туре	Location	
Thayaphu Soe Myint Co., Ltd	Garment factory	Northwest	
Pyae Phyo Aung Co., Ltd	Garment factory	Northwest	

3.1.3. Site Description of Proposed Project Site

The total area of project site is net 0.977 acres. The project is separated into two storey dormitories (10 ft \times 40 ft), two storey security gates (10 ft \times 10 ft), two Storey Office Building (80 ft \times 20 ft) and one factory building (80 ft \times 180 ft). Main structure was designed into fabric warehouse, HR office room, cutting line, sewing line, ironing section and final inspection room. Admin office, generator room and accommodation building are separated by main factory building structure. Factory layout drawing is able to seen in Figure 3-3 and Figure 3-4.

Tae Hyun (Myanmar) Industry Company Limited

Environmental Management Plan



Figure 3-1 Location Map



Figure 3-2 Adjacent Location Map



Figure 3-3 Factory Layout Plan (Aerial Photo)





3.2. PRODUCTION PROCESS

Cutting-Making-Packaging (CMP) is a production system in which raw materials including fixtures and chemicals are imported and then processed into finished product, packaged and exported. The CMP system is a form of production on consignment in which the main raw materials (fabrics, thread, zipper, etc.) are provided by overseas buyers and imported free of charge, then cut, sewn and packed in the domestic factories, after which all of the finished products are exported. The operation of jacket and cap factories with CMP system includes production costs covering wages, electricity and diesel, transportation, communication, factory and office rental, maintenance and repair of sewing machines, and administrative expenses. Steps of production process of proposed jacket and cap factory are described in below.



Figure 3-5 Process Flow Diagram

3.2.1. Description of Production Process

The first stage in the manufacturing of wearing apparel (such as jacket and cap) is the cutting and for that pattern, making is the base. Once the marker is made, pattern pieces must be cut out of the specified fabric.

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

Quality control (QC) checks for any error. Quality control was done manually.

After completion of QC Process, Ironing is a sheet metal forming process that uniformly thins the workplace in a specific area.

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



Store Department

Cutting Department



Sewing Department



QC Department



Ironing Department



Packing Department

Figure 3-6 Production Photos

3.2.2. Products

The production product is jacket and cap products at the proposed area and the estimated production amount per year for each product may be round about 3800 to 4200 pieces. For the estimation of the production amount per year is shown in the following Table 3-2.

No	Particular	Unit	Year 1-3	Year 4-5	Year 6-10
I	Production (Pcs)		1,400,000	1,540,000	1,540,000
1	All Kind of Jacket	Pcs	300,000	330,000	330,000
2	Knit cap	DZ	300,000	330,000	330,000
3	Stocking cap	DZ	600,000	660,000	660,000
4	All Kind of Cap	DZ	200,000	220,000	220,000

Table 3-2 Annual production rate



All kinds of Jacket



All kinds of Cap



knit Cap



Stocking Cap

Figure 3-7 Product Photos

3.3. UTILITIES

3.3.1. Raw Material

The main Raw Materials are fabric, interlining, zipper, thread, label, sticker, button etc. are imported from China and carried to the Tae Hyun (Myanmar) Industry Company Limited by the containers. After quantity verification, these raw materials are stored properly in specified area as per their varieties i.e. fabric and polyester are stored on the shelves; zipper, label and accessories are stored in open cabinets with labels. Raw materials for unit consumption and imported amount are described in Table 3-3.

No	Particular	Unit	Year 1-3	Year 4-10
1.	Fabric	Yard	1,110,000	1,221,000
2.	Interlining	Yard	420,000	462,000
3.	Zipper	Pcs	1,500,000	1,650,000
4.	Thread	Yard	207,000,000	227,700,000
5.	Label	Pcs	14,400,000	15,840,000
6.	Sticker	Pcs	1,200,000	1,320,000
7.	Tag Pin	Pcs	1,200,000	1,320,000
8.	Button	Pcs	4,500,000	4,950,000
9.	Stocking Yarn	Kg	32,000	35,200
10.	Knit Cap Yarn	Kg	120,000	132,000

 Table 3-3
 List of Annual Raw Materials



Figure 3-8 Raw Material Storage

3.3.2. Machinery and Equipment

For the production lines, the categories of machinery lists are divided into two states: Cutting and Stitching/Finishing. For production process, the usage of machinery is for Preparing and Injection. The detail use of machinery for production process is shown in the following Table 3-4.

Stage	Description	Unit	HS Code	Quantity
Operation	Squee Machine	Set	8474	3
Stage	Water Hot Press	Set	8479	2
	Sleeve Attach Machine	Set	8422	10
	Single Needle Machine	Set	8452	400
	Two Needle Machine	Set	8452	20
	Overlock Machine	Set	8447	30
	Bar tacking Machine	Set	8452	5
	Kansai Special	Set	8452	5
	Button Hole Machine	Set	8452	5
	Button Attach Machine	Set	8452	6
	Snap Machine	Set	8479	10
	Packing Machine	Set	8422	2
	Single Cutting Machine	Set	8208	10
	Zig Zag Machine	Set	8452	3
	Hand Knife Machine	Set	8207	10
	QQ Machine	Set	8205	3
	Thread Winding	Set	7310	5
	Fusion Press Machine	Set	7310	4
	Brand Knife Machine	Set	7310	2
	Press Machine For Finishing	Set	7310	5
	Weight Machine	Set	7310	8
	Pocket Walting	Set	7310	2
	Needle Detector Machine	Set	8207	2
	Seam Sealing Machine	Set	8205	4
	Generator (300 KVA)	Set	8465	2
	Boiler (Electrical) 18 KW	Set	8414	1
	Spare Parts Machine	Set	7310	1
	Knitting Cap Machine	Set	7310	20
	Stocking Machine	Set	7310	40
actory	Air Compressor	Set	8414	2
Accessories	Iron Table	Set	7323	30
	Boiler Iron	Set	8465	50

Table 3-4Machinery for Production Line

Stage	Description	Unit	HS Code	Quantity
	Water Iron	Set	8414	20

3.3.3. Human Resource

Human resource required by foreign experts/technicians and local persons for administrative and production process are about 572 persons which are also described in Table 3-5.Currnetly there are 154 employees. Working hour starts from 8:30 am to 5:00 pm. The lunch time is from 11:50 am to 12:30 pm. Ferries are provided to all staff and employee by the company. Foreign experts and technicians stay at dormitory of the factory and the meals for such experts are also provided.

Employee		Number of persons						
	Ye	Year 1 Year 2		ar 2	Year 3-10			
	Local	Foreign	Local	Foreig n	Local	Foreign		
Factory Manager	1	1	1	1	1	1		
Human Resource Manager	1		1		1			
Finance Manager	1		1		1			
Supervisors	15		15		15			
Assistant Supervisors	10		10		10			
Quality Control	20		20		20			
Assistant Quality Control	5		5		5			
Account Staff	2		2		2			
Security	5		5		5			
Driver	2		2		2			
Cleaner	3		3		3			
Skill Worker	399		399		399			
Unskilled Workers	100		100		100			
Fire Safety Officer	1		1		1			
Production Manager		2		1		1		
Quality Control Technician		2		1		1		
Sampling Technician		2		1		1		
Operation Technician		1		1		1		
Engineer Machanic		1		1		1		
Marketing Manager		1		1		1		
Total	565	10	565	7	565	7		

Table 3-5Employment List

3.3.4. Water Requirement

Haing Thar Yar Industrial Zone (Part-4) has no centralized water supply system and the factory gets water from the tube wells installed inside the factory compound. Before operation of the project, the pumping test was carried out to estimate hydraulic properties of an aquifer system i.e. transmissivity, hydraulic conductivity and storability of aquifer. As per the results of pumping test, tube wells are designed and located for water security of the project operation. The depth of both tube wells is about 54.86 meters (180 feet) and the diameter is 0.1016 meter (4 inches).

During operation, the water will be pumped from tube wells and reserved in an underground tank (9,724 gallons) for toilet and firefighting and an overhead tank (10,860 gallons) with filters. Daily water requirement of proposed project is 1,200 gallons and annual water consumption is about 270,000 gallons. By comparing daily water requirement with storage capacity of the tanks, the factory has sufficient water for daily use. (See in Figure 3-9). There is no water usage in production process. Daily required water for domestic usage is about 1,150 gallons and electric steam boiler use about 50 gallons per day.

Drinking water is provided by purified drinking water and daily demand is 50 numbers of 20-liter bottles. The tube well water is treated by sedimentation tank, filers in overhead tank and lastly water treatment system including sand filter, carbon filter, water softener and reverse osmosis (RO) system before distribution through the pipe lines.

Note: To prevent groundwater depletion and lower surface, the factory has future alternative plan for water usage; water will be obtained from Pann Hlaing River and purified and then used.









Figure 3-9 Water Supply System Photo

3.3.5. Electricity and Fuel Requirement

The proposed project intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 kVA of transformer and another sources of energy 150 kVA generator which also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Electrical works, materials and equipment are consistent with Myanmar Standards and electrical codes of practice. Annual electricity consumption is 11264 Unit.

Required petrol and diesel for vehicles and generator are purchased from the nearest petrol station away from 1 mile. Only diesel is stored in 6 diesel containers of 150 gallons beside the generator room. To handle the leakage and spillage of the diesel, an interception with sand is kept under the tank. Annual fuel requirement of the project is shown in Table 3-6.

Table 3-6	Annual fuel requirements
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No	Fuel Use	Unit	Year 1	Year 2	Year 3-10
1.	Diesel for Generator	Gallons	1200	1200	1200



Figure 3-10 Electricity and Fuel Facility

3.3.6. Electric Steam Boiler

The factory has automatic electric steam boiler with the capacity:0-500 kg/hr is used in ironing process for manufacturing process. Daily water requirement for electric steam boiler is about 2 gallons. Electric steam boiler is electric type and does not discharge hot water. Boiler Certificate is not necessary for this type of boiler. Specification of boiler is presented in Table 3-7 and installed photo is shown in Figure 3-11.

Table 3-7 Specification of Boiler

Model No	NBS-FH
Steam Temperature	171°C
Water Tank	20 L
Туре	Electric Power (18 kW)
Drum Placement	Vertical Boiler
Voltage	220V/380V
Rated Working Pressure	0.7 MPa



Figure 3-11 Electric Steam Boiler Photo

3.4. FACILITIES

3.4.1. Fire Hazards Protect Facility

50 Fire extinguishers are installed in the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 10,860 gallons at the proposed area. The emergency contact numbers of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases. In addition, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. The plan to install fire alarm system and fire-frightening system are mentioned in Figure 3-12.



Figure 3-12 Firefighting System

3.4.2. Liquid Waste Control Facility

Water discharge from the factory site will be treated by silts track tank before discharging. The factory plan has kitchen, canteen and toilet facilities (5 rooms for male and 8 rooms for female) attached in various buildings of the factory. In the kitchen, separated drainage lines are provided to flow wastewater from the activities washing and cooking, etc. And around the compound area of the project area, drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. The existing drainage at the project area can be seen in Figure 3-13. Besides, the factory plans to use separate wastewater channels, septic type toilet system. Liquid waste from the dining room, canteens and toilet facilities are collected in septic tanks which are attached with sewer treatment plant and the proponent will connect and cooperate with YCDC to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory have to maintain and clean regularly. Spillage and leakages of oil and grease should also be minimized.

3.4.3. Solid Waste Management Facility

Wastes generated from the wearing apparel factory are cloth scraps of 50% from cutting section, 35% from sewing section and 15% from finishing section. In addition, packing waste of plastic sheet, carton box and fabric paper tube are generated from cutting line and packing section. Total amount of waste about maximum 200 kg per day are generated from operation process. These solid wastes disposal from each operation sectors are collected and disposed by connecting with the Yangon City Development Committee (YCDC) once a week. The recyclable waste will be sold to the local waste buyers.

The factory provides 30 garbage bins at operation area. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste bin: non-hazardous waste, hazardous waste, re-usable waste and final wastes will be disposed by using YCDC's service.



Figure 3-13 Waste Storage, Drainage & Management Photo

3.4.4. Ventilation System

The factory ventilation systems consist of natural ventilation systems and 9 mechanical ventilation systems. The mechanical ventilation system is provided in office room, production area, kitchen and dormitory.





Figure 3-14 Ventilation System Photo

3.5. GENERATION OF WASTE, EMISSION AND DISTURBANCES

3.5.1. Industrial wastes

Wastes generated from the factory are fabric scraps in the operation section. Estimated amount of waste about maximum 200 kg per day are generated from operation process.

3.5.2. Human wastes

The number of staff and workers required in the day shift for the factory is now 154 persons during operation. Solid waste generated from maximum amount of operation and office staffs with assumption of waste generation rate at 60.06 kg/day was calculated based on solid waste generation rate of 0.39 kg/person/day2.

Domestic wastewater generated by maximum amount of 154 persons with assumption rate 15.4 m³/day was calculated based on domestic wastewater generated rate of 0.1 m³/person/day3. This water will be released in operation hour discharge to septic tank or factory drainage.

Waste		Type of Wastes	Estimated waste amount	Source of generation	
Reusable		fabric scraps	200 kg/day	the operation area	
Solid waste	Non re- usable	domestic waste	60.06 kg/day	Canteen, rest room	
Liquid waste		Sanitary discharge water	15.4 m³/day	Toilet facility, canteen	
2 The Vanger City solid waste generation rate as of 20		Oil leakage and spills	-	Generator, movement of vehicles	

Table 3-8 Waste Generation and Waste Amount

² The Yangon City solid waste generation rate as of 2012 is 0.39 kg per person per day (Pollution Control and Cleansing Department, Yangon City Development Committee, 2014). ³ The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m3 per person per day (Metcalf & Eddy, 2004)

4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

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

4.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

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

- Onsite Measurements and Analysis Baseline parameters such as air quality monitoring, Indoor temperature, humidity, operation, light conditions, noise and water quality of the project site.
- Secondary data collection of proposed project site area Socio economic condition, physical/biological environment, and weather data are collected from official township data of Hlaing Thar Yar Township, Yangon Region.

4.2. ENVIRONMENTAL BASELINE STUDY

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

4.2.1. Site survey and Environmental Monitoring

The baseline environmental quality at the Project Site and its immediate surroundings was established by groundwater, wastewater, ambient air quality samples, noise and indoor temperature and humidity measurements at immediate surrounding areas. To determine the existing baseline environmental quality within the project site on July 17,2020.

The overall conditions of air quality, water quality, soil quality, and noise levels are quoted from the project. The summary of the field survey for overall conditions is shown in Table 4-1.

ltem	Parameter			
Air quality	(1) Sulfur dioxide (SO2), (2) Carbon monoxide (CO), (3) Nitrogen dioxide (NO2), (4) TSP, PM10 and PM2.5			
Water quality	(1) Temperature, (2) Odor, (3) Color, (4) pH, (5) Turbidity, (6) SS, (7) DO, (8) COD, (9) TOC, 10) BOD5, 11) Oil and Grease, (12) Total Coliforms,			
Noise level	Indoor sound level (LAeq)			
Light Level	Industry light condition (Lux)			

Table 4-1	Summary	of Environmental Survey	
	Summary	OI LINNIOINNEINAI SUIVE	1

4.2.2. Air Quality

To determine the existing baseline ambient air quality status within the project site on 17 July 2020,24-hours of construction period air pollutants level, which include dust (PM_{10} and $PM_{2.5}$) and gases (CO, CO₂, SO₂, NO₂) were measured at the selected site using the air quality monitoring system. The details of the location of air quality survey points are presented in Table 4-2 and Figure 4-1.

Table 4-2 Location of Air Quality Survey Point					
Survey point	Coordinates	Type of survey point	Description of survey point		
Air Quality	16°51'23.11"N 96° 3'32.62"E	Project area	Between Kin Wun Min Gyi Street and U Tayoke Street, Hlaing Thar Yar Industrial Zone (Part-4), Hlaing tharyar Township, Yangon.		



Figure 4-1 Air Quality Monitoring Location

4.2.2.1. Sampling Method

Sampling and analysis of ambient air quality were conducted by referring to the recommendation of the United States Environmental Protection Agency (U.S. EPA). The Air monitor 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 parameters (SO₂, NO₂, PM₁₀, PM_{2.5}) as shown in Table 4-3. Sampling pump was operated at 2 L/min. Different analysis methods are integrated in the instrument, such as Particulates 900 Infrared Light Scattering for particulate matters (PM₁₀, PM_{2.5}) and electrochemical sensors for toxic gases (NO₂, SO₂).

Table 4-3	<i>l</i> ethod	
Parameter		Analysis method
Nitrogen dioxi	de (NO ₂)	On site reading
Particulate Ma	atter (PM10)	On site reading
Particulate Ma	atter (PM _{2.5})	On site reading
Sulphur dioxid	de (SO ₂)	On site reading

4.2.2.2. Survey Result

The air quality survey results obtained every minute at each survey site were combined to make daily average values (24 hours) for further evaluation and comparison with corresponding standard values. Results of ambient air quality measured at project area are presented in Table 4-4. It is obvious that the concentrations of NO₂, SO₂, and especially $PM_{2.5}$ and PM_{10} were comparing with the tentative target value, the concentration of all pollutants are immanent with the standard. During the, concentrations of NO₂, SO₂, PM_{2.5} and PM₁₀ were exceeded the standard value.

Table 4-4 Ambient Air Quality in Project Area

No.	Parameter	Unit	Period	Result	Standard	Remark
1	PM 10	(µg/m³)	24 hours	18.1	50	Good
2	PM 2.5	(µg/m³)	24 hours	12.2	25	Normal
3	СО	(µg/m³)	8 hours	1.825	10	Good
4	NO ₂	(µg/m³)	1 hour	92.7	200	Good
5	SO ₂	(µg/m³)	10 minutes	365.8	500	Good

*National Environmental Quality (Emission) Guideline



Figure 4-2 Air Quality Monitoring Graph



Figure 4-3 Air Quality Monitoring Photo

4.2.3. Indoor temperature and humidity

In July 17, 2020, the weather condition of prosed project is 36.7 °C average temperature and 84.9 % average humidity.

Date and Time	Description	Result value	Environmental parameter air station guideline
17 July 2020 (1:00	Relative Humidity RH %	84.9 (%)	Present condition
pm to 4:00 pm)	Temperature	36.7 °C	Present condition

 Table 4-5
 Relative humidity and temperature measure at factory



Figure 4-4 Temperature and Humidity Measure Photo

4.2.4. Noise Level

The Noise level was measured by using Digital Sound Level Meter for working hours on 17 July 2020. The average noise level in the project site area is presented in Table 4-6 compared with NEQ guideline. However, according to the Noise source monitoring at operation area (inside the production
sector) of noise level is a little exceeding the acceptable level of National Environmental Quality (Emission) Guideline.^[4]

Coordinates	Type of survey point	Measurement Result	NEQ Guideline	Description of survey point
16°51'22.46"N 96° 3'32.42"E	Operation area (Sewing Section)	70.5 dBA	70 dBA	Between Kin Wun Min Gyi Street and U Tayoke Street, Hlaing Thar Yar Industrial Zone(Part-4), Hlaing tharyar Township, Yangon.

Table 4-6 Location of Noise Level Survey Point

4.2.4.1. Survey method

Measurement of noise level was conducted by referring to the recommendation of the International Organization for Standardization (ISO 1996-1/2003 & 1996-2/2007). The instrument used for noise measurement was set at the height of 1.2 m. A-weighted loudness equivalent level was measured automatically every 20 seconds and recorded in a memory card. Survey result of Noise level (LAeq) along the survey point is presented in Table. Noise levels measured on both weekday and weekend at operation area were found to be lower than the tentative target value. It is obvious that noise levels measured at the same point on weekday were higher than those on weekend.



Figure 4-5 Noise Level Measurement Photo

4.2.5. Light

Activities of the workers in the jacket and cap factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the jacket and cap factory is presented in Table 4-8. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in jacket and cap factory is provided in Table 4-7.

Appropriate lighting is the need for every department, irrespective to the task being handled. Although, there are some areas where focus on maintaining proper illumination is very crucial in a jacket and cap factory, like the inspection points (on-floor and in stores), sampling, and the finishing section, as these areas are crucial for the quality of the production. The tasks involved in these areas require high levels of worker focus and accurate lighting to ensure lower errors and defects passing on to the next stage. However, according to the result of light measurement at operation area (inside the production sector) is in good condition and at the acceptable level of standard.

Table 4-7	Recommended illumination and limiting glare index based on IES Code, 1968
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Visual test	Illumination (lux)	Glare index
Casual seeing	100	28
Rough task with large detail	200	25-28
Ordinary task medium detail	400	25
Fairly severe task, small detail (e.g. drawing office, sewing)	600	19-22
Severe, prolonged task, very small detail (e.g. fine assembly, hand tailoring)	900	16-22
Very severe, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300 -2,000	13-16

Source: Koenigsberger, et al. 1975



Figure 4-6 Light quality measurement

Table 4-8	Result of light measurement in TAE HYUN (MYANMAR) INDUSTRY COMPANY LIMITED
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No	Location	Measure value (Lux)	Standard*
1	Warehouse	295	200
2	Cutting Line	1245	900
3	Sewing Line	1159	600
4	QC	1269	900
5	Ironing	1059	600
6	Packing	1153	2000

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

According to the monitoring results, Tae Hyun (Myanmar) Industry Company Limited light level is a little bit higher than the NEQ guideline that's why some places need to reduce the light level and ought to put on the electricity bulb more over the higher places. On the other hand, some places are a bit lower than the NEQ guideline that is why which need to change like a more powerful light bulb in that light level lower places. In this way are able to adjust the light pollution of this factory.

4.3. PHYSICAL COMPONENT (SECONDARY DATA)

4.3.1. Topography

Yangon area is the largest; most populated and urbanized area in Myanmar. There are thirtythree townships in Yangon city where located at the convergenceon the Yangon and Bago River region about 34 km away from the Gulf of Martaban. The proposed project area is situated at Hlaing Thar Yar Industrial Zone (Part-4), Hlaing Thar Yar Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

4.3.2. Geology

In Yangon area mainly composed of Pegu Group, Irrawaddy Formation and Alluvium. Alluvial deposits (Pliestocene to Recent), the non-marine fluvialtile sediments of Irrawady formation (Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene) underlie the Yangon area. Alluvial deposits are composed of gravel, clay, silts, sands and laterite which lie upon the eroded surface of the Irrawaddy formation at 3-4.6 m above mean sea level (MSL). The rock type in Yangon is mainly soft rocks, which consist of sandstone, shale, limestones and conglomerate. Geological map of Yangon Regional area is shown in Figure 4-7.



Figure 4-7 Geological Map of Yangon Region

4.3.3. Tectonics

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

4.3.4. Soil

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



Figure 4-8 Soil Map of Yangon (Source: Land use of Bureau of Yangon)

4.3.5. Hydrogeology

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

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

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

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

4.3.6. Climate and Meteorology

4.3.6.1. Average Weather in Yangon

In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year-round. Over the course of the year, the temperature typically varies from 67 °F to 97 °F and is rarely below 62 °F or above 101 °F.^[6]



Figure 4-9 Climate Summary of Yangon Region

4.3.6.2. Temperature

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

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



Figure 4-10 Average Temperature of Yangon Region

4.3.6.3. Clouds

In Yangon, the average percentage of the sky covered by clouds experiences extreme seasonal variation over the course of the year. In clearer part of the year in Yangon begins around November 2 and lasts for 5.6 months, ending around April 22. On February 20, the clearest day of the year, the sky is clear, mostly clear, or partly cloudy 72% of the time, and overcast or mostly cloudy 28% of the time.



Figure 4-11 Cloud Cover Categories

4.3.6.4. Rainfall

To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Yangon experiences extreme seasonal variation in monthly rainfall. The rainy period of the year lasts for 7.7 months, from April 5 to November 28, with a sliding 31-days rainfall of at least 0.5 inches. The most rain falls during the 31 days centered around July 30, with an average total accumulation of 9.1 inches. The rainless period of the year lasts for 4.3 months, from November 28 to April 5. The least rain falls around February 1, with an average total accumulation of 0.1 inches.



The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average liquid-equivalent snowfall.

Figure 4-12 Average Monthly Rainfall at Yangon Region

Table 4-9 Annual rainfall and temperature

Rainfall		Temperature		
Year	Raining day	Rainfall value (Inches)	Summer season Max (°C)	Winter season Min (°C)
2017-2018	102	105.4	41°C	27°C
2018-2019	88	84.8	40°C	26°C

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

4.3.6.5. Humidity

We base the humidity comfort level on the dew point, as it determines whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel drier and higher dew points feel more humid. Unlike temperature, which typically varies significantly between night and day, dew point tends to change more slowly, so while the temperature may drop at night, a muggy day is typically followed by a muggy night.

Yangon experiences extreme seasonal variation in the perceived humidity. The muggier period of the year lasts for 10 months, from February 22 to December 23, during which time the comfort level is muggy, oppressive, or miserable at least 61% of the time. The muggiest day of the year is August 5, with muggy conditions 100% of the time. The least muggy day of the year is January 11, with muggy conditions 48% of the time.



Figure 4-13Humidity of Yangon

4.3.6.6. Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly depended on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Yangon experiences significant seasonal variation over the course of the year. The winder part of the year lasts for 4.1 months, from May 1 to September 4, with average wind speeds of more than 8.2 miles per hour. The windiest day of the year is June 24, with an average hourly wind speed of 10.6 miles per hour. The calmer time of year lasts for 7.9 months, from September 4 to May 1. The calmest day of the year is January 9, with an average hourly wind speed of 5.8 miles per hour.



Figure 4-14 Average Wind Speed in Yangon

4.4. BIOLOGICAL COMPONENT (SECONDERY DATA)

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

Ecological Resources	Existing condition
Fisheries, aquatic biology	The nearest river is Pan Hlaing river. Fresh water fish species are residing in the river
Wildlife	Non existence
Forests	Non existence
Rare or endangered species	Non existence
Protected areas	Non existence
Coastal resources	A few mangrove species observed at the river bank of Pan Hlaing river

4.5. SOCIO-ECONOMIC COMPONENT

4.5.1. Population

Tae Hyun (Myanmar) Industry Company Limited is located across Hlaing Thar Yar Township in Yangon Region. In 2019, the population of Hlaing Thar Yar Township is about 440,949 people as present in Table 4-10.^[1]

Table 4-10	Population of Males and Females at Hlaing Thar Yar Township (2019)
	reputation of males and remains at maining that remaining (2015)

Item	Over 18 year		Under 18 year			Total			
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	110193	125186	235379	49964	55193	105157	160157	180379	340536
Rural	34642	32707	67349	16488	16576	33065	51130	49283	100413
Total	144835	157893	302728	66452	71769	138221	211287	229662	440949

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

4.5.2. Religion

The different kinds of religion present in Hlaing Thar Yar Township are shown in Table 4-11. More than 90% of the people living in the township are Buddhists.^[1]

Table 4-11Religion in Hlaing Thar Yar Township (2019)

Township	Buddhist	Christian	Hindu	Muslim	Total
Hlaing Thar Yar	422529	6400	8320	3700	440949

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

4.5.3. Local Economy

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

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

4.5.4. Public Infrastructure and Access

4.5.4.1. Communication and Transportation

Major transportation route in Hlaing Thar Yar Township are railway, port, and car road as presented in Table 4-12.^[1]

Table 4-12 Transp	portation Route
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Categories	Township	Miles	
Categories	From	to	willes
Sail	Pan Hlaing River and Hlaing confluence	Ngwe Pin Lae Industrial	8
Bus line (61,23,68,16,6,69,17,74,20,52,53,54,67) City Bus	WYTU	Downtown area	
Car (Yangon - Pathein road)	King Ba Yin Naung bridge	Mya Sein yaung Stream	5.4
Car (Yangon – Nyaung Tone road)	Aung zaya Bridge	BOC traffic circle	3.2
Car (King Anawyattar Road)	Shwe Pyi Thar Bridge	Thamakone Traffic circle	4.6

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

4.5.4.2. Electricity

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

4.5.4.3. Education

Location of major schools were situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S), basic education high school (B.E.H.S), West Yangon Technological University, in the Hlaing Thar Yar Township. The name and the located village tract/ ward of schools are described in Table 4-10. ^[1]

No.	Name of School	Location
1.	West Yangon Technological University	Outside Padan Village Tract
2.	BEHS (1)	N0 (2) ward
3.	BEHS (2)	No (12) ward
4.	BEHS (3)	NO (17). Ward
5.	BEHS (4)	NO (5) ward
6.	BEHS (5)	NO (7) ward
7.	BEHS (6)	Yae Okken
8.	BEHS (7)	NO (16) ward
9.	BEHS (8)	NO (20) ward
10.	BEMS (Branch) (1)	NO (6). Ward
11.	BEMS (Branch) (2)	Nyaung Village Tract
12.	BEMS (Branch) (3)	Dine Su, Nyaung Village
13.	BEMS (Branch) (4)	NO (6) ward
14.	BEMS (Branch) (5)	NO (1) ward
15.	BEMS (Branch) (6)	NO (10) ward
16.	BEMS (Branch) (7)	Outside Padan Village Tract
17.	BEMS (Branch) (8)	NO (18) ward
18.	BEMS (Branch) (9)	Shwe Lin Pan Village Tract
19.	BEMS (Branch) (10)	NO (9). Ward
20.	BEMS (Branch) (11)	NO (12). Ward
21.	BEMS (Branch) (12)	NO (18). Ward
22.	BEMS (Branch) (13)	NO (15). Ward
23.	BEMS (Branch) (14)	NO (14). Ward
24.	BEMS (Branch) (15)	NO (13). Ward
25.	BEMS (Branch) (16)	NO (11). Ward
26.	BEMS (Branch) (17)	NO (7). Ward
27.	BEMS (Branch) (18)	NO (11). Ward

 Table 4-13
 List of major school in Hlaing Thar Yar Township

No.	Name of School	Location
28.	BEPS (1 to 32)	Hlaing Thar Yar
29.	Pre School (1 to 6)	Hlaing Thar Yar
_	Pre School (1 to 6)	8

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

4.5.4.4. Health Status

The diseases of high prevalence reported in 2019 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2019 of Hlaing Thar Yar Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 4-14.

 Table 4-14
 Common Diseases in the Hlaing Thar Yar Township

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

 Table 4-15
 Lists of Hospital in Hlaing Thar Yar Township

Hospital Name	Beds/Services	Responsible
Township Hospital	200	Government
Cottage Hospital (Shwe Lin Pan)	16	Government
Pan Hlaing	95	Private
Tun Foundation	20	Private
Total	331	-

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

4.6. CULTURAL AND VISUAL COMPONEMTS

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

5. ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

5.1. IMPACT IDENTIFICATION

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

5.1.1. Positive Impact

During the project implementation, local people can get job opportunities in administrative sectors, office works, transportation sectors, skill and unskilled workers, etc. Due to the implementation of the project, there will be employment opportunities especially for workers from the local community. Employees will also improve more in their professional knowledge and skills. The net effect of job creation is the improvement of the livelihoods and living standards of the beneficiaries and poverty reduction, development of local people's livelihood. Cause of the proposed project is located in Hlaing Thar Yar Industrial Zone (Part-4), there may have business opportunities to local people. Local people can have a market by selling foods, snacks and drinks nearby the factory.

5.1.2. Negative Impact

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





5.2. METHODOLOGY FOR THE ASSESSMENTS

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

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

Accessment		Scale												
Assessment	1	2	3	4	5									
Magnitude (M)	Insignificant	small and will have no effect on working environment	ave no effectwill result inresult inon workingminor changessignificant											
Duration (D)	0 - 1 year	2 - 5 year	6 - 15 year	Life of operation	Post Closure									
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International									
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite									

 Table 5-1
 Impact assessment parameters and its scale

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

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

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

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

5.3. POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION AND DECOMMISSIONING PHASE

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

Decommissioning phase: The proposed duration of the investment shall be 25 years. The term of the Lease shall be initial 5 years and extendable 10 years two times commencing from the date of signing of the Lease Agreement between Local owner and Tae Hyun (Myanmar) Industry Company Limited for proposed project site for 0.977 acres (3953.7787 sqm) of land. The project of land and building will be restitution to land owner after close the operation. Therefore, the assessment study cannot be need for environmental impact assessment during decommission phase.

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

5.3.1. Impact on Air Quality

During the operation phase, there is no emission of smoke from the process of production. Particulate matters are generated during cutting and sewing the raw materials. However, that particles amount is low. Dust particles, CO2 and SO2 would be emitted from the activities of loading, unloading and transportation of the raw materials and final product. Various activities using air conditioners in office building, storage of raw materials, vehicles movements and operating diesel generators would also be a factor slightly affecting to air quality.

Though main electricity source for the factory is the national grid line, sound-proof diesel generators will be set-up in case of electricity shortages. So, 315 kVA transformer, and 150 kVA standby generator will be used for both operation and administration appliances. The proposed project will use annually about 1200 gallons of diesel for emergency use of a generator when the electricity goes off. The following table shows the amount of CO₂ emission coming from the combustion of fuels.

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

Category	Range
Negligible	no GHG assessment necessary
Low	< 20 kt/y CO2-equivalent per year
Medium-Low	20 – 100 kt CO2- equivalent per year
Medium-High	100 kt – 1 Mt CO2- equivalent per year
High	>1 Mt CO2-e equivalent per year

Category of GHGs Assessment

Source: EBRD GHG Assessment Methodology, 2010

No.	Туре	Amount(gallon/year)	Equivalent CO ₂ emission (Kilotons)	Status							
1	Diesel for generator	1200	0.013	Negligible							

CO₂ Emission by the Uses of Fuel

Furthermore, likewise the construction phase, negative impact on ambient air quality such as emissions of dust particles emission from the movement of vehicles used for carrying decommissioned materials and gaseous emission from these vehicles and machines can be expected during the decommissioning phase of the proposed project after its lifespan, 25 years.

5.3.2. Impact on Water Quality

During the construction period, water consumption is for implementation of the construction works and domestic water usage by construction workers. Surface water and ground water could be contaminated from the several activities of construction works such as mixing of the concrete, wetting of dry surfaces, washing of the equipment, etc. Moreover, oil spill from the vehicles and machinery can pollute water quality and can enter to the ground water and run into near river during the rainy season. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During operation phase of garment factory, there is no water is used for operation process. Tube well is the main source of raw water for domestic waster use. The raw water is provided for the whole factory use of general office facilities such as canteen and toilets. Moreover, sewage disposed from the employees, staffs, oils spill and grease leakage from transporting vehicles and machinery equipment used in operating can seriously pollute the quality of underground water source. But the factory plans to use separate waste water channels, septic type toilet system and sewage treatment plants in accordance with YCDC guidelines to avoid potential contaminations and hazards by waste water and sewages. So, it can cause low impact to the water quality.

During the decommissioning phase, oil spill from the demolished vehicles and machinery can penetrate to the ground water quality. Water can also be contaminated by activities related with decommissioning works and waste disposed by workers.

5.3.3. Impact on Soil Quality

During the construction phase, the excavation works from the construction activities must be the major impact on soil. The soil is compacted by the vehicles and the solid waste disposal improperly by the workers can affect the soil quality. Oil spillage from the vehicles could be also polluted to the soil. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on soil quality is not assessed for this project.

During the operational phase, there is no significant impact on soil quality due to garment activities because concrete road facilities have been implemented at the whole project site area. However, there may be effect on soil if domestic wastes from office, canteen and rest camp are disposed improperly.

During the decommissioning phase, transportation of decommissioning materials and transferred of heavy machinery may happen oil leakage and lubricants, and thus it can lead to impact on

soil. Moreover, hazardous releases of materials or oil utilized in the infrastructure can contaminate the existing soil during the decommissioning phase.

5.3.4. Impact of Noise

During the construction phase, significant impact on noise and vibration to surrounding environment must be generated from the movements of vehicles, operating the machinery, excavation activities and transportation of equipment and construction materials by heavy trucks. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located at industrial zone and already finished the construction, the potential impact on noise and vibration is not assessed and short-term affect must be caused, the construction period is temporary.

During the operation phase, noise impact may be a significant impact for wearing apparel sectors. The significant sources of noise impact activities are the operation of various machinery and equipment listed in for cutting, sewing and the emergency used of generator, vehicles and automobile movements (short-term noise) will be noise impacts sources. According to the noise results of 8 hours continuously measurement, at the source of operation area inside the factory is a little exceed in noise level of 70 dBA of NEQ (emission) guideline. Therefore, workers in operation area can cause hearing disorders.

During the decommissioning phase, the heavy vehicles, machineries and equipment used for decommissioning activities can affect the noise level and vibration of the area.

5.4. IMPACT ON ECOLOGICAL RESOURCES

The proposed project is located at the industrial zone. Therefore, there is no wildlife, forests, protected area, coastal resource or mangrove area and rare and endangered species are found around the project area. The nearest water body is Pan Hlaing River.

5.5. IMPACT ON HUMAN

5.5.1. Socio-economic

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

5.5.2. Occupational Health and Safety

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

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

During the decommissioning phase, activities related with decommissioning process can cause injuries and can affect the health of decommissioning workers

5.5.1. Waste Disposal

5.5.1.1. Solid Waste

During the construction and decommissioning phase, various kinds of solid wastes will be generated. These wastes will be collected and clean every day to avoid any undesirable working condition and environmental impacts. Based on their types (glass, metal, plastic, wood, cement residues, oil spills and paper based), these solid wastes will be collected separately in rubbish bins and regular and proper disposal will be done in accordance with YCDC guidelines.

In the operation phase, major solid wastes of the proposed wearing apperal factory may be generated from operation area, office and canteen. Factory use fabric, interling, thread and label as raw materials. The residual pieces of fabric scraps from the cutting sections and sewing sections are the main source of solid waste. In addition to factory solid waste, canteen and kitchen will produce solid wastes mainly personal remnants, household wastes and food residues.

5.5.1.2. Liquid Waste

There may be expected significant liquid waste from the construction and decommissioning phase. The main source of the liquid waste of these two phases may be from the operation and sanitary wastewater.

During the operation phases, sanitary wastewater from the usage of toilet facilities and canteens will be discharged as liquid waste. All the liquid waste will be collected in septic tanks and regular monitoring should be done in cooperation with YCDC and follow the YCDC guidelines for proper disposal.

5.6. SIGNIFICANT IMPACTS OF PROJECT ACTIVITY AND MITIGATION MEASURE

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

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

Categories	Source of Impact	Significant of Potential Impacts					Impact	Reason	Mitigation Measure
U		М	D	Ε	Ρ	SP	Significance		5
Impact on En	vironmental Resource								
Air	Dust and GHGs emission from vehicles used for transporting raw							Air pollution in atmosphere. Inhaling them can increase the chance you'll have	To control air pollution, the vehicles, generators and machineries have to check and maintain regularly.
	materials and final products Emission from emergency diesel	3	4	2	4	36	Moderate	health problems. People with heart or lung disease, older adults and children are at greater risk from air pollution.	The factory uses chimney for generator through which the flue gases are emitted for reducing the impact of stack emission on environment.
	generator and vehicle movement								Ensuring vehicles, compressor and generator are well maintained.
Water	Production process	1	4	1	1	6	Insignificant	The factory not generated wastewater from production process on CMP basic	No Mitigation Measure
Soil	Engine oil leaks, spills at diesel storage and during fuel refueling.	1	4	1	1	6	Insignificant	The factory compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant.	No Mitigation Measure
Noise and Vibration	Generating noise from the production machinery	1	4	1	1	6	Insignificant	The factory not operate heavy machinery the major noise source of CMP basic operation activities such as cutting, stitching/finishing and packaging by respective machines. There is	No Mitigation Measure

Categories	Source of Impact		nifi tent			acts	Impact	Reason	Mitigation Measure
U		м	D	Е	Ρ	SP	Significance		
								insignificant impact on surrounding environment	
Impact on Eco	ological Resources								
Flora and fauna on terrestrial and aquatic life	Operation of the jacket and cap factory	1	4	1	1	6	Insignificant	Not Significant Impact on Ecological Resources	No Mitigation Measure
Impact on Hur	man	•	•	•	•				
Fire	Poor electrical installations Waste disposed area raw materials and chemical storage	3	5	2	4	40	Moderate	Serious damage to property and even injury and death	To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must no be blocked with materials or machines for fire emergency cases.
Occupational Safety	Accidental cases cause by operating machines. Unloading, mixing, cutting, pressing and packaging activities. Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate	Accident in workplace (physical injuries or even death) can occur during operation.	First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. According to the observed light intensity values, the proponent provides sufficien lighting for workers for safe working and

Categories	Source of Impact		gnifi tent			acts	Impact Significance	Reason	Mitigation Measure	
		М	D	Ε	Ρ	SP				
									reducing optical problems of the workers.	
									Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department.	
									To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.	
Health	Influx of people Noise from the generating of the							Change in demographic structure, new diseases form immigrant workers	Manage the drainage systems of the factory to prevent health risk of the workers.	
	emergency generators	2	4	1	2	14	Very Low	To cause a range of health problems ranging from stress, poor concentration, productivity losses in the workplace, and communication difficulties and fatigue from lack of sleep, to more serious issues	The maximum allowable noise level for workers is 90dB(A) for 8 hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas	
Waste Genera	ation Impact									
Solid Waste	Residual pieces of fabric scraps from the							Surrounding environmental pollution and soil	Provides separate garbage bins at each building.	
	production lines Waste from packaging materials Waste from kitchen,	3	4	1	4	32	Moderate	contamination	All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area	
	dormitory and office.								Final wastes should be disposed by using YCDC's service.	

Categories	Source of Impact	Significant of Potential Impacts					Impact Reason	Mitigation Measure	
		М	D	Ε	Ρ	SP	Significance		
Liquid Waste	Septic system and sewage. Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	2	16	Low	Contamination of soil, surface water, ground water	Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.

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

Categories	Source of Impact			nifica tial I		of acts	Impact	Reason	Mitigation Measure
		М	D	Ε	Ρ	S	Significance		
Air	 Demolish of buildings and related materials Transportation of demolished materials 	3	1	1	4	20	Low	Emissions of particulate matters and carbon dioxide gases into the air	 Spray water twice a day Cover mesh trap around the decommission area Install shading net about 2 meters above temporary fence of decommission area Carry broken material with cover by canvas.
Water pollution	 Sewage form decommissioning workers Demolition machinery equipment 	3	1	1	3	15	Low	Contamination of surface water and ground water	Systematically demolish the septic tanks.
Soil	 Demolish of buildings and related materials Transportation of demolished materials 	3	1	1	3	15	Low	Contamination of soil	Manage the spillage of oil and diesel and sewage.

Categories	Source of Impact	Significant of Potential Impacts					Impact	Reason	Mitigation Measure
	••••	М	D	Е	Ρ	S	Significance		
Noise and Vibration	 Decommission activities Transportation of demolished materials 	3	1	1	3	15	Low	Noise pollution to the surrounding	 Carry out the activities during day time. Maintain the machines and vehicles to reduce noise pollution. Provide the ear plugs to the workers.
Waste disposal	Demolished debris such as bricks, concrete materials	2	1	1	3	12	Very Low	Dumping to the surrounding environment	Recyclable materials and dispose to the define areas.
Hazardous waste	Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low	Spillage of lubricant	Maintaining and preventing accidental mechanical oil spill,
Occupational Health and Safety (Accidents, Injuries)	 Decommissioning activities Transportation of demolished materials 	3	1	2	3	18	Low	Injuries and accidents	 Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board. Clean up excessive waste debris and liquid spills regularly. Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.



5.7. MITIGATION MEASURES OF IMPACT ON ENVIRONMENTAL RESOURCES

5.7.1. Recommended Air Impact Mitigation Measures

During the operation phases, ventilation system of the factory is enough for the workers cause the proponent has installed Moist Fan around the factory building. To control air pollution, the vehicles, generators and machineries had to be checked and maintained regularly. Since the factory compound area is paved with concrete, dust emission from the movements of vehicles and cars is not significant. Ensuring vehicles, compressor and generator are well maintained.

During the decommissioning phases, the impact on air quality can be controllable and reduced to minimum level and minimized dust emissions from material handling sources. Sprinkling water on the top soil can reduce dust emission from the demolishing activities. In the proposed project area, vehicle movements should be limited, maintained, and checked the vehicles and machineries regularly. Burning the demolished materials and residual wastes must not be allowed.

5.7.2. Mitigation Measure of Impact on Water

During the operation phase, water discharge from the factory site will be treated by silts track tank before discharging. The factory plan has canteen and toilet facilities attached in various buildings of the factory. In addition, around the compound area of the project area, drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. Besides, the factory plans to use separate wastewater channels, septic type toilet system. Wastewater from canteens and toilet facilities are collected in septic tanks which are attached with sewer treatment plant and the proponent will connect and cooperate with YCDC to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory had to be maintained and cleaned regularly. Spillage and leakages of oil and grease should also be minimized.

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

5.7.3. Mitigation Measure of Impact on Soil Contaminate

During the operation phase, the compound area of the factory area will be paved with concrete and hence, contamination due to the oil spillage at this area is insignificant. However, refilling fuel must be done with great care for preventing spillage.

During the decommissioning phase, impact on soil can be mitigated by using modernized machineries, these machines would be maintained regularly and isolated maintenance area would be identified. Any accidental spills of fuel, oil or other hazardous waste must be avoided. Construction wastes and demolishing debris should be disposed properly.

5.7.4. Mitigation Measure of Impact on Noise

During the operation phase, the regular maintenance plans for vehicles, machines and generators should be provided to mitigate impact on noise. Using modernized low noise machines should be used if possible. Noise impact to employees shall be minimized by providing earmuffs and ear plugs to those working near the noisy machines.

During the decommissioning phases, temporary noise pollution can be controlled by planning regular maintenance for decommissioning vehicles and machines. Moreover, construction and decommissioning activities should not be worked during nighttime.

5.8. MITIGATION MEASURES OF IMPACT ON HUMAN

5.8.1. Mitigation Measures on Fire Hazard

The project proponent has provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 5724 gallons at the proposed area. The emergency contact numbers of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases. In addition, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. The plan to install fire alarm system and fire-frightening system are mentioned in below.

5.8.2. Mitigation Measure for Occupational Health and Safety

Medicines and first aid kits are provided in this proposed area. Moreover, these medicines and first aid are provided for emergency cases of workers. First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for workers. According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. To prevent electric shock hazards,

electrical maintenance staff (repairperson) is to be assigned to do regular inspections and take preventive measures. The project proponent must manage the drainage systems of the factory to prevent health risk of the workers.

The Occupational Safety and Health Administration (OSHA) have recommended permissible noise exposure limit for industrial workers, which is based on 92 dB (A) for 6hours exposure a day with 5dB trading rates. The limits are mentioned in. According to OSHA, the maximum allowable noise level for workers is 92 dB (A) for 6hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas, need to provide if actual noise level monitoring results are more than 90 dB (A) at the work site for working time hours for 8 hours.

Total Time of Exposure Per Day in Hours	Noise Level dB(A)
6	92
4	95
3	97
5	100
1	105
1/2	110
1/4	115

Table 5-4 Permissible exposure of noise limits

5.8.3. First Aid Guidelines and Facilities

A well-organized and proper first aid system is implanted to provide immediate first aid to anyone who is injured in the workplace and had also conducted the first aid training by Myanmar Red Cross Society. Adequate number of first-aid kits are listed and made available at all workplaces and contacts of medical providers; hospitals will be notified. The followings are some of the contents in a sample first aid kit.

- Bandage
- Adhesive Tape
- Antiseptic wipe
- Burn dressing and treatment items
- Cold pack
- CPR barrier
- Sterile wound dressings
- Sterile eye coverings
- Scissors, tweezers, compress

5.8.4. Mitigation Measure of Waste Generation

During the operation phase, the project proponent provides separate garbage bins at each building. All the solid wastes will be collected separately in garbage based on their types and stored in relevant temporary waste storage area.

During the decommissioning phase, some of demolished solid wastes must be recycled and the other solid wastes should be stored in dedicated waste storage area in the project site and transferred to YCDC for final disposal.

The objective of the Industrial Disaster Management Plan is to make use of the combined resources of the plant and the outside services to achieve the following:

- Effect the rescue and medical treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment;
- Initially contain and ultimately bring the incident under control;
- · Identify any dead;
- Provide for the needs of relatives;
- Provide authoritative information to the news media;
- · Secure the safe rehabilitation of affected area;

• Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.

It is attempted to plan and construct the buildings following all safety norms. However, it is not always possible to eliminate such eventualities and random failures of equipment or human errors. An essential part of major hazard control has therefore, to be concerned with mitigating the effects of such emergency and restoration of normalcy at the earliest. Detailed Table showing activities during construction and operation phases along with mitigation measures are given in Table 5-5.

Hazards Associated with Activities	Control / Mitigation Measures
Manual Handling	
Strains and sprains - incorrect lifting - too heavy	Exercise/ warm up-get help when needed control loads-rest breaks/ no exhaustion-no rapid movement/
loads -twisting - bending - repetitive movement -	twisting/bending/repetitive movement – good housekeeping.
body vibration.	
Falls - Slips - Trips	
Falls on same level - falls to surfaces below - poor housekeeping- slippery surfaces uneven surfaces -poor access to work areas climbing on	Housekeeping - tidy workplace - guardrails, handholds, harnesses, hole cover, hoarding, no slippery floors/trip hazards - clear/ safe access to work areas-egress from work areas
and off plant-unloading materials into excavations wind - falling objects.	- dust/water controlled - PPE.
Fire	
Flammable liquids/Gases like LPG, Diesel Storage area and combustible building materials - poor housekeeping - grinding sparks – open flames, absence of Fire hydrant network.	Combustible/ flammable materials properly stored /used -good housekeeping-fire extinguishers made available & Fire hydrant Network with reserve Fire water (As per NFPA Code) - Emergency Plan in case of Fire or collapse of structure.

Table 5-5	Activities during Construction and Operation along with Mitigation Measures
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Hazards Associated with Activities	Control / Mitigation Measures
Absence of Personal Protective Equipment _ack of adequate footwear- head protection hearing/ eye protection - respiratory protection gloves-goggles.	Head / face- footwear- hearing / eye-skin respiratory protection provided - training maintenance.
Defective or wrong Hand Tools	
Wrong tool - defective tool - struck by flying debris- caught in or on -missing guards - carbon monoxide - strains and sprains - dust.	Right tool for the job - used properly – good condition/ maintenance guards- isolation eye/ face protection - flying debris controlled.
Electricity	
Electrocution – overhead / underground services - any leads damaged or poorly nsulated temporary repairs -no testing and tagging circuits	Leads good condition and earthed – no temporary repairs - no exposed wires-good insulation-no overloading - use of protective devices - testing and tagging -no overhead/ underground services
overloaded-non-use of protective devices.	
Scaffolding	
Poor foundation-lack of ladder access nsufficient planking-lack of guardrails and toe boards-insufficient ties or other means- all scaffolds incorrectly braced or stabilized to prevent overturning.	All scaffolds correctly braced and stabilized - 3:1 height to base ratio - firm foundation, plumb and level - ladder access provided and used - proper platform (3 planks/ 675 mm) - planks secured- guardrails and toe boards – 900 mm to 1100mm high, within 200 mm of working face, mid - rail.
Ladders Carrying loads - not secured against dislodgement - defective ladders– not sufficient length- wrong positions - ncorrectly placed (angles, in access ways, vehicle movements.	Secured against movement or footed - ladders in good condition – regularly inspected - extend one (1 m) meter above platform - 4:1 angle - out of access ways, vehicle movements - climbing - no carrying loads - 3 points of contact - no higher than 3rd step down - use for access only, not working platforms.
Excavations	
Trench collapse - material falling in	Soil stability known-no water accumulation existing
undetected underground services-falls- nazardous atmosphere struck by traffic and nobile plant.	services known - material 600 mm from edge - clear of suspended loads hardhats/ PPE- ladders - public protection - atmospheric testing- traffic controls - Emergency Plan.
Gas Cutting and Welding	
Fire-welding flash, burns, fumes, electrocution in wet conditions- flashback in oxygen set, leaking cylinders, acetylene cylinders lying down-poorly maintained eads.	Welding flash and burns controlled with PPE and shields -fumes controlled with ventilation and PPE (in good condition and properly positioned), Gas cylinders be kept upright & secured position (properly tied) - combustible materials to be kept at secured place to avoid fire & Fire Extinguishers to be kept in fire prone area with training to people for its use.
Noise Jnknown noise levels - known noise levels over 85 decibels	Levels below 85 decibels – proper protection.

Hazards Associated with Activities	Control / Mitigation Measures
Fall during carrying/ Lifting materials dislodged tools and materials from overhead work areas.	Materials to be secured-kept away from edge- toe boards -Use of hard hats.
Carnage & Lifts	
Display of carrying capacity i.e., load (No. of person) incorrectly slung, defective lifting equipment, unsecured loads, craning in close proximity to building people and plantfalls falling materials.	Periodic testing by competent authority correctly slung/ secured loads, lifting equipment good condition- use of proper hand signals - falls while unloading controlled.
Visitors Presence at site	
Falls -struck by - dropped materials-road accidents -insufficient hoarding or fencing pedestrian access past site-mechanical plant movement on and off site	Sufficient hoarding - fencing and barricades safe pedestrian access past site traffic management for loading and delivery construction separated from occupied areas of projects

6. ENVIRONMENTAL MANAGEMENT PLAN

6.1. ENVIRONMENTAL MANAGEMENT SYSTEM

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

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



Figure 6-1 Environmental Management System

- Commitment and Policy Top management commits to environmental improvement and establishes the organization's environmental policy. The policy is the foundation of the EMS.
- Planning An organization first identifies environmental aspects of its operations.
 Environmental aspects are those items, such as air pollutants or hazardous waste that can

have negative impacts on people and the environment. An organization then determines which aspects are significant by choosing criteria considered most important by the organization. For example, an organization may choose worker health and safety, environmental compliance, and cost as its criteria. Once significant environmental aspects are determined, an organization sets objectives and targets. An objective is an overall environmental goal (e.g., minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (e.g., reduce use of chemical X by 25% by September 1998). The final part of the planning stage is devising an action plan for meeting the targets. This includes designating responsibilities, establishing a schedule, and outlining clearly defined steps to meet the targets.

- Implementation An organization follows through with the action plan using the necessary resources (human, financial, etc.). An important component is employee training and awareness for all employees. Other steps in the implementation stage include documentation, following operating procedures, and setting up internal and external communication lines.
- Evaluation A company monitors its operations to evaluate whether targets are being met.
 If not, the company takes corrective action.
- Review Top management reviews the results of the evaluation to see if the EMS is working. Management determines whether the original environmental policy is consistent with the organization's values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

6.1.1. Institutional Requirement

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

6.1.2. Responsibilities of the EMP

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

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

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

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

6.1.3. Structure and Responsibilities for the EMP Development and Implementation

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

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



Figure 6-2 Organization Structure of Environmental Management Plan

Table 6-1	Responsibilities of HSE Members
Roles	Responsibilities
General Manager	The General Manager will be assisted by the Operations Manager and also the HR and HSE Officer. In terms of environmental protection commitments, the Operation Manager will be the key driving force and will be responsible for:
	Establishing overall environmental direction and policy
	Ensuring the implementation of the EMP
	• Ensuring investigation of all environmental incidents are reviewed and that reports are submitted on time
	Ensuring an effective system of internal and external communication is in place
	 Providing advice regarding the environmental program
Operation Manager	The Operation Manager will assist the General Manager in looking into the overall environmental matters during the operational phase of the Project. The Operation Engineer will also be responsible for:
	 Adherence to the overall environmental direction and policy
	 Ensuring the implementation of the recommended actions in the investigation of all environmental incidents
	 Managing resources for operation wastes
HR Manager	The HR Manager will carry out the day-to-day management of workers and social issues in the factory. The HR Manager will be responsible for:
	Assisting the management in publicising and implementing corporate and local policies, objectives and programs
	 Maintaining key environmental-related documents and information
	 Communicating/ liaising with the local authorities on environmental issues
HSE Officer	The HSE Officer will be the key person in charge of all environmental matters pertaining to the site. The HSE Officer will be responsible for:
	 Coordinating the implementation of environmental programs, including monitoring of the project site environmental performance
	 Performing periodic internal environmental audits and inspections to ensure compliance with the legal environmental requirements
	 Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;
	 Carry out a thorough initial site inspection of environmental controls prior to work commencement;
	• Record and provide a written report to the General Manager and production team of non-conformances with the EMP and require the HR Manager to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.

Table 6-1 Responsibilities of HSE Members

6.2. ENVIRONMENTAL MANAGEMENT PROCESS

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

Objective	To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement.							
	To comply with relevant government rules							
Relevant	National Environmental Quality (Emission) Guideline 2015,							
Government Law and Rule	Motor Vehicles Act (2015),							
Kule	Boiler Law (2015)							
Time Frame	Entire life spans of proposed project operation							
Management Action	Must be plant around the proposed project to reduce carbon emission							
	Should be prohibited burning of waste material at the proposed project site							
	Must be control air pollution, the vehicles, generators and machineries have to check and maintain regularly.							
	The factory should use chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment.							
	Must be ensuring vehicles, compressor and generator are well maintained.							
Monitoring and	Frequency Biannually (16°51'23.22"N, 96° 3'32.46"E)							
Reporting	Monitoring Point Indoor and Outdoor of proposed project							
	Parameters PM 2.5, PM 10, SO2, NO2, O3, CO							
Estimated Cost	1,000,000 Kyats per year							
Responsible Person	Management of the proposed factory;							
	 Head of maintenance: Total implementation of above of air po management plan 							
	 Production manager: Air quality in the production area is good enough 							
	 Manager: To hire organization/ independent third-party testing air quality 							

6.3. AIR POLLUTION/ DUST MANAGEMENT PLAN

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

6.4. WATER CONSUMPTION MANAGEMENT PLAN

Objectives:	• The water consumption management is aimed at minimizing ground water use
Performance Indicator:	 Prohibitions on accessing and using underground water without a license Water consumption saving of general water use from groundwater
Relevant government law and rule	The Underground Water Act (1930)
Management	Install water meter for internal control of water consumption
Plan	• All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption
	 The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles
	Trees plantation surrounding the factory
Monitoring & Reporting	 Daily visual inspections 16°51'23.48"N, 96° 3'32.22"E
Time Frame	Once in a year throughout the factory life
Estimated cost	Approximately 500,000 kyats (annually)
Responsibility	Factory ManagerArrange audit on water usage controls environmental officer

6.5. LIQUID WASTE MANAGEMENT PLAN (WASTEWATER)

Objective	To implementation plan for the management of liquid waste from collection, through treatment and resource recovery, to residual disposal
Relevant Government Law and Rule	Yangon City Development Committee Law (2018), National Environmental Quality (Emission) Guidelines (2015), Underground Water Act
Time Frame	Entire life spans of proposed project
Management Action	Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Monitoring and Reporting	Frequency Biannually (16°51'23.71"N, 96° 3'32.54"E)
	Parameters pH, Turbidity, Conductivity, Iron, Sulpahte, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically
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Estimated Cost	500,000 Kyats per year
Responsible Person	Manager: To hire organization/ Independent third-party testing wastewater quality
	EHS officer: Monitor the condition of factory's drainage and sewerage system

Objective	To maintain low noise exposures, such that human health and well- being are protected. The specific objectives of noise management are to develop criteria for the maximum safe noise exposure levels, and to promote noise assessment and control as part of environmental health programmes.					
Relevant Government Law and	National Environmental Quality (Emission) Guideline 2015					
Rule						
Time Frame	Throughout the project life					
Management Action	 Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment 					
	Impose speed limit to track and vehicles at the transportation route.					
	Provide sufficient personal protective equipment (PPE) at the work place					
		ted personnel will be provided proper training about the ues and ensure PPE wear during working in noisy area.				
Monitoring and	Frequency	Biannually				
Reporting	Monitoring Point	Two points in operation area (especially cutting and sewing) (16°51'22.80"N, 96° 3'32.11"E) (16°51'22.01"N, 96° 3'31.88"E)				
	Parameters	Sound Decibel				
Estimated Cost	500,000 Kyats per year					
Responsible Person	HSE Manager or Environmental Management Team of Tae Hyun (Myanmar) Industry Company Limited.					

6.6. NOISE MANAGEMENT PLAN

6.7. SOLID WASTE MANAGEMENT PLAN

Objective	To assess the activities involved for the proposed and determine the
	type, nature and estimated volumes of waste to be generated
	To identify any potential environmental impacts from the generation of waste at the site

Relevant Government Law and Rule	 Yangon City Development Committee Law (2018), National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	Entire life spans of proposed project
Management Action	Must be provides separate garbage bins at each building.
	All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area
	Final wastes should be disposed by using YCDC's service.
Monitoring and	Daily waste has to be collected and handover to YCDC waste collector
Reporting	The inventory record of waste disposal will be maintained as proof for proper management as designed
	(16°51'23.42"N, 96° 3'32.20"E)
Estimated Cost	50,000 Kyats per month
Responsible Person	Manager (HR)
	 Responsible for overall site cleanliness and waste management
	 Regular waste collection to minimize excessive waste storage

6.8. FIRE MANAGEMENT PLAN

Objective	To ensure that fire control practices are implemented on site to minimise the risk of fire from site operations and bush fires
Relevant Government Law and Rule	Myanmar Fire Brigade Law 2015
Time Frame	Entire life spans of proposed project operation
Management Action	Must be provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases.
	Must be indicated the emergency exit and assembly point in public area.
	Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening.
	The emergency fire alarms are installed at the factory for alerting the workers in case of fire.
	The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Monitoring and Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguish, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)

	(16°51'22.63"N, 96° 3'32.41E)
Estimated Cost	1,200,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Tae Hyun (Myanmar) Industry Company Limited.

6.9. OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PLAN

Objective	To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.					
Relevant Government Law and Rule	 Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019) 					
Time Frame	Entire life spans of proposed project					
Management Action	First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.					
	According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers.					
	Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department.					
	To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.					
	Manage the drainage systems of the factory to prevent health risk of the workers.					
	The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.					
Monitoring and	Weekly check fire extinguishers and water hydrant in position					
Reporting	Daily inspect that all fire exist are open					
	 Servicing fire extinguisher and records accidents 					
	(16°51'22.38"N, 96° 3'32.08"E)					
Estimated Cost	1,000,000 Kyats per year					
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Tae Hyun (Myanmar) Industry Company Limited.					

6.10. ENERGY MANAGEMENT PLAN

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

6.11. EMERGENCY RESPONSE AND DISASTER MANAGEMENT PLAN

Objectives:	To reduce the harmful effects of all hazards, including disasters. The World Health Organization defines an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming a disaster, which is even harder to recover from.
Relevant government law and rule	The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)
Time Frame	 Entire life spans of the factory operation
Management Action	 The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm Provision and inspection of firefighting equipment and fire hydrant system in all the sections A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training. Regular fire drill operation is conducted Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the

	 building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals. A medical team has been prepared for primary treatment (First Aid) Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy. Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety
Monitoring & Reporting	Weekly check fire extinguishers and water hydrant in position Daily inspect that all fire exist are open Servicing fire extinguisher and records accidents, (16°51'22.31"N, 96° 3'32.17"E)
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	 Manager and EHS officer Arrange firefighting training after every 3 months Responsible for fire control and response Monitoring daily danger warning and bans

6.12. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

The EMoP cell members responsible may conduct daily, weekly or monthly general inspections of the project area and facilities. The objectives are to identify non-compliances to EMoP. Table 6-2 is provided the environmental monitoring schedule for Tae Hyun (Myanmar) Industry Company Limited. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

Table 6-2 Environmental Monitoring Schedule for Tae Hyun (Myanmar) Industry Company					Company Limited
Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
	•	Oper	ation Phase		
Air quality	PM 2.5, PM 10, SO2, NO2, O3, CO, VOC	Biannually monitoring and reporting to ECD	Proposed project area (16°51'23.22"N, 96° 3'32.46"E)	1,000,000 Kyats	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
	Solid waste	weekly	Waste storage area (16°51'23.42"N, 96° 3'32.20"E)	200,000 Kyats per year	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
Waste Generation	Wastewater (pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate)	Biannually	Domestic waste at the factory (office, canteen) (16°51'23.71"N, 96° 3'32.54"E)	800,000 Kyats	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory (16°51'22.63"N, 96° 3'32.41E)	500,000 Kyats	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
Light intensity	Illuminance	Monthly	At the production area (Especially Drilling) (16°51'22.28"N, 96° 3'32.34"E)	20,000 Kyats	Environmental Management Team's Tae Hyun (Myanmar)

Table 6-2	Environmental Monitoring	Schedule for Tae Hy	/un (Myanmar)) Industry Comp	anv I imited
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Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
					Industry Company Limited
Occupational safety and health	-	Weekly	Operation area (16°51'22.38"N, 96° 3'32.08"E)	500,000 kyats per year	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
Noise	Noise level in decibel (dBA)	Biannually monitoring and reporting to ECD	Two points in operation area (cutting and sewing) (16°51'22.80"N, 96° 3'32.11"E) (16°51'22.01"N, 96° 3'31.88"E)	100,000 kyats per year	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
Emergency response	-	Weekly	the whole factory (16°51'22.31"N, 96° 3'32.17"E)	1,500,000 Kyats per year	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
Water consumption		Daily actual inspection	16°51'23.48"N, 96° 3'32.22"E	500,000 kyats per year	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited
		Decomm	issioning Phase		
Air quality	PM 2.5, PM 10, SO2, NO2, O3, CO, VOC	One time during this phase	One point in the production area (16°51'22.34"N, 96° 3'32.21"E)	1,000,000 Kyats	Project proponent
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area (16°51'22.34"N, 96° 3'32.21"E)	1,000,000 Kyats	Project proponent
Wastewater management	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS,	One time during this phase	One points in demolishing area (16°51'22.34"N, 96° 3'32.21"E)	800,000 Kyats	Project proponent

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
	Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate				
Occupational safety and health	-	One time during this phase	All decommissioning area (16°51'22.34"N, 96° 3'32.21"E)	500,000 Kyats	Project proponent
Fire	-	One time during this phase	All decommissioning area (16°51'22.34"N, 96° 3'32.21"E)	800,000 Kyats	Project proponent
Emergency Response	-	One time during this phase	All decommissioning area (16°51'22.34"N, 96° 3'32.21"E)	1,000,000 Kyats	Project proponent
Rehabilitation	Recovering and Revegetation	-	All decommissioning area (16°51'22.34"N, 96° 3'32.21"E)	1,000,000 Kyats	Project proponent

6.12.1. Budget Plan for Environmental Management and Monitoring

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

The following table shows the expenditures for the implementation of Environmental Management Plan for operation phase annually. Estimation cost for EMP implementation is presented in Table 6-3.

Table 6-3	Cost estimation for EMP implementation
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No	Item	Frequency/Times	Cost (MMK)	
Mitigation Plan				
1	Maintenance of air ventilation system	Once per year	1200,000 per year	
2	Tree plantation within the area of factory compound	Once per three months	200,000 per three months	
3	Solid waste disposal	Monthly	200,000 per month	

No	Item	Frequency/Times	Cost (MMK)	
4	Purchase of Personal Protective Equipment (PPE)	Once per half a year	200,000 per month	
5	Medical Check-up and Health Insurances	Once per year	1,000,000 per year	
Eme	rgency Preparedness	·		
1	Fire extinguisher	Once per month		
2	Fire alarm system	Once per month	500,000 per month	
3	First Aid Fits	Once per month		
Moni	toring Plan			
1	Air Quality	Biannually	1,000,000 per year	
2	Water Quality	Biannually	800,000 per 6 month	
3	Noise level	Biannually	100,000 per year	
4	Waste generation (Solid)	weekly	200,000 per year	
5	Occupational health and safety	Monthly	500,000 per year	
6	Environmental compliance auditing	1	600,000 lump sum	

6.13. CAPACITY BUIDLING AND TRAINNING PLAN

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

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

6.13.1. Assignment of responsibilities

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

6.13.2. Emergency procedures

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

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

6.13.3. Training for Emergencies

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

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

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

6.13.4. Fire Prevention and Protection

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

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

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

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

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

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

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

6.13.5. Fire Protection Equipment

- 1. Explosion Suppression Systems: Explosion suppression systems should be used in unusually hazardous areas such as elevator legs, boots and head, or in areas such as bins, distributors and tanks.
- 2. Portable Fire Extinguishers: All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:
 - Correct type of extinguisher to use on different classes of fire
 - Proper techniques for use of the equipment to extinguish a fire

- 3. Standpipes and Hoses: All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.
- 4. Automatic Sprinkler Systems: Automatic sprinkler systems are recommended in areas containing combustible materials.
- 5. Fire Hydrants: All grain and feed mill facilities should have adequate public or private fire hydrants on site. Each fire hydrant should have an adequate water supply.

6.13.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

- o Emergency escape routes must be clearly shown on floor plans and workplace maps
- o Employers must know that their employees know the emergency escape routes
- o Procedures for employees who must remain to operate critical equipment before evacuating
- Identification and assignment of personnel responsible for rescue or emergency medical aid Fire Safety Plans should include the following information:
- 1. Procedure for reporting a fire or other emergency
- 2. Site plans indicating the following
 - The Occupancy assembly point
 - The locations of fire hydrants
 - The normal routes of fire department vehicles access
- 3. Floor Plans identifying the locations of the following
 - Exits
 - Primary evacuation routes
 - Secondary evacuation routes
 - Accessible egress routes
 - Areas of refuge
 - Exterior area for assisted rescue
 - Manual fire alarm boxes
 - Portable fire extinguishers
 - Occupant-use hose stations
 - Fire alarm annunciators and controls

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

Table 6-4 American National Fire Fighting Association (NFFA) Standards

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

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

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

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

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

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

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

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

6.13.7. Site Fire Control

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

6.13.8. Employee Information and Training

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

- Methods for detecting the presence or release of a hazardous chemical, such as monitoring devices and the visual
- appearance or odor of the chemical
- Physical and health hazards of chemicals in their work area

- How to protect themselves using work practices, emergency procedures and personal protective equipment
- How to interpret the information on the labels and MSDS.

6.13.9. Health and Safety Training Plan for Worker

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

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

 Table 6-5
 Training Plan Used in Tae Hyun (Myanmar) Industry Company Limited

6.14. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain though Grievance Committee, which includes the responsible persons of Tae Hyun (Myanmar) Industry Company Limited representative from Hlaing Thar Yar Industrial Zone (Part-4) and representative from General Administration Department (Hlaing Thar Yar Township). Small issues will be solved at the Grievance Committee stage and other unsolved problems will be submitted to higher responsible authorities and finally the responsible person decided by the court in legal terms. The following diagram (Figure 6-3) show steps of Grievance Redress Mechanism of Proposed Factory Project.



Figure 6-3 Grievance Redress Mechanism flow diagram

6.15. CORPORATE SOCIAL RESPONSIBILITY (CSR) PLAN

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

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

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

 Table 6-6
 CSR Plan at Tae Hyun (Myanmar) Industry Company Limited

6.15.1. Public School

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

6.15.2. Non-profit Training

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

6.15.3. Healthcare

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

7. PUBLIC CONSULTATION

7.1. PUBLIC CONSULTATION PROCESS

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

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

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

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

During the preparation of this report, the second wave of Covid-19 disease becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people to avoid close contact and to prevent spreading of disease. Thus, the project condition, the present environmental condition and the management plan are through the social media of Myanwei Environmental Solution Company Limited Facebook page (https://drive.google.com/file/d/1BglviXgyVBCBKwkb4hFP8Fw5Bggl HLbZ/view?usp=drivesdk) declared in 30 September, 2020 and until now due to current situation. The suggestion, complain and comments from the public, organization and stakeholder are warmly welcome and accept via mailing, comment, telephoning and messengers.

Public consultation will be conducted and reported in this EMP report when submitting the approved EMP report.

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

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

Services Offers Home Reviews Shop Photos **Myanwei Environmental Solutions** ... **Company Limited** 3 m • 🕄 ရန်ကုန်တိုင်းဒေသကြီး ၊ လှိုင်သာယာမြို့နယ် ၊ လှိုင်သာယာ စက်မှုဇုန် အပိုင်း-(၄)တွင် တည်ရှိသော Tae Hyun (Myanmar) Industry Company Limited (CMP စနစ် ဖြင့်အဝတ်အထည်ချုပ်လုပ်ခြင်းလုပ်ငန်း{ဂုဂုကင်အမျိုးမျိုးနှင့် ဦးထုပ်အမျိုးမျိုး}) အတွက် Myanwei Environmental Solutions Company Limited မှ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအ စီအစဥ္ဂ် (EMP Report) အားတာဝန်ယူဆောင်ရွက်လျက်ရှိ ပါသည်။ ယခု အခါ EMP အစီရင်ခံစာအတွက် လေ့လာပြီးစီးစဉ့်အချိန် တွင် အများပြည်သူ၏ သဘောထားများအကြုံပြု နိုင်ရန် အတွက် Power Point ဖိုင်အား တင်ပြအပ်ပါသည်။ #Myanwei_Environmental_Solutions စီမံကိန်း အကြောင်းအရာ ဖော်ပြချက်https://drive.google.com/file/d /1BglviXgyVBCBKwkb4hFP8Fw5BggIHLbZ/view

?usp=drivesdk

Tae Hyun (Myanmar) Industry Co.,Ltd. ၏ CMP စနစ်ဖြင့် အပတ်အထည်ချုပ်လုပ်ခြင်းလုပ်ငန်း (ဂျာကင်အမျိုးမျိုးနှင့်ဦးထုပ်အမျိုးမျိုး)

> ပတ်ပန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာ (မူကြမ်း) အတွက် သက်ဆိင်သမားနှင့် တေ ဆံဆေးနေးပဲ အခမ်းအနား။

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

8. CONCLUSION & RECOMMENTATION

8.1. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Tae Hyun (Myanmar) Industry Company Limited is located at at Plot No. (139), Myay Taing Block No.Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An EMP has been carried out for the factory according to the requirement of the proponent as it has been made for jacket and cap product manufacturing factory.

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

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

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

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

8.2. RECOMMENTATION

This is recommended that;

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

• Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

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

31-Mar-23

9. REFERENCE

[1] General Administrative Department (Myothit - Hlaing Thar Yar Township), Hlaing Thar Yar Township Data (2019).

[2] Hla Hla Aung, Potential Seismicity of Yangon Region (Geological Approach), "Yangon Surface Displacement as Detected by Insar Time Series Analyisi" July 2011.

[3] Ministry of Natural Resources and Environmental Conversation (MONREC), "Environmental Impact Assessment Procedure" December 2015.

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

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

[6] https;//weatherspark.com/y/112503/Average-Weather-in-Yangon-Myanmar-(Burma)-Year-Round.

APPENDIX A

Company Document's Tae Hyun (Myanmar) Industry Company Limited



ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ် Certificate of Incorporation

TAE HYUN (MYANMAR) INDUSTRY CO., LTD. Company Registration No. 121528797

မြန်မာနိုင်ငံကုမ္ပဏီများဥပဒေ၂၀၁၇ အရ TAE HYUN (MYANMAR) INDUSTRY CO., LTD. အား၂၀၁၉ ခုနှစ် ဇူလိုင်လ ၃၀ ရက်နေ့တွင် အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့်ပြုလိုက်သည်။

This is to certify that **TAE HYUN (MYANMAR) INDUSTRY CO., LTD.** was incorporated under the Myanmar Companies Law 2017 on 30 July 2019 as a Private Company Limited by Shares.

WetSinter

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ Registrar of Companies ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန Directorate of Investment and Company Administration





Form (5-B)

THE REPUBLIC OF THE UNION OF MYANMAR

Yangon Region Investment Committee

ENDORSEMENT

Endorsement No. YGN -277/2019 Date 29 October 2019 This endorsement is issued by Yangon Region Investment Committee in accordance with Section 25(d) of the Myanmar Investment Law-

(1)	Name of Investor MR. KOO JA YONG
(2)	Citizenship KOREAN
(3)	Residence Address NO. 13-301, 262-GA-JEUNG RO SKO KU, INCHEON,
	REPUBLIC OF KOREA
(4)	Name and Address of Principal Organization TAE HYUN (MYANMAR)
	INDUSTRY COMPANY LIMITED, PLOT NO.139, MYAY TAING BLOCK NO.
	PART-4, INDUSTRIAL ZONE, HLAING THAR YAR TOWNSHIP, YANGON
(5)	Place of Incorporation MYANMAR
(6)	Type of huginess MANUFACTURING OF WEARING ARRADEL (SUCH AS

- (6) Type of business MANUFACTURING OF WEARING APPAREL (SUCH AS VARIOUS KINDS OF JACKET AND CAP) ON CMP BASIS
- (7) Place(s) of investment Project PLOT NO.139, MYAY TAING BLOCK NO. PART-4, INDUSTRIAL ZONE, HLAING THAR YAR TOWNSHIP, YANGON REGION
- (8) Foreign Capital Amount NIL
- (9) Period for Foreign Capital to be brought in <u>NIL</u>
- (10) Total Amount of Capital (Kyat) 1245.000 MILLION (INCLUDING US\$ 0.290 MILLION)
- (11) Construction/ Preparation Period 1 YEAR
- (12) Validity of Endorsement 25 YEARS
- (13) Form of Investment MYANMAR CITIZEN INVESTMENT
- (14) Name of Company Incorporated in Myanmar TAE HYUN (MYANMAR) INDUSTRY COMPANY LIMITED





(Phyo Min Thein) Chairman مر



ပုံစံ (၅-ခ)

J: Jose

(ဖြိုးမင်းသိန်း)

SWE S

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အတည်ပြုမိန့်

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(c)	ရင်းနှီးမြှုပ်နှံသူ/ကမကထပြုသူအမည်MR. KOO JA YONG
(J)	နိုင်ငံသား KOREAN
(၃)	နေရပ်လိပ်စာ NO.13–301, 262–GA–JEUNG RO SKO KU, INCHEON,
	REPUBLIC OF KOREA
(၄)	ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ TAE HYUN (MYANMAR) INDUSTRY
	COMPANY LIMITED ၊ မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် –အပိုင်း(၄)၊
	စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်မြို့
(၅)	ဖွဲ့စည်းရာအရပ် မြန်မာ
(၆)	ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အဝတ်အထည်
	ချုပ်လုပ်ခြင်း လုပ်ငန်း (ဂျာကင်အမျိုးမျိုး နှင့်ဦးထုပ် အမျိုးမျိုး)
(၇)	ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ်
•	–အပိုင်း(၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
(റെ	နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ မရိ
(ල)	နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ မရှိ
(00)	စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) ၂၄၅.၀၀၀ သန်း (အမေရိကန်ဒေါ်လာ
	၀.၂၉၀ သန်း အပါအဝင် ကျပ် တစ်ထောင် နှစ်ရာ လေ့ဆယ့်ငါးသန်း တိတိ)
(၁၁)	တည်ဆောက်မှုကာလ ၁ နှစ်
(၁J)	ရင်းနှီးမြှုပ်နှံမှုခွင့်ပြုသည့်သက်တမ်း ၂၅ နှစ်
(၁၃)	ရင်းနှီးမြှုပ်နှံမှုပုံစံ မြန်မာနိုင်ငံသားရင်းနှီးမြှုပ်နှံမှု
(၁၄)	မြန်မာနိုင်ငံတွင်ဖွဲ့စည်းမည့်ကုမ္ပဏီအမည် TAE HYUN (MYANMAR) INDUSTRY
,	COMPANY LIMITED

2019

ကန့်သတ် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော် **ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ** မြေကွက်အမှတ် ၄၉၊ စိမ်းလဲ့မေ လမ်းသွယ်၊ ကမ္ဘာအေးဘုရားလမ်း၊ ရန်ကင်းမြို့နယ်၊ ရန်ကုန်မြို့

စာအမှတ်၊ ရကတ /အ–၂၇၇/၂၀၁၉ (၁၁၄၁) ရက်စွဲ ၊ ၂၀၁၉ ခုနှစ် အောက်တိုဘာလ **ာပ**ရက် Tae Hyun (Myanmar) Industry Company Limited မှ CMP စနစ်ဖြင့် အဝတ်အထည် ချုပ်လုပ်ခြင်းလုပ်ငန်း (ဂျာကင်အမျိုးမျိုး နှင့်ဦးထုပ် အမျိုးမျိုး) အတည်ပြုမိန့်အပေါ် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီ၏ ဆုံးဖြတ်ချက်

🕾 ၀၁– ၆၅၈၂၆၃ 📇 ၀၁– ၆၅၈၂၆၄ အကြောင်းအရာ။

သမ္မတမြန်မ

Je souse

ရည်ညွှန်းချက် ။ Tae Hyun (Myanmar) Industry Company Limited ၏ ၂၀၁၉ ခုနှစ် အောက်တိုဘာလ ၈ ရက်စွဲပါစာ

၁။ Tae Hyun (Myanmar) Industry Company Limited မှ မြေကွက်အမှတ် ၁၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် -အပိုင်း(၄)၊ စက်မှုစုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးရှိ ၀.၉၇၇ ဧက (၃၉၅၃.၇၇၈၇ စတုရန်းမီတာ) တွင် CMP စနစ်ဖြင့် အဝတ်အထည် ချုပ်လုပ်ခြင်း လုပ်ငန်း (ဂျာကင်အမျိုးမျိုး နှင့်ဦးထုပ် အမျိုးမျိုး) အား မြန်မာနိုင်ငံ ရင်းနှီး မြှုပ်နှံမှု ဥပဒေနှင့် အညီ ဆောင်ရွက်ခွင့်ပြုပါရန် အတည်ပြု လျှောက်ထားလွှာ တင်ပြခြင်းအား ၂၀၁၉ ခုနှစ် အောက်တိုဘာလ ၉ ရက်နေ့တွင် ကျင်းပပြုလုပ်ခဲ့သော ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီး မြှုပ်နှံမှု ကော်မတီ၏ (၁၇/၂၀၁၉) ကြိမ်မြောက် အစည်းအဝေးသို့ တင်ပြခဲ့ရာ ခွင့်ပြုကြောင်း ဆုံးဖြတ် ခဲ့ပါသည်။ အဆိုပါ ဆုံးဖြတ်ချက်အရ ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီး မြှုပ်နှံမှုဥပဒေ၊ နည်းဥပဒေကို ကျင့်သုံးလျက် Tae Hyun (Myanmar) Industry Company Limited အား CMP စနစ်ဖြင့် အဝတ်အထည် ချုပ်လုပ်ခြင်း လုပ်ငန်း (ဂျာကင်အမျိုးမျိုး နှင့်ဦးထုပ် အမျိုးမျိုး) ဆောင်ရွက် နိုင်ရန်အတွက် အတည်ပြုမိန့်အမှတ်၊ ရကတ–၂၇၇/၂၀၁၉ ကို ထုတ်ပေး လိုက်သည်။

ကန့်သတ်

၂။ Tae Hyun (Myanmar) Industry Company Limited အနေဖြင့် ဤအတည်ပြုမိန့်အရ လုပ်ငန်း ဆောင်ရွက်ရာတွင် အောက်ပါအတိုင်း အချက်များကို လိုက်နာ ဆောင်ရွက်ရမည် –

- (က) Tae Hyun (Myanmar) Industry Company Limited အနေဖြင့် ဤအတည်ပြုမိန့်အရ CMP စနစ်ဖြင့် အဝတ်အထည် ချုပ်လုပ်ခြင်း လုပ်ငန်း (ဂျာကင်အမျိုးမျိုး နှင့်ဦးထုပ် အမျိုးမျိုး) ဆောင်ရွက်ရာတွင် မြန်မာနိုင်ငံရင်းနှီး မြှုပ်နှံမှု ဥပဒေ အခန်း (၁၈)၊ ပုဒ်မ ၇၅၊ ၇၇ နှင့် ၇၈ တို့ အရ ကင်းလွတ်ခွင့်နှင့် သက်သာခွင့်များကို ပြဋ္ဌာန်းထားသည့် အချက်များ နှင့်အညီ ခံစားခွင့်ပြုနိုင်ရန် လျှောက်ထားနိုင်သည်။
- (ခ) Tae Hyun (Myanmar) Industry Company Limited သည် ဤအတည်ပြုမိန့် အရ လုပ်ငန်းဆောင်ရွက်ရာတွင် ထုတ်လုပ်မှု ရည်မှန်းချက်များကို အနိမ့်ဆုံး ရည်မှန်းချက်များ အဖြစ် ထားရှိ ဆောင်ရွက် အကောင် အထည်ဖော်ရမည်။
- (ဂ) Tae Hyun (Myanmar) Industry Company Limited အနေဖြင့် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေပုဒ်မ ၆၅ နှင့် နည်းဥပဒေအခန်း (၂၀) တို့တွင် ပြဋ္ဌာန်းထား သည့် ရင်းနှီးမြှုပ်နှံသူ၏ တာဝန် ဝတ္တရားများနှင့်အညီ လိုက်နာဆောင်ရွက်ရမည်။
- (ဃ) Tae Hyun (Myanmar) Industry Company Limited သည် အတည်ပြုလုပ်ငန်း ဆောင်ရွက်ရာတွင် သယံဇာတ နှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဝန်ကြီးဌာန မှ ပြဋ္ဌာန်း ထုတ်ပြန်ထားပြီး ဖြစ်သည့် ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဥပဒေ၊ နည်းဥပဒေ၊ ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များတွင် ဖော်ပြပါရှိသည့် လိုက်နာ ဆောင်ရွက်ရမည့် အချက်များ၊ လုပ်ထုံးလုပ်နည်းများ၊ လမ်းညွှန်ချက်များနှင့် အညီ လိုက်နာ ဆောင်ရွက် ရမည်။

(c) Tae Hyun (Myanmar) Industry Company Limited သည် မီးဘေးအန္တရာယ် မဖြစ်ပေါ်စေရေးအတွက် လိုအပ်သည့် မီးဘေးအန္တရာယ် ထိန်းသိမ်း ကာကွယ်ရေး စနစ်များကို ဝန်ခံ ကတိပြုထားသည့် အတိုင်း စနစ်တကျ ထားရှိ ဆောင်ရွက်

ကန့်သတ်

ရမည်ဖြစ်ပြီး မီးသတ် ဦးစီးဌာန်၏ နည်းဥပဒေများ၊ လုပ်ထုံး လုပ်နည်းများ၊ ညွှန်ကြားချက်များနှင့် အမိန့်များကို တိကျစွာ လိုက်နာ ဆောင်ရွက်ရမည်။

(စ) Tae Hyun (Myanmar) Industry Company Limited သည် ရင်းနှီးမြှုပ်နှံမှုအား လုပ်ငန်း သက်တမ်းကာလ အတွင်း အခြားပုဂ္ဂိုလ် တစ်ဦးဦးသို့ တစ်ဆင့် ငှားရမ်းခြင်း၊ ပေါင်နှံခြင်း၊ အစုရှယ်ယာ လွှဲပြောင်းခြင်းနှင့် လုပ်ငန်း လွှဲပြောင်းခြင်း တို့ကို မြန်မာ နိုင်ငံရင်းနှီး မြှုပ်နှံမှု ဥပဒေ ပုဒ်မ ၇၂ နှင့် မြန်မာနိုင်ငံ ရင်းနှီး မြှုပ်နှံမှု နည်းဥပဒေ ၁၉၁ အရ မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်သို့ တင်ပြရမည်။

(ဆ) Tae Hyun (Myanmar) Industry Company Limited သည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု နည်းဥပဒေ ၁၉၆ အရ နှစ်စဉ် ဘဏ္ဍာရေးနှစ် ကုန်ဆုံးပြီးနောက် သုံးလအတွင်း သတ်မှတ်ချက်ပါ အသေးစိတ်များပါရှိသည့် နှစ်စဉ် အစီရင်ခံစာအား သတ်မှတ်ပုံစံဖြင့် ကုမ္ပဏီ၏ ဝက်(ဘ်)ဆိုဒ် (သို့မဟုတ်) ကော်မရှင်ရုံး၏ ဝက်(ဘ်)ဆိုဒ်သို့ တင်ပြရမည်။

(ဇ) Tae Hyun (Myanmar) Industry Company Limited သည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု နည်းဥပဒေ ၁၉၇ အရ လုပ်ငန်း ဆောင်ရွက်နေစဉ်အတွင်း လုပ်ငန်း အစီရင်ခံစာကို သုံးလလျှင် တစ်ကြိမ် ကော်မရှင်က သတ်မှတ် တောင်းခံသည့် ပုံစံဖြင့် တင်ပြရမည်။

၃။ Tae Hyun (Myanmar) Industry Company Limited သည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေပုဒ်မ ၆၅(ဃ)အရ သက်ဆိုင်သည့် ပြည်ထောင်စု ဝန်ကြီးဌာနများ၊ အစိုးရဌာနနှင့် အဖွဲ့အစည်းများမှ လိုင်စင် သို့မဟုတ် ခွင့်ပြုမိန့် ရယူရန် လိုအပ်လျှင်ဖြစ်စေ၊ မှတ်ပုံတင်ရန် လိုအပ်လျှင်ဖြစ်စေ သက်ဆိုင်ရာ ဌာန၏ သက်မှတ်ချက်နှင့် အညီ ဆောင်ရွက်ရမည်။

၄။ Tae Hyun (Myanmar) Industry Company Limited သည် အတည်ပြု လုပ်ငန်း ဆောင်ရွက်ရာတွင် လုပ်ငန်းသဘာဝ အရဖြစ်စေ၊ အခြားလိုအပ်ချက်အရဖြစ်စေ သက်ဆိုင်သည့် ပြည်ထောင်စု ဝန်ကြီးဌာနများ၊ အစိုးရဌာနနှင့် အဖွဲ့အစည်းများမှ လိုင်စင် သို့မဟုတ် ခွင့်ပြုမိန့် ရယူရန် လိုအပ်လျှင်ဖြစ်စေ၊ သက်ဆိုင်ရာဌာနနှင့် မြေငှားရမ်းခြင်း စာချုပ်ချုပ်ဆိုသည်ဖြစ်စေ၊ ^၄ မှတ်ပုံတင်ရန် လိုအပ်လျှင်ဖြစ်စေ သက်ဆိုင်ရာဌာန၏ သတ်မှတ်ချက် များနှင့်အညီ ဆောင်ရွက်ပြီး မိတ္တူ (၅) စုံစီအား ကော်မရှင်သို့ ပေးပို့ရမည်။

ကန့်သတ်

(ဖြိုးမင်းသိန်း)

အုပ်ချုပ်မှုဒါရိက်တာ၊ Tae Hyun (Myanmar) Industry Company Limited ဖြန့်ဝေခြင်း ပြည်ထောင်စုအစိုးရအဖွဲ့ရုံး ပြည်ထဲရေးဝန်ကြီးဌာန ပြည်ထောင်စုအစိုးရအဖွဲ့ရုံးဝန်ကြီးဌာန သယံဧာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန အလုပ်သမား၊ လူဝင်မှုကြီးကြပ်ရေးနှင့်ပြည်သူ့အင်အားဝန်ကြီးဌာန စက်မှုဝန်ကြီးဌာန စီးပွားရေးနှင့်ကူးသန်းရောင်းဝယ်ရေးဝန်ကြီးဌာန စီမံကိန်းနှင့်ဘဏ္ဍာရေးဝန်ကြီးဌာန ရင်းနှီးမြှုပ်နှံမှုနှင့် နိုင်ငံခြားစီးပွားဆက်သွယ်ရေး ဝန်ကြီးဌာန မြန်မာနိုင်ငံတော်ဗဟိုဘဏ် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင်ရုံး ဥက္ကဋ္ဌ၊CMP လုပ်ငန်းများကြီးကြပ်ရေး ကော်မတီ ညွှန်ကြားရေးမှူးချုပ်၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ည္သန်ကြားရေးမှူးချုပ်၊ အလုပ်သမားညွှန်ကြားရေးဦးစီးဌာန ညွှန်ကြားရေးမှူးချုပ်၊ လူဝင်မှုကြီးကြပ်ရေးနှင့် အမျိုးသားမှတ်ပုံတင်ရေးဦးစီးဌာန ည္သန်ကြားရေးမှူးချုပ်၊ စက်မှုကြီးကြပ်ရေးနှင့် စစ်ဆေးရေးဦးစီးဌာန

င္မလ္လင္မီ ^

ကန့်သတ်

ကန့်သတ်

ကန့်သတ် ၂ ညွှန်ကြားရေးမှူးချုပ်၊ ကုန်သွယ်ရေးဦးစီးဌာန ညွှန်ကြားရေးမှူးချုပ်၊ အမျိုးသားမှတ်တမ်းများမော်ကွန်းတိုက်ဦးစီးဌာန ညွှန်ကြားရေးမှူးချုပ်၊ အကောက်ခွန်ဦးစီးဌာန ညွှန်ကြားရေးမှူးချုပ်၊ ပြည်တွင်းအခွန်များဦးစီးဌာန ညွှန်ကြားရေးမှူးချုပ်၊ ပြည်တွင်းအခွန်များဦးစီးဌာန ရင်းနှီးမြှုပ်နှံမှု ကြီးကြပ်ရေးဌာန၊ ရင်းနှီးမြှုပ်နှံမှုနှင့် ကုမ္ပဏီများညွှန်ကြားမှု ဦးစီးဌာန

APPENDIX B Transitional Consultant Registration Certificate



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

Areas of Expertise Permitted (ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

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







APPENDIX C Mornitoring Result

Light Result



Plot No. (36, 38), Room No. 94, 9th Roor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar. Office; (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting.com

Project Name:	Tae Hyun (Myanmar) Industry Company Limited		
Project Location:	Plot No.(139), Myay Taing Block No.Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.		
Sampling Date:	17 July, 2020		
Sampling Time:	1:00 pm to 4:00 pm		
Sampling Condition:	Normal		
Sampling By:	Environmental Team Represented By Myanwei Environmental Solutions Company Limited		

Instrument	Туре	Sampling Rate	Location
Uni-T (Luminometer)	UT380 Series	100 times/second	16°51'22.52"N and 96° 3'32.77"E

No	Measure area	Unit	Result	Standard	Remark
1.	Warehouse	Lux	295	200	
2.	Cutting Line	Lux	1245	900	and the set of the
3.	Sewing Line	Lux	1159	600	
4.	QC	Lux	1269	900	15-02
5.	Ironing	Lux	1059	600	
6.	Packing	Lux	1153	2000	12.50

IESNA Lighting Handbook

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





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

Project Name: Project Location:	Tae Hyun (Myanmar) Industry Company Limited Plot No.(139), Myay Taing Block No.Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Sampling Date :	17 July,2020
Sampling Time:	1:00 pm to 4:00 pm
Sampling Condition:	Normal Condition
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Туре	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°51'22.52"N 96° 3'32.77"E

No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	73.64 dB	70 dBA	Normal

National Environmental Quality (Emission) Guideline

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

LIN HTET SEIN DIRECTOR MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED.

Noise Graph



------ NEQ Guideline

----- Operation Area



Plot No. (36, 38), Room No. 94, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Vangon Region, The Republic of the Union of Myanmar. Office: (+95) 1 526574, Mobile: (+95) 97/5405118, 9792528677, 9449251888; Website: www.myanweiconsulting.com

Project Name:	Tae Hyun (Myanmar) Industry Company Limited
Project Location:	Plot No.(139), Myay Taing Block No.Part-4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Sampling Date:	17 July, 2020
Sampling Time:	11:00 am to 4:00 pm
Sampling Condition:	Moderate
Sampling By:	Environmental Team Represented by Myanwei Consulting Group Company Limited

Instrument	Туре	Sampling Rate	Location
MYANWEI-	Environmental	1 second to 21	Operation Area
AQM-09	Perimeter Air Station	weeks	(Indoor/Outdoor)

Parameter //	Averaging period	Guideline value	Unit
PM 10b	24-hour	20 50	(µg/M ³)
PM 2.5b	24-hour	10 25	$(\mu g/M^3)$
NH3	- (
СО	-	::	
NO2	1-hour	40 200	
SO2	10 minute	20 500	
VOC	() ()	2/20/50/75/100/1 150 c,d	mg/Nm ³

a. Particulate matter 10 micrometer or less in diameter b. Particulate matter 2.5 micrometer or less in diameter

Monitoring Result

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM ₁₀	18.1	50	µg/m ³	NEQG	8 hrs
PM _{2.5}	12.2	25	µg/m ³	NEQG	8 hrs
SO ₂	365.8	500	µg/m ³	NEQG	10 mins
NO ₂	92.7	200	µg/m ³	NEQG	1 hr
CO	1.825	-	µg/m ³	12	

Si LIN HTET SEIN DIRECTOR MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED.
Domestic Wastewater Result



ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-22-00	239)			Date: 2-3-2023
Client Information			Sample Information		
Client Name	:	Tae Hyun (Myanmar) Industry Co., Ltd.	Sample ID	:	7897
Organization	:	Tae Hyun (Myanmar) Industry Co., Ltd.	Sample Name	:	W.W
Client ID	:		Sample Type / Source	:	-
Registration Date & Time	:	21-2-2023	Sampling Date & Time	:	
Contact	:	09421137569	Sample Location	:	Hlaing Thar Yar
Testing Purpose	:		Latitude	:	18.0
			Longitude	:	

Testing Results

This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service. This report shall not be reproduced except in full, without written approval of the laboratory

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	pH ¹	6.5	S.U	6.0 - 9.0 ^d	Normal
2	Turbidity ³	< 5	FAU		
3	TDS ⁴	144	mg/L	≤2000 ^d	Normal
4	TSS ³	1	mg/L	≤50 ^d	Normal
5	Total Solids ³⁴	145	mg/L		
6	Hardness ³	38	mg/L		
7	Chloride ³	123	mg/L	2	
8	BOD ₅ ⁶	6	mg/L	≤ 50 ^d	Normal
9	COD ³	< 30	mg/L	≤ 250 ^d	Normal
10	Iron ⁷	< 0.1	mg/L	≤ 3.5 ^d	Normal
11	Manganese ³	0.06	mg/L	≤ 2 ^d	Normal

'ND" = Not Detected 'LOD" = Lower limit of detection = No Reference Standard Checked by Tested by Approved by leva nu Daw Ma Daw Lin Myst Myat A Lab. Technician I Myat Aung Lab. Tec Ecological La oratory **Ecological Laboratory** ALARM

> 531 (D), MarlarMyaingYeikThar Street, Kamayut Tsp., Yangon, Myanmar Tel: 01-503301, 01-503302, 09-407496078 Email: aelab@alarmmyanmar.org , websites: www.alarmmyanmar.org

Drinking Water Result



APPENDIX D Fire Safety Training Photo











APPENDIX E Power Point Presentation Slides

Tae Hyun (Myanmar) Industry Co.,Ltd. ၏ CMP စနစ်ဖြင့် အဂတ်အထည်ချပ်လုပ်ခြင်းလုပ်ငန်း (ဂျာကင်အမျိုးမျိုးနှင့်ဦးထုပ်အမျိုးမျိုး)

> ပတ်ပန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာ (မူကြမ်း) အတွက် သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနား။

> > စက်တင်ဘာလ၊ ၂၀၂၀ ခုနှစ်။ Preparaed By Myanwei Environmental Solutions Co., Ltd သူတြWYANWEI

Tae Hyun (Myanmar) Industry Co.,Ltd စက်ရုံပြင်ပအဆောက်အအုံပုံစံ



လုပ်ငန်းလည်ပတ်ရန်အခြေခံလိုအပ်ချက်များ

ရေအသုံးမြမှုအခြေအနေ		
ရေအရင်းအမြစ်	အစီစိတွင်းရေ (၁ တွင်း)	
	အဓိကလိုအပ်ချက်	
ခန့်အပ်မည့်လုပ်သားဦးရေ	อกา รู	
အဓိကကုန်ကြမ်း	ချည်ထည်၊ နိုင်လွန်စ၊ ဇစ်အမျိုးမျိုး နှင့် ဆက်စပ်ပစ္စည်းများ။	
နှစ်စဉ်ထွက်ကုန်ပစ္စည်းပမာက	နှစ်စဉ် ပျှမ်းမှုထုတ်ကုန်အရေအတွက် တစ်ဆယ့်လေးသိန်းကျော်။	



အစည်းအပေး အကြောင်းအရာ

- ၁။ Tae Hyun (Myanmar) Industry Co.,Ltd. အား မိတ်ဆက်ခြင်း
- ၂။ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်အား မိတ်ဆက်ခြင်း
- ၃။ သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့် ထိနိုက်မှုအဆင့်သတ်မှတ်ချက်များ
- ၄။ ပတ်ဂန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျော့ရေးနည်းလမ်းများ
- ၅။ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် နှင့်
- ၆။ စက်ရုံ၏ဆောင်ရွက်ချက်များ

Tae Hyun (Myanmar) Industry Company Limited

လုပ်ငန်းအမျိုးအစား	CMP စနစ်ဖြင့် အဂတိအထည်ချပ်လုပ်ခြင်းလုပ်ငန်း (ဂျာကင်အမျိုးမျိုးနှင့်ဦးထုပ်အမျိုးမျိုး)။
ခွင့်ပြုမိန့်အမှတ်	(နွင့်ပြုမိန့်အမှတ်- ရကတ် -၂၇၇/၂၀၁၉)၂၀၁၉ ခုနှစ်၊ အောက်တိုဘာလ ၂၉ ရက်
ရင်းနှီးမြှပ်နှံမှု	မြန်မာနိုင်ငံသားရင်းနှီးမြှင်နံမှု။
မြေဒရိယာ	မြေအရိယာစုစုပေါင်း- ၀.၉၇၇ ဧက (၃၉၅၃.၇၇၈၇ စတုရန်း မိတာ)
အဆောက်အအုံ	(၈၀)လာဝေ၊ ပေ) တစ်ထပ်အဆောက်အအုံတစ်လုံး။ (၈၀)လျှပ ပေ) နှစ်ထပ်ရုံအဆောက်အအုံတစ်လုံး။ (၁၀)လှငဂ ပေ) နှစ်ထပ်လူနေအဆောင်တစ်လုံး။ (၁၀)လှဝ ပေ) နှစ်ထပ်လူခြံရေးစိတ်တစ်လုံး။
ရင်းနှီးမြှုပ်နှံသည့်ကာလ	၂၅ နှစ်ရင်းနှီးမြှုပ်နှံမှု။
စက်ရုံလိပ်စာ	မြေကွက်အမှတ်(၁၃၉)၊ မြေဘိုင်းရပ်ကွက် အမှတ် အပိုင်း (၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ် ၊ ရန်ကုန်တိုင်းဒေသကြီး။

Tae Hyun (Myanmar) Industry Company Limited ၏စီမံကိန်း တည်နေရာ



6'2'6"E 96"2'24"E 96"2'42"E 96"3'0"E 96"3'18"E 96"3'36"E 96"3'54"E 96"4'12"E 96"4'30"E



Tae Hyun (Myanmar) Industry Company Limited ၏ ထုတ်ကုန်များ

Tae Hyun (Myanmar) Industry Company Limited ၏ ကုန်ထုတ်လုပ်ပုံအဆင့်ဆင့်





ပတ်ဂန်းကျင် စီမံခန့်ခွဲမှု လုပ်ငန်းစဉ်



ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု လုပ်ငန်းအား မိတ်ဆက်ခြင်း

ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြုပ်နှံမှုကော်မတီအတည်ပြုမိန့်

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Physike (Physike Their)		Chairman,		(Gincicoto)	
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သက်ရောက်မှုဆန်းစစ်ခြင်းရလာဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်မျ



သဘောထားမှတ်ချက်



စီမံကိန်းပတ်ဂန်းကျင်အနေအထား

စဉ်	အကြောင်းအရာ	ဖော်ပြချက်
01	ကိုဩဒိနိတ်အမှတ်	မြောက်လတ္တီကျ ၁၆°၅၁′၂၂.၅၂"နှင့် အရှေ့လောင်ဂျီကျ ၉၆°၃′၂.ဂု၇″
J	ရာသီဥတုအခြေအခန	လိုင်သာယာ မြို့နယ် နစ်စဉ်ဂျမ်းမျှအမြင့်ထုံးအပူချိန် ၄၀°C၊ အနိမ့်ထုံးအပူအချိန် ၂၆°C
- PI	စက်ရုံနေရာတွင်မြေအသုံးချမှု	စက်မှုလုပ်ငန်းနှင့်သက်ဆိုင်သောမြေအသုံးချမှုပုံစံ (စက်မှုစုန်)
9	လမ်းပန်းဆက်သွယ်ရေး	ခရေပင်လမ်း၊အနော်ရထာလမ်း၊ပုသိမ်လမ်း၊
୭	သစ်တောဓရိယာ	မရှိ
G	ကန့်သတ်ကာကွယ်ထားသော ဧရိယာ	မရှိ
ମ୍	ဝဒိုင်းတာမှုလေခ်	ြ ဆူညီသံ တိုင်းတာခြင်း] ေလဟုအရောင်အခေသူး တိုင်းတာခြင်း] အပူရီဖိုန် နှင့် စိုတိုင်းမှု အရည်အသွေး တိုင်းတာခြင်း] ရောအရည်အသွေး

Tae Hyun (Myanmar) Industry Company Limited ၏ဆူညံသံတိုင်းတာမှုပြဂရပ်



Tae Hyun (Myanmar) Industry Company Limited စါလေထုတိုင်းတာမှုပြဂရပ်



Location

17. July . 2020 Operation Area 16°51'22.46"N 96° 3'32.42"E

အထက်ဖော်ပြပါ ဆူညံသံတိုင်းတာမူရလဒ်များအရ Tae Hyun (Myanmar) Industry Company Limited.အိုဆူညံသံများမှာ National Environmental Quality (Emission) Guideline ထပ်အနည်းငယ်ကျော်လွန်နေသည်ကို ဆန်းစစ်တွေ့ ရှိရပါသည်။

ဆူညံသံတိုင်းတာမှု

GPS location



Date & Time

ဆူညံသံတိုင်းတာမှုပုံရိပ်များ

Noise Result NEQ Guideline

70 dBA

73.64 dBA

လေထုတိုင်းတာမှု

Parameters	Observed Value	Guideline Value	Unit	Organization	Period
PM10	18.1	50	µg/m ³	NEQG	24 hrs
PM2.5	12.2	25	µg/m ³	NEQG	24 hrs
SO2	365.8	500	µg/m ³	NEQG	10 minutes
NO2	92.7	200	µg/m ³	NEQG	1 hour
co	1.825	10	µg/m ³	NEQG	8 hrs



လေထုတိုင်းတာမှုပုံရိပ်များ

အလင်းရောင်တိုင်းတာမှု

No.		Measure value (Lux)		
1	Warehouse	295	200	Above
2	Cutting Line	1245	900	Above
3	Sewing Line	1159	600	Above
4	QC	1269	900	Above
5	Ironing	1059	600	Above





စက်ရုံအတွင်းအလင်းရောင်တိုင်းတာမှုပုံရိပ်များ



ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျှော့ရေးနည်းလမ်းမျာ

သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အချေးယူဆောင်ရွက်မှု
စီမံကိန်းလည်ပတ်ရှိန်		
လေထု	မီးစက်၊မော်တော်ယာဉ်များမှ မီးရိုးများထွက်ခြင်း၊	မီးစက် အတွက် မီးနီး ခေါင်းတိုင်အသုံးမြှစေခြင်း၊ မော်တော်ပ မီးစက်များကို ပုံမှန် စစ်ဆေးခြင်း၊
ఖ్యమ్రిన	စီဆက်၊ အပ်ရုပ်စက်နှင့် မော်တော်ယာဉ် အသုံးပြမှုတို့ကြောင့် ပတ်ဝန်းကျင်အပေါ် ဆူညံမှု	ရာညံသံထွက်သောနေရာများကို အကာကွယ်ဖြင့် ထားရှိခြင်း စက်ရိုဂန်ထမ်းများကို PPEအပြည်စုံအထောက်ပံ့ပေးခြင်း
ໍຣິເລວງ:	ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲ ပေ့်လျော့မှု	ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း လျပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း
ကျန်းမာရေးစောင့်ရှောက်မှု	လုပ်ငန်းလည်ပတ်ခြင်းကြောင့် မတော်တဆထိနိက်မှုဖြစ်ပေါ်ခြင်း၊	အရေးပေါ် အခြေအနေများအတွက် ပစ္စည်းကိုင်တွယ်မှု သင်တန်းပေးခြင်း၊ တစ်ကိုယ်ရေကာကွယ်သုံးပစ္စည်းများအသုံးပြုစေခြင်း
ရှန့်ပစ်ပရွည်း (အစိုင်အခဲ၊ အရည်)	ထုတ်လုပ်ရာတွင်ကန်ရှိသော ရည်မှုင်အဝိုင်းအမျေား၊ နေအိမ်၊ စားသောက်ဆောင် တို့မှုစွန့်ထုပ်ရေ၊ ဒိလ္လာကန်စနစ်	စွန့်ပစ်အမိုက်များအား ပြန်လည်သုံးရဲ့ရန် နှင့် စွန့်ပစ်ရန် အခြစ်သတ်မှတ်ပီ၊ အီးရားစွန့်ပစ်စေခြား စွန့်ပစ်အရည်များအားသီးရှားရေနက်မြောင်းတွေဖြင့်စွန့်ပစ်ခြ
အ္ဆရာယ်ရှိစွန့်ပစ်ပစ္စည်းများ	စက်များမှုဆီယိုစိမ့်မှုများ၊ နိုင်လွန်ဝိတ်စများ၊ တစ်ခြားမီးလောင်လွယ်သောအမှိုက်များ	စက်သုံးဆီများအားစနစ်တကျ အသုံးပြစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း

သက်ရောက်မှု	စိမ်ကိန်းဆောင်ရွက်ရွက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
စီမံကိန်းပိတ်သိမ်းရှိန်		
လေထု	အဆောက်အဦးဗြိုချမှ၊ သယ်ယူမှုများ	လျော့ချရန်မလိုပါ။
ရေထု	မြေပေါ် မြေအောက်အပေါ် သက်ရောက်မှုမရှိနိုင်ပါ	လျော့ချရန်မလိုပါ။
ణ్గుప్రిప	ဆူညံသံများမဖြစ်ပေါ်နိုင်ပါ။	လျော့ချရန်မလိုပါ။
လုပ်ငန်းခွင် ဘေးအန္တရာယ်	လုပ်ငန်းစွင်ဗျက်သိမ်းရှိန်တွင် မတော်တဆမှုများဖြစ်ပေါ်နိုင်ခြင်း	လုပ်သားများကို တစ်ကိုယ်ရေ ကာကွယ်သုံး ပစ္စည်းများအသုံးပြုစေခြင်း၊
စွန့်ပစ်ပစ္စည်း (အစိုင်အခဲ၊ အရည်)	စိမ်ကိန်းဖျက်သိမ်းရာမှ တည်ဆောက်ရေး ပစ္စည်း အကျိုးအပဲများထွက်ခြင်း၊ ကျွန်ရှိနေသော မိလ္လာကန်များ၊	အမိုက်များကို မြို့တော် စည်ပင်သာယာရေး ကော်မတီနှင့် ရိုတ်ဆက်၍ စွန့်ပစ်ခြင်း
အ္ဆနရာယ်ရှိစွန့်ပစ်ပစ္စည်း	စက်ဆီ၊ ဒီဇယ်ပုံးအရုံများ	ဓာတုပစ္စည်းထည့်ထားသော ပုံးစွံများ ဒီဇယ်ပုံ အစွဲများကိုဆေးခကြာ၍ ပြန်လည်အသုံးပြုခြင်း စနစ်တကျစွန့်ပစ်ခြင်း

လေထုညစ်ညမ်းမှုလျှော့ချရေး

ရည်ရွယ်ချက်	စီမံကိန်းကြောင့် စက်ရုံမှ ထွက်သော ဓာတ်ငွေများနှင့် မီးဝက်များမှ ထွက်ရှိသော ဓာတ်ငွေများမိကြာင့် လေထုညစ်ညမ်းမှုကို လျော့ချရန်
လိုက်နာရမည့် စည်းကမ်း	အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်မျာ (၂၀၁၅)
စိမံခန့်ခွဲမှ အစီအစဉ်	 စက်ရုံအတွင်းနှင့် အနားဝန်းကျင်တွင် သစ်ပင်ပန်းမန်စိုက်ပိုးခြင်း စက်ရုံအတွင်း မည်သည့်စွန်ပစ်ပစ္စည်းများအား မီးရှို့ ဇျက်စီးခြင်း မပြုလုပ်ခြင်း လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ စသည်တို့အားထောက်ပုံခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	 ပြုပြင်ထိန်းသိမ်းရေးအရာရှိ - လေထုညစ်ညမ်းမှုလျှောချရေးနည်းလမ်းများ ထုတ်လုပ်ရေးမန်နေဂျာ - လုပ်ငန်းခွင်လေထုသန့်ရှင်းရေး မန်နေဂျာ - ပတ်ဝန်းကျင်လေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညံ့နှိုင်းဆောင်ရွက်ရန်

ရည်ရွယ်ရက်	စွန့်ပစ်အမှိုက်ထွက်ရှိမှုလျှော့ချခေးနှင့် စွန့်ပစ်အမှိုက်ကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုကို လျှော့ချခန်
လိုက်နာရမည့်စည်းကမ်း	 ပတ်ဝန်းကျင်ထိနိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)
	 National Waste Management Strategy and Action Plan (Draft 2018)
စီမံခန့်ခွဲမှုအစီအစဉ်	 စက်ရုံမှ မည်သည်စွန့်ပစ်ပစ္စည်းမှ မြစ်၊ ချောင်း၊ အင်း၊ အိုင် အတွင်းသို့ မစွန့်ပစ်ရ
	 စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို မြန်လည်အသုံးပြုနိုင်သောပစ္စည်း(ဆိုးဆေး၊ စက္ကုဖာ၊ ပလက်စတစ်၊
	စသည်ဖြင့်) များကို ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းရမြင်း
	 စွန့်ပစ်ရန်ပစ္စည်း(လုပ်သားများမှစွန့်ပစ်ပစ္စည်းနှင့်မီးဖိုချောင်ထွက်ပစ္စည်းများ)ကို
	မြို့တော်စည်ပင်သာယာရေးအဖွဲ့ အစည်း ကို နေ့စဉ်ခေါ်ယူပြီး သိမ်းဆည်းစေခြင်း
	 အန္တရာယ်ရှိပစ္စည်း (စက်ဆီအဟောင်းများ၊ လျှပ်စစ်ပစ္စည်းအပျတ်များ၊ သံထည်ပစ္စည်း) များကို
	ဝယ်ယူသူထံမှပြန်လည် သိမ်းစာည်းစေခြင်း
	 စက်ရုံတွင် အမိုက်စွန့်ပစ်ရန် အတွက် အမိုက်ပုံးများကို စီမံထားခြင်း
	 စက်ရုံဝန်းထမ်းအားလုံးကို စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် တိုက်တွန်းနိုးဆော်ထားခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	 မန်နေျာ - စက်ရှံအတွင်းသန့်ရှင်းရေးအတွက်စီမံခန့်ခွဲရန်တာဝန်ရှိသည်
	 အမှိုက်စွန့်ပစ်မှု ပုံမှန်ပြုလုပ်ရန်နှင့် စွန့်ပစ်ပစ္စည်းသယ်ယူသူများကို ပုံမှန်ပြုလုပ်ရန် တာဝန်ယူဆောဂ

စွမ်းအင်သုံးစွဲမှု ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	လျှဝ်စစ်သုံးရဲ့မှာလျှားရစေရန်နှင့် လုပ်ငန်းရွင်အတွင်း လျှပ်စစ်သုံးရွဲမှုကြောင့် အန္တရာယမရှိစေရန်
စိမံခန့်ခွဲမှုအစီအစဉ်	 စက်ရုံတွင်း လျှစ်စစ်သုံးစွဲမှုများအတွက် စွမ်းအစ်လျော့ချနိုင်သည့် စက်ကရိယာများတပ်ဆင်ခြင်း အသုံးမပြုလျှင် စက်ကရိယာများပိတ်ဆင်ထားခြင်း စွမ်းအင်အသုံးနည်းသော Lighting စနစ်တပ်ဆင်ခြင်း စက်ပစ္စည်းနှင့် Lighting အသုံးပြုမှုကို စောင့်ကြည့်ထိန်သိမ်းရေးစနစ်ထားရှိခြင်း (ဥပမာ-အသုံးမပြုပဲမီးဖွင့်ထားခြင်း စက်ဖွင့်ထားခြင်းမျိုး မရှိစေရန်)
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	

ပတ်ပန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

ဆူညံသံလျှော့ချရေး					
ရည်ရွယ်ချက်	ဘေးပတ်ဝန်းကျင်ရာညံမှုမဖြစ်ပေါ်စေရန် နှင့် စက်ရုံရှိ မီးစက်နှင့် အခြားစက်ပစ္စည်းများ ကြောင့် လုပ်သားများအပေါ်ထိမိုက်မှု လျော့ချရန်				
လိုက်နာရမည့် စည်းကမ်း	 ပတ်ဝန်းကျင်ထိန်ကိမ့်ဆန့်၊စစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅) 				
စီမံစန့်ခွဲမှုအစီအစဉ်	 မီးစက်၊လေမှုတ်စက်တို့ကို ရာညံသံထိန်းချပ်နိုင်သော ခန်းဖွဲ့စည်းမှုပုံစံ တည်ဆောက် ထားခြင်း လုပ်ငန်းသုံးယာဉ်များကိုဆူညံသံလျှော့ချရန်သတ်မှတ်အရှိန်ထက်ကျော်လွန်မမောင်းစေ[စင်း 				
	 လုပ်သားများအား Personal Protective Equipment (PPE) တုခေါ်သော အကာအကွယ်မစ္စည်းများဖြစ်သည့် နားအကာကွယ်ရေးမစ္စည်းများ စသည်တို့အား ထောက်ပုံခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း 				
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - ဆူညံသံတိုင်းတာရန် (ThirdParty)ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်				

စွန့်ပစ်အရည် ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	မြေပေါ် ရေနှင့် မြေအောက်ရေ ညစ်ညမ်းမှုမဖြစ်စေရေး
လိုက်နာရမည့်စည်းကမ်း	 ပတ်ဝန်းကျင်ထိနိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ရက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	 စက်ရုံရေမြောင်းများနှင့်မိလ္လာစနစ်ကို စနစ်တကျ သန့်ရှင်းအောင်ထားရှိခြင်း လုံလောက်သည့်အတိုင်းအတာ ပမာကရှိခြင်း မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပြီး လိုအပ်သကဲ့သို့ ထိန်းသိမ်းပြုပြင်ခြင်း စက်ရုံရေမြောင်းအတွင်းတွင် ဝိတ်ဆိုမှုမရှိစေရန်နှင့် အနံ့ဆိုးများမထွက်စေရန်စီမံခြင်း
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - စွန့်ထုတ်ရေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

မြေအောက်ရေသုံးစွဲမှု

ရည်ရွယ်ချက်	ဖရသုံးစွဲမှုလျော့ချရေး
လိုက်နာရမည့်စည်းကမ်း	The Underground Water Act (1930)
စိမံဝန့်ခွဲမှုအစီအစဉ်	 ရေအသုံးပြုမှု သိရှိနိုင်သော မီတာတပ်ဆင်ခြင်း ဝန်ထမ်းများအားအသိပညာပေးခြင်းနှင့် လိုက်နာဆောင်ရွက်ရန် တိုက်တွန်းခြင်း စက်ရုံရှိတာဝန်ရှိပုဂ္ဂိုလ်များအား (Third Party) နေဖြင့်မြေအောက်ရေအကျိုးရှိရှိအသုံးချရန်စည်းကမ်းချက်နဲ့အညီ လမ်းညွှန်ထားခြင်း၊
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	မန်နေဂျာ • ရေ အသုံးပြမှုစာရင်း စစ်ဆေးခြင်း • ဝန်ထမ်းများလိုက်နာဆောင်ရွက်မှု စစ်ဆေးခြင်း
	ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု

ოდ	အမျိုးအတာ	ကြိန်နှန်း	နေရာ	တာဝန်ရှိသူ
စီဖံကိန်းတည်ဆောက်နေစဉ်				
လေထု	SO2, NO2, CO, CO2, PM2.5, PM10	တစ်ကြိမ် (တည်ဆောက်နေစဉ်အတွင်း)	စီမံကိန်းစရိယာ	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited and Third Party
ရေးမု	pH, Apparent Colour, Turbidity, TDS, Total solids, Chloride, Free Cyanide, Nitrate, Arsenic, Cadmium, Copper, Iron, Lead and Zinc		အနီးဆုံး မြ၆၊ ရောင်။ မြေဒေဘက်ရေ	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited and Third Party
ణ్ణమైన	න්ත් dBA		စိမ်ကိန်းစရိယာ	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited and Third Party
Beacos	မီးသွယ်တန်းမှု တစ်		စိမ်ကိန်းစရိယာ	Environmental Management Team's Tae Hyun (Myaamar) Industry Company Limited and Third Party
လွှင့်ငန်းနှင့်တွန်းမာခရာ နှင့် မတောင်လုပ်ခံရေးလုပ်သားများအ တွက် တစ်ကိုယ်ရေကာကွယ်သုံး ပစ္စည်းဖျားပေဖြော်း		တစ်လ တစ်ကြိမ်	ဆောက်လုစ်ရေး လုပ်သားများ	Environmental Management Team's Tae Hyun (Myaamar) Industry Company Limited and Third Party
အရိုက်ရွန့်ပစ်မှု	အစိုင်အခဲ ၊ အရည်	တစ်ပတ်တစ်ကြိန်	စိမံကိန်းစရိယာ	Environmental Management Team's Tae Hyun (Myanmar) Industry Company Limited and Third Party

ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု ခန့်မှန်းကုန်ကျစရိတ်

စဉ်	အကြောင်းအရာ	အကြိမ်အရေအတွက်	ကုန်ကြစရိတ် (အမေရိကန် ဒေါ်လာ)	
လျော့	ချ်ခြင်းအစီအစဉ်	10. 	55	
э.	စက်ရုံအတွင်းလေအဝင်အထွက်အစီအစဉ်	၁နစ် တက်ိမ်	နှစ်စဉ် ဒေါ်လာ ၄၀၀	
٦	စက်ရုံဖရိယာအတွင်း သစ်ပင်များစိုက်ပျိုးခြင်း	၃လ တကြိမ်	၃လခြား ဒေါ်လာ ၁၄၀	
2.	အစိုင်အခဲအမှိုက်ပစ်ခြင်း	၁၂ကြိမ်	နှစ်စဉ် ခေါ်လာ ၂၀၀၀	
9.	တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးပစ္စည်းများဂယ်ယူခြင်း	၆ လ တကြိမ်	၆ လခြား ဒေါ်လာ ၃၀၀	
<u></u> .	ဆေးပစ္စည်များနှင့် ကျန်းမာရေးစစ်ဆေးခြင်း	၁ နှစ် တကြိမ်	နှစ်စဉ် ခေါ်လာ ၁၀၀၀	
အရေ	ටේ ගමි ගෙව			
0.	မီးသတ်ထေးဘူး	ာလ တကြိမ်	[
J۰	မီးသတ်အချက်ပြ စနစ်	၁လ တကြိမ်	လစဉ် ဒေါ်လာ ၆၀၀	
2.	ရှေးဦးသူနာပြု ပစ္စည်းများ	၁လ တကြိမ်		
စာင့်	ကျစ်ကြည့်ရှုရေးအစီအစဉ်	1	1	
о.	ရေဆိုးရေညစ်	ାର୍ଯ୍ବ	၁နှစ် ဒေါ်လာ ၄၀၀	
۰ل	ရာညံသံ	്വത്യം	၁နှစ် ဒေါ်လာ ၆၀၀	
р.	စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ	ာကြိန်	මේ ගත ၂၀၀၀	

စက်ရုံ၏ဆောင်ရွက်ချက်များ

အရေးပေါ် အခြေအနေတုန့်ပြန်မှု

ရည်ရွယ်ချက်		စက်ရတွင်းမတေ	ာ်သဆထိရိက်မှု	လျော့ချရေး			
လိုက်နာရမည့်စ	ာည်းကမ်း						
වී රං ඛුවුහුනරින	වෙ	 အာရားပေါ် အာခြေအနေဖြစ်သော (မီး၊ ငလူင်၊ ရေကြီးရေလျှံမူ) တို့အတွက် စက်ရုံတွင် စိတ်ရှိစစ်းသတ်ဝနစ်များကို ပုံမှန်စစ်ဆေးခြင်း ရောရွာစီးသတ်ဝနစ်များကို ပုံမှန်စစ်ဆေးခြင်း ရောရွာစီးသတ်ဝနစ်များကို ပုံမှန်စစ်ဆေးခြင်း ရောရွာတာသော အစေးပေါ် တုန်ပြန်ရေး အစီအစဉ်များကို ဝန်ထမ်းများ အကျွမ်းတာင်စြစ်စေရန် စိမ်တွေမြန်ခြံဖြေရေမနေများကို အဓိကထားပြီး တောင်တာသို့စတောင်စနေရာများ၊ လှုစ်စစ်ခြန်ခြံဖြေရေမနေများကို အဓိကထားပြီး တွေကြာဘွဲ့စတောင်စနေရာများ၊ လှုစ်စရာမြန်ချမ်ရေးသင်တန်များကို အဓိကထားပြီး တွေကြောကွဲစရာ လွေစံလုပ်စောက်လျှင် ပြလုပ်ရမာင်ပုံစံများ ရေကြီးရေလျှံရ သူမြောအနေထိန်သမီးပရာ အာအစဉ်များ၊ ရှောဦးဖြစ်ခြင်းသင်တန်းများကို ပုံမှန်လေ့ကျင့်မှုများ သင်ကြားမှုများ ပြုံလုပ်ခြင်း အရေးပေါ်စက်သူပါနေနဲ့ ဖိုးနံပါတ်၊ လိစ်အများ၊ အများသူဝံမြင်သာစေသောနေရာများတွင် ကာထားခြင်း စာတိုးတွင်၊ မီးသတ်အဖွဲ့ ငယ်၊ အနုရာပယ်ကင်းရှင်းရေး စာတိုကြင့်ရေးအခွင့်ပပ်များထားရှိမြီး လောရှိတွင်၊ မီးသတ်အဖွဲ့ ငယ်၊ အနုရာပယ်ကင်းရှင်းရေး စာတိုကြင့်ရေးအခွင့်ပယ်များထားရှိမြီး 					
တာဝန်ယူရမည့်	ပုဂ္ဂိုလ်	 Manager an ອໍະວນດົ້ວນວິດ 	d EHS officer ဂန်းများ ၃ လတ	စ်ကြိမ်ပြုလုပ်ရန်စီမံပေးခြင်း တာတဆထိခိုက်မှုမရှိစေရေး စောင့်ဂြ	ရှည့်စစ်ဆေးခြင်း		
		00	ာ်ဝန်းကျင်ဆိုပ	င်ရာစောင့်ကြည့်မှု			
ოფი	1	အမျိုးအစား	Bass.	နေရာ	တာဝန်ရှိသူ		
စီမံကိန်းလည်ပတ်ရန်							
စလထု	PM2.5, PN	f ₁₀ , SO ₂ , NO ₂ ,	တစ်နစ် ၂ကြိမ်	ထုပ်လုပ်မှု စရိယာအတွင်း	Tae Hyun (Myanmar) Industry Company Limited		
භූඩුරා	ဆူညံသံ ပ	ണ	တစ်ပတ် ၂ကြိမ်	၂ နေရာ (ထုပ်လုပ်မှု စရိယာ အတွင်း)	Tae Hyun (Myanmar) Industry Company Limited		
အမိုက်ရွန့်ပစ်မှု	အစိုင်အခဲ၊ အရည် နှင့် အျွန်ရာယ်ရှိပစ္စည်း		အပတ်စဉ်	ဂော်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်နှင့် စွန့်ပစ်ရန်ဟူ၍ အဖိုက်ပုံများအား ခွဲခြားခြင်း	Tae Hyun (Myanmar) Industry Company Limited		
အားအန္တရာလိ	မ်ိဳးသတ်ထေးဘူးပစ္စည်းများနှင့်အရေး ပေါ် ဖုန်းနံပါတ်များ		സമ്	စက်ရုံစရိယာ အတွင်း	Tae Hyun (Myanmar) Industry Company Limited		
	en than and						

ω.	ပေါ် ဖုန်းနံပါတ်များ			Company Limited
အလင်းရောင်ပြင်းပြမှု	အလင်းရောင်ပေးခြင်း	တစ်နစ် ၂ကြိမ်	ထုတ်လုပ်မှ ဧရိယာအတွင်း (ဝိတ်တော်ခြင်း နှင့် အရည်အသွေး စစ်ဆေးခြင်း)	Tae Hyun (Myanmar) Industry Company Limited
လုပ်ငန်းဖြတ်သိမ်းခြင်းက	0000			
လေထု	PM2.5, PM10, 802, NO2	ဖြတ်သိမ်းမှု ကာလအတွင်း ၁ကြိမ်	ထုပ်လုပ်မှု စရိယာအတွင်း	Tae Hyun (Myanmar) Industry Company Limited
කුည්රා	ဆူညံသံ ပမာက	ထိုကာလအတွင်း း ကြိမ်	၆တ်သိမ်းမှု ခရိယာ	Tae Hyun (Myanmar) Industry Company Limited
မြန်လည်မွန်းခံခြင်း	သစ်ပင်များပြန်လည်စိုက်ပျိုးခြင်း		ဖျက်သိမ်းမည့် ဧရိယာအားလုံး	Tae Hyun (Myanmar) Industry Company Limited

လုမှုအကိူးတူပူးပေါင်း ပါဝင်မှု

Tae Hyun (Myanmar) Industry Company Limited တွင် CSR အတွက် အမြတ်ငွေ၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးတို့ အတွက် အသုံးပြုသွားမည် မြစ်ပါသည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	ი.ე %
ပညာရေး	ပညာရေးကက္က မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	ი.ე %
နယ်မြေဖွံ့ဖြီးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လူ၊ခါန်းခြင်း	o %



Tae Hyun (Myanmar) Industry Company Limited ၀န်ထမ်းများအတွက်သုံးရေသောက်ရေပြင်ဆင်ထားရှိ



Tae Hyun (Myanmar) Industry Company Limited ၏ လျှပ်စစ်သုံးစွဲမှုအတွက်ပြင်ဆင်ထားရှိမှု



Tae Hyun (Myanmar) Industry Company Limited ၏ မီးဘေးအန္တရာယ်အတွက်ပြင်ဆင်ထားရှိမှုများ



စက်ရုံအတွင်းအမှိုက်စွန့်ပစ်မှုအခြေနေများ နှင့် ပန်ထမ်းများအတွက်အိမ်သာထားရှိမှုများ

Thank You for Your Patien Attention!

APPENDIX I List of Commitments

Tae Hyun (Myanmar) Industry Company Limited ၏ လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော သဘာဝပတ်ဝန်းကျင်၊ လူမှုဘဝ နှင့် ကျန်းမာရေး ထိခိုက်မှုများရှိခဲ့ပါက လျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် တားဆီးရေး အစီအစဉ်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan – EMP) တွင် ပါဝင်ရမည့် အချက်များကို အကောင်အထည်ဖော် စီမံဆောင်ရွက်သွားမည် ဖြစ်ကြောင်း။ အောက်ဖော်ပြပါ ဖယားဖြင့် အကျဉ်းချုပ် စာရင်းပြုစု ဖော်ပြထားပါသည်။

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
နိဒါန်း	Э	 စီမံကိန်းအဆိုပြုသူ၏ ကိုယ်ရေးအချက်အလက် ဒါရိုက်တာစာရင်း ရင်းနှီးမြှုပ်နှံမှု အချက်အလက်များ အစီရင်ခံစာရေးဆွဲသည့် တတိယအဖွဲ့အစည်း၏ အချက်အလက်များ 	အခန်း (၁)
မူဝါဒ၊ဥပဒေနှင့်အဖွဲ့အစည်းဆိုင်ရာ မူဘောင်များ	J	 ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ(၂၀၁၂) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနည်းဥပဒေ(၂၀၁၄) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း(၂၀၁၅) မြန်မာနိုင်ငံမှ ချမှတ်ထားသောစက်ရုံနှင့်သက်ဆိုင်သည့် တခြားလိုက်နာ ဆောင်ရွက်ရမည့်လုပ်ထုံးလုပ်နည်းဥပဒေ၊ နည်းဥပဒေနှင့်မူဝါဒများ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန် ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များ 	အခန်း(၂)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
စီမံကိန်းအကြောင်းအရာ ဖော်ပြချက်	2	စီမံကိန်း၏ တည်နေရာ၊ တည်နေရာပြမြေပုံများ၊ စီမံကိန်းလုပ်ငန်း ဆောင်ရွက်ပုံအဆင့်ဆင့်၊ စက်ရုံတွင် အသုံးပြုသည့် အရင်းအမြစ်များ၊ စီမံကိန်းမှ ထွက်ရှိသည့် စွန့်ပစ်ပစ္စည်းများအား အသေးစိတ် ဖော်ပြထားရှိ ပါသည်။	အခန်း(၃)
ပတ်ဝန်းကျင်အရည်အသွေး တိုင်းတာမှု	9	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန် ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသက်မှတ်ချက်များနှင့် ပတ်ဝန်ကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များကို အခြေခံ၍ လေ့လာ တိုင်းတာထားပါသည်။	အခန်း(၄)
လေအရည်အသွေး	<i>ç</i> .၁	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန် ချက် (၂၀၁၅) ၏ ထုတ်လွှတ်အခိုးအငွေ့ (Air emissions) လမ်းညွှန် သတ်မှတ်ချက်ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ(၄-၂-၂)
အပူချိန်နှင့် စိုထိုင်းဆ	9. J	စက်ရံအတွင်းရှိ အပူချိန်နှင့် စိုထိုင်းဆအား တိုင်းတာထားရှိပါသည်။	အပိုဒ်ခွဲ (၄-၂-၃)
ဆူ ညံသံ	۶.၃	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန် ချက် (၂၀၁၅) ၏ အမြင့်ဆုံးလက်ခံနိုင်သည့် ဆူညံသံအဆင့် (Noise level) လမ်းညွှန်သက်မှတ်ချက် စက်မှုဇုန် ဧရိယာတွင် (70 One-hour LAeq (dBA)) ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ(၄-၂-၄)
စက်ရံအလင်းရောင်ရရှိမှု	۶.२	> Illumination and Limiting Glare Index based on IES Code, 1968 ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ(၄-၂-၅)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
ဘေးအန္တရာယ်ရှိမှုဆန်းစစ်ခြင်းနှင့် လျော့နည်းစေရေး အစီအစဉ်	ງ	စီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နှင့်လူမှုစီးပွားအပေါ် ဖြစ်ပေါ်နိုင်သော အကျိုးသက်ရောက်မှုများကို လေ့လာဆန်းစစ်၍ လျော့နည်းစေရေး အစီအစဉ်များကို လုပ်သွားမည် ဖြစ်ပါသည်။	အခန်း (၅)
အကျိုးသက်ရောက်မှုများအား အမျိုးအစားခွဲခြားခြင်း	၅.၁	ကောင်းမွန်သော သက်ရောက်မှုများနှင့် ဆိုးကျိုးများအား ဖော်ထုတ်ခြင်း။	အပိုဒ် (၅.၁)
ပတ်ဝန်းကျင်အရင်းအမြစ်များ အပေါ် သက်ရောက်မှုများ	၅.၂	စီမံကိန်းကြောင့် ပတ်ဝန်းကျင် (လေ၊ ရေ၊ မြေ၊ အသံ) သက်ရောက်မှုများ အား ဖော်ထုတ်ခြင်း။	အပိုဒ် (၅.၃)
ဂေဟဗေဒအရင်းအမြစ်များ အပေါ် သက်ရောက်မှုများ	<u> </u> .୧	ဂေဟဗေဒအရင်းအမြစ်များအပေါ် စီမံကိန်းကြောင့် သက်ရောက်နိုင်မှုများ အား ဖော်ထုတ်ခြင်း။	အပိုဒ် (၅.၄)
လူသားတို့အပေါ် သက်ရောက်မှု များ	ე.၄	လူမှုစီးပွား၊ လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် လုံခြုံရေး၊ အမှိုက်စွန့်ပစ်မှုတို့နှင့် ပတ်သက်၍ ဖြစ်ပေါ်နိုင်သော သက်ရောက်မှုများအား ဖော်ထုတ်ခြင်း။	အပိုဒ် (၅.၅)
စီမံကိန်း၏ လုပ်ဆောင်မှုများနှင့် ၎င်း၏ အကျိုးသက်ရောက်မှုများ	ე.ე	စီမံကိန်း၏ လုပ်ငန်းစဉ်အဆင့်၊ ဖျက်သိမ်းခြင်းအဆင့် တို့တွင် ဖြစ်ပေါ်နိုင် သော စီမံကိန်း၏ ပတ်ဝန်းကျင်၊ ဂေဟဗေဒနှင့် လူသားတို့အပေါ် အကျိုး သက်ရောက်မှုများအား အဆင့်အလိုက်ခွဲခြား ဖော်ပြထားခြင်း။	အပိုဒ် (၅.၆)
ပတ်ဝန်းကျင်အရင်းအမြစ်များ အပေါ် သက်ရောက်မှုများအား လျော့နည်းစေရေး နည်းလမ်းများ	ე.ც	စီမံကိန်းကြောင့် ပတ်ဝန်းကျင် (လေ၊ ရေ၊ မြေ၊ အသံ) သက်ရောက်မှုနှင့် ပတ်သက်၍ လျော့နည်းစေရေး နည်းလမ်းများကို ဖော်ပြထားပါသည်။	အပိုဒ် (၅.၇)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
လူသားတို့အပေါ် သက်ရောက်မှု များအား လျော့နည်းစေရေး	ગુ.૧	မီးဘေးအန္တရာယ်၊ လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးကင်းလုံခြုံရေး၊ စွန့်ပစ် ပစ္စည်းထွက်ရှိမှုနှင့် ပတ်သက်၍ လျော့နည်းစေရေး နည်းလမ်းများအား	အပိုဒ် (၅.၈)
နည်းလမ်းများ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု	હ	ဖော်ပြထားပါသည်။ > Tae Hyun (Myanmar) Industry Company Limited သည် စက်ရုံ အခြေအနေ၊ အလုပ်သမား၊ ဒေသခံလူထုအမြင်၊ အစုရှယ်ယာဝင်များနှင့် ညှိနှိုင်းဆွေးနွေးခြင်း အပါအဝင် ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြပ်ကြည့်ရှု ခြင်းများကို ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။	အခန်း(၆)
လေထုညစ်ညမ်းမှုနှင့်ဖုန်မှုန့်	G.ɔ	 လေထုညစ်ညမ်းခြင်းကိုကာကွယ်ရန်နှင့် ကာဗွန်ထုတ်လုပ်မှုကို လျှော့ချပေး ရန် အတွက်စက်ရုံဝင်းအတွင်းအပင်များစိုက်ပျိုးခြင်း မီးစက်များကိုပြုပြင်ထိန်းသိမ်းခြင်း အမှိုက်များမီးရှို့ခြင်းကိုတားမြစ်ခြင်း ဖုန်ထူထပ်သောနေရာများတွင်တာဝန်ထမ်းဆောင်သောဝန်ထမ်းများအတွက် နှာခေါင်းစည်းများဝတ်ဆင်ခြင်း 	အပိုဒ်(၆-၁)
ရေအသုံးချမှု	Թ.յ	 ရေသုံးစွဲမှုကို ထိန်းချုပ်ရန်အတွက် ရေမီတာတပ်ဆင်ထားခြင်း ဝန်ထမ်းများအတွက် အိမ်သာနှင့် အခြားရေသုံးစွဲသည့် လုပ်ငန်းစဉ်များတွင် ရေသုံးစွဲမှုနှင့် ပတ်သက်၍ သတိပေးဆိုင်းဘုတ်များထားရှိခြင်း၊ အလေ့အကျင့် ကောင်းများ သင်ကြားပေးခြင်း ပြုလုပ်ခြင်း 	အဝိုဒ်(၆-၂)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
		 ရေညစ်ညမ်းမှုကို ရှောင်ရှားနိုင်ရန်အတွက် စက်များနှင့် မော်တော်ယာဉ်များ တွင် အသုံးပြုသည့် လောင်စာဆီများကို သင့်တော်ကောင်းမွန်အောင် စီမံ ဆောင်ရွက်ခြင်း စက်ရုံပတ်ဝန်းကျင်တွင် သစ်ပင်များ စိုက်ပျိုးထားရှိခြင်း 	
စွန့်ပစ်အရည်	ઉ.၃	 ရေနုတ်မြောင်းလိုင်းကို သင့်တော်သော အကျယ်၊ အနက်ရှိစေပြီး မိလ္လာစနစ် သည် ရေလုံပြီး စနစ်တကျ သိုလှောင်နိုင်ခြင်း မိလ္လာပိုက်လိုင်းကို အမြဲစစ်ဆေးခြင်းနှင့် ထိန်းသိမ်းခြင်း ရေနုတ်မြောင်းကို အနံ့အသက်များ ကင်းစေရန် အမှိုက်များ ပိတ်ဆို့စေခြင်း မရှိ အောင် ဆောင်ရွက်ခြင်း 	အပိုဒ်(၆-၃)
ဆူညံသံထွက်ရှိမှု	G.ç	 အသံလုံအခန်းများတည်ဆောက်ပြီး စက်ပစ္စည်းများကို သေချာစွာ ပြုပြင် ထိန်းသိမ်းစေခြင်း သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်းတွင် ယာဉ်များ၏ အမြန်နှုန်းကို ကန့်သတ် ခြင်း လုံလောက်သော တစ်ကိုယ်ရည်သုံး အကာအကွယ်ပစ္စည်းများ ထားရှိပေးခြင်း သက်ဆိုင်ရာ ဝန်ထမ်းများအားလုံးကို သင့်လျော်သော သင်တန်းများ ပို့ချခြင်း နှင့် ဆူညံသော နေရာတွင် အလုပ်လုပ်စဉ် တစ်ကိုယ်ရည်သုံး အကာအကွယ် များ တပ်ဆင်စေခြင်း 	အပိုဒ်(၆-၄)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
အမှိုက်စွန့်ပစ်မှု	6.၅	 စီမံကိန်းမှ ထွက်ရှိသော စွန့်ပစ်အမှိုက်များကို စက်ရုံဝင်းအတွင်း (သို့မဟုတ်) ဒေသရှိ အင်းအိုင်၊ ချောင်း၊ မြောင်း၊ မြစ် စသည်တို့ထဲသို့ စွန့်ပစ်ခြင်း မပြုလုပ်ပါ။ စွန့်ပစ်အမှိုက်များကို တစ်နေရာတည်းတွင် စနစ်တကျ ခွဲ၍ စုဆောင်းရန် လိုအပ်ပြီး အထည်အလိပ် စွန့်ပစ်အမှိုက်များကို သီးခြားသိုလှောင်သိမ်းဆည်း ခြင်း၊ အန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်းများနှင့် တခြားသော သတ္တုပစ္စည်းများကို သီးခြား သိုလှောင်သိမ်းဆည်းခြင်း စွန့်ပစ်အမှိုက်များကို စနစ်တကျ ထားသို၍ စွန့်ပစ်ခြင်း စွန့်ပစ်အမှိုက်များကို စနစ်တကျ ထားသို၍ စွန့်ပစ်ခြင်း နေ့စဉ်ထွက်ရှိသော အမှိုက်များကို ရန်ကုန်မြို့တော်စည်ပင်ယာရေးကော်မတီ နှင့် ချိတ်ဆက်စွန့်ပစ်ခြင်း 	အဝိုဒ်(၆-၅)
မီးဘေးအန္တရာယ်	ତ.ତ	 အရေးပေါ် အခြေအနေများအတွက် စက်ရုံနံရံများတွင် မီးသတ်ဆေးဘူးများ၊ မီးသတ်ပိုက်ဘီးများနှင့် မီးသတ်ရေပိုက်များ ထားရှိခြင်း အရေးပေါ် ထွက်ပေါက်ပြ မြေပုံများနှင့် စုဝေးရပ်ညွှန်ပြရာ သင်္ကေတများ ထားရှိခြင်း မီးသတ်ပစ္စည်းများကို ပုံမှန်စစ်ဆေးခြင်းနှင့် မီးသတ်ရေကန်ကို အရေးပေါ် အခြေအနေအတွက် ပြင်ဆင်ခြင်း အလုပ်သမားများအား သတိပေးရန် မီးဘေးအချက်ပြခေါင်းလောင်းများ တပ်ဆင်ထားခြင်း အဓိက ဝင်ပေါက်ထွက်ပေါက်များကို ပိတ်ဆို့ထားခြင်း မပြုလုပ်စေခြင်း 	အဝိုဒ်(၆-၆)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
လုပ်ငန်းခွင်ထိခိုက်မှုနှင့်ကျန်းမာရေး	ઉ. <i>૧</i>	 ရှေးဦးသူနာပြုသင်တန်း၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးသင်တန်း၊ မီးဘေး အန္တရာယ်ကာကွယ်ရေး သင်တန်း၊ စက်ယန္တယားများ ကိုင်တွယ်ခြင်း သင်တန်းများ ပို့ချခြင်း လေ့လာတွေ့ရှိထားသော အလင်းတိုင်းတာချက်များအရ၊ အလုပ်သမားများ ဘေးကင်းလုံခြုံစွာ လုပ်ကိုင်နိုင်စေရန် လုံလောက်သောအလင်းရောင် ရရှိ စေရန် ဆောင်ရွက်ခြင်း တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးကိရိယာများ (ဥပမာ- နားကြပ်၊ လက်အိတ်၊ ခေါင်ဆောင်း၊ မျက်မှန်) များကို ဌာနအလိုက် ပေးအပ်ခြင်း ဓာတ်လိုက်ခြင်း အန္တရာယ်မှ ကာကွယ်ရန်အတွက် လျှပ်စစ်ထိန်းသိမ်း စောင့်ရှောက်ရေး ဝန်ထမ်းအား ပုံမှန်စစ်ဆေးခြင်းနှင့် ကြိုတင်ကာကွယ်မှု ပြုလုပ်ရန် တာဝန်ပေးခန့်အပ်ခြင်း ရေနတ်မြောင်းများ ရေစီးရေလာကောင်းအောင် ဆောင်ရွက်ခြင်းဖြင့် အလုပ်သမားများ၏ ကျန်းမာရေး ဘေးအန္တရာယ် ကာကွယ်ခြင်း ရေနတ်မြောင်းများ ရေစီးရေလာကောင်းအောင် ဆောင်ရွက်ခြင်းဖြင့် အလုပ်သမားများအတွက် အများဆုံးခွင့်ပြုနိုင်သော ဆူညံသံအဆင့် 90dB(A) သည် တစ်ရက်လျှင် စနာရီသာ ဖြစ်သည်။ ထို့ကြောင့် ဆူညံသော နေရာများတွင် လုပ်ကိုင်ပါက နားကြပ်ကိရိယာ တပ်ဆင်ခြင်းရာည်။ 	အဝိုဒ်(၆-၇)
စွမ်းအင်	6.ຄ	အပူအအေးအလိုအလျောက်ညွှန်ပြရာ ကိရိယာနှင့် အချိန်အတိုင်းကိရိယာများ တပ်ဆင်ခြင်း	အပိုဒ်(၆-၈)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
		 စက်ရုံ၏နေရာအမျိုးမျိုးတွင် စွမ်းအင်ချွေတာသော လျှပ်စစ်မီးများ တပ်ဆင် ခြင်း စွမ်းအင်ချွေတာသော စက်ပစ္စည်းများကို တပ်ဆင်ရမည် စက်ရုံအနေဖြင့် အရေးပေါ်ဖြစ်ပေါ် လာနိုင်သော မီးဘေးအန္တရာယ်၊ ငလျင်၊ 	
အရေးပေါ် အခြေအနေ	ઉ.၉	ရေကြီးခြင်းနှင့် မုန်တိုင်းများအတွက် စီမံထားရှိခြင်း > မီးသတ်ပစ္စည်းကိရိယာများနှင့် မီးသတ်ဆေးဘူးများကို နေရာတိုင်းတွင် တပ်ဆင်ထားခြင်းနှင့် စစ်ဆေးခြင်း > အသေးစိတ်အခြေအနေပြ ရုပ်ပုံ (အရေးပေါ်ထွက်ပေါက်တံခါး စသည်) ကို အလုပ်သမားများ သိရှိစေရန် ဆောင်ရွက်ထားခြင်း > ရေပိုက်ခေါင်း၊ မီးသတ်ဘူး စသည်တို့ကို ထားရှိခြင်း၊ စစ်ဆေးခြင်းနှင့် ဓာတ်လိုက်ခြင်းမှ ကာကွယ်ရန် လျှပ်စစ်အန္တရာယ် အသိပေး သင်တန်းများ ပို့ချခြင်း > အလုပ်သမားများအား ငလျင်လှုပ်သောအခါ စားပွဲအောက်ကဲ့သို့သော ဘေးကင်းသော နေရာများတွင် နေထိုင်ရန်၊ အပြင်သို့ မရွေ့ရန်၊ အပြင်တွင်ရှိနေ သော အလုပ်သမားများအနေဖြင့် အဆောက်အဦးအောက်၊ သစ်ပင်အောက်၊ တိုင်များအောက်တွင် နေထိုင်ခြင်းမပြုဘဲ ကွင်းပြင်တွင်သာ နေထိုင်ရန်၊ တခြား သော သက်ဆိုင်ရာ ဘေးကင်းလုံခြုံရေး လမ်းညွှန်ချက်များကို အသိပညာ ပေးခြင်း	အဝိုဒ်(၆-၉)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
		 ရေလွှမ်းမိုးမှု (မုန်တိုင်းအပျက်အစီးများ၊ ရေမြောင်းများ ပွင့်နေခြင်း၊ မြေတိုက် စားမှု) နှင့် ရွှေ့ပြောင်းတွားသွားသတ္တဝါများ (မြွေ သို့မဟုတ် တခြား တိရိစ္ဆာန်များ) ၏ အန္တရာယ်များကို သတိပြုစေခြင်း အရေးပေါ် ဆေးအဖွဲ့များနှင့် ဆေးပစ္စည်းများ ထားရှိခြင်း အရေးပေါ် ဆက်သွယ်နိုင်သည့် မီးသတ်ဌာန၊ ရဲတပ်ဖွဲ့၊ ဆေးရုံ စသည့် တယ်လီဖုန်းနံပါတ်များကို မြင်သာနိုင်သည့်နေရာတွင် ကပ်ထားခြင်း မီးငြိမ်းသတ်ရေးအဖွဲ့၊ ကယ်ဆယ်ရေးအဖွဲ့တို့ဖြင့် ဘေးကင်းရေးကော်မတီ တစ်ရပ် တည်ဆောက်ခြင်းနှင့် ကော်မတီအနေဖြင့် ဘေးအန္တရာယ်ကင်းရှင်း ရေးဆိုင်ရာ စီမံခန့်ခွဲမှုနှင့် ပတ်သတ်၍ လစဉ်အစည်းအဝေး ကျင်းပခြင်း သဘာဝဘေးအန္တရာယ်စီမံခန့်ခွဲရေး၊ မီးဘေးအန္တရာယ်နှင့် လုပ်ငန်းခွင်ထိခိုက်မှု နှင့် ကျန်းမာရေး ကာကွယ်ရေးအတွက် သင့်လျော်သော သင်တန်းများပို့ချခြင်း 	
စောင့်ကြပ်ကြည့်ရှုမှု	۲	အဆိုပြုစီမံကိန်းသည် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာကို ဝန်ကြီးဌာနသို့ (၆)လ တစ်ကြိမ် တင်ပြဆောင်ရွက်မည်။	အပိုဒ်(၆-၁၀)
ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုမှု အချိန်ဇယားနှင့် အစီရင်ခံတင်ပြ မည့်အစီအစဉ်	၇.၁	ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ပါ အစီအစဉ်များအတိုင်း စောင့်ကြပ် ကြည့်ရှုသွားမည့် နေရာများ၊ GPS Location Point များ၊ ကုန်ကျစရိတ်များ၊ တာဝန်ယူဆောင်ရွက်သွားမည့် အဖွဲ့အစည်းအား ဖော်ပြထားရှိပါသည်။	ဇယား (၆.၁)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
ပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှု နှင့် စောင့်ကြပ်ကြည့်ရှုမှုအတွက် ကုန်ကျစရိတ်	٩٠J	ပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုနှင့် စောင့်ကြပ်ကြည့်ရှုမှုအတွက် ခန့်မှန်း ကုန်ကျစရိတ်များအား ဖော်ပြထားရှိပါသည်။	ယေား (၆.၂)
စွမ်းဆောင်ရည်မြှင့်တင်ခြင်းနှင့် သင်တန်းပို့ချခြင်း အစီအစဉ်	6	ဝန်ထမ်းများအား အရေးပေါ် အခြေအနေ၊ ကျန်းမာရေးအခြေအနေ၊ မီးဘေး အန္တရာယ်များ ဖြစ်ပေါ် လာပါက ထိန်းချုပ်ဖြေရှင်းနိုင်ရန် လိုအပ်သည့် သင်တန်းများ ပို့ချထားရှိခြင်း	အပိုဒ် (၆.၁၁)
မကျေနပ်မှုများဆိုင်ရာ ဖြေရှင်းမှု နည်းလမ်း	9	ဒေသခံပြည်သူများ၏ စီမံကိန်းနှင့် ပတ်သက်၍ မကျေနပ်မှုများ၊ ပြဿနာများ အား ဖြေရှင်းရန်အတွက် စက်ရုံ၏ ကော်မတီ၊ အစိုးရဌာန၊ စက်မှု ုန် တာဝန်ရှိ သူများနှင့် ပူးပေါင်းဖြေရှင်းသွားပါမည်။	အပိုဒ် (၆.၁၂)
လူမှုရေးဆိုင်ရာ တာဝန်ယူဆောင်ရွက်မှု	00	လူထုအကျိုးပြုဆောင်ရွက်ချက်များကို လူနေမှုအဆင့်အတန်း မြင့်မားစေရန် နှင့် စီမံကိန်းဧရိယာရှိ လူနေမှုအသိုင်းအဝိုင်းများ အားလုံးနှင့် အဆင်ပြေစေရန် ရည်ရွယ်ပါသည်။ Tae Hyun (Myanmar) Industry Company Limited ၏ လူထုအကျိုးပြု ဆောင်ရွက်ချက်များအနေဖြင့် ဒေသအတွင်း စာသင်ကျောင်း များအား ထောက်ပံ့ပေးခြင်း၊ ဝန်ထမ်းများအတွက် သင်တန်းများပေးခြင်း နှင့် ဝန်ထမ်းများအတွက် ကျန်းမာရေးကူညီစောင့်ရှောက်မှု ထားရှိပေးခြင်းများ ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။	အပိုဒ် (၆.၁၃)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ် စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်း ချက်အခန်း
အများပြည်သူနှင့် တွေ့ဆုံ ဆွေးနွေး ခြင်း	00	 အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးခြင်းအား အစီရင်ခံစာစတင်ရေးဆွဲချိန်တွင် ကိုဗစ်-၁၉ ရောဂါများ ဖြစ်ပွားနေသောကြောင့် ကျင်းပနိုင်ခြင်းမရှိခဲ့ဘဲ Facebook စာမျက်နှာမှတစ်ဆင့် အကြံပြုချက်များတောင်းခံခဲ့ပါသည်။ အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးခြင်းအား အတည်ပြုအစီရင်ခံစာတင်ပြ သည့်အချိန်တွင် ထည့်သွင်းဖော်ပြသွားမည် ဖြစ်ပါသည်။ 	အခန်း (၇)
နိဂုံးနှင့် အကြံပြုချက်	ວງ	Tae Hyun (Myanmar) Industry Company Limitedသည် အမျိုးမျိုးသော ဂျာကင်နှင့်ဦးထုပ်များအား CMP စနစ်ဖြင့် ထုတ်လုပ် ရောင်းချခြင်း ဖြစ်ပါ သည်။ စီမံကိန်းမှရရှိသော အကျိုးအမြတ်၏ ၂% ကို CSR အစီအစဉ်ဖြင့် ဒေသအကျိုးပြုလုပ်ငန်းများနှင့် ဝန်ထမ်းများ၏ ကျန်းမာရေးဆိုင်ရာ ကူညီ ထောက်ပံ့ခြင်းများတွင် အသုံးပြုသွားမည် ဖြစ်ပါသည်။ စီမံကိန်း လည်ပတ် နေစဉ် နှင့် ပိတ်သိမ်းမည့်ကာလအတွက် နေ့စဉ်၊ လစဉ်၊ နှစ်စဉ် ရေးဆွဲမည့် အစီအစဉ်များအား ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုဆိုင်ရာ စည်းမျဉ်း၊ စည်းကမ်း များ၊ လုပ်ထုံးလုပ်နည်းများနှင့်အညီ ရေးဆွဲသွားမည်ဖြစ်ပါသည်။	အခန်း(၈)

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Mr. Koo Ja Yong Promoter Tae Hyun (Myanmar) Industry Co., Ltd