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AMITY (MYANMAR) LINGERIE COMPANY LIMITED

ENVIRONMENTAL MANAGEMENT PLAN FOR GARMENT MANUFACTURING FACTORY

2ND REVISED

PROJECT NO.	**091-2017**	**DISTRIBUTION**	
DATE	**April , 2020**	**Amity**	**3 COPIES**
DOCUMENT NO.	**EMP/07/2017**	**TBS**	**1 COPY**

ကတိကဝတ်များ

(က) ဤပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို တိကျခိုင်မာမှုများနှင့် ပြည့်စုံစွာ ဆောင်ရွက်ထားပါသည်။

(ခ) ဤလုပ်ထုံးလုပ်နည်းများအပါအဝင် သက်ဆိုင်ရာဥပဒေများကို တိကျစွာလိုက်နာ၍ ပတ်ဝန်းကျင်စီမံခန့် ခွဲမှုအစီအစဉ်များကို ရေးဆွဲထားပါသည်။

(ဂ) စီမံကိန်းပိတ်သိမ်းချိန်တွင် လူမှုပန်းကျင်အား ထိခိုက်မှုအနည်းဆုံး ဖြစ်စေရန် စီမံဆောင်ရွက်ပေးမည်ဖြစ်ပြီး ထိခိုက်မှုများ ရှိလာပါက မူလအခြေအနေသို့ ရောက်ရှိ စေရန် ဆောင်ရွက်ပေးမည် ဖြစ်ပါသည်။

(ဃ) စီမံကိန်းသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်ပါ ကတိကဝတ်၊ ပတ်ဝန်းကျင် ထိခိုက်မှုလျော့ချရေး လုပ်ငန်းများနှင့် အစီအစဉ်များကို အပြည့်အဝအစဉ်အမြဲ လိုက်နာဆောင်ရွက်သွားမည် ဖြစ်ကြောင်း ကတိကဝတ်ပြုပါသည်။

Managing Director

Amity Garment (MYANMAR) Co., Ltd

အကြံပေးအဖွဲ့ အစည်း၏ဝန်ခံချက်

ဤသဘာဝပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်သည် အကြံပေးအဖွဲ့အစည်း၏ လုပ်ငန်းဆိုင်ရာ နားလည်တတ်ကျွမ်းမှုနှင့် စုံစမ်းရရှိသော အချက်အလက်များကို အခြေခံ၍ ပြည့်စုံ မှန်ကန်မှုရှိအောင် ဆောင်ရွက်ထားပါကြောင်း ဝန်ခံပါသည်။

Managing Director

Total Business Solution Co., Ltd.

အစီရင်ခံစာအကျဉ်းချုပ်

၁။ နိဒါန်း

Amity (Myanmar) Lingerie Co., Ltd သည် အမျိုးသမီးဝတ် အတွင်းခံထုတ်လုပ်သော အထည်ချုပ်စက်ရုံဖြစ်ပြီး ပဲခူးတိုင်း၊ ပဲခူးမြို့နယ်၊ အင်းတကော်၊ အင်းတကော်စက်မှုဇုန်အတွင်း တည်ရှိပါသည်။ ထိုအထည်ချုပ်စက်ရုံအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန် Total Business Solution Co.,Ltd (TBS) အား ငှားရမ်းရေးဆွဲခဲ့ပါသည်။

၂။ စီမံကိန်းအစီအစဉ်

Amity အထည်ချုပ်စက်ရုံသည် မြေကွက်အမှတ် ၅၃၊ ကွင်းအမှတ် ၁၁၉၀ (ခ)၊ အရှေ့ဂုန်မင်းအင်း၊ ပဲခူးတိုင်း၊ အင်းတကော်၊ အင်းတကော်စက်မှုဇုန်အတွင်းတည်ရှိပါသည်။ Amity (Myanmar) Lingerie Co., Ltd ၏ မြေကွက်ဧရိယာ အကျယ်အဝန်းမှာ ၃.၁ ဧကရှိပြီး၊ Goldenberg Bago Development Co., Ltd နှင့် ဟောင်ကောင်အခြေစိုက် Aiyasi Underwear HK limited တို့နှင့်အတူ အကျိုးတူပူးပေါင်းရင်းနှီးမြှုပ်နှံထားပါသည်။ Amity စက်ရုံအတွင်း ရုံးဝန်ထမ်း ၃၄ ဦးရှိပြီး၊ နိုင်ငံခြားသား ဝန်ထမ်း ၁၀ ဦးတို့သည် စက်ရုံလည်ပတ်ခြင်းနှင့် စီမံခန့်ခွဲမှုအပိုင်းကို ထောက်ပံ့ပေးကြပြီး၊ စက်ရုံ၏ အလုပ်ချိန်မှာ မနက် ၈း၀၀ နာရီ မှ ညနေ ၅း၀၀ အထိဖြစ်ပါသည်။ စက်ရုံအတွင်းသို့ သွားရောက် လေ့လာခဲ့စဉ်အတွင်း၊ စက်ရုံလည်ပတ်ရန်အတွက် ဝန်ထမ်း ၁၁၈၇ ကို ခန့်အပ်ပြီးဖြစ်ပါသည်။

၃။ ထုတ်လုပ်မှု အစီအစဉ်

စက်ရုံ၏ အဓိကလုပ်ငန်းစဉ်မှာ စက်ချုပ်စက်များဖြင့် လုပ်ဆောင်ခြင်းဖြစ်ပါသည်။ စက်ရုံသို့သွားရောက် လေ့လာစဉ်အတွင်း၊ စက်ရုံတွင်၌ အပ်ချုပ်လိုင်း ၂၄ လိုင်းရှိပြီး၊ ၅ လိုင်းကိုသာ အသုံးပြုနေပါသည်။ ကျန်အပ်ချုပ်လိုင်း ၁၉ လိုင်းကို ထပ်မံတိုးချဲ့ဆောင်ရွက်သွားမှာ ဖြစ်ပါသည်။ ပထမဦးစွာ အဝတ်အစများဖြတ်ရန် အတွက် ဒီဇိုင်း ရေးဆွဲရပါသည်။ ထို့နောက် ရေးဆွဲထားသော ဒီဇိုင်းပုံစံအတိုင်း အဝတ်စများဖြတ်တောက်၍ စက်ဖြင့်ချုပ်လုပ်ရပါသည်။ စက်ဖြင့်ချုပ်ပြီးလျှင် အဝတ်ထည်များကို မီးပူတိုက်ခြင်း နှင့် စစ်ဆေးခြင်းများ ပြုလုပ်ရပါသည်။ ပစ္စည်းများကို အပ်နှံသူထံသို့ မပို့သေးခင် နောက်ဆုံးအကြိမ် စစ်ဆေးခြင်းနှင့် ထုတ်ပိုးခြင်းများ ပြုလုပ်ရပါသည်။

၄။ ဥပဒေမူဘောင်များ

Amity (Myanmar) Lingerie Co., Ltd. သည် ပတ်ဝန်းကျင်အပေါ် ဆိုးကျိုးသက်ရောက်မှု လျော့နည်းအောင် ချမှတ်ထားသော ပတ်ဝန်းကျင်ဆိုင်ရာ နည်းဥပဒေများနှင့်အညီ ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။ ထိုကုမ္ပဏီသည် အစိုးအဖွဲ့အစည်းများ၊ ပြည်သူများနှင့် ပူပေါင်းကာ ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်များကို နှစ်ဦးသဘောတူပြု လုပ်သွားမည်ဖြစ်ပါသည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်သည် သယံဇာတအရင်းအမြစ်နှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဝန်ကြီးဌာနမှ ချမှတ်ထားသော နည်းဥပဒေ ၅၀/၂၀၁၄ နှင့် ပတ်ဝန်းကျင် ထိခိုက်ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမှတ် ၆၁၆/၂၀၁၅ နှင့် ကိုက်ညီရမည်ဖြစ်ပါသည်။

၄.၁။ နိုင်ငံတကာ မူဝါဒနှင့် အမျိုးသားရေးမူဝါဒများနှင့် စံချိန်စံညွှန်းများနှင့် လမ်းညွှန်ချက်များ

စီမံကိန်း၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး ကိစ္စ ရပ်များကိုမြန်မာနိုင်ငံ၏နည်းဥပဒေများနှင့်အညီ ဆောင်ရွက်ရမည်ဖြစ်ပါသည်။ Amity company သည် အောက်တွင်ဖော်ပြထားသော ဥပဒေများကို လိုက်နာရပါမည်။

- ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ (၂၀၁၂)
- ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး နည်းဥပဒေများ (၂၀၁၄)
- ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅)
- အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (အမှတ် ၆၁၅/၂၀၁၅) (၂၀၁၅ ဒီဇင်ဘာ၊ ၂၉)
- ပြည်တွင်းရင်းနှီးမြှုပ်နှံမှုဥပဒေ (၂၀၁၃)
- နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုဥပဒေ (၂၀၁၂)
- ပို့ကုန် နှင့်သွင်းကုန်ဥပဒေ (၂၀၁၂)
- ဖွံ့ဖြိုးရေးကော်မတီ ဥပဒေ (၁၉၉၃)
- ပြည်သူ့ကျန်းမာရေးဆိုင်ရာ ဥပဒေ (၁၉၇၂)
- ပုဂ္ဂလိက စက်မှုလုပ်ငန်းများဥပဒေ (၁၉၉၀)
- စက်ရုံများဥပဒေ (၁၉၅၁)
- လူမှုဖူလုံရေးဥပဒေ (၂၀၁၂)
- လူမှုဖူလုံရေးနည်းဥပဒေများ (၂၀၁၄)
- ခွင့်ရက်နှင့်အလုပ်ပိတ်ရက်အက်ဥပဒေ , ၁၉၅၁ (၂၀၁၄)
- အလုပ်သမားရေးရာဥပဒေ (၁၉၅၁)
- အနည်းဆုံးလုပ်ခဥပဒေ (၂၀၁၃)
- အနည်းဆုံးလုပ်ခ (၂၀၁၅)
- လုပ်အားခနှင့်ငွေပေးချေရမည့်အက် ဥပဒေ (၂၀၁၆)
- အလုပ်သမား အငြင်းပွားဥပဒေအခြေချခြင်း (၂၀၁၂)
- အလုပ်သမားဖွဲ့စည်းဥပဒေ (၂၀၁၁)
- ဓာတုဓါတ်အန္တရာယ်နှင့်စပ်စပ် ပစ္စည်းများကာကွယ်ရေး ဥပဒေ (၂၀၁၃)
- မြန်မာနိုင်ငံ မီးသတ်ဥပဒေ (၂၀၁၆)

၅။ ပတ်ဝန်းကျင်လေ့လာမှု

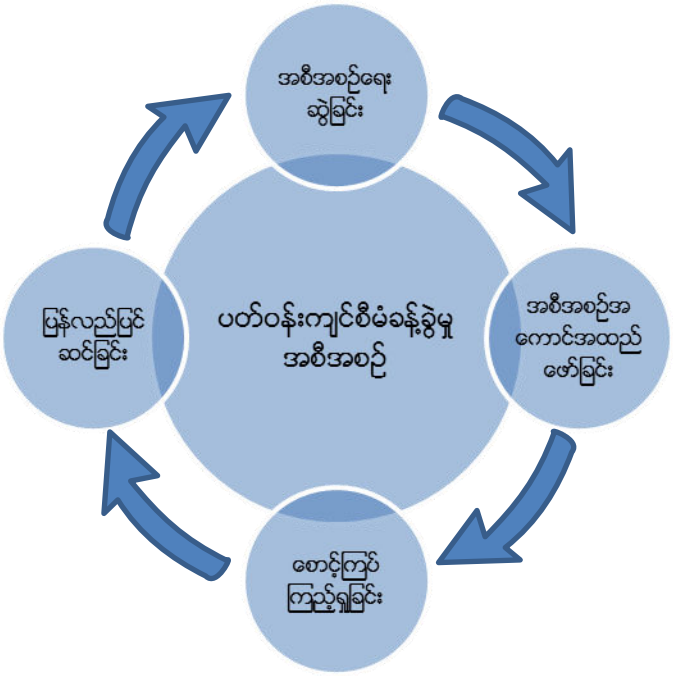
လေ့လာနေသောစီမံကိန်း ဇရိယာ သည် စီမံကိန်ဇရိယာ၏ အနီးနားတွင်ရှိသော ဇရိယာများကိုသတ်မှတ်ပြီး ထိုမှရရှိလာသော သတင်းအချက်အလက်များကို စုဆောင်းထားပါသည်။ စီမံကိန်းဇရိယာသည် ၃.၁ ဧကရှိပြီး အင်းတကော်စက်မှုဇုန်တွင် တည်ရှိပါသည်။ ပတ်ဝန်းကျင်အစီရင်ခံစာအတွက် လေ့လာနေသော စီမံကိန်း ဇရိယာ၏ အနီးနားရှိ ၅၀၀ မီတာပတ်လည်ခန့်ကို လေ့လာခဲ့ပြီး၊ ၅၀၀ မီတာတွင် ရှိသော ဧကမှာ ၁၉၃.၃၃ ဧကရှိပါသည်။ စီမံကိန်းအတွက် လေ့လာရာတွင် တွေ့ရှိရသောပတ်ဝန်းကျင်ဆိုင်ရာ အဓိက အချက်သုံးချက်မှာ (၁) ရုပ်ပိုင်းဆိုင်ရာအချက်အလက်များ (၂) ဇီဝအစိတ်အပိုင်းများနှင့် (၃) လူမှုစီးပွားရေး အချက်အလက်အများတို့ ဖြစ်ကြပါသည်။

၆။ ဖြစ်ပေါ်လာနိုင်သော ပတ်ဝန်းကျင်ထိခိုက်မှုများ

စက်ရုံသည်အမျိုးသမီးအတွင်းခံထုတ်လုပ်သည့်စက်ရုံဖြစ်ပါသည်။ စက်ရုံအတွင်းသို့ လေ့လာ ခဲ့ချိန်အတွင်း စက်ရုံ၏အလုပ်သမားဦးရေမှာ ၁၁၈၇ ဦးရေနှင့် လည်ပတ်နေပါသည်။ စီမံကိန်းလည်ပတ်စဉ်အတွင်းဖြစ်ပေါ်လာနိုင်သော ပတ်ဝန်းကျင်ထိခိုက်လာနိုင်မှုများမှာ (၁) လေထုညစ်ညမ်းမှု (၂) ဆူညံသံများ (၃) ဇရေဆိုးများနှင့်စွန့်ပစ်အစိုင်အခဲများ ဖြစ်ကြပါ သည်။

၇။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်

ပတ်ဝန်ကျင်စီမံခန့်ခွဲခြင်း၏ရည်ရွယ်ချက်မှာဖြစ်ပေါ်လာနိုင်သော ပတ်ဝန်းကျင်ထိခိုက်မှုများကို လျော့ချပေးရေးနှင့် နိုင်ငံတော်မှမှတ်ထားသော ဥပဒေများနှင့် စည်းမျဉ်းစည်းကမ်းများကို လိုက်နာရန်ဖြစ်ပါသည်။ ပတ်ဝန်ကျင်ထိန်းသိမ်းမှုလုပ်ငန်းဆောင်ရွက်ရာတွင် အဓိကအသုံးပြုသော စီမံခန့်ခွဲမှုမှာ PDCA cycle ကိုအခြေခံပြီး ၄ မျိုးကိုခွဲခြားဖော်ပြထားပါသည်။



ပုံ။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ပြစက်ပိုင်း

၁။ Plan (P) - အစီအစဉ်ရေးဆွဲခြင်း

၂။ Do (D) - အကောင်အထည်ဖော်ခြင်း

၃။Check (C) - အကောင်ထည်ဖော်ချိန်တွင် ရေးဆွဲထားသော အစီအစဉ်အတိုင်း ဆောင်ရွက်မှုရှိမရှိ

၄။Act (A) - စစ်ဆေးတွေ့ရှိချက်များအရလိုအပ်သည်များကိုဆက်လက်ဆောင်ရွက်ရန်

၈။ ပတ်ဝန်းကျင် နှင့် လူမှုထိခိုက်မှုများ

၈.၁ လုပ်ငန်းလည်ပတ်စဉ်ကာလ

(က) လေထုအရည်အသွေး

လုပ်ငန်းလည်ပတ်ရေးကာလတွင် ဓာတ်ငွေ့ပါသော ထုတ်လွှတ်ခြင်းများ မရှိပါ။ သို့သော် လုပ်ငန်းခွင်သုံး ပစ္စည်းများ သယ်ယူပို့ဆောင်ရေး အတွက် အသုံးပြုသော ယာဉ်များမှ ထုတ်လွှတ်မှုများ ရှိနိုင်ပါသည်။

(ခ) ဆူညံမှု

လုပ်ငန်းလည်ပတ်ရေးကာလတွင် စီမံကိန်းစက်ရုံမှ လွန်ကဲသော ဆူညံသံ ထုတ်လွှတ်မှုများ ရှိနိုင်မည် မဟုတ်ပါ။ အပတ်ချုပ်လိုင်း ကိရိယာများနှင့် မီးစက်များမှ ဆူညံသံများ ထွက်ရှိနိုင်သော်လည်း

တိုင်းတာမှုရလဒ်များအရ လမ်းညွှန်ချက်တန်ဖိုးအတွင်းတွင် တည်ရှိပြီး လက်ခံနိုင်သော ဆူညံမှုများအဖြစ် သတ်မှတ်နိုင်ပါသည်။

(ဂ) ရေအရည်အသွေး

လုပ်ငန်းလည်ပတ်ရေးကာလတွင် အောက်ပါလုပ်ငန်းများကြောင့် ရေအရည်အသွေး ညစ်ညမ်းမှုများ ဖြစ်ပေါ်စေနိုင်ပါသည်။

- အလုပ်သမားများ၏ သန့်စင်ခန်းများ ထွက်ရှိလာသော မိလ္လာစွန့်ပစ်ရေများ။
- စွန့်ပစ်ပစ္စည်းများ သိုလှောင်ထားခြင်း။
- ဓာတုပစ္စည်း မတော်တဆ ယိုဖိတ်မှုများ။

လုပ်ငန်းလည်ပတ်ရေးလုပ်ငန်းများကြောင့် ပတ်ဂန်းကျင်ရှိရေထုများကို ထိခိုက်မှုများ မဖြစ်ပေါ်စေရန်အတွက် သင့်တင်သော ပတ်ဂန်းကျင် စီမံခန့်ခွဲမှုများကို ဆောင်ရွက်မည်ဖြစ်ပြီး စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို ရေးဆွဲဖော်ဆောင်သွားမည် ဖြစ်ပါသည်။

(ဃ) စွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲမှု

စီမံကိန်း ဇရိယာတွင် လေ့လာမှုများအရ (ဥပမာ - ဆေးကြောရေများ)ကို စက်မှုဇုန် ရေမြောင်းထဲသို့ စွန့်ပစ်ပါသည်။ အစိုင်အခဲစွန့်ပစ်ပစ္စည်းများကို ပုဂ္ဂလိက အမှိုက်စွန့်ပစ်သည့် လုပ်ငန်းနှင့် စီမံကိန်းစက်ရုံထုတ်လုပ်ရေးမှ ထွက်ရှိသော ပိတ်ဖြတ်စများနှင့် ဂန်ထမ်းများမှ စွန့်ထုတ်သောအမှိုက်များကို စွန့်ပစ်ပါသည်။ စီမံကိန်းစက်ရုံတွင်လည်း စည်ပင်အမှိုက်ပုံးများကို အလုံအလောက်ထားရှိပါသည်။

(င) လူမှုစီးပွားရေး

စီမံကိန်းစက်ရုံလည်ပတ်ရေးကာလတွင် ဒေသခံပြည်သူလူထုများအတွက် အလုပ်အကိုင် အခွင့်အရေးများ ဖန်တီးပေးမည် ဖြစ်ပါသည်။ အလုပ်သမားအားလုံးကိုလည်း မြန်မာနိုင်ငံအလုပ်သမား ဥပဒေနှင့် အညီ စီမံအုပ်ချုပ်သွားမည် ဖြစ်ပါသည်။

(စ) ကျန်းမာရေးနှင့် လုပ်ငန်းခွင် ဘေးအန္တရာယ် ကင်းရှင်းရေး

စီမံကိန်းစက်ရုံလည်ပတ်ရေးကာလတွင် ဖြစ်ပေါ်လာနိုင်သော ကျန်းမာရေး နှင့် ဘေးအန္တရာယ်သက်ရောက်မှုများမှာ လုပ်ငန်းခွင်သုံး ဓာတုပစ္စည်းများအသုံးပြုမှု၊ စက်ပစ္စည်း ကိရိယာများ အသုံးပြုမှု၊ ဓာတုပစ္စည်းနှင့် လောင်စာဆီများ သိုလှောင်ထားရှိမှုများ နှင့် လုပ်ငန်းခွင်သုံး ယာဉ်များမှ ဖြစ်ပေါ်စေနိုင်ပါသည်။ အဆိုပါ မတော်တဆမှုများအတွက် သင့်တော်သော အရေးပေါ် စီမံခန့်ခွဲမှုများ ရေးဆွဲဖော်ဆောင်ထားမည် ဖြစ်ပါသည်။

၉။ စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်များ

စီမံကိန်းလုပ်ငန်းတွင် အဓိက စောင့်ကြပ်ကြည့်ရှုရမည့် အကြောင်းအရာများမှာ လေထုညစ်ညမ်းမှု၊ အသံဆူညံမှု၊ အမှိုက်စွန့်ပစ်မှု၊ လုပ်သားများ၏ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းမှုတို့ကို စောင့်ကြပ်ကြည့်ရှုရပါမည်။ စောင့်ကြပ်ကြည့်ရှုရခြင်း၏ ရည်ရွယ်ချက်မှာ (၁) စီမံကိန်းလုပ်ငန်းလည်ပတ်နေစဉ်အတွင်း ဖြစ်ပေါ်နိုင်သော ထိခိုက်မှုများကို တိုင်းတာရန်၊ (၂) ပြဌာန်းထားသော ဥပဒေအတိုင်း လုပ်ဆောင်စေရန်၊ (၃) ပတ်ဝန်းကျင်အပေါ် ထိခိုက်နိုင်မှုများအတွက် လျော့ချရေးနည်းလမ်းများ သတ်မှတ်ရန်၊ (၄) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်တွင် ပြည့်စုံစွာ ဖော်ပြနိုင်ရန် တို့ဖြစ်ပါသည်။

စောင့်ကြပ်ကြည့်ရှုခြင်းအစီအစဉ်တွင် ပြုလုပ်ရမည့်အချက်များ၊ စောင့်ကြည့်ရမည့်နေရာ၊ အချိန်ကာလနှင့် တာဝန်ယူမည့်အဖွဲ့အစည်းတို့ ပါဝင်ပါသည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်နှင့် စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ် အသေးစိတ်ကို အခန်း (၆) တွင် ဖော်ပြထားပါသည်။

၁၀။ ရံပုံငွေလျာထားခြင်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ပတ်ဝန်းကျင် စောင့်ကြပ်ကြည့်ရှုမှု၊ ကျန်းမာရေး နှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးဆိုင်ရာ အစီအစဉ်များအတွက် သုံးစွဲမည့် ခန့်မှန်း စရိတ်များကို ဇယားတွင် ဖော်ပြထားပါသည်။

ဇယား ၂ ပတ်ဝန်းကျင်ဆိုင်ရာ အစီအစဉ်များအတွက် သုံးစွဲမည့် ခန့်မှန်းစရိတ်များ

စဉ်	ပတ်ဝန်းကျင်လျော့ချရေးအတွက်ပြုလုပ်မည့်အစီအစဉ်များ	ခန့်မှန်းအသုံးစရိတ် အမေရိကန်ဒေါ်လာ (နှစ်စဉ်)
ပတ်ဝန်းကျင်ဆိုင်ရာလုပ်ငန်းများ		
၁	ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာခြင်း၊ စောင့်ကြပ်ကြည့်ရှုခြင်း	၂,၅၀၀ အမေရိကန်ဒေါ်လာ
၂	သက်ဆိုင်ရာသင်တန်းများပို့ချခြင်း	၁,၀၀၀ အမေရိကန်ဒေါ်လာ
၃	အရေးပေါ်အခြေအနေ	၂,၀၀၀ အမေရိကန်ဒေါ်လာ
ကျန်းမာရေးနှင့်ဘေးအန္တရာယ်ကင်းရှင်းရေးဆိုင်ရာလုပ်ငန်းများ		
၄	လုပ်ငန်းခွင်သုံး ကာကွယ်ရေးပစ္စည်း	၅,၀၀၀ - ၁၀,၀၀၀
၅	ကျန်းမာရေး အထောက်အပံ့	၃,၀၀၀ အမေရိကန်ဒေါ်လာ
၆	မီးသတ်ဆေးဘူး	၁,၀၀၀အမေရိကန်ဒေါ်လာ

၁၀။ အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်းနှင့် ပြည်သူတို့၏ပူးပေါင်းပါဝင်မှု

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးပွဲ ပြုလုပ်ရခြင်းမှလည်း လိုအပ်သော အခန်းကဏ္ဍ တခုဖြစ်ပါသည်။ အများပြည်သူနှင့် တွေ့ဆုံပွဲပြုလုပ်ရခြင်း၏ ရည်ရွယ်ချက်မှာ အစိုးရဌာနဆိုင်ရာအဖွဲ့အစည်းများ၊ စီမံကိန်းကို

စစ်ဆေးမည့်သူများနှင့် ပတ်ဂန်းကျင်ပြည်သူလူထုအား စီမံကိန်းမှ အချက်အလက်များဖြစ်သော ထုတ်လုပ်မှု အဆင့်ဆင့်များ၊ အမှိုက်စွန့်ပစ်မှုစနစ်များ နှင့် ပတ်ဂန်းကျင်အပေါ် အကျိုးသက်ရောက်မှုများကို ရှင်းလင်းတင်ပြရန်ဖြစ်ပါသည်။

အများပြည်သူနှင့် လူထုတွေ့ဆုံပွဲကို ဇကရစ် (မင်္ဂလာ ခန်းမ)၊ အင်းတကော်မြို့နယ်၊ မင်းလမ်းမဘေး၊ ဘီအီးလမ်းဆုံအနီး၊ ပဲခူးတိုင်းဒေသကြီး တွင် ၂၇ ရက်၊ စက်တင်ဘာလ၊ ၂၀၁၇ခုနှစ် တွင်ကျင်းပခဲ့ပါသည်။ အဖွင့်အမှာ စကားကို Amity (Myanmar) Lingerie Co., Ltd မှ ဦးကျော်လွင်ဦး (HR မန်နေဂျာ) မှ ပြောကြားခဲ့ ပါသည်။ ထို့နောက် TBS ကုမ္ပဏီမှ ဦးလင်းထက်စိန် (Environmental Manager) မှ စီမံကိန်းအချက်အလက်များ၊ ထုတ်လုပ်မှု အဆင့်ဆင့်များ၊ အမှိုက်စွန့်ပစ်မှု စနစ်များ၊ ပတ်ဂန်းကျင်အပေါ် အကျိုးသက်ရောက်မှုများ၊ လျော့ချရေး အစီအစဉ်များ၊ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်များ၊ စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်များ နှင့် CSR အစီအစဉ်များကို ရှင်းလင်းတင်ပြ၍ အစိုးရဌာနဆိုင်ရာအဖွဲ့အစည်းများမှ တာဂန်ရှိသူများ တတ်ရောက်ကြပါသည်။ ယခု ရေးသားထားသော ပတ်ဂန်းကျင် စီမံခန့်ခွဲမှု အစီရင်ခံစာ တွင် အများပြည်သူနှင့် တွေ့ဆုံပွဲ ပြုလုပ်ခြင်း အကြောင်းအရာများကို အခန်း(၇)တွင် ဖော်ပြထားပါသည်။

၁၁။ နိဂုံး

နိဂုံးချုပ်အနေဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်လေ့လာမှုတွင် အောက်ဖော်ပြပါ အချက်များကို သတ်မှတ်ဖော်ပြထားပါသည်။

၁။ စီမံကိန်းဖော်ဆောင်သူသည် စီမံကိန်း လည်ပတ်ရာတွင် အမျိုးသမီးဂတ် အတွင်းခံ အဂတ်အထည် များကို ထုတ်လုပ်သွားမည်ဖြစ်သည်။

၂။ စီမံကိန်း အကောင်အထည်ဖော်ဆောင်မှု အဆင့်အလိုက် ပတ်ဝန်းကျင်အရည်အသွေး တန်ဖိုးများကို လေ့လာဆန်းစစ်ပြီး အစီရင်ခံစာတွင် အသေးစိတ်ဖော်ပြမည် ဖြစ်သည်။

၃။ လိုအပ်သည့် ခွင့်ပြုချက်များ၊ လိုင်စင်များကိုရယူပြီး အရည်အချင်းပြည့်မီသော ဝန်ထမ်းများဖြင့် စီမံကိန်းကိုအဆိုပြု ထားသည့်အတိုင်း အကောင်အထည်ဖော်ဆောင်သွားမည် ဖြစ်ပါသည်။

၄။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီအရင်ခံစာကို ပြည်သူလူထုသိရှိစေရန် ထုတ်ဖော်တင်ပြခြင်းနှင့် တွေ့ဆုံဆွေးနွေးခြင်းများကို ပြုလုပ်ထားပြီး အများပြည်သူလူထု၏ ထင်မြင်ချက်၊ အကြံပြုချက်၊ မှတ်ချက်များကို တည့်သွင်းစဉ်းစားရေးဆွဲထားပါသည်။

ထို့ကြောင့် စီမံကိန်း အကောင်အထည်ဖော်ဆောင်ရွက်သူသည် ပတ်ဝန်းကျင်စီခန့်ခွဲမှု အစီအစဉ် အစီအရင်ခံစာတွင်ပါရှိသည့် အဆိုပြုအချက်အလက်များကို အပြည့်အဝ လိုက်နာဆောင်ရွက် အကောင်အထည်ဖော်ဆောင်မည် ဖြစ်ကြောင်း၊ ဒေသတွင်းလူမှုစီးပွားရေး တိုးတက်ဖွံ့ဖြိုးစေမည်

ဖြစ်ကြောင်း နှင့် နိုင်ငံတော်အတွက် အခွန်ဘဏ္ဍာများ တိုးတက်ရရှိစေမည် ဖြစ်ကြောင်း တင်ပြအပ်ပါသည်။

EXECUTIVE SUMMARY

1. INTRODUCTION

The Project Proponent, Amity (Myanmar) Lingerie Co., Ltd. is the apparel manufacturer and has an apparel manufacturing factory (the Project) in Indagaw Industrial Complex, Indagaw, Bago Township, Bago Region. The project proponent requested Total Business Solution Co., Ltd. (TBS) (the Consultant) to complete the Environmental Management Plan (EMP) for its apparel factory.

2. PROJECT DESCRIPTION

The Amity factory is located at Plot No.53, Field No. 1190(B), East Field of Gomminn Inn, Indagaw Industrial Complex, Indagaw, Bago District Figure 1 is shown the location map of Amity factory site. Amity (Myanmar) Lingerie Co., Ltd. is implemented in 3.1 acre of plot area and invested with join venture from Goldenberg Bago Development Co., Ltd. and Aiyasi Underwear HK Limited base on Hong Kong. The Amity factory has 34 office staff and is 10 foreign staff to support management and engineering requirements of the factory operation and factory working hour is from 8:00 am to 5:00 pm. At the time of site visit, the factory employs for operation 1,187 day shift workers.

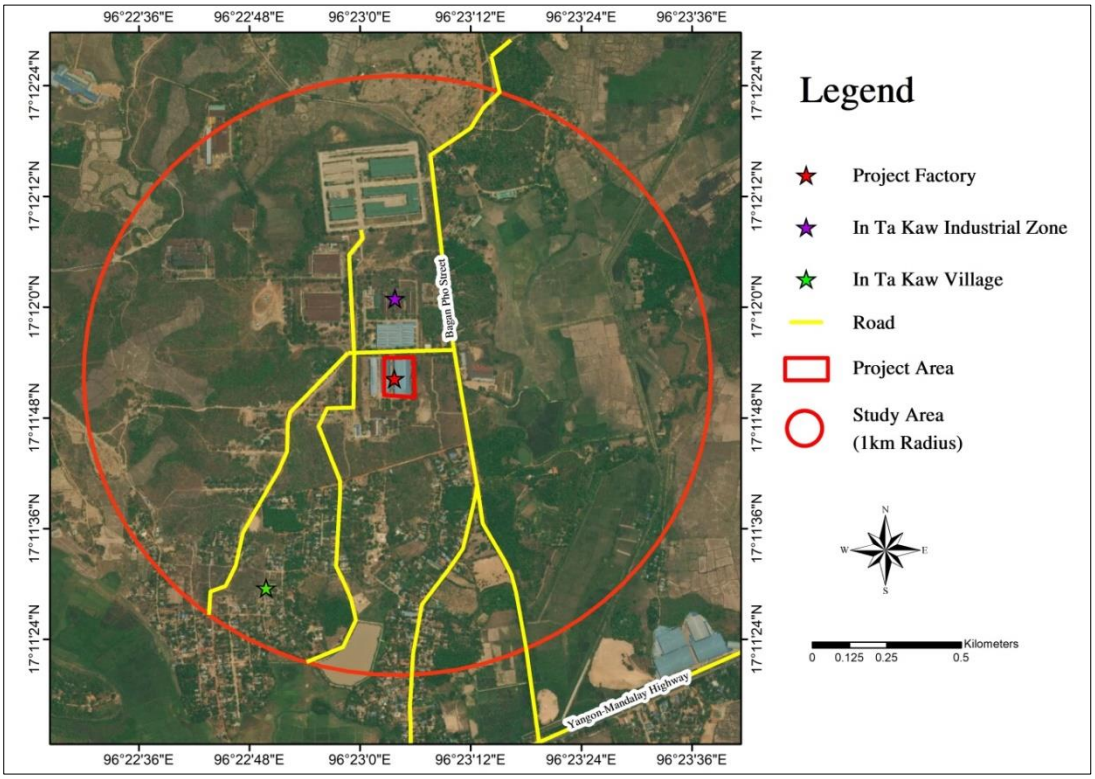


Figure 1 Project Location Map

3. PRODUCTION PROCESS

The factory main operation line is sewing process. The factory has 24 sewing lines the existing condition is running only 5 sewing lines during our site visit. The production capacity will be expend to run the other 19 sewing lines. Once the fabrics arrive to the cutting design section and then fabric is cut as per design which is followed by sewing process. The ironing process is completed after sewing process. After that, steam wet drying process and inspection or quality control of the garment is completed. After the final inspection, garment packing is completed prior to shipping to its destinations. Detail of production processes are explained in Chapter 2.

4. LEGAL FRAMEWORK

Amity (Myanmar) Lingerie Co., Ltd. has environmental policy of doing environmentally and socially responsible with minimal impact on the environment. The company is working with the local communities and government agencies integrating the environment into its planning, operations and policy decisions.

Environmental managements of a project need to comply with legal requirements pertinent to the Environmental Management Plan prescribed in the Environmental Conservation Rules, Notification No. 50/2014 and the EIA Procedure, Notification No. 616/2015.

4.1 Myanmar Laws and Regulations relating to The Environment

The existing Myanmar laws and regulations are relevant to environmental, health and safety issues of this project. The conducting works of Amity company shall comply with the following Laws and Acts;

- Environmental Conservation Law (2012)
- Environmental Conservation Rules (2014)
- Environmental Impact Assessment Procedure (2015)
- National Environmental Quality (Emission) Guidelines (No. 615/2015) (2015 Dec, 29)
- Myanmar Citizens Investment Law (2013)
- Foreign Investment Law, (2012)
- Export and Import Law (2012)
- Development Committee Law (1993)
- Public Health Law, (1972)
- Private Industrial Enterprises Law (1990)
- Factories Act, (1951)
- Social Security Law (2012)
- The Social Security Rules, Notification (2014)
- The Leave and Holiday Act, 1951 (2014)
- Labour Law Act, (1951)
- Minimum Wage Law, (2013)
- Minimum Wage (2015)
- The Payment of Wages Act (2016)

- The Settlement of Labour Dispute Law (2012)
- Labour Organization Law (2011)
- Prevention from Danger of Chemical and Associated Materials Law (2013)
- The Myanmar Fire Brigade Law (2015)

5. SURROUNDING ENVIRONMENTAL

The project study area is defined as an area surrounding the project site from which the baseline information collection should be collected. The project site is 3.1 acre size, located in Indagaw Industrial Zone. In the EMP report study area is about 500 meter radius around the project site, its zone covers about 193.33 acre.

The study area for project surrounding environment to consist of three groups of components: (i) physical components, (ii) biological components and (iii) socio-economic components.

6. POTENTIAL ENVIRONMENTAL IMPACTS

The factory manufactures underwear. At the time of site visit, there are 160 day shift processing workers at the factory. Factory will employ maximum of 688 processing workers in the future.

The potential environmental impacts specific to the project operation phase will be (a) Air impact, (b) Noise, (c) Wastewater and Solid waste ***CHAPTER 6*** provides summary of the potential environmental impacts during the operation phase of the project.

7. ENVIRONMENTAL MANAGEMENT ACTION

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the PDCA cycle. Environmental management consists of four related tasks as described below:

- Plan (P) - What need to be done
- Do (D) - Implement the plan
- Check (C) - Monitor and evaluate the results of implementation
- Act (A) - Taking corrective actions to improve the results, if found inadequate

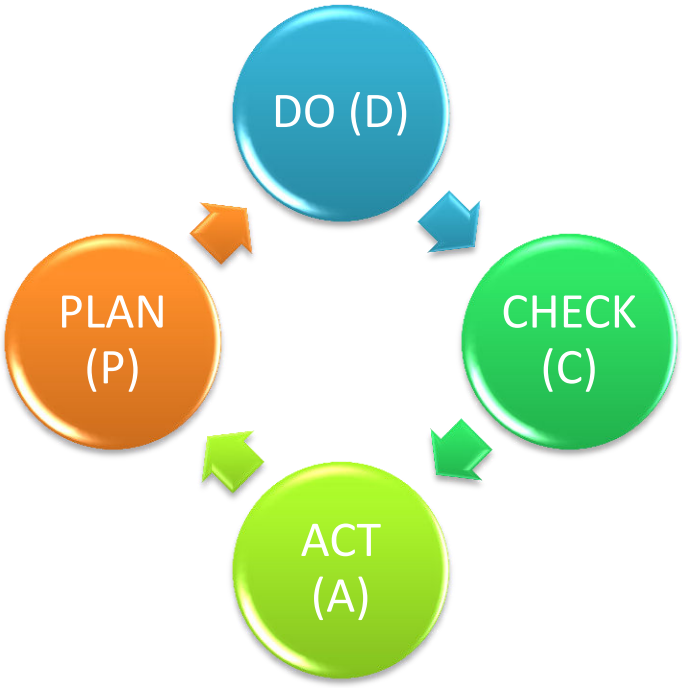


Figure P.D.C.A cycle

7.1 Mitigation Measures to be taken During Operation Phase

Amity company shall take all these mitigation measures. Operation phase potential environmental impacts and mitigation measures for air pollution, noise, wastewater and solid waste are presented in Chapter 6, Table 6-4.

8. Environmental and Social Impacts

8.1 Construction Phase

a) Air Quality

Construction activities will impact the environment but in very limited short term. Main impacts on air quality is dust generation from the construction activities. Moreover, emissions from vehicles and other construction equipment are likely to impact the air quality in short term.

b) Noise

Generation of highest noise level comes from the vehicle and construction equipment. During installation of facilities and equipment for factory, the noise generation will be relatively lower.

c) Water Quality

The following activities can deteriorate the water quality during construction phase such as site clearance activities, wastewater from septic tank, waste storage, leakage of fuel and chemical.

d) Waste management

Daily construction waste will be generated during construction phase. Most of the waste are non-hazardous but some may be hazardous such as paint, oils, used batteries,

etc. Since the network of municipal facilities is limited, all the wastes are disposed with private waste management company.

e) Social Impacts

There will be more job opportunities for local people during construction phase. Due to the potential job opportunities, there will be more income that will improve their standard of living.

f) Health and Safety

Health and safety of the workers can impact from the vehicle traffic as well as from the various construction activities. All staffs will have to wear the relevant PPE whenever they are in construction site. Moreover, the communicable diseases are expected to transmit on both workers and local community. The appropriate monitoring plan will be implemented systematically for health and safety issues.

8.2 Operation

a) Air Quality

There are no gaseous emissions during operation, but vehicles and other transportation materials possibly generate emissions.

b) Noise

There will be less significant noise emission during operation phase. There will be some negligible noise from the sewing and cutting machine as well as from generators.

c) Water Quality

The following activities can deteriorate the water quality during construction phase such as site clearance activities, wastewater from septic tank, waste storage, leakage of fuel and chemical, stormwater discharge. Relevant environmental management plan including monitoring measures will be implemented to control the negative impacts on the environment.

d) Waste management

Based on the study, the domestic wastewater is directly discharged to the industrial drainage. The solid waste during operation phase are mainly from the cutting section and domestic waste from the workers. The generated solid waste is collected by the private waste management system.

e) Social Impacts

There will be more job opportunities for local people during construction phase. Due to the potential job opportunities, there will be more income that will improve their standard of living. All the workers will have to work under the Myanmar Labour Law.

f) Health and Safety

The impacts to health and safety issues to workers and community are quite similar to the construction phase. Furthermore, there will be potential to expose some chemicals such as ethanol used for hand washing and use of heavy machine, storage of chemicals and fuel. The above-mentioned issues will be prevented by appropriate environmental management plan.

9. Monitoring Program

Environmental monitoring plan is the important for the effective execution and successful implementation of EMP. Environmental monitoring focuses on the work

environment which includes, waste management, health and safety of workers, safety of the facilities and also on the socio-economic component of the environment. The objectives of monitoring are;

- To measure impacts that occurs during the operation phase of the project
- To ensure compliance with statutory requirements
- To determine the effectiveness of mitigation measures and other measures
- To assist in the implementation of EMP

10. Organization and Fund for EMP

The budget for EMP fund will cover the initial cost and recurring expenses for implementation EMP. Table shows budget allocation for proposed environmental, health and safety mitigation measures.

Table 2 Estimated Budget for Environmental, Health and Safety Mitigation Measurement

No	Proposed Environmental Mitigation Measures	Estimated Budget (USD)
Environmental Work		
1	Monitoring program	2,500
2	Capacity building and training	1,000
3	Emergency case	2,000
Health and Safety Work		
4	Personal protective equipment	5,000-10,000
5	Medical for Clinic (per year)	3,000
6	Fire Extinguisher	1,000

10. Public Consultation and Public Participation

Public consultation is necessary as a part of the EMP study. The project proponent and its consultant have to organize a public consultation among regulators, local community, local authority and other relevant organizations on the project development and plans.

Public Consultation meeting was hold on Tuesday, 27th September, 2017 A Ka Rit (Min Galar Room), Inn Dagaw Town, beside the Min Road and near the Junction of B.E Road,Bago, Myanmar. In which U Kyaw Lwin Oo (HR Manager) from Amity (Myanmar) Lingerie Company Limitted gave an opening speech about their business. Then, U Lin Htet Sein (Environmental Geologist) from TBS (consultant), aslo explained about the objective of EMP study, baseline data collection and prediction of environmental impact and effective impact mitigation measure and preparation of EMP plan including with Environmental Monitoring Plan and CSR plan etc. The details of public consultation meeting are presented in ***CHAPTER 7***.

11. Conclusion

The following recommendations have been made for efficient and effective implementation of environmental conservation, health and safety and social responsibilities through the lifespan of the proposed project.

- The Project Proponent manufactures the high-quality men shirt products.

- Follow the comments and suggestions made by ECD after reviewing this EMP report.
- For full and proper implementation of EMP, well understanding and supports by proponent and authority is deem necessity.
- Well experienced and knowledgeable HSE Manager and HSE Assistants shall be appointed.
- 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.
- Public consultation meeting with different stakeholders was held for community transparency and the discussion and suggestions from this public consultation meeting are shown in this EMP report.

Therefore, the Project Proponent will fully follow the commitments, mitigation measures according to this EMP. Moreover, due to this Project, the livelihood of the local community will be more developed.

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ABBREVIATIONS

EIA	Environmental Impact Assessment
EHS	Environmental Health and Safety
EIF	Environmental Incident Form
EMS	Environmental Management System
EMP	Environmental Management Plan
ECD	Environmental Conservation Department
ECC	Environmental Compliance Certificate
HR	Human Resource
IEC	Independent Environmental Consultant
MIC	Myanmar Investment Commission
MOECAF	Ministry of Environmental Conservation and Forest
MONREC	Ministry of Natural Resource and Environmental Conservation
NEQG	National Environmental Quality (Emission) Guideline
CEMP	Construction Phase Environmental Management Plan
kVA	Kilo Volt Ampere
KW	Kilowatt
LED	Light-emitting Diode
OEMP	Operational Phase Environmental Management Plan
OSHE	Occupational Safety, Health and Environment
OSHA	Occupational Safety and Health Administration
O & M	Operation and Maintenance
PPE	Personal Protective Equipment
PEMP	Pre-construction Environmental Management Plan
PAPs	Project affected persons
PDCA	Plan-Do-Check-Act
QC	Quality Control
TBS	Total Business Solution Co., Ltd.
US NAAQS	United State National Ambient Air Quality Standard
USD	United State Dollar
WHO AQG	World Health Organization Air Quality Guideline
NEQG	National Environmental Quality (Emission) Guideline
HIV	Human Immunodeficiency Virus

AIDS	Acquired Immune Deficiency Syndrome
TB	Tuberculosis

CHAPTER 1
INTRODUCTION

The Project Proponent, Amity (Myanmar) Lingerie Co., Ltd. is the apparel manufacturer and has an apparel manufacturing factory (the Project) in Indagaw Industrial Complex, Indagaw, Bago Township, Bago Region. The project proponent requested Total Business Solution Co., Ltd. (TBS) (the Consultant) to complete the Environmental Management Plan (EMP) for its apparel factory.

EMP for the Project identifies the principal approaches, procedures and methods to control and minimize the environmental and social impacts of the factory operation. The main objectives of the EMP are (a) to identify environmental impacts, (b) to define details of who, what, where and when environmental management and mitigation measures to be implemented and (c) to ensure that the environmental quality of the area does not deteriorate due to the Project.

1.1. PROJECT PROPONENT PROFILE

Amity (Myanmar) Lingerie factory occupies the Plot No (53), Indagaw Industrial Complex, Indagaw Town, Bago Township, Bago Region, Myanmar. Representative's name and address of the Project Proponent are given below.

Representative:	U Kyaw Lwin Oo
Position:	HR Manager
HP:	+95 9795500059
Email:	james@aiyasi.com
Address:	Plot No. 53, Kwin No. 1190 (B), East of Gomminn Inn, Indagaw Industrial Complex, Indagaw Village Tract, Bago Township, Bago Region

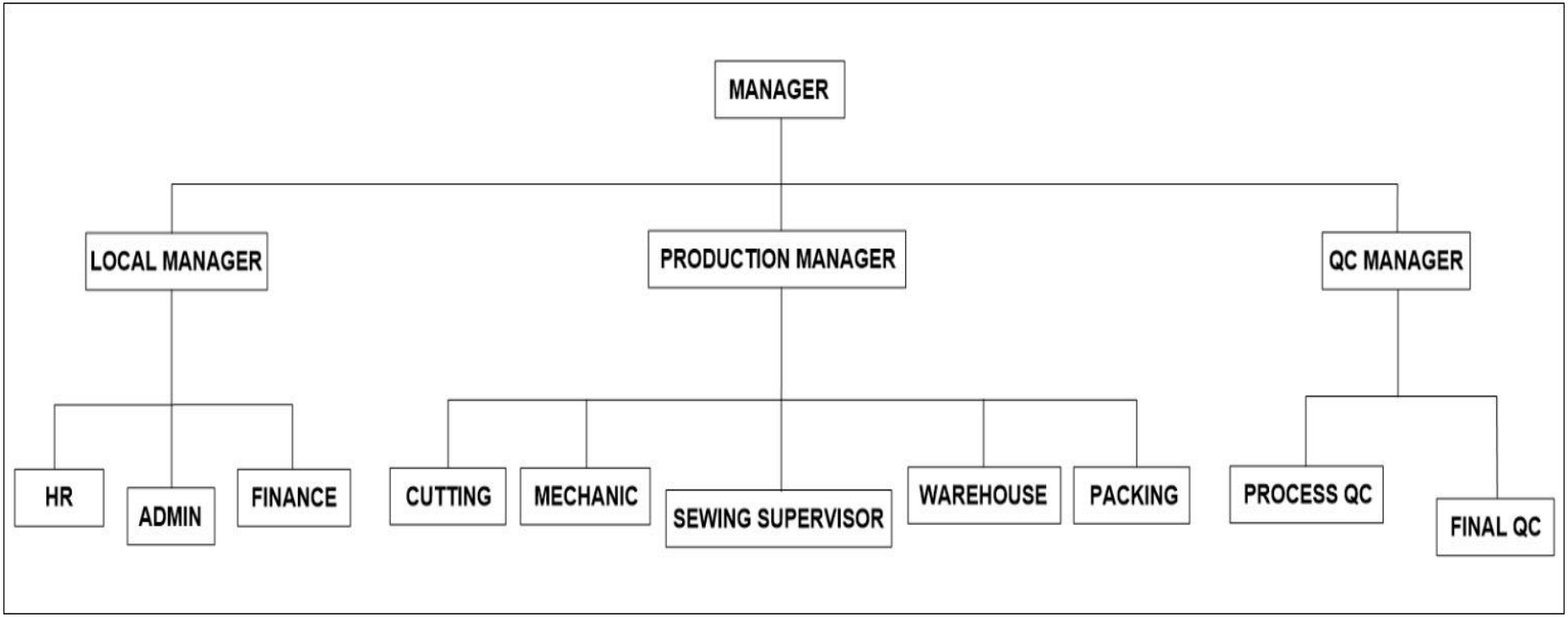

Figure 1-1 Organization Chart

1.2. THE ENVIRONMENTAL CONSULTING ORGANIZATION

TBS is the third party organization which conducted the EMP of this project. The contact name and address of the Environmental Consulting Organization are described below:

Representative: Dr. Soe Moe Kyaw Win, Ph.D., P.Eng., P.Geo.

Position: Managing Director

Mobil Phone: +95 9455309359

Office Phone: +95 9401604493

Email: drsoemoe@outlook.com

Address: No.54, Room no. 704, Waizayantar Tower, Waizayantar Road, Thingangyun Township, Yangon, Myanmar

1.3. BACKGROUND INFORMATION OF TBS

TBS is registered with Myanmar Investment Commission (MIC) since 2012. Its office is located in No. 54, Room No. 704, Waizayantar Tower, Waizayantar Road, Thinngangyun Township, Yangon, Myanmar. Since its inception, TBS, in collaboration with TEAM Group of Companies at Thailand, has been providing consulting services to the private and public sectors in Myanmar. The two partners with their combined strengths provide services to assist investors in project development or setting up and operating businesses in Myanmar. Their services have gained recognition from Myanmar and foreign investors involved in development projects including port, industrial estate, power transmission, flood control, drainage and sewerage system, environmental impact assessment, initial environmental examination and environmental management plan. Environmental projects completed and experience of environmental consultant by TBS shown in Table 1-1 and Table 1-2.

Table 1-1 Experiences of Environmental Consultants

No	Name and Position	Education	Experience	Responsible of Chapters
1	Dr. Soe Moe Kyaw Win Principal Geotechnical/Geoenvironmental Engineer	Ph.D (Geotechnical Engineering) M.Sc (Geotechnical Engineering) B.Sc (Geology)	25 years' experience in the areas of environmental assessment, geotechnical and geological engineering in Southeast Asian, U.S.A and Canada. Dr. Soe Moe's experience includes environment assessments, mine waste management, site investigation, instrumentation, ground improvement, land reclamation and	Overall review of the report. Chapters 1 to 6.

No	Name and Position	Education	Experience	Responsible of Chapters
			landslide investigation.	
2	Mr Lin Htet Sein (Environmental Geologist)	MSc (Regional Geology) B Sc (Hons) Geology	4 years experiences in Geological and Soil Study, Hydrology, Land Use Plan, Environmental Assessment and Coordination with government organizations and villagers, environmental risk assessment and environmental report preparation	Chapters 1, 2, 3 and 6
3	Mr Ko Latt	BE (Mechanical Engineering) B Tech A G T I	Work as a representative of our company working with YCDC for 12 ½ story office building project. Inspect the design of M&E work on Warehouse project (Mistine 'Thiri Land' Project Work as Mechanical Site engineer related with fire protection, ACMV, sanitary installation, water treatment system and electrical installation in warehouse with office project Drafting for water treatment project and submission to authority	Chapters 3,4
4	Mr. Aung Zin Min Civil Engineer	BE(Civil Engineering) B Tech A G T I	5 years experiences in Civil work and Construction field. Health, Safety and Environmental experiences in construction project.	Chapters 5,6
5	Mr. Htun Lin Kyaw	MSc (Structural Geology) B Sc (Hons) Geology	3 years experiences in topography survey and road design work. Coordination with government organizations and villagers, environmental risk assessment and environmental report preparation	Chapters 4, 5 and 6

No	Name and Position	Education	Experience	Responsible of Chapters
6	Mr. Phone Myat Ko	MSc (Petroleum Geology) B Sc (Hons) Geology, Diploma in GIS (Global Information System)	Experiences in Water Supply, Land Use Plan, Environmental Assessment.	Chapters 2 and 4
7	Ms. Thin Yu Yu Hlaing	BE (Civil Engineering) B Tech A G T I	Experiences in Water Supply, Airport Construction, Land Use Plan, Environmental Assessment.	Chapter 1, 2 and 3
8	Mr. Zaw Zaw Tun	Bsc Biology (Pharmacy/MBA candidate)	Experiences in biodiversity research and waste management. Others include Pharmacology, microbiolgoy and environmental project management	Chapter 2, 4 and 5
9	Ms. Ei Ei Zaw	MRes (Petroleum Geology), MSc (Petroleum Geology), B Sc (Hons) Geology, Diploma in Apply Geology	Experiences in Water Supply, Land Use Plan, Environmental Assessment.	Chapter 2, 4 and 6
10	Mr. Zin Win Tun	BE Mining	5 months experience in Tin-Tungsten production mine (WAI International Manufacturing Co., Ltd), Thabawleik in Thanintharyi Division.	Chapter 4

Table 1-2 TBS Environmental Project in Myanmar

Project Name	Location	Client	Period
Preliminary Environmetal Study for Kyaing Tone Power Plant	Southern Shan State	Ratchaburi Electricity Generating Holding PCL.	Feb - Mar 2014
Environmental Consideration Study Combined Cycle Power Plant	Myingyan District, Mandalay Division Region.	Ratchaburi Electricity Generating Holding PCL.	2013- 2014
ESIA for Combined	Kanbauk, Dawei District, TaninTharyi	Andaman Power	Jun - Oct

Project Name	Location	Client	Period
Cycle Power Plant	Division Region.	and Utility Co., Ltd.	2013.
ESIA for the Transmission Line from Mawlamyine-Dawei.	Mawlamyine-Dawei, TaninTharyi Division Region.	Andaman Power and Utility Co., Ltd.	Jun - Sept 2013.
EIA of Re-Routing Sections and Soil Disposal Area of Zawtika Onshore Pipeline Construction	Dawei District, TaninTharyi Division Region.	PTTEP International Limited	Feb - April 2013
Environmental monitoring program of the onshore pipeline	Dawei District, TaninTharyi Division Region.	PTTEP International Limited	2012 -2014
IEE for New Foodstuffs Factory	Dagon Seikkon Industrial Zone, Yangon.	Makro Manufacturing Co., Ltd.	April - May 2014
ESIA for 400MW Gas-Fired Combined Cycle Power Plant	Twantay Township, Yangon Division Region.	RANHILL POWER SdnBhd	July – Dec 2014 (On going)
IEE for Somerset Serviced Apartment and 68 Residence Condominium	Bahan Township, Yangon.	United GP Development Co., Ltd.	June 2015
EIA for Somerset Serviced Apartment and 68 Residence Condominium	Bahan Township, Yangon.	United GP Development Co., Ltd.	Sep 2015 - Jan 2016
IEE for PVC pipes factory	Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township, Yangon.	Grand Nawa plastic Myanmar Co., Ltd.	Feb – April 2016
EMP report of Garment Factory	Shwe Lin Ban Industrial Zone, HlaingTharyar Township, Yangon	Hangzhou Hundred-Tex Garment (Myanmar) Co., Ltd.	May - July 2016
ESIA report of Hantharwaddy International Airport	Bago	Japan Nus Co., Ltd.	Aug - Sep 2016
IEE for Jean Washing Factory	ShwePyiThar Industrial Zone (4), Yangon.	REEBLUE MYANMAR LIMITED	Sep - Nov 2016
EMP for Electric Component Factory	Hlaing Thar Yar Industrial Zone (2), Hlaing Thar Yar Township, Ynagon.	FTE Corporation (Myanmar) Co., Ltd.	Oct - Nov 2016 – July 17
EMP for Hotel project	Dawei	Good Rainbow Trading Co., Ltd.	Nov - Dec 2016
IEE for paper factory	Lwae-Taught villages track, Lashio Township, Northern Shan State	Swon Phone Tar Co., Ltd	Dec 2016-Feb 2017
EMP for Garment	Shwe Lin Pan Industrial Zone, Hlaing	Myanmar Toppy	Feb - Mar

Project Name	Location	Client	Period
factory	Thar Yar Township, Yangon	Company Limited	2017
EIA for Dawei Gold Coast Condominium	Kyat SarPyin Ward, Dawei Township	Degao Construction Co., Ltd	Feb - July 2017
EMP for Garment factory	Thar Du Kan Industrial Zone, Shwe Pyi TharTownship,Yangon.	Hundred Garment (Myanmar) Company Limited	Mar – May 2017
EMP for Motor factory	Mandalay	CP Motor Myanmar Co., Ltd	April – June 2017
IEE for PTTEPI office	8 ½ Mile, Mayangone Township, Yangon.	PTTEP International Limited (PTTEPI)	Feb – May 2017
EMP for Garment factory	Indagaw Industrial Zone, Indagaw, Bago Township, Bago Region, Myanmar	Amity (Myanmar) Lingerie Co., Ltd.	July – Sept 2017
EMP for Quarry Project	Mandalay-Muse Highway Road, Ohm Chaw Village tract, PatheinGyi Township, Mandalay Region	SeinKyalKabar Mining Co., Ltd.	Aug - Oct 2017
EMP for Seafood Processing factory	Yangon fishery department compound, Bayintnaung Road, Gyogone, Insein Township, Yangon	Golden Bay Co., Ltd.	Sept – Nov 2017
EMP for food manufacturing factory	No. Art-8/138,139,140,150,151, 64 Street, between Zawgyi Street and Kuthotaw Street, PyiGyiTagon Township, Mandalay Division.	Kan Kaw Soyar Bean	Nov – Jan 2017
IEE for Garment factory	Special Industrial Zone (2), OkhThar (9) Ward, Bago Township, Bago Region, Myanmar	Myport Limited	Dec – Feb 2018
IEE for Lubricant factory	Thilawa SEZ, Zone A, Thanlyin Township, Yangon Division.	Pacific PSP-Syntech Co., Ltd.	Mar – June 2018
IEE for Motorcycle Assembly factory	Taung Yin Yat, Singaing Township, Kyaukse District, Mandalay Division	Karmax Co., Ltd.	Feb - June 2018
EMP for Garment factory	Middle Street and No. 32/34, Third Street, Ngwe Pin Lae Industrial Zone, HlaingTharyar Township, Yangon, Myanmar	Saung Oo Shwe Nay (Golden Sunshine) Co., Ltd.	May – July 2018
EMP for Electric Device Charger factory	U Shwe Bin Street, East Dagon Industrial Zone Part (1), East Dagon Township, Yangon Region, Myanmar	Wisechamp Electronic (Myanmar) Co., Ltd	June – Sept 2018
EMP for Garment Factory	No.58, 2nd St Ngwe Pin Lae Industrial Zone, Hlaing Thar Yar, , Yangon Region , Myanmar	Kai Xi (Myanmar) Lingerie Co., Ltd	June – Sept 2018
EMP for Paper Box Factory of San Yee Enterprise Co., Ltd	No.(64/ 46) Juction of Mya Taung Wun Gyi U Hmo Street and Twin Thin Taik Wun U TunNyo Street, Industrial Zone 3 , Shwe Pyi Thar Township, Yangon Region , Myanmar	KMD & Associates Co., Ltd	July – Sept 2018

Project Name	Location	Client	Period
EMP for Garment Factory of Sheng Jie (Myanmar) Clothing Co., Ltd	No 296 / 297 Block No (25). Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, Yangon Region , Myanmar	Sheng Jie (Myanmar) Clothing Co., Ltd	July – Sept 2018
IEE for Quarry factory	Plot No. (14, 15, 16), Myauk Ta Tine Shae Village, Pathein Gyi Township, Mandalay, Myanmar.	Aung Kabar Co., Ltd	Oct 2018-Feb 2019
IEE for Quarry factory	Plot No. (551), Oo Paing No (20/21), Ai Gyi Village, Pathein Gyi Township, Mandalay, Myanmar	U Win Khaing Co., Ltd	Oct 2018-Feb 2019
IEE for Quarry factory	Oo Paing No (22, 29, 28,27), Ai Gyi Village, Pathein Gyi Township, Mandalay, Myanmar	Shwe La Waddy Co., Ltd.	Oct 2018-Feb 2019
EMP for garment factory	Address: N0-53/D, 1002 Mi Chaung Ai Kwinn, Kyaukka Din Track, Helgu Township, Yangon Region	Dong Yuan Richland Fashion (Myanmar) Co., Ltd.	Oct 2018-Feb 2019
EMP for garment factory	No. (37), Min Theikdhi Kyaw Swar Street, Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, Yangon	Sunan Hung Tak Apparel Limited	March 2019- On going
EMP for garment factory	Plot No. (A-4), Mingaladon Industrial Park, Corner of No (3) Highway Road and Khayebin Road, Mingaladon Township, Yangon Region	SMK Mingaladon Company Limited	March 2019- On going
EMP for garment factory	Plot No. 35, Quin No. Special Zone 3, Nyaung Inn Village, Industrial Area, Bago Division, Myanmar	KM Healthcare Myanmar Company Limited	April 2019-On going
EMP for garment factory	Plot No. (2), Theik Gyi – Phaung Gyi Road, Naung Inn Junction, Ward – 9, Oaktha Myothit, Bago, Myanmar.	Suitstar Garment Co., Ltd.	May 2019-On going
EIA For High-rise-mixed-used development project	Suite 1906-07, 19th floor, Sule Square, No.221, Sule Pagoda Road, Kyauktada Township, Yangon	Marga Landmark Development Co., Ltd.	May 2019-On going

CHAPTER 2
INTRODUCTION

2.1. PROJECT INFORMATION

The Amity factory is located at Plot No.53, Field No. 1,190 (Kha), East Field of Gomminn Inn, Indagaw Industrial Complex, Indagaw Township, Bago District is shown the location map of Amity factory site. Amity (Myanmar) Lingerie Co., Ltd. is implemented in 3.1 acre of plot area and invested with join venture from Goldenberg Bago Development Co., Ltd. and Aiyasi Underwear HK Limited base on Hong Kong. It is a garment factory on CMP basic of which main objective of the business is to manufacture. The Amity factory has 34 office staff and is 10 foreign staff to support management and engineering requirements of the factory operation and factory working hour is from 8:00 am to 5:00 pm. At the time of site visit, the factory employs for operation 1,187-day shift workers. The buildings were constructed, and installed necessary garment factory equipment on August 2017. The estimated construction period was over one year. The production process was started on 1st August, 2017.

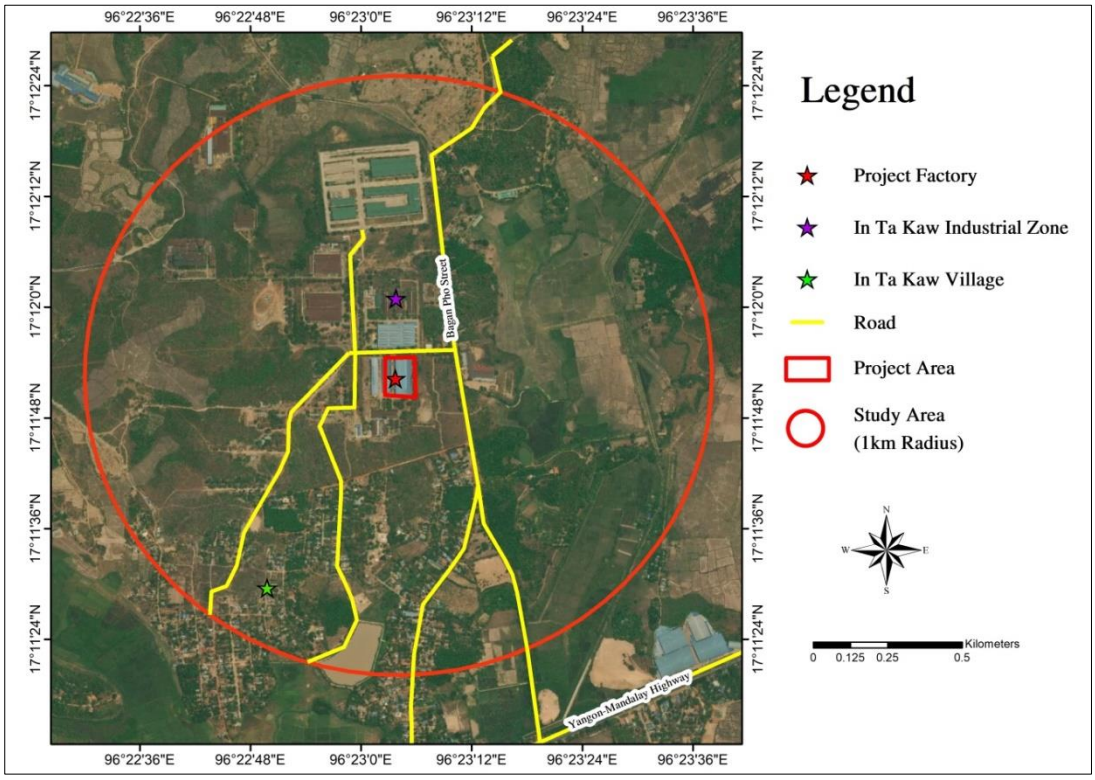

Figure 2-1 Project Location Map

2.2. SITE DESCRIPTION

The factory has three main buildings and is constructed on the land of 3.09 acres. This area of owner is Myanmar Economic Holding Limited (MEHL). The Building 1 is composed of office rooms, clinic room, sewing section, shoulder lining room, ironing room and bra sample room. The building 1 area is wide length 120 m and breadth 55 m. The Building 2 contains storage room, cutting section, parking section, drying room, toilets and lumber room. The building 2 area is wide length 120 m and breadth 24 m. Layout plan view of the factory buildings is presented in Figure 2-2.

2.3. WORK FORCE

The main manufacturing of underwear for woman and produces 15,000 of products per days, based on 1,187 operation workers and 8 hours per day depend on customers' order. The production capacity will be expended to produce 72,000 of products per day. This EMP report covers the total rated production capacity of the factory. The factory has about 7 administrative workers, 862 all sewing line workers, 62 quality control (QC) workers, 14 mechanic workers, 11 warehouse workers, 53 cutting workers, 87 packing workers, 9 logistics workers, 81 moulding workers and a driver.

Working hour is from 8:00AM to 4:30 PM and from 8:00AM to 12:00 PM on Saturday. Lunch time is from 12:00 PM to 12:30 PM. Overtime is from 5:00 PM to 8:00 PM and overtime is 20 hours per week. The employees can rest and dine in the canteen area, which is an area open area with tables and chairs. The ferries are provided for employee who live far away from the factory. Moreover, the company is provided uniform, overtime money and yearly bonus for employees and factory clinic.

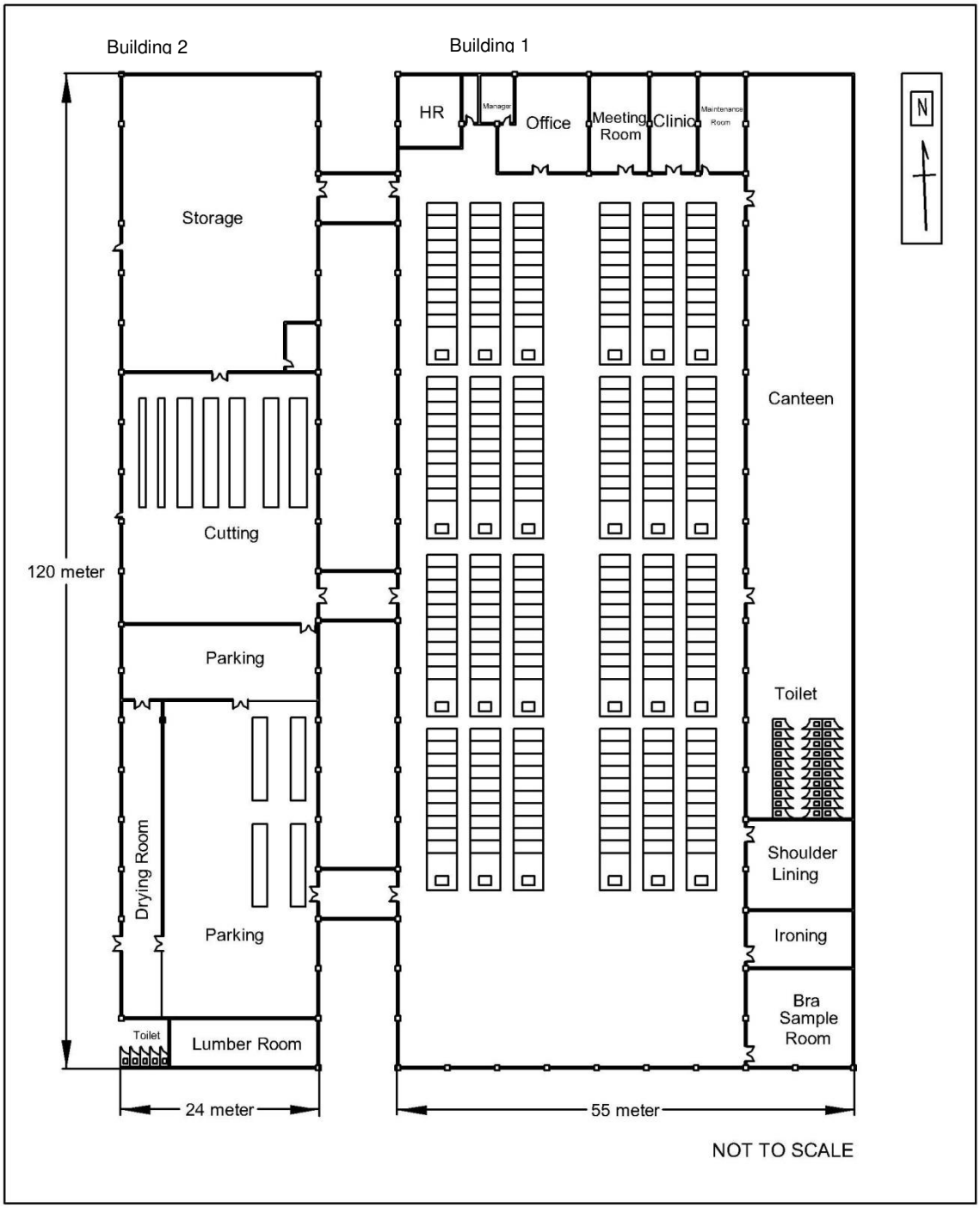

Figure 2-2 Factory Layout Plan View

2.4. OPERATION MACHINERIES AND ACCESSORIES

The lists of machines and accessories used in operation process required for the proposed garment factory are listed in the following Table 2-1.

Table 2-1 Machinery and Factory Equipment (To Be Imported)

No.	Particulars	A / U	Qty
1	1- Needle Lockstitch Sewing Machine	Set	144
2	2 - Needle Lockstitch Machine	Set	52
3	Overlock Machine	Set	132
4	Zigzag Stitching Machine	Set	250
5	Covering Stitch Machine	Set	158
6	Bartack Machine	Set	59
7	Fix Box Machine	Set	26
8	Ultrasonic Machine	Set	6
9	Tape Feeder	Set	216
10	Moulding Machine	Set	8
11	Band Knife Machine	Set	15
12	Electric Cutter	Set	5
13	Cloth Cutting Machine	Set	5
14	Inkjet Plotter	Set	1
15	Fabric Inspection Machine	Set	1
16	Fabric Relaxing Machine	Set	1
17	Ribbon Cutting Machine	Set	1
18	Fabric Rolling Machine	Set	1
19	Needle Detetor	Set	1
20	Drying Machine	Set	2
21	Electric Steam Boiler	Set	1
22	Ironing Table	Set	3
23	Steam Iron	Set	3
24	Fabric Trolly	Set	2
25	Fabric Relaxing Shelf	Set	5
26	Thread Winder	Set	4
27	Cutting Table (13.2 M*2.13M)	Set	1
28	Cutting Table (13.2 M*1.83M)	Set	6
29	Cutting Table (13.2 M*0.8M)	Set	3
30	Air Compressor 22KW	Set	1
31	Air Compressor 15KW	Set	1
32	Fabric Shelf	Set	48

No.	Particulars	A / U	Qty
33	Accessory Shelf	Set	60
34	Manual Hydraulic Pallet Truck	Set	6
35	Electric Pallet Stacker	Set	1
36	Manual Fabric spreading Machine	Set	5
37	Workbench (1.2M*2.4M)	Set	15
38	Workbench (1.8M*3.6M)	Set	15
39	Workbench (1.2M*3.15M)	Set	30
40	Workbench (1.05M*0.6M)	Set	48
41	Plastic Pallets	Set	230
42	Table	Set	26
43	Office Desk	Set	26
44	Office Chair	Set	70
45	Meeting Table	Set	3
46	Worker Stool	Set	1,100
47	Generator 400KVA	Set	1
Total			2,798

2.5. PRODUCTION RATE

The main types of products from Amity (Myanmar) Lingerie Co., Ltd are underwear, swimwear, sport bra and night dress. The estimated annual production rate is described in Table 2-2.

Table 2-2 Production and Sale Statement

No	Particular	Unit	Year									
			Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10
A	Export Sale											
	Quantity		727.00	733.00	828.00	828.00	907.00	907.00	907.00	907.00	907.00	907.00
I	Underwear											
1	Mould cup bra	Doz (000)	10.00	13.00	13.00	13.00	15.00	15.00	15.00	15.00	15.00	15.00
2	Wire bra	Doz (000)	20.00	23.00	23.00	23.00	25.00	25.00	25.00	25.00	25.00	25.00
3	String	Doz (000)	30.00	30.00	35.00	35.00	38.00	38.00	38.00	38.00	38.00	38.00
4	Brief	Doz (000)	30.00	30.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
5	Panty	Doz (000)	20.00	20.00	25.00	25.00	30.00	30.00	30.00	30.00	30.00	30.00
6	Body	Doz (000)	40.00	40.00	45.00	45.00	50.00	50.00	50.00	50.00	50.00	50.00
7	MZ bra	Doz (000)	20.00	20.00	22.00	22.00	25.00	25.00	25.00	25.00	25.00	25.00
8	Short	Doz (000)	20.00	20.00	25.00	25.00	30.00	30.00	30.00	30.00	30.00	30.00
9	Bralette	Doz (000)	20.00	20.00	25.00	25.00	30.00	30.00	30.00	30.00	30.00	30.00
10	Tanga	Doz (000)	40.00	40.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
II	Swim Wear	Doz (000)										
1	Mould cup bra	Doz (000)	45.00	45.00	50.00	50.00	55.00	55.00	55.00	55.00	55.00	55.00
2	Brief	Doz (000)	15.00	15.00	20.00	20.00	25.00	25.00	25.00	25.00	25.00	25.00
3	Hipster	Doz (000)	25.00	25.00	28.00	28.00	30.00	30.00	30.00	30.00	30.00	30.00
4	Mould cup vest	Doz (000)	38.00	38.00	42.00	42.00	45.00	45.00	45.00	45.00	45.00	45.00
5	Push up bra with fixed cookies	Doz (000)	30.00	30.00	35.00	35.00	38.00	38.00	38.00	38.00	38.00	38.00
6	Gathered side brief	Doz (000)	25.00	25.00	28.00	28.00	30.00	30.00	30.00	30.00	30.00	30.00
7	Flounce top bra	Doz (000)	32.00	32.00	35.00	35.00	40.00	40.00	40.00	40.00	40.00	40.00

No	Particular	Unit	Year									
			Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10
8	Triangle bra	Doz (000)	32.00	32.00	35.00	35.00	38.00	38.00	38.00	38.00	38.00	38.00
9	Swimsuit	Doz (000)	30.00	30.00	32.00	32.00	35.00	35.00	35.00	35.00	35.00	35.00
10	Tie up brief	Doz (000)	30.00	30.00	35.00	35.00	38.00	38.00	38.00	38.00	38.00	38.00
11	Boardshort	Doz (000)	45.00	45.00	50.00	50.00	55.00	55.00	55.00	55.00	55.00	55.00
12	Balcony bra	Doz (000)	38.00	38.00	45.00	45.00	47.00	47.00	47.00	47.00	47.00	47.00
III	Sport Bra	Doz (000)	40.00	40.00	45.00	45.00	48.00	48.00	48.00	48.00	48.00	48.00
IV	Night Dress	Doz (000)	52.00	52.00	55.00	55.00	60.00	60.00	60.00	60.00	60.00	60.00

2.6. RAW MATERIAL REQUIREMENTS

The following Table 2-3 shows the quantity of raw material required for each product.

Table 2-3 Raw Material Requirement (Imported) (CMP System)

No	Particulars	A / U	Years						
			Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7 to Yr.10
1	Fabric	Yards	2097.84	2110.80	2368.32	2368.32	2595.18	2595.18	2595.18
2	Lace	Yards	7296.96	7296.96	8173.92	8173.92	9031.08	9031.08	9031.08
3	Mesh Fabric	Yards	50.28	51.72	63.00	63.00	75.24	75.24	75.24
4	Elastic Trimming	Yards	27317.40	27507.84	30919.92	30919.92	33836.76	33836.76	33836.76
5	Hook & Eye	Pcs	1080.00	1152.00	1236.00	1236.00	1380.00	1380.00	1380.00
6	Ring & 9 Hook & Slider	Pcs	13800.00	13980.00	15468.00	15468.00	17148.00	17148.00	17148.00
7	Wire Channel Open	Yards	163.20	187.68	187.68	187.68	204.00	204.00	204.00
8	Wire	Pcs	2616.00	2652.00	2964.00	2964.00	3216.00	3216.00	3216.00
9	Mould Cup	Pcs	5124.00	5160.00	5748.00	5748.00	6312.00	6312.00	6312.00
10	Bow	Pcs	3504.00	3540.00	3960.00	3960.00	4296.00	4296.00	4296.00
11	Plastic Bone	Pcs	1680.00	1680.00	1920.00	1920.00	2088.00	2088.00	2088.00
12	Polyester Thread	Yards	454532.40	457866.00	513939.60	513939.60	564424.80	564424.80	564424.80
13	Nylon Thread	Yards	596964.00	597672.12	673938.72	673938.72	741103.80	741103.80	741103.80
14	Hangtag	Pcs	14424.00	14568.00	16392.00	16392.00	17916.00	17916.00	17916.00
15	Label	Pcs	27984.00	28056.00	31668.00	31668.00	34668.00	34668.00	34668.00
16	Plastic Closure	Pcs	2100.00	2100.00	2364.00	2364.00	2580.00	2580.00	2580.00
17	Reflector Print	Pcs	936.00	936.00	1080.00	1080.00	1140.00	1140.00	1140.00

No	Particulars	A / U	Years						
			Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7 to Yr.10
18	Accessories	Pcs	7164.00	7164.00	7944.00	7944.00	8700.00	8700.00	8700.00
19	Hygienic Sticker	Pcs	1500.00	1500.00	1716.00	1716.00	1896.00	1896.00	1896.00

2.7. PRODUCTION PROCESS

The factory main operation line is sewing process. The factory has 24 sewing lines and currently only 5 sewing lines were operated during our site visit. The production capacity will be expanded to run other 19 sewing lines. Once the fabrics arrive to the cutting design section and then fabric is cut as per design which is followed by sewing process. The ironing process is completed after sewing process. After that, steam wet drying process and inspection or quality control of the garment is completed. After the final inspection, garment packing is completed prior to shipping to its destinations. Unit process flow chat is shown in Figure 2-3.

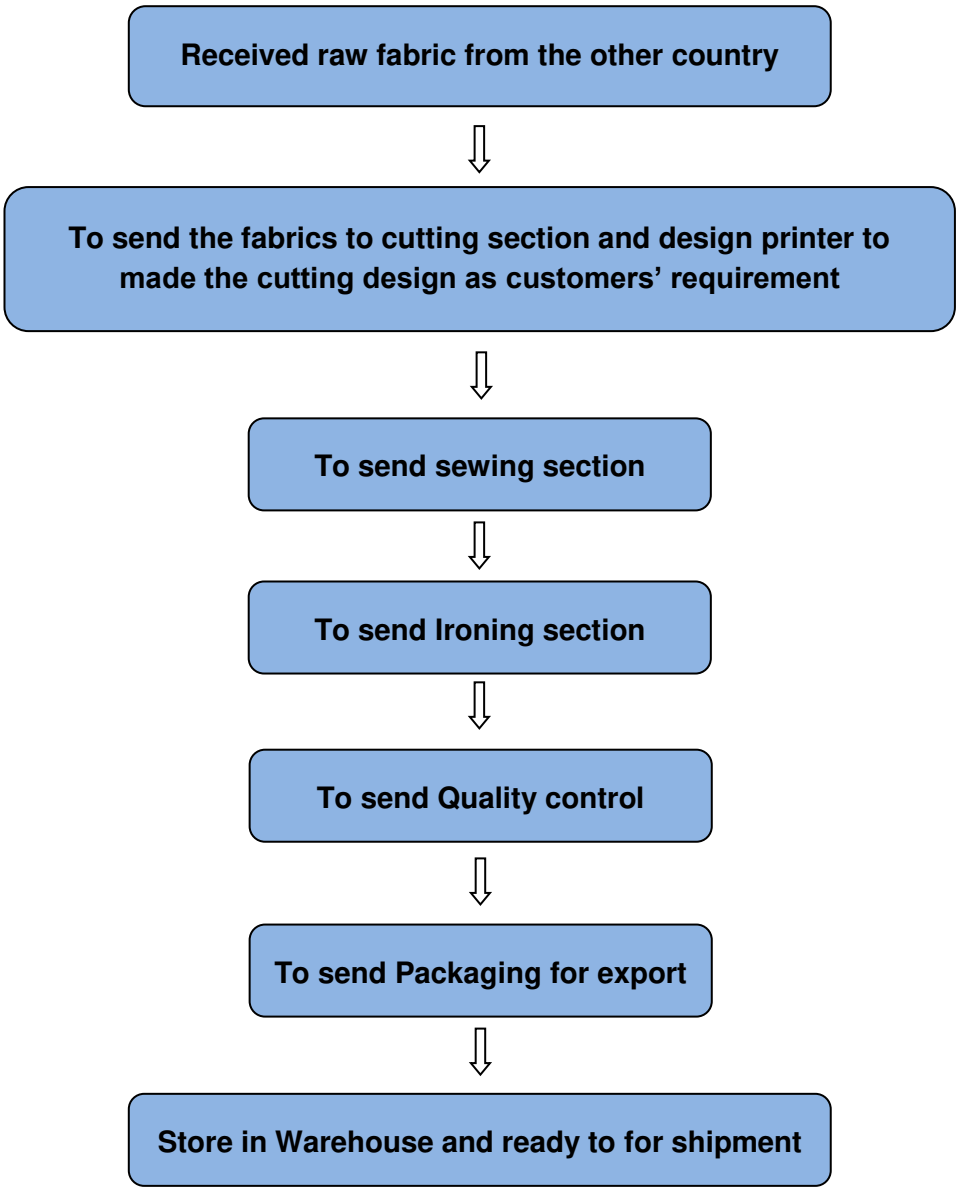

Figure 2-3 Production Process Flow Chart

2.7.1. **Raw Material**

The raw materials are silk, fabric, threads and ornamental fabrics which are imported from China. They are stored at the storage room as shown in Figure 2-4.

Figure 2-4 Storage Room

2.7.2. **Cutting Designing**

Manufacturing process starts with ordering raw fabrics per customers' specifications. Customer's specification is designed in the computer, which prints out cutting line drawing that is sent to cutting section of the manufacturing Figure 2-5.

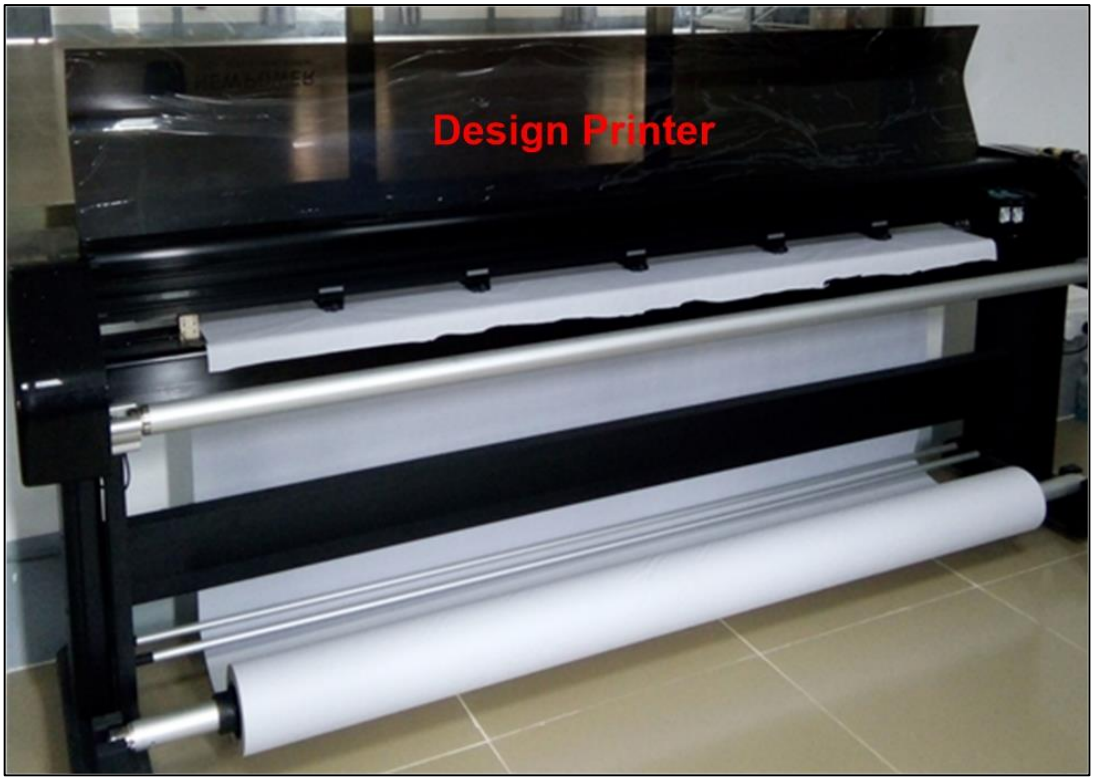

Figure 2-5 Design Drawing

2.7.3. **Fabric Cutting**

Cutting is performed by one processing worker using a printed computer layout on top of the fabrics, banded together by several binders. Only one line is being used, but there are 7 lines available to operate and it's used for future plan. A supervisor oversees the cutting process Figure 2-6.

Figure 2-6 Cutting Section

2.7.4. **Sewing**

Sewing Process is operated by processing workers as seen in Figure 2-7. Sewing of each underwear starts by over-locking three pieces of layers (fabric for front, back and side of an underwear) on one side. Lining of the edges of underwear and over-locking the remaining sides is the second step. The necessary elastic parts are installed for legs. Then labels are attached before elastic parts for waist are installed. The completed units are sent for Ironing.

Figure 2-7 Sewing Section

2.7.5. **Garment Ironing**

The Completed garments will iron by applying steam The ironing process is powered by a power steam-heated generator. Fuel oil is used to generate the power steam-heated generator. This burning fuel not only in the emission of carbon dioxide and particulate matter also the spillage of fuel oil will weaken the soil quality.Ironing process is done by using ironing machine with operator Figure 2-8 and Figure 2-9. The steam generator is providing for ironing before they are sent to Quality Control (QC) department.

Figure 2-8 Ironing Section

Figure 2-9 Power Heated Steam Generator

2.7.6. **Quality Control**

After completion of the ironing, quality control (QC) checks for any error. Quality control was done manually Figure 2-10. The QC passed units are sent to packing department for export.

Figure 2-10 Quality Control Section

2.7.7. **Garment Packing**

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 will be sent to the countries per customer's specification. Packing process was done manually by hand Figure 2-11.

Figure 2-11 Packing Section

2.8. PROJECT UTILITIES

The project is use electricity from the Myanmar Economic Corporation (MEC) grid line. Water supply system is a centralized system. Small drainage channels are constructed to drain wastewater into the drainage channel in surrounding of the factory building.

2.8.1. Water Supply

The industrial zone has centralized water supply system to distribute the all factory. The centralized water source comes from Shwe Pyi Tone Dam. The water is pumped to the water storage tank of MEC industrial zone. Fire-fighting will be used to this water. Based on the U.S EPA (1978)[1], the average daily water usage for a worker is 150 liter/day/person. Therefore, the estimated wastewater discharge from the (1,187) workers will be around (178,050) liter/day. Currently, the water demand is enough for the factory.

The feature plan of the Amity factory will install the on-site tube well in the factory area. 4000 ft^2 of water storage tank is already built in behind the factory which is a capacity of 23,000 gal storage tanks to supply enough water for the factory and domestic usages in the storage tank as shown in Figure 2-12. The manufacturing process is not

[1] U.S.EPA. (1978), Environmental impact statement phase II, Facility Plan Handover Country, Virginia 3rd Edition.

used the water in the factory. 80 bottles (20 L) of Supernal purified drinking water is provided daily to all employees as shown in Figure 2-13.

Figure 2-12 Water Storage Tank

Figure 2-13 Purified Drinking Water By Water Cooler

2.8.2. **Electricity**

The factory operation is used electricity from MEC grid line to connect 500 KVA transformer. The transformer location is situated at behind the factory building.

A 400 kVA diesel generator is installed to ensure power supply during power supply outage. A generator house is constructed behind the factory building and the diesel generator will be located within the house. The generator is used 53 gallons of premium diesel per month. The transformer and generator photos are shown in Figure 2-14 and Figure 2-15.

Figure 2-14 400 kVA Generator

Figure 2-15 One is Amity Transformer and Another One is MEC Transformer

2.8.3. **Drainage Channels**

On-site factory drainage channel is installed around the factory building. Domestic wastewater discharges to the factory drainage channel is flowed to the industrial drainage channel along behind the factory compound. Factory drainage channel is shown in Figure 2-16.

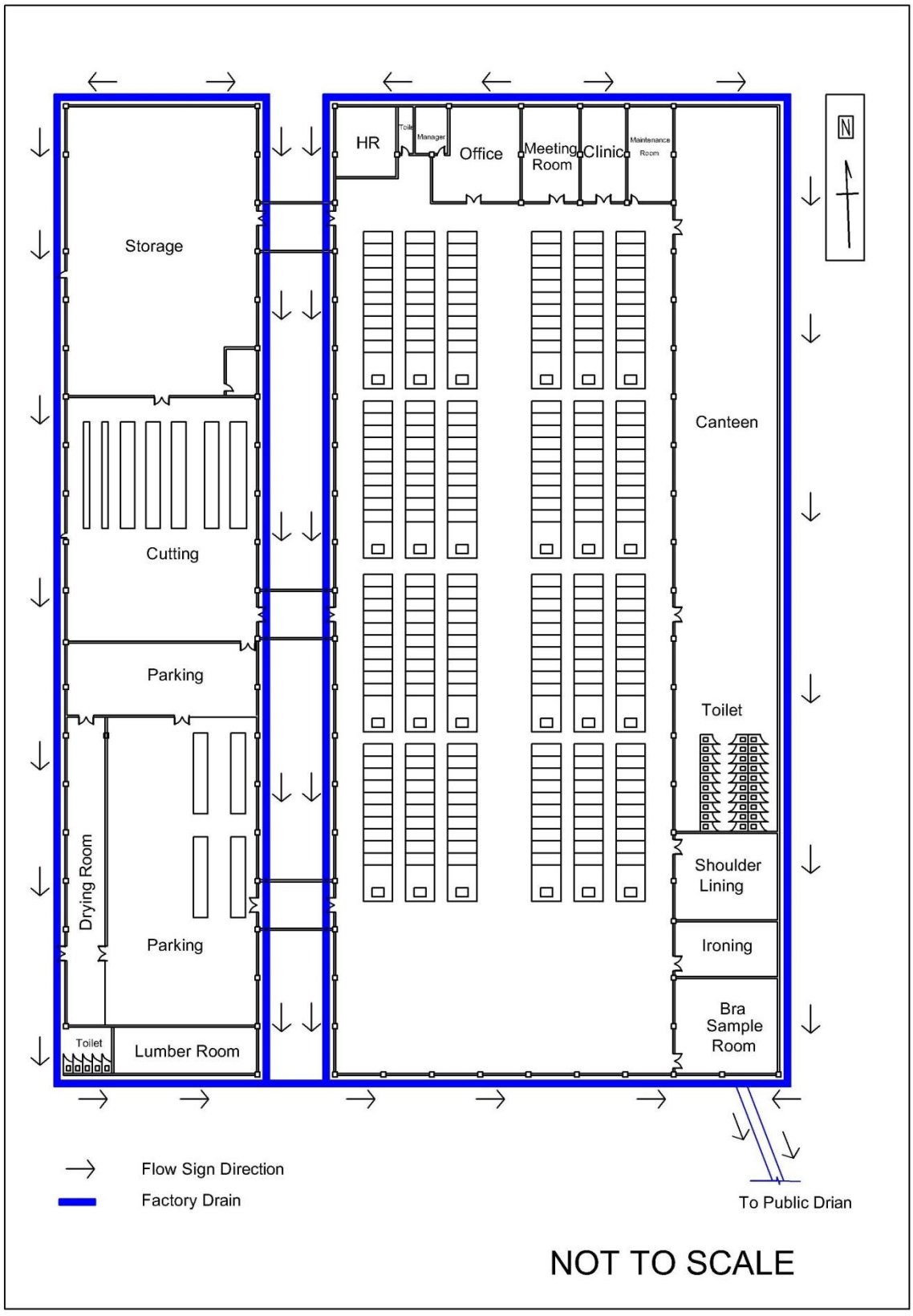

Figure 2-16 Drainage Channel Map of the Factory

2.8.4. **Factory Clinic**

A clinic is provided for health and safety of the workers Figure 2-17. One full time nurse-aid has been employed to treat employees for minor injuries, sickness and to give emergency medical care. Other serious injuries cases will be transfer to the Indagaw General Hospital. Medical checkup for the workers are conducted once a year. The clinic fills in medical product about 200,000 kyats per month.

Figure 2-17 Factory Clinic

2.8.5. **Supporting toilet for employee**

The factory has 34 local office staff and 10 Chinese staff to support management and engineering requirements of the factory. The factory employs 688 day shift workers and their working hour is from 8:00 am to 5:00 pm. For the day shift workers, there are facilities for eating, cleaning and washrooms in the factory compound. There are 21 toilets for woman and 13 toilets for man the office employees. The sewage is connected to septic tanks with dimension of 10.6 m length and 7.4 m wide. There are 2 septic tanks in the factory compound one is the under of big building and one is behind the small building the solid waste (sludge) from the septic tanks is removed once a year. Water coming out of the septic tank is discharged into the factory drainage. Toilets facilities are shown in Figure 2-18.

Figure 2-18 Toilets for Factory Employees

2.8.6. Operation solid waste collect site and garbage bins

The garbage bins are provided in the factory compound (Figure 2-19). Domestic waste from office and canteen are disposed in the garbage bins. Domestic waste is collected in dedicated bins and disposed at MEC waste disposal site. Most of the solid waste from operation are rejected fabrics and cutting pieces (0.3 ton per day of total solid waste). According to the IGES (2016)[2], the estimated amount of waste generation from each person is 0.4 kg/person/day. There are 1,187 workers `currently, the waste generation is around 474.8 kg/day. Generated waste from the factory is disposed once in a month by Bago City Development Committee. The waste temporary dumping site is shown in Figure 2-20.

[2] IGES (June, 2016), Quick Study On Waste Management in Myanmar

Figure 2-19 Garbage Bin

Figure 2-20 Garment Waste Temporary Dumping Site

2.8.7. **Canteen**

All the employee can rest and dine in the canteen area, which is an open area with tables and chairs provided as shown in Figure 2-21.

Figure 2-21 Factory Canteen Area

CHAPTER 3
LEGAL REQUIREMENT

3.1. INTRODUCTION

Amity (Myanmar) Lingerie Co., Ltd. has environmental policy of doing environmentally and socially responsible with minimal impact on the environment. The company is working with the local communities and government agencies integrating the environment into its planning, operations and policy decisions.

The company is working with the local committees and government agencies, such as MONREC integrating the environment into its planning, operations and policy decisions. The first and foremost policy is to comply with laws, rules and regulations relating to the physical and social environment. Most of all, it will follow the rules and regulations set up by the ECD, the main agency responsible for environmental management of regional level. The company pledges to do the business that will be environmentally as practical as possible.

Environmental management of the Project/Factory needs to comply with legal requirements of the Environmental Management Plan prescribed in the Environmental Conservation Rules, Notification No. 50/2014 and the EIA Procedure, Notification No. 616/2015.

An EMP is a project document to be prepared according to the requirements and guidance of the Ministry of Natural Resources and Environmental Conservation (MONREC), in order to refrain from, protect against, mitigate and monitor adverse impacts caused by the design, construction, implementation, operation, maintenance, termination, or closure of a project or business or activity; or after its closure, or by any other related cause [Environmental Conservation Rules, 50/ 2014, Chapter I, Article(s 2g)]. An EMP should include programs to manage, implement activities, and monitor changes to the environmental context.

3.2. ENVIRONMENTAL POLICY AND LEGAL FRAME WORK IN MYANMAR

The National Commissions of Environmental Affairs (NCEA) was formed in 1990. Myanmar Agenda-21 was outlined which contains social, economic, institutional and infrastructural improvement programmes and most of all, environmental conservations programmes.

Respective ministries devised 56 environmental polices and regulations directly related with environmental conservation and protection.

The National Environmental Conservational Committee (NECC) was formed 2011 with the aim to achieve sound environmental management in the country. With a view of effectively implementing the protection and conservation of the environment the government in 2016 has created the new ministry, the MONREC. The ECD is the focal and coordinating agency for the overall and detail environmental management through-out the country.

3.3. MYABNAR LAWS AND REGULATIONS RELATING TO THE ENVIRONMENT

The existing Myanmar laws and regulations are relevant to environmental, health and safety issues of this project. The conducting works of Amity company shall comply with the following Laws and Acts;

3.3.1. Environmental Conservation Law (March 20th, 2012)

On 30th March 2012, Myanmar Environmental Law was approved and effectively enforced to public. The Environmental Conservation Law relevant to this Project is "Any person causing a point source of pollution shall treat any pollution which caused environmental pollution, in accord with stipulated environmental quality standard".

Environmental Conservation Department (ECD) and MONREC are the responsible organizations to ensure that any new project developments are in compliance with the Environmental Conservation Law and other environmental guidelines.

3.3.2. Environmental Conservation Rules (Notification.No.50/2014)

Chapter IX, Articles 41 to 46 prescribe, the tasks regarding waste management under the control of MONREC and ECD. Waste management covers hazardous wastes, solid wastes, wastewater and emissions.

3.3.3. Environmental Impact Assessment Procedure (December 29, 2015)

Articles 76, Chapter (7) EMP in the EIA Procedure should be prepared the relevant to the preparation and implementation of the EMP report. Preparation and implementation of the EMPs will need to comply with relevant rules of 55(A).

3.3.4. National Environmental Quality (Emission) Guidelines (No. 615/2015) (2015 Dec, 29)

Objective of the National Environmental Quality (Emission) Guidelines (NEQG) are to provide the basis for regulation and control of noise and vibration, air emissions, solid wastes and effluent discharges from various sources in order to prevent pollution and protection of human health and ecosystem.

3.3.5. Myanmar Citizens Investment Law (Pyidaungsu Hluttaw Law No. 18 of 29-7-2013)

Chapter 5 of the Law, Article 5 states economic activities which shall be applied by the citizens for investment, except otherwise restricted or prohibited business under this law, or any existing Law.

Article 6 states the investments which shall be stipulated as the restricted or prohibited business. These are businesses which can;

- Affect the traditional culture and customs of the national races within the Union
- Affect public's environment, causing noise in the residential area.
- Affect public health.

- Cause damage to the natural environment and ecosystem.
- Affect the land and marine animals, trees, flowers, crops, antique heritage, resources
- Bring the hazardous or poisonous waste into the Union.
- The factory which produce or the business which use hazardous chemicals under international agreements.

3.3.6. **Foreign Investment Law, 2012**

This law sets out the power of Myanmar Investment Commission (MIC) to permit foreign investments. Foreign investors are restricted or prohibited in investment activities which may cause damage to the natural environment, ecosystem and public health.

Chapter V; Form of Investment

The investment may carry out any of the following forms:

a) Carrying out an investment by a foreigner with one hundred per cent foreign capital on the business permitted by the Commission;

b) Carrying out a joint venture between a foreigner and a citizen or the relevant Government department and organization;

c) Carrying out by any system contained in the contract which approved by both parties;

In forming the form of investment under section 9:

I. Shall be formed as company in accord with the existing law;

II. If it is formed as a joint venture under sub-section (b) of section 9, the ratio of foreign capital and citizen may be prescribed in accord with the approval of both foreigner and citizen who has made joint venture;

III. In investing by the foreigner, the Commission shall, the minimum amount of investment according to the sector, prescribe with the approval of the Union Government depending on the nature of business;

IV. The foreigner may, if a joint venture is carried out with citizen in prohibited and restricted business, propose the ratio of foreign capital as prescribed by the rule;

In carrying out the form of investment business under sub-section (a), liquidating before the expiry of the term of the contract as it has obtained the right to terminal or liquidating on the conclusion of the business shall be complied with and exercised in accord with existing laws of the Union

3.3.7. **Export and Import Law (2012)**

The objectives of this Law are as follows:

- To enable to implement the economic principles of the State successfully.

- To enable to lay down the policies relating to export and import that support the development of the State.
- To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards.
- To cause to be streamlined and speedy in carrying out the matters relating to export and import.

3.3.8. Development Committee Law (April 1st, 1993)

Development Committees law replaced the 1898 Municipal Law which lasted for 95 years. The law is related to governance and development of the town and cities.

3.3.9. Public Health Law, 1972

The law deals with the provisions to promote and safeguard public health including preventive measures to promote environmental health. The laws related to the public health are provided in Sections 2 to 5.

3.3.10. Private Industrial Enterprises Law (1990)

The objectives of this Law are as follows:

- 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;
- To acquire modem 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;
- To cause utilization by relying mainly as local natural resources;
- To cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises;
- To cause opening up of more employment opportunities;
- To cause avoidance of or reduction of the use of technical know-how which cause environmental pollution;
- To cause the use of energy in the most economical manner.

3.3.11. Factories Act, 1951

This act deals with the provisions for the proper disposal of wastes and effluents in factories, treatment of wastewater, regulations for health and cleanliness in factories and prevention of hazards. First aid appliances related to factory are presented in Article 47 and described below.

1. In every factory the manager shall provide and maintain a first-aid box or a cupboard equipped with the prescribed contents in suitable place as may be directed by the Inspector so as to be readily accessible during all working hours,

and where more than one maintained for every additional one hundred workers or part thereof.

2. Nothing but the prescribed contents shall be kept in the first-aid boxes or cupboards referred to in sub-section (1), and all such first-aid boxes and cupboard shall be kept in the charge of a responsible who has been trained in first-aid treatment and who shall always be available during working hours.
3. In every factory wherein more than two hundred and fifty workers are employed there shall be provided and maintained a first-aid room or dispensary of the prescribed dimension, containing the prescribed equipment, and shall be kept under the supervision of such medical officer and nursing staff as may be prescribed.

3.3.12. Social Security Law (No.15 of 31-8-2012)

The objectives of the Law are:

a) To fulfill health and social needs of the workers;

b) Workers to enjoy more security in social life and health care;

c) To raise public reliance upon the social security system;

d) To have the right to draw back some of the contributions paid by the employers;

e) To obtain the right to continued medical treatment and benefits after retirement;

3.3.13. The Social Security Rules, Notification, No 41/2014

The rules include provisions of a comprehensive medical care for insured workers to promote health, prevent the disease, provide medical treatment, rehabilitate and to enable the worker to resume the work.

3.3.14. The Leave and Holiday Act, 1951 (Law Amended July, 2014)

The Leave and Holidays Act was firstly adopted on 1 January 1952, by the International Labour Organization, Myanmar. Recently, the Act was amended in July 2014. The key objectives of this Act are to allow workers (daily wage worker/temporary worker/permanent worker) to have a leave and holiday allowances, religious or social activities with earn allowance, and health insurance allowances.

The followings describe the right of workers to leave and have a holiday:

- Causal Leave (6 days)
- Earned Leave (10 days)
- Medical Leave (30 days)
- Maternity leave
- Public Holiday (21 days)
- Penalty for Violation

3.3.15. Labour Law Act, 1951

In Chapter 10 (Resignation and Termination), Myanmar's labour law does provide few details on termination and dismissal of employees. The conditions and requirements for termination are primarily governed by the policies of the Ministry of Labour, most importantly the template contract of the Ministry of Labour.

a) Termination

Under the law, an employer is not required to state any reasons for the termination of an employee by notice. Pursuant to the template contract of the Ministry of Labour, an employee may however only be terminated for the reasons specified in the employment contract or work rules. Even during the probation period, termination would require one (1) months' notice and strong reasons for the termination.

Generally, termination by notices results in severance payments as set out below:

b) Resignation

Pursuant to the template contract of the Ministry of Labour, employees may resign by giving one (1) months' notice (after confirmation) or seven (7) days' notice during the Probation Period.

No severance payment is required.

c) Dismissal

An employee who violates the terms of his contract or the work rules shall – for ordinary misconduct – be given a verbal warning for the first violation, a written warning for the second violation and shall sign an undertaking for the third violation. After the third warning and in case of further violation, the employer shall be entitled to dismiss the employee with disbursement of wages remaining to be paid for days actually worked, but without need to pay severance payment.

d) Severance Payment

Employees terminated by notice or without fault (e.g. for redundancy) are entitled to severance payments as follows in Table 3-1.

Table 3-1 Employees Terminated Notice or Without Fault

Term of Employment	Severance Amount
6 months	-
6 months – 1 year	0.5 month's salary
1 year – 2 year	1 month's salary
2 years – 3 years	1.5 months' salary
3 years – 4 years	3 months' salary
4 years – 6 years	4 months' salary
6 years – 8 years	5 months' salary
8 years – 10 years	6 months' salary

Term of Employment	Severance Amount
10 years – 20 years	8 months' salary
20 years – 25 years	10 months' salary
>25years	13 months' salary

3.3.16. Minimum Wage Law, 2013

In Chapter 2 of the law, The president's will create a National committee comprised of relevant persons in government departments, representatives of employers and employees, to conduct research on the prevalent minimum wages across various industries for employees.

The national committee will be calculated the basis for which minimum wage. The committee will take into consideration the needs of the employees and their families, the current living standards, the cost of living, the state of the country's economy, the well-being of the employee vis-a-vis his profession, and other considerations presented by the relevant ministry.

Relating to fixing of the minimum wage rate and reviewing and amending that rate, regular meeting of the national committee shall be held twice in a year. If necessary, special meeting may be held.

In Chapter 6 of the law, The committee will use its findings to set forth a minimum wage for employees across the various industries for the entire country, including for employees employed in special economic zones.

3.3.17. Minimum Wage (Notification No.2/2015 on 28 August 2015)

The National Committee for Minimum Wage issued on 28 August 2015 which set the minimum wage at 450 kyat per hour for each standard 8 hour working day (or 3600 kyat a day) with effect from 1 September 2015. This stipulated rate of minimum wage applies uniformly to all workers nationwide and across all industries except those in small, family-run business with a workforce of less than 15 workers.

3.3.18. The Payment of Wages Act (25th January 2016)

The Payment of Wage Act was firstly unacted on 1963, the act was repealed in 25th January 2016 .The purpose of this act the employer must pay wage or salary to employee (working part time, weekly or monthly) within designated time frame. In this Act contains 9 main Chapters.

In Chapter 2 (Method of Payment and time-frame) of the law, Article 3 and 4 describe the following;

Article 3. The employer must;

a) Pay in local currency or foreign currency recognized by the central bank of Myanmar. This may be in cash, check or deposit into the bank account of the Employee.

b) Moreover, pay can be in the mean of;

1. Totally in cash or half the cash and half in things set as local price according to the local price to those employees working in trade, manufacturing and service sector.
2. Totally in cash or half the cash and half in things set as local price according to local traditions or common agreement to those working in agriculture and livestock sectors. But this must be for the sake of the employees and their families. And, it also must be reasonable and fair.
3. An employee shall receive the payment for 60 days when he/she is in Alternative Civil Service.

Article 4. An employer must pay for;

a) Part-time, daily, weekly or other part-time job, temporary or piecework when the work is done or at the agreed time.

b) According to the Article (a), the time frame shall not exceed one month.

c) Wages for the permanent work must pay per monthly basic as below.
   1. Must pay at the end of the payment period when there are not more than 100 workers.
   2. If there are 100 workers and above, pay must not be administered later than 5 days after the end of the payment period.

d) Upon termination, wages must be paid within 2 days from the date of termination.

e) If a resignation letter is submitted, wages must be paid at the ending day of the payment period.

f) If an employee dies, wages must be paid to legally recognized person within 2 working days after the day he/she died.

g) All wages must be paid during the working day.

3.3.19. **The Settlement of Labour Dispute Law (28th March 2012)**

The Settlement of Labour Dispute Law (2012) was repealed by The Trade Disputes Act (1929). The purpose of this act is for safeguarding the right of workers or having good relation between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. This law contains 10 main chapters.

3.3.20. **Labour Organization Law (October 11th, 2011)**

The law was created to protect the rights of the workers, to have good relations among the workers or between the employer and the worker, and to enable to form and carry out the labour organizations systematically and independently.

3.3.21. Prevention from Danger of Chemical and Associated Materials Law, 26th August 2013

There are 14 Chapters in Prevention from danger of chemical and Associated Materials Law (2013). The sections associated with the Project are:

Article 13 of Chapter-7 (work permit relating to Chemical and Associated Materials) states that any people, who want to do the business of chemical and associated materials, shall apply the central body of the acquisition of the license, attached with the management plan for the environmental conservation in accord with the stipulations.

Article 2 of Chapter 9 (Controlling, Preventing the danger and alleviating the danger) states that the license holders shall follow the stipulations of the following items to control, preventing alleviate the danger relating to the chemical and associated materials:

a) To classify the danger level according to the properties of the chemical and associated materials so as to prevent the danger in advance;

b) To reveal the danger warning sign and safety level certificate;

c) To attend the training for keeping the personal protective equipment and using them systematically to prevent and alleviate accident;

d) To carry out in accord with the stipulations in connection with transporting, keeping, storing, using and disposing the chemical and associated materials;

e) Importing or exporting the chemical and associated materials which are prohibited by the central supervising team, the equipment which are used inside the said materials.

3.3.22. The Myanmar Fire Brigade Law (17th March, 2015)

In Chapter 8 of the law, Article 17, states-C, factory, work shop, warehouse and store should take inspection from the Department of Fire Service for safety and permissions to be granted.

3.3.23. Natural Disaster Management Law (2013)

On 31st July, 2013, Natural Disaster Management Law was approved are effectively enforced to public.

The objective of the law are as follows:

1. To implement natural disaster management programmes systematically and expeditiously in order to reduce disaster risks
2. To form the Natural Committee and Local Bodies in order to implement natural disaster management programmes systematically and expeditiously
3. To coordinate natural and international government departments and organizations, social organizations, other non-government organizations or

international organization and regional organizations in carrying out natural disaster management activities

4. To conserve and restore the environment affected by natural disasters
5. To provide health, education, social and livelihood programmes in order to bring about better living conditions for victims.

3.4. INTERNATIONAL AND NATIONAL GUIDELINES AND STANDARDS

International policies, guidelines and standards relevant to environmental and social impacts of projects that are referred to by most countries are those issued by the National Environmental Quality (Emission) Guideline (NEQG), World Health Organization (WHO), the U.S Environmental Protection Agency (EPA), the World Bank, and the International Finance Corporation (IFC). The policies, guidelines and standards of the World Bank and IFC are cross referenced and complementary as the IFC is an organization of the World Bank Group. They are also adopted by most development organizations such as the Asian Development Bank, and Japan Bank for International Cooperation. It should be noted that the guidelines and standards recommended by the World Bank and IFC, especially those related to environmental pollution, also provide due consideration to the guidelines and standards of U.S. EPA and WHO.

Only those international policies, guidelines and standards relevant to this Project are discussed herein.

3.4.1. IFC's Standards and Guidelines

IFC's standards and guidelines relevant to this project are described in two documents:

- Performance Standards on Environmental and Social Sustainability, January 1, 2012.
- Environmental, Health and Safety-General Guidelines, April 30, 2007.

The first document describes eight performance standards on environmental and social sustainability which IFC requires its clients to apply throughout the project life cycle.

The second document provides general guidelines for environmental, health and safety (EHS) for development projects.

3.4.2. World Bank's Pollution Prevention and Abatement Handbook (1988)

Toward Clear Production

The World Bank's Pollution Prevention and Abatement Handbook (PPAH) is a comprehensive document providing guidelines for industrial pollution control, and it recommends emission and ambient quality standards to be applied in environmental management. These recommends standards have taken into account the standards enforced by U.S.EPA and those recommended by WHO. They are referred to in the IFC's EHS Guidelines.

3.4.3. **National Environmental Quality (Emission) Guidelines (No. 615/2015) (2015 Dec, 29)**

Objective of the guidelines are to provide the basis for regulation and control of noise and vibration, air emissions and effluent discharges from various sources in order to prevent pollution for the purpose of protection of human health and ecosystem.

3.5. GUIDELINES APPLICATION TO THE PROJECT

The project environmental management plan during construction and operation needs to comply with Myanmar National Environmental Quality (Emission) Guidelines (2015) and the others as appropriate. Guidelines for parameters relevant to the Project are shown in Table 3-2 to Table 3-4, as follows:

Table 3-2 National Guidelines of Air Quality

Parameter	Averaging Period	Guideline Value µg/ m³
Nitrogen dioxide	1-year 1-hour	40 200
Ozone	8-hour daily maximum	100
Particulate matter PM_{10} [a]	1-year 24-hour	20 50
Particulate matter $PM_{2.5}$ [b]	1-year 24-hour	10 25
Sulphur dioxide	24-hour 10 -minute	40 500

a Particulate matter 10 micrometers or less in diameter

b Particulate matter 2.5 micrometers or less in diameter

Table 3-3 National Guidelines on Noise Level

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

a Equivalent continuous sound level in decibels

Table 3-4 National Guidelines for (Wastewater, Storm Water Runoff, Effluent and Sanity Discharges (General Application))3 Operation phase

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

a Standard Unit

[3] 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.

b At the edge of 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

CHAPTER 4
SURROUNDING ENVIRONMENT

4.1. INTRODUCTION

The purpose of this EMP is to predict how environmental and socio-economic conditions will be impacted as a result of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the Project Site which was 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.

The project study area is defined as an area surrounding the project site from which the baseline information collection should be collected. The project site is 3.1 acre size, located in Indagaw Industrial Zone. In the EMP report study area is about 500 meter radius around the project site, its zone covers about 193.33 acre.

The study area for project surrounding environment to consist of three groups of components: (i) physical components, (ii) biological components and (iii) socio-economic components.

4.2. PHYSICAL ENVIRONMENT

The relevant physical environment comprises common adjacent, climate, topography, geology, drainage, solid waste, ambient noise, etc. They are described as follows.

4.2.1. Overview of the Project Area

The Project Site will occupy 12,502 m^2 in Plot No.53, Kwin No. 1190(Kha), East of Gomminn Inn, Indagaw Industrial Zone. Numbers of factories are located nearby the Project Site. Adjacent factory map of the project site and information on nearby factories are shown in Figure 4-1.

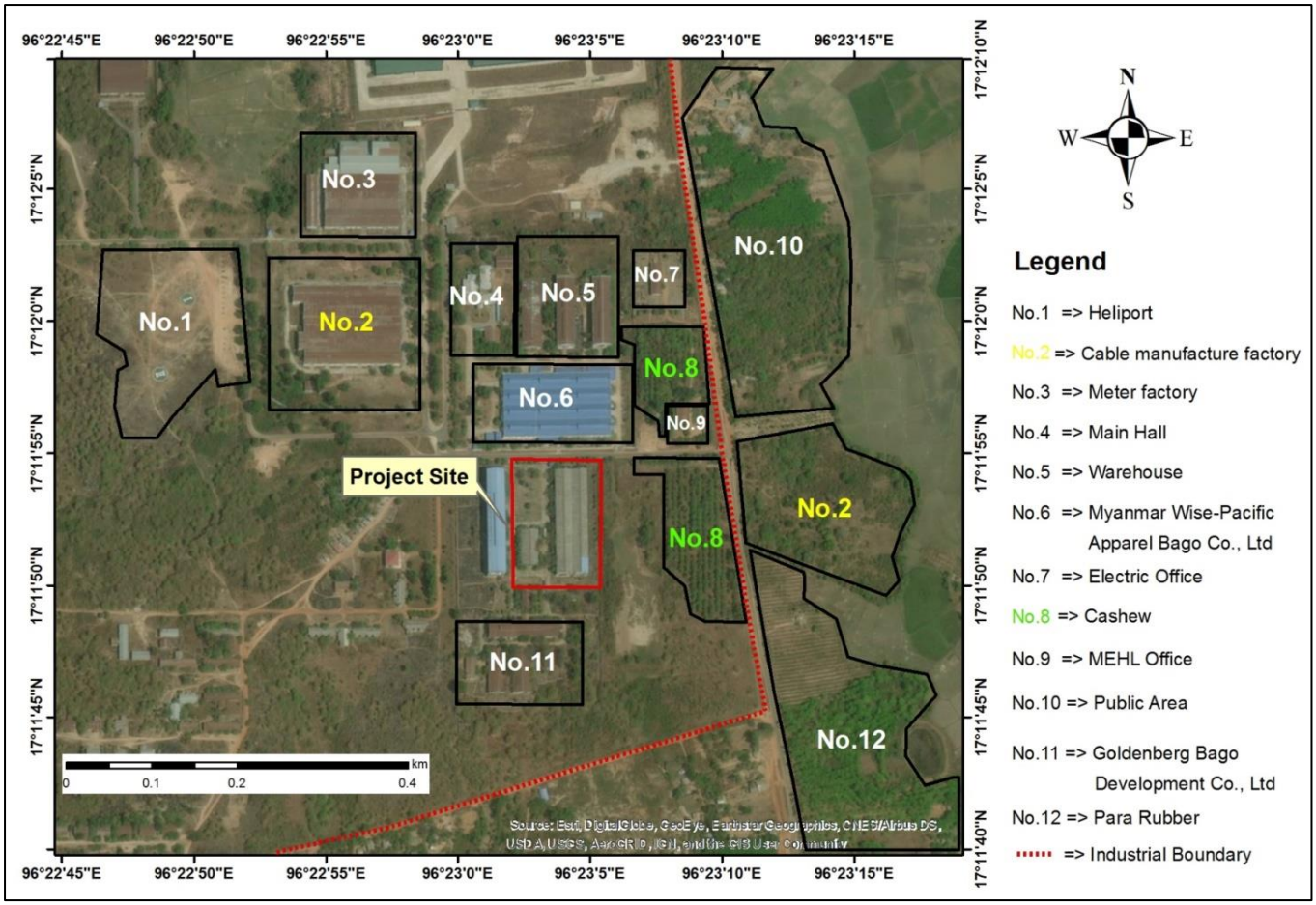

Figure 4-1 Adjacent Factories Map of the Project Site

4.2.2. **Climate Conditions**

The climatic condition of the project area is based on secondary information source. It is available at Indagaw Administration Department, which is the nearest to the project site. The study area has a tropical monsoon climate classification by three seasons. The city typically experiences a distinct rainy season from the month of May through to October when a substantial amount of precipitation occurs. Dry season commences from November and ends in April. During the course of a year, average temperature can range from 14.2 to 40.2° C. Average rainfall can range from 121.24 to 133.70 mm per year. Yearly rainfall and temperatures from 2014 to 2016 are shown in Table 4-1 (Source; Department of Administration, Indagaw Township).

Table 4-1 Yearly Status of Rainfall and Temperature (2014-2017ggg)

No	Year	Rainfall*		Temperature*	
		Raining Days	Total Rainfall (mm)	Summer	Winter
				Higher °C	Lower °C
1	2014	135	121.24	37.2	13.6
2	2015	110	132.30	36.1	14.1
3	2016	136	133.70	40.2	14.2

No	Year	Rainfall*		Temperature*	
		Raining Days	Total Rainfall (mm)	Summer	Winter
				Higher °C	Lower °C
4	2017	-	-	-	-

* Department of Administration in Indagaw Township

4.2.3. **Topography**

The factory is in Indagaw Township, Bago Region. Indagaw has the Latitude 17° 14′ to 17° 15′ and Longitude 96° 24′ to 96° 41′ of above 30ft mean sea level. Total area is 23890 acres, 37.32 square mile. Industrial zone and residential areas surround the factory location. Agricultural fields are located to the west of the project area.

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

4.2.4. **Geology**

The study area is mainly composed of bluish gray silts and clay of Younger alluvium (recent). The alluvial soil occurred in the eastern part of the study area. Younger alluvium consists of stream deposits, gravel deposits, silty clay and light colour sandy soils. Younger alluvium overlies the older alluvium of Quaternary, followed by Irrawaddy Formation of Pliocene age as shown in Table 4-2. Older alluvium is composed of silty clay, silty sand, sand and lateritic clay. Irrawaddy Formation is mainly exposed at the north western part of the project area. This Formation is characterized by alteration of mudstone and sandstone, sandy mudstone. The sandstone is underlying the mudstone and is medium to coarse grain, highly loose and friable, grit and conglomerate with the subordinate bluish grey shale. Mudstone is of bluish grey color, moderately jointed, stiff and compact.

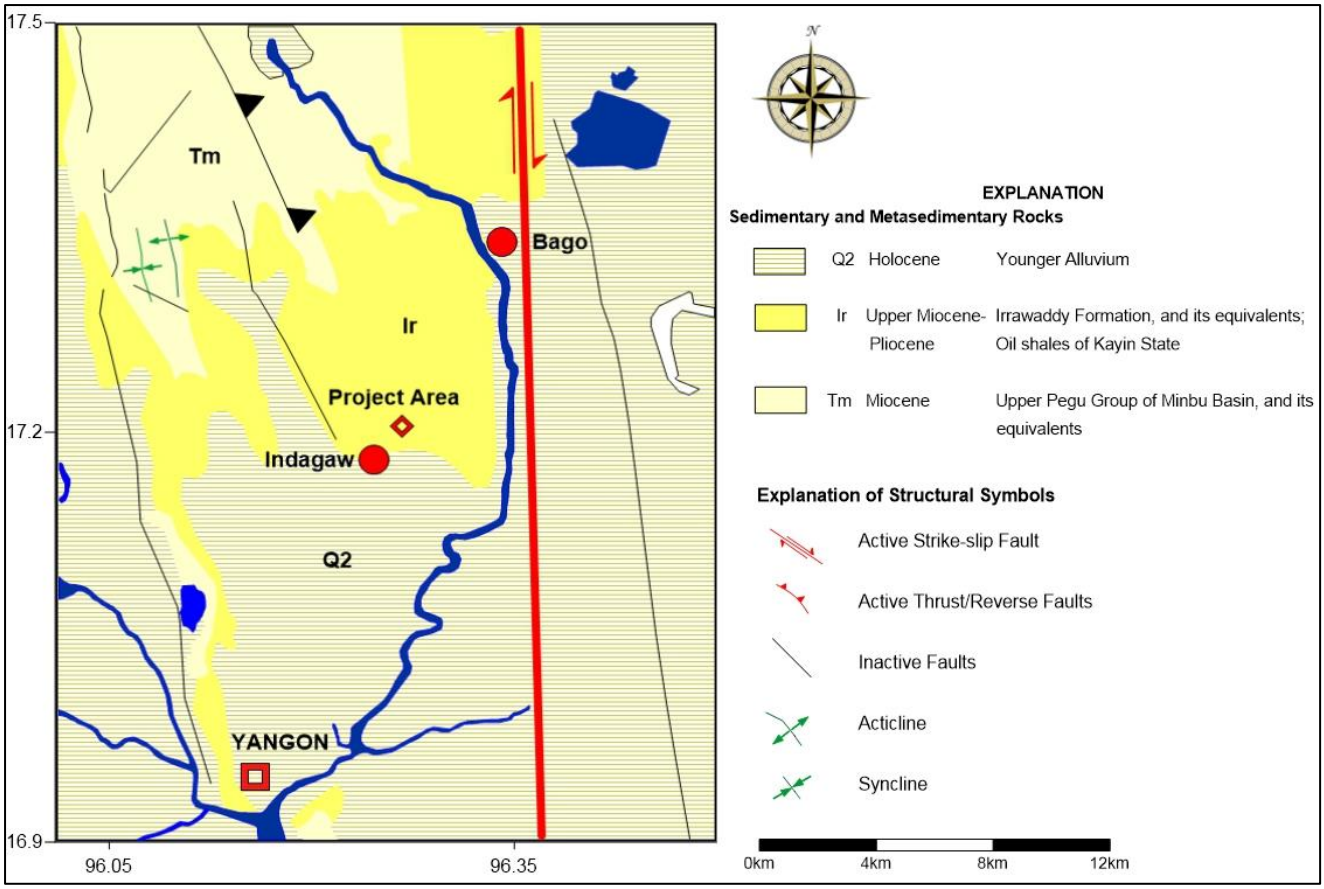

Figure 4-2 Geological Map of the Project area

4.2.4.1. Stratigraphic Sequence

The main lithology units cropped out in this region are Irrawaddy Formation and Pegu Group. The stratigraphic succession of the study area is shown in Table 4-2.

Table 4-2 Stratigraphic Succession of the Study Area

Description	Age
Alluvium	Holocene
.....Unconformity	
Irrawaddy Formation	Miocene -Pliocene
.....Unconformity	
Pegu Group	Lower-Middle Miocene

4.2.4.2. Seismology

As shown in the Figure 4-3, five seismic zones are demarcated and named (from low to high) Zone I (Low Zone), Zone II (Moderate Zone), Zone III (Strong Zone), Zone IV (Severe Zone), and Zone V (Destructive Zone), mainly following the nomenclature of the European Macroseismic Scale 1992. Our project study area is under the Zone V (Destructive Zone). A probable range of ground acceleration in g values and equivalent Modified Mercalli (MM) Scale classes are given. The highest intensity zone designated for

Myanmar is the Destructive Zone (with probable intensity range of 0.4 – 0.5 g) which is equivalent to MM class IX. There are four areas in that zone; namely, Bago-Phyu, Mandalay-Sagaing-Tagaung, Putao-Tanaing, and Kale Myo-Homalin areas. The latter two, however, would not have major earthquake hazards as they are only sparsely populated.

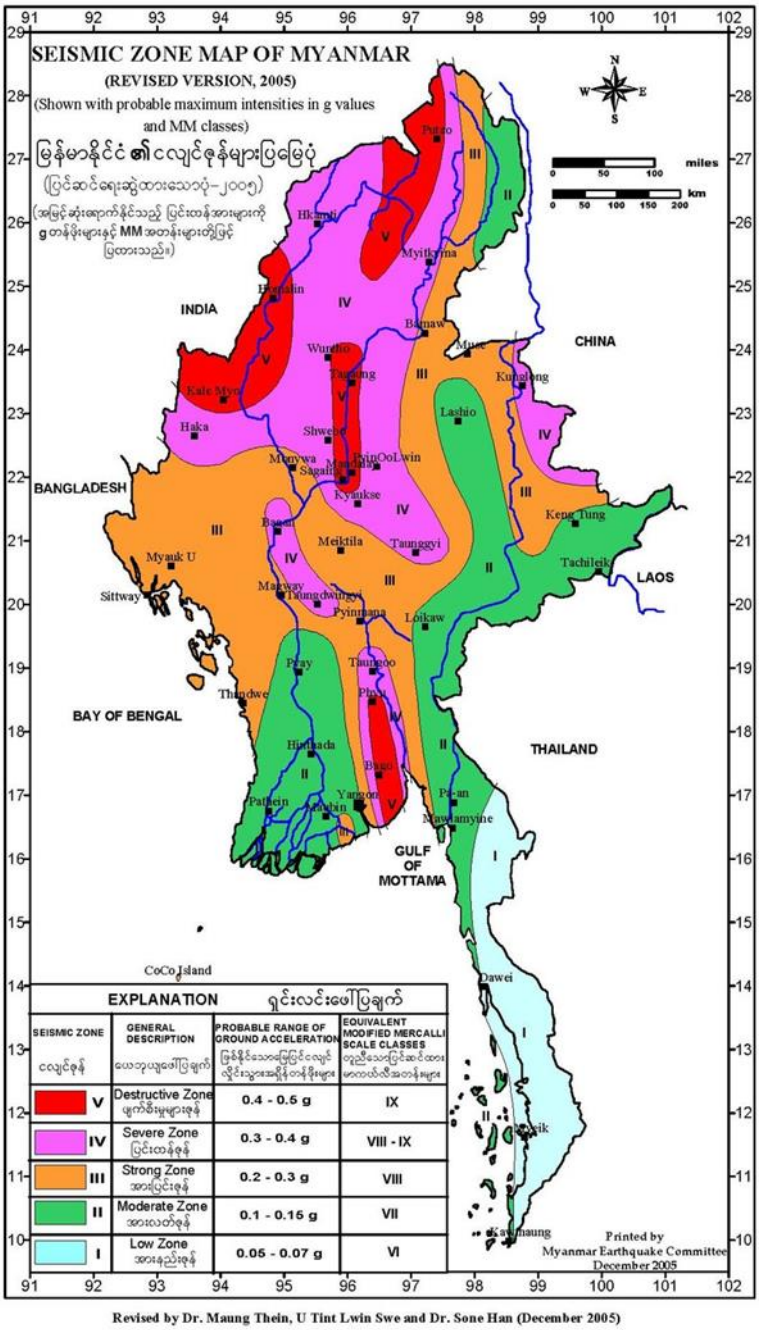

Figure 4-3 Seismic Zones Map of Myanmar

4.2.4.3. Bago Earthquake

The well know Bago Earthquake, struck on May 5, 1930 (13:45:58) with the magnitude of 7.3, cause of 500 casualties and a certain amount of damage in Bago while

caused 50 deaths and greater damage in Yangon. The earthquake epicenter is Lat 17˚ 00' N and Long 96˚ 50' E.

4.2.4.4. Hydrogeology

Hydrologically, the area under investigation possesses two aquifers, alluvial aquifer and Irrawaddian aquifer. The quality of water in the Bago City is generally good table but in the area, covered by lateritic soil, Fe contents is high.

4.2.5. **Land Use**

4.2.5.1. Methodology

Information about land use was collected from secondary sources in combination with ground truth surveys. The survey helps to verify and fill gaps of the secondary information.

4.2.5.2. Secondary Data Collection

Secondary data on land use was compiled from the following sources:

- Satellite image of GOOGLE EARTH PRO
- Art Global Information System map of Bago Region

Based on the secondary data, initial land use maps were prepared and used as a basis for subsequent ground truth surveys.

4.2.5.3. Ground Truth Survey

Ground truth surveys were conducted during 25 July, 2017 in the project site and the 500 m marginal area. It was used to verify the land use information in the initial land use map. The results were used to recheck, revise, and modify the accuracy of each type of land used on Art GIS mapping software. The finial land use maps were then generated accordingly as shown in Figure 4-4.

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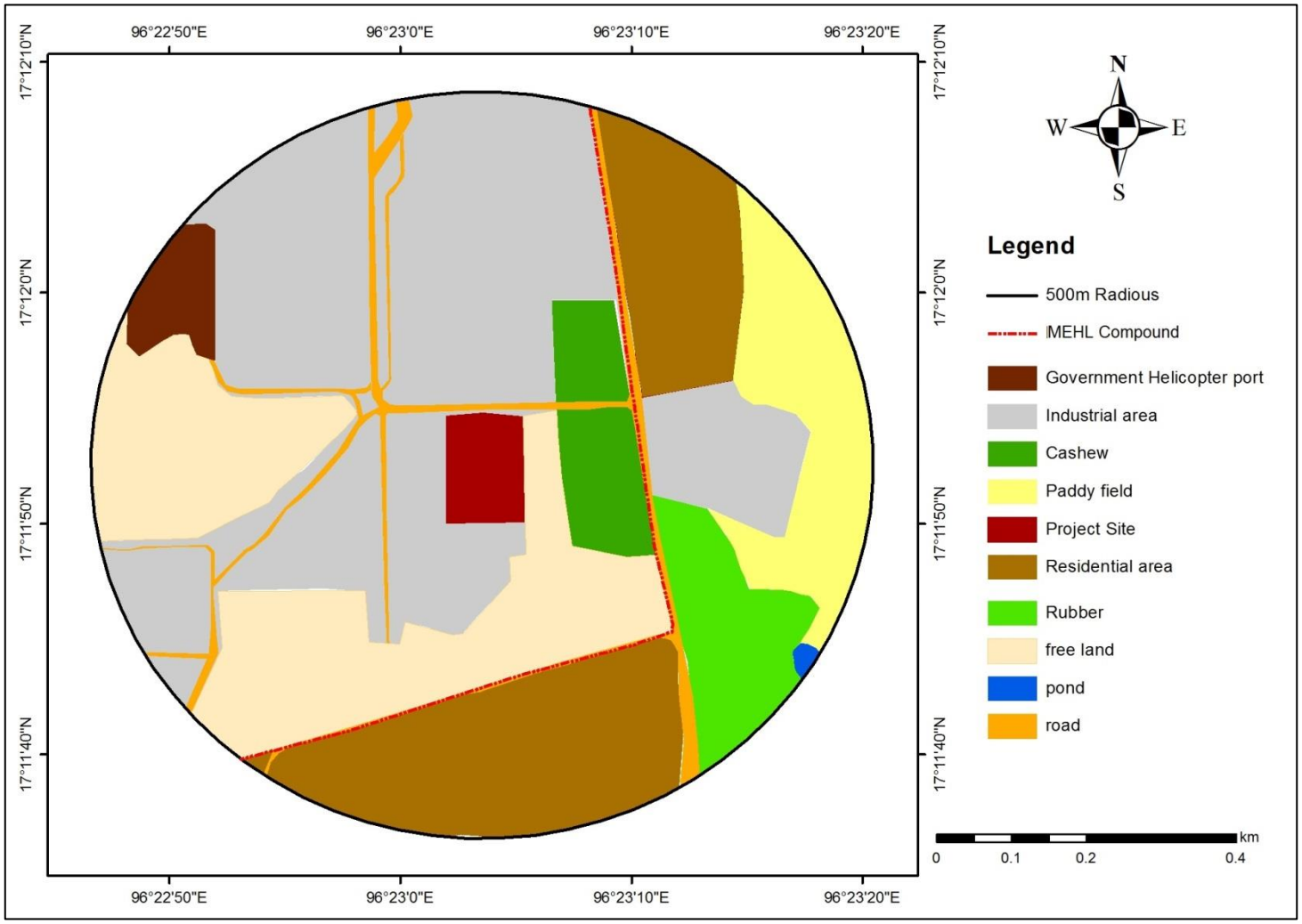

Figure 4-4 Land Use Map on Study Area

4.2.5.4. Result of the study

Result of land used investigation on project study area. The study area consists of the proposed project site (about 2.70 hectares) and 500m marginal area (78.32 hectares).This area is characterized by four types of land used: (i) industrial area, (ii) agricultural area, (iii) residential area and (iv) government area. The land use types and area are summarized and illustrated in Table 4-3 and Figure 4-5.

Establishment area refers to industrial zone. Inn Ta Gaw Industrial zne area occupies about 39% respectively and most of factory are garment manufacturing factory.

As the location is adjacent to Inn Ta Gaw Town, residential area occupies nearly 24% of study area. Agricultural areas of rubber plantation, paddy and cashew farm are occupied about 17% of the area.

Table 4-3 Land Use Type in the Project Area

Name	Area (Hectare)	Percentage (100 %)
Industrial Area	30.71	39.3
Agricultural Area	13.42	17.2
Residential Area	19.11	24.5
Government Helicopter port	1.46	1.8
Public pond	0.10	0.2
Free land	10.27	17

	
Paddy Field	**Rubber Farm**
	
Cashew Farm	**Free land**
	
Residential Area	**Industrial Area**

Figure 4-5 Existing Land Use Photo Within Study Area

4.2.6. **Drainage**

The width of drainage channel in front of the Project Site is approximately 1 ft. Wastewater discharged from the project on-site drains into industrial drainage networks are shown in Figure 4-6.

Figure 4-6 Indagaw Industrial Drainage Network

4.2.7. **Solid Waste**

The industrial zone has the solid waste dumping site far from about 550 m on project site as shown in Figure 4-7.

Figure 4-7 Industrial Zone Solid Waste Landfill Site

4.3. ENVIRONMENTAL QUALITY

4.3.1. Air Quality

Air quality measurement was conducted at in the study area of 24-hour at 16th May, 2019 to 17th May, 2019. Air pollutants level including dust (TSP and PM10) measured at the N 17°11' 54.7" and E 096°23' 03.2" by using the TISCH high volume air sampler. The operation place of the factory is making the fabric cutting, sewing, and ironing on the working hours nonstop which movement will become the air pollution emissions than the other places.To reveal the existing status of baseline air quality, the average air quality compared with NEQG and international standard WHO 1979 and World Bank guideline. The air quality measurement result were within the range of standard. The result from the high volume gravimetric air sampler shown in Table 4-4, location map of air monitoring point and measurement activities are shown in Figure 4-8 and Figure 4-9.

Table 4-4 Results From the High-Volume Gravimetric Air Sampler

Parameter	Unit	Average hour	Results	WHO 1979 (WHO Guidelines)1	World Bank (General Environmental Guidelines)2	NEQG3
TSP	µg/m^3	24-hour	142.24	150-230 (24-hour)	-	-
PM_{10}	µg/m^3	24-hour	91.32	-	70 (24-hour)	50 (24-our)

When the air quality measurement is compared to the NEQGS guideline, it can be seen that TSP and PM_{10} is less then the NEQGS guideline limits. So it is evaluated that the air quality from the factory has no pollution and can be the suitable workplace for the workers.

Figure 4-8 Air Quality Measurement Activities

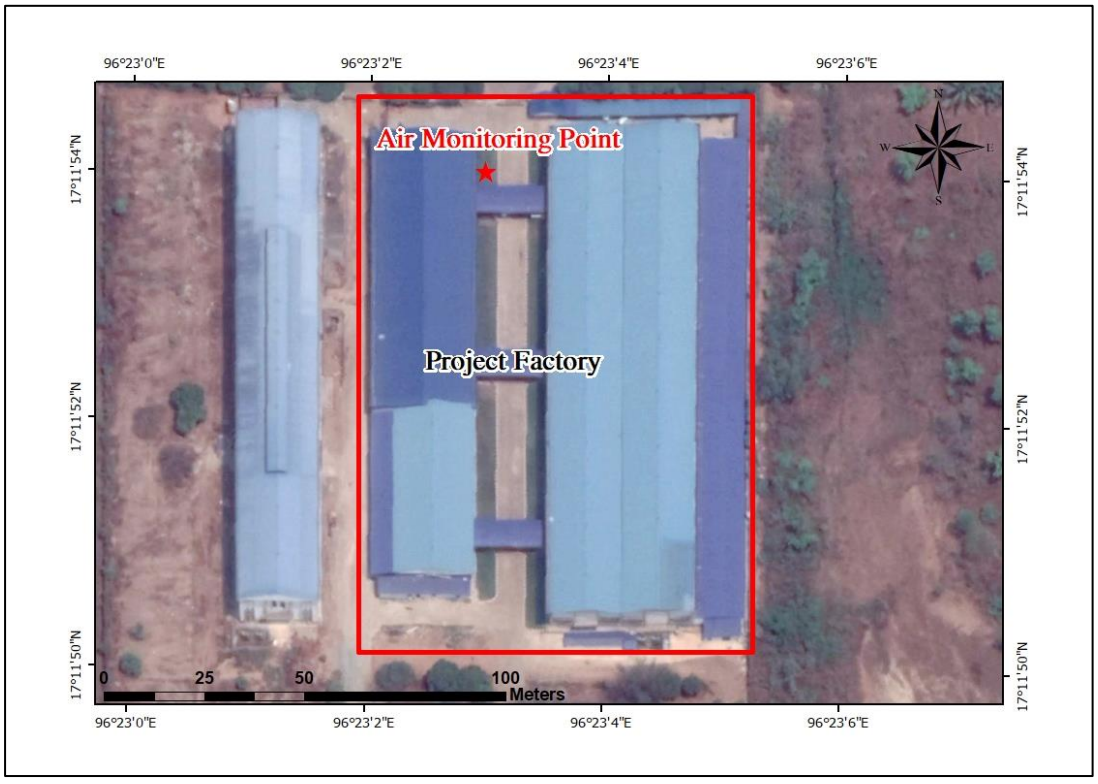

Figure 4-9 Location Map of Air Monitoring Point

4.3.2. **Noise Level**

Noise pollution takes place when there is either an excessive amount of noise or an unpleasant sound that causes a temporary disruption in the natural balance.The high noise pollution will cause hearing problems, health issues to the workers. So the noise pollution mornitoring takes place at the office, sewing, canteen and cutting where the workers are most crowded. The MONREC has issued National Environmental Quality (Emission) Guidelines (NEQG), International Finance Corporation (IFC) and World Health Organization (WHO) guidelines to provide the basis for regulation and control of noise level. Noise impact should not exceed the levels presented in Table 4-5.

Table 4-5 Noise Level Standard (NEQG)

Receptor	One Hour LAeq (dBA)a	
	Daytime 07:00-22:00 (10:00-22:00 for Public holidays)	**Nighttime 22:00 – 07:00 (22:00 – 10:00 for Public Holidays)**
Residential, Institutional, educational	55	45
Industrial, commercial	70	70

[a] Equivalent continuous sound level in decibels

Table 4-6 Noise Level Guidelines (IFC)

Receptor	One Hour LAeq (dBA)a	
	Daytime 07:00-22:00	**Nighttime 22:00 – 07:00**
Residential, Institutional, educational	55	45
Industrial, commercial	70	70

Table 4-7 Noise Level Guideling (WHO)

Specific Environment	Critical health effect(s)	LAeq (dB)	Time base (hours)	LAmax fast (db)
Industrial, commercial, shooping and traffic areas, indoors and Outdoors	Hearing impairment	70	24	110

*Source noise guideline values of World Health Organization

Operation noise impacts are key issue of the project. Therefore, the consultant conducted the noise measurement on July 25, 2017 at the garment factory at potential noise sensitive area including garment factory work places. Monitored data is shown in Table 4-8.

Table 4-8 Noise Meter Monitoring Result for Amity Factory

No.	Measurement Location	Coordinate	Measure value Day Time Laeq (dBA)	NEQG Standard value (dBA)	IFC Standard value (dBA)	WHO Standard value (dBA)
1	Office	N 17°11' 54.33" E 096°23' 4.13"	53.04	70	70	70
2	Canteen	N 17°11' 52.90" E 096°23' 5.27"	64.64	70	70	70
3	Cutting	N 17°11' 52.60" E 096°23' 2.77"	63.68	70	70	70
4	Sewing	N 17°11' 53.85" E 096°23' 4.13"	72.74	70	70	70

Overall, the noise level of the factory is below the NEQG standard value. Only the sewing place is a bit over the NEQG limit. However, the project proponent provides hearing protection to the workers. The noise pollution to the workers can be effectively reduced.

4.3.3. Light and Temperature

Lighting and ventilation are important for the work place. Activities of the workers in the garment factory are highly dependent on the quality of light and temperature. Therefore the consultant conducted the light and temperature measurement in the garment factory during July 25th, 2017 site visit and monitored data are shown in Table 4-9.

Table 4-9 Light (Lux) Meter Monitoring Result for Amity Factory

No	Location	Measure value (Lux)	(IFC) Standard value (Lux)
1.	Operation Sewing	579	500
2.	Cutting room	601	
3.	Warehouse	285	
4.	office	254	

Table 4-10 Room Temperature Monitoring Result for Amity Factory

No	Location	Measure Value (°C)	(IFC) Standard Value (°C)
1.	Office	33	32
2.	Canteen	29	
3.	Cutting	30	
4.	Sewing	33	

4.3.4. Water Quality

Amity (Myanmar) Lingerie factory is the garment factory that produces the only woman lingeries. Processing of cutting, sewing, garment ironing does not need for water consumption. The water is used for the workers' washing, bathing, and toilet. This water also is released systematically to the drainage. So, the factory does not need to measure water quality.

4.4. BIOLOGICAL ENVIRONMENT

Biological resources are not significant to the Project as it is located in the Industrial Zone.

4.5. SOCIO-ECONOMIC ENVIRONMENT

4.5.1. Population and Demolition

According to March 2017 consensus, Indagaw has a population of 22,835 from 6197 household, living in the 23,890 acres or 37.33 square miles. The Majority of population is Buddhist Myanmar. Only 1.3 percent of the populations are foreigners residing in the area. A total of only 4 major criminal cases reported (3 homicides and 1 rape) and 3 petty theft cases are registered in the region. Less than half (44.9%) uses mobile phone. Many residents use motorcycles for transport. The following t shows the population and demolition.

Table 4-8 Ethnicity and Population Percentage in Indagaw

No	Ethnicity	Population of Ethnicity	Population of Town	Percentage (%)
1.	Kayin	905	22,835	4
2.	Chin	40		0.2
3.	Burma	21,586		95
4.	Rakhine	43		0.2
5.	Shan	11		0.05
6	Other	250		0.6
Total		22,835	22,835	100

4.5.2. Employment and Occupation

There are many privately operating factories in the region, which employ residents from Indagaw and surrounding area according to region ministry office (Source by Indagaw Administrative Department Table 4-11).

Table 4-11 Factories Employment Data

No	Factory Name	Factory Type	Number of workers
1.	Myanmar Economic Corporation Co Ltd.	Car Manufacturing	178
2.	SIGMA Communication	Wire Manufacturing	64
3.	Hong Q	Garment	2283
4.	Win Mabel	Garment	99
5.	Myanmar MACHIMERY MAMUFACTURING	Electronic Meters	104
6.	SEINHINN Co. Ltd	Steel Melting	24
7.	MYANMAR WISE-PACIFIC APPAREL Co., Ltd.	Garment	693
8.	GOLDEN BERG BAGO DEVELOPMENT Co. Ltd	Plastic	72
9.	SMOOT WORLD INTERNATIONAL (MYANMAR) LIMITED	Garment	394

Source: ministry data (2015-2016)

Highest number of population work in agricultural sector (Table 4-12). Most work at animal husbandry industry (mainly chicken breeding) as a mean of living. Unemployment rate is at a low 3.8% and poverty rate at 4%.

Table 4-12 Employment in Different Sector

Type of job	Population
Government Jobs	89
Service Industry	67
Argriculture	6,696
Cattle Breeders	982
Retail / Traders	2,931
Carpentry / Construction	408
Fishery	57
Random	2,605
Other	7,359
Total	**21,294**

Source: ministry data (2015-2016)

Indagaw population uses 3,800 KW of electricity, which is enough to supply residential and commercial area for 2015-16 year. There are three Buddhist temples and one Islamic temple, two hotels (Shwe Pyi and Palace Hotel), 159 registered private small retail businesses and one public market.

4.5.3. Health Profile

There are 7 government subsidized clinics and 2 INGO (International Non-Government Organization) across the region. INGO organizations aid in many organizations such as women health, children health, veteran families, Red Cross and local fire-fighting group.

According to the data from Indagaw Administrative Department, no major epidemic is found in the region from 2015 to 2017. Most of the cases are dysentery, cholera, diarrhea, and TB due to poor sanitation practices (Table 4-13). No mortality is reported. There is no reported case of HIV/AIDS.

Table 4-13 Rate of Morbidity and Mortality by Cases in Indagaw

Case	Diseases and Rate				
	Malaria	Diarrheal	Tuberculosis	Dysentery	Hepatitis B
Morbidity	-	315	93	283	-
Mortality	-	-	-	-	-

4.5.4. Level of Education

Although many receive education at a younger age, many dropped out of school, and only 42.27 percent out of 272 students passed examination to enter college in 2015-2016 year. One public high school, five middle schools, one kindergarten school and two Buddhist teaching school accommodate most of the younger population. (Source; Indagaw Administrative Department Table 4-14 and Table 4-15.

Table 4-14 Level of Education in Indagaw

No	School Name	Location	Teachers	Students	Ratio of Teacher and student
1	B.E.H.S Indagaw	No. (5) Ward	89	2622	1:29
2	B.E.M.S Sae Mine Gone	No.(1) Ward	12	214	1:17
3	B.E.M.S Indagaw Satpine	No. (4) Ward	12	341	1:28
4	B.E.M.S Tharyar Gone	No. (5) Ward	14	651	1:46
5	B.E.M.S Kone Than Din	No. (6) Ward	6	156	1:26
6	B.E.M.S Sar Mu Ngal	No (6) Ward	9	190	1:21

Table 4-15 List of Buddhist Teaching School in Indagaw

No	School name	Teachers	Students	Ratio of teacher and student
1	Sit Kaing Kyaung (Monastery)	8	304	1:38
2	Mahar Gunekaryarmar (Monastery)	6	250	1:42

CHAPTER 5
POTENTIAL ENVIRONMENTAL IMPACT ASSESSMENT

5.1. OVERVIEW OF PROJECT'S ENVIRONMENTAL ISSUES

The factory manufactures underwear. At the time of site visit, there are 160 day shift processing workers at the factory. Factory will employ maximum of 688 processing workers in the future.

The potential environmental impacts specific to the project operation phase will be (a) Air impact, (b) Noise, (c) Wastewater and Solid waste. The potential environmental impacts during the operation phase of the project will explain the following.

5.2. POTENTIAL ENVIRONMENTAL IMPACTS DURING OPERATION PHASE

The project has not construction phase activity this is on-going project of EMP preparing. Only the operation phase impact analysis for negative and positive impacts will generate in the project.

5.2.1. **Negative Impact**

5.2.1.1. Potential negative Impacts on air environment

Loading and unloading of raw materials and cleaning floor lead to the generation of dust emission. Vehicle and generator are generated to gas emission.

5.2.1.2. Potential negative impacts of noise

Noise impact may occur from operation of sewing machines and other operation machine. The impact will have direct effect on the sewing workers.

5.2.1.3. Potential negative impacts on Water

The other domestic wastewater is storm water discharge. Domestic wastewater is discharged to the industrial zone drainage system, which drains to the stream outside the compound.

5.2.1.4. Potential negative impacts; lack of good safety practice and health education

(a) Lighting and temperature

Factory will use light tubes for general lighting purposes. This includes space lighting and task lighting. Activities of the workers in the operating sector are dependent on the quality of light; thus, it is important to provide sufficient lighting to those areas.

(a) Physical injuries

Physical injuries may occur in workplaces with fall on slippery floors, improper use of machines and tools (eg, cutting machine and other) and improper product loading and unloading in store.

5.2.1.5. Negative impacts; lack of emergency and fire-fighting

Fire could start due to many reasons. Potential fire hazard could be from bad electrical connections, improper fuel storage and cigarettes smoking. Fire in the factory can spread quickly if fire extinguishers or sprinklers are not provided.

Fire drill training that educates safe and clear exit routes should be provided. In order to prevent fire hazard, smoking place should be located away from the generator fuel storage area.

5.2.2. **Positive Impacts**

- The Project plans to increase the production capacity in this years, nearby communities will get benefit by being the source of manpower for the factory.
- A dramatic number of jobs will be created, and nearby people will be recruited to work at the factory.
- The company will continue to implement CSR programs.
- These investments have contributed to the increase in GDP of the nation.
- Amity company should try to mitigate or minimize negative impacts it should, on the other hand, enhance and maximize the positive impacts to their optimum.

CHAPTER 6
ENVIRONMENTAL MANGEMENT ACTION

6.1. INTRODUCTION

This chapter presents the Environmental Management Plan (EMP) of garment factory. This EMP provides the procedures and processes, which will apply to the project production activities to check and monitor compliance and effectiveness of the mitigation measure to Project Proponent has committed. In addition, this EMP used to ensure compliance with statutory requirement and corporate safety and environmental policies.

6.2. SCOPE OF THE ENVIRONMENTAL MANAGEMENT

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the PDCA cycle (see Figure 6-1). Environmental management consists of four related tasks as described below:

- **Plan (P) - What need to be done**

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

- **Do (D) - Implement the plan**

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

- **Check (C) - Monitor and evaluate the results of implementation**

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

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

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

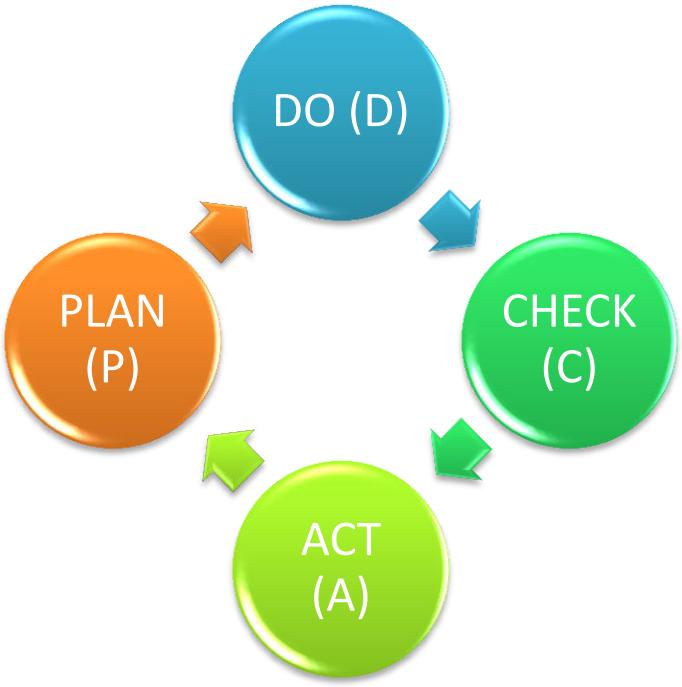

Figure 6-1 P.D.C.A Cycle

6.3. ORGANIZATION AND FUND FOR EMP

A small EMP cell consisting of 2-5 members has to be formed; the factory manager should be the EMP cell leader. Other cell member will be consisting into technicians together with employees. If possible, some of these cell members should be deployed for doing monitoring and inspection works in order to effectively implement EMP.

The budget for EMP fund will cover the initial cost and recurring expenses for implementation EMP. The total budget for EMP in Amity factory is estimated at about 21,500 US Dollar prices per year.Table 6-1shows budget allocation for proposed environmental, health and safety mitigation measures. The factory will expand the budget for environmental management plan if is not sufficient for the environmental management plan.

Table 6-1 Estimated Budget for Environmental, Health and Safety Mitigation Measuement

No	Proposed Environmental Mitigation Measures	Estimated Budget (USD)
Environmental Work		
1	Monitoring program	3100
2	Capacity building and training	2000
3	Emergency case	2000
Health and Safety Work		
4	Medical for Clinic (per year)	2,400

5	Fire Extinguisher	2,000
6	Personal protective equipment	10,000

6.4. CORPORATE SOCIAL RESPONSIBILITY (CSR) PROGRAM

The Project Proponents will provide CSR fund which is (2%) of the net profit to use in the following purpose. CSR plan of factory is shown in Table 6-2.

a) To provide the support in education sector around Bago Region

b) To support the protection of the environment as well as from the fire around the factory

c) To develop the skill of the employees

d) To provide educational grand for the employees' children

e) To provide the employees' health examination

f) To donate the clothes to the poor.

Table 6-2 CSR Plan at Amity (Myanmar) Lingerie factory

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

6.5. MITIGATION MEASURES TO BE TAKEN DURING CONSTRUCTION PHASE

The Project Proponent shall take all these mitigation measures. Potential environmental impacts and mitigation measures during construction for air pollution, noise, wastewater and solid waste are presented in Table 6-3.

Table 6-3 Environmental Impacts and Mitigation Measures during Construction Phase

Source	Environmental Impacts	Mitigation Measures
➲ Traffic emission ➲ Combustion processes such as diesel engines and gas turbines. ➲ Fugitive gases from loading operations and losses from equipment. ➲ Burning sources from well testing. ➲ Paint and other related chemical for construction activities.	➲ Dust Dispersion to the nearby community. ➲ Inhalation of dust ➲ Respiratory tract infection (asthma). ➲ Eye irritation ➲ Shortness of breath ➲ Decrease visibility ➲ Harming plants	➲ Water should be sprayed as a suppressants to increase the moisture content. ➲ Chemical dust suppressants are an alternative to water application. ➲ Construction material should be covered by Tarpaulin while transportation. ➲ Mask with dusk filter should be provided to workers. ➲ Banning of old diesel or gasoline powered cars for construction by defining specific types and ages of vehicle. ➲ Improved in the quality of diesel/ gasoline for construction related vehicle/equipment. ➲ Restore, resurface and rehabilitate the disturbed area as soon as practicable after completion of construction or renovation.
➲ Construction processing material waste such as iron, steel scrap, fly ash, wood pieces, clay, brick, stone, ceramics, rubber, gypsum, wire, aluminum products, light bulbs, etc.	➲ Solid waste ➲ Creating air pollution (especially unpleasant odor) ➲ Significant surface or underground water pollution from the leachates ➲ Related health hazards such as cholera and other vector transmitted diseases	➲ Prepare proper waste bins or containers for separate waste collection in construction site. ➲ Provide enough storage area for construction materials. ➲ Inspect temporary waste disposal site regularly. ➲ Inform YCDC to collect and dispose waste every day. ➲ Prohibit open burning waste in the project site. ➲ Health impact training for workers related to waste handling.
➲ Using heavy machines ➲ Construction activities	➲ Exposure of excessive noise ➲ Hearing issues ➲ Sleeping disorder ➲ Cardiovascular issues ➲ Trouble in communication	➲ Use equipment and machines which generate low noise levels. ➲ Change vehicle types and driving habits can affect the intensity of exposure to noise. ➲ Driving behaviors such as over-revving or tire squealing that

Source	Environmental Impacts	Mitigation Measures
		intentionally increase noise should be prohibited to drivers. ➲ Uneven driving such as frequent acceleration or deceleration of speed can result in increase in noise emissions. ➲ Provide adequate ear protection (ear plugs or muffs) to workers working in the excessive noise areas.
➲ Construction activities	➲ Heat stroke and heat exhaustion ➲ Hypotension ➲ Vomiting ➲ Heavy sweating ➲ Faintness ➲ Dizziness ➲ Fatigue ➲ Weak, rapid pulse ➲ Low blood pressure upon standing ➲ Muscle cramps ➲ Nausea ➲ Headache	➲ Insulated gloves, insulated suits, reflective clothing, or infrared reflecting face shields should be provided. ➲ Rotating job functions and incorporate work/rest cycles among workers can help minimize to heat exposure. ➲ Workers should have an emergency response plan in place if a work suffer heat-related illness. ➲ Workers must have adequate potable (safe for drinking) water close to the working area and should drink water frequently.
➲ Poorly designed or maintained vehicles or machinery during construction activities	➲ Vibration ➲ Impairment of vision or balance ➲ Motion sickness ➲ Muscle and join damage	➲ Install a non-vibrating products or tools. ➲ Proper and regular maintenance of all vehicles and machinery. ➲ Limit the amount of time of a worker or frequent breaks from exposure of vibration.
➲ Slip and fall ➲ Bumping ➲ Use of heavy vehicle ➲ Moving parts of machinery	➲ Safety practices and education ➲ Accidents such as personal injury, moving vehicle and machinery	➲ Clean working area regularly. ➲ Avoid walking on slippery floors. ➲ Warning signs around spills or wet floors. ➲ Use non-slip footwear. ➲ Illegal drugs or alcohol must be prohibited at any time on working hours. ➲ Workers who are taking prescription medication that may affect their safety at work should be inform to the supervisor to assign appropriate duties. ➲ Provide all workers for construction site with PPE. ➲ Provide sufficient First Aid Kids at the construction area and

Source	Environmental Impacts	Mitigation Measures
		coordinated with nearby hospital for admission in case of accidents. ➲ Restricted to use mobile phone while driving a motor vehicle or equipment. ➲ Wearing a seat belts while operating a moving vehicle. ➲ Firefighting equipment and portable fire extinguishers shall be properly provided in construction area.
➲ Direct contact of person to person, animal to person ➲ Insect bites ➲ Food contamination ➲ Poor personal hygiene practices ➲ Poor cleanliness in the workplace	➲ Spread of infectious disease ➲ Malaria ➲ Dengue ➲ Tuberculosis ➲ Hepatitis ➲ HIV/AIDS ➲ Cholera	➲ Wash the hands thoroughly with water and soap after visiting the toilet, preparing food, and after touching equipment. ➲ Any cuts or abrasions should be covered with a waterproof dressing. ➲ Do not share personal items such as towels, clothing, razors, toothbrushes, and shavers among workers. ➲ Regularly wash the floors, bathrooms and surfaces with hot water and detergent. ➲ Health impact training for workers about waste handling. ➲ Stay at home if workers have signs and symptoms of an infection. ➲ Practice about good personal hygiene for workers. ➲ Environmental and health related education programs should be provided to raise awareness.

6.6. MITIGATION MEASURES TO BE TAKEN DURING OPERATION PHASE

Amity company shall take all these mitigation measures. Operation phase potential environmental impacts and mitigation measures for air pollution, noise, wastewater and solid waste are presented in Table 6-4.

Table 6-4 Operation Phase Environmental Impacts and Mitigation Measures

Source	Environmental Impacts	Mitigation Measures
➲ Industrial solid waste such as rejected garments, cutting pieces and threads. ➲ Domestic solid waste from employees such as food waste, plastic, paper, glass, metal can, sanitary napkins, tissue paper, garden waste, etc.	➲ Solid waste ➲ Related health impacts for community	➲ Waste should be segregated at source by types of waste and systematically disposed into separate containers. ➲ 3R (reuse, refuse, recycle) should be promoted for employees by awareness-raising campaigns and environmental education program. ➲ Use marked bins to segregate hazardous and non-hazardous wastes.
➲ The factory is not produced wastewater from the operation process. ➲ Domestic wastewater such as from toilets, showers, and kitchen sinks, laundries, etc. ➲ Storm water runoff from roofs, roads, paths into drains after raining. ➲ Septic tank	➲ Wastewater	➲ Avoid generating unnecessary wastewater ➲ Separate the drainage and pipeline system for sewer line, surface runoff, treated wastewater. ➲ Regularly check the septic tank to avoid leakage of sewage.
➲ Operating machinery and equipment	➲ Exposure of excessive noise ➲ Irritability ➲ Tiredness or nervousness ➲ Interference in concentration ➲ Increase in incidence of accidents ➲ Long term ill health	➲ Use equipment and machines which generate low noise levels. ➲ Reducing the volume of the sources by periodic maintenance by covering, period cleaning, lubricating machinery, aligning moving parts. ➲ Creating barriers, using sound-absorbing materials wall to prevent and reduce reflection. ➲ Provide adequate ear protection (ear plugs or muffs) to workers working in the excessive noise areas.
➲ Poor design and construction	➲ Soil pollution ➲ Changes in surface hydrology and drainage patterns	➲ Proper design the drainage system and building design to avoid soil contamination.

Source	Environmental Impacts	Mitigation Measures
	➲ Increase habitat damage ➲ Reduce the capacity of the environment to support vegetation and wildlife.	
➲ Operation area	➲ Fire hazard ➲ Flammable and explosive chemicals ➲ Improper wiring system	➲ The factory designates the emergency response team and receives training in fire prevention, use of fire equipment, first aid and emergency medical rescue. ➲ The employees receive basic firefighting from a local firefighting authority. ➲ Draw up a plan for emergency response and procedures ➲ Provide adequate PPE, provision of firefighting equipment, install lighting rods and arresters ➲ Display warning signs, addresses/phone numbers of Fire Brigade, Ambulance service, Hospital, Police Station, etc, ➲ Educate workers for safety awareness in work place.
➲	➲ Flood	➲ Project area is elevated enough to protect the flooding during monsoon season. ➲ Proper drainage system should be managed to protect flooding condition. ➲ Emergency response team should be training to evacuate during flooding condition.
➲	➲ Occupational health and safety	➲ Create safety condition for work places ➲ Educate and train workers for good working practice, good safety practice and good house-keeping practice ➲ Prevent and avoid accidents at work places ➲ Use eye protection and impermeable gloves as protective equipment while handling the hazardous materials. ➲ Educate and train them for health education and workers in First Aid

Source	Environmental Impacts	Mitigation Measures
		Kid training ➲ Provide first aid box with medicines and drugs comprising anti-malaria, anti-cholera and anti-toxicant. ➲ The workplace must be hygiene with adequate facilities provided for cleaning food, utensils and equipment. ➲ Employees who are directly involved in the production process should not work while affected by infectious diseases. ➲ Factory shall has a dispensary run by a certified nurse. ➲ Conduct annual medical checkup for current staffs. ➲ A qualified medical doctor shall be appointed to perform medical checkups. ➲ Reporting of occupational incidents.

6.7. MONITORING PROGRAM

Environmental monitoring plan is the important for the effective execution and successful implementation of EMP. Environmental monitoring focuses on the work environment which includes, waste management, health and safety of workers, safety of the facilities and also on the socio-economic component of the environment. The objectives of monitoring are;

- To measure impacts that occurs during the operation phase of the project
- To ensure compliance with statutory requirements
- To determine the effectiveness of mitigation measures and other measures
- To assist in the implementation of EMP

6.7.1. Summary of Environmental Monitoring Program

Table 6-5 Environmental, Health and Safety Monitoring Program

Environmental Issues	Monitoring Location	Note	Monitoring and Reporting Frequency	Estimated budget (USD)	Responsible persons
Air Pollution (Dust and Exhaust Emission)	Indoor Air quality (at production process)	Check compliance with the Air pollution mitigation measure.	Once a Year	800	Amity (Myanmar) Lingerie Co., Ltd.
Noise	Generator house and sewing processes area		Weekly	200	Amity (Myanmar) Lingerie Co., Ltd.
Solid Waste	Solid waste disposed area in front of factory	Inspection of storage area and disposal check list. Check compliance with best practices for solid waste management	Weekly inspection of waste disposal	100	Amity (Myanmar) Lingerie Co., Ltd.
Wastewater	Wastewater Quality Test at water outlet source from factory drainage and wastewater treatment plant		Twice a Year	500	Amity (Myanmar) Lingerie Co., Ltd.
Occupational Health, Safety	Within the Factory	Statistic of accident Statistic of accidents, injuries and remedial measures taken.	Immediately after the incidents	500	Amity (Myanmar) Lingerie Co., Ltd.
		Inspection of compliance with PPE, Fan or Ventilation system, Fire extinguisher, medical kit box and etc).	Monthly	500	
		Monitoring and evaluation of safety measures and training, and emergency	Once a year	500	

Environmental Issues	Monitoring Location	Note	Monitoring and Reporting Frequency	Estimated budget (USD)	Responsible persons
		management drills			

In addition to monitoring plan there should be auditing plan in the form of internal and external environmental audit. The audits will assess the environmental performance of the operation in complying with environmental laws, rules and regulations.

Table 6-6 During Operation Phase Output Parameter and Area to be Monitored

Monitoring items	Monitoring Parameter	Area to be Monitored	Frequency	Responsible person
Air quality	SO^2, NO_x, TSP, CO and PM10	Indoor Air quality (at production process)	Once a year during operation phase	Amity (Myanmar) Lingerie Co., Ltd.
Noise	Noise level (dB(A) scale)	Generator house and sewing processes area	Twice a year during operation period	Amity (Myanmar) Lingerie Co., Ltd.
Water Quality	O&G, PH, BOD, TDS, SS, COD, etc.	Wastewater Quality Test at water outlet source from factory drainage and wastewater treatment plant	Twice a year during operation period	Amity (Myanmar) Lingerie Co., Ltd.
Solid Quality	Cutting waste, Packaging waste bags and cartons Domestic refuse, Paper and general office waste and domestic waste	Solid waste disposed area in front of factory	Weekly	Amity (Myanmar) Lingerie Co., Ltd.
Occupational Health and Safety	Incident/accident records	Statistic of accident Statistic of accidents, injuries and remedial measures taken Inspection of compliance with PPE, Fan or Ventilation system, Fire extinguisher, medical kit box and etc). Monitoring and evaluation of safety measures and training, and emergency management drills	Monthly	Amity (Myanmar) Lingerie Co., Ltd.

Table 6-7 During Closing Phase Output Parameter and Area to be Monitored

Monitoring items	Monitoring Parameter	Area to be Monitored	Frequency	Responsible person
Air quality	TSP, and PM10	factory	Once a year during operation phase	Consultants under supervision of contractor/ Amity (Myanmar) Lingerie Co., Ltd.
Noise	Noise level (dB(A) scale)	factory	Once during decommission period	Consultants under supervision of contractor/ Amity (Myanmar) Lingerie Co., Ltd.
Solid Quality	Demolition debris, including concrete, metal, drywall, wood, glass, adhesives, sealants and fasteners and other hazardous demolished materials	Disposal sites of decommissioning phase of factory	Once during decommission period	Contractor/ Amity (Myanmar) Lingerie Co., Ltd.
Occupational Health and Safety	Incident/accident records	working area	Daily	Contractor/ Amity (Myanmar) Lingerie Co., Ltd.

6.8. FACTORY MANAGEMENT PLAN

6.8.1. Domestic Wastewater Management

Based on the U.S EPA (1978)[4], the average daily water usage for a worker is 150 liter/day/person. Therefore, the estimated wastewater discharge from the (1,187) workers will be around (178,050) liter/day. On-site factory drainage channel and proper sanitation facility are installed around the factory building. Domestic wastewater discharges to the factory drainage channel is flowed to the industrial drainage channel along behind the factory compound.

Industrial wastes are not generated as the dry process technology in the project. The project must take the responsibility so that there is no pollution of environment due to the use of water. The domestic wastewater generated from the Project is relatively small amount so there is no effect to the environment. Therefore, it is not required to provide domestic wastewater treatment plant.

[4] U.S.EPA. (1978), Environmental impact statement phase II, Facility Plan Handover Country, Virginia 3rd Edition.

6.8.2. **Solid Waste Management**

Waste generated at the factory shall be well-managed. Solid wastes such as reject fabrics, cutting pieces and wastes of worker shall be properly dumped at approved dumped site. Most of solid waste, i.e., fabrics reject and cutting pieces (0.3 ton per day of total solid waste) will be operation period. Domestic wastes are generated from the workers including from office and canteen. According to the YCDC (2012)[5], the estimated amount of waste generation from (1,187) workers will be (474.8) kg/day. Generated solid waste from the factory is disposed once a month by Bago City Development Committee.

It is recommended that the project will dump remaining solid waste of two times per month at the Industrial Zone solid waste collecting sites. And also domestic wastes from workers will dump together at the collecting sites. All the mitigation measures described earlier will be duly implemented.

6.8.3. **Fire Management**

In order to prevent fire, the garment factory has to install fire detectors, alarm systems, sprinkler systems and provision of fire-fighting equipment based on the requirements of Myanmar's fire codes. Safety manager has to arrange fire-fighting training once a year and conduct fire drill monthly. Safety manager has to establish emergency exit ways and muster points in the factory compound with clear marking.

Safety manager has to provide access to emergency services of the nearby hospitals and direct communication link with local fire brigades and other relevant government authorities.

6.8.4. **Factory Clinic**

Workers can be injured due to falling on slippery floors and improper use of machine and tools.

Food-borne diseases like diarrhea, food poisoning and seasonal diseases such as influenza (Flu) and Dengue fever may occur among the workers. The crowded conditions in the garment industry create ideal conditions for transmission of infectious diseases.

It is required to provide clean and healthy facilities such as hygienic eating areas, ventilated working areas and clean latrines etc. Provide first aid service under the medical officer in charge and nursing staff. Yearly medical check-up should be provided for the workers for their health and safety. It is also required to draw up emergency response plan, nearest hospital location maps and phone numbers of fire department, administrative offices and nearby hospitals and clinics.

[5] 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).

6.8.5. **EMP for Good Working Practices and Good Safety Practices**

Amity factory shall fallow, as practical as possible environmental health and safety standard and guidelines. The factory has own program for capacity building and training covering good working practices and good safety practices. The factory shall also follow EHS guidelines and international standards for the ecofriendly operation of garment factory as already mentioned earlier.

6.8.6. **Emergency Response Plan**

The HR Department responsible person may control the emergency response plan which will be a part of the factory Occupational Health, Safety and Environmental program (OHSE). Factory emergency respond plan should include the following:

- Fully equipped first aid facilities;
- Fire-fighting equipment;
- Access to emergency services of the nearby hospital
- Direct communication link with industrial or township fire brigades and other relevant government authorities
- Training of all staff on work place safety.

Health and environmental management also play a major role in emergency response plan as shown inTable 6-8 below.

Table 6-8 Emergency Response Plan of the Factory

Amity (Myanmar) Lingerie Co., Ltd.			
Hazard			
Procedures	**Fire**	**Earthquake**	**Storm**
Step - 1	To ring the fire alarm	To inform people	To inform people
Responsible person	Any man who is near the control plan	Any who is firstly got	Security and the authority
Step - 2	Shut down the main power switch	Shut down the main power switch	Evacuate and shutdown the factory
Responsible person	Electrician Maintenance	Electrician Maintenance	Management
Step - 3	To identify the location of fire	First evacuate the vulnerable people	
Responsible person	Security Guard	Everybody who is nearest and the management	
Step - 4	Inform all about the fire by announcement	Evacuate everybody	
Responsible person	Security Guard	Everybody who is nearest and the management	
Step - 5	First evacuate the vulnerable people	Assemble in or order for head count	
Responsible person	Everybody who is nearest and the management	Everybody who is nearest and the management	

6.9. RECORDING AND REPORTING

Record keeping and reporting are an important management tools for ensuring sustainable operation.

There will be two types of monitoring reports after environmental monitoring and site inspection. The first type is for internal use to provide feedback to the Environmental Management system. Finally annual review should be prepared and an annual environmental management report should be submitted to the MONREC/ECD at every 6 month a time under the EIA procedure.

6.9.1. Internal Monitoring and Inspection Report

The EMP cell members responsible may conduct daily, weekly or monthly general inspections of the project area and facilities. The objectives are to identify non-compliances to EMP.

6.9.2. Incident, Accident and Emergency Report

In cases of incident and accident prompt reporting has to be carried out. This must be in the form of verbal reporting follows by written statement, after emergency and contingency procedures have been undertaken. The written statement should be more comprehensive and should include the location and cause of accident, the time, extent and intensity and how actions for emergency and contingency procedures were taken. Reporting on incidents may not be necessary, it is actually the duty of the security staff to taken action.

6.9.3. Reporting on Training Program

As mentioned earlier there must be regular monitoring and inspection of all training programs provided such as firefighting training, first aid training and also training for quick response and preparedness such as drills and mock drills.

EMP cell members conducting monitoring and inspection works must be able to interpret and assess the overall condition of the training processes especially assessment of the effectiveness and applicability of each training.

A report on the training program including assessment on its effectiveness must be submitted at the end of each and every training program.

6.9.4. Training Programming for the Factory

There has own program for capacity building and training covering good working practices and good safety practices such as fire training, earthquake training and first aid training. Safety risk management for the factory is important.

CHAPTER 7
PUBLIC CONSULTATION

7.1. OBJECTIVE OF PUBLIC CONSULTATION

The main objective of public consultation is to provide project information, production procedures, waste management and potential environmental impacts to the regulators, authorities and stakeholders. During the public consultation, Amity (Myanmar) Lingerie Co., Ltd and TBS (consultant) presented the project background, operation processes, environmental conditions, summary of impacts assessment and proposed mitigation measures. Suggestions and comments from the regulators, authorities and stake holders are incorporated in the EMP report. The public consultation was meeting Indagaw government stakeholders and households near the project site. The details of the public consultation are presented below and summary table of attendance sheets is included in ***APPENDIX A***.

7.2. ENVIRONMENTAL MANAGEMENT PLAN REQUIREMENTS

Public consultation is necessary as a part of the EMP study. The project proponent and its consultant have to organize a public consultation among regulators, local community, local authority and other relevant organizations on the project development and future plans. As a part of EMP requirement, the project proponent publicized about the project developments to the concerned stakeholders as follows;

1) Information the stakeholders about the Project, environmental and social issues related to Project 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.

Results of the public consultation are useful to the EIA investigation and public consultation during the remaining course of the EIA.

7.3. APPROACH TO PUBLIC MEETING

The following approach to the public meeting was adopted:

- TBS coordinated with Amity (Myanmar) Lingerie Co., Ltd. to inform and consult about the date and venue of the public consultation meeting.
- TBS prepared and issued the invitation letter and sent to the identified stakeholders and households near the project site on September 20, 2017.

- Informed to all of the concerned stakeholders 7 days prior to EMP study of public consultation meeting.
- The. Power Point presentation for EMP study of Amity (Myanmar) Lingerie project was written and presented in Myanmar language. Further elaboration focuses on environmental monitoring and mitigation measures.
- The meeting then provided an open forum for discussion. Both of Amity (Myanmar) Lingerie Co., Ltd. and TBS were responsible for answering questions from the participants and addressing public concern raised in the meeting regarding the project development plan.

Public Consultation during EMP report was conducted on 27th, September, 2017, following the EIA procedure. The methodology and approach by public consultation is presented below:

7.4. SUMMARY OF PUBLIC CONSULTATIONS AND ACTIVITIES UNDERTAKEN

Public consultation was conducted on September 27th, 2017 at Akarit (Mingalar Hall), Yangon-Bago highway road, junction of the B.E, Indagaw. The participants in the public consultation were the project proponent, TBS (consultant performing the EMP study), Environmental Conservation Department (ECD), Fire sub brigades of Indagaw and near the project of factories. The details of the meeting, including the meeting time, venue and names of participates attended the consultation meeting are listed in Table 7-1.

Table 7-1 The Meeting Time, Venue and Names of Participates Attended the Consultation Meeting

Meeting Date/ Time	27 September 2017, 9:00 A.M-11:00 A.M		
Venue	A Ka Rit (Min Galar Room), Inn Dagaw Town, Beside the Min Road and Near the junction of B.E Road.		
No	**Name**	**Position**	**Organization**
Government Authorities (total of 3 persons)			
1	Dr Ni Ni Aung	Director	Environmental Conservation Department (ECD)
2	U Zaw Zaw Aung	Assistant	Environmental Conservation Department (ECD)
3	U Nay Lin Aung	Captained	Fire Sub Brigade Indagaw
Project Proponent (total of 3 persons)			
1	U Kyaw Lwin Oo	HR Manager	Amity (Myanmar) Lingerie
2	U Ko Ko Zaw	Staff	Amity (Myanmar) Lingerie
3	U Kyaw Min Htet	Staff	Amity (Myanmar) Lingerie
People Affected by the Project (total of 8 persons)			

1	U Kyaw Myint	Head	Myanmar Economic Holding Limited
2	U Tin Oo	Assistant General Manager	Myanmar Economic Holding Limited
3	U Wai Phyo Aung	Major	Myanmar Economic Holding Limited
4	U Than Naing Oo	Major	Myanmar Economic Holding Limited
5	Daw Khin Su Hlaing	Staff	Golden Berg Plastic
6	Daw Ngu War War	Staff	Myanmar Wise-Pacific Apparel
7	U Myint Aye	Staff	Meter Factory
8	U Ye Kyaw Oo	Staff	Meter Factory

Public consultation was carried out after the presentation on the project, followed by questions, answers and discussion. The Public Consultation started by the opening speech from U Kyaw Lwin Oo (HR Manager), at Amity (myanmar) Lingerie Co., Ltd. After that, EMP study and findings were presented by Mr Lin Htet Sein B.Sc, Horns, M.Sc (Geology) Environmental Geologist of TBS and discussed about the EMP requirements for the project. Question and answer section followed after the TBS presentation. Agenda of the public consultation meeting is shown in Table 7-2.

Table 7-2 Agenda of the Public Consultation Meeting

No	Activity	Time
1.	Registration	9:30-9:45
2.	Opening Speech by the Amity (Myanmar) Lingerie Co.,Ltd	9:45-10:00
3.	Presentation of project description, existing environmental conditions, potential impacts, mitigation measures and environmental management plan by Total Business Solution Co., Ltd.	10:00-10:30
4.	Discussion time – comments and suggestion by the concerned stakeholders	10:30-11:00

7.4.1. Summary of Public Consultation Feature

Fourteen participants attend the public consultation. Out of total participants, 58% represented the near the project site, 21% represented government authorities and 21% represented the project proponent Table 7-3 and Figure 7-1 to shows some pictures of the meeting.

Table 7-3 Percentage of Participates and Attended of Public Consultation

Community	Number of participant	% of Total
Nearby communities	8	58
Project proponent	3	21
Government authorities	3	21
Total	**14**	**100**

7.5. DISCUSSING AND FEEDBACKS RECEIVED FROM MEETING

After the presentation, the floor was opened for questions and answers. Most of questions were about project planning and environmental issues, as shown below.

Figure 7-1 Public Consulting Meeting Activities

Discussion	photos
Advice By Daw Ni Ni Aung (Director) : Enviromental Conservation Department Bago division: The warmly welcome the public consultation meeting is hold for Environmental Management Plan (EMP). Every factory will make the public consultation meeting for EMP report. The wastewater was generated a few amount from the kitchen and basin, which is not significant impact on the environment. The garment waste such as reject fabric and cutting pieces should sell supplier. The factory drainage channel will be checked the regularly to maintain good condition. The on-site wastewater treatment plan will be necessary to install at the factory compound. The detail of EMP monitoring budget and CSR budget will be submitted in the EMP report.	
Advice By U Kyaw Myint (Head) : MEHL Indagaw Industrial Zone The regularly check to the factory from the department of fire sub brigades for the fire risk. Fire-fighting training will be provided for factory workers to support the fire sub brigade of Indagaw. The safety of factory operation will be checked by department of Industrial supervision regularly. The regularly check at the factory from the	

Discussion	photos
department of industrial supervision for the safety. The monitoring report of monthly and yearly report must be made from the factory.	
Advice By U Nay Lin Aung (Captained) : Fire Sub brigade Indagaw Fire-fighting training should be provide the factory workers every month. The sustainable water tank should be provided for the fire-fighting at the near the factory. The enough of fire extinguisher should be installed at the factory.	
Participates in the meeting	

According to the public consultation meeting comment, the factory changes the garment waste management and fire-fighting training. The garment wastes such as reject fabric and cutting pieces were sold supplier and domestic solid waste from workers were disposed to the Bago development committee collection sites in one time per week. The project proponent shall be arranging the fire -fighting training with the Inndakaw fire station one time per three months.Fire-fighting training photo is shown in Table 7-4.

Table 7-4 Fire-fighting Training

Photos of the training programme	
	
	

7.6. ACTIONS FOR THE VICTIMS

The factory proponent will instruct to team the group that will include the executive director, administrative manager, human resource manager, general manager, and associative staff. This team will transparently solve the problems of the affected victims. The time and actions to the problem will depend on the case of the issues.

The factory proponent will donate the budget for the local people development programs. The work opportunity for the local people and victims will be the first priority. The factory will provide an educational grand for the local people children.

CHAPTER 8
CONCLUSION

The factory operates at Plot No.53, Field No.1190 (kha), East Field of Gomminn Inn, Myanmar Economic Holding Limited (MEHL) Compound, Indagaw Industrial Zone, Indagaw, Bago District. It produces underwear, swimwear and sportbra. TBS as a third party conducted Environmental Management Plan (EMP) for Amity (Myanmar) Lingerie Company Limited per ECD requirement. Amity (Myanmar) Lingerie Company Limited has facilities and stuffs to train and manage solid and liquid waste water. The EMP report outlined potential environmental impacts during the operational phase of the factory. Those potential impacts could be mitigated if the above recommended mitigation measures are taken. The environmental monitoring team organized by the factory should take the responsibility of regular monitoring.

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APPENDIX A
Public Consultation

Public Consultation Attended List for Amity Garment Factory

No	Name	Position	Phone No	Address	Sign
1					
2					
3					
4					
5					
6					
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APPENDIX B
Air Result

ပတ်ဝန်းကျင်ရေးရာဓာတ်ခွဲခန်း
Ecological Laboratory

စိမ်းလန်းအမိမြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

Reference Number/ စာအမှတ်: EL-R / 03304

Date / နေ့စွဲ: 21 May, 2019

Laboratory Analysis Report /ဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာ

Sample Profileနမူနာရာဇဝင်

နမူနာအမည် /Sample Name	AMITY GARMENT (PM 10)	နမူနာအမှတ်/ Sample ID	5105	
နေရာ (မြို့နယ်) Location (Township)	INNDAKAW TOWNSHIP	လတ္တီတွဒ် Latitude	N 17°11′ 54.7″	
နေရာ (တိုင်း/ပြည်နယ်) Location (Division/State)	BAGO	လောင်ဂျီတွဒ် Longitude	E 096°23′ 03.2″	
ပေးပို့သူအမည် Sender Name	THEIN TUN OO	နမူနာကောက်ယူချိန် (နေ့၊ နာရီ) Sampling Time (Date, Time)	16.5.2019	-
အဖွဲ့အစည်းOrganisation	Total Business Solution			
ဆက်သွယ်ရန် Contact	095195669	နမူနာရောက်ရှိချိန် (နေ့၊ နာရီ) Arriving Time (Date, Time)	21.5.2019	-

(This laboratory analysis report is based solely on the sample submitted by the customer)
(ဤဓာတ်ခွဲစစ်ဆေးမှုအစီရင်ခံစာသည် ပေးပို့သူမှပို့ဆောင်ခဲ့သည့်နမူနာကိုသာအခြေခံထားပါသည်။)

Analysis Results စမ်းသပ်ချက်အဖြေ

Pure filter weight= 3.5118 g

စဉ် Sr.	Sample Name	နည်းစဉ် Method	ရလဒ်အဖြေ (Results)
1.	AMITY GARMENT (PM 10)	METTLER (Weighting Balance)	0.1772 g

* Myanmar Emission Guideline 2015 NG=No Guideline ND= Not Detected

စမ်းသပ်ပြီး Tested by	စစ်ဆေးပြီး Checked by	တာဝန်ခံApproved by
Daw May Myat Khine Lab. Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	Dr. Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

A-2, Kan Street, Hlaing Township, 11051, Yangon, Myanmar. Tel: +95 1 503301 | Fax: +95 1 503302
Email: alarm.myanmar@gmail.com | website: www.myanmaraffairs.com

ပတ်ဝန်းကျင်ရေးရာဓာတ်ခွဲခန်း
Ecological Laboratory

စိမ်းလန်းအဓိမြေဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (Advancing Life and Regenerating Motherland, ALARM)

Reference Number/ စာအမှတ်: EL-R / 03303

Date / နေ့စွဲ: 21 May, 2019

Laboratory Analysis Report /ဓာတ်ခွဲစစ်ဆေးမှုအစီအရင်ခံစာ

Sample Profileနမူနာရာဇဝင်

နမူနာအမည် /Sample Name	AMITY GARMENT (TSP)	နမူနာအမှတ်/ Sample ID	5104	
နေရာ (မြို့နယ်) Location (Township)	INNDAKAW TOWNSHIP	လတ္တီတွဒ် Latitude	N 17°11′ 54.7″	
နေရာ (တိုင်း/ပြည်နယ်) Location (Division/State)	BAGO	လောင်ဂျီတွဒ် Longitude	E 096°23′ 03.2″	
ပေးပို့သူအမည် Sender Name	THEIN TUN OO	နမူနာကောက်ယူချိန် (နေ့၊ နာရီ) Sampling Time (Date, Time)	16.5.2019	-
အဖွဲ့အစည်းOrganisation	Total Business Solution			
ဆက်သွယ်ရန် Contact	095195669	နမူနာရောက်ရှိချိန် (နေ့၊ နာရီ) Arriving Time (Date, Time)	21.5.2019	-

(This laboratory analysis report is based solely on the sample submitted by the customer)
(ဤဓာတ်ခွဲစစ်ဆေးမှုအစီရင်ခံစာသည် ပေးပို့သူမှပို့ဆောင်ခဲ့သည့်နမူနာကိုသာအခြေခံထားပါသည်။)

Analysis Results စမ်းသပ်ချက်အဖြေ

Pure filter weight= 3.4720 g

စဉ် Sr.	Sample Name	နည်းစဉ် Method	ရလဒ်အဖြေ (Results)
1.	AMITY GARMENT (TSP)	METTLER (Weighting Balance)	0.249 g

* Myanmar Emission Guideline 2015 NG=No Guideline ND= Not Detected

စမ်းသပ်ပြီး Tested by	စစ်ဆေးပြီး Checked by	တာဝန်ခံApproved by
Daw May Myat Khine Lab. Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	Dr. Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

A-2, Kan Street, Hlaing Township, 11051, Yangon, Myanmar. Tel: +95 1 503301 | Fax: +95 1 503302
Email: alarm.myanmar@gmail.com | website: www.myanmaraffairs.com

APPENDIX C
Internal Incident Form

Tentative Incident Report Form - Operation Phase

<table>
<tr><td colspan="3">Date of Incident:</td><td colspan="3">Time of Incident:</td></tr>
<tr><td colspan="6">Types of Operation: Amity (Myanmar) Lingerie Co., Ltd.</td></tr>
<tr><td colspan="6">TYPE OF INIDENT</td></tr>
<tr><td colspan="3">OHS for workers</td><td colspan="3">Environment</td></tr>
<tr><td>☐ Noise
☐ Temperature
☐ Fire
☐ Explosion</td><td colspan="2">☐ Work related accidents
☐ Non-compliance safety/regulation</td><td>☐ Wastewater management
☐ Non-compliance monitoring/requirement
☐ Noise and vibration at sensitive receptors</td><td colspan="2">☐ Hazardous waste
☐ Non-compliance complaint redress requirements
☐ Condition of CEMS
☐ NO, reduction</td></tr>
<tr><td colspan="6">TYPE OF IMPACT
☐ General environmental and social effects (to be used where other categories do not apply
☐ Local air pollution
☐ Land contamination
☐ Excessive noise and vibration at sensitive receptors
☐ Pollution of the receiving waters
☐ Disturbances and discomforts to the communities
☐ Public safety risk
☐ Health and safety of operational staff
☐ Breach of conditions in the ECC
☐ Power plant company's image
☐ Legal liabilities
☐ Financial-fine, liabilities, legal cost, construction cost</td></tr>
<tr><td colspan="6">NUMBER OF PEOPLE AFECTED BY THE INCIDENT</td></tr>
<tr><td colspan="6">DETAILS OF THE INCIDENT
person who reported the incident</td></tr>
<tr><td colspan="6">Place of incident and related operational activity</td></tr>
<tr><td colspan="6">Area affected by the incident</td></tr>
<tr><td colspan="6">Actual or Suspected Cause</td></tr>
<tr><td colspan="6">Estimated cost incurred by the incident</td></tr>
<tr><td colspan="6">CLASSIFICATION OF THE INCIDENT
☐ High severity level
☐ Medium severity level
☐ Low severity level</td></tr>
<tr><td colspan="6">INCIDENT INVESTIGATION DETAILS
Incident investigation undertaken</td></tr>
<tr><td colspan="6">Details of actions taken</td></tr>
<tr><td>COMPLETED BY</td><td>Name:</td><td>Signature:</td><td colspan="2">Position:</td><td>Date:</td></tr>
</table>

APPENDIX D
Consultant Registration

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 0010 Date 07 JUL 2017

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

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

(a)	Name of Organization (အဖွဲ့အစည်းအမည်)	Total Business Solution Co., Ltd.
(b)	Name of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ အမည်)	Mr. Praneet Prasongnitjakit
(c)	Citizenship of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ နိုင်ငံသား)	Thai
(d)	Identity Card /Passport Number of the representative person in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်)	Z 322340
(e)	Address of organization (ဆက်သွယ်ရန်လိပ်စာ)	No.54, Room No.704, Waizayantar Tower, Waizayantar Road, Thingangyun Township, Yangon. tbs.myanmar@gmail.com praneet.tbs@gmail.com , 09253556719
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Organization
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁.၃.၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်ဆက်တိုး တိုးမြှင့်သည်။
12.10.2018
For Director General
(Soe Naing, Director)
Environmental Conservation Department

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

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Air Pollution Control
2. Geology and Soil
3. Risk Assessment and Hazard Management
4. Socio-Economy
5. Water Pollution Control
6. Public Health
7. Safety and Health in Construction

ပဲခူးတိုင်းဒေသကြီး၊ အင်းတကော်မြို့၊ အရှေ့ဂုန်မင်းအင်း၊ အင်းတကော်စက်မှုဇုန်၊ မြေကွက်အမှတ် (၅၃)၊ ကွင်းအမှတ် ၁၁၉၈(ခ)၊ မြေဧရိယာ အကျယ်အဝန်း (၃.၁၈) ဧက၊ Amity (Myanmar) Lingerie Co.,Ltd ပေါ်၏အမျိုးသမီးအတွင်းခံ ထုတ်လုပ်သည့် အထည်ချုပ်လုပ်ငန်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan –EMP) အစီရင်ခံစာအပေါ် သဘောထားမှတ်ချက်ပြန်ကြားခြင်း

စဉ်	ကနဦးတင်ပြမှုအပေါ် စိစစ်သုံးသပ်၍ သဘောထားပြန်ကြားချက်	ထပ်မံတင်ပြလာမှုအပေါ် စိစစ်တွေ့ရှိချက်	ကနဦးပြန်ကြားမှုအပေါ် လိုအပ်သည်များအတွက် ထပ်မံတင်ပြရန် အကြံပြုချက်	
(က)	**အကျဉ်းချုပ်အစီရင်ခံစာ**			
၁။	အထူးသဘောထားမှတ်ချက် ပေးရန်မရှိပါ။	-	-	
(ခ)	**နိဒါန်း**			
	အထူးသဘောထားမှတ်ချက် ပေးရန်မရှိပါ။			
(ဂ)	**ကတိကဝတ်**			
၁။	အထူးသဘောထားမှတ်ချက် ပေးရန်မရှိပါ။			
(ဃ)	**စီမံကိန်းအကြောင်းအရာဖော်ပြချက်**			
၁။	အစီရင်ခံစာ၏ စီမံကိန်း အကြောင်းအရာတွင် အောက် ဖော်ပြပါ အချက်များကို ထပ်မံ ထည့်သွင်း ဖော်ပြရန်-	အစီရင်ခံစာတွင် စီမံကိန်း အကြောင်းအရာ ဖော်ပြချက် များနှင့် ပတ်သက်၍ စာမျက်နှာ (၂.၁-၂.၂၃)	စီမံကိန်းတည်နေရာ၊ ဆက်စပ်နေရာများ၊ အနီးစပ်ဆုံးမြစ်ချောင်းများအပါအဝင် ဆက်စပ်နေရာအားလုံးကို ဖော်ပြထားသော Layout Map များအား ပိုမိုရှင်းလင်းသောပုံဖြင့်	• အစီရင်ခံစာ၏ အခန်း (၂)၊ ပုံ (၂-၁)၊ စာမျက်နှာ (၂-၁)တွင် စီမံကိန်းတည်နေရာ၊ ဆက်စပ်နေရာများ၊ အနီးစပ်ဆုံး

	(က) စီမံကိန်းတည်နေရာ၊ ဆက်စပ်နေရာများ၊ အနီးစပ်ဆုံး မြစ်ချောင်းများအပါအဝင် ဆက်စပ်နေရာအားလုံးကို ဖော်ပြထားသော Layout Map များဖြင့် ရှင်းလင်းသောပုံဖြင့်ဖော်ပြရန်၊ (ခ) စတင်လည်ပတ်သည့်ခုနှစ်နှင့် စီမံကိန်းကာလများ ဖော်ပြပေးရန်၊ (ဂ)အဆောက်အဦအရေအတွက် စာရင်းအား ဖော်ပြရန်၊ (ဃ) သုံးစွဲမည့်ဓာတုပစ္စည်းများ အပါအဝင် ကုန်ကြမ်းပစ္စည်းများ ဖော်ပြရန်၊ (င) စီမံကိန်းလုပ်ငန်းအဆင့်ဆင့် ဆောင်ရွက်မှုများ ဖော်ပြရန်၊ (စ) အသုံးပြုမည့် စက်ယန္တရား အင်းအားများ ဖော်ပြရန်၊ (ဆ)တစ်နှစ်အတွက် လောင်စာဆီ လိုအပ်ချက် ဖော်ပြရန်၊ (ဇ) မီးပူတိုက်မည့် လုပ်ငန်းစဉ် အတွက်အသုံးပြုမည့် အပူစွမ်းအင် ရယူသည့် နည်းစနစ်၊ စက်စွမ်းအင်၊ စွန့်ပစ်ပစ္စည်း	အထိဖော်ပြထားသော်လည်း ထပ်မံ ဖြည့်စွက် ဖော်ပြရန် လိုအပ်ကြောင်း စိစစ်တွေ့ရှိရပါသည်။	ဖော်ပြရန်၊ မီးပူတိုက်မည့် လုပ်ငန်းစဉ်အတွင်း စွန့်ပစ်ပစ္စည်း ထွက်ရှိနိုင်မှု အခြေအနေကို အသေးစိတ် ထပ်မံဖော်ပြရန်၊	မြစ်ချောင်းများအပါအဝင် ဆက်စပ်နေရာအားလုံးကို ပြည့်စုံစွာ ထည့်သွင်း ဖော်ပြ ထားပါသည်။ • အစီရင်ခံစာ၏ အခန်း (၂)၊ စာပိုဒ် (၂.၇.၅)၊ စာမျက်နှာ (၂-၁၄)တွင် မီးပူတိုက်မည့် လုပ်ငန်းစဉ်အတွင်း စွန့်ပစ်ပစ္စည်း ထွက်ရှိနိုင်မှု အခြေအနေအားအသေးစိတ် ထပ်မံဖြည့်စွက် ထည့်သွင်း ဖော်ပြ ထားပါသည်။

	ထွက်ရှိနိုင်မှုအခြေအနေ ကို အသေးစိတ်ထပ်မံဖော်ပြရန်၊ (ဈ) အဆိုပြုလုပ်ငန်းဆောင်ရွက်မှု များကြောင့် ထွက်ရှိလာမည့် စွန့်ပစ်ပစ္စည်း (အစိုင်အခဲ၊ အရည်၊ အခိုးအငွေ့) အမျိုးအစား၊ပမာဏ အား ဖော်ပြရန်၊ (ည) ကုန်ကြမ်းသုံးစွဲမည့် ပမာဏ နှင့် ထွက်ရှိမည့် ကုန်ချော အမျိုးအစား၊ ပမာဏ တို့အား ထည့်သွင်း ဖော်ပြရန်၊ (ဋ)အဆိုပြု အထည်ချုပ်လုပ်ငန်းမှ ထွက်ရှိမည့် အစိုင်အခဲ စွန့်ပစ် ပစ္စည်း (ဥပမာ- ပိတ်ဖြတ်စများ၊ စုပေါင်းအမှိုက်များနှင့် ထုပ်ပိုး ပစ္စည်းများ) အမျိုးအစားနှင့် စွန့်ပစ်မည့်နည်းစနစ် သို့မဟုတ် အခြားနည်းလမ်းတို့အား ဖော်ပြရန်၊ (ဌ) ဝန်းထမ်းများ၏ နေထိုင်ရေး အစီအစဉ်များ စီစဉ်ထားရှိပါက ဖော်ပြရန်နှင့် အစီရင်ခံစာတွင် ရင်းနှီးမြှုပ်နှံမှုအမျိုးအစားအား ဖော်ပြ ပရန်၊			

(c)	**မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာ မူဘောင်**			
၁။	အစီရင်ခံစာတွင် အောက်ဖော်ပြပါ ဥပဒေနည်းဥပဒေများကို ထပ်မံဖြည့်စွက် ဖော်ပြရန်- (က) သဘာဝဘေး အန္တရာယ် ဆိုင်ရာ စီမံခန့်ခွဲမှု ဥပဒေ (၂၀၁၃)၊ (ခ) အခြားသက်ဆိုင်နိုင်သည့် ဥပဒေများ နည်းဥပဒေများ ရှိပါက ဖော်ပြရန်၊	အစီရင်ခံစာတွင် စီမံကိန်းနှင့်သက်ဆိုင်သည့် ဥပဒေ၊ နည်းဥပဒေ၊ လုပ်ထုံးလုပ်နည်းများ၊ နိုင်ငံတကာ စံချိန်စံညွှန်းများ စသည်တို့ကို စာမျက်နှာ (၃.၁-၃.၉) အထိ ထည့်သွင်း ဖော်ပြထားသည်ကို စိစစ် တွေ့ရှိရပါသည်။	အထူးသဘောထားမှတ်ချက်ပေးရန်မရှိပါ။	
(d)	**လက်ရှိပတ်ဝန်းကျင်အခြေအနေ**			
၁။	(က) ရေအရည်အသွေး၊ လက်ရှိ ပတ်ဝန်းကျင် အခြေအနေရှိ လေအရည်အသွေးတို့ကို တိုင်တာပြီး တိုင်းတာခဲ့သည့်များ၊ တိုင်းတာခဲ့သည့် နေရာများ၏ Coordinate အမှတ်များအား ဖော်ပြရန်နှင့် အဆိုပါတိုင်းတာမှု ရလဒ်များအား အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်၍ ထပ်မံ ထည့်သွင်းဖော်ပြရန်၊	အစီရင်ခံစာတွင် လက်ရှိပတ်ဝန်းကျင် အခြေအနေ နှင့် ပတ်သက်၍ စာမျက်နှာ (၄.၁-၄.၁၁)အထိ ဖော်ပြထားသော်လည်း ထပ်မံဖော်ပြရန်လိုအပ်ကြောင်း စိစစ်တွေ့ရှိရပါသည်။	• အစီရင်ခံစာတွင် ရေဆိုးထွက်ရှိမှုမရှိဟု ဖော်ပြ ထားခြင်းအပေါ် ရှင်းလင်းဖော်ပြရန်၊ • အစီရင်ခံစာတွင် အဆိုပြုလုပ်ငန်းအနီး ပတ်ဝန်းကျင်ရှိ မြေ၊ ရေ၊ လေ၊ ဆူညံသံ တိုင်းတာမှု ရလဒ်များကို IFC၊ WHO စံချိန်စံညွှန်းတို့နှင့် နှိုင်းယှဉ်ဖော်ပြရန်၊ • မြေ၊ ရေ၊ လေ၊ ဆူညံသံ တိုင်းတာကောက်ယူ ခဲ့သော နေရာများအား ကိုဩဒိနိတ် အမှတ် များဖြင့် ဖော်ပြ၍ ၎င်းအမှတ်တို့အား ရွေးချယ် ရသည့် ရည်ရွယ်ချက်ကို ဖော်ပြရန်၊ • စွန့်ပစ်ရေထွက်ရှိမှုပမာဏနှင့် စွန့်ပစ်ရေ	• အစီရင်ခံစာ၏ အခန်း(၄)၊ စာပိုဒ် (၄.၃.၄)၊စာမျက်နှာ (၄-၁၅)တွင် ရေဆိုး ထွက်ရှိမှု မရှိဟု ဖော်ပြ ထားခြင်းအပေါ် ထပ်မံ ဖြည့်စွက်ထည့်သွင်းဖော်ပြ ထားပါသည်။ • အစီရင်ခံစာ၏ အခန်း(၄)၊ စာပိုဒ် (၄.၃.၁)၊(၄.၃.၂)၊ (၄.၃.၃)၊ ဇယား (၄-၄)၊ (၄-၈)၊ (၄-၉)၊ (၄-၁၀) စာမျက်နှာ (၄-၁၁) မှ (၄-၁၄) ထိတွင် အစီရင်ခံစာ

			အရည်အသွေးရလဒ်များကို အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လုပ်မှု) လမ်းညွှန်ချက်များပါ အထွေထွေလမ်းညွှန် တန်ဖိုးများနှင့် နှိုင်းဖော်ပြရန်၊	အဆိုပြု လုပ်ငန်းအနီး ပတ်ဝန်းကျင် ရှိ မြေ၊ ရေ၊ လေ၊ ဆူညံသံ တိုင်းတာမှု ရလဒ်များကို IFC၊ WHO စံချိန်စံညွှန်းတို့နှင့်နှိုင်းယှဉ် ဖော်ပြထားပါသည်။ • အစီရင်ခံစာ၏ အခန်း(၄)၊ စာပိုဒ် (၄.၃.၁)၊(၄.၃.၂)၊ (၄.၃.၃)၊ ဇယား (၄-၄)၊ (၄-၈)၊ (၄-၉)၊ (၄-၁၀) စာမျက်နှာ (၄-၁၁) မှ (၄-၁၄) ထိတွင် ကောက်ယူခဲ့သော နေရာများအား ကိုဩဒိနိတ် အမှတ်များဖြင့်ဖော်ပြ၍ဂွင်းအမှတ်တို့အား ရွေးချယ် ရသည့် ရည်ရွယ်ချက်ကို ဖော်ပြထားပါသည်။ • အစီရင်ခံစာ၏ အခန်း(၄)၊ စာပိုဒ် (၄.၃.၄)၊စာမျက်နှာ (၄-၁၅)တွင် စွန့်ပစ်ရေ ထွက်ရှိမှုပမာဏနှင့် စွန့်ပစ်ရေ အရည်အသွေး ရလဒ်များကို ဖော်ပြထား

				ပါသည်။
(ဆ)	**ထိခိုက်မှုများအား သတ်မှတ်ဖော်ထုတ်ခြင်း၊ဆန်းစစ်ခြင်း နှင့် လျော့နည်းစေရေး ဆောင်ရွက်မည့်နည်းလမ်းများ**			
၁။	အစီရင်ခံစာတွင်ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှု များနှင့် လျော့နည်းစေရန် ဆောင်ရွက်မည့် လုပ်ငန်းများ နှင့် ပတ်သက်၍ အောက်ဖော်ပြပါ အချက်များကို ထပ်မံထည့်သွင်းဖော်ပြရန်- (က) Impact mitigation လျော့ချခြင်းပြုလုပ်မည့် အဖွဲ့အစည်းတာဝန်ဝတ္တရား၊ အချိန်ဇယား၊ ရန်ပုံငွေ လျာထားချက်တို့အား ဖော်ပြပေးရန်၊ (ခ) အဆိုပြုစီမံကိန်းမှ ထွက်ရှိသော အစိုင်အခဲ စွန့်ပစ် ပစ္စည်းများ၊မိလ္လာစွန့်ထုတ်ရည်တို့ အား စွန့်ပစ်သည့်နည်းလမ်း၊ မစွန့်ပစ်မီယာယီသိုလှောင် သည့်နေရာ၊ စည်ပင်သာယာ နှင့်ဆက်သွယ် ဆောင်ရွက် ထားရှိပါက အစီအစဉ်တို့ကို ဖော်ပြရန်၊	အဆိုပြုလုပ်ငန်းမှ ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် လျော့နည်းစေရန်ဆောင်ရွက် မည့် လုပ်ငန်းများနှင့် ပတ်သက်၍ စာမျက်နှာ (၆.၁-၆.၁၂) အထိ ဖော်ပြထား သည်ကို စိစစ်တွေ့ရှိရပါသည်။	စွန့်ထုတ်ပစ္စည်းများ (ရေ၊ လေ၊ အစိုင်အခဲ၊ ဆူညံသံ)တို့ကို စွန့်ထုတ်ခြင်းမှ ရရှိလာသော အတိုင်းအတာ ရလဒ်များအား သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာန ၏အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် များ (၂၀၁၅) နှင့် နှိုင်းယှဉ်ဖော်ပြရန်၊	• အစီရင်ခံစာ၏ အခန်း(၄)၊ စာပိုဒ် (၄.၃.၁)၊(၄.၃.၂)၊ (၄.၃.၃)၊ ဇယား (၄-၄)၊ (၄-၈)၊ (၄-၉)၊ (၄-၁၀) စာမျက်နှာ (၄-၁၁) မှ (၄-၁၄) ထိတွင် စွန့်ထုတ် ပစ္စည်းများ တို့ကို စွန့်ထုတ်ခြင်းမှ ရရှိလာ သော အတိုင်းအတာ ရလဒ်များအားသယံဇာတ နှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန ၏အမျိုးသားပတ်ဝန်းကျင် ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု)လမ်းညွှန် ချက်များ (၂၀၁၅) NEQEGs နှင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။

	(ဂ) Domestic waste water များကို Treatment ပြုလုပ်မည့် နည်းလမ်းများကို ဖော်ပြရန်၊ (ဃ) ဖြစ်ပေါ်လာမည့် ထိခိုက်မှုများအား လျော့နည်းစေရန် ဆောင်ရွက်မည့် အစီအစဉ် များကို စနစ်တကျဖော်ပြရန်၊ (င)စွန့်ပစ်ပစ္စည်းများကို စွန့်ထုတ်ခြင်း ပြုလုပ်ရာတွင် သယံဇာတနှင့်သဘာပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဝန်ကြီးဌာန၏ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ NEQGS (၂၀၁၅) ပါအတိုင်း စွန့်ထုတ် သွားရမည် ဖြစ်ပါကြောင်း ဖော်ပြရန်၊			
(ဇ)	**ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု**			
၁။	အစီရင်ခံစာတွင် စောင့်ကြပ်ကြည့်ရှုမည့် အစီအစဉ်နှင့် ပတ်သက်၍ အောက်ဖော်ပြပါ အချက်များကို ထပ်မံဖော်ပြရန်- (က) အဆိုပြုစီမံကိန်း လုပ်ငန်း			

	ကြောင့်ပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုလျော့ချမည့်လုပ်ငန်းစဉ်များနှင့် ထွက်ရှိလာမည့် စွန့်ပစ်ပစ္စည်းများအပေါ် စောင့်ကြပ်ကြည့်ရှုခြင်းတို့အတွက် တာဝန်ယူဆောင်ရွက်မည့် အဖွဲ့ဝင်အမည်၊ ၄င်းတို့၏ တာဝန်ဝတ္တရားများအား ထည့်သွင်းဖော်ပြရန်၊ (ခ) စောင့်ကြပ်ကြည့်ရှုခြင်း အစီအစဉ်တွင် လုပ်ငန်းလည်ပတ်ခြင်းမှ ထွက်ရှိလာမည့် စွန့်ပစ်ပစ္စည်းများ၏ Parameter များအလိုက် သတ်မှတ်ဖော်ပြရန်၊ (ဂ) စောင့်ကြပ်ကြည့်ရှုမည့် အစီအစဉ်အတွက် ဖော်ပြပေးထားသောရန်ပုံငွေနှင့် လုံလောက်မှု မရှိပါက ဆောင်ရွက်ပေးမည့် အစီအစဉ်များကို ဖော်ပြရန်			
(ဈ)	**အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်း**			
၁။	စက်ရုံဝန်းကျင်ရှိ အများပြည်သူ၏ ဆန္ဒ သဘောထားရယူရန်နှင့် အများပြည်သူနှင့် တိုင်ပင်	အစီရင်ခံစာတွင် အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်းနှင့် ပတ်သက်၍	• ဆွေးနွေးညှိနှိုင်းခြင်းမှ ရရှိလာသော ဌာနဆိုင်ရာ အဖွဲ့အစည်းများ၊ လူမှုအဖွဲ့အစည်းများနှင့် ဒေသခံ တို့၏	• အစီရင်ခံစာ၏ အခန်း(၇)၊ စာပိုဒ် (၇.၅)၊ စာမျက်နှာ (၇-၅)တွင် ဆွေးနွေးညှိနှိုင်းခြင်းမှ

	ဆွေးနွေးရာတွင် အလွှာမျိုးစုံမှ ပြည်သူများ တက်ရောက်နိုင်ပါရန် ဖိတ်ကြားအသိပေးခြင်း၊ တက်ရောက်သည့် အမည်စာရင်းနှင့် ဦးရေ၊ ဆွေးနွေးမှု ရလဒ်နှင့် ဆောင်ရွက်ပေးမည့် အစီအစဉ်တို့အားဖော်ပြ၍ မှတ်တမ်းဓာတ်ပုံများ၊ အမေး အဖြေ ပုံစံတို့ဖြင့် ပူးတွဲဖော်ပြပေးရန်၊ ဌာနဆိုင်ရာအဖွဲ့အစည်းများ၊ လူမှုအဖွဲ့အစည်း များ၏ အကြံပြုချက်၊ လိုလားတောင်းဆို ချက်များ အားဖော်ပြရန်နှင့် မည်ကဲ့သို့ အရေးယူ ဆောင်ရွက် သွားမည်ဖြစ်ကြောင်း၊	စာမျက်နှာ (၇.၁-၇.၅) တွင် ဖော်ပြထားသော်လည်း အသေးစိတ် ထပ်မံ ဖော်ပြရန်လိုအပ်ကြောင်း စိစစ်တွေ့ရှိ ရပါသည်။	အကြံပြုချက်ဆွေးနွေးချက်တို့ အပေါ် ဆောင်ရွက်ထားရှိမှုတို့အား ဖော်ပြရန်၊ • စီမံကိန်းကြောင့်ဖြစ်ပေါ်လာသည့် ပြဿနာများ၊ ဒေသခံပြည်သူများ၏ မကျေနပ်ချက်များရှိပါက လက်ခံဖြေရှင်းပေးနိုင်ရေး လုပ်ငန်းစဉ် တစ်ရပ် ထားရှိ ဆောင်ရွက်ရန်၊	ရရှိလာသော ဌာနဆိုင်ရာ အဖွဲ့အစည်းများ၊ လူမှုအဖွဲ့အစည်းများနှင့် ဒေသခံ တို့၏ အကြံပြုချက်ဆွေးနွေးချက်တို့ အပေါ် ဆောင်ရွက်ထားရှိမှုတို့အား ထပ်မံဖြည့်စွက် ဖော်ပြထားပါသည်။ • အစီရင်ခံစာ၏ အခန်း(၇)၊ စာပိုဒ် (၇.၆)၊စာမျက်နှာ(၇-၆) တွင် စီမံကိန်းကြောင့် ဖြစ်ပေါ်လာသည့် ပြဿနာများ၊ ဒေသခံပြည်သူများ၏ မကျေနပ်ချက်များရှိပါက လက်ခံဖြေရှင်းပေးနိုင်ရေး လုပ်ငန်းစဉ် တစ်ရပ် ထားရှိ ဆောင်ရွက်မှုအား ထပ်မံဖြည့်စွက်ဖော်ပြထားပါသည်။
(ည)	စီမံကိန်းကြောင့် ထိခိုက်ခံစားရသည့် ဒေသခံပြည်သူများအတွက် ဆောင်ရွက်ပေးမည့်ဒေသဖွံ့ဖြိုးရေးအစီအစဉ်			
၁။	အစီရင်ခံစာတွင် အောက်ဖော်ပြပါ အချက်များကို ထပ်မံဖော်ပြရန် (က) စီမံကိန်းကြောင့် ထိခိုက်ခံစားရသည့် ဒေသခံပြည်သူများ အတွက် ဆောင်ရွက်ပေးမည့်	စီမံကိန်းကြောင့် ထိခိုက်ခံစားရသည့် ဒေသခံပြည်သူများ အတွက် ဆောင်ရွက်ပေးမည့် အစီအစဉ်များ ဖော်ပြထား သော်လည်း ထပ်မံ ဖော်ပြရန်	စီမံကိန်းကြောင့် ထိခိုက်ခံစားရသည့် ဒေသခံ ပြည်သူများအတွက် ဆောင်ရွက်ပေးမည့် ဒေသ ဖွံ့ဖြိုးရေးလုပ်ငန်းများအား ဖော်ပြရန်၊	• အစီရင်ခံစာ၏ အခန်း(၇)၊ စာပိုဒ် (၇.၆)၊စာမျက်နှာ (၇-၆) တွင်စီမံကိန်းကြောင့် ထိခိုက်ခံစားရသည့် ဒေသခံ ပြည်သူများအတွက်

	ဒေသဖွံ့ဖြိုးရေး အစီအစဉ်များ ဆောင်ရွက်ပေးနိုင်ရန်အတွက် ရန်ပုံငွေလျာထားမည့် အစီအစဉ်များကို တိကျစွာ ရေးဆွဲ၍ ဆောင်ရွက်ပေးမည့် လုပ်ငန်းတာဝန်များကို ဖော်ပြပေးရန်၊ (ခ) စီမံကိန်းကြောင့် ထိခိုက်ခံစားရသည့် ဒေသခံ ပြည်သူများအတွက် ဆောင်ရွက် ပေးမည့် ဒေသဖွံ့ဖြိုးရေး လုပ်ငန်းများအား ဖော်ပြရန်၊	လိုအပ်ကြောင်း စိစစ်တွေ့ရှိရပါသည်။		ဆောင်ရွက်ပေးမည့် ဒေသဖွံ့ဖြိုးရေးလုပ်ငန်းများအား ထပ်မံ ဖြည့်စွက်ဖော်ပြားပါသည်။
(၄)	**ဘေးအန္တရာယ်ကာကွယ်ရေးအစီအစဉ်**			
	• လုပ်ငန်းခွင်ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေး တို့နှင့် ပတ်သက်၍ ဆောင်ရွက် ထားရှိသည့် အစီအစဉ်တို့အား ပြည့်စုံစွာ ဖော်ပြရန်၊ • လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး တို့နှင့် ပတ်သက်၍သုံးစွဲမည့် ရန်ပုံငွေ လျာထားမှုနှင့် ထောက်ပံ့မည့် အစီအစဉ်၊	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး တို့နှင့် ပတ်သက်၍ စာမျက်နှာ (၆.၅-၆.၁၅)အထိ ဖော်ပြ ထားကြောင်း	အထူးသဘောထားမှတ်ချက် ပေးရန်မရှိပါ။	

	ဝန်ထမ်းများအတွက် နေထိုင်ရေး၊ သန့်ရှင်းသော သောက်သုံးရေရရှိရေးနှင့် ကျန်းမာရေးစောင့်ရှောက်မှု ပေးနိုင်ရေး ဆောင်ရွက်ထားရှိမှု အစီအစဉ်တို့အား ထည့်သွင်း ဖော်ပြရန်၊ • မီးဘေးအန္တရာယ် ကာကွယ်ရေး အစီအစဉ်အား ထည့်သွင်းဖော်ပြရန်၊ • ဘေးအန္တရာယ်ရှိလုပ်ငန်းများ ဖြစ်ပါက လုပ်ငန်းခွင်ကျွမ်းကျင်မှုရှိစေရေး လေ့ကျင့်သင်ကြားမှု အစီအစဉ်များအား ဖော်ပြရန်၊ • အရေးပေါ်ဘေးအန္တရာယ် ကျရောက်ပါက ဆောင်ရွက်မည့် အစီအစဉ်နှင့် ကြိုတင်ဆောင်ရွက်ထားရှိမှုများအားဖော်ပြရန်- • အရေးပေါ်ကျန်းမာရေး စောင့်ရှောက်မှု စီမံချက်			

	• သဘာဝဘေးတစ်ခုခုနှင့် ကြုံတွေ့ရပါက ကာကွယ်နိုင်မည့် စီမံချက်များ (စီမံချက်များ အလိုက်ပါဝင် ဆောင်ရွက်သူများ စာရင်း)			