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ENVIRONMENTAL MANAGEMNT PLAN

ENVIRONMENT MANAGEMENT

KHIN MG MYOE

PCML | [Company address]

DELICIOUS FOOD LIMITED

Sugar Production

Environmental Management Plan (EMP) Report

Prepared by

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Reference

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Acronyms and abbreviations

ALARP	As low as reasonably practicable
BOD	Board of Director
CSR	Corporate Social Responsibility
DICA	Directorate of Investment and Company Administration
ECC	Environmental Compliance Certificate
ECD	Environmental Conservation Department
EHS	Environment, Health & Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan

FDA	Food and Drug Administration
GAD	General Administration Department
GDP	Gross Domestic Product
HSE	Health, Safety and Environment
JICA	Japan International Cooperation Agency
LAeq	Equivalent Continuous Sound Level A-weighted
MD	Managing Director
MIC	Myanmar Investment Commission
MIFER	Ministry of Investment and Foreign Economic Relations
MOECAF	Ministry of Environmental Conservation and Forestry
MOEE	Ministry of Energy and Electricity
MOHS	Ministry of Health and Sports
MONREC	Ministry of Natural Resources and Environmental Conservation
MOTC	Ministry of Transportation and Communications
NEQEG	National Environmental Quality Emission Guidelines
PPE	Personal Protective Equipment
TCU	True Color Unit
ToR	Terms of Reference
WHO	World Health Organization
UBMCL	UK Bakery (Myanmar) Company Limited
YCDC	Yangon City Development Committee
YESB	Yangon Electricity Supply Board
YESC	Yangon Electricity Supply Corporation

အစီရင်ခံစာအကျဉ်းချုပ်

နိဒါန်း

ဒလိရှပ်(စ်)ဖုဒ်လီမိတက်၏ အမှတ် (၆) စက်ရုံဝင်းရှိ ရေတာရှည်သကြားစက်ရုံ သကြားထုတ်လုပ်ခြင်းလုပ်ငန်း စီမံကိန်း၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အစီရင်ခံစာအား သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနမှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်းပါ သတ်မှတ်ချက်များနှင့်အညီ ရေးဆွဲပြုစုထားပါသည်။

စီမံကိန်းဆောင်ရွက်သူအနေဖြင့် အောက်ပါအချက်များအား မှန်ကန်တိကျစွာ ဆောင်ရွက်ထားပါကြောင်း ကတိကဝတ် ပြုပါသည်-

(က) အစီရင်ခံစာသည် တိကျခိုင်မာ၍ ပြည့်စုံပါသည်

(ခ) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း အပါအဝင် သက်ဆိုင်ရာဥပဒေများကို တိကျစွာလိုက်နာ၍ ရေးဆွဲထား ပါသည်။

(ဂ) အစီရင်ခံစာပါ ကတိကဝတ်၊ ပတ်ဝန်းကျင်ထိခိုက်မှု လျော့ချရေးလုပ်ငန်းများနှင့် အစီအစဉ်များကို အပြည့်အဝအစဉ်အမြဲ လိုက်နာဆောင်ရွက် ပါမည်။

စီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နှင့် လူသားတို့အပေါ် ဆိုးကျိုးနှင့်ကောင်းကျိုးသက်ရောက်နိုင်မှုအခြေအနေများအား ဖော်ထုတ်၍ အဆိုပါ သက်ရောက်နိုင်မှုများအပေါ်မူတည်၍ ကောင်းမွန်စွာ စီမံခန့်ခွဲနိုင်မည့် အစီရင်ခံစာဖြစ်စေရန် ကျွမ်းကျင်သူတတိယအဖွဲ့အစည်းမှ ပတ်ဝန်းကျင်ဆိုင်ရာ ပညာရှင်များက ရေးဆွဲပြုစုထားပါသည်။

အစီရင်ခံစာတွင် အောက်ပါအချက်များ ပါဝင်ပါသည်-

(က) စီမံကိန်းအရွယ်အစား၊ တပ်ဆင်မှု၊ အသုံးပြုနည်းပညာ၊ အခြေခံအဆောက် အအုံ၊ ထုတ်လုပ်မှုလုပ်ငန်းစဉ်၊ ကုန်ကြမ်းနှင့် အရင်းအမြစ်များသုံးစွဲမှု၊ စွန့်ပစ် ပစ္စည်းထွက်ရှိမှု၊ ထုတ်လွှတ်မှုနှင့် အနှောင့်အယှက်ဖြစ်စေမှု ဖော်ပြချက်များ ပါဝင်သော စီမံကိန်း အကြောင်းအရာ အသေးစိတ်ဖော်ပြချက်နှင့်အတူ စီမံကိန်း လုပ်ငန်း အဆင့်တစ်ခုချင်းစီအတွက် ကောင်းကင်ဓာတ်ပုံ၊ ဂြိုလ်တုဓာတ်ပုံများ အသုံးပြု၍ သင့်လျော်သောစကေးဖြင့် စီမံကိန်းတစ်ခုလုံးဖော်ပြသောမြေပုံ၊ စီမံကိန်းလုပ်ငန်းခွင်တစ်ခုချင်းစီ အလိုက် နေရာချထားမှုပုံစံပြမြေပုံများနှင့် စီမံကိန်းလုပ်ငန်းအဆင့် တစ်ခုချင်းစီအတွက် အခြားဆောင်ရွက်နိုင်သော နည်းလမ်းများ၊

(ခ) စီမံကိန်းအဆိုပြုသူ၏ အကြောင်းအရာဖော်ပြချက်နှင့် စီမံကိန်းအဆိုပြုသူသည် လူပုဂ္ဂိုလ် တစ်ဦးချင်းမဟုတ်ဘဲ ကုမ္ပဏီ သို့မဟုတ် အခြားအဖွဲ့အစည်းဖြစ်ပါက ပိုင်ရှင်များ၊

ဒါရိုက်တာများနှင့် စီမံကိန်းအရာရှိများ၏ အကြောင်းအရာ ဖော်ပြချက်၊ နေ့စဉ်စီမံဆောင်ရွက်မည့် ကိစ္စရပ်များနှင့် စီမံကိန်းအရာရှိများ၏ အကြောင်းအရာဖော်ပြချက်၊

(ဂ) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ၏ မည်သည့်အပိုင်းတွင် မည်သည့် ကျွမ်းကျင်သူက တာဝန်ရှိကြောင်း အပါအဝင် ကနဦးပတ်ဝန်းကျင် ဆန်းစစ်ခြင်း ဆောင်ရွက်သည့် ကျွမ်းကျင်သူများ၏ အကြောင်းအရာဖော်ပြ ချက်၊

(ဃ) လိုက်နာဆောင်ရွက်မည့် ဥပဒေ၊ ဒီကရီ၊ စည်းမျဉ်းစည်းကမ်း၊ စံချိန်စံညွှန်း၊ လမ်းညွှန်ချက်များနှင့် စီမံကိန်း၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့် လူမှုရေး ဆိုင်ရာပူးပေါင်း အကောင်အထည်ဖော်မည့်မူဝါဒများ၊ ပါဝင်ဆောင်ရွက်မည့် သက်ဆိုင်ရာ အစိုးရအဖွဲ့ အစည်းများနှင့် ၎င်းတို့၏အခန်းကဏ္ဍနှင့် စီမံကိန်း ဆိုင်ရာ တာဝန်ရှိမှုများ၊

(င) သက်ဆိုင်ရာ ရုပဆိုင်ရာ၊ ဇီဝဆိုင်ရာ၊ လူမှုရေး၊ လူမှုစီးပွားရေးနှင့် ယဉ်ကျေးမှု ဆိုင်ရာ အနေအထားများ၏ မြေပုံများ အပါအဝင် စီမံကိန်းအနီးပတ်ဝန်းကျင်ရှိ ပတ်ဝန်းကျင် နှင့် လူမှုရေးဆိုင်ရာ အခြေအနေများ ဖော်ပြချက်၊

(စ) မြေပုံများ၊ ဓာတ်ပုံများ၊ ပုံရိပ်များ၊ ကောင်းကင်ဓာတ်ပုံများနှင့် ဂြိုလ်တုဓာတ်ပုံ များ အသုံးပြု၍ မြေပြင်အနေအထားဆိုင်ရာနှင့် သက်ရောက်မှုများ၏ ထူးခြား လက္ခဏာများ တင်ပြချက်နှင့်အတူ ဆိုးကျိုးသက်ရောက်မှုများနှင့် ကြွင်းကျန် သက်ရောက်မှုများ အပါအဝင် ပတ်ဝန်းကျင်အပေါ် ဆိုးကျိုးသက်ရောက်မှု များ အား ဖော်ထုတ်ချက်နှင့် ဆန်းစစ်ချက်၊

(ဆ) အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးမှုနှင့် အများပြည်သူ ပူးပေါင်းပါဝင်မှု လုပ်ငန်းစဉ်၊ ပြည်သူများထံမှ အကြံပြုချက်များ လက်ခံရရှိမှု၏ရလဒ်များနှင့် ယင်းလုပ်ငန်းစဉ် အတွင်းလက်ခံရရှိသော သဘောထားမှတ်ချက်များ အပေါ် စီမံကိန်းအဆိုပြုသူ၏ စာဖြင့် ရေးသားပြန်ကြားချက်၊

(ဇ) စီမံကိန်း၏ ဆိုးကျိုးသက်ရောက်မှုများကို လျှော့ချရန်ရည်ရွယ်ထားသည့် ပတ်ဝန်းကျင် ထိန်းသိမ်းကာကွယ်ရေးဆိုင်ရာ လုပ်ငန်းများနှင့်အတူ လိုက်နာ ဆောင်ရွက်မည့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့် လူမှုရေးဆိုင်ရာ သတ်မှတ် ချက်များအား ရှင်းလင်းစွာ ဖော်ပြထားချက်နှင့် ကြွင်းကျန်သက်ရောက်မှုများ၊

(ဈ) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် နှင့်

(ည) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို အကောင်အထည်ဖော်ရန် လိုအပ်သည့် အဖွဲ့အစည်း၊ ပုဂ္ဂိုလ်နှင့်အသုံးစရိတ်လျာထားမှု။

စီမံကိန်းဆောင်ရွက်သူ

စီမံကိန်းအား အပြည့်အဝနားလည်စေရန် နှင့် စီမံကိန်းဆောင်ရွက်ချက်အပေါ်အခြေခံသည့် အချက် အလက်များအား စုစည်းနိုင် စီမံကိန်းအား သုံးသပ်ခဲ့ပါသည်။ စီမံကိန်းဆောင်ရွက်သူ အချက်အလက်များအား စီမံကိန်း၏ ကျိုးကြောင်းဆီလျော်မှုနှင့်နောက်ခံ၊ စီမံကိန်းဆောင်ရွက်သူ၊ စီမံကိန်းအကျိုးကျေးဇူး ခေါင်းစဉ်များဖြင့် အစီရင်ခံစာ အခန်း (၁) ၌ ဖော်ပြထားပါသည်။

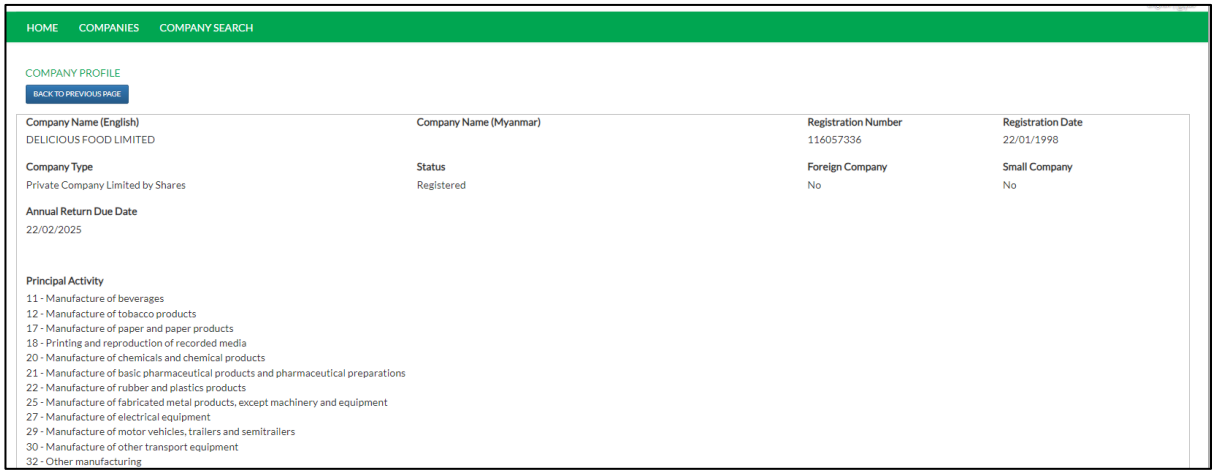
စီမံကိန်းကျိုးကြောင်းဆီလျော်မှုနှင့် နောက်ခံ

DFL သည် ရေတာရှည်သကြားစက်ရုံ သကြားထုတ်လုပ်ခြင်းလုပ်ငန်းစီမံကိန်းအတွက် စုစုပေါင်းရင်းနှီးမြုပ်နှံမှု ယန်း သန်း ၅၀၀) ဖြင့် လည်ပတ်ဆောင်ရွက်လျက် ရှိသည်။

DFL သည် ၎င်း၏ လုပ်ငန်းစီမံကိန်းအား အင်ဒိုင်းရွာ၊ (မြောက်ဘက် ရေတာရှည်နှင့် တောင်ဘက် ဆွာမြို့ ကြား) တောင်ငူခရိုင်၊ ရေတာရှည်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး၊ ရှိ မြေနေရာတွင် စီစဉ်ဆောင်ရွက်လျက်ရှိပါသည်။

စီမံကိန်းအဆိုပြုသူဆိုင်ရာ အချက်အလက်များ

DFL အား ၁၉၉၈ ခုနှစ် ဧန်ဝါရီလ ၂၂ ရက်နေ့တွင် ကုမ္ပဏီမှတ်ပုံတင်အမှတ် ၁၁၆၀၅၇၃၃၆ ဖြင့် ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာနဌ အောက်ပါ လုပ်ငန်းများ ဆောင်ရွက်ခြင်း အတွက် မှတ်ပုံတင်ထားပါသည်။ Ministry of Investment and Foreign Economic Relations (MIFER) မှ အောက်ဖော်ပြပါလုပ်ငန်းအတွက် မြန်မာနိုင်ငံတည်ဆဲ ဥပဒေ၊ လုပ်ထုံးလုပ်နည်းများနှင့်အညီ ဆောင်ရွက်ခွင့်ပြုခဲ့ပါသည်။



HOME COMPANIES COMPANY SEARCH

COMPANY PROFILE

BACK TO PREVIOUS PAGE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
DELICIOUS FOOD LIMITED		116057336	22/01/1998
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	No	No

Annual Return Due Date
22/02/2025

Principal Activity
11 - Manufacture of beverages
12 - Manufacture of tobacco products
17 - Manufacture of paper and paper products
18 - Printing and reproduction of recorded media
20 - Manufacture of chemicals and chemical products
21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations
22 - Manufacture of rubber and plastics products
25 - Manufacture of fabricated metal products, except machinery and equipment
27 - Manufacture of electrical equipment
29 - Manufacture of motor vehicles, trailers and semitrailers
30 - Manufacture of other transport equipment
32 - Other manufacturing

အောက်ဖော်ပြပါ “ဒလိရှပ်(စ်)ဖုဒ်လီမိတက်” အမည်ဖြင့် ကုမ္ပဏီသည် မြန်မာနိုင်ငံ ကုမ္ပဏီများအက်ဥပဒေဖြင့် ဖွဲ့စည်းထားသည့် ဖက်ဆပ်ကုမ္ပဏီဖြစ်ပြီး နိုင်ငံခြားရင်းနှီး မြုပ်နှံမှု ဥပဒေနှင့်အညီ အဆိုပြုစီမံကိန်း သကြားထုတ်လုပ်ခြင်း လုပ်ငန်းအား ဆောင်ရွက်မည့်အဖွဲ့အစည်းဖြစ်ပါသည်-

ကုမ္ပဏီ	လိပ်စာ
ဒလိရှပ်(စ်)ဖုဒ်လီမိတက် မှတ်ပုံတင်အမှတ် ၁၁၆၀၅၇၃၃၆	အင်ဒိုင်းရွာ၊ (မြောက်ဘက် ရေတာရှည်နှင့် တောင်ဘက် ဆွာမြို့ ကြား) တောင်ငူခရိုင်၊ ရေတာရှည်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး၊ အီးမေးလ်၊

	ဖုန်း၊ ၀၉၄၂၁၁၇၆၀၄၁

စီမံကိန်းဆောင်ရွက်ရန်အတွက် အောက်ဖော်ပြပါ ပုဂ္ဂိုလ်များသည် ရင်းနှီးမြှုပ်နှံမှုပြုထားသူများ ဖြစ်ကြပါသည်-

ရှယ်ယာရှင်များ	လိပ်စာ
၁။ ဦးထွန်းထွန်းဝင်း	အမှတ် ၆၊ သကြားစက် ဖုန်း၊ ၀၉၄၂၁၁၇၆၀၄၁ aithiha@gmail.com

အောက်ဖော်ပြပါ ကုမ္ပဏီသည် အဆိုပြုထားသော သကြားထုတ်လုပ်မှုစီမံကိန်း တစ်ခုတည်းကိုသာ ထောက်ခံပါသည်။

ကုမ္ပဏီ	လိပ်စာ
ဒလိရှုပ်(စ်)ဖုဒ်လီမိတက် မှတ်ပုံတင်အမှတ် ၁၁၆၀၅၇၃၃၃၆	အင်ဒိုင်းရွာ၊ (မြောက်ဘက် ရေတာရှည်နှင့် တောင်ဘက် ဆွာမြို့ ကြား) တောင်ငူခရိုင်၊ ရေတာရှည်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး၊ အီးမေးလ်၊ sugarmill007@gmail.com ဖုန်း၊ ၀၉၄၂၁၁၇၆၀၄၁

DFLသည် ရင်းနှီးမြှုပ်နှံသူများ ထိန်းကြောင်းမှုဖြင့် အမှတ် ၆ ရေတာရှည်သကြားစက်ရုံ သကြားထုတ်လုပ်သည့်လုပ်ငန်းစီမံကိန်း၏ အုပ်ချုပ်ရေးအဖွဲ့အဖြစ် ဆောင်ရွက်သွားမည်ဖြစ်သည်။ ရင်းနှီးမြှုပ်နှံသူများသည် ခန့်အပ်ထားသည့် ဒါရိုက်တာနှင့် ဝန်ထမ်းများမှတဆင့် စီမံကိန်းအားလည်ပတ်မည်ဖြစ်သည်။ ဒါရိုက်တာအဖွဲ့အား အောက်ပါအတိုင်း ဖော်ပြအပ်ပါသည်-

ဒလိရှုပ်(စ်)ဖုဒ်လီမိတက် (သကြားထုတ်လုပ်ခြင်း)

အမည်	မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ်	ရာထူး
ဦးထွန်းထွန်းဝင်း	မြန်မာ ၁၂/ပပတ(နိုင်) ၀၀၃၁၇၅	ဒါရိုက်တာ

DFL ကို မြန်မာကုမ္ပဏီအက်ဥပဒေအရ ၂၀၁၇ ခုနှစ် ဧန်နဝါရီလ ၁၃ ရက် နေ့တွင် စက်မှုလုပ်ငန်းဝန်ကြီးဌာနတွင် အဓိကဆောင်ရွက်လုပ်ကိုင်မှု- စားနပ်ရိက္ခာထုတ်လုပ်မှုအတွက်

လိုင်စင်မှတ်ပုံတင်ထားပြီး မှတ်ပုံတင်လိုင်စင်အမှတ် (ပခ/ကြီး/ဂုဓဂ) နှင့် ဆောင်ရွက်လုပ်ကိုင်လျက်ရှိပါသည်။

စီမံကိန်းအကျိုးကျေးဇူးများ

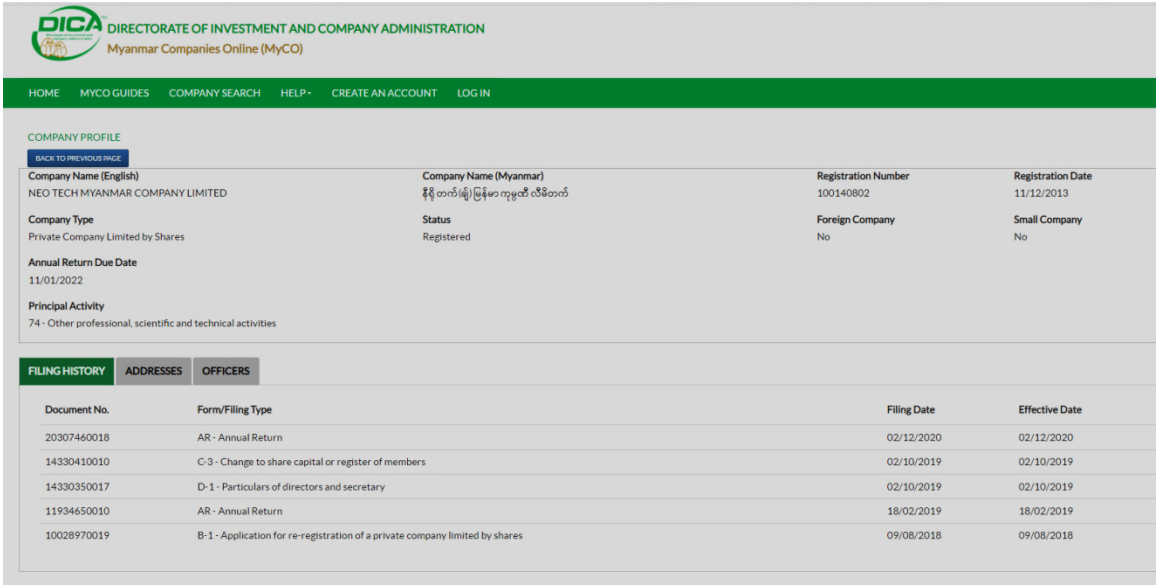
စီမံကိန်းဆောင်ရွက်လည်ပတ်မှုကြောင့် ပြည်တွင်းစားနပ်ရိက္ခာထုတ်ကုန်စျေးကွက် မြင့်မားကျယ်ပြန့်လာရန် အလားအလာရှိသည်။ စီမံကိန်းဆောင်ရွက်ခြင်းကြောင့် ရရှိမည့် အကျိုးကျေးဇူးများအား အောက်ပါအတိုင်း ဖော်ပြအပ်ပါသည် -

- အိမ်တွင်းသုံးစွဲသူများအတွက် အရည်အသွေးရှိသော ကိတ်များနှင့် ပေါင်မုန့် ထုတ်ကုန်များကို စျေးကွက်အတွင်း ထုတ်လုပ်ခြင်း၊ ဖြန့်ဖြူးခြင်း
- အသိအမှတ်ပြုလက်မှတ်ရ စက်ပစ္စည်းများသုံးစွဲခြင်းနှင့် လုပ်ငန်းတွင် စက်ယန္တရား စွမ်းဆောင်ရည် မြှင့်တင်ခြင်း
- စီမံကိန်းလည်ပတ်ရာတွင် ဒေသခံများအတွက် အလုပ်ကိုင်အခွင့်အလမ်းများ ဖန်တီးပေး နိုင်ခြင်း
- သင်တန်းများဆောင်ရွက်ပေးခြင်းဖြင့် ဝန်ထမ်းများ၏ ကျွမ်းကျင်မှုအမျိုးမျိုးအား မြှင့်တင်ပေးခြင်း
- သက်ဆိုင်ရာ အာဏာပိုင်များက ကောက်ခံသည့် လုပ်ငန်းဆောင်ရွက်မှု ဝန်ဆောင်ခများမှ ပြည်ထောင်စုအစိုးရထံ တိုက်ရိုက်ဝင်ငွေရရှိခြင်း
- စီမံကိန်း ပြည်တွင်းလုပ်သားများအနေဖြင့် လုပ်ငန်းဆောင်ရွက်မှုဆိုင်ရာ နည်းပညာ ဗဟုသုတများ ရရှိမည်ဖြစ်ပြီး၊ ရေရှည်တွင် ပြည်တွင်းလုပ်သားထု၏ ကိုယ်ပိုင် စွမ်းဆောင်ရည်များကို အထောက်အကူပြုနိုင်ခြင်း
- အစိုးရ ရှုထောင့် အနေဖြင့် ပထမဦးစွာ တစ်ဦးချင်းစီဝင်ငွေမှ အခွန်အခများ တိုးမြင့် ရရှိမည်ဖြစ်ပြီး ဝင်ငွေခွန်၊ ကုန်သွယ်လုပ်ငန်းခွန်များလည်း ပိုမိုရရှိနိုင်မည်ဖြစ်ခြင်း
- EMP သေချာစွာ အကောင်အထည်ဖော်ဆောင်ရွက်ခြင်းဖြင့် ဒေသခံအစုအဖွဲ့များ နှင့် အခြား ရင်းနှီးမြှုပ်နှံသူများ အနေဖြင့်လည်း ပတ်ဝန်းကျင်ဆိုင်ရာ အသိအမြင်များ တိုးပွားခြင်း
- နှစ်စဉ် အမြတ်ငွေ ၂ ရာခိုင်နှုန်းအား CSR လုပ်ငန်းများ ဆောင်ရွက်ခြင်း (ဝန်ထမ်းများ လူမှုဖူလုံရေး ဆောင်ရွက်ပေးခြင်း၊ သင်တန်းများပို့ချခြင်း၊ နှစ်စဉ်ထောက်ပံ့မှုများ စသည်) နှင့် ဥပဒေနှင့်အညီ လုပ်ငန်းဆောင်ရွက်ချိန်ထားရှိခြင်း
- မြန်မာနိုင်ငံ၏ ပြဋ္ဌာန်းထုတ်ပြန်ထားသည့် ဥပဒေ၊ နည်းဥပဒေများအား နှင့် အညီလိုက်နာ ပြီး၊ ပွင့်လင်းမြင်သာစွာဖြင့် အကောင်အထည်ဖော် ဆောင်ရွက်သွားမည်ဖြစ်ခြင်း။

စီမံကိန်းအတွက် တတိယအဖွဲ့အစည်း ပတ်ဝန်းကျင်ဆိုင်ရာကျွမ်းကျင်သူများ၏ အကြောင်းအရာ ဖော်ပြချက်

ဒလိရုပ်(စ်)ဖုဒ်လီမိတက်သည် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်းများနှင့် အညီ ပတ်ဝန်းကျင်ဆိုင်ရာလေ့လာ၍ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ဆောင်ရွက်ရန်အတွက် တတိယအဖွဲ့အစည်းဖြစ်သည့် နီယိုတက်ချ်ကုမ္ပဏီလီမိတက်အား စက်တင်ဘာလ ၂၀၂၃ ခုနှစ်တွင် ငှားရမ်းဆောင်ရွက်ခဲ့ပါသည်။ EMP လေ့လာဆောင်ရွက်မည့်အဖွဲ့စာရင်းအား အခန်း-၁ တွင် ပြည့်စုံစွာဖော်ပြထားပါသည်။

နီယိုတက်ခ်မြန်မာကုမ္ပဏီလီမိတက်သည် ကုမ္ပဏီမှတ်ပုံတင်အမှတ် ၁၀၀၁၄၀၀၀၂ ဖြင့် ရင်းနှီးမြှုပ်နှံမှုနှင့် ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန၌ မှတ်ပုံတင်ထားပြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန မှ ၁၁.၁၂.၂၀၁၃ ရက်နေ့တွင် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ် ၅၁၆/၂၀၁၅ ဖြင့် ကြားကာလအကြံပေးလုပ်ကိုင်သူ အထောက်အထားလက်မှတ် အမှတ် ၀၀၀၀၄ ဖြင့် မှတ်ပုံတင်ထားသည့် ကုမ္ပဏီဖြစ်ပါသည်။


DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION
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COMPANY PROFILE

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Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
NEO TECH MYANMAR COMPANY LIMITED	နီယိုတက်(မြန်မာ)ကုမ္ပဏီလီမိတက်	100140802	11/12/2013

Company Type	Status	Foreign Company	Small Company
Private Company Limited by Shares	Registered	No	No

Annual Return Due Date
11/01/2022

Principal Activity
74 - Other professional, scientific and technical activities

FILING HISTORY | ADDRESSES | OFFICERS

Document No.	Form/Filing Type	Filing Date	Effective Date
20307460018	AR - Annual Return	02/12/2020	02/12/2020
14330410010	C-3 - Change to share capital or register of members	02/10/2019	02/10/2019
14330350017	D-1 - Particulars of directors and secretary	02/10/2019	02/10/2019
11934650010	AR - Annual Return	18/02/2019	18/02/2019
10028970019	B-1 - Application for re-registration of a private company limited by shares	09/08/2018	09/08/2018

ရည်ရွယ်ချက်နှင့် တိုင်းတာသတ်မှတ်ခြင်း

IEE အား ကြိုတင်ကာကွယ် ခြင်း ၊ လျော့ချခြင်း နှင့် စောင့်ကြည့်ရေး ဆောင်ရွက်မှုများအားဖြင့် သက်ရောက်မှုများကို အတော်အတန် လက်တွေ့ကျသောအဆင့် (ALARP) အဖြစ် လျော့နည်း စေရန် ပြင်ဆင်ခဲ့သည်။

ဤအစီရင်ခံစာ၏ ရည်ရွယ်ချက်များမှာ

- စီစဉ်ထားသော လုပ်ဆောင်မှုများနှင့် အလားအလာရှိသော မစီစဉ်ရသေးသော အဖြစ်အပျက်များ ခွဲခြားစိတ်ဖြာရန်
- စီမံကိန်း ဧရိယာရဲ့ ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံလိုင်းတစ်ခု တည်ထောင်ရန်
- လက်ရှိပတ်ဝန်းကျင်ဆိုင်ရာဖော်ပြချက်အပေါ် အခြေခံ၍ သိသာထင်ရှားသော အကျိုးသက်ရောက်မှု များကို ခွဲခြားစိစစ်၍ အကဲဖြတ်ရန်။
- ဖြစ်နိုင်ခြေရှိသော အကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် လျော့နည်းစေသည့် ဆောင်ရွက်ချက်များကို ခွဲခြားစိစစ်ပြီး ဆောင်ရွက်ရန်။

- ပတ်ဝန်းကျင်အပြောင်းအလဲများကို ခြေရာခံနိုင်ပြီး မြန်မာဥပဒေကို လိုက်နာခြင်း သေချာစေရန် စောင့်ကြည့်ရေးအစီအစဉ်တစ်ခုကို အကြံပြုရန်။

ပတ်ဝန်းကျင်လေ့လာမှုအဖွဲ့နှင့် အစီအစဉ်ဇယား

ကြာချိန် – စက်တင်ဘာလ ၂၀၂၃ (၂၀၂၂ စက်တင်ဘာလ ၂၁ ရက်နေ့တွင် စတင်လေ့လာမှု စတင်ခဲ့)

လေ့လာရေးအဖွဲ့ – နီယိုတက်ခ် မြန်မာ ကုမ္ပဏီလီမိတက် (DICA မှတ်ပုံတင်အမှတ်-၁၀၀၁၄၀၈၀၂၊. ရက်စွဲ ၁၁၊၁၂၊၂၀၁၃) (ECD အမှတ် ၀၀၀၄)

အဖွဲ့ဝင်များ –

၁ ဦးခင်မောင်မျိုး (Consultant, ECD No.0015) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၁၉၉၈ ခုနှစ်မှစ၍)

၂ ဒေါ်နုနု၄ (Consultant, ECD No.0014) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၁၃ ခုနှစ်မှစ၍)

၃ ဒေါက်တာခွန်လှိုင်းမြင့် (Consultant, ECD No.0016) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၀၀ ခုနှစ်မှစ၍)

၄ ဒေါက်တာဇင်မင်း (Consultant, ECD No.0018) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၀၀ ခုနှစ်မှစ၍)

၅ ဦးဗညားအောင် (Coordinator) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၀၃ ခုနှစ်မှစ၍)

၆ ဦးဟိန်းသိုက် (Field Surveyor) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၁၃ ခုနှစ်မှစ၍)

၇ ဦးအောင်ချမ်းမင်း (Field Surveyor) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၁၅ ခုနှစ်မှစ၍)

၈ ဦးစောထီးမူး (Field Surveyor) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၁၈ ခုနှစ်မှစ၍)

၉ ဦးဟိန်းထက် (Field Surveyor) ပတ်ဝန်းကျင်ဆိုင်ရာအလုပ်လုပ်ခြင်း အတွေ့အကြုံ (၂၀၁၈ ခုနှစ်မှစ၍)

IEE အစီရင်ခံစာအတွက် မာတိကာ

ဤ အစီရင်ခံစာတွင် IEE အတွက် မာတိကာ အနေဖြင့် အကျဉ်းချုပ်အစီရင်ခံစာအပါအဝင် အခန်း (၉) ခန်း ပါဝင် သည် ။

- အစီရင်ခံစာအကျဉ်းချုပ်၊
- • စီမံကိန်းအဆိုပြုသူ နိဒါန်း

- မူဝါဒ၊ ဥပဒေဆိုင်ရာနှင့် အဖွဲ့အစည်းဆိုင်ရာ အကျဉ်းချုပ်
- စီမံကိန်း အကြောင်းအရာဖော်ပြချက်
- လက်ရှိပတ်ဝန်းကျင်အကြောင်းအရာဖော်ပြချက်
- အဓိကဖြစ်ပေါ်နိုင်သည့် ပတ်ဝန်းကျင်ထိခိုက်မှုများနှင့် ထိခိုက်မှုလျှော့ချရေးလုပ်ငန်းများ၊
- အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်းနှင့် အများပြည်သူသို့ ထုတ်ဖော်တင်ပြခြင်း၊
- ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်
- နိဂုံး။

စီမံကိန်းအကြောင်းအရာဖော်ပြချက်

စီမံကိန်းကိုအပြည့်အဝ သိရှိနားလည်နိုင်ရန်နှင့် စီမံကိန်းလုပ်ဆောင်မှုများနှင့်ပတ်သက်၍ သတင်းအချက်အလက်များကို စုစည်းနိုင်ရန်အတွက် စီမံကိန်းအကြောင်းအရာများကို ပြန်လည်လေ့လာသုံးသပ်ခဲ့ပါသည်။. စီမံကိန်းအကြောင်းအရာဖော်ပြချက်ကို အခန်း (၃) တွင် အောက်ပါအတိုင်း ရေးသားဖော်ပြထားပါသည်။

(၁) နှိုင်းယှဉ်မှုနှင့် အခြားနည်းရွေးချယ်မှုများ

(၂) ရွေးချယ်ထားတဲ့သော အခြားနည်းရွေးချယ်မှုများ၏ ဖော်ပြချက်

စီမံကိန်းတင်ပြခြင်းနှင့် အခြားနည်းအကြောင်းအရာဖော်ပြချက်

စီမံကိန်းနောက်ခံအကြောင်းအရာ

DFL သည် အမှတ် (၆) ရေတာရှည် သကြားစက် သကြားထုတ်လုပ်ခြင်း အဆိုပြုစီမံကိန်း လုပ်ငန်းအားဆောင်ရွက်ခွင့်ပြုပါရန် DFL ဒါရိုက်တာမှ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ တင်ပြခဲ့ရာ မြန်မာနိုင်ငံရင်းနှီး မြှုပ်နှံမှုကော်မရှင်မှ ခွင့်ပြုမိန့်ချပေးခဲ့ပါသည်။

အဆိုပြုစီမံကိန်း ကို ၂၀၁၁ ခုနှစ် ကတည်းက စတင်ခဲ့ပြီး ၎င်း၏ ထုတ်ကုန်များနှင့်အတူ စီမံကိန်းလည်ပတ်မှုအဆင့်တွင်ရှိပြီးဖြစ်သည်။ DFL မှ အဆိုပြုစီမံကိန်းကိုမူ အောက်တွင် ဖော်ပြထားသော စီမံကိန်းအတွက် ပတ်ဝန်းကျင်ထိန်းသိမ်းစောင့်ရှောက်ရေးလုပ်ဆောင်ချက်များကို ဆောင်ရွက်ရာတွင် လိုအပ်ချက်များကိုလိုက်နာရန်နှင့် (ဖော်ပြချက်နှင့်အတူ EMP ပြင်ဆင်ရန် လိုအပ်သည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းလုပ်ထုံးလုပ်နည်းများကို လိုက်နာဆောင်ရွက်၍ အကြံပြုချက်အရ တင်ပြနေစဉ်အတွင်း မိတ္တူကို သယံဇာတနှင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာနသို့တိုက်ရိုက်တင်ပြရန် အကြံပေးထားသည်။

(က) အဆိုပြုလုပ်ငန်းများကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်၊ လူမှုရေးနှင့် ကျန်းမာရေး ထိခိုက်ပျက်စီးမှုများကို လျော့နည်းစေရန်အတွက် လုပ်ငန်းဆိုင်ရာ အချက်အလက်များကို ပြည့်စုံစွာဖော်ပြပြီး လုပ်ငန်းဆောင်ရွက်ရာတွင် ပတ်ဝန်းကျင် ထိခိုက်မှုအနည်းဆုံးဖြစ်စေမည့် နည်းစနစ်များအား အသုံးပြုရန် နှင့် အဆိုပြုလွှာတွင် ဖော်ပြထားသည့် လူမှုရေးဆိုင်ရာ တာဝန်ခံဆောင်ရွက်မှု (Corporate Social Responsibality-CSR) အတွက် အသားတင် အမြတ်ငွေ၏ (၂ ရာခိုင်နှုန်း) ကို အသုံးပြုခြင်းအပါအဝင် ဆောင်ရွက်ပေးသွားမည့် ကတိကဝတ်များကို တိတိကျကျ လိုက်နာအကောင်အထည်ဖော် ဆောင်ရွက်ရန်၊

(ခ) အထက်ပါ လေ့လာဆန်းစစ်မှုရလဒ်များကို အခြေခံ၍ ပတ်ဝန်းကျင်နှင့် လူမှုရေး ထိခိုက်မှု မဖြစ်ပေါ်စေရေး (သို့မဟုတ်) ထိခိုက်မှု အနည်းဆုံးဖြစ်စေသည့် လုပ်ငန်း ဆောင်ရွက်မည့် အစီအစဉ် စွန့်ပစ်ပစ္စည်း/စွန့်ပစ်အရည် စီမံခန့်ခွဲမှုအစီအစဉ်၊ စောင့်ကြပ်ကြည့်ရှုစစ်ဆေး မည့် အစီအစဉ်၊ ပတ်ဝန်းကျင် ထိခိုက်မှုလျော့ပါးစေရေး ဆောင်ရွက်မည့် လုပ်ငန်းများအတွက် သုံးစွဲမည့် ရန်ပုံငွေ စသည်တို့ပါဝင်သည့် (Environmental Management Plan-EMP) ကို ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းပါ အချက်အလက်များနှင့်အညီ ရေးဆွဲတင်ပြ ရန်နှင့် စီမံချက်ပါအတိုင်း အကောင်အထည်ဖော် ဆောင်ရွက်ရန်၊

(ဂ) စီမံကိန်း ဆောင်ရွက်မည့်သူများအနေဖြင့် ကနဦး ပတ်ဝန်းကျင် ဆန်းစစ်ခြင်း၊ ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်များ၊ အစီရင်ခံစာများ ရေးသားပြုစုရာတွင် ပြဋ္ဌာန်းထုတ်ပြန်ထားပြီး ဖြစ်သော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ၊ နည်းဥပဒေ ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်း ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များတွင် ဖော်ပြပါရှိသည့် လိုက်နာဆောင်ရွက်ရမည့် အချက်များ၊ လုပ်ထုံးလုပ်နည်းများ၊ လမ်းညွှန်ချက်များ နှင့်အညီ

လိုက်နာ ဆောင်ရွက်ရန်နှင့် တင်ပြရမည့် အစီအစဉ်အလိုက်လိုအပ်သည့်ပုံစံများ ဖြည့်စွက်၍ တစ်ပါတည်း တင်ပြရန်။

စီမံကိန်း ရည်ရွယ်ချက်နှင့်နယ်ပယ်

ဒလိရှပ်(စ်)ဖုဒ်လီမိတက်သည် အမှတ် (၆) ရေတာရှည် သကြားစက် သကြားထုတ်လုပ်ခြင်း လုပ်ငန်းစီမံကိန်းအား ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ စီမံကိန်းဆောင်ရွက်သူအနေဖြင့် စီမံကိန်းအား သက်ဆိုင်ရာဌာနများမှ အသိအမှတ်ပြုလက်မှတ်၊ ခွင့်ပြုချက်များရယူ၍ မြန်မာနိုင်ငံ၏ ဥပဒေ၊ နည်းဥပဒေများ၊ လုပ်ထုံး လုပ်နည်းများနှင့်အညီ ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

စီမံကိန်း၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အစီရင်ခံစာအား သယံဇာတနှင့် သဘာဝ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန၌ မှတ်ပုံတင်ထားသည့် တတိယအဖွဲ့အစည်းဖြင့် ရေးဆွဲထားပါသည်။

စီမံကိန်း မြေအသုံးချမှု

အင်ဒိုင်းရွာ၊ (မြောက်ဘက် ရေတာရှည်နှင့် တောင်ဘက် ဆွာမြို့ ကြား) တောင်ဂူခရိုင်၊ ရေတာရှည်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး၌တည်ရှိသည့် မြေ၏ နှစ် (၆၀) ဂရံအား ရရှိခဲ့ပြီး ဒလိရှပ်(စ်)ဖုဒ်လီမိတက်၏ အုပ်ချုပ်မှု ဒါရိုက်တာထံသို့ ပြန်လည်ရုတ်သိမ်းပိုင်ခွင့် မရှိသော အထူးကိုယ်စားလှယ် လွှဲစာဖြင့် လွှဲပြောင်းခဲ့ပါသည်။

စီမံကိန်းမြေဧရိယာသည် စက်မှုဇုန်မြေနေရာဖြစ်ပြီး၊ သစ်တောမြေနှင့် အခြားဒေသအစု အဖွဲ့ပိုင်မြေပိုင်ဆိုင်မှုများမှ လွတ်ကင်းပါသည်။ ထို့ကြောင့် စီမံကိန်း၏ မြေပိုင်ဆိုင်မှုသည် အရှုပ်အရှင်းမရှိကြောင်း တွေ့ရှိရ ပါသည်။ ရွေးချယ်ထား သော သီးသန့်စက်မှုဇုန်နယ်မြေဧရိယာအား ဒလိရှပ်(စ်)ဖုဒ်လီမိတက်၏ အမှတ် (၆) ရေတာရှည် သကြားစက် သကြားထုတ်လုပ်ခြင်း ထုတ်လုပ်မှုအတွက် စီမံကိန်းနေရာအဖြစ် အသုံးပြုလိမ့်မည်ဖြစ်သည်၊ ။

စီမံကိန်းသည် စုစုပေါင်းမြေဧရိယာ ၇၂၉.၅၀ ဧကခွဲ ဆောင်ရွက်ခြင်း ဖြစ်ပြီး၊ အင်ဒိုင်းရွာ၊ (မြောက်ဘက် ရေတာရှည်နှင့် တောင်ဘက် ဆွာမြို့ ကြား) တောင်ဂူခရိုင်၊ ရေတာရှည်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး (ကိုဩဒိနိတ်အမှတ် 19°11'56.16667"N, 96° 21' 5.30216“E) ၌ တည်ရှိပါသည်။

စီမံကိန်းသည် စုစုပေါင်းမြေဧရိယာ ၇၂၉.၅၀ ဧကခွဲ ဆောင်ရွက်ခြင်း ဖြစ်ကြောင်း အောက်ပါ ဇယားဖြင့် ရှင်းလင်းဖော်ပြအပ်ပါသည်-

လက်ရှိမြေအသုံးချမှုအခြေအနေ (၂၀၂၃ ခုနှစ်)

မြေအသုံးချမှု	ဧကာ	မြေအသုံးချမှု ရာခိုင်နှုန်း
DFL အတွက် အသုံးပြုသည့် အခြေခံအဆောက်အအုံများ၊ အဆောက်အအုံများနှင့် စိုက်ခင်းများပါရှိသော စက်မှုမြေ	၇၂၉.၅၀	၁၀၀.၀၀
စုစုပေါင်း	၇၂၉.၅၀	၁၀၀.၀၀

စီမံကိန်း၏ မြေဧရိယာ (၇၂၉.၅၀ ဧက) အား အောက်ပါအတိုင်း အသုံးချသွားပါမည်-

စီမံကိန်း၏ မြေဧရိယာ (၀.၂၁၇ ဧက) မြေအသုံးချမှု

မြေအသုံးချမှု	ဧက	မြေအသုံးချမှု ရာခိုင်နှုန်း
DFL စက်ရုံအဆောက်အဦများ၊ အခြားသက်ဆိုင်ရာ အဆောက်အဦများနှင့် ကြံစိုက်ဧရိယာ၊	၇၂၉.၅၀	၁၀၀
စုစုပေါင်း	၇၂၉.၅၀	၁၀၀

သကြားစက်ဧရိယာ (၇၂၉.၅၀ ဧက) သည် စက်ရုံနေရာ (သကြားသန့်စင်စက်၊ ဇီဝစက်ရုံစသည်)၊ လူနေရပ်ကွက် (ဝန်ထမ်းအိမ်၊ ဧည့်ရိပ်သာ၊ ဝန်ထမ်းအိပ်ဆောင်၊ တန်းလျား၊ ကျောင်း၊ စာကြည့်တိုက်၊ ဆေးခန်း၊ ခန်းမ၊ ဝန်ထမ်းသက်သာစတိုးဆိုင်နှင့် ရဲစခန်းစသည်ဖြင့် ဖွဲ့စည်းထားခြင်းဖြစ်သည်။

စီမံကိန်းအပိုင်း

အဆိုပြုထားသော ဧရိယာကို ဖြစ်နိုင်ခြေလေ့လာမှု တွင် စီမံကိန်းဖွံ့ဖြိုးရေးအစီအစဉ်အတွက် စတင်လျက်ရှိပြီး လက်ရှိအဆောက်အဦး နှင့် စက်ပစ္စည်းများ နှင့် ပစ္စည်း ကိရိယာ များ ကဲ့သို့) လက်ရှိ အဆောက်အဦး နှင့် အသုံးအဆောင်ကိရိယာများတပ်ဆင်ခြင်း၊ အသေးစားပြုပြင်ခြင်း တို့အတွက် ဒီဇိုင်းအဆင့်ကို အောက်ပါဇယားတွင် စီမံခန့်ခွဲရန် လိုအပ်ပါသည် -

DFL အဆောက်အအုံ/ထောက်ပံ့မှု ဖော်ပြချက်များ

စဉ်	အဆောက်အအုံ/ကိရိယာ ဖော်ပြချက်
၁	ပင်မစက်ရုံ အဆောက်အဦများ (၇ ခု)၊ ဂိုဒေါင်များ (၁၀ ခု)၊
၂	ဝန်ထမ်းရပ်ကွက်နှင့် ဧည့်ရိပ်သာ (၁၁၃ ခု)၊ အခြားအဆောက်အအုံများ (၁၂ ခု)၊
၃	ပုံမှန်လည်ပတ်မှုအတွက် ပါဝါထောက်ပံ့မှုစနစ် – 1000 KVA၊ အဝင်အတွက် ထရန်စဖော်မာ (၁ ခု)၊ ဖြန့်ဖြူးရန်အတွက် 1000 KVA၊ Transformer (၃ ခု) နှင့် YESB, MOEE မှ နေထိုင်သည့်ရပ်ကွက်အတွက် 300 KVA၊ Transformer (၁ ခု) အစားထိုး ပါဝါထောက်ပံ့မှုစနစ် (အရန်သိမ်းရန်သာ)- 2000 KW ပါဝါတာဘိုင်ဂျင်နရေတာ (1 လုံး) နှင့် DFL မှ 5000 KW ဒီဇယ်ဂျင်နရေတာ (၁ ခု) လည်ပတ်အသုံးပြုမှုအတွက် အခြားစွမ်းအင်သုံးစွဲမှု – Bagasse Boiler (2 စုံ)
၄	အထွေထွေအသုံးပြုသော ရေထောက်ပံ့ရေးစနစ် ရေရင်းမြစ် - မြေအောက်ရေနှင့် မြစ်ရေ လုပ်ငန်းလည်ပတ်မှု - ၈ လက်မရေတွင်းမှ ရေစုပ်စက်ဖြင့် သိုလှောင်ကန်အတွက် စုပ်ယူ သိုလှောင်မှု - သုံးရေ / မီးသတ်ရေ ကန်စနစ်

	သောက်ရေ - လက်ရှိအလေ့အကျင့်နှင့် ခွင့်ပြုထားသော သောက်သုံးရေထုတ်ကုန်များကိုသာ အသုံးပြုရန် စီစဉ်
၅	မုန်တိုင်း နှင့် မိုးရေ စီဆင်းမှုအာ အများပြည်သူရေမြောင်းသို့ တိုက်ရိုက်ချိတ်ဆက်ထား
၆	အများသုံးရေမြောင်းသို့မစွန့်ပစ်မီ စွန့်ပစ်ရေသန့်စင်မှုစနစ် (စစ်ထုတ်ခြင်း)
၇	အညစ်အကြေးသန့်စင်စနစ်(မိလ္လာကန်)
၈	အထွေထွေ အစိုင်အခဲအမှိုက် စီမံခန့်ခွဲရေးစနစ် (အမှိုက်သိုလှောင်ရုံ ဇရိယာတွင် စုဆောင်း၍ CDC သို့ပေးပို့စွန့်ပစ်ခြင်း); ယာယီ စွန့်ပစ်ပစ္စည်းသိုလှောင်ရာဇရိယာ (၁ ခု.)
၉	၂၄ နာရီ လုံခြုံရေး (အစောင့်) ဝန်ဆောင်မှု
၁၀	အရေးပေါ်မီးနှင့် ဘေးအန္တရာယ်စီမံခန့်ခွဲရေးစနစ်

လုပ်ငန်းစဉ် မာစတာပလန်အရ လက်ရှိစက်ရုံ၏ ဌာနအလိုက် တပ်ဆင်ထားသော စက်ပစ္စည်းများနှင့် ပစ္စည်းကိရိယာများကို အောက်တွင်ဖော်ပြထားသည် -

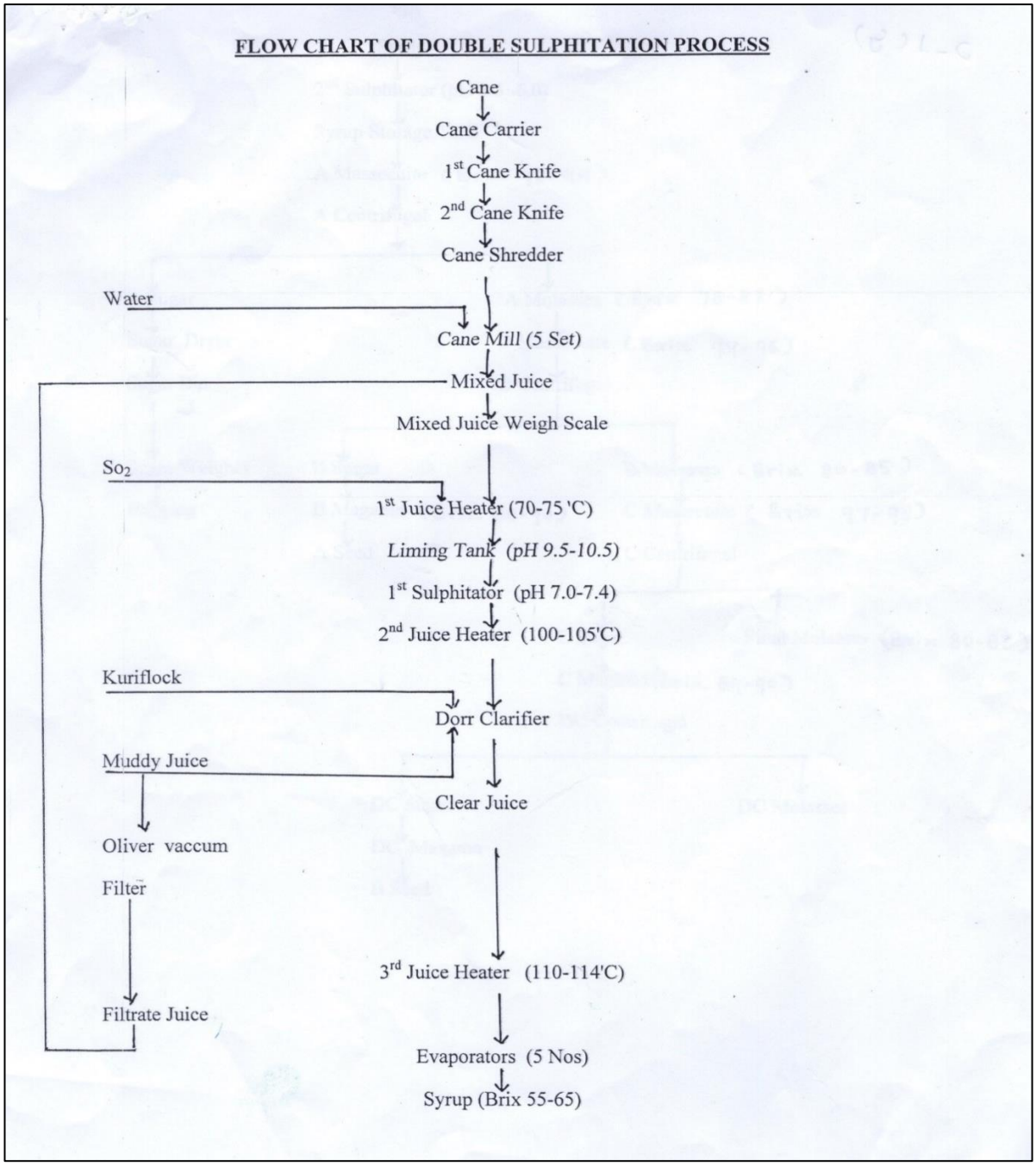
ဌာနအလိုက် တပ်ဆင်ထားသည့် စက်နှင့် ပစ္စည်းကိရိယာစာရင်း

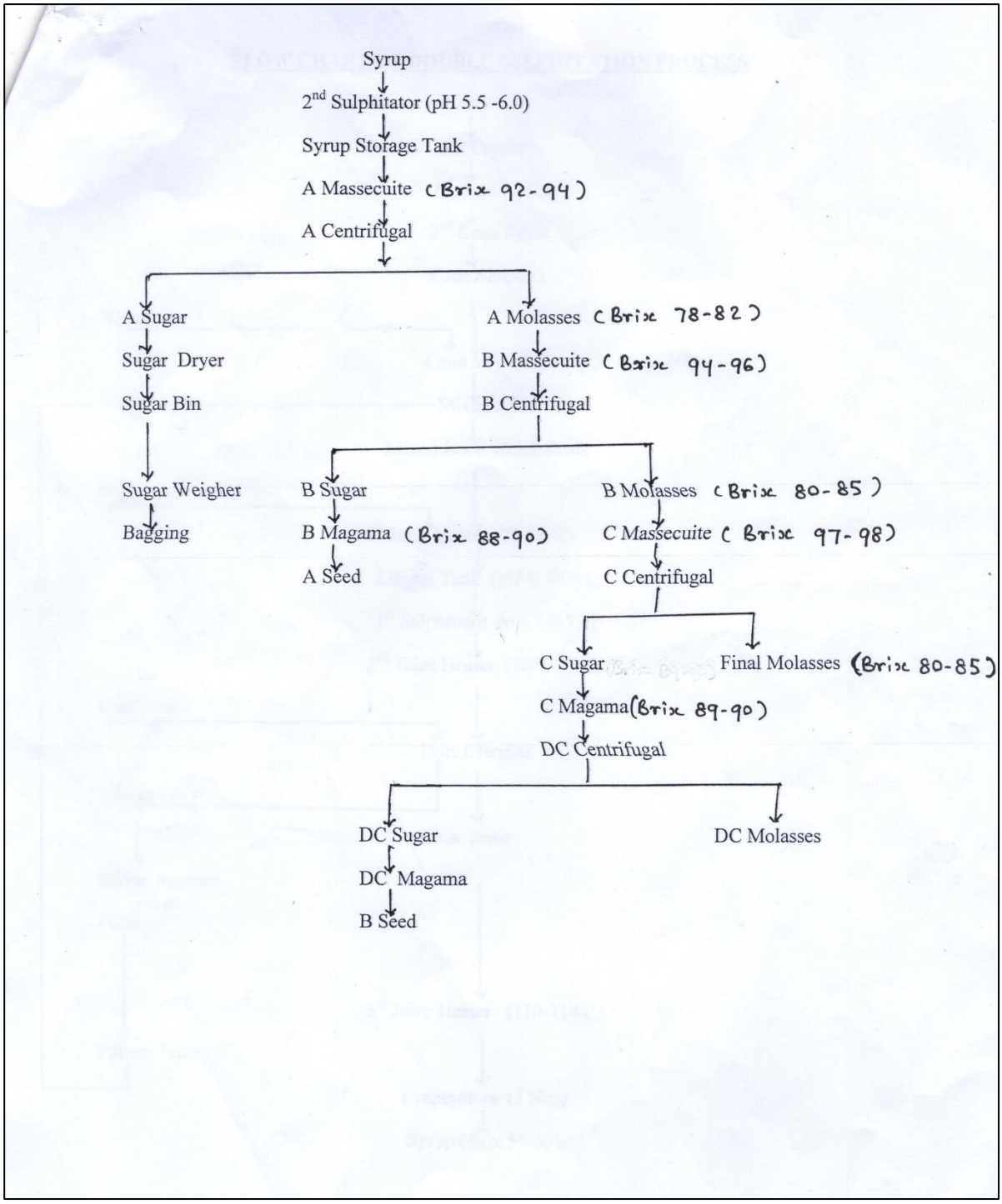
စဉ်	ဌာန	ယူနစ်	စက်နှင့် ပစ္စည်းကိရိယာပမာဏ
၁	ဘွိုင်လာဌာန	ခု	၈၂
၂	ပင်မစက်ရုံ	ခု	၅၆
၃	တာဘိုင်	ခု	၁၃
၄	လျှပ်စစ်	စုံ	၁၄၀
၅	စက်ပစ္စည်း	ခု	၃၇
၆	ဓါတ်ခွဲခန်း	စုံ	၂၉

ပြည်တွင်းမှ ဝယ်ယူထားသော ကုန်ကြမ်းပစ္စည်းများ ကို DFL စီမံကိန်းလုပ်ငန်းစဉ်အဆင့်တွင် အသုံးပြုပါမည်။

ကုန်ကြမ်းအတွက် ကြံစိုက်ပျိုးဇရိယာ - ၄၁၁၆.၂၀ ဧက
တောင်သူဦးရေ - ၇၄၅ ဦး
ကုန်ကြမ်းဝယ်ယူမှုပမာဏ -၆၀၀၀၀ တန်
အမှတ် ၆ သကြားစက်ရုံ၏ ကြံစိုက်ပျိုးဇရိယာ - ၅၃၇.၅၀ ဧက
စက်ရုံစိုက်ခင်းမှကြံထွက်ရှိမှုပမာဏ - ၁၀၀၀၂၅ တန်

ထုတ်လုပ်မှုလုပ်ငန်းစဉ်


FLOW CHART OF DOUBLE SULPHITATION PROCESS
Cane
Cane Carrier
1st Cane Knife
2nd Cane Knife
Cane Shredder
Water
Cane Mill (5 Set)
Mixed Juice
Mixed Juice Weigh Scale
So2
1st Juice Heater (70-75 'C)
Liming Tank (pH 9.5-10.5)
1st Sulphitator (pH 7.0-7.4)
2nd Juice Heater (100-105'C)
Kuriflock
Dorr Clarifier
Muddy Juice
Clear Juice
Oliver vaccum
Filter
3rd Juice Heater (110-114'C)
Filtrate Juice
Evaporators (5 Nos)
Syrup (Brix 55-65)



ထုတ်လုပ်မှုလုပ်ငန်းစဉ်အဆင့်များ

နှစ်အလိုက်ကုန်ထုတ်လုပ်မှုအစီအစဉ်

DFL ၏ ထုတ်လုပ်မှုပမာဏမှာ တစ်ရက်လျင် ၁၅၀၀ တန်ဖြစ်သည်။ ထုတ်လုပ်မှုလုပ်ငန်းစဉ်နှင့် ထုတ်ကုန်များအကြောင်းအားနောက်ဆက်တွဲ (၂) တွင် ဖော်ပြထားပါသည်။

နှစ်စဉ် လောင်စာ/ဓါတုပစ္စည်း သုံးစွဲမှု

နှစ်စဉ် လောင်စာ/ဓါတုပစ္စည်း သုံးစွဲရာတွင် စီမံကိန်းလည်ပတ်မှုနှင့် ပြုပြင်ထိန်းသိမ်းမှုတွင် အများစုအသုံးပြုပြီး၊ သယ်ယူပို့ဆောင်ရန် မော်တော်ယာဉ်များ သုံးစွဲခြင်းတို့ပါဝင်ပါသည်။ (ဥပမာ - မီးစက်မောင်းနှင်ခြင်း၊ အိမ်သုံးဓာတုပစ္စည်းအသုံးပြုခြင်း)

အင်ဂျင်ဝိုင်/လောင်စာဆီ/ဒီဇယ်ဆီ/ဓါတ်ဆီ သုံးစွဲမှုအခြေအနေ(အမျိုးအစား၀ယ်ယူမည့်နေရာတစ်ရက်/တစ်လ/တစ်နှစ် ပျမ်းမျှသုံးစွဲမှု/သိုလှောင်ထားရှိမှု)

စဉ်	ဆီအမျိုးအစား	သုံးစွဲမှုအခြေအနေ			သိုလှောင်ထားရှိမှု	ဝယ်ယူမည့်နေရာ	မှတ်ချက်
		တန်နှစ်	တစ်လ(ဂါလံ)	တစ်ရက်(ဂါလံ)			
1	Diesel	3585 1/3 Gal	298.75	9.95		ပြင်ပကုမ္ပဏီပိုင်စက်ဆီ ချောဆီကုမ္ပဏီလုပ်ငန်းများ	2022–2023 ကိုရည်ညွှန်းပါသည်။
2	Petro	459 1/3 Gal	38.25	1.27		〃	〃
3	Octane	207 Gal	17.25	0.575		〃	〃
4	Engine Oil (Turbine)	132 Gal	-	-			2019 ကိုရည်ညွှန်းပါသည်။
	Engine Oil (ဖိုက်ကွင်း)	83 Gal	-	-			2022 ကိုရည်ညွှန်းပါသည်။
5	မီးထိုးဆီ	7400 Gal	-	-	Main Storange Tank တွင်ခန့်မှန်းတစ်နှစ်လျှင် 30000 gals သိုလှောင်ပြီး Service Tank သို့လိုအပ်သလောက်ပေးပို့ ပြီး Bunner မောင်းနှင်ပါသည်။		2022–2023 ကိုရည်ညွှန်းပါသည်။
6	Swee IGO GC EP 680	15 Drum	-	-			〃
7	Gear Oil 220	6 Drum	-	-			〃
8	Tellus Oil 150	1 Drum	-	-			〃
9	Hydraulic Oil 32	1 Drum	-	-			〃
10	Turbine 46	3.5 Drum	-	-			〃
11	Turbine 68	1 Drum	-	-			〃
12	Diesel (Diesel Generator)	300 Gal	-	-			〃
13	Compressor Oil 32	1 Can	-	-			〃
14	Compressor Oil 46	5 Gal	-	-			〃
15	Tonna Oil 38	1 Drum	-	-			〃
16	Tonna Oil 68	30 Gal	-	-			2020 ကိုရည်ညွှန်းပါသည်။
17	Hydraulic Oil 32	20 Gal	-	-			2020 ကိုရည်ညွှန်းပါသည်။ Work Shop

နှစ်စဉ် လောင်စာ/ဓါတုပစ္စည်းသုံးစွဲမှု ခန့်မှန်းခြေ

စွန့်ပစ်ကြံဖတ်ကြိတ်ဖက်များကို ဘွိုင်လာလောင်စာအဖြစ်အသုံးပြုပါသည်။ ဘွိုင်လာလောင်စာ စွန့်ပစ်ကြံဖတ်ကြိတ်ဖက်အသုံးပြုမှုပမာဏအား အောက်တွင်ဖော်ပြထားပါသည်။

J၄- Boiler Usage

ဘွိုင်လာသုံးစွဲမှု(၅)နှစ်စာတွက်ချက်မှုစာရင်း

စဉ်	ကြံရာသီ ခုနှစ်	ကြိတ်ဝါးတန် (မက်ထရစ်တန်)	မီးထိုးဆီသုံးစွဲမှု (ဂါလံ)	ကြံဖတ်သုံးစွဲမှု (တွက်ချက်မှုတန်)	ကြံပြာထွက်ရှိမှု နှေလိုက်(တန်)	ကြံပြာထွက်ရှိမှု စုစုပေါင်း(တန်)
1	2018-2019 Bagasse %Cane b=31.96%	102024.51	14150	31794.87	29.364	2550.61
2	2019-2020 b =31.4%	53046.63	8275	16656.87	28.21	1326.17
3	2020-2021 b =31.54%	41707.93	3750	13154.17	34.29	1042.70
4	2021-2022 b =30.55%	37931.460	9300	11587.87	28.5	948.29
5	2022-2023 b =30.12%	56225.2614	7400	16933.03	31.23	1405.63

ငါးနှစ်စာ ဘွိုင်လာလောင်စာအသုံးပြုမှု

နှစ်စဉ်လျှပ်စစ်သုံးစွဲမှု

လျှပ်စစ်ဓါတ်အား သုံးစွဲရာတွင် လျှပ်စစ်ဓါတ်အားပေးရေးကော်ပိုရေးရှင်း၏ ဓါတ်အားဖြန့်ဖြူးရေးမှ ရယူသုံးစွဲသွားပါမည်။ လျှပ်စစ်မီးပြတ်တောက်ချိန်တွင် သုံးစွဲနိုင်ရန် ဒီဇယ်ဆီသုံး အရံမီးစက် အသင့်ထားရှိပါသည်။ လစဉ်လျှပ်စစ်သုံးစွဲမှုများအတွက် ကျသင့်ငွေများ ပေးဆောင်သွားမည်ဖြစ်ပြီး၊ သုံးစွဲမှု ခန့်မှန်းခြေအား အောက်ပါအတိုင်း တွက်ချက်ဖော်ပြအပ်ပါသည်-

နှစ်စဉ်လျှပ်စစ်ဓါတ်အားသုံးစွဲမှု (ယူနစ်- မီတာယူနစ်)

စဉ်	လျှပ်စစ်သုံးစွဲမှု	သုံးစွဲယူနစ် ထုတ်လုပ်မှု ရာသလည်ပတ်ချိန်	သုံးစွဲယူနစ် လည်ပတ်မှု ရာသီရပ်နားထားချိန်
၁	ထရန်စဖော်မာ (၄) လုံး ဓါတ်အားဖြန့်ဖြူးရေးမှ ရယူသုံးစွဲခြင်း (ပုံမှန်လည်ပတ်ခြင်း)	၁၆၀၀ KWH/Day ၄၈၀၀၀ KWH/Month	၈၀၀ KWH/Day ၂၄၀၀၀KWH/Month
၂	တာဘိုင်မီးစက် (၂) လုံး ဒီဇယ်ဆီသုံးမီးစက် (၁) လုံး (အရံစနစ်သုံးစွဲခြင်း)	၄၀၈၀၀၀ KWH/Day ၁၂၂၄၀၀၀ KWH/ Month	-

နှစ်စဉ်ရေသုံးစွဲမှု

နှစ်စဉ်ရေသုံးစွဲရာတွင် စက်ရုံစီမံကိန်းလည်ပတ်ရန် နှင့် ဝန်ထမ်းများအတွက် အဓိကထားသုံးစွဲမည်ဖြစ်ပြီး၊ စစ်တောင်းမြစ်ရေနှင့် မြေအောက်ရေအား သုံးစွဲသွားမည်ဖြစ်ပါသည်။ မြေအောက်ရေအား ၈ လက်မ အဝိစိတွင်းမှ မော်တာဖြင့်စုပ်ယူ၍ သိုလှောင်ကန်များတွင် သိုလှောင်ပြီးနောက် စီမံကိန်းအတွင်း နေ့စဉ်သုံးစွဲနိုင်ရန် ဖြန့်ဖြူးသွားမည်ဖြစ်ပြီး၊ စီမံကိန်းလည်ပတ်ခြင်း သုံးစွဲရန်နှင့် အရေးပေါ်မီးငြိမ်းသတ်ရန်အတွက်လည်း အရံသင့် ထားရှိပါမည်။ ရေသုံးစွဲမှု ခန့်မှန်းခြေအား အောက်ပါအတိုင်း ဖော်ပြအပ်ပါသည်-

နှစ်စဉ် ရေသုံးစွဲမှု (ဂါလံ)

စဉ်	ကြာချိန်	သုံးစွဲယူနစ် လည်ပတ်မှု ရာသီရပ်နားထားချိန် (၁၀ လ)	သုံးစွဲယူနစ် ထုတ်လုပ်မှု ရာသီလည်ပတ်ချိန် (၂ လ)
၁	တစ်နာရီ	၆၀ တန်	၄၀၀ တန်
၂	တစ်ရက်	၃၆၀ တန်	၈၀၀၀ တန်
၃	တစ်လ	၉၃၆၀ တန်	၂၀၀၀၀၀ တန်
၄	တစ်နှစ်	၉၃၆၀၀ တန်	၄၀၀၀၀၀ တန်

စီမံကိန်းရင်းနှီးမြှုပ်နှံမှုပမာဏ

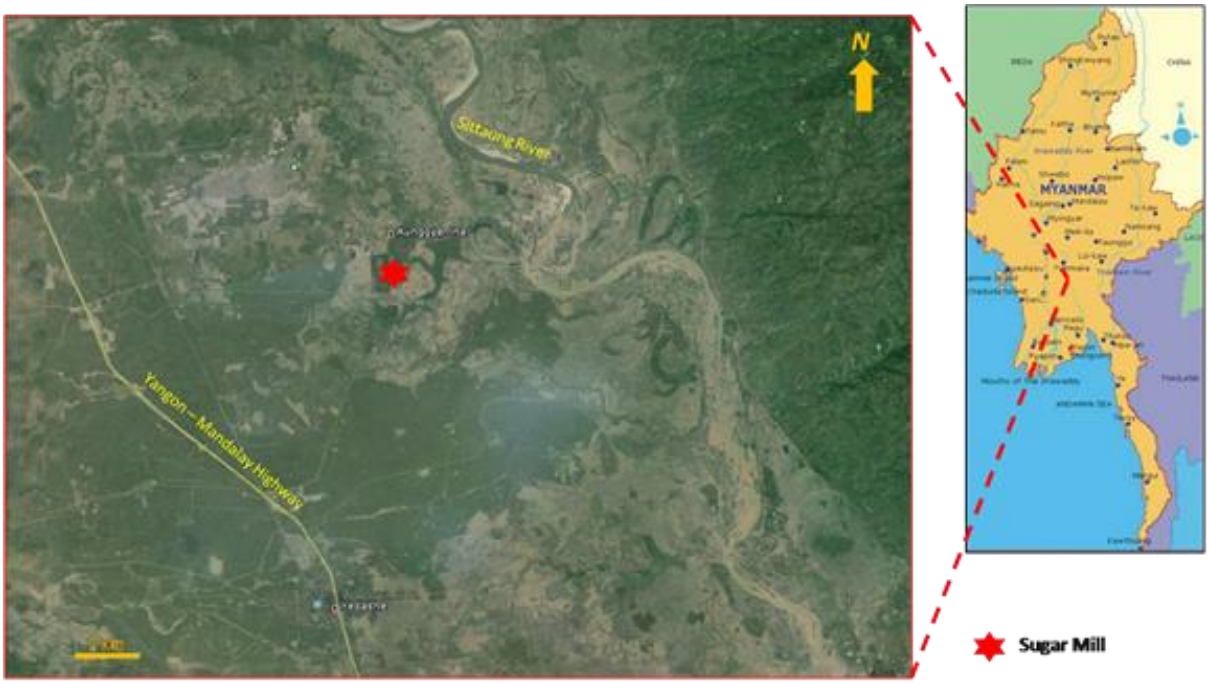
စီမံကိန်းဆောင်ရွက်ရန်အတွက် ယန်း သန်း ၅၀၀၀ အား ရင်းနှီးမြှုပ်နှံ သွားမည်ဖြစ်ပါသည်။

ဝန်ထမ်းလိုအပ်ချက်

စီမံကိန်းလည်ပတ်ရန် ဝန်ထမ်း (၂၀၇) ဦးခန့် လိုအပ်မည် ဖြစ်ပါသည်။

စီမံကိန်းတည်နေရာပြမြေပုံ

စီမံကိန်းသည် ကိုဩဒိနိတ်အမှတ် (19°11'56.16667"N, 96° 21' 5.30216"E) အင်ဒိုင်းရွာ၊ (မြောက်ဘက် ရေတာရှည်နှင့် တောင်ဘက် ဆွာမြို့ ကြား) တောင်ငူခရိုင်၊ ရေတာရှည်မြို့နယ်၊ ပဲခူးတိုင်းဒေသကြီး၌ တည်ရှိပါသည်။



စီမံကိန်းတည်နေရာပြမြေပုံ

စီမံကိန်းတည်နေရာပြမြေပုံ (19°11'56.16667"N, 96° 21' 5.30216“E)

စီမံကိန်းအကောင်အထည်ဖော်ရေးအချိန်ဇယား

စီမံကိန်းအား ဒလိရှပ်(စ်)ဖုဒ်လီမိတက်မှ လည်ပတ်ဆောင်ရွက်သွားမည်ဖြစ်ပြီး စိုက်ပျိုးရေးနှင့် ဆည်မြောင်းဝန်ကြီးဌာနအောက်တွင် BOT စနစ်ဖြင့်ဆောင်ရွက်ရန် ၂၀၁၁ ခုနှစ် စက်တင်ဘာလ ၁၄ ရက် ရက်စွဲပါ စာအမှတ် ၁၁/သကြားစက် (ဖ၅၃/၂၀၁၁) ဖြင့် အတည်ပြုထားပါသည်။

ဖွံ့ဖြိုးရေးကာလ၊ လည်ပတ်ရေးကာလ နှင့် ဖျက်သိမ်းခြင်းကာလဟူ၍ စီမံကိန်းကာလ (၃) ခုဖြစ်ပါသည်။ စီမံကိန်းအား ၂၀၁၁ ခုနှစ်တွင် စတင်ခဲ့ပြီး စိုက်ပျိုးရေးနှင့် ဆည်မြောင်းဝန်ကြီးဌာန၏ ခွင့်ပြုသက်တမ်းအတွင်း BOT စနစ်ဖြင့် နှစ်ပေါင်း ၃၀ ခန့် စီမံကိန်းလည်ပတ်ဆောင်ရွက်သွားရန် လျာထားပါသည်။ စီမံကိန်းဖျက်သိမ်းခြင်းအား သဘောတူထားသည့်စီမံကိန်းကာလ ပြီးဆုံးပြီးနောက် သို့မဟုတ် အငှားစာချုပ်တွင် ပါဝင်သည့် အချက်များအား နှစ်ဦးနှစ်ဖက် လိုက်နာပြီးနောက် ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။

စီမံကိန်းအကောင်အထည်ဖော်ရေး အချိန်ဇယားအား အောက်ပါဇယားဖြင့် ဖော်ပြအပ်ပါသည်-

ကာလ	စတင်ခြင်း	ကာလ	ပြီးဆုံးမှု %
ဖွံ့ဖြိုးရေး	၁၉၈၆	၄ နှစ်	၁၀၀%
လည်ပတ်ရေး (အစိုးရ)	၁၉၉၀ နိုဝင်ဘာ	၂၁ နှစ်	ပြီးစီး ရင်းနှီးမြှုပ်နှံမှု အသစ်ဆီ လွှဲပြောင်း
လည်ပတ်ရေး (DFL)	၂၀၁၁ ခုနှစ် သြဂုတ်	စာချုပ်ပါအတိုင်း	BOT စနစ်ဖြင့်စာချုပ်
ဖျက်သိမ်းရေး	TBA	TBA	N/A

အခြားဆောင်ရွက်နိုင်သည့်နည်းလမ်း

တည်နေရာ၊ ရင်းနှီးမြှုပ်နှံမှုအမျိုးအစား၊ ဈေးကွက်အခြေအနေ စသည်တို့ကို အကဲဖြတ်သည့် အဆိုပြုထားသော စီမံကိန်းအတွက် ဒေသတွင်း အရင်းအနှီးမြှုပ်နှံရန် ပြင်ဆင်သည့် အဆင့်မှစတင်၍ အဆိုပြုထားသော ပရောဂျက်အတွက် ရင်းနှီးမြှုပ်နှံသူမှ ကျယ်ကျယ်ပြန့်ပြန့် လေ့လာမှုကို ပြုလုပ်ခဲ့ပါသည်။ အဆောက်အဦမှာ ဆောက်လုပ်ပြီးစီးပြီး ဖြစ်သဖြင့် ဆောက်လုပ်ခြင်းအတွက် အခြားဆောင်ရွက်နိုင်သည့် နည်းလမ်းအား ထပ်မံဆောင်ရွက်နိုင်ခြင်းမရှိပါ။

အဆောက်အဦဒီဇိုင်း၊ ဆောက်လုပ်မှုနှင့် တပ်ဆင်မှုလုပ်ငန်းစဉ်၊ စီမံကိန်းကာလနှင့် တရားဝင်ခွင့်ပြုထားသည့် ပရောဂျက်အဆိုပြုချက်အတိုင်း ဆက်လက်ဆောင်ရွက်ရန် အဆိုပြုထားသော စီမံကိန်းရည်ရွယ်ချက်များအတွက် အခြားရွေးချယ်စရာမရှိသေးပါ။

တရားဝင်ခွင့်ပြုထားသော မူလပရောဂျက်အဆိုပြုချက်မှလွဲ၍ ပရောဂျက်ကာလတလျှောက် အပြောင်းအလဲများ လိုအပ်ပါက အခြားရွေးချယ်စရာ/ပြောင်းလဲမှုများကို တင်ပြပါ မည်။

ရွေးချယ်ထားသည့်နည်းလမ်း

စီမံကိန်းတည်နေရာ၊ ဈေးကွက်လိုအပ်ချက်၊ ဝန်ဆောင်ပေးနိုင်မှု၊ စက်ပစ္စည်းကိရိယာများ၏ စွမ်းဆောင်ရည်၊ ထောက်ပံ့ပို့ဆောင်ရေးနှင့်ငွေပေးချေခြင်း၊ ရင်းနှီးမြှုပ်နှံမှု နှင့် ပြန်လည်ရရှိမည့် အကျိုးအမြတ် တို့အပေါ် မူတည်၍ လက်တွေ့ကျသည့် နည်းလမ်းအားရွေးချယ်ထားပါသည်။

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ်

DFL သည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာကျွမ်းကျင်သူများနှင့် လိုအပ်သလို ပူးပေါင်း၍ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ်အား ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ ထပ်မံ၍ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ၊ နည်းဥပဒေများ၊ အမိန့်၊ ညွှန်ကြားချက်များအား လိုက်နာသွားမည် ဖြစ်ကြောင်း ကတိပြုပါသည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP)

စီမံကိန်းဆောင်ရွက်သူအနေဖြင့် စီမံကိန်းမှ နေ့စဉ်ထွက်ရှိသည့် စွန့်ပစ်ပစ္စည်းများအား ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်နှင့်အညီ သန့်ရှင်းစေရန် ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။ စီမံကိန်းဆောင်ရွက်သူအနေဖြင့် EMP အား အကောင်အထည်ဖော် ဆောင်ရွက်သွားပါမည်။

လိုက်နာဆောင်ရွက်မည့် ဥပဒေ၊ ဒီကရီ၊ စည်းမျဉ်းစည်းကမ်း၊ စံချိန်စံညွှန်း၊ လမ်းညွှန် ချက်များ

စီမံကိန်းအနေဖြင့် မြန်မာနိုင်ငံမှ ထုတ်ပြန်ထားသည့် ဥပဒေ၊ နည်းဥပဒေများ၊ လုပ်ထုံးလုပ်နည်းများ နှင့် အမိန့်နှင့်ညွှန်ကြားချက်များအား လိုက်နာသွားမည်ဖြစ်ပါသည်။ အသေးစိပ်အား အစီရင်ခံစာ အခန်း (၂) ၌ ဖော်ပြထားပါသည်။

စီမံကိန်းဆောင်ရွက်သူ အနေဖြင့် ဤအစီရင်ခံစာပါ အချက်အလက်များအား ပြည့်စုံကြောင်း နှင့် စီမံကိန်းဆောင်ရွက်သည့်ကာလတစ်လျှောက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား အကောင်အထည်ဖော် ဆောင်ရွက်သွားမည်ဖြစ်ကြောင်း ကတိပြုပါသည်။

ဤအစီရင်ခံစာရေးသားသည့် တတိယအဖွဲ့အစည်းဖြစ်သည့် နီရိုတက်ချ်မြန်မာကုမ္ပဏီလီမိတက်အနေဖြင့် စုစည်းရရှိသည့် အချက်အလက်များအပေါ် အခြေခံ၍ ဤအစီရင်ခံစာအား ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းလုပ်ထုံးလုပ်နည်း နှင့်အညီ ရေးသားပြုစုထားပါသည်။

စီမံကိန်းဆောင်ရွက်သူ အနေဖြင့် ထုတ်ပြန်ထားသည့် ဥပဒေ၊ နည်းဥပဒေ၊ အမိန့်၊ ညွှန်ကြားချက်များနှင့်အညီ ပတ်ဝန်းကျင်နှင့်လူမှုရေးဆိုင်ရာ ကောင်းမွန်သည့် အလေ့အကျင့်များ ကျင့်သုံး၍ စီမံကိန်းအား လည်ပတ်သွားမည်ဖြစ်ပါသည်။

စီမံကိန်းဆောင်ရွက်သူ အနေဖြင့် စီမံကိန်းဆိုင်ရာ အခွန်အခအားလုံးအား ပေးဆောင်သွားရမည် ဖြစ်ကြောင်း နားလည်သဘောပေါက်ပြီး ဖြစ်ပါသည်။ စီမံကိန်းဝန်ထမ်းများ၏ သက်သာချောင်ချိရေးအတွက် သက်သာချောင်ချိရေးအစီအစဉ်များအား ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

ဝိဟိတကုမ္ပဏီလီမိတက်အနေဖြင့် CSR အစီအစဉ်အား နှစ်စဉ်အမြတ်ငွေ၏ ၂ ရာခိုင်နှုန်း ထည့်ဝင်၍ အကောင်အထည်ဖော်ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ CSR အစီအစဉ်အား အကောင် အထည်ဖော်ဆောင်ရွက်မှုအဖြစ် အောက်ပါအတိုင်း ဆောင်ရွက်ရန် စီစဉ်ထားရှိပါသည်-

-ဒေသတွင်းရှိ ကျောင်းသားများအတွက် စာကြည့်တိုက်၊ စာရေးကိရိယာ၊ ဗလာစာအုပ်များ အစရှိသဖြင့် ပညာရေးကဏ္ဍအတွက် အထောက်အပံ့ပေးခြင်း

-ဒေသတွင်းရှိ လူနာများအတွက် ဆရာဝန် နှင့် ဆေးဝါးများ၊ ဆေးခန်းများ အစရှိသဖြင့် ကျန်းမာရေးကဏ္ဍအတွက် အထောက်အပံ့ပေးခြင်း

စီမံကိန်းအနီးပတ်ဝန်းကျင်

စီမံကိန်းသည် အမှတ်၂၈၊ ကနောင်မင်းသားကြီးလမ်းနှင့် လှေသင်းအတွင်းဝန် ဦးချမ်း လမ်းထောင့်၊ စက်မှုဇုန် (၁)၊ ဒဂုံဆိပ်ကမ်း မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး (ကိုဩဒိနိတ်အမှတ် 16°48'06.03" N, 96° 08'5.12" E) ၌ တည်ရှိပါသည်။ စီမံကိန်းသည် လူနေရပ်ကွက်အတွင်း တည်ရှိပြီး၊ စီမံကိန်းဧရိယာမှ မိတာ ၁၀၀ အချင်းဝက်အတွင်းရှိ အခြေခံ လူမှု-ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များကို ရှာဖွေဖော်ထုတ်၍ အဆိုပြုစီမံကိန်းအတွက် ကနဦးပတ်ဝန်းကျင်စစ်ဆေးမှု ပြုစုရာတွင် ကိုးကား အသုံးပြုသွားပါမည်။

ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံအကြောင်းအရာများ

အဆိုပြုထားသော ပရောဂျက်၏ အခြေခံပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်ကို အတိုချုံး၍ အောက်တွင်ဖော်ပြထားပြီး အသေးစိတ်မှာ အစီရင်ခံစာ အပိုဒ် - ၄ တွင် ပါရှိပါသည် -

- ရုပ်ပိုင်းဆိုင်ရာအကြောင်းအချက်များ
- ဇီဝပိုင်းဆိုင်ရာအကြောင်းအချက်များ
- လက်ရှိပတ်ဝန်းကျင်အရည်အသွေးဆိုင်ရာအကြောင်းအချက်များ
- လူမှုဆိုင်ရာအကြောင်းအချက်များ

ရုပ်ပိုင်းဆိုင်ရာအကြောင်းအချက်များ

ဒဂုံဆိပ်ကမ်းမြို့နယ်သည် ပင်လယ်ရေပြင်အထက် ၁၄.၄၁ ပေ ၌တည်ရှိပြီး၊ ပဲခူးမြစ်သည် မြို့နယ်အရှေ့ဘက်မှ ရန်ကုန်မြစ်အတွင်း စီးဝင်ပါသည်။ မြေပြန့်ဒေသတွင် တည်ရှိသောကြောင့် သဘာဝဘေးအန္တရာယ် မကြာခဏ ဖြစ်ပွားလေ့မရှိပါ။ မြို့နယ်သည် ပူနွေးသောရာသီဥတုရှိပြီး အမြင့်ဆုံးအပူချိန်မှာ ၄၂.၂ ဒီဂရီစင်တီဂရိတ်နှင့် အနိမ့်ဆုံးအပူချိန်မှာ ၁၅.၆ ဒီဂရီစင်တီဂရိတ် ဖြစ်သည်။

ဘူမိဗေဒအမြင်အရ လေ့လာသည့်ဧရိယာသည် Quaternary Valley Filled Deposit များ ဖုံးလွှမ်းနေပါသည်။ ရန်ကုန်ဧရိယာတွင် Quaternary Bed သည် အတော်အတန်အထူ ၁၆ မှ ၁၀၀

မီတာ)ရှိပြီး ဧလဗေဒရှုထောင့်မှကြည့်လျှင် ရေအောင်းအလွှာသည် ၄၀ မှ ၈၀ မီတာ အကြားတွင်ရှိသည်။ (ဇော်မျိုးဦး – 2012)

ဇီဝပိုင်းဆိုင်ရာအကြောင်းအချက်များ

အဆိုပြုထားသောစီမံကိန်းဧရိယာတွင် ဇီဝမျိုးစုံမျိုးကွဲ အကာအကွယ်ပေးထားသော နေရာများအတွင်း မတည်ရှိပါ။ စက်မှုဇုန်အတွင်းတွင် တည်ရှိသောကြောင့် သစ်ပင်ပန်းမန်များနှင့် တိရစ္ဆာန်များကို အကျိုးသက်ရောက်မှုမရှိနိုင်ပါ။

လက်ရှိပတ်ဝန်းကျင်အရည်အသွေးဆိုင်ရာအကြောင်းအချက်များ

၂၀၂၂ ခုနှစ် မေလ ၅ ရက်နေ့တွင် လက်ရှိပတ်ဝန်းကျင်အရည်အသွေး (ရေအရည်အသွေး၊ လေထုအရည်အသွေး၊ ဆူညံသံထုတ်ရှိမှု စသည်တို့) ကို သိရှိနိုင်ရန် စီမံကိန်းဧရိယာတွင် ကွင်းဆင်းလေ့လာခဲ့ပါသည်။ ပတ်ဝန်းကျင်အရည်အသွေးစောင့်ကြည့်ရေးအစီအစဉ် အဓိကရည်ရွယ်ချက်မှာ လက်ရှိဝန်းကျင်၏ အခြေခံကိန်းဂဏန်းဆိုင်ရာအချက်အလက်များကို မှတ်တမ်းတင်ထားပြီး၊ စီမံကိန်းလုပ်ဆောင်ချက်ကြောင့် အနီးပတ်ဝန်းကျင်အပေါ် အကျိုးသက်ရောက်နိုင်မှုအား တွက်ချက်နိုင်ရန် ဖြစ်သည်။ တိုင်းတာချက်များအရ လမ်းညွှန်ချက်များအတွင်းရှိကြောင်း တွေ့ရှိရပါသည်။

လူမှုဆိုင်ရာအကြောင်းအချက်များ

ရန်ကုန်တိုင်းဒေသကြီး၏ မြို့ပြလူဦးရေသည် ၅ ဒသမ ၁ သန်းကျော်ရှိသည်။ ဒဂုံဆိပ်ကမ်းမြို့နယ်သည် စီးပွားရေး ဖွံ့ဖြိုးတိုးတက်လျက်ရှိသည့် မြို့နယ်တစ်ခုဖြစ်ပြီး၊ မြို့နယ်အတွင်း စက်မှုဇုန် (၂) ခု တည်ရှိပါသည်။ မြို့နယ်အတွင်း လျှပ်စစ်ဓါတ်အားရရှိသုံးစွဲလျက်ရှိပြီး၊ အများပြည်သူသယ်ယူပို့ဆောင်ရေးမော်တော်ယာဉ်များဖြင့် သွားလာနိုင်ပါသည်။

မြို့နယ်အား ရပ်ကွက် ၃၅ ခုဖြင့် ဖွဲ့စည်းထားသည်။ မြို့နယ်တွင် နေထိုင်သူ စုစုပေါင်း ၂၈၇၇၂၂ ဦး နေထိုင်ပါသည်။ ဤမြို့နယ်ရှိ အိမ်ထောင်စု စုစုပေါင်းမှာ ၇၄၃၆၂ ဖြစ်ပါသည်။ အမျိုးသားနှင့် အမျိုးသမီးအချိုးသည် ၁:၁.၀၇ ဖြစ်သည်။ မြို့နယ်တွင် အလုပ်လက်မဲ့နှုန်း (အသက် ၁၅ နှစ်မှ ၆၄ နှစ်ကြား) သည် ၅.၇၈% ဖြစ်သည်။

မြို့နယ်ရှိ လူအများစုသည် ဗုဒ္ဓဘာသာဝင်များ ဖြစ်ကြသည်။ ထင်ရှားသော စေတီ ၂ ဆူ၊ ထင်ရှားသော ဘုန်းတော်ကြီးကျောင်း ၃ ကျောင်း၊ တည်ရှိသည်။

ယေဘူယျအားဖြင့် စီမံကိန်းအနီးဝန်းကျင်နေရာများသည် ရန်ကုန်မြို့တော်စည်ပင်သာယာရေး ကော်မတီ (YCDC)၏ အုပ်ချုပ်မှု အောက်တွင်ရှိပါသည်။ လျှပ်စစ်မီး၊ ရေပေးဝေရေး၊ ဆက်သွယ်ရေး၊ လမ်း၊ အများပြည်သူသယ်ယူပို့ဆောင်ရေး၊ ဆေးရုံ၊ အမှိုက်သိမ်း၊ စွန့်ပစ်မှု၊ ပတ်ဝန်းကျင်သန့်ရှင်းရေး၊ အများသူငှာစွေးနှင့် လုံခြုံရေးဝန်ဆောင်မှုများကို ရန်ကုန်တိုင်းဒေသကြီးအစိုးရအဖွဲ့က စီမံဆောင်ရွက် ပေးလျက်ရှိသည်။

ဖြစ်နိုင်ချေရှိသော ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများ ဖော်ထုတ်ခြင်း နှင့် ဆန်းစစ်ခြင်း

ဖြစ်နိုင်ချေရှိသော ပတ်ဝန်းကျင်ဆိုင်ရာသက်ရောက်မှုများ ဖော်ထုတ်ခြင်း နှင့် ဆန်းစစ်ခြင်းတွင် ပြင်းထန်သည့် သက်ရောက်မှုများ၊ ကြွင်းကြန်သက်ရောက်မှုများအား ကောင်းကင်ဓါတ်ပုံများ၊ ဂြိုလ်တုဓါတ်ပုံများ၊ မြေပုံများ အသုံးပြု ဆန်းစစ်ခြင်းတို့အောက်ပါအတိုင်း ပါဝင်ပြီး အသေးစိတ်အား အခန်း (၇) ၌ ဖော်ပြထား ပါသည်။

ဖြစ်နိုင်ချေရှိသော ဘေးအန္တရာယ်များ ဖော်ထုတ်ခြင်းနှင့် လျော့ကျစေရေး အစီအမံများ

ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများဖော်ထုတ်ရာတွင် သက်ရောက်မှု၏ ပြင်းထပ်မှု ပမာဏ (လျစ်လျူရှု/အလယ်အလတ်/ပြင်းထန်-ရေချိန်အနိမ့်အမြင့်ပေါ်မူတည်) နှင့် ပြင်းထန်မှု ကြာချိန် (တခဏ/အမြဲတမ်း) အပေါ်အခြေခံပါသည်။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန အနေဖြင့် ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းပါ သတ်မှတ်ချက်များနှင့် အညီ အဆိုပြု စီမံကိန်း အား ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ပါဝင်သည့် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) ပြုလုပ်ရန် ညွှန်ကြားထားပါသည်။

ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် လျော့ကျစေရေးဆောင်ရွက်ချက်များ

ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း၏ ရည်ရွယ်ချက်မှာ ပတ်ဝန်းကျင်အပေါ်ဖြစ်ပေါ်နိုင်သည့် ဘေးအန္တရာယ်များဖော်ထုတ်ရန်နှင့် စီမံကိန်း လုပ်ဆောင်မှုများမှ ဖြစ်ပေါ်လာနိုင်သည့် သက်ရောက်မှု များအား တိုင်းတာရန်၊ ဖယ်ရှားရန်၊ ထိန်းချုပ်ရန် သို့မဟုတ် လျော့ကျစေရေးဆောင်ရွက်ရန်တို့ ဖြစ်ပါသည်။

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း

အဆိုပြုထားသောစီမံကိန်းအတွက် ကနဦးပတ်ဝန်းကျင်ဆိုင်ရာစစ်ဆေးမှုများကို စီမံကိန်း ရေးဆွဲခြင်းနှင့် အကောင်အထည်ဖော်ခြင်း၏ အောက်ဖော်ပြပါအဆင့်များ၌ ဖြစ်နိုင်ချေရှိသော သက်ရောက်မှုများအတွက်ပြုလုပ်ခဲ့ပါသည်။

(၁) တည်နေရာသက်ရောက်မှု။ ။ ပတ်ဝန်းကျင်အပေါ်သက်ရောက်မှုများနှင့် ပြန်လည် နေရာချထားရေး သို့မဟုတ် လူမှုအသိုင်းအဝိုင်းအပေါ်သက်မွေးဝမ်းကျောင်းဆိုင်ရာ သက်ရောက်မှုများအပါအဝင် လုပ်ငန်းခွင်နေရာ ရွေးချယ်ရေးနှင့်ဆက်စပ်သက်ရောက်မှု။

(၂) ဒီဇိုင်းသက်ရောက်မှုများ။ ။ အသုံးပြုသောနည်းပညာ၊ လုပ်ငန်းလည်ပတ်မှုအတိုင်းအတာ၊ စွန့်ပစ်ပစ္စည်းစံနှုန်းများစသည့် စီမံကိန်းဒီဇိုင်းမှဖြစ်ပေါ်လာသောသက်ရောက်မှုများ။

(၃) ဆောက်လုပ်ရေးသက်ရောက်မှုများ။ ။ လုပ်ငန်းခွင်ရှင်းလင်းခြင်း၊ မြေနေရာရှင်းလင်းခြင်း၊ ဆောက်လုပ်ရေးလုပ်ငန်းများစသည်တို့အပါအဝင် အဆင့်မြှင့်တင်ခြင်း/ဆောက်လုပ်ရေးလုပ်ငန်း များမှ သက်ရောက်မှုရလဒ်များ။

(၄) လည်ပတ်ရေးနှင့် ပြုပြင်ထိန်းသိမ်းခြင်းသက်ရောက်မှု။ ။ အဆိုပြုလုပ်ငန်းတွင် တည်ဆောက်ထားသော အခြေခံ အဆောက်အအုံများ၏ လည်ပတ်မှု၊ ထိန်းသိမ်းမှုနှင့်သက်ဆိုင်သော သက်ရောက်မှုများ။

အဆိုပြုစီမံကိန်းကြောင့် ဖြစ်ပေါ်လာနိုင်မည့် ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများနှင့် လျော့ပါးစေရေး အစီအမံများအား အစီရင်ခံစာ၌ အသေးစိတ် ထည့်သွင်းရေးဆွဲထားပါသည်။ ဖြစ်ပေါ်လာနိုင်မည့် သက်ရောက်မှုများအား အောက်ပါအတိုင်းဖော်ပြအပ်ပါသည်-

ကာလ	ဆောင်ရွက်ချက်	ဘေးအန္တရာယ်	သက်ရောက်မှု

ဖွံ့ဖြိုးရေး	နေရာ	မြေယာသိမ်းဆည်းမှု၊ အတင်းအကြပ်ရွှေ့ပြောင်းစေမှု	လူမှုရေး၊ သမိုင်း၊ ယဉ်ကျေးမှု၊
	ဒီဇိုင်း	အမြင်ပသာဒ	ပတ်ဝန်းကျင်
	ဆောက်လုပ်ရေး	ဆူညံမှု၊ ဖုန်မှုန့်၊ ညစ်ညမ်းမှု၊ စွန့်ပစ်ပစ္စည်း၊ ပဋိပက္ခ	ပတ်ဝန်းကျင်၊ လူမှုရေး
	တပ်ဆင်ခြင်း	ဆူညံမှု၊ ဖုန်မှုန့်၊ ညစ်ညမ်းမှု၊ စွန့်ပစ်ပစ္စည်း၊ ပဋိပက္ခ	ပတ်ဝန်းကျင်၊ လူမှုရေး
လည်ပတ်ရေး	လည်ပတ်ခြင်း	စွန့်ပစ်ပစ္စည်း၊ ပဋိပက္ခ	ပတ်ဝန်းကျင်၊ လူမှုရေး
	ပြုပြင်ထိန်းသိမ်းခြင်း	ဆူညံမှု၊ ဖုန်မှုန့်၊ ညစ်ညမ်းမှု၊ စွန့်ပစ်ပစ္စည်း၊ ပဋိပက္ခ	ပတ်ဝန်းကျင်၊ လူမှုရေး
	ဝန်ဆောင်မှုပေးခြင်း	ပဋိပက္ခ	လူမှုရေး
ဖျက်သိမ်းရေး	ရပ်စဲခြင်း	ပဋိပက္ခ	လူမှုရေး

ပတ်ဝန်းကျင်ဆိုင်ရာ ဘေးအန္တရာယ် နှင့် သက်ရောက်မှုဆန်းစစ်ခြင်း အကျဉ်းချုပ်

စီမံကိန်းမှ ဖြစ်ပေါ်လာနိုင်သည့် အလားအလာရှိသော သက်ရောက်မှုများကို ကြွင်းကြန်နိုင်ချေနည်းသည့် အဆင့်များအဖြစ် အမျိုးအစား ခွဲခြားနိုင်ပါသည်။ ကျန်ရှိသည့် အန္တရာယ်များအား အလယ်အလတ်၊ မြင့်မား၊ သို့မဟုတ် ပြင်းထန်မှုအဖြစ် အကဲဖြတ်ထားခြင်း မရှိပါ။ အစီရင်ခံစာ အခန်း (၅) ၌ ဆန်းစစ်ချက်အကျဉ်းချုပ်အား ဖော်ပြထားပြီး၊ သက်ရောက်မှု လျော့ပါးစေမည့် သို့မဟုတ် ပျောက်ကွယ်စေမည့် အချက်များအားလည်း ထည့်သွင်းဖော်ပြထားပါသည်။

အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးခြင်း နှင့် ပူးပေါင်းဆောင်ရွက်ရေး ရလဒ်များ

အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးခြင်းနှင့် ပူးပေါင်းဆောင်ရွက်ရေးရလဒ်များအနေဖြင့် အကြံပြုချက်များရရှိခြင်း၊ စီမံကိန်းဆောင်ရွက်သူမှ ပြန်လည်တုံ့ပြန်မှုများအား အစီရင်ခံစာ အခန်း (၆) ၌ အသေးစိတ်ဖော်ပြထားပါသည်။

အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သတင်းအချက်အလက် ထုတ်ဖော်ခြင်း

စီမံကိန်းအနေဖြင့် ပတ်ဝန်းကျင်ဆိုင်ရာကိစ္စရပ်များနှင့်စပ်လျဉ်း၍ ဒေသခံများနှင့်တွေ့ဆုံဆွေးနွေးခြင်းအား လုပ်ငန်းစဉ်၏ အရေးကြီးအစိတ်အပိုင်းအဖြစ် ဆောင်ရွက်ထားပါသည်။ တွေ့ဆုံဆွေးနွေးမှုများမှ ဒေသခံများ၏ လိုအပ်ချက်များအား ဖော်ထုတ်ရာတွင် အထောက်အကူပြုပါသည်။ တိုင်ပင်ဆွေးနွေးမှုများမှ ရလဒ်များအား မှတ်တမ်းတင်ထားရှိပါသည်။ စီမံကိန်းအနေဖြင့် တွေ့ဆုံဆွေးနွေးမှုများအား အောက်ပါပုဂ္ဂိုလ်များဖြင့် ဆောင်ရွက်ထားပါသည်-

- ဌာနဆိုင်ရာများမှ တာဝန်ရှိသူများ

- တိုင်းဒေသကြီးအစိုးရအဖွဲ့ဌာနများမှ တာဝန်ရှိသူများ နှင့်
- ဒေသခံအစုအဖွဲ့များ နှင့် စီမံကိန်းဝန်ထမ်းများ

လူထုတွေ့ဆုံဆွေးနွေးမှုရလဒ်များ

အစီရင်ခံစာ ရေးဆွဲရာတွင် အများပြည်သူ၏ သဘောထားအမြင်များအား ထည့်သွင်း စဉ်းစားခဲ့ပါသည်။

MIC အနေဖြင့် စီမံကိန်းအား အတည်ပြုရာတွင် ထုတ်ပြန်ပြဌာန်းထားသည့် ဥပဒေ၊ နည်းဥပဒေ၊ လုပ်ထုံးလုပ်နည်း၊ အမိန့်နှင့် ညွှန်ကြားချက်များအား လိုက်နာ၍ ဆောင်ရွက်စေခဲ့ ပါသည်။ သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် အတည်ပြုချက် လုပ်ငန်းစဉ်ဆိုင်ရာ အသေးစိတ်အချက်အလက်များအား ပေးထားပါသည်။

တိုင်းဒေသကြီးအစိုးရအဖွဲ့၊ စည်ပင်သာယာရေးကော်မတီတို့သည် တိုင်းဒေသကြီး ဖွံ့ဖြိုး တိုးတက်ရေးနှင့် အလုပ်အကိုင်အခွင့်အလမ်းများ တိုးတက်လာရေး၊ ဒေသတွင်းဝင်ငွေတိုးမြင့်လာရေး၊ လူနေမှုအဆင့်အတန်း မြင့်မားလာစေရေးတို့အတွက် စီမံကိန်းမြေပေါ်တွင် ဆောင်ရွက်ခွင့် ပြုခဲ့ပါသည်။

IEE အစီရင်ခံစာ ဆောင်ရွက်စဉ်အတွင်း စီမံကိန်းဝန်ထမ်းများထံမှ တိုင်ကြားချက်နှင့် တုန့်ပြန်ချက်များ မရရှိခဲ့ပါ။ CSR လုပ်ငန်းမှတဆင့် ဒေသခံများဖွံ့ဖြိုးရေးလုပ်ငန်းများတွင် ပံ့ပိုးပေး နိုင်ရန် ညှိနှိုင်းဆွေးနွေးခဲ့ပြီး၊ စီမံကိန်းဆောင်ရွက်ခြင်းကြောင့် ဒေသတွင်း အလုပ်အကိုင် အခွင့် အလမ်းများ တိုးတက်ခဲ့ပါသည်။

ဥပဒေ၊ နည်းဥပဒေများနှင့်အညီဆောင်ရွက်ထားသည့် ဤ IEE အစီရင်ခံစာအား အများ ပြည်သူထင်မြင်ချက်ပေးနိုင်မည်ဖြစ်ပါသည်။ အစီရင်ခံစာ အပြည့်အစုံအား အင်္ဂလိပ်ဘာသာဖြင့် ရေးသားထားပြီး၊ လွယ်ကူရှင်းလင်းစွာရေးသားထားသည့် အကျဉ်းချုပ်အစီရင်ခံစာအား မြန်မာဘာသာဖြင့် ဖတ်ရှုနိုင်မည် ဖြစ်ပါသည်။ ဤအစီရင်ခံစာအား သက်ဆိုင်သူများ သိရှိနိုင်ရန် စီမံကိန်းရုံး၌လည်း ထားရှိသွားမည် ဖြစ်ပါသည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်၏ မူဝါဒနှင့်ရည်မှန်းချက်

အဆိုပြုစီမံကိန်းအတွက် တိကျသောစီမံကိန်း ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) တစ်ခုကိုပြင်ဆင်ထားပါသည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) သည် စီမံကိန်း ကာလတစ်လျှောက်လုံး ဆောင်ရွက်ရမည့် လိုက်နာမှုလိုအပ်ချက်များ၊ လျှော့ချရေးအစီအမံများနှင့် စောင့်ကြည့်ကြီးကြပ်ရေးအစီအစဉ်များကို အကြမ်းဖျင်းအားဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုမူဘောင်ကို သတ်မှတ်ပေးရန်ဖြစ်သည်။

အခန်းကဏ္ဍနှင့် တာဝန်များ

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) သည် စီမံကိန်းတွင်ပါဝင်မည့် ပုဂ္ဂိုလ်အားလုံးအတွက် အဓိကအခန်းကဏ္ဍနှင့် တာဝန်များကို ဖော်ပြထားပါသည်။

အစီအစဉ်ရေးဆွဲခြင်းနှင့် အကောင်အထည်ဖော်ခြင်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) သည် ဤလေ့လာမှု၏တွေ့ရှိချက်များအပေါ် အခြေခံ၍ ပြင်ဆင်ရေးဆွဲထားပြီး အဆိုပြုစီမံကိန်း၏ ဖြစ်နိုင်ချေရှိသော ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများကို လျော့ပါးစေရန်အတွက် ဒီဇိုင်းနှင့်စီမံခန့်ခွဲမှုအစီအမံများကိုဖော်ပြထားပြီး လက်ခံနိုင်သောအဆင့်များနှင့်ဆက်စပ်နေသည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အား ပုံမှန်ပြန်လည်သုံးသပ်ပြီး စီမံကိန်းလိုအပ်ချက်များနှင့်ကိုက်ညီစေရန် ပြင်ဆင်ဆောင်ရွက်မည် ဖြစ်သည်။

စောင့်ကြည့်လေ့လာခြင်း၊ မှတ်တမ်းတင်ခြင်းနှင့်အစီရင်ခံခြင်း

စီမံကိန်းဧရိယာအတွင်းရှိ အဆိုပြုစီမံကိန်းနှင့် ဆက်စပ်သောလုပ်ဆောင်မှုများအတွက် စောင့်ကြည့်ခြင်း၊ မှတ်တမ်းတင်ခြင်းနှင့် အစီရင်ခံခြင်းလိုအပ်ချက်များအားလုံးကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) မှ အသေးစိတ်ဖော်ပြထားသည်။

စာရင်းစစ်ခြင်းနှင့် ပြန်လည်သုံးသပ်ခြင်း

စီမံကိန်းလုပ်ဆောင်ချက်၏ သိသာထင်ရှားသော ပတ်ဝန်းကျင်ဆိုင်ရာရှုထောင့်အားလုံးကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) မှ ဖုံးလွှမ်းထားသည်ကို အတည်ပြုနိုင်ရန်အတွက် ပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်စစ်ဆေးခြင်းကို ဆောင်ရွက်သွားပါမည်။ ထို့အပြင် ပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်စံနှုန်းများကို အကောင်အထည်ဖော်လျက်ရှိပြီး စဉ်ဆက်မပြတ် တိုးတက်မှုနှင့် လိုက်လျောညီထွေမှုမရှိသောအခွင့်အလမ်းများ ဖော်ထုတ်နိုင်ကြောင်းကိုလည်း အတည်ပြုသွားမည်ဖြစ်သည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အကောင်အထည်ဖော်ရန် လိုအပ်သည့် အဖွဲ့အစည်း၊ ပုဂ္ဂိုလ်နှင့်အသုံးစရိတ်လျာထားမှု

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အကောင်အထည်ဖော်ရန် လိုအပ်သည့် အဖွဲ့အစည်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အကောင်အထည်ဖော်သည့် အဖွဲ့၏ အဓိက တာဝန်ရှိသူများအဖြစ် အောက်ပါအတိုင်းသတ်မှတ်ထားပါသည် -

မန်နေးဂျင်းဒါရိုက်တာ	-	ပတ်ဝန်းကျင်ဆိုင်ရာလုပ်ဆောင်ချက်များအတွက် တာဝန်ရှိခြင်း
ဒါရိုက်တာ	-	လုပ်ငန်း၏ ယူနစ်များအတွင်း EMP ထိရောက်စွာ အကောင်အထည် ဖော်ခြင်း အတွက် တာဝန်ရှိခြင်း
မန်နေဂျာ	-	EMP စီမံခန့်ခွဲမှုချုပ်ပိုင်း
ကျန်းမာရေး၊ ဘေးကင်းရေးနှင့်ပတ်ဝန်းကျင်ညှိနှိုင်းရေးမှူး	-	EMP ချုပ်ပိုင်း (EMP ဖွံ့ဖြိုးရေး နှင့် အကောင်အထည်ဖော်ရေးတွင် အဓိကကျသည့်ပါဝင်သူ)

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် ဘဏ္ဍာငွေ

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အကောင်အထည်ဖော် ဆောင်ရွက်ရန်အတွက် သီးခြားဘဏ္ဍာငွေအဖြစ် (ခန့်မှန်း အမေရိကန်ဒေါ်လာ ၃၀၀၀) လျာထားပါသည်။

CSR အစီအစဉ်အတွက် ဘဏ္ဍာငွေ

စီမံကိန်းအနေဖြင့် CSR အစီအစဉ်ဆောင်ရွက်ရာတွင် ဒေသခံများ၏ ပညာရေးကဏ္ဍ၊ ကျန်းမာရေးကဏ္ဍများအတွက် အထောက်အပံ့ပေးခြင်း ဆောင်ရွက်သကဲ့သို့ ဝန်ထမ်းများနှင့်

၎င်းတို့၏ မိသားစုဝင်များ၏ ကျန်းမာရေးဆိုင်ရာနှင့် ကျွမ်းကျင်မှုဆိုင်ရာအထောက်အပံ့များ ဆောင်ရွက်သွားမည်ဖြစ်ကြောင်း အော်ပါအတိုင်းဖော်ပြအပ်ပါသည် -

(က) နှစ်စဉ်အမြတ်ငွေ ၂ ရာခိုင်နှုန်းမှ ၅၀ ရာခိုင်နှုန်းအား ပညာရေးကဏ္ဍအတွက်သုံးစွဲခြင်း၊
(ခ) နှစ်စဉ်အမြတ်ငွေ ၂ ရာခိုင်နှုန်းမှ ၅၀ ရာခိုင်နှုန်းအား ကျန်းမာရေးကဏ္ဍအတွက် သုံးစွဲ ခြင်း၊

Executive Summary

Introduction

IEE Report together with Executive Summary of IEE Report; summarized in this Section, for Refined Sugar Production submitted by project proponent is prepared in accordance with EIA Procedure and aim to receive Environmental Compliance Certificate from relevant authority, Ministry of Natural Resources and Environmental Conservation (MONREC).

A letter of endorsement in a format prescribed by the Ministry has been issued by the project proponent, and is submitted to the Department together with this IEE Report. Report prepared in English with an accompanying, accurate summary in the Myanmar language, and confirming that:

a) the accuracy and completeness of the IEE,
b) the IEE has been prepared in strict compliance with applicable laws including EIA Procedure,
c) the Project will at all times comply fully with the commitments, mitigation measures, and plans in the IEE Report.

Study has been conducted by third party environmental expert on proposed project to prepare suitable environmental management plan based on the identified impacts (of both positive and negative) affected to the environment, human use values, quality of life and health, etc., which may come out from the operation of proposed project.

This Report contains the following contents:

a) identification of the Project Proponent including (where the Project Proponent is not a natural person but a company or other juridical entity) the identification of the owners, directors (if any) and day to day management and officers of the Project Proponent; and identification of the Environmental experts, including which expert is responsible for which part of the IEE Report;
b) description of applicable laws, decrees, regulations, standards, guidelines and corporate policies related to environmental and social matters of the Project

together with the relevant government agencies involved and their roles and responsibilities vis-à-vis the Project.

c) Project description in reasonable detail with description of the project size, installations, technology, infrastructure, production processes, use of materials and resources, generation of waste, emissions and disturbances together with overview maps and site layout maps (using aerial photos and satellite images in proper scale) for each Project phase and, where relevant, project alternatives for each Project phase;

d) description of the surrounding environmental and social conditions of the Project including maps of all relevant physical, biological, social, socioeconomic and cultural features;

e) identification and assessment of potential Environmental Impacts including assessment and description of Adverse Impacts and Residual Impacts with presentation of the spatial and temporal characteristics of the impacts using maps, images, aerial photos and satellite images;

f) results of the public consultation and public participation processes, recommendations received from the public, and the Project Proponent's written responses to comments received during that process;

g) the EMP; and the persons, organizations and budgets needed for implementation of the EMP.

This Report is confined specifically to an Environmental management for the Refined Sugar Production project to be operated by Delicious Food Limited.

Project Proponent

The Project was reviewed in order to gain a full understanding of the project and to compile information on project activities. The Project proponent is described in Section 1 covering as below mentioned:

a. Project rationale and background
b. Project proponent/project developer
c. Project benefits

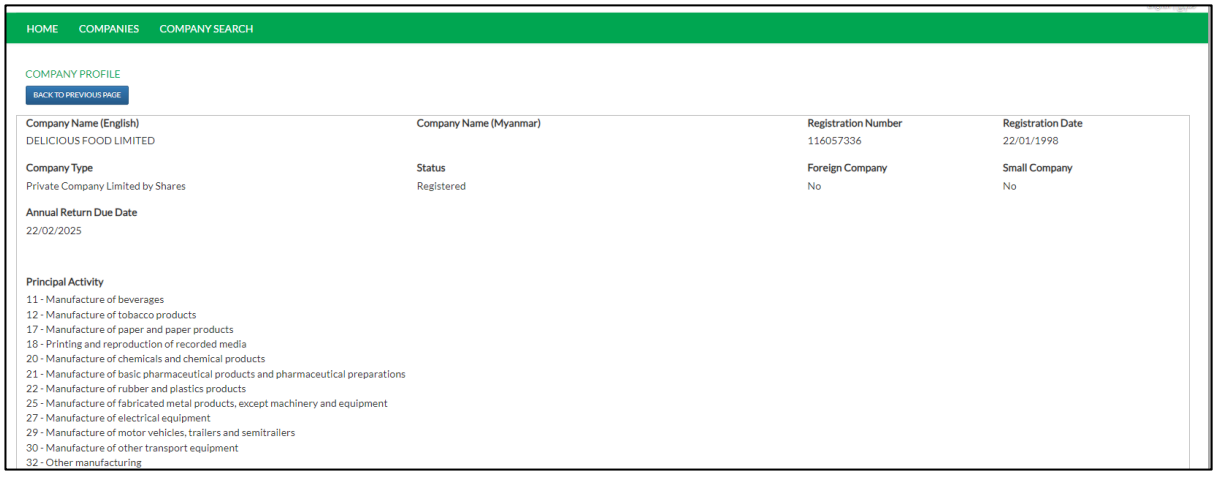
Project Rationale and Background

DFL is aimed to continue operation by total invested capital equivalent in 5,000 million Yen for “Refined Sugar Production (Yedashe Sugar Mill)”.

DFL is currently operating its operation in the rented location; Bago Region, Taung Oo district/province, Yedashe Township, In-Dine village (between north of Yedashe and south of Swar).

Identification of the Project Proponent

DFL was incorporated under the Myanmar Companies Act with certification No. 116057336 on 22.01.1998. DFL has registered at Directorate of Investment and Company Administration (DICA), Ministry of Investment and Foreign Economic Relations (MIFER) for the business mentioned below accordingly under Myanmar Laws & Regulations:



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COMPANY PROFILE

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Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
DELICIOUS FOOD LIMITED		116057336	22/01/1998
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	No	No

Annual Return Due Date
22/02/2025

Principal Activity
11 - Manufacture of beverages
12 - Manufacture of tobacco products
17 - Manufacture of paper and paper products
18 - Printing and reproduction of recorded media
20 - Manufacture of chemicals and chemical products
21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations
22 - Manufacture of rubber and plastics products
25 - Manufacture of fabricated metal products, except machinery and equipment
27 - Manufacture of electrical equipment
29 - Manufacture of motor vehicles, trailers and semitrailers
30 - Manufacture of other transport equipment
32 - Other manufacturing

The following company incorporated under Myanmar Companies Act is Principal Organization; company named as “Delicious Food Limited” to operate in accordance with Myanmar Investment Law for the proposed project “Refined Sugar Production”

Company	Address
Delicious Food Limited Reg.No. 116057336	Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). Tel: 09 421176041

The following personnel are investing capital of the proposed project; Refined Sugar Production.

Investor/Promoter	Address
U Tun Tun Win	No. 6, Sugar Mill Tel: 09 421176041 aithiha@gmail.com

Company	Address
Delicious Food Limited Reg.No. 116057336	Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). Email: sugarmill007@gmail.com Tel: 09-452103568

Delicious Food Limited will be functioned as an administrative body of the Refined Sugar direction of investors of DFL. The investors operate through appointed director and staff. The mentioned below investor is registered as directors in the certificate of relevant department according to Myanmar Procedures and laws.

Delicious Food Limited (Refined Sugar Production)

Name	Nationality, NRC Card No. / Passport No.	Position
U Tun Tun Win	Myanmar (12/Pabata (N)003175)	Director

DFL was incorporated under the Myanmar law on 13th January 2017 as a Delicious Food's Yedashe Sugar Mill Project with certificate of Private Industrial Registration License No.PaKha/Kyee/780 at Ministry of Industry for the below principal activity:

– Manufacture of food products project. (Annexure – 1)

Project Benefits

The proposed Refined Sugar Production project has potential in promotion of domestic mass beverage product market from its operation. The benefits accrued due to the present project components are:

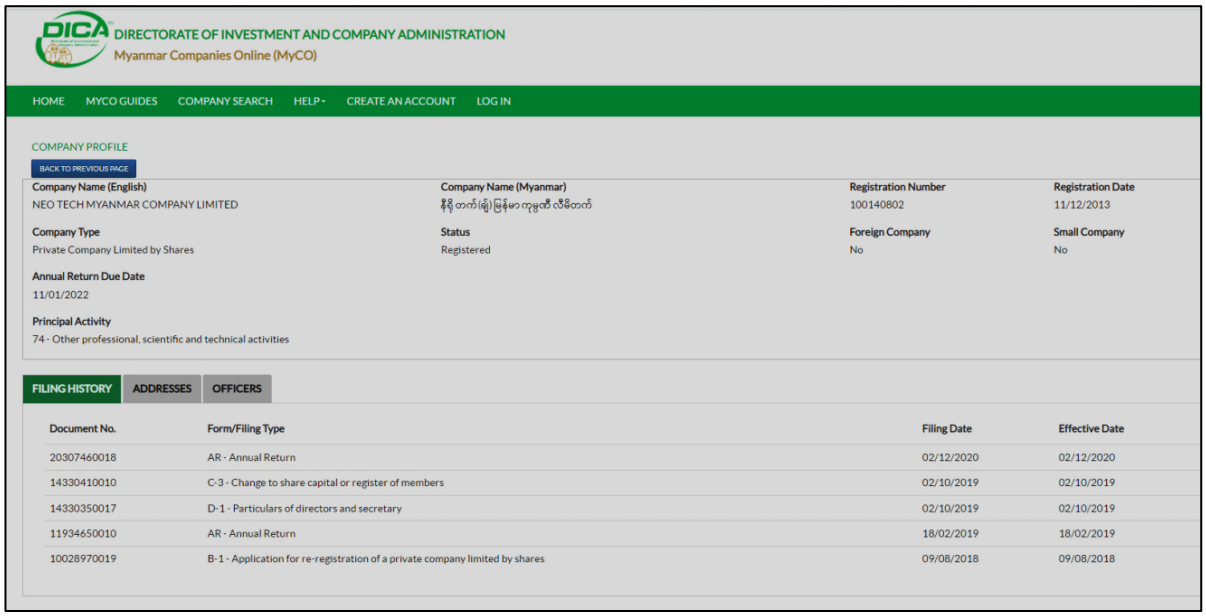
i. Manufacturing, distribution, and marketing standard quality refined sugar products for domestic customers;
ii. Utilization of certified machinery and enhancement of machinery efficiency in the business;
iii. Creating more opportunity for local human resources to work Refined Sugar Production.
iv. Enhancement of different level of skills of the International standard manpower by providing appropriate trainings to employee;
v. Created more opportunity for local human resources to work at proposed Project; local personnel manpower 207 nos. will be appointed;
vi. Direct income generation to the Union Government from operations service charges charged by relevant authorities has been accrued;
vii. Myanmar nationals working at proposed Project will be able to acquire International Standard technical know-how from the operation. This will contribute to the personal capability of the national workforce in the long term;
viii. From the standpoints of the Government of the Republic of the Union of Myanmar, personal income tax revenue will increase firstly and other tax revenue like income tax and commercial tax will also be generated;
ix. Implementation of EMP for the proposed project can enhance environmental awareness for the local community as well as other investors to comply properly;
x. 2% of net profit reserves from proposed Project yearly income will be used in CSR activities (such as funding in educational sector, healthcare of local community as well as staff and its family by arranging clinic & medical doctor, etc.) without fail which complying with existing laws & regulation of Myanmar.

Identification of Third-Party Environmental Expert for Project

DFL has assigned NeoTech Myanmar Co. Ltd. in September 2023 to conduct Environmental assessment study and to produce environmental management plan for

the Proposed Project; complied with MONREC instruction to be submitted by following existing Myanmar law, regulations, procedures, and standing instructions for further perusal. EMP Study Team member is presented briefly in below and detailed are in the Section 1.

Neo Tech Myanmar Company Limited is registered in DICA since 11.12.2013 with registration no.100140802 for Principal Activity; 74 - Other professional, scientific and technical activities and registered in ECD since 2013 with temporary registration no.00004 to identify as third-party expert to conduct Initial Environmental Examination, Environmental Impact Assessment, and Environmental Management Plan Study for the Project required to prepare as defined in EIA Procedure.



DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION
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COMPANY PROFILE

BACK TO PREVIOUS PAGE

Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
NEO TECH MYANMAR COMPANY LIMITED	နီရို တက်(မြို့)မြန်မာ ကုမ္ပဏီ လီမိတက်	100140802	11/12/2013
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	No	No

Annual Return Due Date
11/01/2022

Principal Activity
74 - Other professional, scientific and technical activities

FILING HISTORY | ADDRESSES | OFFICERS

Document No.	Form/Filing Type	Filing Date	Effective Date
20307460018	AR - Annual Return	02/12/2020	02/12/2020
14330410010	C-3 - Change to share capital or register of members	02/10/2019	02/10/2019
14330350017	D-1 - Particulars of directors and secretary	02/10/2019	02/10/2019
11934650010	AR - Annual Return	18/02/2019	18/02/2019
10028970019	B-1 - Application for re-registration of a private company limited by shares	09/08/2018	09/08/2018

Environmental Study Team & Schedule

Duration – September 2023 (commenced study on September 21, 2023)

Study Team – NeoTech Myanmar Co., Ltd. (DICA Reg. No. 100140802, Date 11.12.2013) (ECD No.0004)

Member –

1. U Khin Maung Myoe (Consultant, ECD No.0015) working experience in environment since 1998

2. Daw Nu Nu Aye (Consultant, ECD No.0014) working experience in environment since 2013
3. Dr. Khun Hline Myint (Consultant, ECD No.0016) working experience in environment since 2000
4. Dr. Zin Min (Consultant, ECD No.0018) working experience in environment since 2000
5. U Hein Thike (Field Surveyor) working experience in environment since 2013
6. U Zaw Bala (Field Surveyor) working experience in environment since 2023
7. U Saw Htee Mu (Field Surveyor) working experience in environment since 2018
8. U Hein Htet (Field Surveyor) working experience in environment since 2018

Purpose and Scope

EMP has been prepared to minimize impacts as low as reasonably practicable level (ALARP) by means of prevention, mitigation, and monitoring measures.

The specific objectives of this report are to:

- Identify all planned activities and potential unplanned events;
- Establish an environmental baseline of the project area;
- Identify and assess potentially significant impacts based on existing environmental description;
- Identify and recommend mitigation measures to minimize potential impacts;
- Recommend a monitoring plan that can track changes in the environment issues and to ensure compliance with Myanmar legislation.

TOR for EMP Report

This Report contains Nine (9) sections as TOR for the EMP including Executive Summary:

- Executive Summary
- Introduction covering project proponent;
- Policy, Legal and Institutional Framework;
- Description of project components;
- Description of the Surrounding Environment;
- Screening of potential environmental impacts and mitigation measures;
- Public Consultation and Information Disclosure; and

- Environmental Management Plan.
- Finding and Recommendation
- Conclusion

Description of Applicable Laws, Policy, Legal and Institutional Framework

Proposed project has undertaken to operate under enacted Myanmar law, regulations, procedures, and standing instructions for further perusal. Detailed is describe in Section – 2.

Project Proponent; DFL, has verified that all data and information compiled in this EMP report is complete and commit to perform Refined Sugar Production Operation Environmental Management Plan throughout the project period.

Third Party Environmental Study Team; Neo Tech Myanmar Co., Ltd., verify that EMP Report for Delicious Food Limited; Refined Sugar Production is prepared using correct and accurate based on collected data and information which complying with Myanmar EIA Procedure.

DFL verified to comply with enacted Myanmar Laws in its project operation by maintaining good Environmental and Social practices commitment as Delicious Food Limited; Refined Sugar Production Project has to operate under Myanmar Laws, guidelines, rules & regulation, and standing instruction defined by relevant authority and local authority.

DFL understood the responsibility of the proposed project and undertaken to pay all taxes relating to the project without fail. DFL has aware for its staff welfare working at Proposed Project operation and undertaken to support with proper welfare management program.

DFL has undertaken to spend 2% of annual net profit in CSR program. DFL plans to cooperate with local community as part of CSR programs to be supported by DFL is as below:

- Providing in Education Sector by funding in school library, stationary, exercise book, etc., for the students from local community

- Providing in health care service sector by funding in clinic, doctor & medicine for the patients from local community

Project Description

The Project was reviewed in order to gain a full understanding of the project and to compile information on project activities. The Project is described in Section – 3 covering as below mentioned:

1. Presentation of the project and description of alternatives
2. Comparison and selection of alternative
3. Description of the selected alternatives

Presentation of the Project and Description of Alternatives

Project Background

The proposal of proposed Project has been submitted by identified Director of DFL for approval from Ministry of Natural Resources and Environmental Conservation (MONREC).

The proposed project is commenced since 2011 and already in developing phase with its products in 2011. DFL proposed project, however, required to prepare EMP with (states to comply with requirements in conducting environmental conservation activities for proposed project mentioned below and report submit directly (To) to Ministry of Natural Resources and Environmental Conservation (MONREC) whilst report submit) as advised by relevant authority which complying Myanmar EIA Procedures.

(a) DFL has to provide all proposed project data and has to use the systems which may cause minimum environmental impact only as low as reasonably practicable (ALARP) to reduce potential environmental, socio-eco, and health impacts in its proposed project activities. DFL has to comply strictly in its commitments which including commitment to conduct Corporate Social Responsibility (CSR) activities by using 2% of annual net benefits.

(b) DFL has to prepare Environmental Management Plan (EMP) based on results come out from environmental assessment for proposed project, and DFL has to comply as prepared EMP. Prepared EMP which compiled with Project Operation & Maintenance Plan that affecting zero (or) minimum impact to environment and

socio-eco of local people, Waste (Solid/Water) Management Plan, Monitoring Plan, Budget for Environmental Conservation Tasks according to EIA Procedure and comply with it.

(c) DFL has to follow Myanmar enacted environmental laws, rules, regulations, guidelines (Environmental Conservation Law, Procedures, Environmental Impact Assessment Procedures, National Environmental Quality (Emission) Guidelines (NEQEG) in its IEE, EIA, & EMP preparations and has to submit the fulfilled form together with reports required by the submission procedure.

Purpose and Scope of DFL for Refined Sugar Production Project

Delicious Food Limited (DFL) purposes to develop Refined Sugar Production and sales.

The Investor; DFL, aim to get official's approval/permission order such as Environmental Compliance Certificate, etc., for proposed project; Refined Sugar Production, to operate under Myanmar enacted environmental laws, rules, regulations.

DFL scopes to prepare EMP Report for the proposed project, Refined Sugar Production, by eligible Third-Party Environmental Study Team which registered at Environmental Conservation Department (ECD), Ministry of Natural Resources and Environmental Conservation.

Project Land Use and Master Plan

Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar) has been established as (60 years) granted land to first landlord. MD of DFL has takeover land ownership together with Special Power of Attorney. The land area is cleared by former landlord.

The proposed project area is industrial land and excludes from forest reserve area and other local community land usage. Therefore, the proposed project area is cleared from land acquisition issue. The selected reserved industrial land area will be used continuously as immediate location for the Delicious Food Limited; Refined Sugar Production.

Granted industrial land area (total area 729.50 Acre) locating at (19°11'56.16667"N, 96° 21' 5.30216“E) Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar), is selected for the proposed project; Refined Sugar Production. Existing land use of proposed Project Area covers 729.50 Acre.

Existing Land Use in the Proposed Project Area (2023)

Land Use	Area in Acre	% To Total Area
Industrial Land with infrastructures, buildings and plantation used for Delicious Food Limited	729.50	100.00
Total	729.50	100.00

Master plan of the existing and proposed project land use in the concerning area covers 729.50 Acre has been described in below Table and Figure.

Existing & Proposed Project Land Use in the Selected Land Area (729.50 Acre)

Land Use	Area in Acre	% To Total Area
Delicious Food Limited Factory Buildings, other Relevant Buildings and Plantation Area of Sugarcane	729.50	100.00
Total	729.50	100.00

The Sugar Mill area (729.50 Acres) has organized/complied with factory site (sugar refinery mill, bio-factory, etc.), residential area (staff house, guest house, staff dormitory, barrack, school, library, clinic, conventional hall, convenient store and shops, police station, etc.)

Project Component

The proposed area has been commenced for Delicious Food Limited; Refined Sugar Production project development in feasibility study, design stage for minor renovation of existing building & facility installation (such as machinery and equipment) as required to operate for Refine Sugar Production as per below Table.

Delicious Food Limited; Refined Sugar Production Building/Facility Descriptions

Sr. No.	Facility/Building Description
1.	Main Factory Buildings (7 nos.), Warehouses (10 nos.),
2.	Staff Quarter and Guesthouse (113 nos.), Other Buildings (12 nos.)
3.	Power Supply System for Normal Operation – 1000 KVA, Transformer (1 no.) for Incoming, 1000 KVA, Transformer (3 nos.) for distribution and 300 KVA, Transformer (1 no) for Living Quarter from YESB, MOEE Alternative Power Supply System (Back Up only)– 2000 KW Power Turbine Generator (1 no) and 5000 KW Diesel Generator (1 no.) from DFL Other energy consumption for operation use – Bgasse Boiler (2 sets)
4.	Domestic use Water Supply System Water Source – Groundwater and River Water Operation – Compressor Pump for 8-inch tube well and pump for storage tank Storage - Utility Water / Fire Water Tank System Drinking Water – Current Practice and plan to use approved drinking water products only
5.	Storm & rainwater drainage direct connect to public drain
6.	Wastewater Disposed Tank and Collected Tank for Recycle Used
7.	Sewage Treatment System (Septic Tank)
8.	General Solid Waste Management System (Collect at Waste Storage Area and Send to CDC); Temporary waste storage area (1 no.)
9.	24 Hour Security (Guard) Service
10.	Fire Emergency & Disaster Management System

Total number of locally and foreign purchased Machinery & Equipment in the existing main building as per Process Master Plan according to each department (below Table). (Ref: MIC proposal)

Total Number of Machinery & Equipment according to Department (locally purchased)

Sr. No.	Department	Unit	Machinery and Equipment Quantity
1.	Boiler Department	Nos	82
2.	Mill House Department	Nos	56
3.	Turbine	Nos	13
4.	Electrical Power Department	Set	140
5.	Mechanical Workshop	Nos	37
6.	Laboratory	Set	29

Locally purchased raw materials will be used in DFL project operation phase.

The Plantation Area of Sugar Cane for Raw Materials -4116.20 Acre

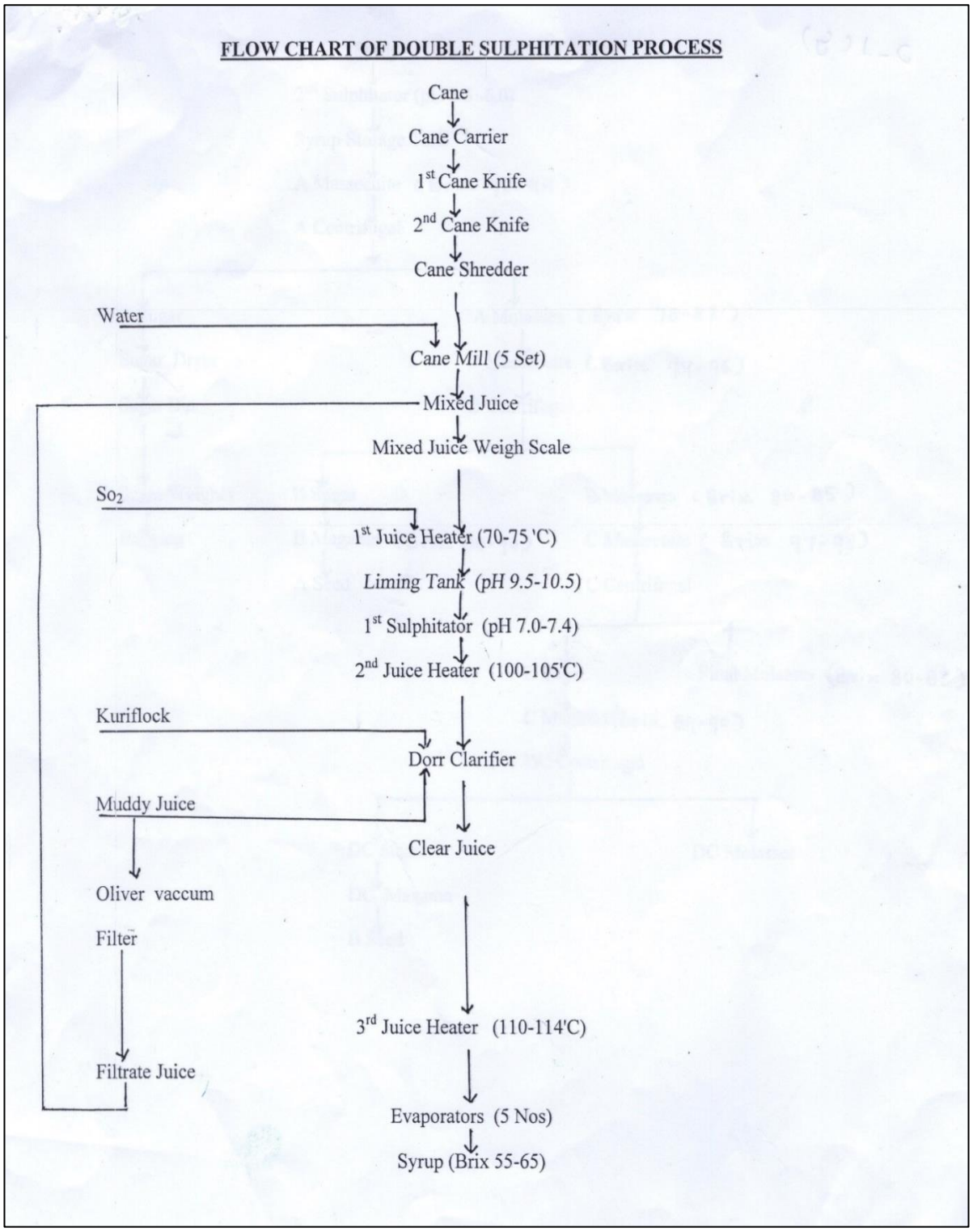
Number of Farmers – 745 Nos.

Quantity of Raw Material Purchased – 60000 Tons

Sgar Cane Plantation Area of No. 6 Sugar Mill Factory -537.50 Acre

Sugarcane Production Quantity of from Factory's Plantation–100025Tons

Process Flow Chart



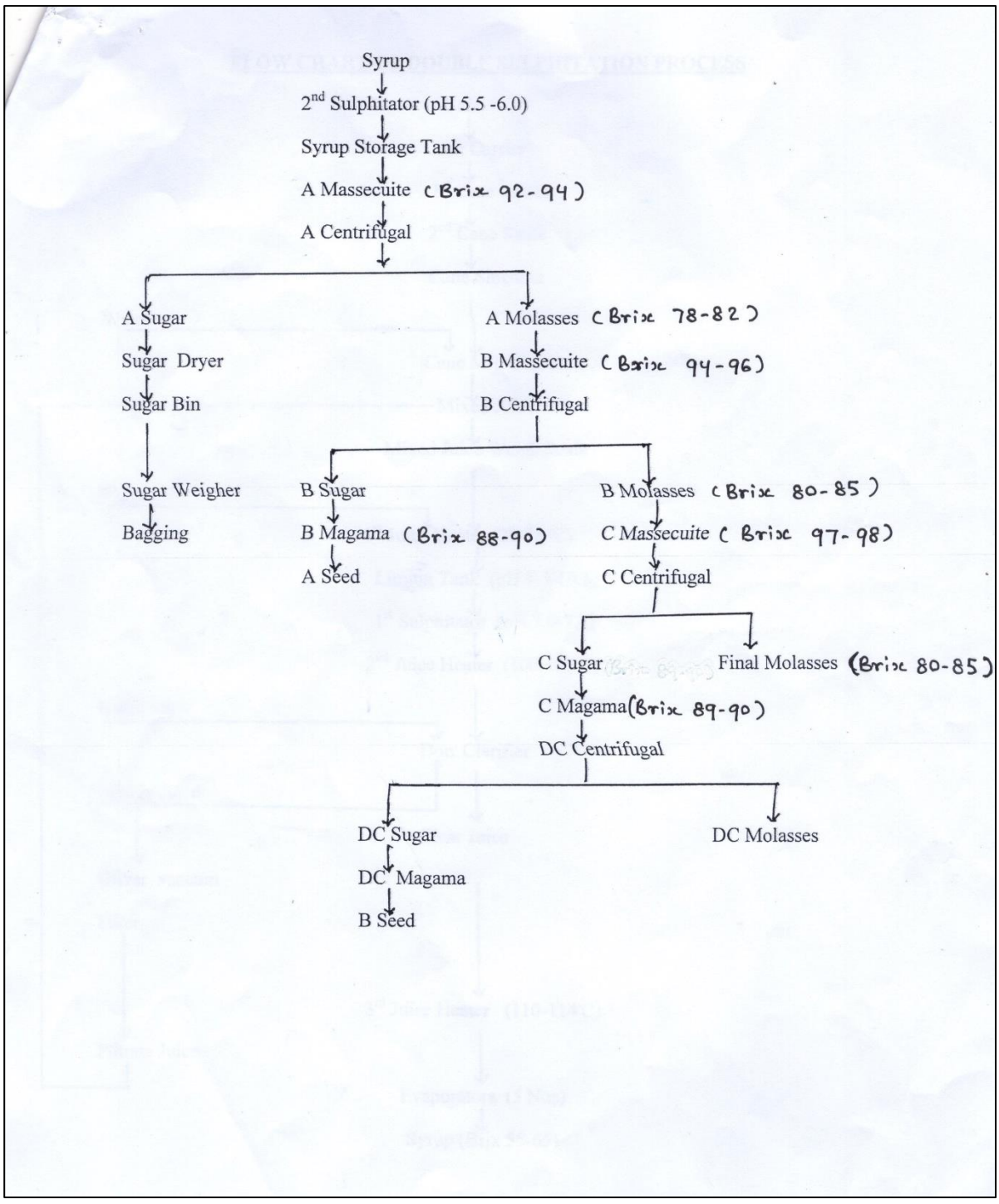


Figure 0.1: Flow Chart of Double Sulphitation Process

Annual Production Plan

The sugar mill can operate 1500 Ton per day and it needs 225000 ton for a season as per manufacturer (TSUKI SHIMA KIKAI Co., Ltd.) constructed and operated in 1991. Efficiency of existing equipment is in down warding due to long time usage of equipment is in downgrading due to long time usage of equipment over 20 years as well as facing

difficulties on getting spare parts for replacement in maintenance process as and when requirement.

Products and Process of Refined Sugar Production are shown in Annexure -.2.

Annual Chemical/Fuel Consumption

Annual chemical/fuel consumption from project operation and maintenance activity estimated majority which may come out from transportation activity by using vehicles as most consumption while other activities (i.e., fuel consumption for backup generator operation) may be considered low consumption as follows and actual consumption will be updated in future routing (six monthly) Environmental Report to ECD.

အင်ဂျင်ဝိုင်/လောင်စာဆီ/ဒီဇယ်ဆီ/ဓါတ်ဆီ သုံးစွဲမှုအခြေအနေ(အမျိုးအစား၀ယ်ယူမည့်နေရာတစ်ရက်/တစ်လ/တစ်နှစ် ပျမ်းမျှသုံးစွဲမှု/သိုလှောင်ထားရှိမှု)

စဉ်	ဆီအမျိုးအစား	သုံးစွဲမှုအခြေအနေ			သိုလှောင်ထားရှိမှု	ဝယ်ယူမည့်နေရာ	မှတ်ချက်
		တနှစ်	တစ်လ(ဂါလံ)	တစ်ရက်(ဂါလံ)			
1	Diesel	3585 1/3 Gal	298.75	9.95		မြင်ပကုမ္ပဏီဝိုင်စက်ဆီ ချောဆီကုမ္ပဏီလုပ်ငန်းများ	2022-2023 ကိုရည်ညွှန်းပါသည်။
2	Petro	459 1/3 Gal	38.25	1.27		〃	〃
3	Octane	207 Gal	17.25	0.575		〃	〃
4	Engine Oil (Turbine) Engine Oil (ဖိုက်ကွင်း)	132 Gal 83 Gal	- -	- -			2019 ကိုရည်ညွှန်းပါသည်။ 2022 ကိုရည်ညွှန်းပါသည်။
5	ဓီးထိုးဆီ	7400 Gal	-	-	Main Storange Tank တွင်ခန့်မှန်းတစ်နှစ်လျှင် 30000 gals သိုလှောင်ပြီး Service Tank သို့လိုအပ်သလောက်ပေးပို့ ပြီး Bunner မောင်းနှင်ပါသည်။		2022-2023 ကိုရည်ညွှန်းပါသည်။
6	Swee IGO GC EP 680	15 Drum	-	-			〃
7	Gear Oil 220	6 Drum	-	-			〃
8	Tellus Oil 150	1 Drum	-	-			〃
9	Hydraulic Oil 32	1 Drum	-	-			〃
10	Turbine 46	3.5 Drum	-	-			〃
11	Turbine 68	1 Drum	-	-			〃
12	Diesel (Diesel Generator)	300 Gal	-	-			〃
13	Compressor Oil 32	1 Can	-	-			〃
14	Compressor Oil 46	5 Gal	-	-			〃
15	Tonna Oil 38	1 Drum	-	-			〃
16	Tonna Oil 68	30 Gal	-	-			2020 ကိုရည်ညွှန်းပါသည်။
17	Hydraulic Oil 32	20 Gal	-	-			2020 ကိုရည်ညွှန်းပါသည်။ Work Shop

Annual Chemical/Fuel Consumption (Unit – Gallon)

The sugar cane wastes are only used for the boiler. The sugar cane fuel consumption for the boiler is detailed in below figure.

JÇ- Boiler Usage

ဘွိုင်လာသုံးစွဲမှု(၅)နှစ်စာတွက်ချက်မှုစာရင်း

စဉ်	ကြုံရာသီ ခုနှစ်	ကြိတ်ဝါးတန် (မက်ထရစ်တန်)	မီးထိုးဆီသုံးစွဲမှု (ဂါလံ)	ကြံဖတ်သုံးစွဲမှု (တွက်ချက်မှုတန်)	ကြံပြာထွက်ရှိမှု နှေလိုက်(တန်)	ကြံပြာထွက်ရှိမှု စုစုပေါင်း(တန်)
1	2018-2019 Bagasse %Cane b=31.96%	102024.51	14150	31794.87	29.364	2550.61
2	2019-2020 b =31.4%	53046.63	8275	16656.87	28.21	1326.17
3	2020-2021 b =31.54%	41707.93	3750	13154.17	34.29	1042.70
4	2021-2022 b =30.55%	37931.460	9300	11587.87	28.5	948.29
5	2022-2023 b =30.12%	56225.2614	7400	16933.03	31.23	1405.63

Figure 0.2: Boiler Fuel Usage for Five Years

Power Consumption

Power consumption from project operation is mainly from power supply source from National Power Line via installed private transformers under permission of Yedashe Power Supply Corporation and consumed electricity from national power grid will be counted monthly as unit for billing purpose. DFL has installed Diesel Generator as backup power supply system to be used for public area lighting purpose when main power supply system does not work temporarily. DFL commits to pay timely for monthly electricity bill settlement and annual power consumption is estimated as follows and actual consumption will be updated in future routing (six monthly) Environmental Report to ECD.

Table 0.1: Power Consumption (Unit – Meter Unit)

Sr. No.	Power Source Description	Consumption (Unit) During Operation of Production Period	Consumption (Unit) During Operation Stoppage Period
1	Transformer (4 no.) Main Source for Normal Operation	1600 KWH/Day 48000 KWH/Month	800 KWH/Day 24000 KWH/Month

	Power Supply from National Grid Line		
2	Power Turbine Generator (2 nos.) Diesel Generator Set (1 no.) Alternative Source for Backup Essential Operation Power Supply from DFL	408000 KWH/Day 1224000 KWH/ Month	-

Annual Water Consumption

Annual water consumption from project operation is operation use and utility use. Water resources are mainly from Sittaung River Water and secondly source is ground water via 8 inches tube-well. River water and Ground water will be pumped out to storage tank, treat, and then utilize for daily domestic usage and operation utility water usage whilst reserving for emergency usage for firefighting. Annual water consumption is estimated as follow and actual consumption will be updated in future routing (six monthly) Environmental Report to ECD.

Table 0.2: Annual Water Consumption (Unit – Gallon)

Sr. No.	Duration	Consumption (Unit) During Operation Stoppage Period (10 Month)	Consumption (Unit) During Operation of Production Period (2 month)
1.	An Hour (per hr.)	60 ton	400 yon
2.	Daily (per day)	360 ton	8000 ton
3.	Monthly (per month)	9360 ton	200000 ton
4.	Yearly (per year)	93600 ton	400000 ton

Investment Budget for Proposed Project

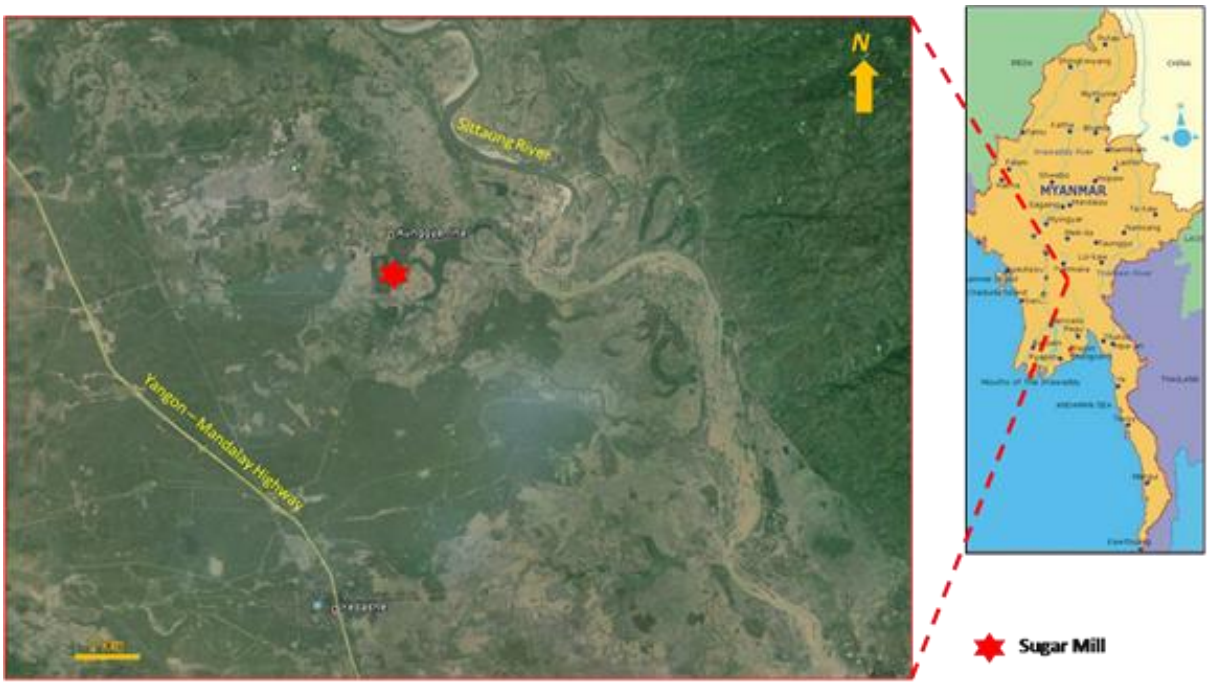
DFL invests for proposed operation using total capital 5,000 million Yen for proposed project, Delicious Food Limited, Refined Sugar Production.

Man Power Consumption

Local human resources; local personnel manpower (207 nos.), will be appointed in proposed project to be operated by DFL. Detailed list is described in section - 3.

Project Location, Overview Map and Site Layout Maps

Delicious Food Limited; Refined Sugar Production Project location is at area 729.50 Acre (19°11'56.16667"N, 96° 21' 5.30216“E) in Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). Project Overview Map and Layout Maps are shown in below Figures.



Overview Map of Proposed Project Location

Layout Map of Proposed Project (19°11'56.16667"N, 96° 21' 5.30216“E)

Project Implementation Schedule

DFL will operate its proposed project 12 years in accordance with the Ministry of Agriculture and Irrigation under (Build, Operate, Transfer) BOT System with reference to letter of Ministry of Agriculture and Irrigation (dated: 14 September 2011, Letter no. 11/sugar mill (653/2011).

Proposed project can be considered as 3 phases; developing phase, operating phase, and abandonment phase. Proposed Project development has been commenced in 2011 (mainly for installation of facility equipment) after the Ministry of Agriculture and Irrigation approval and operation is planned for 30 years period according to BOT permit. Abandonment process will be included after completion of project period or termination of project to ensure complying as mentioned in the rental contract without fail from both parties.

Project implementation schedule for Delicious Food Limited; Refined Sugar Production is present in below table and detailed is present in Section – 3.

Project implementation schedule

Phase	Commence	Duration	Note
Development	1986	4 years	100% completed
Operation (Government)	1990 November	21 Year	It was completed and transferred to a new investment.
Operation (DFL)	2011 August	As per Contract	Contracted by B.O.T System
Abandonment	TBA	TBA	N/A

Alternatives

The comprehensive study has been made by the investor for the proposed project since preparation stage to invest capital for the proposed project which covering site location, investment type, building design, quantity and capacity of marketable products, etc., and then proposal has been prepared with final outcome from studied.

There is currently alternative site for and the proposed alternative site is intended to serve as an immediate location to be used for project. There is no alternative for building design, construction & installation procedure, project period and the proposed project aim to proceed as per officially permitted project proposal with exception in alternative site.

Any alternative/changes will be presented if there is any project activity requires changes throughout project period which deviate from officially approved original project proposal.

Comparison and Selection of Alternative

Methodology

In this study, DFL has considerably practiced comparison and selection of alternative based on location, marketing demand, affordable products, efficiency of Equipment & Machinery, investment and return benefit ration before commencing the proposed project and decision make internally.

Description of the Selected Alternatives

Technical Description of the Selected Alternative

The study area boundary is set up within 0.5-kilometer radius from the center of No.6 Sugar Mill factory that locating approximately at 19°11'58.53"N, 96°21'1.72"E. The set study area is explored for existing environmental and socio-eco data info and compiled in this report.

The study area 1km radius circle excludes away from residential area, historical area and protected area. This project belonged in InDine Viallage, Yedashe Township, and related area are farm land.

Environmental Conservation Program

DFL commit to conduct Environmental Conservation Program in collaboration with Environmental Experts as necessary. In addition, DFL commit to comply with Environmental Laws, Procedures, Orders, & Instruction issued from MONREC.

Environmental Management Plan EMP

DFL commit to perform Cleaning of Daily waste produces from Delicious Food Limited; Refined Sugar Production focus on Production rented area to maintain clean Delicious Food Limited; Refined Sugar Production is responsible of operator as part of EMP.

Description of the Surrounding Environment

The Existing Environment and Surrounding Environment

The project type is belonged in trading industry and located beside Yangon-Mandalay Old highway. It's neighbored with North-U win myint house, East south- Nat Taung Basic Education Post Primary School, South-U Min Min House and West- Police jatropha plantation area.

Methodology and Objective of Data Collection and Assessment

This study aims to identify sensitive receptors in the assessment of impacts on physical resources, biological resources, human use values, and quality of life values. In collection of environmental and social information; primary data collection and secondary data collection were used.

Physical Component

Climate and Natural Hazard: Yedashe Township has hot and humid climate with occasional monsoons rains. Highest temperature is 37°C and lowest temperature is 27°C. Sittaung river flows from north to south in the Yedashe township, so that floods often occur. The water level concern in Yedashe township is 600 cm.

Topography: Yedashe township is located between north latitude 19°3' to 19°29', east longitude 95°47' to 96°33'. The township area is 1011.11 square miles and length is 43.5 miles from east to west and 29.5 miles from south to north. Yedashe Township is farthest north of eastern part of Bago Region. It is bordered with Eastern- Than Taung Township (Kayin Region), Western – Aung Lan Township (Magway Region), Southern – Taung gyu Township, and Northern – Lel we Township (Nay Pyi Taw).

Geology: The study area is mainly composed with the alluvium. The eastern part of the study area is mainly dominated by the granitoid rocks with an age ranging from Mesozoic to Cenozoic time. Structurally, it is bounded by the north south trending right lateral,

strike slip Sagaing Fault in the west, Shan Scarp Fault zone in the east and Papun Fault in the southeast of the study area. The Sagaing Fault is an active, north-south trending right-lateral fault system mapped over more than 1000km from the Andaman Sea to the Himalayas (Geodia – Coyne et Bellier, 1995).

Soil Profile: The propose project is located Yedashe Township, Bago Region. The project area soil type is included in Meadow soils (Gleysol) and Meadow Alluvial Soil (Fluvic Gleysol). The meadow soils or paddy soils are widely occuring in the different parts of Myanmar in river plains, delta and low coastal plains and valleys. All types of Meadow Soils have thick solum and are mostly having clavey texture. They are most suitable for paddy cultivation.

Hydrology: Yedashe Township has lots of numeral creeks/rivers and most are flow from north to south. The most prominent river is Sittaung river and it is flows from north to south in the eastern part of the township.

Existing Environmental Baseline Condition

Existing environmental baseline condition include 1) soil quality, 2) water quality, 3) air quality, 4) vehicle traffic record, 5) flora and fauna assessment near the project area. In 1 July 2022 to 3 July 2022, NeoTech Myanmar environmental study team was conducted a field study to find out the existing environmental baseline condition in the project area. Details are presented in Section - 4. Brief information of ambient environment quality survey is shown in below.

Soil Quality Testing Soil sample 1 Location (Lat:/Long:) 19°22'38.82"N, 96°15'41.52"E

Soil sample 2 Location (Lat:/Long:) 19°22'39.29"N, 96°15'45.42"E

Soil sample 3 Location (Lat:/Long:) 19°22'37.54"N, 96°15'45.04"E

Soil sample 4 Location (Lat:/Long:) 19°22'37.49"N, 96°15'41.48"E

Soil sample 5 Location (Lat:/Long:) 19°22'38.43"N, 96°15'43.54"E

Water Quality Testing Water sample 1 (ground water) Location (Lat:/Long:) 19°22'37.33"N, 96°15'41.49"E

Water sample 2 (surface water) Location (Lat:/Long:) 19°22'26.50"N, 96°16'57.02"E

Water sample 3 (surface water) Location (Lat:/Long:) 19°22'36.82"N, 96°15'44.08"E

Water sample 4 (waste water) Location (Lat:/Long:) 19°22'39.09"N, 96°15'44.57"E

Air Quality Monitoring Using Equipment EPAS Haz scanner, Ozone Meter, Air quality multimeter

Parameter O3, CO, SO2, NO2, PM2.5, PM10, RH, VOC, Temperature

Period 24 hours

Location (Lat:/Long:) 19°22'38.10"N, 96°15'43.90"E

Noise Level Measurement Using Equipment Digital Noise Meter

Period 24 hours

Location (Lat:/Long:) 19°22'40.39"N, 96°15'44.19"E

Traffic and vehicles volume counting Duration 8 hours

Method Manual traffic counting

Equipment Talley book and pen

Location (Lat:/Long:) 19°22'40.35"N, 96°15'45.48"E

Flora account: During the site visit, the different biodiversity features, habitat and landscape units present at the site were identified. Walk-through-surveys were conducted across the site and all flora species observed were recorded. Flora account is based on actual sighting, a total of 20 plant species represent 20 genera of 18 families were observed during the assessment.

Socio-eco component

Yedashe township was composed with 4 towns, 17 quarters, 48 village tracts and 295 villages. Township area of Yedashe is 1011.11 square miles. The township is an economically important township and most of people living in the township are mainly work in agriculture. Rice is the main product of Yedashe township. There is one industrial zone called Tha Ga Ya in the township. Other small industries and workshops are scattering in the township.

The population of Bago Region is above 4.8 million. People living in Yedashe Township is total 221139 (major race Bama). Above 97 percent of the people in the township are Buddhists. Average per capita income is estimated about 1746717 kyats in 2019-2020 according to Sept 2022 Yedashe Township report, General Administration Department.

There are no college or university in Yedashe Township. Matriculation pass rate in 2019-2020 was 26.54 and the literacy rate for age over 15 is 100%. The enrolment rate for school-age children was 100%. Four hospitals in Yedashe Township. A lot of rural health division are operated with good healthcare system within the Township.

Identification and Assessment of Potential Environmental Impacts

Identification and assessment of potential Environmental Impacts including assessment and description of Adverse Impacts and Residual Impacts with presentation of the spatial and temporal characteristics of the impacts using maps, images, aerial photos and satellite images are present in below and detailed are in Section – 5.

Screening of Potential Environmental Risk and Mitigation Measures

Screening

Screening of environmental impacts has been based on the impact magnitude (negligible/ moderate/ severe – in the order of increasing degree) and impact duration (temporary/ permanent). ECD Screening based on the principles and categorization in EIA Procedure. Proposed project is required to conduct Environmental Management Plan; EMP, according to ECD instruction.

Environmental Assessment & Mitigation Measure

The objective of environmental impact assessment is to identify risks and to measure associated impacts which may arise from project activities, and to eliminate, control or mitigate the risk to environment.

Initial Environmental Examination

The Initial Environmental Examinations for the proposed project have been carried out for potential impacts during the following stages of the project planning and implementation:

(i) **Location impacts.** Impacts associated with site selection, including impacts on environment and resettlement or livelihood related impacts on communities

(ii) **Design impacts.** Impacts arising from project design, including the technology used, scale of operations, discharge standards etc.

(iii) **Construction impacts.** Impacts result from upgrading/construction activities including site clearance, earthworks, civil works, etc.

(iv) **O&M impacts.** Impacts associated with the operation and maintenance of the infrastructure built in the proposed project; Delicious Food Limited; Refined Sugar Production.

The potential environmental impacts and mitigation measures of all the components for Proposed Project are presented detailed in the report. Identification Potential Risk and Impact which may come from project activities is described as:

Phase	Activity	Risk	Impact
Development	Location	Land Acquisition, Force	Social
	Design	Relocation	Historical, Cultural
	Construction	View	Environmental
		Noise, Dust, Pollution, Waste	Social
	Installation	Conflict	Environmental
		Noise, Dust, Pollution, Waste	Social
		Conflict	
Operation	Operation	Waste	Environmental
		Conflict,	Social
	Maintenance	Noise, Dust, Pollution, Waste	Environmental
		Conflict	Social
	Services	Conflict,	Social
Abandonment	Termination	Conflict,	Social

Summary of Environmental Risk & Impacts Assessment

The potential impacts arising from the proposed project can be categorized as having Low residual risk levels. No residual risks were assessed as Medium, High or Severe. Attachment 1 presents a summary of the assessed level of residual (post-mitigation) environmental risk associated with the project activity. Table 5.3 also summarizes the key mitigation strategies and measures that DFL and the contractor(s) will implement during the development activity to ensure that impacts are either eliminated or reduced to levels that are environmentally sound and acceptable.

Results of the Public Consultation and Public Participation Processes

Results of the public consultation and public participation processes, recommendations received from the public, and the Project Proponent's written responses to comments received during that process are described in here and detailed in Section – 6.

Public Consultation and Information Disclosure

Consultations with stakeholders on environmental issues have been taken up as an integral part of the process. These consultations provided inputs to the various sector specialists in identification of the felt needs of the communities, and the relevant stakeholders.

The outputs of the consultation sessions are documented in on Stakeholder Consultations. Consultations were held with the following stakeholders:

- Officials of Union Government Departments;
- Officials of Regional Government Departments; and
- Local Communities; DFL staff
- Local Authority of Industrial Zone Committee
- Contractors and employee, investors adjacent to factory and,
- Local Communities; adjacent/around of the project factory area

Outcomes from Public Consultation

These issues raised during public consultation, together with the findings of the baseline data gathering, have been considered when compiling the EMP. MONREC has approved the proposed project to invest and operate by following rules & regulations, and procedures & standing instructions. MONREC provided details on the regulatory submission and approvals process.

There is no objection from the authorities of host country in general as well as no complaint received from staff regarding the current food manufacturing and marketing operation while study team consulting during assessment period. Providing necessary skill factory training as of voluntary nomination system for the eligible staff to develop local staff is built in as ongoing process throughout project period.

As per Myanmar regulations, this prepared EMP Report will be made available for public comment. The full report will be made available to the public in English and a non-technical summary will be made available in Myanmar. The report will be disclosed to stakeholders, at proposed project factory and at DFL office in Yangon.

EMP

Policy and Objective of EMP

A Project-specific Environmental Management Plan (EMP) has been prepared for the proposed project. The EMP aims to provide an environmental management framework by outlining the compliance requirements, mitigation measures and monitoring programs to be undertaken throughout the project period.

Roles and Responsibilities

The EMP describes the key roles and responsibilities for all personnel (DFL and contractors) who will be involved in the Project.

Planning and Implementation

The EMP has been prepared based on the findings of this EMP and describes management measures designed to mitigate potential environmental impacts of the proposed project and associated to levels that are considered to be and acceptable. EMP will be regularly reviewed and updated to suit with project requirements.

Monitoring, Record Keeping and Reporting

The EMP details all of the monitoring, record keeping and reporting requirements for the proposed project associated activities in the project area.

Auditing and Review

Environmental performance auditing will be undertaken to confirm that all significant environmental aspects of the project activity are covered by the EMP. It will also confirm that the standards to achieve environmental performance are being implemented and identify opportunities for continuous improvement and potential non-conformances.

The Persons, Organizations and Budgets Needed for Implementation of the EMP

The Persons and Organizations for EMP Implementation

The following personnel have been identified as key person as Project Team to the implementation of EMP:

- Managing Director – Responsible for environmental performance of DFL
- Director –Responsible for effective implementation of the EMP across all operating units
- Manager – Management Champion for EMP
- Health, Safety, & Environmental (HSE) Coordinator – EMP Champion, to be the key person involved in development and implementation of EMP

Budget for Environmental Management Plan Implementation

Separated EMP budget (estimated 3000 USD) reserves from DFL Proposed Project will be used in implementation of EMP activities without fail which complying with existing laws & regulation of Myanmar. The separated and dedicated budget will be reserved by the operator to implement effective environmental management plan EMP.

Budget for CSR Plan

The Proposed Project CSR program has been outlined as per below in sponsoring educational sector, healthcare of local community as well as staff and its family by arranging clinic & medical doctor, providing necessary equipment & training which relating to East Wing Tower throughout operational period without fail to promote CSR.

(a) 50% of 2% annual net profit for the education section

(b) 50% of 2% annual net profit for the health care section

1.0 PROJECT PROPONENT

This section describes the Project description in reasonable detail with description of the project size, installations, technology, infrastructure, production processes, use of materials and resources, generation of waste, emissions and disturbances together with overview maps and site layout maps (using aerial photos and satellite images in proper scale) for each Project phase and, where relevant, project alternatives for each Project phase.

This section describes the project background, project proponent, project third party environmental study team, purpose & scope, TOR, implementation schedule, and project benefits.

1.1 Background

The Government of the Republic of the Union of Myanmar (hereinafter referred to as Myanmar) is encouraging investor to develop business of Myanmar under administration of MONREC. Delicious Food Limited (DFL) is investing in Fined Sugar Production after MONREC approval.

Delicious Food Limited prepared this Environmental Management Plan (EMP) for its operation throughout the project period (the developing phase, operation phase, and abandonment phase of Fined Sugar Production), for submission to ECD, Ministry of Natural Resources and Environmental Conservation (MONREC) in accordance with the Environment Impact Assessment Procedure.

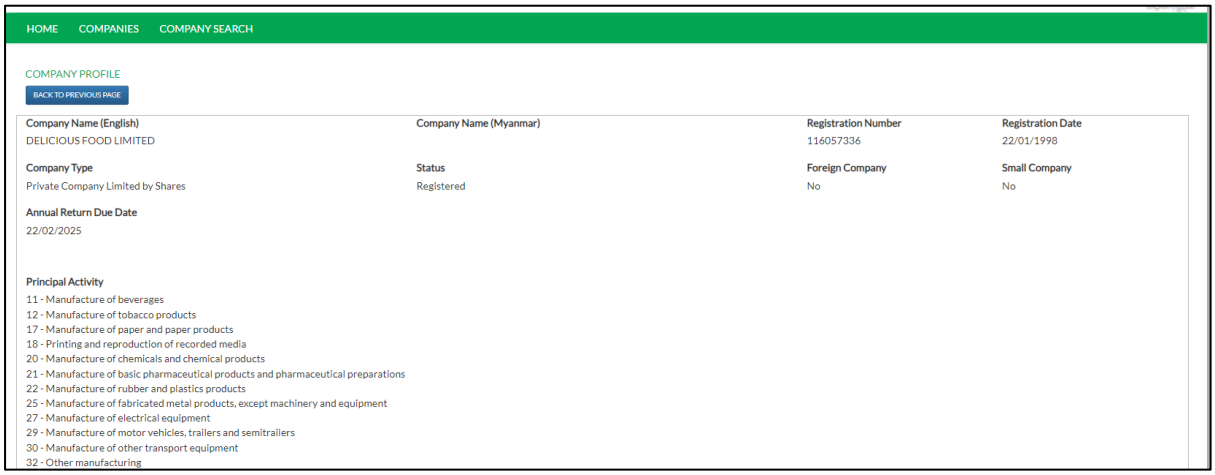
DFL is aimed to continue operation by total invested capital equivalent in 5,000 Million Yens for Refined Sugar Production. Income money received from the project operation will be invested again into other allowed business within Myanmar.

DFL is currently operating its operation in the rented location; Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar).

1.1. Presentation of the Project Proponent/Project Developer

1.1.1 Delicious Food Limited is the operator/investor of Refined Sugar Production

DFL was incorporated under the Myanmar Companies Act with certification No. 116057336 on 22.01.1998. DFL has registered at Directorate of Investment and Company Administration (DICA), Ministry of Investment and Foreign Economic Relations (MIFER) for the business mentioned below accordingly under Myanmar Laws & Regulations: Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar)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COMPANY PROFILE

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Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
DELICIOUS FOOD LIMITED		116057336	22/01/1998
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	No	No

Annual Return Due Date
22/02/2025

Principal Activity
11 - Manufacture of beverages
12 - Manufacture of tobacco products
17 - Manufacture of paper and paper products
18 - Printing and reproduction of recorded media
20 - Manufacture of chemicals and chemical products
21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations
22 - Manufacture of rubber and plastics products
25 - Manufacture of fabricated metal products, except machinery and equipment
27 - Manufacture of electrical equipment
29 - Manufacture of motor vehicles, trailers and semitrailers
30 - Manufacture of other transport equipment
32 - Other manufacturing

Company	Address
Delicious Food Limited Reg.No. 116057336	Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar) Email: sugarmill007@gmail.com Tel: 09-452103568

Delicious Food Limited will be functioned as an administrative body of the Refined Sugar direction of investors of DFL. The investors operate through appointed director and staff. The mentioned below investor is registered as directors in the certificate of relevant department according to Myanmar Procedures and laws.

Delicious Food Limited (Refined Sugar Production)

Name	Nationality, NRC Card No. / Passport No.	Position
U Tun Tun Win	Myanmar (12/Pabata (N)003175)	Director

DFL was incorporated under the Myanmar law on 13th January 2017 as a Delicious Food's Yedashe Sugar Mill Project with certificate of Private Industrial Registration License No.PaKha/Kyee/780 at Ministry of Industry for the below principal activity:
– Manufacture of food products project. (Annexure – 1)

1.2 Project Benefits

The proposed Delicious Food Limited project has potential in promotion of domestic mass refined sugar product market from its operation. The benefits accrued due to the present project components are:

i. Manufacturing, distribution, and marketing standard quality refined sugar product for domestic customers;
ii. Utilization of certified machinery and enhancement of machinery efficiency in the business;
iii. Creating more opportunity for local human resources to work Delicious Food Limited; Fine Sugar Production.
iv. Enhancement of different level of skills of the International standard manpower by providing appropriate trainings to employee;
v. Created more opportunity for local human resources to work at proposed Project; local personnel manpower 207 nos. will be appointed;
vi. Direct income generation to the Union Government from operations service charges charged by relevant authorities has been accrued;
vii. Myanmar nationals working at proposed Project will be able to acquire International Standard technical know-how from the operation. This will contribute to the personal capability of the national workforce in the long term;
viii. From the standpoints of the Government of the Republic of the Union of Myanmar, personal income tax revenue will increase firstly and other tax revenue like income tax and commercial tax will also be generated;

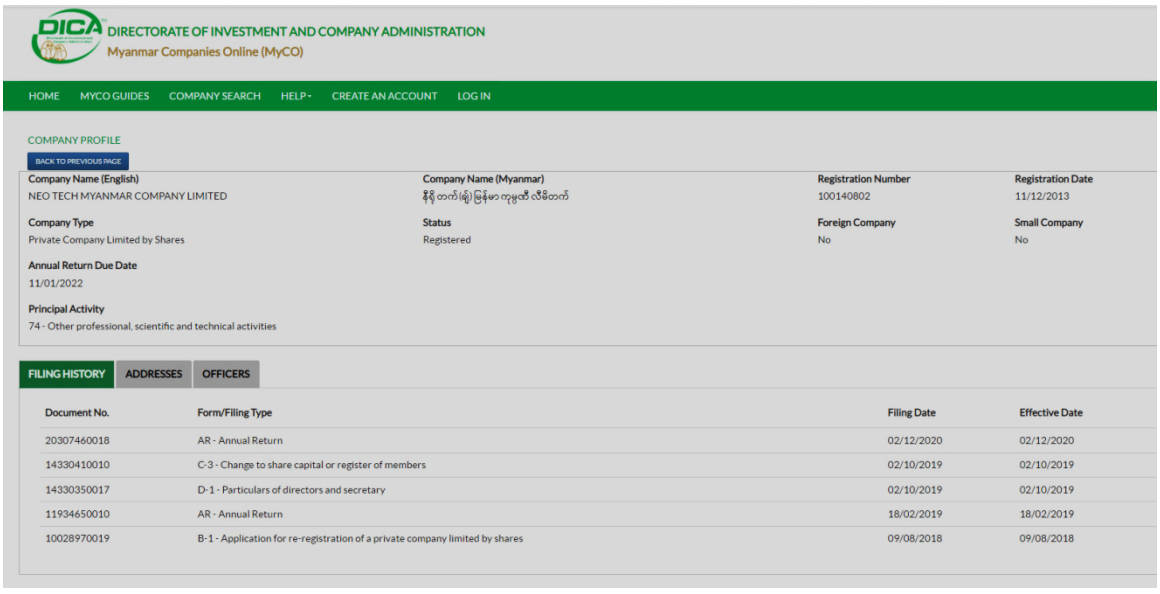
ix. Implementation of EMP for the proposed project can enhance environmental awareness for the local community as well as other investors to comply properly;

x. 2% of net profit reserves from proposed Project yearly income will be used in CSR activities (such as funding in educational sector, healthcare of local community as well as staff and its family by arranging clinic & medical doctor, etc.) without fail which complying with existing laws & regulation of Myanmar.

1.3 Identification of Third-Party Environmental Expert for Project

DFL has assigned NeoTech Myanmar Co. Ltd. in September 2023 to conduct Environmental assessment study and to produce environmental management plan for the Proposed Project; complied with MONREC instruction to be submitted by following existing Myanmar law, regulations, procedures, and standing instructions for further perusal.

Neo Tech Myanmar Company Limited is registered in DICA since 11.12.2013 with registration no.100140802 for Principal Activity; 74 - Other professional, scientific and technical activities and registered in ECD since 2013 with temporary registration no.00004 to identify as third-party expert to conduct Initial Environmental Examination, Environmental Impact Assessment, and Environmental Management Plan Study for the Project required to prepare as defined in EIA Procedure.



DIRECTORATE OF INVESTMENT AND COMPANY ADMINISTRATION
Myanmar Companies Online (MyCO)

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COMPANY PROFILE

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Company Name (English)	Company Name (Myanmar)	Registration Number	Registration Date
NEO TECH MYANMAR COMPANY LIMITED	နီအို တက်(မြို) မြန်မာ ကုမ္ပဏီ လီမိတက်	100140802	11/12/2013
Company Type	**Status**	**Foreign Company**	**Small Company**
Private Company Limited by Shares	Registered	No	No

Annual Return Due Date
11/01/2022

Principal Activity
74 - Other professional, scientific and technical activities

FILING HISTORY | ADDRESSES | OFFICERS

Document No.	Form/Filing Type	Filing Date	Effective Date
20307460018	AR - Annual Return	02/12/2020	02/12/2020
14330410010	C-3 - Change to share capital or register of members	02/10/2019	02/10/2019
14330350017	D-1 - Particulars of directors and secretary	02/10/2019	02/10/2019
11934650010	AR - Annual Return	18/02/2019	18/02/2019
10028970019	B-1 - Application for re-registration of a private company limited by shares	09/08/2018	09/08/2018

1.4 Environmental Study Team & Schedule

Duration – September 2023 (commenced study on September 2023)

Study Team – NeoTech Myanmar Co., Ltd. (DICA Reg. No. 100140802, Date 11.12.2013) (ECD No.0004)

Member –

1. U Khin Maung Myoe (Consultant, ECD No.0015) working experience in environment since 1998
2. Daw Nu Nu Aye (Consultant, ECD No.0014) working experience in environment since 2013
3. Dr. Khun Hline Myint (Consultant, ECD No.0016) working experience in environment since 2000
4. Dr. Zin Min (Consultant, ECD No.0018) working experience in environment since 2000
5. U Hein Thike (Field Surveyor) working experience in environment since 2013
6. U Zaw Bala (Field Surveyor) working experience in environment since 2023
7. U Saw Htee Mu (Field Surveyor) working experience in environment since 2018
8. U Hein Htet (Field Surveyor) working experience in environment since 2018

1.5 Purpose and Scope

The purpose of this EMP report is to get ECC for the prepared EMP of the proposed project operation from relevant authority, and to take EMP implementation in its operation. Environmental study on proposed project activity scopes to prepare suitable environmental management plan based on the identified impacts (of both positive and negative) affected to the environment, human use values, quality of life and health, etc., which may come out from the project activities throughout proposed project operation. EMP has been prepared to minimize impacts as low as reasonably practicable level (ALARP) by means of prevention, mitigation, and monitoring measures.

The specific objectives of this report are to:

- Identify all planned activities and potential unplanned events;
- Establish an environmental baseline of the project area;

- Identify and assess potentially significant impacts based on existing environmental description;
- Identify and recommend mitigation measures to minimize potential impacts;
- Recommend a monitoring plan that can track changes in the environment issues and to ensure compliance with Myanmar legislation.

This Report is confined specifically to an Environmental Management Plan for the Delicious Food Limited; Refined Sugar Production (Development, operational, and abandonment phases of project) to be operated by Delicious Food Limited.

This Report examines the existing situation of proposed area as well as examines possible impact from all 3 phases (development/upgrading, operation, and abandonment) of Delicious Food Limited; Refined sugar production in proposed area. The environmental baseline data collection has been carried out. And calculation on possible environmental impact from daily operational of Delicious Food Limited; Refined Sugar Production has been done.

1.6 TOR for EMP Report

This Report contains Nine (9) sections as TOR for the EMP including Executive Summary:

1. Executive Summary
2. Introduction covering project proponent;
3. Policy, Legal and Institutional Framework;
4. Description of project components;
5. Description of the Surrounding Environment;
6. Screening of potential environmental impacts and mitigation measures;
7. Public Consultation and Information Disclosure; and
8. Environmental Management Plan.
9. Finding and Recommendation
10. Conclusion

2.0 DESCRIPTION OF APPLICABLE LAWS

Description of applicable laws, decrees, regulations, standards, guidelines and corporate policies related to environmental and social matters of the Project together with the relevant government agencies involved and their roles and responsibilities vis-à-vis the Project is present in this section.

2.1 Applicable Laws & Regulations, Procedures & Guidelines

The Myanmar Government has requirement either for the conduct of necessary environmental examination or assessment for any projects based on scale /size of project. Proponents of major development projects will be required to prepare and formally submit an environmental impact assessment report for approval by government authority (Environmental Conservation Department, ECD). In the meantime, existing legislation includes provisions for various ministries which have their own conservation and protection guidelines.

The investor; DFL, has the duty to comply with laws, and regulation of host country; the Republic of the Union of Myanmar. The implementation of proposed project will be governed by the Laws, Acts, Rules, Procedures, Policies, and Regulations of the Government of the Republic of the Union of Myanmar; Union Ministries; Ministry of Natural Resources & Environmental Conservation, Ministry of Health & Sports, Ministry of Labor, and the respective local authority; Regional Government of Yangon Region, etc. These regulations impose restrictions on the activities to minimize/mitigate likely impacts on the environment. The following are the recent applicable Myanmar laws, rules & regulations relating (but not limited) to the proposed project:

Myanmar Laws, Acts, Rules	Description & relevant section	Date of Legislate
The Myanmar Constitution Law, (2008)	Section No.45, 349(b), 359, 389, 390 (a, b, c, d)	29.05.2008
The Environmental Conservation Law, (2012 Pyidaungsu Hluttaw Law No. 9)	Section No.7(o), 14, 15, 16 (a, b, c), 24, 32	30.03.2012
The Environmental Conservation Rules (2014 MOECAF Notification Order No.50)	Section No.55, 69	05.06.2014
Environmental Impact Assessment Procedure (2015 MOECAF Notification No.616)	Section No.102 – 110, 113, 115, 117	29.12.2015
National Environmental Quality (Emission) Guidelines (2015 MOECAF Order No.616)	Article No.9, 10, 12 & 13, (Appendix A 1 & 2.3.1.4)	29.12.2015
Working with ODS Notification (MOECAF Order No.37/2014) (25th April 2014)	To follow the law	25.04.2014
Prohibit the importation of hydrochlorofluorocarbons (HCFCs / R-22) with less than 2.5 horsepower (HCFCs / R-22 based split and window type air conditioner equipment) to control ozone depletion. Notification No. 28/2020	To follow the law	01.07.2020
The Order on the Operation of Business Relating to Ozone Depleting Substances Notification (No. 37/2014)	To follow the law	25.04.2014
The Ethnic Right Protection Law (2015)	Section No. 5	24.2.2015
The Myanmar Investment Law, (2016)	Section No.40 – 46, 51, 65	18.10.2016
The Myanmar Investment Rules, (2017)	Section No.19, 21 to 23, 26, 35 to 43 and 62 to 67	30.03.2017
Foreign Investment Law (2012)	Section No.9, 10, 17 (a to k), 18 (a to g), 19, 24 (a to f), 25, 26, 35, 39, 40, 41, 43 (a,b), 46	02.11.2012
Natural Disaster Management Law (2013)	Section No.13 to 18,32, 35, 36 and 37	31.7.2013

Prevention of Hazard from Danger of Chemical and Related Substances Law (2013 Pyidaungsu Hluttaw Law No, 28)	Section No.15 (b), 16, 17, 22, 23 (a), 27	26.08.2013
Prevention of Hazard from Danger of Chemical and Related Substances Rules Order No.85/2015-2016	To follow the law	12.01.2016
Restricted Chemicals List Notification Order No.3/2016	To follow the law	30.06.2016
The Forestry Law (2018)	Section No. 12 (a)	
Protection of Biodiversity and Protected Area Law (May 2018)	Section No.25, 31 (a to f), 34 to 36	21.05.2018
The Conservation of Water Resources and Rivers Law (2006)	Section No.8 to 24	02.10.2006
The Factories Act No.65 (1951) (Amended)	To follow the law	20.01.2016
Private Industrial Enterprise Law (State Law & Order Restoration Council Law No. 22/90)	Article No.3, 4(b), 7(c), 13, 27	26.11.1990
Export and Import Law (2012 Pyidaungsu Hluttaw Law No.17)	Section No.5 to 7	17.09.2012
The Labor Organization Law (2011 Pyidaungsu Hluttaw Law No.7)	Section No.17 to 23, 29 to 31, 37 to 42, 43 to 50	11.10.2011
The Labor Organization Rules Order No. (1/2012)	Section No.30, 31 (a to b), 41	29.02.2012
The Settlement of Labor Dispute Law & Rule (2012 Pyidaungsu Hluttaw Law No.5)	Section No.6 to 7, 20, 25, 31 to 33, 35, 36, 45	28.03.2012
The Edited Settlement of Dispute Law (2014)	To follow the law	30.09.2014
The Social Security Law, 2012 (Came into force on 1 April 2014)	Section No.11 (a, b), 16 to 18, 45 (a, b), 48 to 51, 53 to 54 (a), 65 to 67 (a), 69 (b) and 77, 88 (a) (1,2)	31.08.2012
The Social Security Rules (Notification No. 41/2014)	Section No.40, 41, 42 (c), 43, 45 and 47	02.04.2014
The Minimum Wages Law (2013)	Section No.12 (a to e), 13 (a to g), 14 (a to j), 15 (a to	22.03.2013

	b) and 16, 22 (a to e) and 24 (a to b),	
The Minimum Wages Rules (2013)	Section No.43 (a to l)	12.07.2013
The Minimum Wages Notification Order No.2/2018	To follow the law	14.05.2018
The Employment and Skill Development Law (2013 Pyidaungsu Hluttaw Law No, 29)	Section No.5 (a to h), 14 and 15 (a, b), 30	30.08.2013
The Workman's Compensation Act, (1923) (Amended)	To follow the law	11.5.2016
The Leave and Holidays Rules, (2018)	Section No.3, 4, 15, 17 to 21, 23 to 28, 33, 41, 42, 48, 50 and 52	26.4.2018
The Payment of Wages Law (2016 Pyidaungsu Hluttaw Law No.17)	Section No.3 (a to c), 4 (a to g), 5, 7 (a to d), 8, 9, 10 (a to h),11, 12 (a to b), 14, 22 to 23	25.01.2016
Myanmar Fire Brigade Acts (2015 Pyidaungsu Hluttaw Law No.11)	Section No.25, 46-50	17.03.2015
Electricity Law (2014 Pyidaungsu Hluttaw Law No.44)	Section No.11, 14, 18 to 21 (a), 22(a), 23(a), 24 to 27, 28, 40, 44 to 53, 68	27.10.2014
The Public Health Law of the Union of Myanmar, (1972)	Section No.6 to 8, 10	12.01.1972
Occupational Safety and Health Law (2019 Pyidaungsu Hluttaw Law No.8)	Section No.8 to 10, 12 (a to b), 26 to 30, 31 to 33, 34, 36 (b and c), 48 to 50	15.03.2019
The Control of Smoking and Consumption of Tobacco Product Law (2006)	Section No.9	04.05.2006
The Prevention and Control of Communicable Diseases Law (1995)	Section No.8, 9	20.03.1995
The Motor Vehicle Law, (2015)	Section No.4, 5, 8, 11 to 13, 15, 45 to 57	07.09.2015

Petroleum and Petroleum Products Law (2017)	Section No. 9,10,11	01.08.20147
The Commercial Tax Law (2015)	Section No.4, 5, 11 (a to b), 12 (a), 13 (a)	02.04.2015
The Myanmar Insurance Law. (1993)	To follow	23.07.1993
The National Food Law (The State Law and Order Restoration Council Law No.5/97) (3.3.1997) [Amendment]	To follow the law	13.08.2013
The Consumer Protection Law (2019) (Pyidaungsu Hluttaw Law No. 9, 2019)	To follow	15.03.2019
The Myanmar Engineering Council Law (2013)	Section No.34, 37	28.11.2013
The Administration of Vacant, Fallow and Virgin Lands Law (2012)	Section No. 16, 25	30.03.2012
The Yangon City Development Law, (2018 Yangon Region Government)	Section No.30, 70 (a, b), 72, 75 (a, b) and 77, 123, 151, 310 to 313, 315 to 319, 322, 323 (m)	28.01.2018
Myanmar National Building Code 2016	To follow	
The Laws & Regulation from Ministry of Planning and Finance, Ministry of Construction and Department of Urban and Housing Development	To follow	
Standing Instructions from Yangon Region Government	To follow	
The Standing Instructions from Environmental Conservation Department	To follow	
Standing Orders and Instructions from FDA, MOHS, MIC	To follow	
Rules and Regulations of Dagon Seik Kan Industrial_Zone (1)	To follow	

Any component included in proposed location shall comply with the above Myanmar laws, standards, rules and requirements. Key standards include those related to water quality, air quality, effluent discharge, and protected areas. Compliance is required in all stages of the project including development phase, operation phase, and abandonment.

Proposed Project Operation requires MONREC consent for investment in operation. The EIA Notification of 29th December 2015 defined necessary action to perform environmental survey and reporting for investment in projects depending on the scale of project.

Type of Invested Project	Size/Scale of the Project	Requirement to conduct Environmental Survey Type
Food and Beverage Manufacturing		
Food and Beverage Processing Facilities (processing of beef, pork, mutton and poultry meats, vegetables, and fruit raw materials into value-added food and non-fermented beverage products for human consumption)	≥10 t/d but <20 t/d	Initial Environmental Examination
	≥20 t/d	Environmental Impact Assessment

The proposed project is commenced since 2011 and already in operation phase with its products less than 10 t/d size/scale in 2011. DFL proposed project, however, required to prepare EMP as advised by relevant authority which complying Myanmar EIA Procedures.

2.2 Delicious Food Limited Environmental and Social Policy

DFL has prepared environmental and social policy for the operations operating by the proponent within the country. The following policy is presented as a Draft and is subject to review and confirmation by DFL.

DELICIOUS FOOD LIMITED (DFL) commits to an objective of environmental excellence on the basis that this approach is:

- essential to efficient business performance,
- recognizes the company's role and responsibilities in the broader community,
- acknowledges it's environmental & corporate social responsibility commitments

"Environmental Conservation and Social Policy"

- It will take an approach that promotes sustainable development in decision making for project operation.
- It will be managed to minimize the use of human and material resources in all activities and to avoid losses.
- It will be managed to create a clean environment and a good workplace for

2.3 Policy Legal Framework, including existing applicable laws and rules, International Conventions, Treaties and Agreements, and national & international standards and guidelines

The investor of the proposed project; has the duty to comply with the applicable laws, rules and regulation, procedures, guidelines and instructions (Environmental Conservation, Industrial and Factory Health and Safety, Fire Risk, National Environmental Quality (Emission) Guidelines, IFC guideline, WHO guideline) of host country; the Republic of the Union of Myanmar and understands that.

The proposed project has undertaken to comply with laws, and regulation of host country; the Republic of the Union of Myanmar and has also undertaken to comply International Conventions, Treaties and Agreements, and national & international standards and guidelines without violation.

International Environmental Conventions/Protocols/Agreements Signed/Ratified by Myanmar

International Environmental Conventions/Protocols/Agreement	Date of Signature	Date of Ratification	Date of Member	Cabinet Approval Date
United Nations Framework Convention on Climate Change, New York, 1992 (UNFCCC)	11-6-1992	25-11-1994 (Ratification)		41/94 9-11-1994
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985		24-11-1993 (Ratification)	22-9-1994	46/93
Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987		24-11-1993 (Ratification)	22-9-1994	46/93
London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London, 1990		24-11-1993 (Ratification)	22-9-1994	46/93
ASEAN Agreement on Transboundary Haze Pollution	10-6-2002	13-3-2003 (Ratification)		7/2003 (27-2-2003)
Parties to the Basel Convention on the Control of transboundary Movements of Hazardous Wastes and their Disposal		6-4-2015 (Ratification)		

The project investor has undertaken to comply the above-mentioned Law, Rules & Regulations, Procedures & Guidelines etc. in accord with their relevant sections about the project and has also undertaken to comply Orders, Instructions, Regional order and instructions issued from time to time.

2.4 National Environmental Quality (Emission) Guideline

ECD has instructed DFL to conduct EMP for the proposed project. DFL has to follow National Environmental Quality (Emission) Guidelines for the overall project operation.

Sr. No.	Project Activity Description	EQEG Specific	Particular
Construction Phase			
1.	Factory and Facility Installation (developing)	General	Air Emission Wastewater Noise
Operation Phase			
2. (a)	Factory Process Manufacturing of Foods (Refined Sugar Products)	Refined Sugar Production Processing (Article 2.3.1.4)	Wastewater Particulate Matter (PM10)
		General	Air Emission Noise Odor
Abandonment Phase			
3. (a)	Dismantling Process Termination Operation, Removing/Uninstallation and storing equipment/ facilities	General	Air Emission Wastewater Noise

The following EQEG general guideline values, or as stipulated on a case-by-case basis, applying during project operations in Refined Sugar Manufacturing and Sales of Product.

Table 2.1: Air Emission (General)

Parameter	Averaging Period	Guideline Value µg/m3
Nitrogen dioxide	1-year 1-hour	40 200
Ozone	8-hour daily maximum	100
Particulate matter PM10	1-year 24-hour	20 50
Particulate matter PM2.5	1-year 24-hour	10 25
Sulfur dioxide	24-hour 10-minute	20 500

Table 2.2: Wastewater, Storm water Runoff, Effluent and Sanitary Discharge (general)

Parameter	Unit	Guideline Value
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.	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulfide	mg/l	1
Temperature increase	˚C	<3
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

Table 2.3: Site Runoff and Wastewater Discharges

(EQEG, Article 2.2.5 (Refined Sugar Processing))

Parameter	Unit	Guideline Value
5-day Biochemical oxygen demand	mg/l	50
Chemical oxygen demand	mg/l	250
Oil and grease	mg/l	10
pH	S.U.a	6-9
Temperature increase	°C	<3b
Total coliform bacteria	100 ml	400
Total nitrogen	mg/l	10
Total phosphorous	mg/l	2
Total suspended solids	mg/l	50

[a] Standard Unit

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

Air Emission (EQEG, Article 2.2.5 (Refined Sugar Processing))

Air Emissions in Refined Sugar Processing consist mainly of particles and odors. In this case, the particulate matter PM10 must not normally exceed 50 mg / Nm3.

Table 2.4:Noise Emission Level

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

The Refrigerant to be used in the project is encourage to use no ozone depletion gas for the AC System based on the table mentioned below.

R-32 V/S R-410A V/S R-22 V/S R-290

As we have mentioned above the best quality of the refrigerants depends upon their global warming potential and the ozone depletion potential as well. To clear the difference between all these refrigerants follow the table below.

REFRIGERANT	OZONE DEPLETION POTENTIAL	GLOBAL WARMING POTENTIAL POTENTIAL
R-22	MEDIUM	1810
R-32	NO	675
R-134A	NO	1430
R-290	NO	3
R-410A	NO	2088
R-600A	NO	3

(Ref: https://www.beeindia.in/air-conditioner-refrigerants-r32-vs-r410a-vs-r22-vs-r290/)

Odor (Environmental Quality Emission Guidelines -EQEG)

The detectability of an odor is a sensory property that refers to the minimum concentration that produces an olfactory response or sensation. An odorant unit is defined as the amount of odorant mixtures which distributed in one cubic meter of air results in odor intensities corresponding to a defined threshold value. The odorant unit is therefore defined by a physiologically measured amount of substance. In practice, offensive odor can only be judged by public reaction to the odor, with the nuisance level being as low as two odorant units and as high as ten odorant units for less offensive odors. An odor assessment criterion of five to ten odorant units is likely to represent the level below which offensive odors should not occur.

2.5 Legal Requirements

In line with the National Health Policy NGOs, both national and international, are also taking some share of service provision and their roles are also becoming important as the needs for collaboration in health become more prominent.

World Bank Group Safeguard Policies and regulations applicable to this project

- OP/BP 4.01 Environmental Assessment

- OP/BP 4.10 Indigenous People
- Public Consultations and Information Disclosure
- The World Bank Group Environment, Health and Safety (EHS) General Guidelines
- World Bank Group Good Practice Note: Asbestos: Occupational and Community Health Issues

The following Table summarizes legal requirements and international guidelines relevant to environmental performance for the facilities.

Table 2.5: Legal Requirements and International Guidelines

Activity	World Bank Group 1988/95/98 Environmental Guidelines for Production	Project Objectives
Disposal of waste	No specific requirements relevant to Project	Ensure no spillage or disposal of industrial waste into normal waste disposing site. Hazardous Wastes cannot be exported without permission and extensive pre-notification.
Noise	Maximum increase of 3dB(A) above background noise levels, as measured at noise receptors, or conform to the following maximums: Daytime in residential areas: 55 dB(A) Night time in residential areas: 45 dB(A)	Maximum increase of 3dB(A) above background noise levels, as measured at noise receptors, or conform to the following maximums: Daytime in residential areas: 55 dB(A) Night time in residential areas: 45 dB(A)

2.5.1 International Air Quality Guidelines and Standards

In terms of ambient air quality standard, the relevant guidelines and standards were used to compare with the findings. The following table presents the relevant air quality guidelines and standards.

Table 2.6: International ambient air quality standards/guidelines

Pollutant	Averaging Period	Limit/Guideline Value/ Standards (µgm-3)	Relevant Standards/ Guidelines
NO2	1 year	40	WHO Guideline
		100	NAAQS (USEPA)
	24 hours	100	NAAQS (USEPA)
		150	World Bank
	1 hour	200	WHO Guideline
SO2	1 year	50	WHO Guideline
		50	World Bank
	24 hours	20	WHO Guideline
		80	NAAQS (USEPA)
		125	World Bank
	1 hour	365	NAAQS (USEPA)
CO	8 hours	10,000	WHO Guideline
		10,000	World Bank
	1 hour	30,000	WHO Guideline
		40,000	NAAQS (USEPA)
PM 2.5	1 year	10	WHO
	24 hours	25	WHO
		35	NAAQS (USEPA)
PM10	24 hours	150	NAAQS (USEPA)
		50	WHO
TSPM	24 hours	100	WHO
CO	8 hours	9 ppm (8hr)	USEPA (NAAQ)

2.5.2 WHO Drinking Water Guideline (Geneva-1993)

World Health Organization Drinking Water guideline value (Geneva-1993) are shown in below Table respectively. DFL has to follow these following Guidelines for the overall project operation.

Table 2.7:World Health Organization Drinking Water guideline value (Geneva-1993)

Test	Unit	Maximum Permissible Limit
Colour (TCU)	Pt-Co	15
Turbidity	NTU	5
Total Dissolved Solvent	mg/l	1000
Chloride	mg/l	250
Lead	mg/l	0.01
Total Hardness (as CaCO3)	mg/l	500
Iron	mg/l	0.3
pH	S.Uc	6.5 – 8.5
Sulphate	mg/l	200
Zinc	mg/l	5
Calcium	mg/l	200
Magnesium	mg/l	150
Nitrate	mg/l	50
Arsenic	mg/l	≤0.01

2.5.3 Standards and Codes of Practice

The DFL environmental management plan, emergency response & fire safety procedures, occupational health & hygiene procedures, Natural disaster response management Plan will be made available which reference to Myanmar government requirement for the reporting.

2.6 Commitments

2.6.1 Commitments by Delicious Food Limited

DFL has undertaken to perform DFL EMP for the project operation; Business project, for all period (development, operation & abandonment) prepared according to EIA procedure section 62 and existing relevant Laws & Regulation Refined Sugar Production.

Delicious Food Ltd. commits in respect of the proposed project that the EMP report:

- has been presented in a manner which is accurate and complete:
- has been prepared in strict compliance with applicable laws including the Environmental Impact Assessment Procedure, and
- Proposed Project will at all times comply fully with the commitments, mitigation measures, and plans in the EMP Report. (Natural Disaster & Emergency Response Plan, Fire Safety Procedure and Action Plan, Social Welfare Program, Waste Management Plan.
- will be reviewed and revised as/when instructed to do so by official authority to suit with the changing modern technology in industry
- covering to minimize and mitigate socio economic impacts which may cause by project abandonment activities

Project proponent; DFL, has confirmed that above mentioned facts and data are correct. (Signed commitment letter is also presented in Attachment).

The following personnel have been identified as key person to the EMP implementation:

- Managing Director – Responsible for performance of DFL EMP
- Director – Responsible for effective implementation of the DFL EMP
- Factory Manager – Management Champion for DFL EMP

2.6.2 Commitment by Third Party

Neo Tech Myanmar Company Limited commits in respect of the proposed project that the EMP report has been:

- presented in a manner which is accurate and complete:
- prepared in accordance with the requirements of applicable laws, consistence with Environmental Impact Assessment Procedure, and
- prepared under the guidance of the Ministry of Natural Resources and Environmental Conservation (MONREC).

Third Party; NeoTech Myanmar Co., Ltd., has confirmed that above mentioned facts are correct. (Signed commitment letter is also presented in Attachment).

2.6.3 Contractual and other Commitments

DFL has undertaken to operate the proposed project operation on the developed granted land under permit agreement between land developer; and proposed project proponent; Delicious Food Ltd. (DFL).

DFL has undertaken to operate the proposed project operation on the granted land.
CVCL has undertaken to perform EMP on project throughout the project period (development, operation & abandonment phases) prepared by third party study team according to existing relevant Laws & Regulation of Myanmar.

DFL has undertaken to ensure clear from Public & Occupational Health and Safety issues throughout its proposed project operations to operate Refined Sugar Production Factory according to Myanmar Occupational Health & Safety Law for the proposed project.

DFL has undertaken to ensure clear from electricity safety issues according to 2014 The Electricity Law for alternative electricity power utilization from its own standby generator.

DFL has undertaken to follow standing instruction from government officials; local, regional, union level.

DFL has undertaken to apply prepared effective management systems; environmental management plan, natural disaster & emergency responding management system, fire

safety & responding system, social & cultural awareness programs, throughout project period.

DFL has undertaken to pay tax and charges as defined under Myanmar Tax Laws and promise to undertake responsibility without fail.

DFL has undertaken to submit EMP performance report to State Office of ECD (Yangon) in 6 monthly (or) as instructed by Head Office of ECD (Nay Pyi Taw).

3.0 PROJECT DESCRIPTION AND ALTERNATIVES

The Project was reviewed in order to gain a full understanding of the project and to compile information on project activities. The Project description and alternatives is described in Section 3.

3.1 Project Land Use

Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). has been established as (60 years) granted industrial land. The land area is cleared and developed for Refined Sugar Production and manufactory by landlord.

The proposed project area excludes from forest reserve area and other local community land usage. Therefore, the proposed project area is cleared from land acquisition issue. The preferred granted industrial land is selected as alternative location for the proposed project; Delicious Food Limited.

Proposed granted industrial land area (729.50) Acres locating at Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar) is selected for the proposed project; Delicious Food Limited. Existing land use of proposed Project Area covers 729.50 Acres as per Table 3.1.

Table 3.1: Existing Land Use in the Proposed Project Area (2023)

Land Use (Project Layout Plan)	Area in Acre	% To Total Area
Industrial Land with infrastructures, buildings and plantation used for Delicious Food Limited	729.50	100.00
Total	729.50	100.00

The selected industrial land area will be used continuously as immediate location for the proposed project; for the Delicious Food Limited. Master plan of the existing and

proposed project land use in the concerning area covers 729.50 Acre has been described in below Table 3.2.

Table 3.2: Proposed Project Land Use in the Selected Land Area (729.50 Acre)

Land Use	Area in Area	% To Total Area
Delicious Food Limited Factory Buildings, other Relevant Buildings and Plantation Area of Sugarcane	729.50	100.00
Total	729.50	100.00

3.2 Project Component

The proposed area has been commenced for Delicious Food Limited project development in feasibility study, design stage for minor renovation of existing building & facility installation (such as machinery and equipment) as required to operate for Refined Sugar as per below Table 3.3.

Table 3.3: Delicious Food Limited Building/Facility Descriptions

Sr. No.	Facility/Building Description
1.	Main Factory Buildings (7 nos.), Warehouses (10 nos.),
2.	Staff Quarter and Guesthouse (113 nos.), Other Buildings (12 nos.)
3.	Power Supply System for Normal Operation – 1000 KVA, Transformer (1 no.) for Incoming, 1000 KVA, Transformer (3 nos.) for distribution and 300 KVA, Transformer (1 no) for Living Quarter from YESB, MOEE Alternative Power Supply System (Back Up only)– 2000 KW Power Turbine Generator (1 no) and 5000 KW Diesel Generator (1 no.) from DFL Other energy consumption for operation use – Bagasse Boiler (2 sets)
4.	Domestic use Water Supply System Water Source – Groundwater and River Water Operation – Compressor Pump for 8-inch tube well and pump for storage tank Storage - Utility Water / Fire Water Tank System Drinking Water – Current Practice and plan to use approved drinking water products only

5.	Storm & rainwater drainage direct connect to public drain
6.	Wastewater Disposed Tank and Collected Tank for Recycle Used
7.	Sewage Treatment System (Septic Tank)
8.	General Solid Waste Management System (Collect at Waste Storage Area and Send to CDC); Temporary waste storage area (1 no.)
9.	24 Hour Security (Guard) Service
10.	Fire Emergency & Disaster Management System

The DFL proposed project development phase of main building renovating has been commenced and facility installation was followed. Proposed Project Operation facility and Machinery & Equipment is already existed in the factory building as per Process Master Plan (Annexure – 2)

Table 3.4: List and Specification of Machinery & Equipment (Boiler Department)

No	Equipment Name	Specification	UOM	Qty
1	Water Tube Boiler	Max; Steam Evaporation = 28 ton/hr	Nos	2
	(Takuma, Model N-1000)	Design Pressure = 24kg/cm^2		
		Normal Pressure = 21.1kg/cm^2		
		Steam Temperature =360 º ± 10(at S.H Outlet)		
		Feed Water Temp; =108º C		
		Draft System = Balanced Draft		
		Circulation System = Normal Circulation		
		Heating Surface		
		Boiler Proper = 760 m^2		
		Combustion Chamber = 280 m^2		
		Super Heater = 100 m^2		
		Air Preheater = 900 m^2		

		Boiler Water Capacity		
		at Normal Water Level = 21m^3		
		at Full Water Level = 27m^3		
2	Boiler Feed Pump	Capacity = 80m^3/hr	Nos	2
		Total Head = 300M		
		Speed = 3000 rpm		
		Motor = 100 KW	Nos	2
3	Steel Chimney	Height = 30M	Nos	1
		Diameter = 2.4 m (Top)		
4	Water Softener Plant For Boiler Feed Water	Capacity = 10m^3/hr	Nos	1
5	Boiler Feed Tank	Outlet Design Capacity = 75m^3/hr	Nos	1
		Storage Capacity = 30m^3/hr		
6	Condensate Storage Tank	Capacity = 350 m^3	Nos	1
		Height = 7M		
		Diameter = 8 M		
7	Make-Up Condensate Pump (From Storage Tank to B.F.T)	Capacity = 60m^3/hr	Nos	2
		Motor = 11 KW	Nos	2
		Total Head = 30M		
8	Auxiliary Fuel Oil Storage Tank	Capacity = 1200m^3	Nos	1
		Diameter = 11.3 M		
		Height = 13.6 M		
9	Auxiliary Fuel Oil Pump	Capacity = 3m^3/hr	Nos	2
		Head = 65 M		

		Motor = 2.2 KW	Nos	2
10	Ash Elevator (Common) (Fly Ash Collecting)	Capacity = 5.6 ton/hr	Nos	1
		Motor = 2.2 KW, 400V	Nos	1
11	Ash Elevator (Under Furnace)	Capacity = 5 ton/hr	Nos	1
		Motor = 2.2 KW, 400V	Nos	1
12	Ash Elevator (Under Dust Collector)	Capacity = 0.6 ton/hr	Nos	1
		Motor = 0.75 KW, 400V	Nos	1
13	Chemical Dosing Plant	Q = 5L/hr, Pressure = 30kg/cm^2	Nos	2
		Q = 4.5L/hr, Pressure = 10kg/hr		
		Motor = 0.37 KW	Nos	1
		Motor = 0.07 KW	Nos	1
14	Forced Draft Fan	Capacity = 770 m^3/hr	Nos	2
		Motor = 75KW, 3.3KV	Nos	2
15	Secondary Forced Draft Fan	Capacity = 350m^3/hr	Nos	2
		Motor = 37 KW, 400V	Nos	2
16	Induced Draft Fan	Capacity = 2000m^3/hr	Nos	2
		Motor = 9 KW, 3.3KV	Nos	2
17	Bagasse Screw Conveyor	Capacity = 40 ton/hr	Nos	1
		Motor = 7.5KW, 400V	Nos	1
18	Bagasse Conveyor (Main Carrier)	Capacity = 40 ton/hr	Nos	1
		Motor = 22 KW, 400V	Nos	1
19	Bagasse Storage & Reclaim Conveyor	Capacity = 40 ton/hr	Nos	1
		Motor = 22 KW, 400W	Nos	1
20	Bagacillo Screen	A = 3.6m^2 , W = 1200mm, L = 3000 mm	Nos	1

21	Bagasse Return Conveyor	Capacity = 40 ton/hr	Nos	1
		Motor = 22KW, 400V	Nos	1
22	Surplus Bagasse Conveyor	Capacity = 40 ton/hr	Nos	1
		Motor = 15KW, 400V	Nos	1
23	Continuous Blow down Equipment	Capacity = 5600 kg/hr(One Set for Two Boiler)	Nos	1
24	Bagasse Screw Feeder	Capacity = 3.7KW, 400V	Nos	4
		Motor = 3.7KW	Nos	4
25	Picker Roller	Capacity = 0.75KW, 400V	Nos	4
		Motor = 0.75KW	Nos	4
26	Air Seal Dumper (Under Dust Collector)	Double Dumper 0.4KW, 400V	Nos	4
		Motor = 0.4KW	Nos	4
27	Air Seal Dumper	Double Dumper 0.4KW, 400V	Nos	2
		Motor = 0.4KW	Nos	2

Table 3.5: List and Specification of Machinery & Equipment (Mill House Department)

No.	Equipment Name	Specification	UOM	Qty
1	Cane Grab	Cane Weight = 3 Ton, Grab Weight = 3000kg	Set	2
2	Gantry Crane	Capacity = 10-ton, Gantry Height = 13m	Set	2
		Motor = 30KW, For Cross Travel = 45 KW		
		For Bridger Travel = 6.3KW (2Set)		
3	Hydrum Loader	Hook or Line Pull = 7ton	Set	2
		Hook or Line Speed = 25.6 m/min		
		Electric Motor = 30KW, TEFC Motor		
4	Cane Feed Table	Width = 6meters, Length = 6meters	Set	2

		Chain Speed = 2-6 m/min		
5	No.1 Cane Carrier	Width = 1524mm, Horizontal Length = 80m	Set	1
		Chain Speed = 0-20 m/min		
6	No.2 Cane Carrier	Width = 1524mm, Horizontal Length = 80m	Set	1
		Chain Speed = 0-20 m/min		
7	No.1 Cane Leveller	Diameter Over Tips = 1250mm, Width =1524mm	Set	1
		Motor = 45KW, TEFC		
8	1st Cane Cutter	Capacity = 70ton/hr, Diameter Over Tips = 1250mm	Set	1
		Width =1524mm, Revolution Speed = 735 rpm		
		Drive Power = 130 KW, TEFC, 3.3KV, Knife = 30 Nos		
9	2nd Cane Cutter	Width = 1524mm, Revolution Speed = 735 rpm	Set	1
		Knife Number =46 Nos,Drive Power = 150KW,3.3KV		
10	No.2 Cane Leveller	Width = 1524 mm, Diameter = 1250mm,	Set	1
		Motor = 37KW		
11	Magnetic Iron Separator	Width of Magnet =1500mm, Length of Magnet =1300mm	Set	1
		Electric Power = 7.9KW		
12	Cane Shredder	Diameter of Rotating Hammer =1220mm	Set	1
		Inside Width of Casing = 1550mm		
		Nos Hammer = 112 Pcs Rotating Speed =960rpm		
		Driving Turbine = 225 KW		

13	Shredder Cane Elevator	Width = 1524 mm, Length = 8m	Set	1
		Chain Speed = 20m/min		
14	Intermediate Carrier	Width- 1520mm, Length 7000mm (Approx)	Set	4
		Drive Motor 15 KW,		
15	Mill Roller	(1) Roller Diameter - 760mm, Length - 1520mm	Nos	15
		(2) Pressure Feeder Roller (Top & Bottom)	Nos	2
16	Force Feed Rollers	Roller Diameter 750mm	Set	4
17	Mill Hydraulic System	Cap; 11.3 Liters/min	Set	5
		Pressure max 350 kg/cm^2 Drive Motor 5.5 KW		
18	Maceration Juice Pump No.1	Speed -1460rpm, Capacity - 600L/min	Set	1
		Head - 20m, Motor -15KW		
19	Maceration Juice Pump No.2	Speed -1450rpm, Capacity - 600L/min	Set	1
		Head - 20m, Motor -11KW (Japan)		
20	Maceration Juice Pump No.3	Speed -1450rpm, Capacity - 600L/min	Set	1
		Head - 20m, Motor -15KW		
21	Unscreened Mixed Juice Pump-A	Speed -1460rpm, Capacity - 1700L/min	Set	1
		Head - 20m, Motor -18.5KW (Japan)		
22	Unscreened Mixed Juice Pump-B	Speed -1470rpm, Capacity - 1700L/min	Set	1
		Head - 20m, Motor -22KW		
23	Screen Mixed Juice Pump-A	Speed -1460rpm, Capacity - 1500L/min	Set	1

		Head - 35m, Motor -18.5KW (Japan)		
24	Screen Mixed Juice Pump-B	Speed -1475rpm, Capacity - 1500L/min	Set	1
		Head - 35m, Motor -30KW		
25	Mill House Crane	Rated Load -15/5 ton, Speed - 5/6.7 m/min	Set	1
		Motor- 2×6.7/7 Set × KW, Trolly Speed- 14m/min		
		Motor- 2×0.47 Set × KW,		
		Bridge Speed: 45m/min, Motor- 2×2.2 Set × KW		
26	Bagasses Elevator	Capacity- 30 Ton/hr, Width - 1475mm	Set	1
		Length - 25m, Chain Speed- 37m/min		
		Motor- 11 KW		

Table 3.6: List and Specification of Machinery & Equipment (Pan Department)

No	Equipment Name	Specification	UOM	Qty
1	Fine Syrup Tank	Capacity; 36m^3, width; 3000mm, length; 4000mm,	Set	3
		height; 3000mm		
2	Remelt Syrup Tank	〃	Set	1
3	A Molasses Tank	〃	Set	2
4	B Molasses Tank	〃	Set	2
5	DC Molasses Tank	〃	Set	1
6	Vacuum Pan	Capacity; 28m^3, heating surface 158m^2; seeding volume35m^3,	Set	4
		dia of shell; 3800mm, dia of calandria;3800mm, calandria height;		
		950mm, tube size;1016mm OD× 950mm long; Motor; 50kW		

7	Vacuum Receiver	Capacity; 20m^3, dia;2500mm, length; 4300mm, Motor; 5.5 kW	Set	1
8	A & B Seed Mixers	Capacity;20m^3, Width;2500mm; height;2700mm, length;4000mm	Set	2
		Stirring Speed; 0.5 r.p.m,Motor; 5.5 kW		
9	Vacuum Pan Condensers	Capacity; 8000kg/hr at 660mmHg	Set	4
10	Vacuum Pumps	Capacity; 11.2m^3/min, Motor; 22kW	Set	6
11	Hot Water Head Tank	Capacity; 20m^3, width; 2500mm, length; 2500mm, height;3500mm	Set	1
12	Cold Water Head Tank	Capacity; 40m^3, width; 3500mm, length; 3500mm, height; 3500mm	Set	1
13	Hot Water Pump	Capacity; 172m^3/min, Motor; 3.7 kW	Set	1
14	Cold Water Pump	-	Set	1

Table 3.7: List and Specification of Machinery & Equipment (Centrifugal Department)

No	Equipment Name	Specification	UOM	Qty
1	A & B Centrifugal	Type; Motor driven semi-automatic suspended type, Basket size	Set	5
		dia;1220mm, height;760mm, charging capacity; 0.43m3/cycle; no of		
		cycle;22 cycle/hr, Revolution; charging; 200 r.p.m, spinning; 1000 r.p.m		
		discharing; 50 r.p.m		
2	C & DC Centrifugal	Basket Speed; 2200 r.p.m,	Set	5
		Motor; 37 kW		4
		50 hp		1
3	A & B Molasses Receiving Tank	Capacity; 3m^3, dia; 1600mm, height; 1600mm	Set	2

4	C & DC Molasses Receiving Tank	〃	Set	2
5	A Light Molasses Receiving Tank		Set	1
6	A & B Molasses Pumps	Capacity; 12m3/hr, 357 r.p.m, Motor; 7.5 kW	Set	3
7	A Light Molasses Pump	〃	Set	1
8	DC Molasses Pump	〃	Set	1
9	C Molasses Pump	Capacity; 170 L/min, Motor; 5.5 kW	Set	1
10	A Sugar Hopper No -1	Capacity; 40 tons/hr, Width; 750 mm, Length; 7000mm, Motor; 5.5 kW	Set	1
11	A Sugar Elevator	Capacity;20 tons/hr, Width; 650mm, Length; 950mm, height; 10m	Set	1
		Motor; 5.5 kW		
12	A Sugar Hopper No- 2	Capacity; 15 tons/hr, Width; 450mm, Length; 10000mm, Motor; 3.7 kW	Set	1
13	White Sugar Dryer	Capacity; 10 tons/hr,Motor; 22 kW	Set	1
14	Dust Collector	Motor; 20 hp	Set	1
15	Inlet Fan	Motor; 3.7 kW	Set	1
16	Sugar Water Pump	Motor; 7.5 kW	Set	1
17	White Sugar Elevator	Capacity; 10 tons/hr, Width; 600mm, Width of casing; 950 mm, Motor; 3.7 kW	Set	1
18	White Sugar Screen	Capacity; 10 tons/hr,width; 900mm,length; 3000mm,	Set	1
		Motor; 1.5 Kw		2
19	White Sugar Storage Bin	Capacity; 20 tons, dia; 4100 mm, height; 2500mm	Set	2
20	White Sugar Bagging Machine	Capacity; 150 bags/hr, Set weight per bag; 50 kg/bag	Set	2

21	Sugar Bag Conveyor	1750 r.p.m, Motor; 0.75 kW	Set	2
22	Sugar Bag Sewing Machine	Motor; ½ hp	Set	2
23	B Sugar Conveyor	Capacity; 40 tons/hr, Width; 620 mm, Length; 5m, height; 800mm, Motor; 3.7 kW	Set	1
24	B Sugar Mingler	Capaciyt; 0.5 m^3, width; 400mm, height; 600mm, length; 4500mm, Motor; 2.2 kW	Set	1
25	B Magma Receiver	Capacity; 2m^3, width 100mm, height; 1000mm, length;2000mm, Motor; 2.2 kW	Set	1
26	B Magma Pump	Motor; 15 kW	Set	2
27	C Sugar Conveyor	Capacity; 6 tons/hr, width; 420mm, height; 600mm length; 6m, Motor; 3.7 kW	Set	1
28	C Sugar Mingler	Capacity; 0.3m^3, dia; 400 mm, height;600 mm; length;2500mm, Motor; 1.5 kW	Set	1
29	C Magma Receiver	Capacity;2m^3, width;1000mm, height; 1000 mm , length; 2000mm, Motor; 2.2 kW	Set	1
30	C Magma Pump	Capacity; 170L/min, total head; 35m, Motor;11 kW	Set	1
31	DC Sugar Conveyor	Capacity; 6 tons/hr, width; 420mm, height; 600mm length; 4m, Motor; 2.2 kW	Set	1
32	DC Sugar Mingler	Capacity; 0.5 m3, width; 400mm, height; 600mm, length; 4500mm, Motor; 2.2 kW	Set	1
33	DC Magma Receiver	Capacity; 2m3, width 1000mm, height; 1000mm, length;2000mm, Motor; 1.5 kW	Set	1
34	DC Magma Pumps	Motor; 15 kW	Set	2
35	Final Molasses Weigher	Capacity; 5 tons/hr, Tip capacity; 10 tons/batch	Set	1
36	Final Molasses Receiving Tank	Capacity; 3m^3,dia; 1600mm, height; 1600mm	Set	1
37	Weighed Molasses Pump	Capacity;15m^3/hr, 305 r.p.m, Motor; 15 kw	Set	1

38	Remelter	Capacity; 3m3, width; 1300mm, height; 1500mm, length; 2000 mm, Motor; 3.7 kW	Set	1
39	Remelt Syrup Pump	Capacity; 30m^3/hr,total head; 25 m, Motor; 11 kW	Set	1
40	A & B Massecuite Receiver	Capacity; 34 m^3, width; 2500mm, height; 2800 mm, length; 6000 mm, Motor; 5.5 kW	Set	3
41	C Massecuite Receiver	〃	Set	1
42	C Massecuite Pump	Capacity; 170 L/min,total head; 35 m, Motor; 11 kW	Set	2
43	A Sugar Mingler	Capacity;0.3 m^3, dia; 400mm, height; 600 mm, length; 2500 mm	Set	1
44	A Magma Mixer	Capacity; 20m^3, width; 2500mm, heigth; 2750mm, length; 4000 mm, Motor; 5.5 kW	Set	1
45	A & B Massecuite Supply Mixer	Width; 1000mm, height; 1200mm, length; 10000mm, stirring speed; 4 r.p.m, Motor; 5.5 kW	Set	1
46	C & DC Massecuite Supply Mixer	〃	Set	1
47	Crystallizer	Capacity; 68m^3, dia; 3200mm, height; 8500mm, stirring speed; 0.35 r.p.m, Motor; 7.5 kW	Set	2
		Cooling or Heating Surface; 1st crystallizer - 105 m^2		
		2nd crystallizer- 105 m^2		
		include 55m^2/heating surface		
48	Hot Water Tank (Vertical)	Motor; 3.7 kW, Capacity; 70 L/min, Head; 20 m	Set	1
49	Cold Water Tank (Vertical)	Motor; 3.7 kW	Set	1
50	Hot Water Storage Tank	Capacity; 50 m^3, dia; 4020 mm, height; 3750 mm	Set	1

51	Hot Water Storage Pump	Capacity; 50 m^3/hr, head; 30 m	Set	1
52	Air Compressor for Centrifugal	Design Pressure; 1.76 Mpa, Proof Pressure; 6 Mpa	Set	2

Table 3.8: List and Specification of Machinery & Equipment (Juice Clarification & Juice Evaporation Department)

No	Equipment Name	Specification	UOM	Qty
1	Weighed Juice Pump with Motor	Head- 65m, Capacity- 120m^3/hr, Speed - 1450 r.p.m	No	1
	(Taki Pump)	Motoor -Power - 45 kW, 60 HP	No	1
	Weighed Juice Pump With Motor (China)	Type-WST 120 - 65 150 ,2950 r.p.m, 65m, 120m^3/hr	No	1
		Motor - Power -45 kW	No	1
2	Sulphited Juice Pump With Motor (Taki)	Head - 65 m, Capacity - 120 m^3/hr,1450 r.p.m	No	1
		Motor - Power -60 Hp	No	1
	Sulphited Juice Pump With Motor (China)	Type-WST 120 - 65 150 ,2950 r.p.m, 65m, 120m^3/hr	No	1
		Motor - Power -45 kW	No	1
3	Liming Juice Pump With Motor	Head - 20 m, Capacity - 1500 L/min,1450 r.p.m	No	2
		Motor - Power -15 kW	No	2
4	Clear Juice Pump With Motor(Grandfos)	Head - 50 m, Capacity - 120 m^3/hr,1484 r.p.m	No	1
		Motor - Power -50 HP	No	1
	Clear Juice Pump With Motor(Taki)	Head - 60 m, Capacity - 120 m^3/hr,1450 r.p.m	No	1
		Motor - Power -60 HP	No	1

5	Pre - Evaporated Juice Pump With Motor	Head - 20 m, Capacity - 1500 L/min,1450 r.p.m	No	2
		Motor - Power -15 kW	No	2
6	Fine Syrup Pump With Motor (Taki)	Head - 30 m, Capacity - 20 m^3/hr,1450 r.p.m	No	1
		Motor - Power -10 HP	No	1
	Fine Syrup Pump With Motor (China)	Type-WTF- 30 - 25- 100 D, Head - 30 m, Capacity - 25m^3/hr, 1450 r.p.m	No	1
		Motor - Power - 11 kW	No	1
7	Mud Pump With Motor(Taki)	Type- 80 - 33 - PDIA 310, Head - 25 m, Capacity - 30m^3/hr, 1450 r.p.m	No	2
		Motor - Power - 15 kW	No	2
8	Mud Over Flow Pump With Motor	Type-SLZA 80 - 250, Head - 75 m, Capacity -120 m^3/hr, 2950 r.p.m	No	1
		Motor - Power - 45 kW	No	1
9	Filtrae Pump With Motor	Type-SLZA 50 - 250, Head - 20 m, Capacity -30 m^3/hr, 1450 r.p.m	No	1
		Motor - Power - 4 kW	No	1
	Filtrae Pump With Motor	Type-WTF- 30 - 20 - 100 D, Head - 20 m, Capacity -30 m^3/hr, 1450 r.p.m	No	1
		Motor - Power - 7.5 kW	No	1
	Filtrae Pump With Motor(Taki)	Type- 80 - 33 PDIA280, Head - 20 m, Capacity -30 m^3/hr, 1450 r.p.m	No	1
		Motor - Power - 10 HP	No	1
10	Syrup Extraction Pump With Motor (Taki)	Head - 30 m, Capacity - 45 m^3/hr,1450 r.p.m	No	1
		Motor - Power -10 HP	No	1
	Syrup Extraction Pump With Motor	Head - 20 m, Capacity - 250 L/min,1450 r.p.m	No	1
		Motor - Power -5.5 kW	No	1

11	Pure Condensate Pump With Motor(China)	Type- DHN60 - 20 - 2 , Head - 40 m, Capacity -60 m^3/hr, 1450 r.p.m	No	1
		Motor - Power - 18.5 kW	No	1
	Pure Condensate Pump With Motor(Taki)	Head - 25 m, Capacity - 50 m^3/hr,1450 r.p.m	No	1
		Motor - Power -10 HP	No	1
12	Inpure Condensate Pump With Motor(China)	Type- DHN60 - 20 - 2 , Head - 40 m, Capacity -60 m^3/hr, 1450 r.p.m	No	1
		Motor - Power - 18.5 kW	No	1
	Inpure Condensate Pump With Motor	Head - 30 m, Capacity - 50 m^3/hr,1450 r.p.m	No	1
		Motor - Power -7.5 kW	No	1
13	Evaporator No - 5 Condensate Pump With	Type- DHN60 - 20 - 2 , Head - 40 m, Capacity -60 m^3/hr, 1450 r.p.m	No	1
	Motor (China)	Motor - Power - 18.5 kW	No	1
14	Imbibition Water Pump With Motor	Head - 30 m, Capacity - 390 L/min, 1450 r.p.m	No	2
		Motor - Power - 3.7 kW	No	2
15	Milk of Line Pump With Motor	Head - 20 m, Capacity - 70 L/min, 1950 r.p.m	No	2
		Motor - Power - 3.7 kW	No	2
16	Oliver Vacuum Pump With Motor	Pressure- -500mmHg, Speed - 980 r.p.m, 12 m^3/min	No	1
		Motor - Power - 22 kW	No	1
17	Sulphited Juice Tank	Ø 2400mm × 2400 mmH	No	1
	Agitator With Motor	Ratio - 43, 1500 r.p.m, 1.5 kW	No	1
18	Liming Juice Tank	Ø 1500 mm × 2200 mmH	No	1
	Agitator With Motor	Ratio - 5, 1500 r.p.m, 0.75 kW	No	1
19	Clear Juice Tank	Ø 3000 mm × 5000 mmH	No	1
20	Fine Syrup Tank	Ø 1500 mm × 1700 mmH	No	1

21	Mud Tank	Ø 2000 mm × 2000 mmH	No	1
22	Mud Over Flow Tank	Ø 1750 mm × 3000 mmH	No	1
23	Pre - Evaporated Juice Tank	Ø 3300 mm × 3700 mmH	No	1
24	Weighed Juice Tank	Ø 2400 mm ×2400 mmH	No	1
25	Pure Condensate Tank	Ø 2000 mm × 3400 mmH	No	1
26	Impure Condensate Tank	Ø 2000 mm × 3400 mmH	No	1
27	Heater Condensate Tank	Ø 2000 mm × 3400 mmH	No	1
28	Imbibition Water Tank	Ø 2600 mm × 2600 mmH	No	1
29	Mud Feed Mixer	Ø 700 mm × 3000 mmL × 950 mmH, Speed - 33 r.p.m	No	1
30	Bagaccilo Fan	90 m^3/min, 2480 r.p.m	No	1
		Motor Power - 11 kW	No	1
31	Bagaccilo Separator Valve	90 m^3/min	No	1
		Motor Power - 0.4 kW	No	1
32	Clear Juice Screen		No	1
33	Rotary Vacuum Mud Filter	Ø 2440 mm × 4880 mmL , Speed - 0.25 to 0.5 r.p.m, Area - 37 m^2	No	1
34	Oliver Drive Shaft Cylodrive With Motor	Ratio - 43, 1500 r.p.m,	No	1
		Motor Power - 5.5 kw	No	1
35	Cake Hopper	3.5 mL × 3.5 mW, 2 mH	No	1
36	Oliver Agitator Cyclodrive With Motor	1400 r.p.m	No	1
		Motor Power - 1.5 kW	No	1
37	Vacuum Filtrate Receiver		No	2
38	Filter Cake Conveyor Cyclodrive With Motor	54´ L × 750 mmW × 9 mmT	No	1
		Motor Power -	No	1

39	Clarifier	Ø 8018 mm × 5355 mmH	No	1
40	Clarifier Agitator Gear Box With Motor	Speed - 0.067 r.p.m	No	1
		Motor Power - 1.5 kW	No	1
41	Sulphitator	Ø 1600 mm × 4800 mmH	No	3
42	Flocculant Dosing Tank	Ø 1 m ×1 mH	No	1
43	Flocculant Preparation Tank Agitator	Ø 1.2 m × 1.4 mH	No	1
	With Motor	Motor Power - 0.4 kW	No	1
44	Flocculant Dosing Pump with Motor	Pump - Type Grundfos, Capacity - 1150 L/hr, 10 Bar	No	1
45	Juice Heater No - 2	Ø 1280 mm × 4594 mmH, Total Tube - 192 Nos	No	1
46	Juice Heater No - 1, 3, 4, 5 , 6	Ø 1200 mm × 4594 mmH, Total Tube - 170 Nos	No	5
47	Evaporator No - 1	Ø 4600 mm × 12362 mmH, Total Tube - 4780 Nos, Tube Pipe OD -	No	1
		38.1 × 1.5 mmT × 3048 mmL, Area - 1600 m^2		
48	Evaporator No - 2	Ø 4200 mm × 9400 mmH, Total Tube - 2366 Nos, Area - 830 m^2	No	1
49	Evaporator No - 3, 4.1, 4.2	Ø 4200 mm × 9400 mmH, Total Tube - 2366 Nos, Area - 350 m^2	No	3
50	Evaporator No - 5	Ø 4300 mm × 7190 mmH, Total Tube - 2004 Nos, Area - 670 m^2	No	1
51	Castic Tank		No	2
52	Castic Tank Agitator With Motor	Motor Power - 15 kW	No	1
53	Sulphur Burner	Rayio - 43, 1500 r.p.m	No	2
		Motor Power - 1.5 kW	No	2
54	Gas Cooler	Ø 1010 mm × 2538 mmH	No	1

55	Milk Of Lime Tank Agitator with Motor	Ø 3000 mm × 2500 mmH	No	2
		Ratio - 29, 1500 r.p.m, Motor Power - 2.2 kW	No	2
56	Quick Lime Elevator	Motor Power - 2.2 kW	No	1
57	Milk Of Lime Mixing Tank Agitator	Ø 1500 mm × 2800 mmH	No	1
	With Motor	Ratio - 17, 1500 r.p.m, Motor Power - 1.5 kW	No	1
58	Lime Screen	3 m3/hr, 600 mmW, 1500 mmL, Motor - 1.5 kW	No	1
59	Lime Slaker	Ratio- 43, 1500 r.p.m	No	1
		Motor Power - 3.7 kW	No	1
60	Ejection Condenser Water Pump with Motor	Head- 15 m,1100 m^3/hr, 1490 r.p.m	No	3
		Motor Power - 75 kW	No	3
61	Priming Pump with Motor	Speed- 1450 r.p.m	No	1
		Motor Power - 3.7 kW	No	1
62	Cold Water Service Pump With Motor	Head- 30 m, 3 m^3/min, 1450 r.p.m	No	2
		Motor Power - 22 kW	No	2
63	Filter Supply Pump With Motor	Head- 25 m, 3 m^3/min, 1450 r.p.m	No	2
		Motor Power - 22 kW	No	2
64	Back Wash Blower	Capacity - 4.2 m^3/min, 1650 r.p.m	No	1
		Motor Power - 7.5 kW	No	1
65	Feed Water Pump	Head- 40 m, 3 m^3/min, 1450 r.p.m	No	1
		Motor Power - 37 kW	No	1
	Feed Water Pump (Taki)	Head- 40 m, 180 m^3/hr, 1450 r.p.m	No	1
		Motor Power - 50 Hp	No	1

66	Sand Filter	Ø 2700 mm × 3050 mmH	No	3
67	အနည်ချတိုင်ကီ		No	1
68	Injection Pump with Motor	Head- 30 m, 1100 m^3/hr,950 r.p.m	No	3
		Motor Power - 110 kW	No	3
69	Priming Pump With Motor	1450 r.p.m, Motor - 3.7 kW	No	1
70	Alum Dosing Pump with Motor	Capacity - 1320 L/min, Motor- 0.12 kW	No	1
71	Kuriflock Pump with Motor	Capacity - 1320 L/min, Motor- 0.12 kW	No	1
72	Alum Tank Agitator with Motor	Capacity- 1m^3, 1425 r.p.m	No	1
		Motor Power - 0.4 kW	No	1
73	Kuriflock Tank Agitator With Motor	Capacity- 1.5 m^3, 1430 r.p.m	No	1
		Motor Power - 1.5 kW	No	1
74	Cooling Water Spray Pond	3000 m^2	No	1
75	Wste Water Pump with Motor		No	2
		Motor Power	No	1
76	Evaporator Condenser	Ø 1200 mm × 3200 mmH, 8000 kg/Vapour/hr at - 660 mmHg	No	1
77	Evaporator Vacuum Pump With Motor	Capacity- 13 m3/min, 980 r.p.m, 3300 Pa, 380 V	No	1
		Motor Power - 22 kW	No	1
78	Kobelco Air Compresser	Speed - 1455 r.p.m, 1.5 MPA, 22 kW	No	1
		Air Dryer	No	1
79	Puma SAS 300 Air Compresser	1.4 MPA, 0.022 m^3, 1440 r.p.m, 380 V	No	1
		Air Dryer	No	1
		Air Receiver Tank	No	1

80	General Air Compresser		No	1
		Motor Power- 11 kw	No	1
81	Water Supply Pump with Motor (Taki)	Head - 40 m, 600 m3/hr, 1450 r.p.m	No	1
		Motor Power - 120 HP	No	1

Table 3.9: List and Specification of Machinery & Equipment (Turbine)

No	Equipment Name	Specification	UOM	Qty
1	Generator Turbine	TYPE B 6 - R4 - R	Nos	2
	(Steam Turbine)	HORSEPOWER (GENE. END) 2000 KW		
	TSK	SPEED 6400 RPM		
	TSUKISHIMA KIKAI CO. LTD	INITINAL STEAM PRESS 19.0 Kg/ cm^2		
	TOKYO JAPAN)	INITINAL STEAM TEMP; 354.0 °C		
		EXHAUST STEAM PRESS 1.2 Kg/cm^2		
		WEIGHT 15000 Kg		
2	Mill Turbine	SPEED 3500 RPM	Nos	5
		STEAM PRESS (INITIAL) 19.0 Kg/ cm^2		
		STEAM TEMP; 354.0 °C		
		EXHAUST STEAM PRESS 1.2 Kg/cm^2		
3	Shredder Turbine	SPEED 4800 RPM	No	1
4	Diesel Engine	TYPE 6 PSH TC - 26 H	No	1
	(DAIHATSU DIESEL ENGINE)	ENG . SPEED 750 RPM		
		NO.OF CYL 6		
		NET WEIGHT 9100 Kg		
5	Diesel Engine	TYPE D 65	No	1
	(MITSUBISHI)	SPEED 6.5 PS/ 2400 RPM	No	1

6	Air Compressor	TYPE HAC 75	Nos	2
		R.P.M 900		
		POWER 5 PS		
		PRESSURE 30 KGf/ cm^2		
		CAPACITY 19.6m^3/h		

Table 3.10: List and Specification of Machinery & Equipment (Electrical Power Dept)

No	Equipment Name	Specification	UOM	Qty
1	MCC - 1 Panel	Power Voltage 400 VAC	Set	1
2	MCC - 1 EPC Panel	Power Voltage 400 VAC	Set	1
3	Mill Control Panel	Power Voltage 400 VAC	Set	1
4	Shrreder Turbine Panel	Power Voltage 400 VAC	Set	1
5	No - 1 Mill Turbine Panel	Power Voltage 400 VAC	Set	1
6	No - 2 Mill Turbine Panel	Power Voltage 400 VAC	Set	1
7	No - 3 Mill Turbine Panel	Power Voltage 400 VAC	Set	1
8	No - 4 Mill Turbine Panel	Power Voltage 400 VAC	Set	1
9	No - 5 Mill Turbine Panel	Power Voltage 400 VAC	Set	1
10	New Leveller Panel	Power Voltage 400 VAC	Set	1
11	Hydrumloader Panel(Stationery)	Power Voltage 400 VAC	Set	1
12	HMCC - 1 Panel	Power Voltage 3300 VAC	Set	1
13	Gantry Crane Distribution Panel	Power Voltage 400 VAC	Set	2
	(ကား & ရုထား)			

14	Gantry Crane Holding & Closing Panel	Power Voltage 400 VAC	Set	2
	(ကား & ရထား)			
15	Gantry Crane Traversing Panel	Power Voltage 400 VAC	Set	2
	(ကား & ရထား)			
16	Gantry Crane Travelling Panel With	C 2000 VFD, 10 HP 2 Nos, 25 HP 2 Nos	Set	2
	VFD 4 Nos (ကား & ရထား)			
17	Mill House Crane Panel	Power Voltage 400 VAC	Set	1
18	VFD For Shreddered Cane Elevator	VFD B, 18.5 kW, 400 VAC	Set	1
19	MCC -2 Panel	Power Voltage 400 VAC	Set	2
20	Instrument Panel	Control Power 220 VAC	Set	1
21	Automation Panel With HMI	Power Voltage 400 VAC	Set	1
22	Instrument Panel	Contron Power 220 VAC	Set	1
23	Ignition Panel (B1 & B2)	Power Voltage 400 VAC	Set	2
24	High Chemical Dosing Panel	Power Voltage 400 VAC	Set	1
25	Low Chemical Dosing Panel	Power Voltage 400 VAC	Set	1
26	Water Treatment Plant Panel	Power Voltage 400 VAC	Set	1
27	Bagasse Crane Panel	Power Voltage 400 VAC	Set	1
28	Workshop Crane Panel	Power Voltage 400 VAC	Set	1

29	No - 1 Induced & Forced Draft Fan	Power Voltage 400 VAC	Set	2
	Resistor Panel			
30	No - 2 Induced & Forced Draft Fan	Power Voltage 400 VAC	Set	2
	Resistor Panel			
31	HMCC - 2 Panel	Power Voltage 3300 VAC	Set	1
32	MCC - 3 A Panel	Power Voltage 400 VAC	Set	1
33	Quick lime Elevator Panel	Power Voltage 400 VAC	Set	1
34	Instrument Panel	Control Power 220 VAC	Set	2
35	MCC - 3 Panel	Power Voltage 400 VAC	Set	1
36	MCC - 4 Panel	Power Voltage 400 VAC	Set	1
37	HMCC - 3 Panel	Power Voltage 3300 VAC	Set	1
38	HMCC - 4 Panel	Power Voltage 3300 VAC	Set	1
39	Sugar Screen Panel	Power Voltage 400 VAC	Set	1
40	Pan Auto Panel	Control Power 220 VAC	Set	4
41	Mcc - 5 Distribution Panal	Power Voltage 400 VAC	Set	1
42	A & B Centrifugal Panel With	Power Voltage 400 VAC	Set	6
	VFD	CH - 2000 , 250 A, 175 HP		
43	PLC Panel	DC 24 V	Set	5

44	MCC -6 Panel	Power Voltage 400 VAC	Set	1
45	MCC - 7 Panel	Power Voltage 400 VAC	Set	1
46	Touch Screen For 1 & 2 Bagging Machine	Control Power 220 VAC	Set	2
		Out Put 24 VDC	Set	2
47	VFD For Bagging Machine Conveyor		Set	2
	(VFD 2 Nos)	HF 320 & 0.75 kW		
48	C & DC Control Panel	Power Voltage 400 VAC	Set	1
49	VFD For C - 2 Centrifugal	VFD C - 2000, 55 kW, 400 VAC	No	1
50	VFD For DC - 2 Centrifugal	VFD C - 2000, 45 kW, 400 VAC	No	1
51	VFD For C - 3 Centrifugal	VFD B , 55 kW, 400 VAC	No	1
52	APF Panel	400 V, 100 A	Set	1
53	APF Panel	400 V, 200 A	Set	1
54	Regeneration Panel With VFD 3 Nos		Set	1
	(REG 2000)	400 V, 75 A, 55 kW		
55	Operation Panel With Touch Screen	DC 24 V	Set	5
56	Light & Heavy Panel For A Centrifugal	Control 24 VDC, 220 VAC, Power 400 VAC	Set	1
	With PLC & Touch Screen			
57	VFD For Oliver Motor	VFD B - 400 V, 38 A, 25 HP	Set	1

58	VFD For Clarifier Motor	VFD B - 400 V, 38 A, 25 HP	Set	1
59	MCC - 8 Panel	Power Voltage 400 VAC	Set	1
60	VFD For Flocculant Motor	400 V, 2.2 KW, VFD B	Set	1
61	Tube Well Panel	Power Voltage 400 VAC	Set	3
62	MCC - 9 Panel	Power Voltage 400 VAC	Set	1
63	Item 2205 - 1 Power Transformer	33000 V - 3300 V, 1000 KVA 17.49 A - 174.9 A	Set	1
64	Item 2302 - 3 Distribution Transformer	3300 V - 415 V, 1000 KVA 174.9 A - 1391 A	Set	3
65	Distribution Transformer	3300 V - 400 V, 500 KVA 87.5 A	Set	1
66	3.3 KV Feeder Panel (52 - 20, 52 - 30,	High Voltage Switch Board	Set	1
	52 - 40 Item 2301 - 4)			
67	S - C Swihch Panel (52 - C1, 52 - C2,	High Voltage Switch Board	Set	1
	52 - C3 Item 2301 - 7 - 1)			
68	Switch Board For No - 1 T/G (Item 2203 - 3 A)	High Voltage Switch Board	Set	1
69	Switch Board For No - 2 T/G (Item 2203 - 3 B)	High Voltage Switch Board	Set	1
70	Switch Board For D/G (Item 2203 - 4)	High Voltage Switch Board	Set	1
71	DS Panel (Item - 2301 -5)	High Voltage Switch Board	Set	1
72	DS Panel (Item - 2301 -6)	High Voltage Switch Board	Set	1

73	No - 1 & 2 Turbine Generator (Item - 2201-2 A,	2000 kW, 4 P, 437 A	Set	2
	2 B)			
74	Diesel Generator (Item - 2202 - 2)	500 kW, 8 P, 109 - 3 A	Set	1
75	SC 100 Panel (Item 2301 - 7 - 4)	High Voltage Switch Board	Set	1
76	SC 200 Panel (Item 2301 - 7 - 3)	High Voltage Switch Board	Set	1
77	SC 500 Panel (Item 2301 - 7 - 2)	High Voltage Switch Board	Set	1
78	33 Kv Cubicle Receiving Panel (Item 4705 - B -	33 KV	Set	1
	2 - 2 -3)			
79	Disconnecting Switch Stand (Item 4705 - B -	36 KV, 600 A	Set	1
	2 - 1)			
80	River Pump Station & Factory Panel	3.3 kV	Set	1
	(Item 4705 - B - 2 -7)			
81	Incoming Panel	3.3 KV	Set	1
82	Radiator Motor	11 kW, 21 A	Set	1
83	F . O Transfer Motor	0.75 KW, 1.6 A	Set	1
84	Air Compressor Motor	3.7 KW, 7.5 A	Set	1
85	LO Priming Pump Motor	1.5 KW, 3.7 A	Set	1
86	Distribution Transformer (Item 2301 - 2)	300 KVA, 3300 - 400 VAC	Set	1

87	No - 1 415 / 240 V Feeder Panel & Earthing Panel	Low Voltage Switch Board	Set	1
	(Item 2303 - 1)			
88	No - 2 & 3 415/240 V Feeder Panel	Low Voltage Switch Board	Set	1
	(Item 2303 - 2)			
89	Panel With Distribution Breaker	Low Voltage Switch Board	Set	2
90	NGR Panel (Item 2204)	High Voltage Switch Board	Set	1
91	Incoming Panel (Item 2301 - 1)	High Voltage Switch Board	Set	1
92	No - 1 3.3 KV 52 - 10 & 52 - Q Feeder Panel	High Voltage Switch Board	Set	1
	(Item - 2301 - 2)			
93	D.S Panel (Item 2301 - 3)	High Voltage Switch Board	Set	1
94	No - 1 Turbine Control Panel With HMI	High Voltage Switch Board	Set	1
	(Item 2203 - 1 A)			
95	No - 2 Turbine Control Panel With HMI	High Voltage Switch Board	Set	1
	(Item 2203 - 1B)			
96	Diesel Control Panel With HMI	High Voltage Switch Board	Set	1
	(Item 2203 - 2 - 1)			
97	No - 1 & 2 Generator Turbine Panel	400 VAC	Set	2
	(Item - 2201- 1 A - 8 , 1B - 8)			

98	No - 1 & 2 Turbine Oil Pump Motor	22 Kw, 400 VAC	Set	2
99	Plainer Panel	Power Voltage 400 VAC	Set	1
100	Mill Roller Lathe Machine Panel	Power Voltage 400 VAC	Set	1
101	Water Supply Panel	Power Voltage 3300 VAC	Set	1
102	ရေစကန် Panel with Motor	Power Voltage 400 VAC	Set	1

Table 3.11: List and Specification of Machinery & Equipment (Mechanical Work Shop)

No	Equipment Name	Specification	UOM	Qty
1	Gap Lathe	Length: 2680mm, Bed: 510mm,Cross: 300mm, Spindle Speed: 25 to	No	3
		1500 r.p.m, Width: 200mm, Depth: 100mm,		
		Motor: 5.5 kW	No	3
2	Drilling Machine	Column surface to spindle center: 1300mm, dia of column: 320mm	No	1
		Horizontal head travel on arm: 1010mm		
		Motor: 3.7 kW	No	1
3	Planer Machine	Planing width: 1200mm- 1500mm, Planing Heigth: 1000-1200 mm,	No	1
		Planing Length: 2400-5000 mm		
		Motor: 1.5 kW	No	1
		Motor: 15 kW	No	1
4	Shaper Machine	Max stroke: 780 mm,Max workable width: 700 mm,Max table Ram	No	1
		Distance: 480 mm		
		Motor: 5.5 kW	No	1

5	Double Head Grinding Machine	Wheel dia:Ø405 × T-50 × Ø38.1 mm, spindle speed: 1550 r.p.m,	No	1
		Distance of wheel center: 870mm		
		Motor: 4 kW	No	1
6	Hack Saw Machine	Max cutting Round Bar: 250 mm,Square Bar: 225 × 225 mm,Saaw	No	1
		Blade 450 × 38 × 1.65 6T(4T), Stroke 90 & 130		
		Motor: 1.5 kW	No	1
7	Electric Welding Machine	Voltage: 230 V, Current: 400 A, Frequency: 50 Hz	No	1
8	Uliversal Milling Machine	Table surface: 1100mm× 280 mm, Longitudinal travel: 650mm, Cross	No	1
		Travel: 300mm, Vertical travel: 400mm		
		Motor: 1.5 kW	No	1
		Motor: 3.7 kW	No	1
9	Plate Bending Machine	Capacity (T × W): 13 × 2050 mm, Dimensions 320 × 950 × 970 mm	No	1
		approx, Net weight 2300 kg		
		Motor: 1 kW	No	1
10	Plate Shearing Machine	Capacity (T × W): 13 × 2000 mm, Stroke: 35 spm, Table Height:830mm	No	1
		Back Gauge: 600mm, Net Weight: 7000kg		
		Motor: 15 kW	No	1
11	Height Speed Cutter Machine	Cutting Disc Ø14″	No	1
		Motor: 2.2 kW	No	1
12	Screw Cutting Machine	Capacity: 12.7 - 51 mm, Spindle rpm: 50 (6~ 11mm), 50 (23~ 38mm),	No	1
		70 (18~22mm), 100 (12~17mm)		

		Motor: 1.5 kW	No	1
13	Anvils		No	1
14	Vice		No	1
15	Mill Roller Lathe Machine	Min swing Over bed: 1050 mm, Min Swing Over Saddle: 890 mm, Min Swing	No	1
		in gap: 1300mm, Min distance between Center 5 mm, Spindle Speed range:		
		12 ch-3-100 rpm		
		Motor: 2.2 KW	No	1
		Motor: 3.7 kW	No	1
		Motor: 0.75 kW	No	1
16	Hydroulic (Pressure) Baler	Voltage: 380 V/50 Hz, Weight: 3200 kg	No	1
		Motor: 8.5 kW	No	1

Table 3.12: List and Specification of Machinery & Equipment (Laboratory)

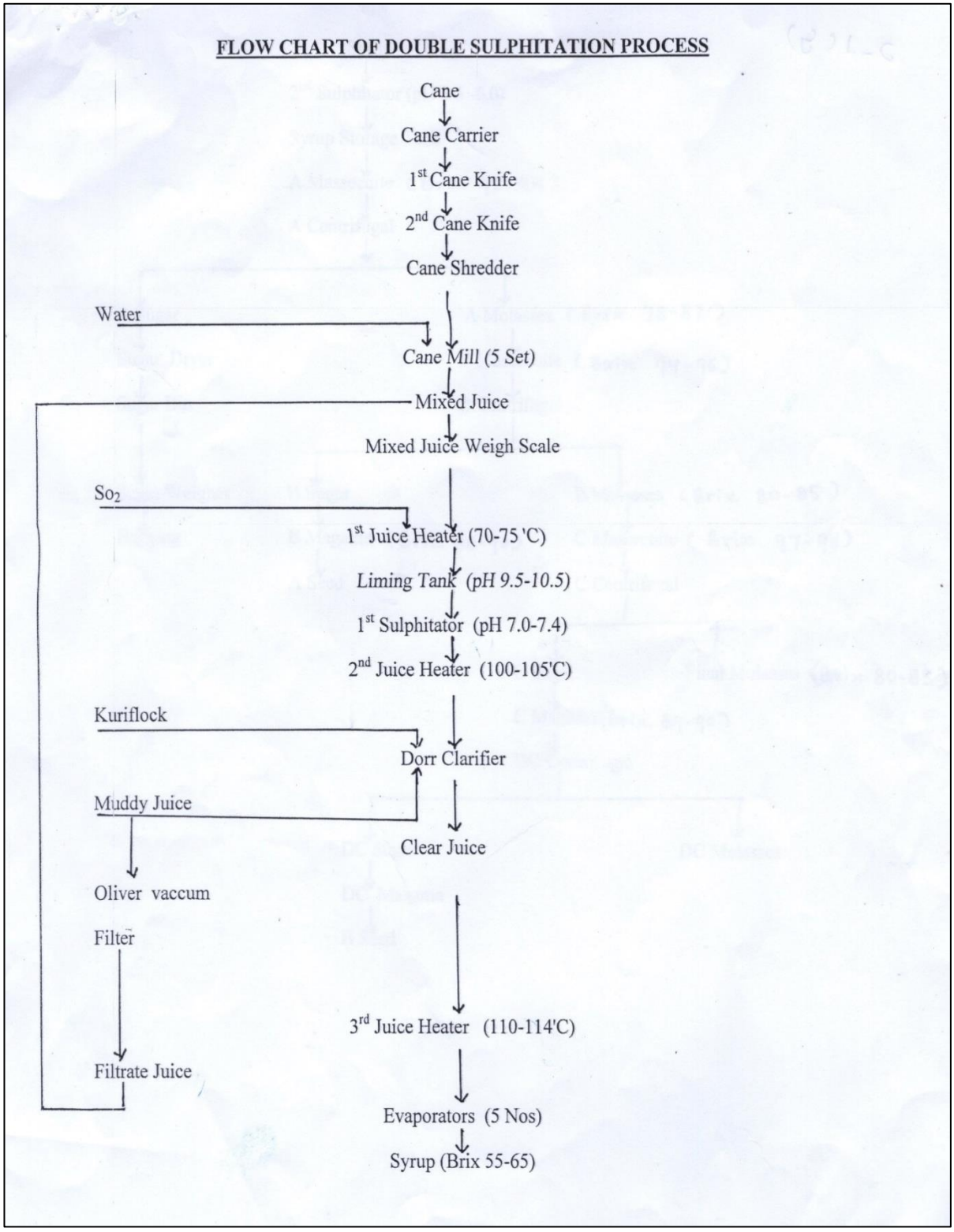
No	Equipment Name	Specification	UOM	Qty
1	Sugar Cane Mill	Laboratory 3- Roll	Set	1
2	Jeffco Cutter	Model - 265 BMX	Set	1
3	Centrifugal	Model - H 100 B	Set	1
		R . P. M - 4000		
		Power - AC 230 Volt		
4	Centrifugal	Model - H 120 A	Set	1
		R . P. M - 3000		
5	Hot Plate	Model - HP 13	Set	1
		Heater Capacity - 2 KW		
		Temperature - 400°C (max)		
6	Microwave Oven	Model - NN GT 35 HM	Set	1

7	Water Bath	Model - GA 13 S	Set	1
		Heat Capacity - 1.2 KW		
		Temperature - 95°C (max)		
8	Cooler	Model - 108 H	Set	1
		Temperature - -20°C- +80°C		
9	Automatic polarimeter	Model - AP - 300	Set	1
		Serial No - 134250 N		
10	PH Meter	Model - S 610 L	Set	1
11	Conductivity Meter	Model - CM 20 S	Set	1
		Measurement Range - µS/CM 0 - 20		
		0-200		
		µS/ CM 0 - 2		
		0 - 20		
		0 - 100		
12	Jar Tester	Model - MJS - 4	Set	1
		Capacity of Beaker - 1000 ml		
13	Distiller	Model - WD 1008	Set	1
14	Slurry Mill	Model - 500/16	Set	1
		Capacity 1000 ml (Sugar)		
15	Sieve Shaker	Model -Speed of oscillation- 290 r.pm	Set	1
		Number of Tapping - 156 t.p.m		
		Power - AC 230 Volt		
16	Vibratory Sieve Shaker	Model - AS 200 Basic B	Set	1
		Serial No - 1219190354		
17	Electric Furnace	Model - 2	Set	1

		Capacity - 1000 W		
		Temperature - 900°C (Normal)		
		- 1100°C (Max)		
18	Magnetic Stirrer	Model - CHS 2	Set	1
		Capacity - 50 - 500 ml	Set	1
19	Vaccum Drying Oven	Model - VO 3-2		
		Vaccum - 760 mmhz		
		Power - AC 230 Volt		
20	Drying Oven	Model - BSF	Set	1
		Temperature range - 40-250°C		
		Power - AC 220 Volt		
21	Desicator	-	Set	1
22	Flask Shaker	Model - SF 1	Set	1
		Timmer- 10-60 min		
23	Electric Dryer	Model - ED 331 E	Set	1
24	Balance	Capacity - 1500 gm	Set	1
25	Electronic Balance	Model -BL 2200 H	Set	1
		Capacity - 2200 gm		
26	Analytical Balance	Model -ATX 224	Set	1
27	Turbidimeter (Lovibond	Model - TB 210 IR	Set	1
	water testing)			
28	Moisture Analyzer	Model - MJ 33	Set	1
29	Lovibond Tintometer	Model - PFX - 880/S	Set	1

3.3 Production Plan

3.3.1 Process Flow Chart



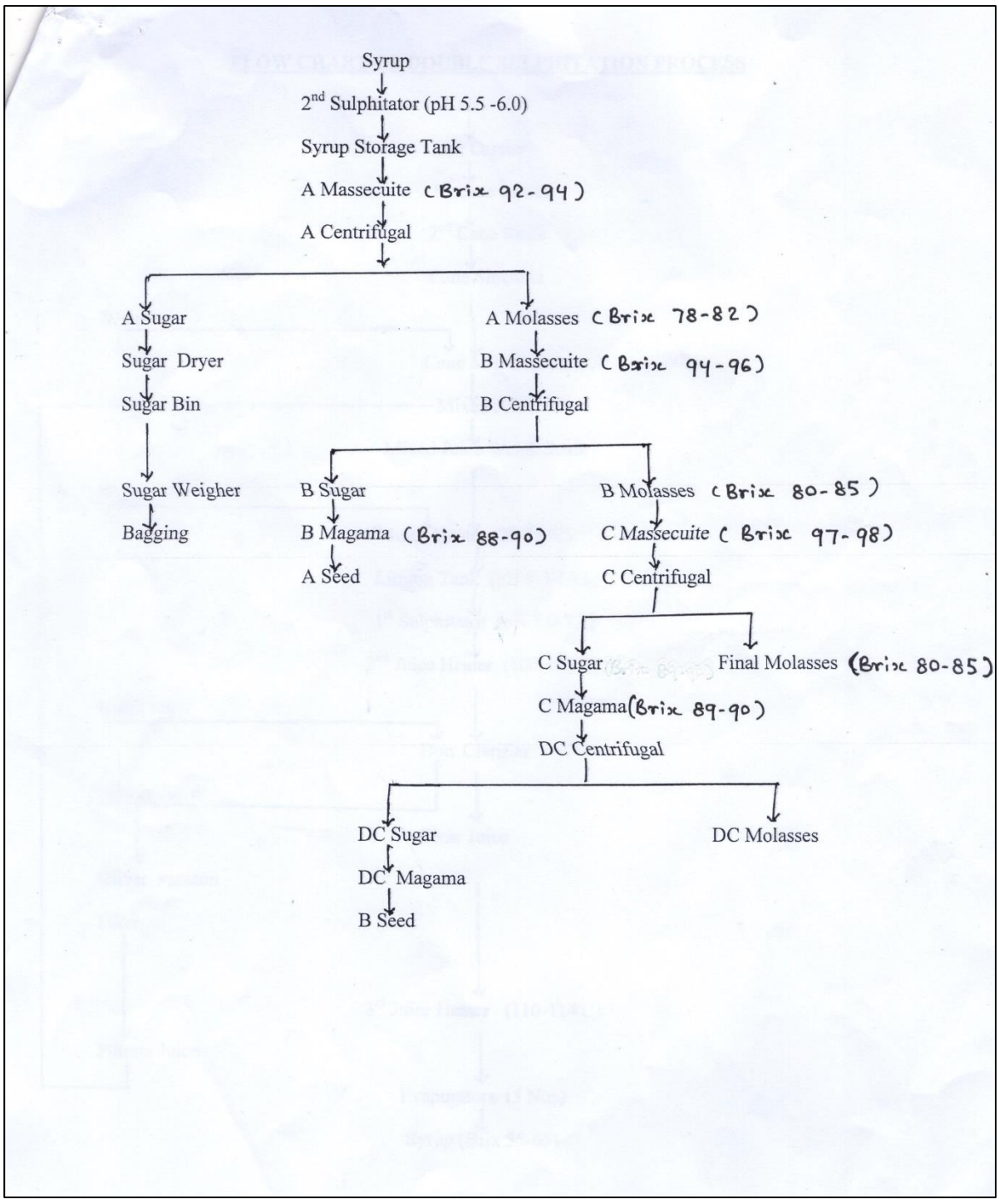


Figure 3.1: Flow Chart of Double Sulphitation Process

The brief description of the production process according to each step is detailed in Annexure - 4. The Production Process Flow Chart in machinery Section is shown in below figure.

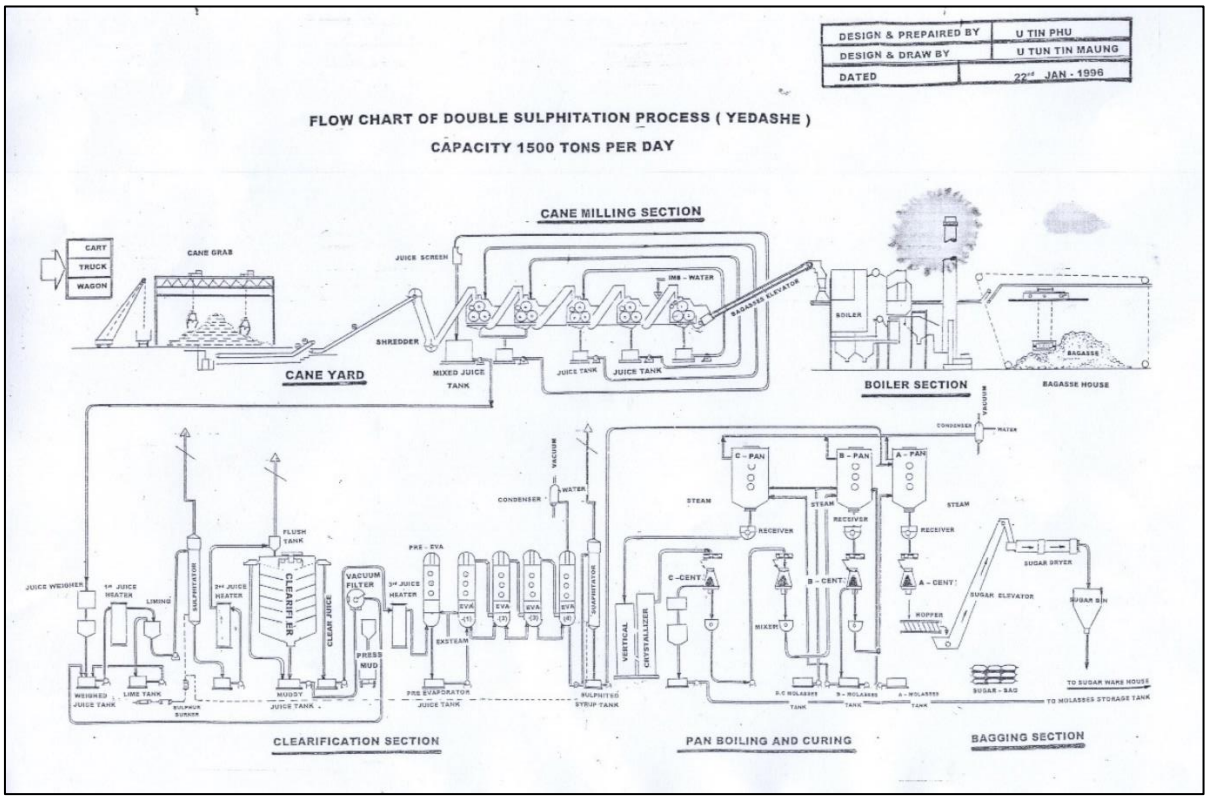


Figure 3.2: Flow Chart of Double Sulphitation Process with Machinery Section

Locally purchased raw materials will be used in DFL project operation phase.

The Plantation Area of Sugar Cane for Raw Materials -4116.20 Acre

Number of Farmers – 745 Nos.

Quantity of Raw Material Purchased – 60000 Tons

Sgar Cane Plantation Area of No. 6 Sugar Mill Factory -537.50 Acre

Sugarcane Production Quantity of from Factory's Plantation–100025Tons

3.3.2 Annual Production Plan

DFL aims to operate Refined Sugar Production expect to earn in Local Market targeting for local consumer with reasonable price accordance with specific particular types of Refined Sugar. The production quantity of sugarcane is 1500 tons per day.

Products and Process of Refined Sugar Production are shown in Annexure -.2.

3.4 Annual Chemical/Fuel Consumables

Annual chemical/fuel consumption from project operation and maintenance activity estimated majority which may come out from transportation activity by using vehicles as most consumption while other activities (i.e., fuel consumption for backup generator operation) may be considered low consumption as follows and actual consumption will be updated in future routing (six monthly) Environmental Report to ECD.

အင်ဂျင်ဝိုင်/လောင်စာဆီ/ဒီဇယ်ဆီ/ဓါတ်ဆီ သုံးစွဲမှုအခြေအနေ(အမျိုးအစား၀ယ်ယူမည့်နေရာတစ်ရက်/တစ်လ/တစ်နှစ် ပျမ်းမျှသုံးစွဲမှု/သိုလှောင်ထားရှိမှု)

စဉ်	ဆီအမျိုးအစား	သုံးစွဲမှုအခြေအနေ			သိုလှောင်ထားရှိမှု	ဝယ်ယူမည့်နေရာ	မှတ်ချက်
		တနှစ်	တစ်လ(ဂါလံ)	တစ်ရက်(ဂါလံ)			
1	Diesel	3585 1/3 Gal	298.75	9.95		ပြင်ပကုမ္ပဏီဝိုင်စက်ဆီ ချောဆီကုမ္ပဏီလုပ်ငန်းများ	2022-2023 ကိုရည်ညွှန်းပါသည်။
2	Petro	459 1/3 Gal	38.25	1.27		〃	〃
3	Octane	207 Gal	17.25	0.575		〃	〃
4	Engine Oil (Turbine) Engine Oil (ဓိုက်ကွင်း)	132 Gal 83 Gal	- -	- -			2019 ကိုရည်ညွှန်းပါသည်။ 2022 ကိုရည်ညွှန်းပါသည်။
5	မီးထိုးဆီ	7400 Gal	-	-	Main Storange Tank တွင်ခန့်မှန်းတစ်နှစ်လျှင် 30000 gals သိုလှောင်ပြီး Service Tank သို့လိုအပ်သလောက်ပေးပို့ ပြီး Bunner မောင်းနှင်ပါသည်။		2022-2023 ကိုရည်ညွှန်းပါသည်။
6	Swee IGO GC EP 680	15 Drum	-	-			〃
7	Gear Oil 220	6 Drum	-	-			〃
8	Tellus Oil 150	1 Drum	-	-			〃
9	Hydraulic Oil 32	1 Drum	-	-			〃
10	Turbine 46	3.5 Drum	-	-			〃
11	Turbine 68	1 Drum	-	-			〃
12	Diesel (Diesel Generator)	300 Gal	-	-			〃
13	Compressor Oil 32	1 Can	-	-			〃
14	Compressor Oil 46	5 Gal	-	-			〃
15	Tonna Oil 38	1 Drum	-	-			〃
16	Tonna Oil 68	30 Gal	-	-			2020 ကိုရည်ညွှန်းပါသည်။
17	Hydraulic Oil 32	20 Gal	-	-			2020 ကိုရည်ညွှန်းပါသည်။ Work Shop

Figure 3.3: Annual Chemical/Fuel Consumption (Unit – Gallon)

3.4.1 Boiler

The sugar cane wastes are only used for the boiler. The sugar cane fuel consumption for the boiler is detailed in below figure.

JÇ- Boiler Usage

ဘွိုင်လာသုံးစွဲမှု(၅)နှစ်စာတွက်ချက်မှုစာရင်း

စဉ်	ကြာသီ ခုနှစ်	ကြိတ်ဝါးတန် (မက်ထရစ်တန်)	မီးထိုးဆီသုံးစွဲမှု (ဂါလံ)	ကြံဖတ်သုံးစွဲမှု (တွက်ချက်မှုတန်)	ကြံပြာထွက်ရှိမှု နှေလိုက်(တန်)	ကြံပြာထွက်ရှိမှု စုစုပေါင်း(တန်)
1	2018-2019 Bagasse %Cane b=31.96%	102024.51	14150	31794.87	29.364	2550.61
2	2019-2020 b =31.4%	53046.63	8275	16656.87	28.21	1326.17
3	2020-2021 b =31.54%	41707.93	3750	13154.17	34.29	1042.70
4	2021-2022 b =30.55%	37931.460	9300	11587.87	28.5	948.29
5	2022-2023 b =30.12%	56225.2614	7400	16933.03	31.23	1405.63

Figure 3.4: Boiler Fuel Usage for Five Years

3.5 Power Consumption

Power consumption from project operation is mainly from power supply source from National Power Line via installed private transformers under permission of Power Supply Corporation and consumed electricity from national power grid will be counted monthly as unit for billing purpose. DFL has installed Diesel Generator as backup power supply system to be used for public area lighting purpose when main power supply system does not work temporarily. DFL commits to pay timely for monthly electricity bill settlement and annual power consumption is estimated as follows and actual consumption will be updated in future routing (six monthly) Environmental Report to ECD.

Table 3.13: Power Consumption (Unit – Meter Unit)

Sr. No.	Power Source Description	Consumption (Unit) During Operation of Production Period	Consumption (Unit) During Operation Stoppage Period
1	Transformer (4 no.) Main Source for Normal Operation Power Supply from National Grid Line	1600 KWH/Day 48000 KWH/Month	800 KWH/Day 24000 KWH/Month
2	Power Turbine Generator (2 nos.) Diesel Generator Set (1 no.) Alternative Source for Backup Essential Operation Power Supply from DFL	408000 KWH/Day 1224000 KWH/ Month	-

Figure 3.5: Transformer

Figure 3.6: Diesel Generator

Figure 3.7: Power Turbine Generator

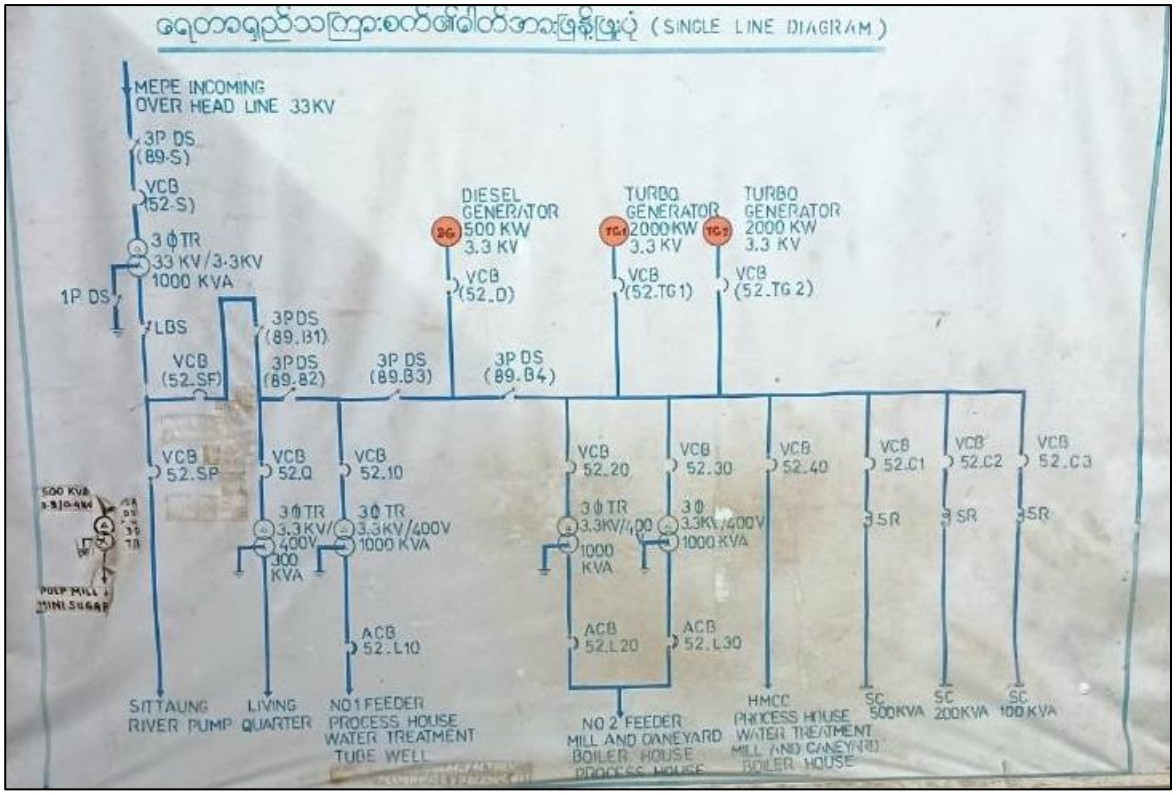


Figure 3.8: Electric Distribution Diagram

3.6 Annual Water Consumption

Annual water consumption from project operation is operation use and utility use. Water resources are mainly from Sittaung River Water and secondly source is ground water via 8 inches tube-well. River water and Ground water will be pumped out to storage tank, treat, and then utilize for daily domestic usage and operation utility water usage whilst reserving for emergency usage for firefighting. Annual water consumption is estimated as follow and actual consumption will be updated in future routing (six monthly) Environmental Report to ECD.

Table 3.14: Annual Water Consumption (Unit – Gallon)

Sr. No.	Duration	Consumption (Unit) During Operation Stoppage Period (10 Month)	Consumption (Unit) During Operation of Production Period (2 month)
1.	An Hour (per hr.)	60 ton	400 yon
2.	Daily (per day)	360 ton	8000 ton

3.	Monthly (per month)	9360 ton	200000 ton
4.	Yearly (per year)	93600 ton	400000 ton

Figure 3.9: Raw Water (River water) Storage Area

3.7 Investment Budget for Proposed Project

DFL invests for proposed operation using total capital 5,000 million Yen for proposed project, Delicious Food Limited.

3.8 Man Power Consumption

The proposed Project is already in operation phase. In the operation phase; to operate operation activities and by using Local human resources; local personnel manpower (207 nos.), of DFL in long term. Permanent Man Power of the Project will be mainly for normal operation of the DFL and required man power has been estimated in below Table. The basic salary of the factory is 144,000 and DFL will pay the tax for the employee; who earns 480,000 Kyat per annum and above, as defined by local authority of Taxation Department. (List of employees and organization chart are shown in below table and figure)

Table 3.15: Proposed DFL Operation Workforces

Sr. No.	Staff Description	No. of Employee	Sr. No.	Staff Description	No. of Employee
(A)	**LOCAL PERSONNEL**		(B)	**FOREIGN PERSONNEL**	0
1	Officer	14			
2	Service	193			
Total Local Personnel		207	Total Foreign Personnel		0

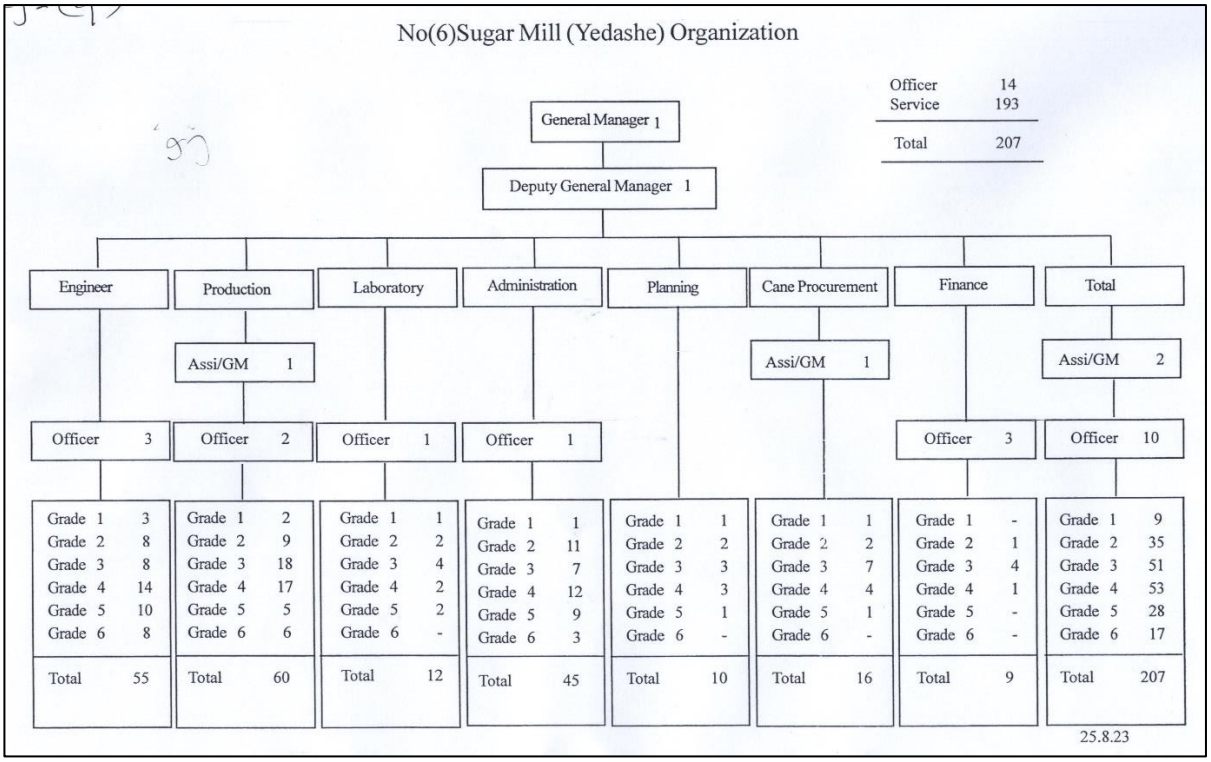


Figure 3.10: Organization Chart of No. (6) Yedashe Sugar Mill

3.9 Project Location, Overview Map and Site Layout Maps

Delicious Food Limited Project location is at area 729.50 Acre (19°11'56.16667"N, 96° 21' 5.30216“E) in Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). Project Overview Map and Layout Maps are shown in below Figures.

Figure 3.11: Overview Map of Proposed Project Location

Figure 3.12: Layout Map of Proposed Project (19°11'56.16667"N, 96° 21' 5.30216“E)

3.10 Master Plan Layout Design

Detailed design of Delicious Food Limited is presented in below Figure .

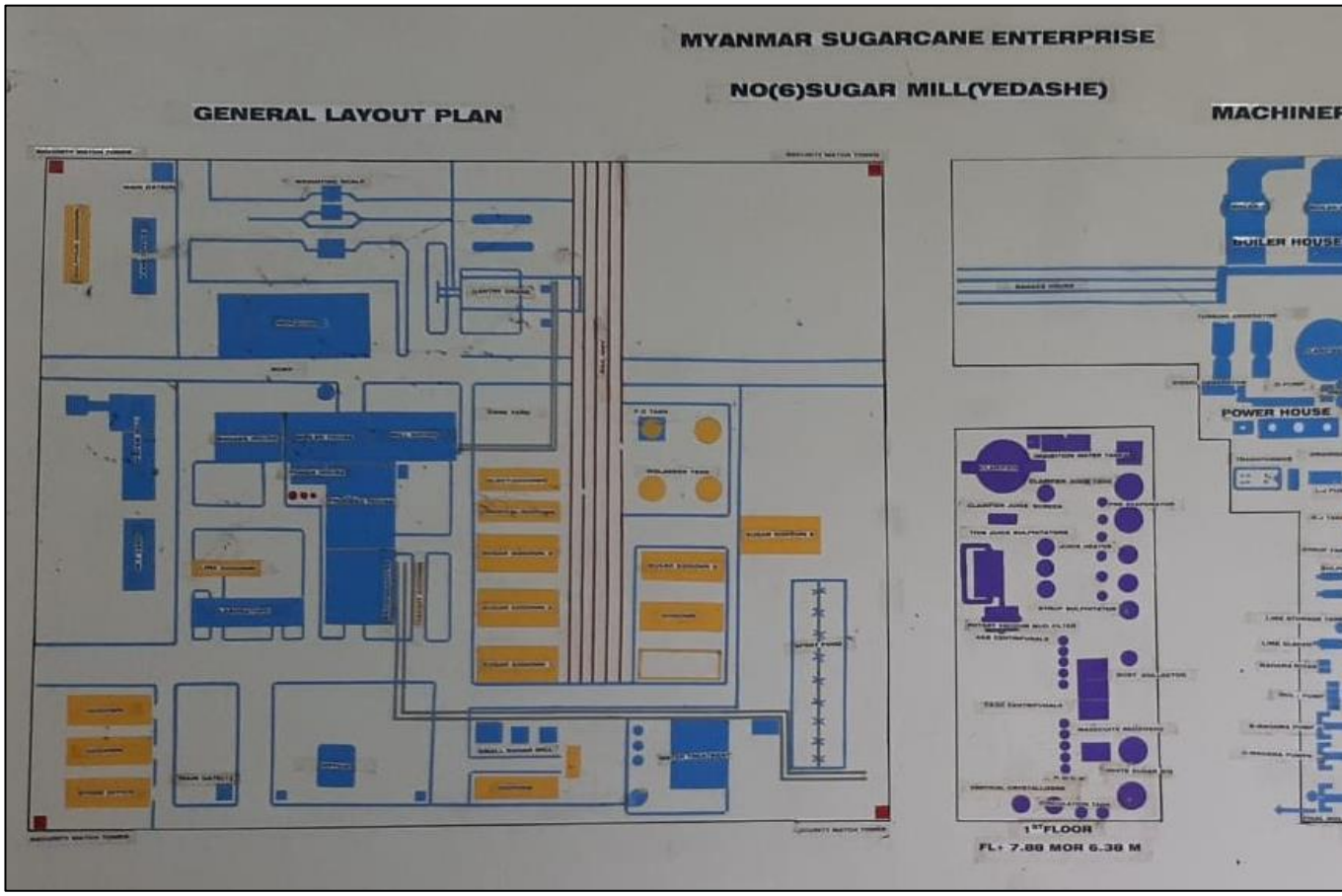


Figure 3.13: Master Plan Layout Design of No. 6 Yedashe Sugar Mill Production

The type and area list of buildings existing in the No. (6) Yeadashe Sugar Mill factory and their layout plan are described with tables in Annexure. - 2.

3.11 Project Implementation Schedule

Proposed project can be considered as 3 phases; developing phase, operating phase, and abandonment phase. Proposed Project has been developed in 1986 (mainly for installation of facility equipment in existing building). Abandonment process will be included after completion of agreed project period or termination of project to ensure complying as mentioned in the rental contract without fail from both parties. The implementation of the project operation has been undertaken in 1990. And Delicious Food Limited taken over all of the factory operation from previous owner (government project) and changed from a government-owned factory project to a privately owned factory project by B.O.T system at August 30, 2011.

DFL will operate its proposed project 12 years in accordance with the Ministry of Agriculture and Irrigation under (Build, Operate, Transfer) BOT System with reference to letter of Ministry of Agriculture and Irrigation (dated: 14 September 2011, Letter no. 11/sugar mill (653/2011). DFL is willing to operate its proposed project continuously and development phase is set. Abandonment process will be included after completion of permitted project period or termination of project by either operator; DFL or officials to ensure operator complying with enacted Myanmar laws and regulations.

Proposed project can be considered as 3 phases; developing phase, operating phase, and abandonment phase. Proposed Project development has been commenced in 1986 for four years and changed project investor at 2011 (mainly for installation of facility equipment). The operation period is planned for 30 years period. Abandonment process will be included after completion of project period or termination of project to ensure complying as mentioned in the rental contract.

Project implementation schedule for Delicious Food Limited is present in below table.

Table 3.16: Project implementation schedule

Phase	Commence	Duration	Note

Development	1986	4 years	100% completed
Operation (Government)	1990 November	21 Year	It was completed and transferred to a new investment.
Operation (DFL)	2011 August	As per Contract	Contracted by B.O.T System
Abandonment	TBA	TBA	N/A

3.11.1 Development Phase Activity

Delicious Food Limited facility will be installed by project proponent; DFL. It is observed that DFL has conducted installation activities since 1986 and 2011. It was completed in originally applied location mentioned in project proposal application submitted for MONREC Permit.

There will be logistics process relatively involved in the proposed project development activities mainly for the materials, and facility; machines, & equipment. DFL is operating the proposed project with existing installed machineries, facilities and equipment in the factory which has developed by previous investor.

Delicious Food Limited building design has been prepared already by landlord as to meet Myanmar building standards requirement for permit approval from relevant authority. The pre-construction activities are considerably being completed before made land rental agreement and assessment study for pre-construction activities may not involve in current study.

Delicious Food Limited Production rented land with Building which completed for building construction, and infrastructure for machinery & equipment facility installation before production.

Table 3.17: Development Phase Activities

Sr. No.	Activity Description	Responsible by
(A)	LAND & BUILDING RENOVATION	DFL

1	Concrete Floor works	
(B)	**FACILITY INSTALLATION OPERATION**	DFL
1	Lighting, Ventilation, Air-Con/Fan system	
(C)	**MAINTENANCE**	DFL
1	Operation Maintenance & Housekeeping	
2	Facility Maintenance	
3	Power Supply & Water Supply	
4	General Domestic Waste Collection & Disposal	
5	Wastewater & Effluent Collection & Treatment	
6	Fire Safety Preparedness	

3.11.2 Operation Phase Activities

Delicious Food Limited operation phase activities combine with operation and maintenance activities which practice simple process mentioned briefly below. Potential Environmental Risks which may come out from operation & maintenance activities of Delicious Food Limited; Refined Sugar Production are operating of backup diesel generator, consumption of power, consumption of water, and generation of waste; domestic general solid waste domestic wastewater & effluent disposal, only.

There will be logistics process relatively involved in the proposed project operation activities mainly for the routine operation & maintenance service items. DFL commits to perform to ensure all operation & maintenance service items and chemicals are registered and approved by relevant authority of host country prior to be taken to site. Transportation from source (local market) to Refined Sugar & storage site may also impact during operation period.

Other activity; vehicle movement and parking for visitor and transporters, is considered as controllable as by providing enough parking space in place to prevent vehicle blocking on public road other road users.

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Table 3.18: Operation Phase Activities

Sr. No.	Activity Description	Responsible by
(A)	**PRODUCTION OPERATION**	DFL

1	Refined Sugar Production	
(B)	**BUSINESS OPERATION**	DFL
1	Sale Marketing	
(C)	**MAINTENANCE**	DFL
1	Operation Maintenance & Housekeeping	
2	Facility Maintenance	
3	Power Supply & Water Supply	
4	General Domestic Waste Collection & Disposal	
5	Wastewater & Effluent Collection & Treatment	
6	Fire Safety Preparedness	

3.11.3 Abandonment/Decommission/Closure/Post Closure Activities

Decommission/Closure/Post Closure activities may include dismantling of installed facility and termination of refined sugar production operation in terms of unforeseen & uncontrollable issues (such as fire, natural disaster, inevitable accident or damage by war, riot, civil disturbances, etc.,). There will be liability for both sides to comply with signed agreement between DFL (Developer) and employee.

However, there will be social impact to the employee working at Refined Sugar Production if the proposed project is fully terminated by either DFL or authority officials. DFL undertakes to comply with existing Myanmar rules & regulations, and procedures & standing instruction especially for the employee involved.

Table 3.19: Abandonment Phase Activities

Sr. No.	Activity Description	Responsible by
(A)	**FACILITY DEINSTALLATION OPERATION**	DFL
1	Machinery & Equipment dismantling	
(B)	**LAND & BUILDING REINSTATEMENT**	DFL
1	Reinstatement as per rental agreement	
(C)	**MAINTENANCE**	DFL
1	Operation Maintenance & Housekeeping	

2	General Domestic Waste Collection & Disposal	
3	Wastewater & Effluent Collection & Treatment	
4	Fire Safety Preparedness	
(D)	SHUT DOWN OPERATION ACTIVITY	DFL
1	Clearance for Business Termination	

3.12 Alternatives

The comprehensive study has been made by the investor for the proposed project since preparation stage to invest capital for the proposed project which covering site location, investment type, building design, quantity and capacity of marketable products, etc., and then proposal has been prepared with final outcome from studied.

There is currently alternative site for and the proposed alternative site is intended to serve as an immediate location to be used for project. There is no alternative for building design, construction & installation procedure, project period and the proposed project aim to proceed as per officially permitted project proposal with exception in alternative site.

Any alternative/changes will be presented if there is any project activity requires changes throughout project period which deviate from officially approved original project proposal.

3.13 Comparison and Selection of Alternative

3.13.1 Methodology

In this study, DFL has considerably practiced comparison and selection of alternative based on location, marketing demand, affordable products, efficiency of Equipment & Machinery, investment and return benefit ration before commencing the proposed project and decision make internally.

3.14 Description of the Selected Alternatives

3.14.1 Technical Description of the Selected Alternative

DFL has prepared project proposal to operate Refined Sugar Production Project to suit with Myanmar laws and submitted to MONREC for approval. There is no alternative site to compare with the project site to serve as an immediate location to be used for project

3.15 Relevant Programs

Proposed project operator undertakes to conduct the below considered relevant programs but not limited to. There will be yearly review and update to improve in its program performance throughout project period.

3.15.1 Environmental Conservation Program

DFL commit to conduct Environmental Conservation Program in collaboration with Environmental Experts as necessary. In addition, DFL commit to comply with Environmental Laws, Procedures, Orders, & Instruction issued from MONREC.

3.15.2 Environmental Management Plan EMP

DFL commit to perform Cleaning of Daily waste produces from Refined Sugar Production focus on Production area to maintain clean Production is responsible of operator as part of EMP.

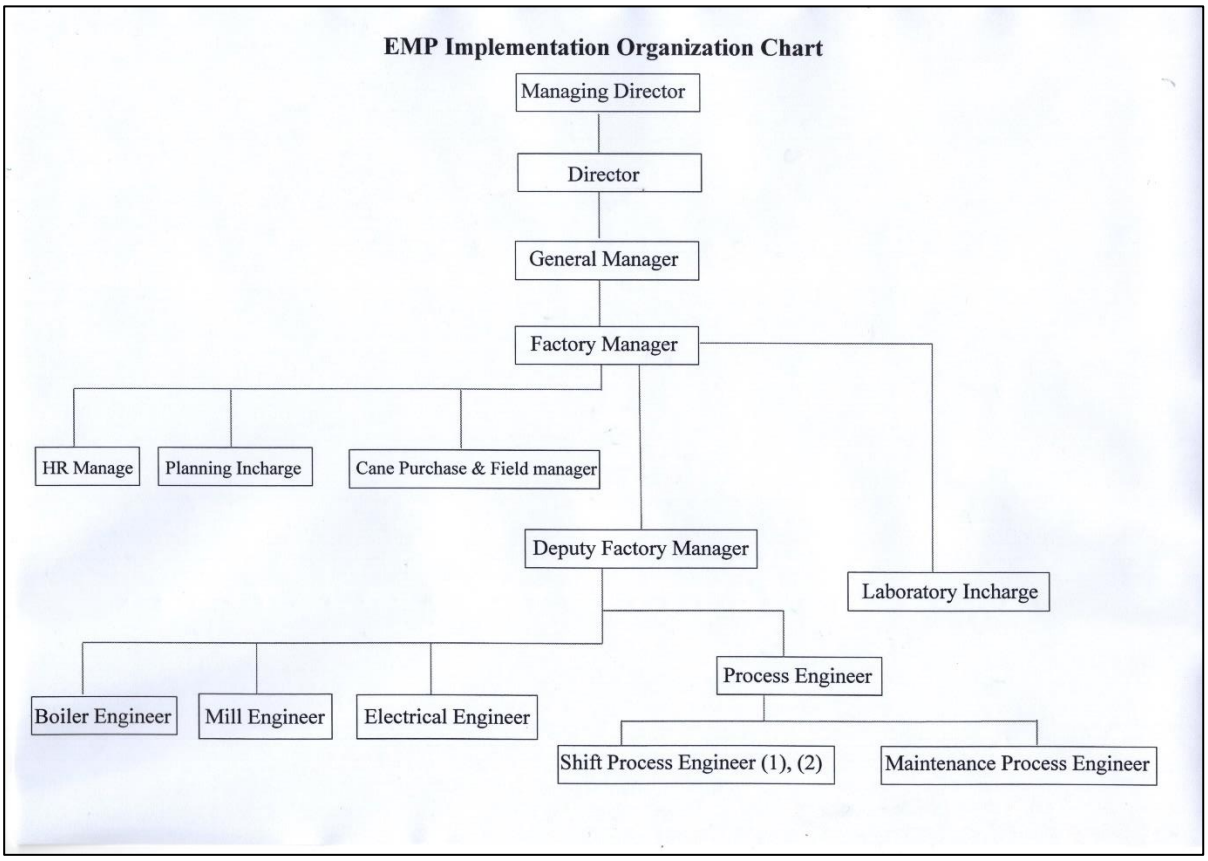


Figure 3.14: EMP Implementation Organization Chart

3.15.3 Waste Management Plan

Wastewater generated by the proposed project includes domestic and sanitary wastewater, all of which will be treated and monitored onsite before discharge into designated location within project area. DFL has to ensure the wastewater releases comply with NEQEG standards. The waste water generated from the factory flows through the factory's designated drain and finally discharged into the earthen pond designated for the project waste water. The waste water drainage layout plan is shown in below figure.

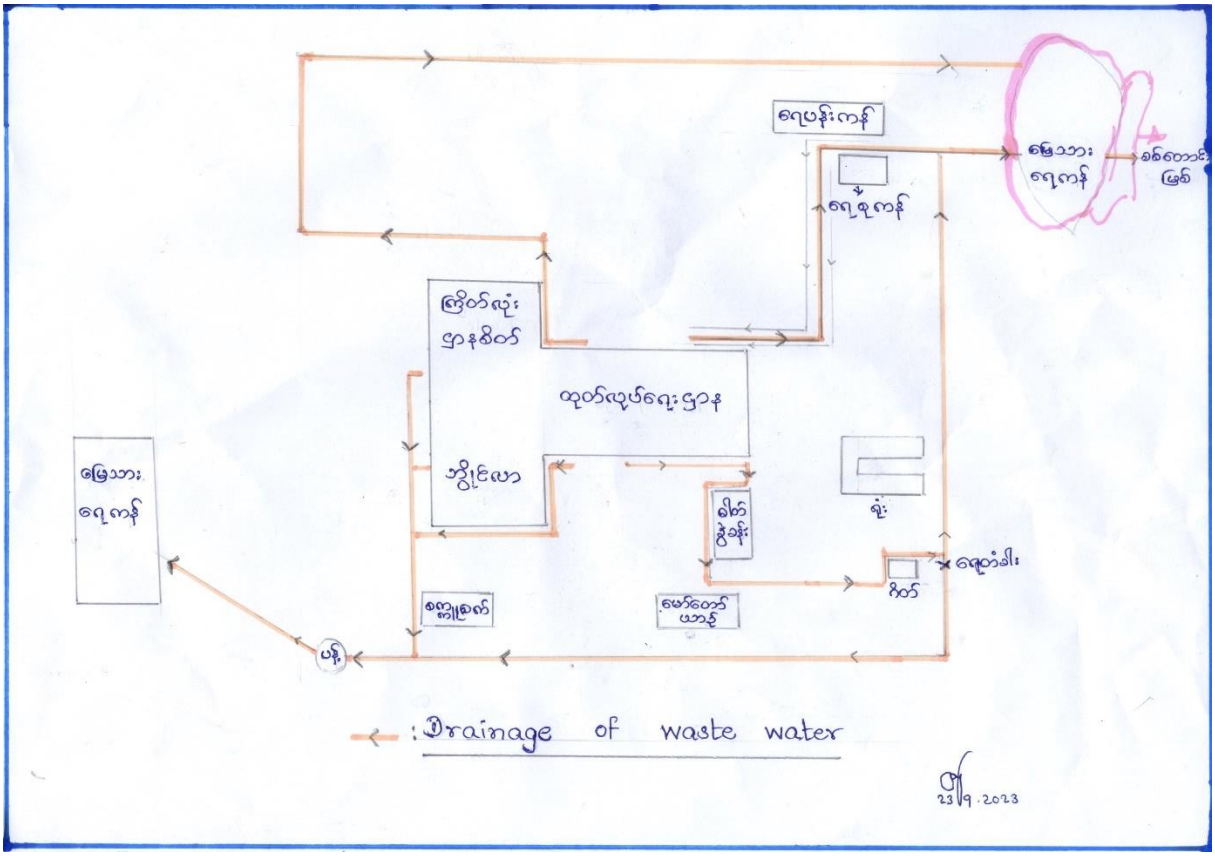


Figure 3.15: Waste Water Drainage Layout Plan

A small amount of non-hazardous general solid wastes, such as kitchen waste, food waste, paper, woods, etc., generated from operation activity will be segregated individually for reuse and recycle to maximize its usage in the operation and only domestic waste generated from operation staff will be sent for proper disposal at relevant Township Development Committee waste disposal site. No Hazardous wastes will be generated from the normal operation of DFL.

3.15.4 Fire Safety, Emergency & Disaster Management Plan

Delicious Food Production Limited have been installed fire safety facilities (such as emergency exits, sufficient & quality certificate passed fire extinguishers, fire-fight equipment, fire-water hose) according to instruction from Myanmar Fire Service Department. Water source for firefighting will be ground water according to instruction and procedure from YCDC. In emergency situation occurs at Refined Sugar Production, project staff will communicate relevant Industrial Zone Fire Service Department and take

actions by following guidance from authority. In addition, DFL undertake to commit to run its operation activities under Myanmar laws, regulations, orders, and procedures.

Figure 3.16: Fire Safety Training record

3.16 Corporate Social Responsibility (CSR) Plan

DFL commits to reserve 2% of net profit from proposed Project yearly income in sponsoring required CSR activities of respective local community development programs (Yedashe Township, Bago Region) in collaboration with authority and representative of Yedashe Township.

3.17 Social Welfare Plan

DFL has also plan for the social welfare of staff and labor such as enough vehicles in transport/ferry, relevant training to improve skill and performance-based awarding program, annual staff party and team building trip, etc.,) and working hour will be in line with existing labor laws & regulation of Myanmar.

4.0 DESCRIPTION OF THE SURROUNDING ENVIRONMENT

4.1 Objective of Data Collection and Analytical Assessment

This study aims to identify sensitive receptors in the assessment of impacts on physical resources, biological resources, human use values, and quality of life values.

4.1.1 Setting the study Limits

The study area boundary is set up within 0.5-kilometer radius from the center of No.6 Sugar Mill factory that locating approximately at 19°11'58.53"N, 96°21'1.72"E. The set study area is explored for existing environmental and socio-eco data info and compiled in this report.

The existing environment of the project within selected study area is focus to record baseline environmental condition (ambient air quality, water quality, soil quality, and noise emission, etc.,), socio-economics condition (land use, relocation, conflict, etc.,), historical, cultural, etc., to be used as background data which enable to refer in the operation activity throughout project period.

The study area 1km radius circle excludes away from residential area, historical area and protected area. This project belonged in InDine Viallage, Yedashe Township, and related area are farm land. The study area and surrounded area area are show in below Figure.

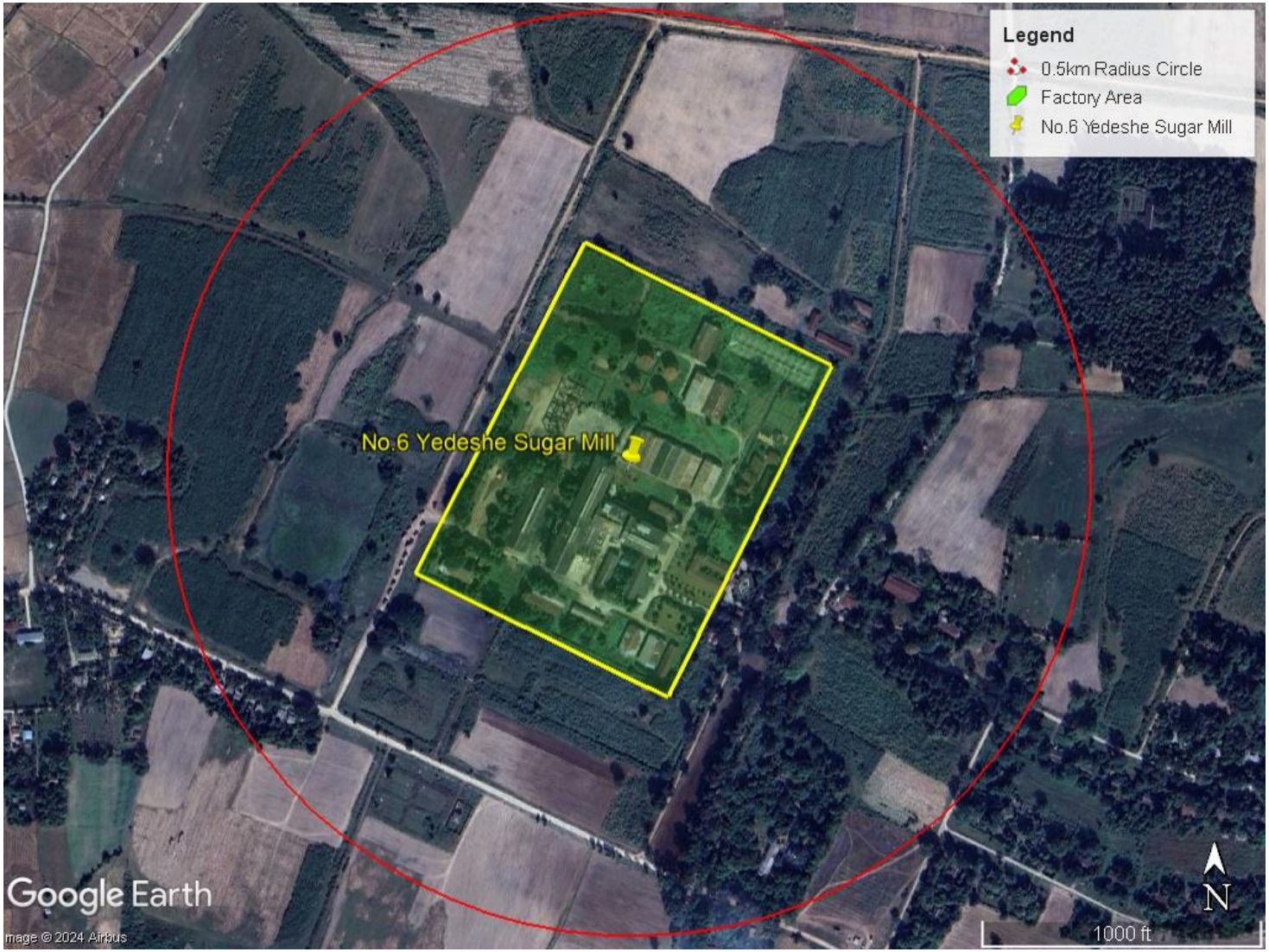


Figure 4.1: Study Area 0.5km Radius Circle

4.1.2 Methodology of Data Collection

In collection of environmental and social information; primary data collection and secondary data collection were used.

(i) Primary Data Collection

Primary data such as soil quality, water quality, air quality, noise level and, flora/fauna assessment has been collected by using with certified equipment at the project field area.

Grab sampling method was used in sampling for soil & water samples, and then send to the national certified laboratories for analysis.

EPAS Haz scanner and air quality multimeter were used for monitoring of ambient air quality (such as CO, NO_2, SO_2, RH%, PM_{10}, $PM_{2.5,}$ VOC) in the project area.

Digital noise meter was used for baseline data collection of noise emission from project activities.

Flora/fauna information are collected by walk through survey and some are getting from interview with local people. The results of existing environmental qualities were compared with related guideline in this section.

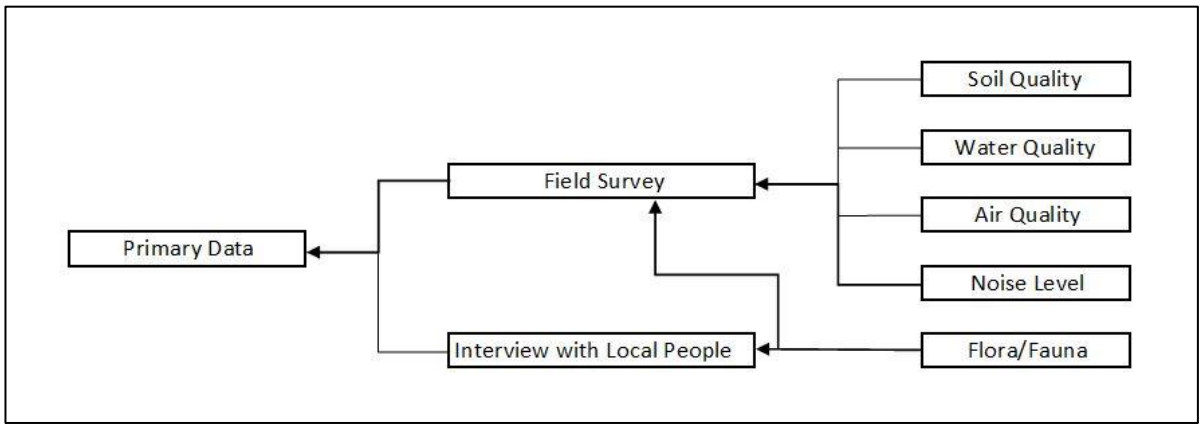


Figure 4.2: Methodology for primary data collection

(ii) Secondary data Collection

Desktop study to collect the existing physical characteristic and socio-economic data/information from secondary resources. Physical characteristics such as topography, climate, natural disaster, and hydrology were collected from Yedashe Township profile 2020, General Administrative Department.

Socio-economic information such as population, education, health, religion/cultural heritage, and infrastructure services were also collected from Yedashe Township profile 2020, General Administrative Department and other relevant government websites.

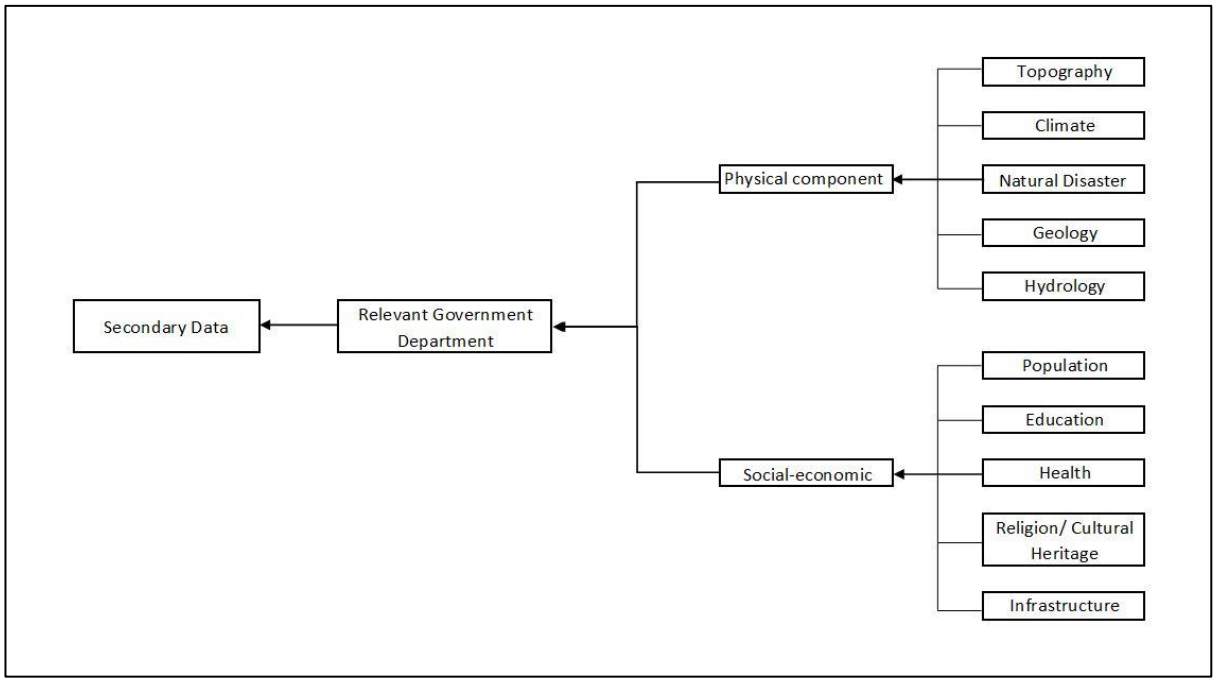


Figure 4.3: Methodology for secondary data collection

4.1.3 Climate

The climate in Myanmar is strongly influenced by the position of the Inter Tropical Convergence Zone (ITCZ). This zone marks the convergence of air streams from the southern and northern hemispheres. The ITCZ migrates north-south during the year, in response to the seasonal shift of the sun relative to the earth's surface. The ITCZ reaches its northern-most point at a latitude north of central Myanmar during the northern hemisphere summer, and its southern-most position over the Indian Ocean during the hemisphere summer.

Table 4.1 Climate of Yedashe Township

No.	Year	Rainfall		Temperature	
		Rainy Day	Total Rainfall (inches)	Summer	Winter
				Highest (°C)	Lowest(°C)
1	2017	96	95.74	39	15
2	2018	88	78.91	39	15
3	2019	68	87.07	40	15
4	2020	85	56.52	40	15

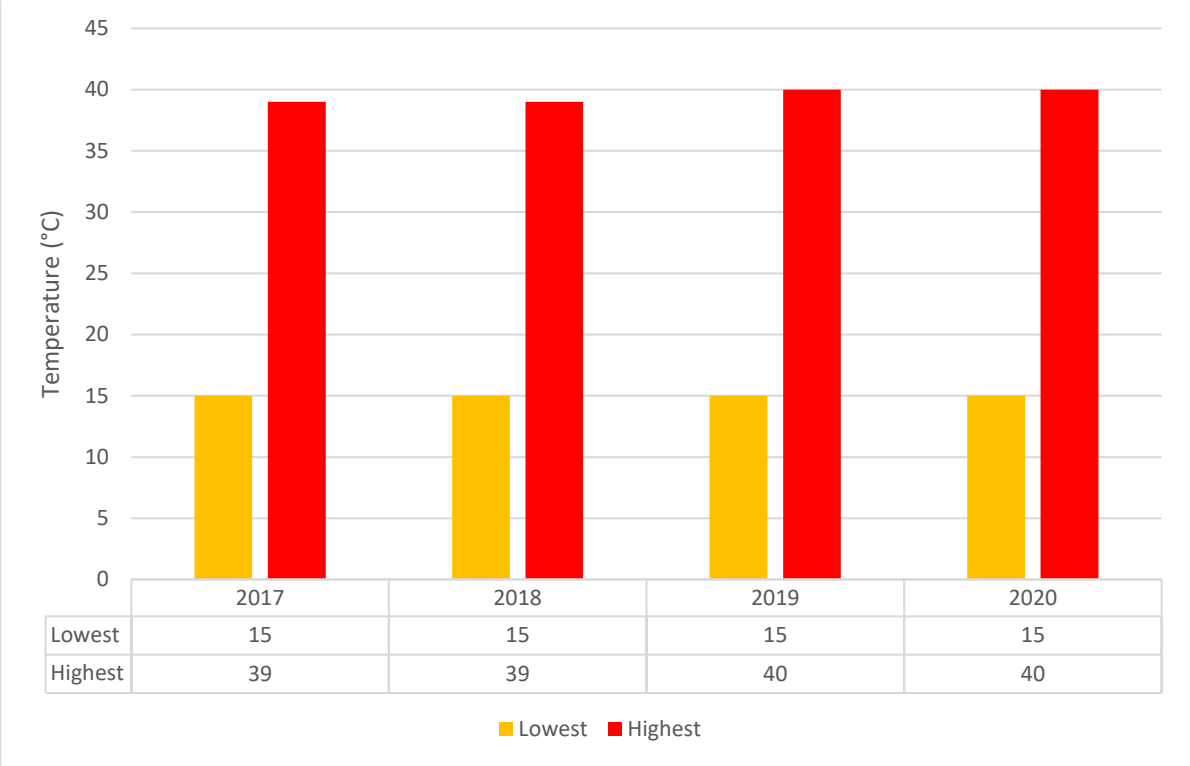


Figure 4.4: Annual temperature in Yedashe Township (2017-2020)

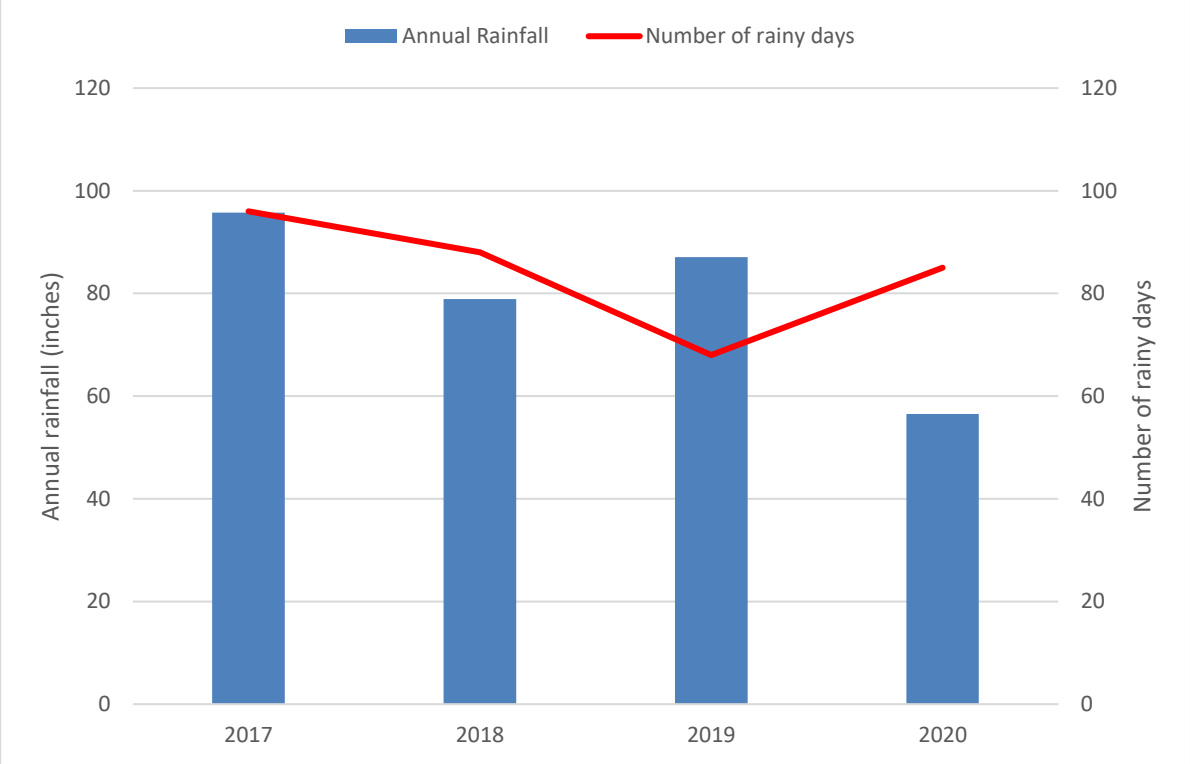


Figure 4.5: Annual rainfall and no. of rainy days in Yedashe Township

4.1.4 Natural Disaster

Sittaung river flows from north to south in the Yedashe township, so that floods often occur. The water level concern in Yedashe township is 600 cm. Natural disaster occurred in Yedashe Township (Oct 2019 to Sept 202) is shown in the following table.

Table 4.2: Natural disaster occurred in Yedashe Township

No.	Type	Frequency	Death/Missing (person)	Building Losses/Damage	Total Losses (kyats)
1	Storm	15	1	385	30.589
2	Tsunami	-	-	-	-
3	Earthquake	-	-	-	-
4	Flood	5	1	5	21.80
5	Fire	11	-	14	36.325
Total		31	2	404	88.714

4.1.5 Topography

Yedashe township is located between north latitude 19°3' to 19°29', east longitude 95°47' to 96°33'. The township area is 1011.11 square miles and length is 43.5 miles from east to west and 29.5 miles from south to north.

Yedashe Township is farthest north of eastern part of Bago Region. It is bordered with Eastern- Than Taung Township (Kayin Region), Western – Aung Lan Township (Magway Region), Southern – Taung gyu Township, and Northern – Lel we Township (Nay Pyi Taw).

East Yoma is situated in Eastern flank of Yedashe Township and West Yoma is located in Western flank of the Township. 75 percent of the township area is covered with forest.

Elevation of the township is average 200 feet. The Lowest part of the township area is Kywel Yine Pyin village tract and, the highest mountain is Phoe Kyar Mountain with a height of 320 feet.

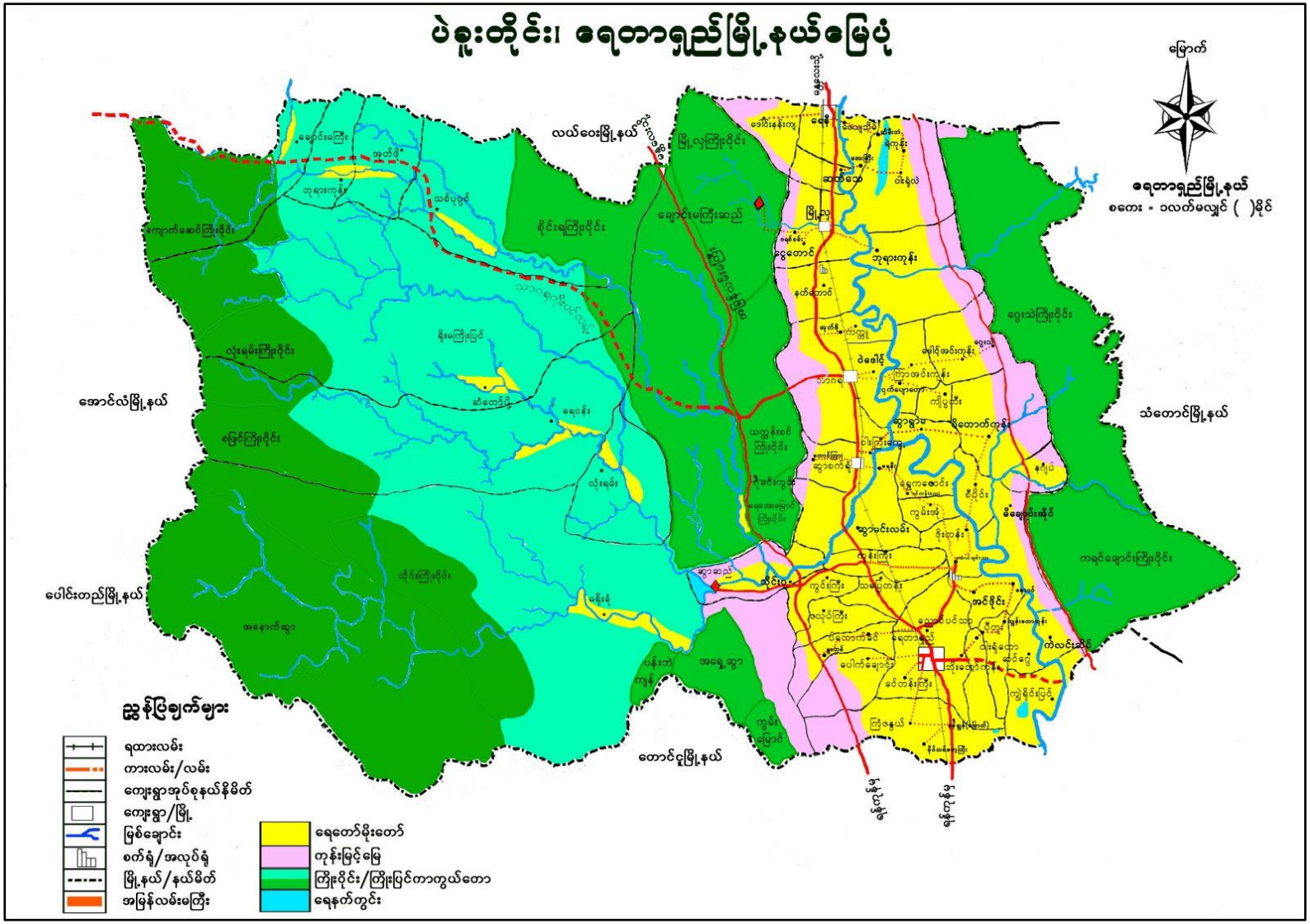


Figure 4.6: Yedashe township map

4.1.6 Geology

Regional geological setting of the study area and its surroundings are shown in Figure (2). According to the geological map, the study area is mainly composed with the alluvium. The eastern part of the study area is mainly dominated by the granitoid rocks with an age ranging from Mesozoic to Cenozoic time. Structurally, it is bounded by the north south trending right lateral, strike slip Sagaing Fault in the west, Shan Scarp Fault zone in the east and Papun Fault in the southeast of the study area. The Sagaing Fault is an active, north-south trending right-lateral fault system mapped over more than 1000km from the Andaman Sea to the Himalayas (Geodia – Coyne et Bellier, 1995).

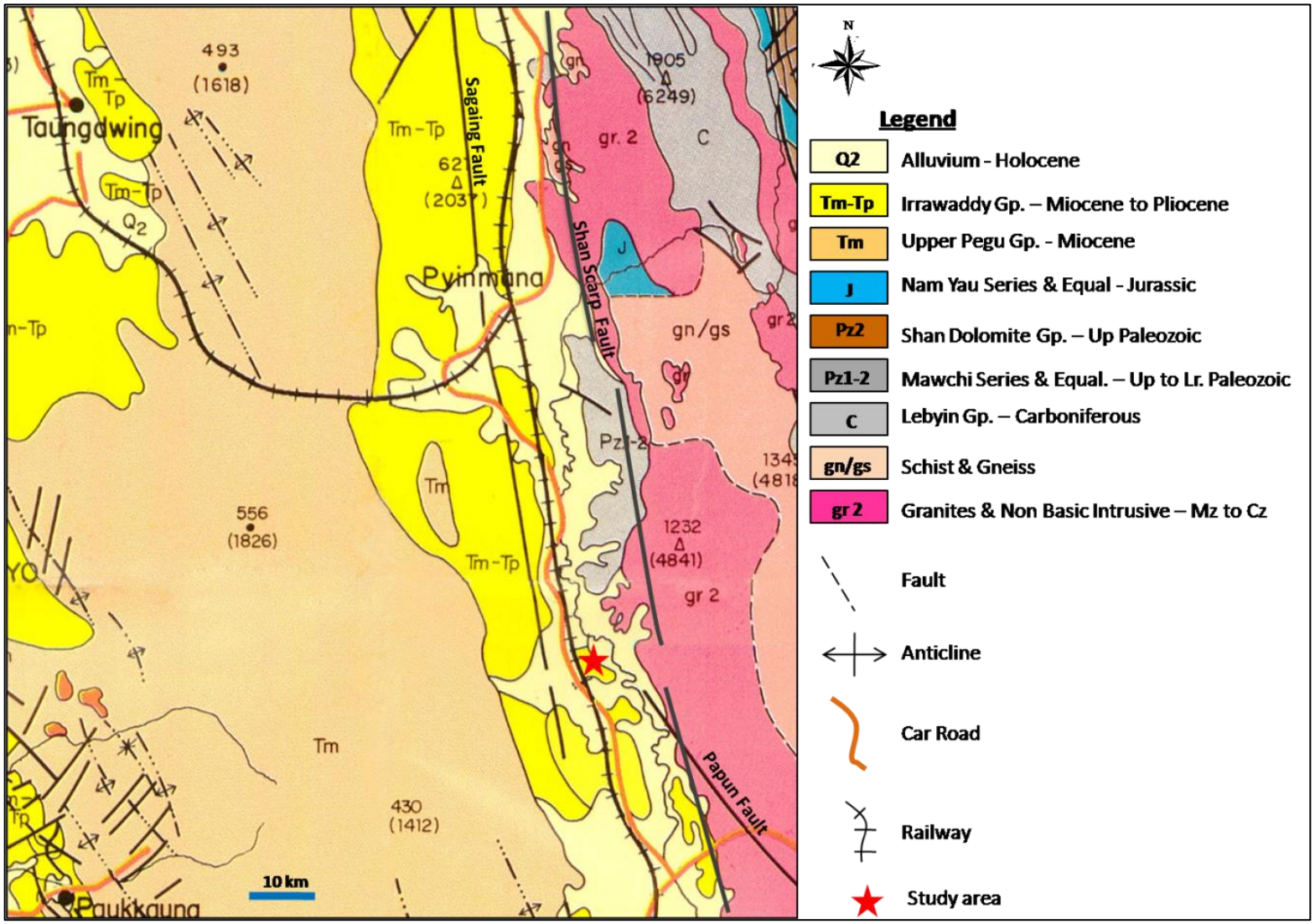


Figure 4.7: Geological map of the study area

4.1.7 Earthquake

According to the previous major earthquakes in Myanmar, Yedashe area is an earthquake prone area. The major earthquake source of this area is Sagaing Fault, which is located about 12 km west of Yedashe. Figure (4) shows the seismicity of Yedashe and its surrounding area. The most significant event is Swa Earthquake with the magnitude 7 on August 8, 1929. This earthquake caused severe damage in Yedashe and Taungoo Townships, e.g. the railway was bent and the bridges and culverts caused damage and the loaded trucks were turned upside down. (Chit Thet Mon and Myo Thant, 2012). Therefore, the earthquake hazard is one of the hazards that should be considered for the study area

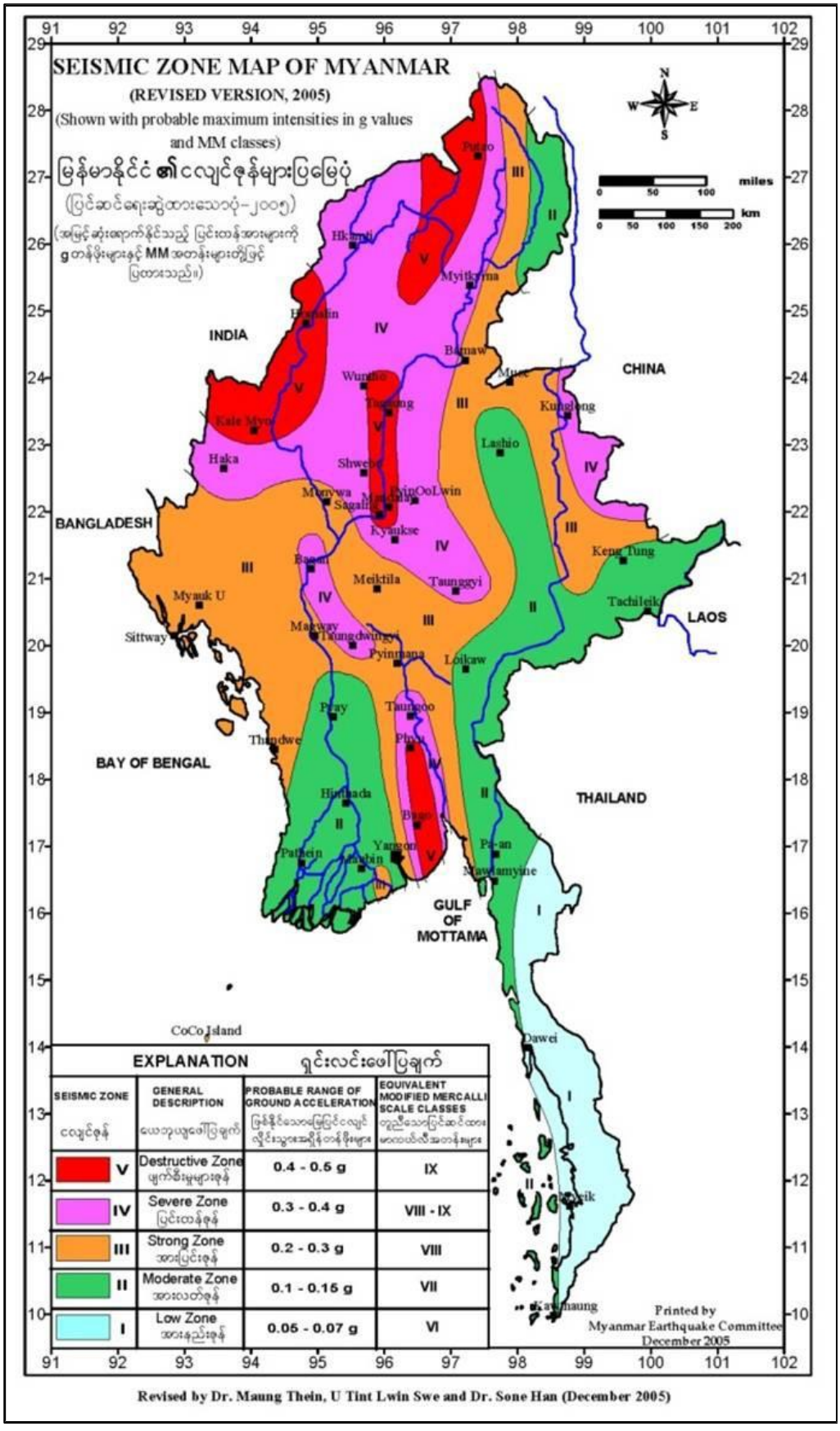


Figure 4.8: Seismic zone map of Myanmar

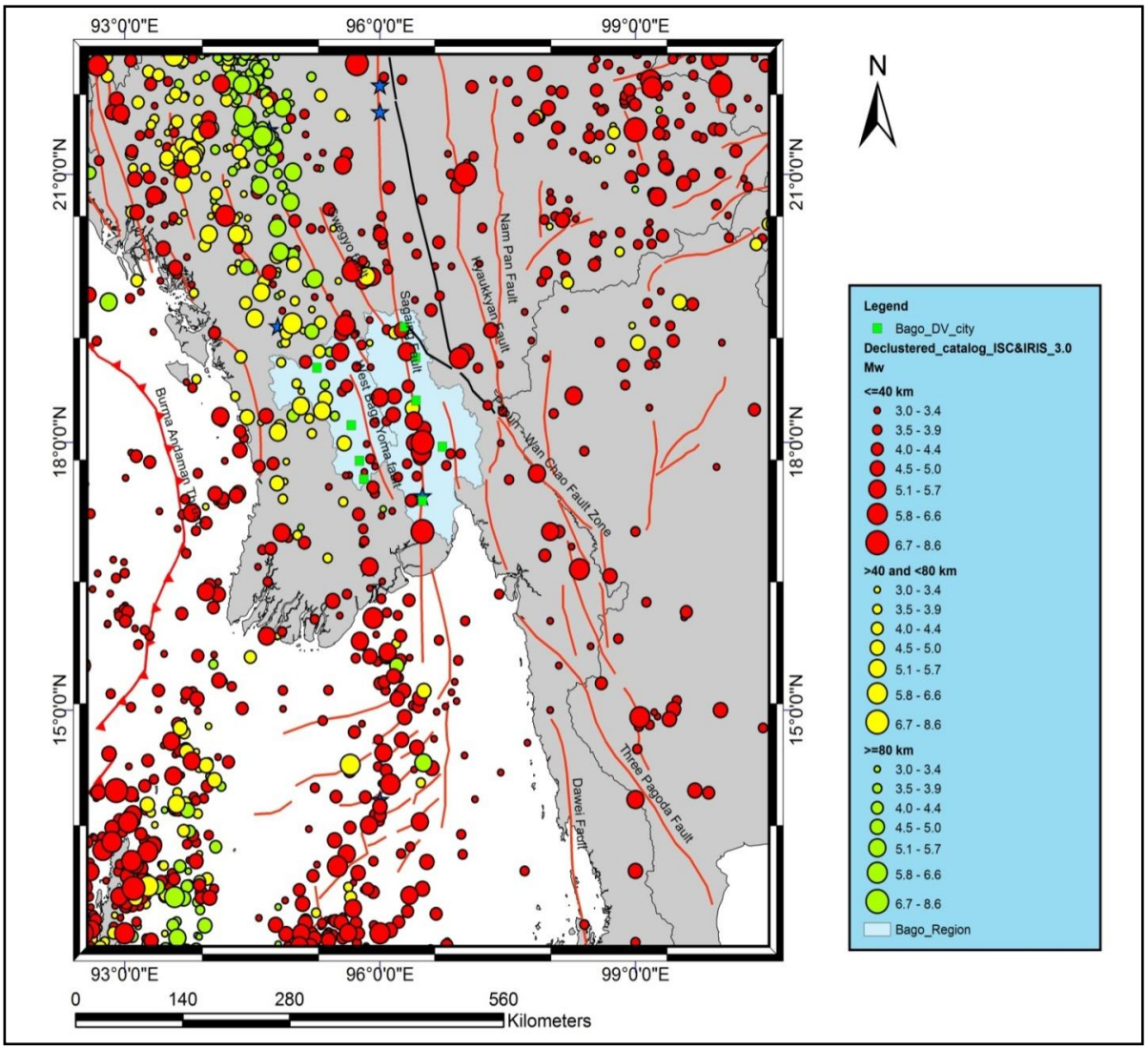


Figure 4.9: Seismicity of Bago Region (ISC catalog, 2011)

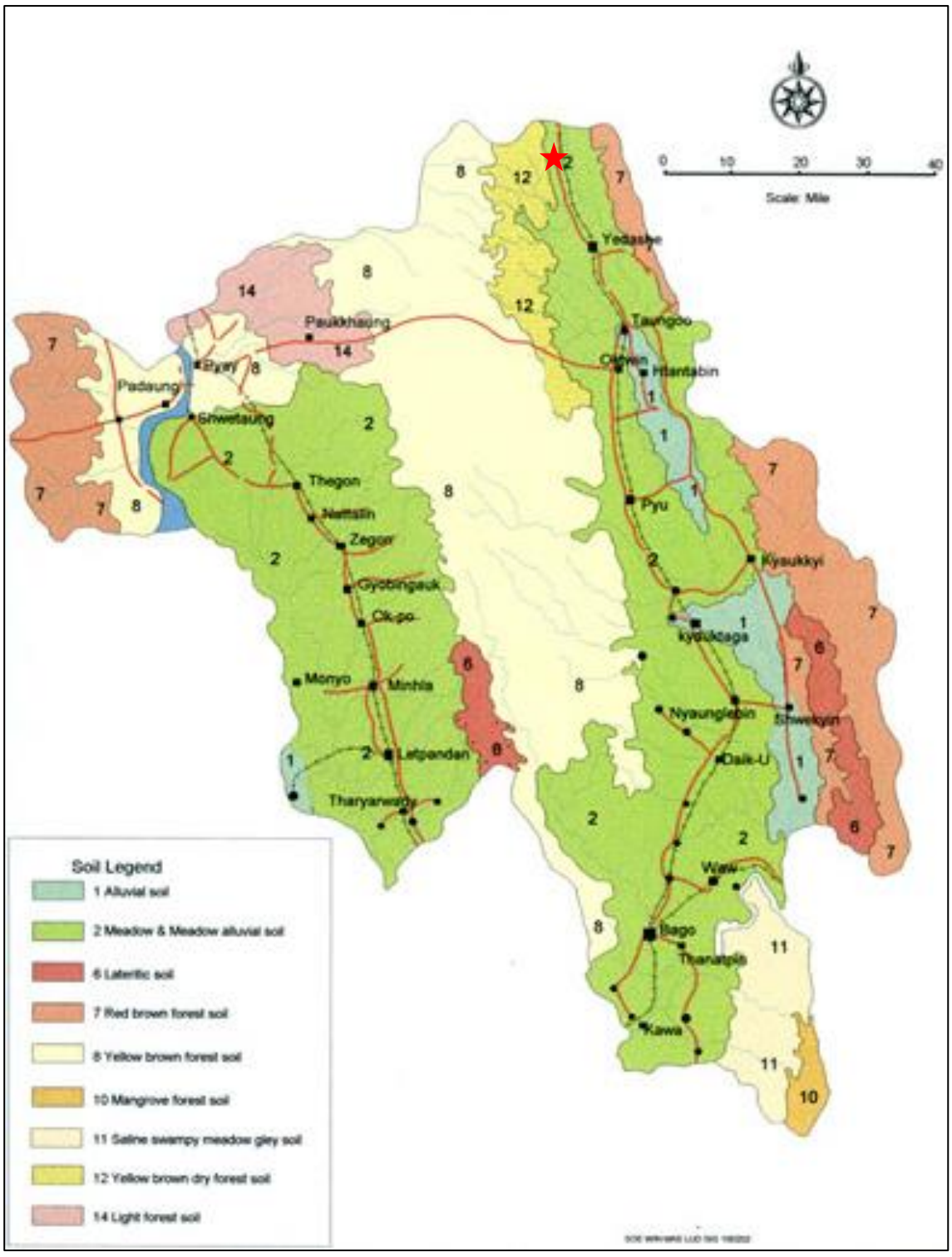
4.1.8 Soil Profile

According to the modern classification, there are 24 main soil types being recognized in the Union of Myanmar. The characteristic of these soils is determined upon (1) the physical and mineral composition of the parent material, (2) the relief (physical features), (3) the climate under which the soil material has been developed and, (4) the vegetation. Soil Classification has generally been made on the basis of the distribution of the important land resources for agriculture. The propose project is located Yedashe Township, Bago Region. The project area soil type is included in Meadow soils (Gleysol) and Meadow Alluvial Soil (Fluvic Gleysol).

The meadow soils or paddy soils are widely occuring in the different parts of Myanmar in river plains, delta and low coastal plains and valleys. All types of Meadow Soils have thick solum and are mostly having clavey texture. They are most suitable for paddy cultivation.

The Meadow soils in the mountainouse region with high rainfall and Meadow soils of the lower Myanmar have yellow brown colour with acid to neutral soil reaction, the meadow soils which occur near the river plains with occasional tidal floods are non-carbonate. They usually contain large amount of salts. They contain more plant nutrients than the Meadow soils of upper Myanmar. Regardless of the more content of iron, the soils can be utilized for rice and vegetables.

Meadow Alluvial soils (Fluvic Gleysol) can be found in the flood plains. They have the texture of silty clay loam and they can be utilized for groundnut, sesame, sunflower, jute, sugarcane and vegetables in addition to rice cultivation.



★ Project Area

(Source: Soil Types and characteristic of Myanmar, Land Use Divison, Ministry of Agriculture and Irrigation)

Figure 4.10: Bago soil map

4.1.9 Hydrology

Yedashe Township has lots of numeral creeks/rivers and most are flow from north to south. The most prominent river is Sittaung river and it is flows from north to south in the eastern part of the township.

(Refer: Shwe Pyi Thar Township profile 2020, General Administrative Department Information)

4.1.10 Biodiversity Conservation Area, Protected Area and Historical Places

There is no Biodiversity Conservation Area, Protected Area and Historical Places in Shwe Pyi Thar Township.

4.2 Existing Environmental Baseline Condition

Existing environmental baseline condition include 1) soil quality, 2) water quality, 3) air quality, 4) noise quality 5) biological assessment near the project area. In September 2023, NeoTech Myanmar environmental study team conducted a field study to find out the existing environmental baseline condition in the project area.

4.2.1 Soil quality

The principal objective of Soil Quality Monitoring program was to obtain quantitative baseline data for the area affected by the Proposed Project. Soil sampling surveys involve analysis of samples collected from a particular soil horizon then sieved to retain a suitable size fraction. Many surveys have used B horizon samples to take advantage of the abundance of clays and iron oxides which scavenge many indicator elements.

Soil can contain four basic ingredients:

1. Residual minerals or rock fragments,
2. Secondary minerals formed during weathering,
3. Soluble material (either in solution or temporarily precipitated by saturated groundwater), and
4. Organic material.

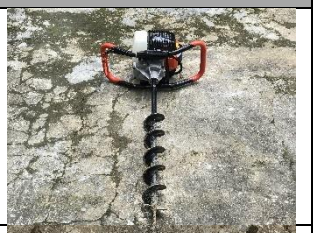
Brief description of soil sample locations is shown in following Table.

Table 4.3: Soil Sample Location

Name	Collected Date	Latitude	Longitude	Location
Soil sample	21.9.2023	19°11'54.63"	96°21'4.28"E	Infront of factory

Using materials to collect soil samples are shown in below table.

Table 4.4: Using Material for soil survey

No.	Type	Description	Remark
1	Earth Auger	To digging the surface soil	
2	Sample bag	To add soil sample	
3	Marker pen	To label about collected sample	
4	GPS Tracker	To record location points	

Soil sample locations map is shown in following Figure.

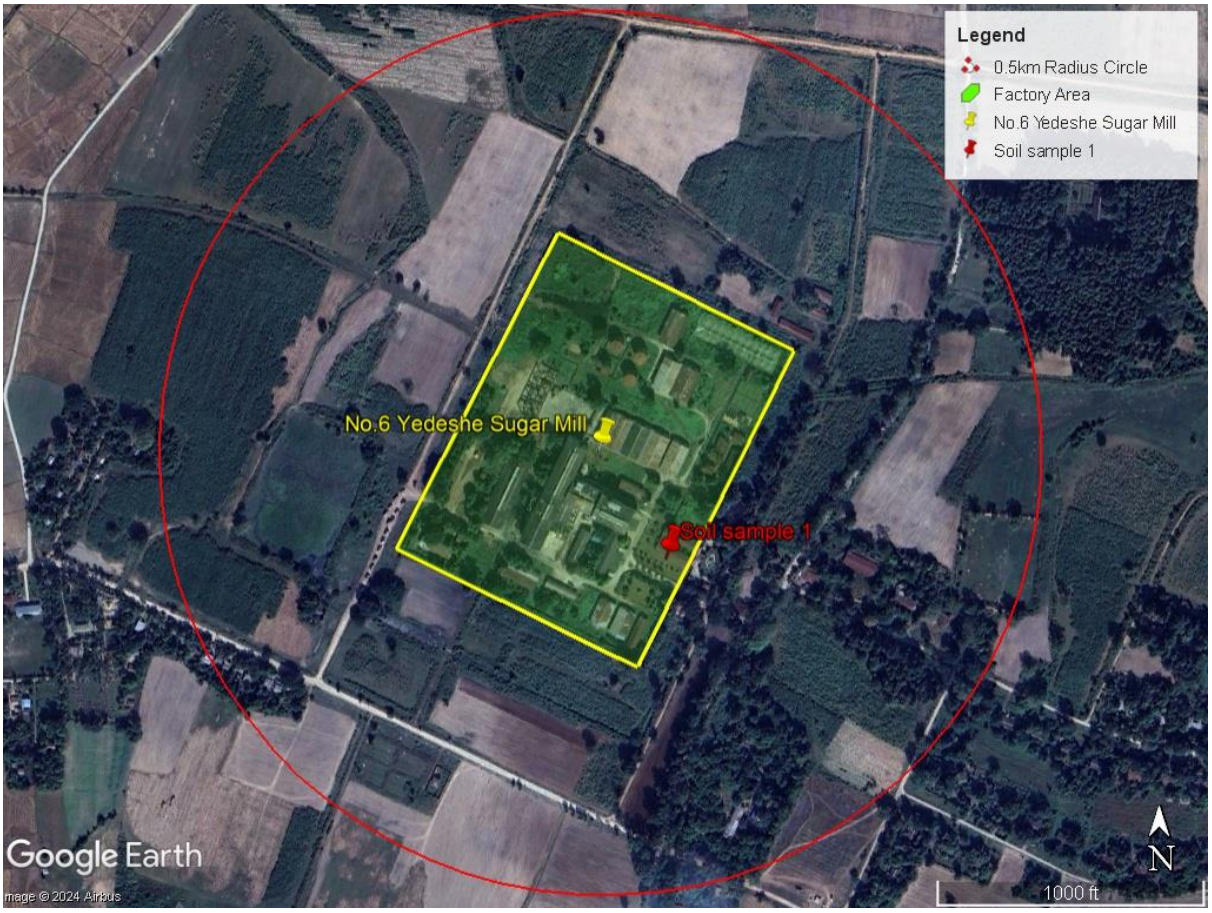


Figure 4.11: Soil Sample Location (19°11'54.63", 96°21'4.28"E)

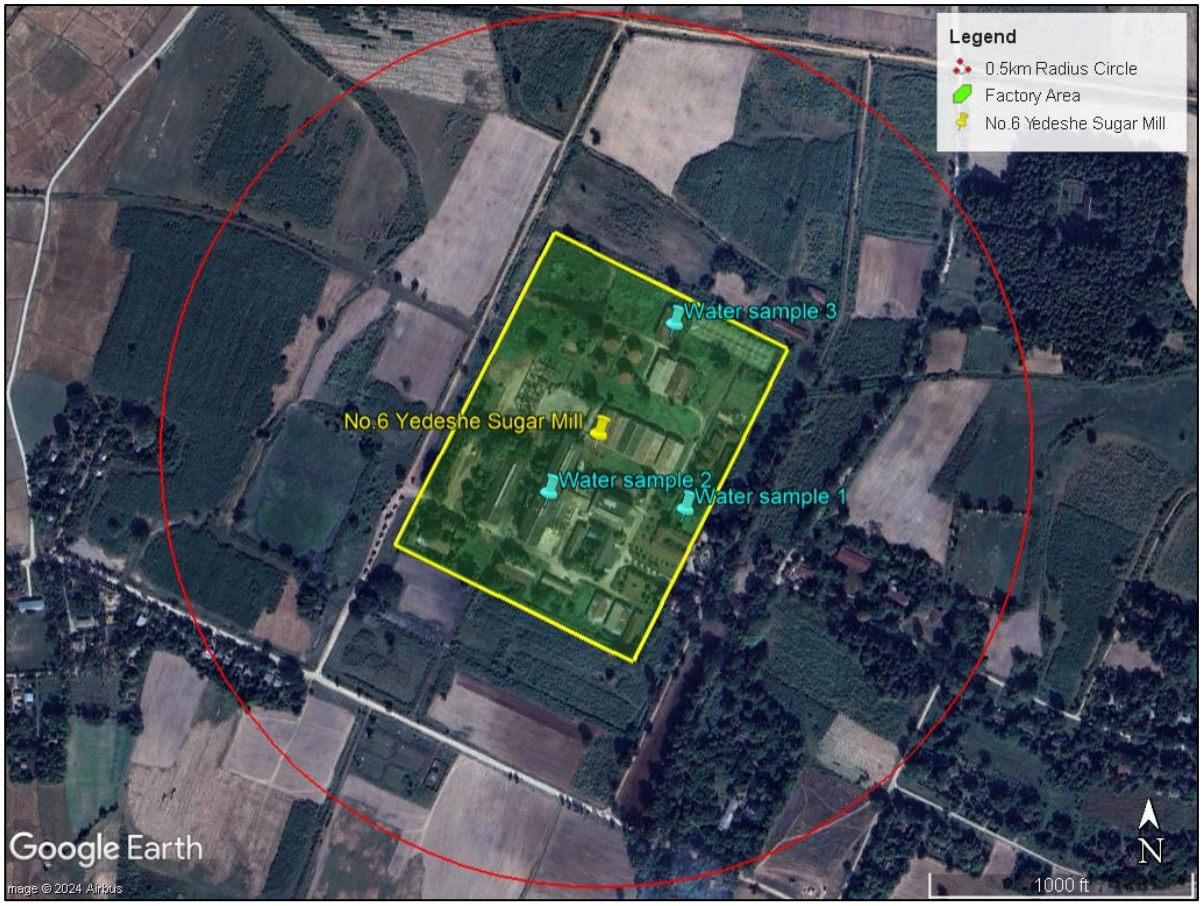
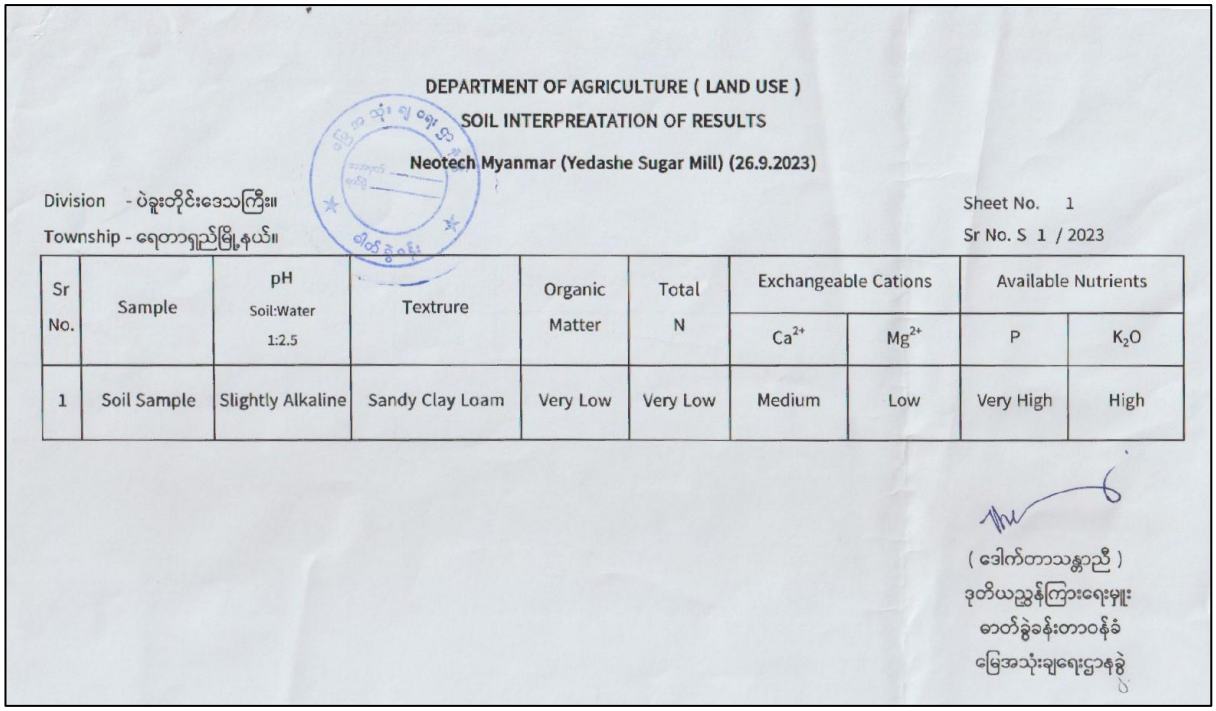


Figure 4.12: Soil Sampling

In field survey, one soil sample was collected at front of the factory building for analysis. Locality of the soil sample was taken by GPS. Soil sample was collected from B horizon of soil layers. The earth auger was used for the collection of sample and organic matter was avoided. All collected samples were labeled and then sent to the laboratory of Department of Agriculture (Land Use Division), Ministry of Agriculture and Irrigation. Soil analytical and interpretation results are shown in following figures.



DEPARTMENT OF AGRICULTURE (LAND USE)

SOIL INTERPREATATION OF RESULTS

Neotech Myanmar (Yedashe Sugar Mill) (26.9.2023)

Division - ပဲခူးတိုင်းဒေသကြီး။ Sheet No. 1

Township - ရေတာရွာမြို့နယ်။ Sr No. S 1 / 2023

Sr No.	Sample	pH Soil:Water 1:2.5	Textrure	Organic Matter	Total N	Exchangeable Cations		Available Nutrients	
						Ca^{2+}	Mg^{2+}	P	K_2O
1	Soil Sample	Slightly Alkaline	Sandy Clay Loam	Very Low	Very Low	Medium	Low	Very High	High

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ဓာတ်ခွဲခန်းတာဝန်ခံ
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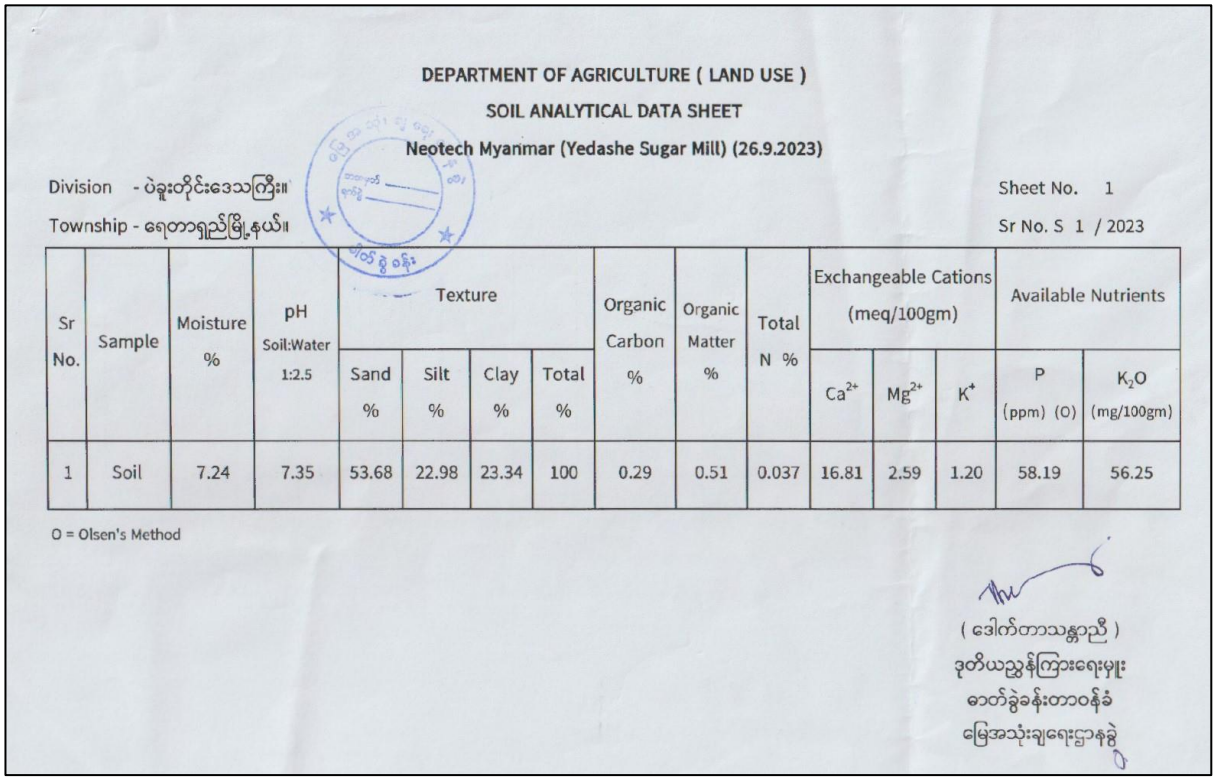

DEPARTMENT OF AGRICULTURE (LAND USE)

SOIL ANALYTICAL DATA SHEET

Neotech Myanmar (Yedashe Sugar Mill) (26.9.2023)

Division - ပဲခူးတိုင်းဒေသကြီး။ Sheet No. 1

Township - ရေတာရွာမြို့နယ်။ Sr No. S 1 / 2023

Sr No.	Sample	Moisture %	pH Soil:Water 1:2.5	Texture				Organic Carbon %	Organic Matter %	Total N %	Exchangeable Cations (meq/100gm)			Available Nutrients	
				Sand %	Silt %	Clay %	Total %				Ca^{2+}	Mg^{2+}	K^{+}	P (ppm) (O)	K_2O (mg/100gm)
1	Soil	7.24	7.35	53.68	22.98	23.34	100	0.29	0.51	0.037	16.81	2.59	1.20	58.19	56.25

O = Olsen's Method

(ဒေါက်တာသန္တာညီ)
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ဓာတ်ခွဲခန်းတာဝန်ခံ
မြေအသုံးချရေးဌာနခွဲ

Figure 4.13: Analytical and interpretation results of the soil sample

4.2.2 Water Quality

The principal objective of water quality monitoring program was to obtain quantitative baseline data for the area affected by the project activity, and impacts to environment. Analysis methods of the water parameters are shown in below table.

Table 4.5: Water Analysis methods

Parameter	Analysis Method
pH	Instrumental Analysis
Colour (True)	APHA Platin u m Cobalt Unit
Turbidity	Instrumental Analysis
Conductivity	Instrumental Analysis
Total Hardness	EDTA Titrimetric Method
Calcium Hardness	EDTA Titrimetric Method
Magnesium Hardness	EDTA Titrimetric Method
Total Alkalinity	Titration Method
Phenolphthalein Alkalinity	Titration Method
Carbonate ($CaCO_3$)	Calculation of Alkalinity Relationships
Bicarbonate (HCO_3)	Calculation of Alkalinity Relationships
Iron	Phenanthroline Method
Chloride (as Cl)	Argentometric Method
Sodium Chloride (as NaCl)	Argentometric Method
Sulphate (as SO_4)	4500-504 E. Turbidimetric Method
Total Solids	Calculation Method
Total Suspended solids	Photometric Method
Total dissolved solids	Instrumental Analysis
Temperature °C	Laboratory and Field Methods

Figure 4.14: Water Sample Location

Brief descriptions of water surveys are shown in below Tables.

Table 4.6: Water sample brief description

Sample No.	Water sample 1	Water sample 2	Water sample 3
Type of water	Ground water	Waste water	Waste water
Collected Date	21.9.2023	21.9.2023	21.9.2023
Collected Time	11:00am	11:15am	1:00pm
Examination Period	27.9.2023 to 2.10.2023	27.9.2023 to 2.10.2023	27.9.2023 to 2.10.2023
Location	19°11'55.79"N, 96°21'5.05"E	19°11'56.40"N, 96°20'59.69"E	19°12'2.67"N, 96°21'4.63"E

Using materials to collect water samples are shown in following table.

Table 4.7: Using material for water survey

No.	Type	Description	Remark
1	Water bottle	Water container	
2	Marker pen	To label about collected sample	
3	GPS Tracker	To record location points	

Collected water samples are shown in below figures.

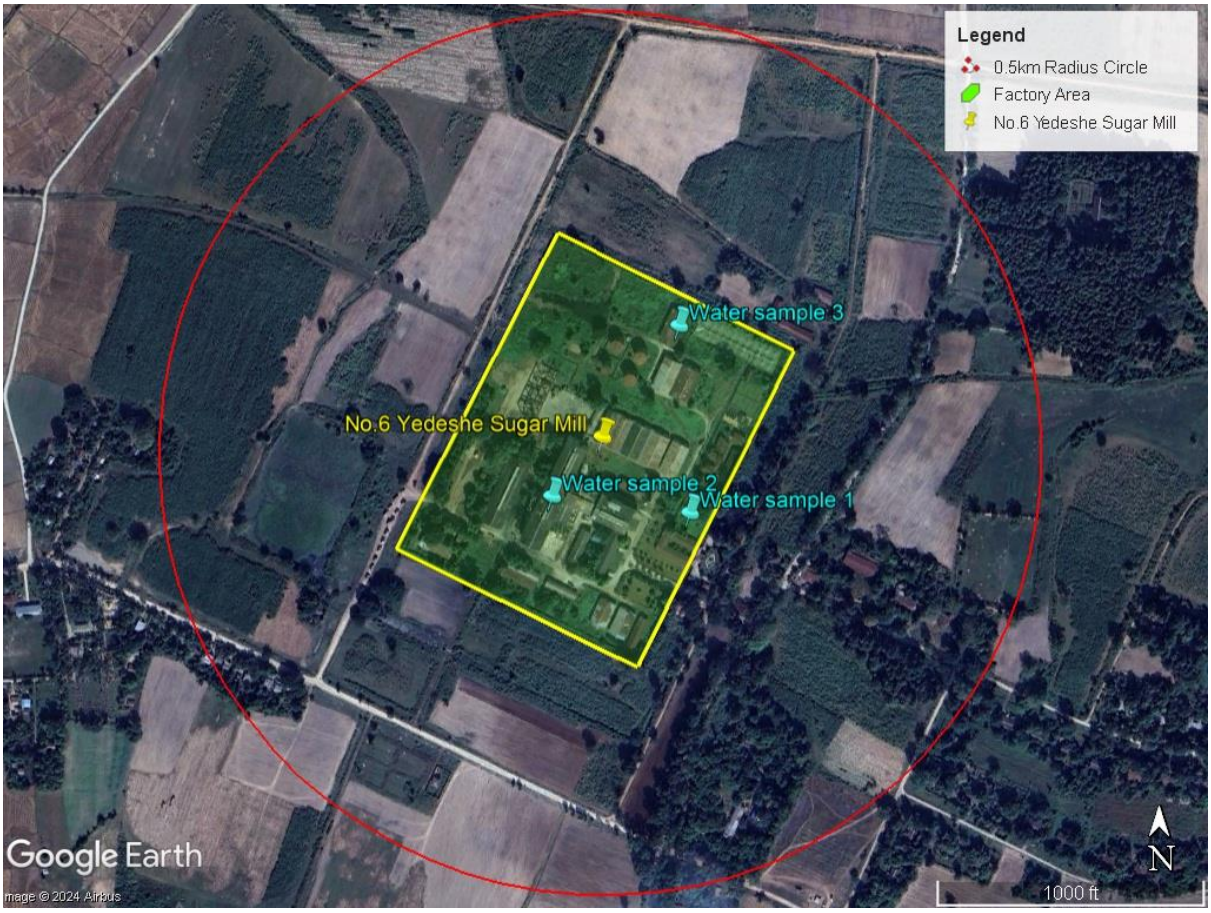

Figure 4.15: Water samples

The monitoring program outlined above began recording data in 21 September 2023. Water samples were collected from four sampling stations (1 ground water sample and 2 waste water sample) by using **Grab Sampling Method**. The steps of Grab Sampling Method are as follow;

- A garb sample is a discrete sample which is collected at a specific location at a certain point in time.
- Rinse the sampling vessel with water on site 3-4 times.
- Care must be taken to avoid contaminating water to be sampled during rinsing.
- Submerge the sampling vessel gently, fill it with the water sample and close it tightly.
- Location of each sampling station was recorded by GPS and photographed.

All collected samples were labelled and sent to the laboratory. The ground water quality results compared with the WHO Drinking Water Guideline are as follows.

Table 4.8: Ground water results compared with WHO Guideline 2011

Parameter	Water sample 1	WHO Drinking Water Guideline	Unit
	Ground water		
pH	7.1	6.5-8.5	
Colour (True)	40	15	TCU
Turbidity	58	5	NTU
Conductivity	120	-	Micro S/cm
Total Hardness	22	500	mg/l as $CaCO_3$
Calcium Hardness	16	-	mg/l as $CaCO_3$
Magnesium Hardness	6	-	mg/l as $CaCO_3$
Total Alkalinity	60	-	mg/l as $CaCO_3$
Phenolphthalein Alkalinity	Nil	-	mg/l as $CaCO_3$
Carbonate ($CaCO_3$)	Nil	-	mg/l as $CaCO_3$
Bicarbonate (HCO_3)	60	-	mg/l as $CaCO_3$
Iron	0.92	0.3	mg/l
Chloride (as Cl)	3	250	mg/l
Sodium Chloride (as NaCl)	5	-	mg/l
Sulphate (as SO_4)	10	500	mg/l
Total Solids	128	1500	mg/l
Total Suspended solids	68	-	mg/l
Total dissolved solids	60	1000	mg/l

According to the results, the parameters pH, total hardness, chloride, sulphate, total solids, and total dissolved solids are meet with WHO Drinking water guideline. Some parameters such as Color, turbidity and iron are a little higher than the WHO drinking water guidelines because of the ground water nature of the study area . However, this ground water is only used as domestic water and do not used for drinking water.

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Issue Date - 01-12-2012
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WATER QUALITY TEST RESULTS FORM

Client	Neo Tech Myanmar (Yedashe Sugar Mill)
Nature of Water	Ground Water
Location	Yedashe
Date and Time of collection	21.9.2023
Date and Time of arrival at Laboratory	26.9.2023
Date and Time of commencing examination	27.9.2023
Date and Time of completing	29.9.2023

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	7.1		6.5 - 8.5
Colour (True)	40	TCU	15 TCU
Turbidity	58	NTU	5 NTU
Conductivity	120	micro S/cm	
Total Hardness	22	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	16	mg/l as $CaCO_3$	
Magnesium Hardness	6	mg/l as $CaCO_3$	
Total Alkalinity	60	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	60	mg/l as $CaCO_3$	
Iron	0.92	mg/l	0.3 mg/l
Chloride (as CL)	3	mg/l	250 mg/l
Sodium Chloride (as NaCL)	5	mg/l	
Sulphate (as SO_4)	10	mg/l	500 mg/l
Total Solids	128	mg/l	1500 mg/l
Total Suspended Solids	68	mg/l	
Total Dissolved Solids	60	mg/l	1000 mg/l
Manganese		mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

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

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Figure 4.16: Ground Water Sample

The two waste water samples were also sent to ISO Laboratory. According to the results, the parameters pH, suspended solid, and COD are meet with National Environmental Qualities (Emission) Guideline 2015; 2.3.1.7 Sugar Manufacturing.

Table 4.9: Waste water results compared with NEQEG General Guideline 2015

Parameter	Water sample 2	Water sample 3	NEQEG 2016 Sugar Manufacturing Guidelines Limit	Unit
	Waste water	Waste water		
BOD	14	22	50	mg/l
COD	32	64	250	mg/l
Dissolved Oxygen	7.0	6.8	-	mg/l
pH	7.4	7.3	6-9	S. U
TSS	22	32	50	mg/l
TDS	76	36	-	mg/l
Temperature	25	25	-	°C

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WATER QUALITY TEST RESULTS FORM

Client: Neo Tech Myanmar (Yedashe Sugar Mill)
Nature of Water: Wastewater (Inlet) - 1
Location: Yedashe
Date and Time of collection: 21.9.2023
Date and Time of arrival at Laboratory: 26.9.2023
Date and Time of commencing examination: 27.9.2023
Date and Time of completing: 2.10.2023

Results of Water Analysis

pH	7.4		
Colour (True)		TCU	
Turbidity		NTU	
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron		mg/l	
Chloride (as CL)		mg/l	
Sodium Chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	
Total Solids		mg/l	
Total Suspended Solids	22	mg/l	
Total Dissolved Solids	76	mg/l	
Manganese		mg/l	
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

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

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WATER QUALITY TEST RESULTS FORM

Client: Neo Tech Myanmar (Yedashe Sugar Mill)
Nature of Water: Wastewater (Inlet) - 1
Location: Yedashe
Date and Time of collection: 21.9.2023
Date and Time of arrival at Laboratory: 26.9.2023
Date and Time of commencing examination: 27.9.2023
Date and Time of completing: 2.10.2023

Results of Water Analysis

Temperature (°C)	25.0	°C	
Fluoride (F)		mg/l	
Lead (as Pb)		mg/l	
Arsenic (As)		mg/l	
Nitrate ($N.NO_3$)		mg/l	
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)	7.0	mg/l	
Chemical Oxygen Demand (COD)	32	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	14	mg/l	
Cyanide (CN)		mg/l	
Zinc (Zn)		mg/l	
Copper (Cu)		mg/l	
Silica (SiO_2)		mg/l	

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Figure 4.17: Result of water sample 2 (Wastewater)

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WATER QUALITY TEST RESULTS FORM

Client	Neo Tech Myanmar (Yedashe Sugar Mill)
Nature of Water	Wastewater (Inlet) - 2
Location	Yedashe
Date and Time of collection	21.9.2023
Date and Time of arrival at Laboratory	26.9.2023
Date and Time of commencing examination	27.9.2023
Date and Time of completing	2.10.2023

Results of Water Analysis

pH	7.3		
Colour (True)		TCU	
Turbidity		NTU	
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron		mg/l	
Chloride (as CL)		mg/l	
Sodium Chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	
Total Solids		mg/l	
Total Suspended Solids	32	mg/l	
Total Dissolved Solids	36	mg/l	
Manganese		mg/l	
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

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WATER QUALITY TEST RESULTS FORM

Client	Neo Tech Myanmar (Yedashe Sugar Mill)
Nature of Water	Wastewater (Inlet) - 2
Location	Yedashe
Date and Time of collection	21.9.2023
Date and Time of arrival at Laboratory	26.9.2023
Date and Time of commencing examination	27.9.2023
Date and Time of completing	2.10.2023

Results of Water Analysis

Temperature (°C)	25.0	°C	
Fluoride (F)		mg/l	
Lead (as Pb)		mg/l	
Arsenic (As)		mg/l	
Nitrate ($N.NO_3$)		mg/l	
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)	6.8	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	22	mg/l	
Cyanide (CN)		mg/l	
Zinc (Zn)		mg/l	
Copper (Cu)		mg/l	
Silica (SiO_2)		mg/l	

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Figure 4.18: Result of water sample 3 (Wastewater)

4.2.3 Air Quality

The Objectives of air quality monitoring are; to monitor the existing baseline air quality status of the proposed project area and to determine the potential air impact likely affected by proposed project. The findings present the baseline air quality measurements which were recorded per minute simultaneously in terms of 24-hours average.

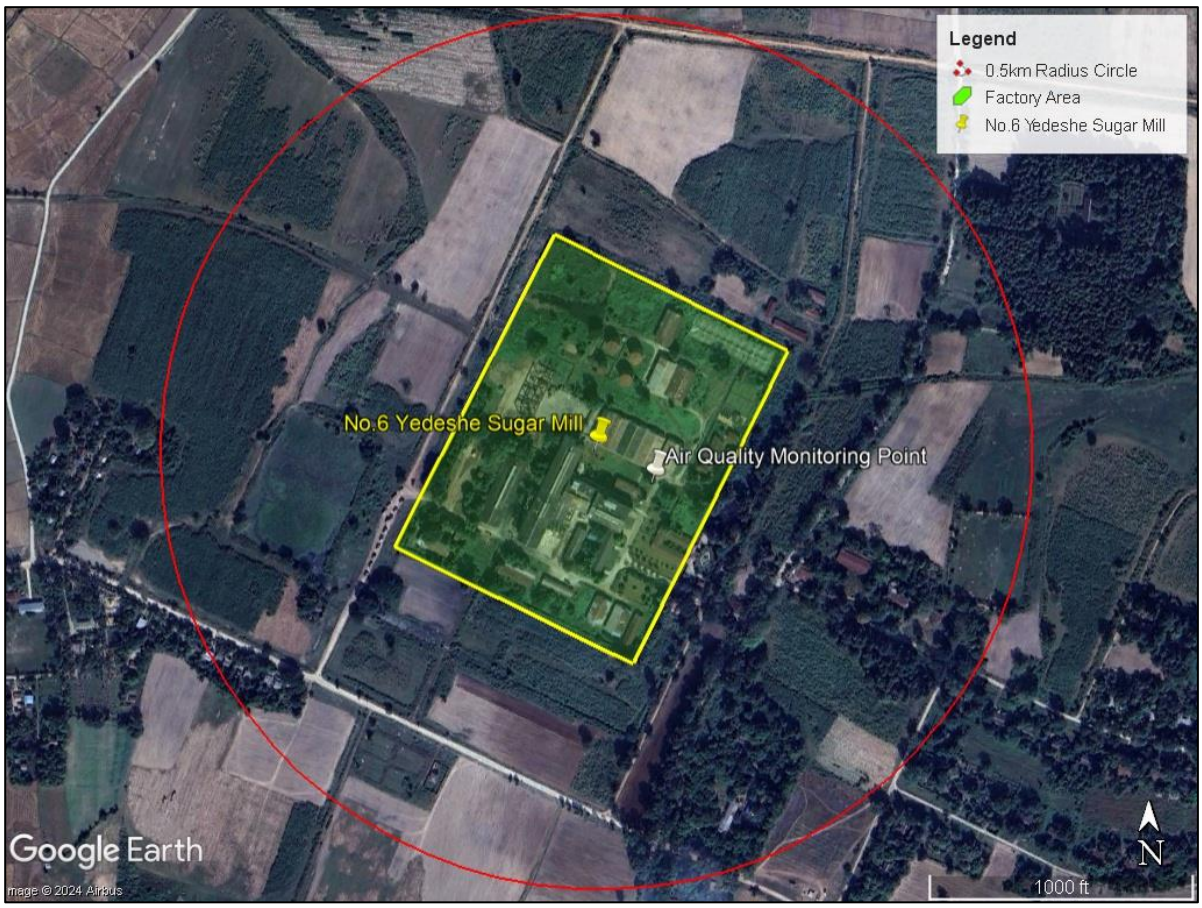


Figure 4.19: Air Quality Monitoring Location (19°11'57.36"N, 96°21'3.89"E)

Brief description of air quality monitoring program is shown in below.

Table 4.10: Air Quality Monitoring Program

Subject	Air Quality Monitoring Program
Parameter	O_3, CO, SO_2, NO_2, Relative Humidity $PM_{2.5}$, PM_{10}, VOC, Temperature
Date	21. 9. 2023 to 22. 9. 2023

Period	24 hours
Location Point	Latitude: 19°11'57.36"N, Longitude: 96°21'3.89"E

Using materials for ambient air quality monitoring are shown in below table.

Table 4.11: Using materials for ambient air quality monitoring

No.	Type	Parameter & Range	Remark
1	EPAS Haz-scanner -Direct reading -Simultaneously monitor PM and toxic gases	**Carbon monoxide** Range: 0 to 10,000 ppb **Nitrogen Dioxide** Range: 0 to 5,000 ppb **Sulfur Dioxide** Range: 0 to 5,000 ppb **PM_{10}** Range: 0 to 5,000 ug/m³	
2	Ozone meter -Electrochemical sensor	**Detection data range:** (0.000-5.000ppm)	
3	Air quality multimeter	**Dust / $PM_{2.5}$:** Range: 0-500 ug/m³ Accuracy: ±10% Sampling cycle: 1 second **VOC:** Range: 0-10 ppm Accuracy: ±10% Sampling cycle: 1 second **Temperature:** Range: -10-80 ℃ Accuracy: ±0.3 ℃ Sampling cycle: 2 second **Humidity:**	

		Range: 0-100 RH% Accuracy: ±3 RH% Sampling cycle: 2 second	
4	GPS Tracker	To record location points	

Figure 4.20: Ambient Air Quality Monitoring (19°11'57.36"N, 96°21'3.89"E)

National Environmental Quality (Emission) Guideline designed as limits for protection of public health, welfare and environment were used to compare with the results of the baseline survey and to determine the existing baseline status of air quality at the locations within the proposed project area. Compared Ambient air quality results with National Environmental Quality (Emission) Guideline are as follow;

Table 4.12: Air Quality Monitoring Result

Parameter	NEQEG General Air Emission Standard		Ambient Air Quality Results No.6 Sugar Mill	
	Averaging Period	Value	Averaging Period	Value
Ozone	8-hours	100 µg/m^3	24 hours	0.000 µg/m^3
Carbon monoxide	-	-	24 hours	0 ppb
Nitrogen dioxide	1 hour	200 µg/m^3	24 hours	112 µg/m^3
Sulphur dioxide	24 hours	20 µg/m^3	24 hours	13 µg/m^3
VOC	-	-	24 hours	0.12 ppm
PM_{10}	24 hours	50 µg/m^3	24 hours	45 µg/m^3
$PM_{2.5}$	24 hours	25 µg/m^3	24 hours	26.67 µg/m^3
Relative Humidity	-	-	24 hours	59.16 %
Temperature	-	-	8 hours	35.79 °C

According to the above table, the results of the baseline survey indicate that the 24-hours average levels of O_3, NO_2, SO_2, and PM_{10} meet National Environmental Quality (Emission) Guidelines: General Air Emission Standard.

4.2.4 Noise Level

Ambient noise levels are associated with Project Activity and natural elements i.e., wind, rains, and thunderstorms. Measurement of environmental noise level was conducted by Digital Noise Level Meter in 21 September 2023.

The noise level measured in the perimeter of the project area can provide the indication of the existing noise level of the area. There are no significant sources of vibration in the project area. Noise level measurement location point is shown in following Figure.

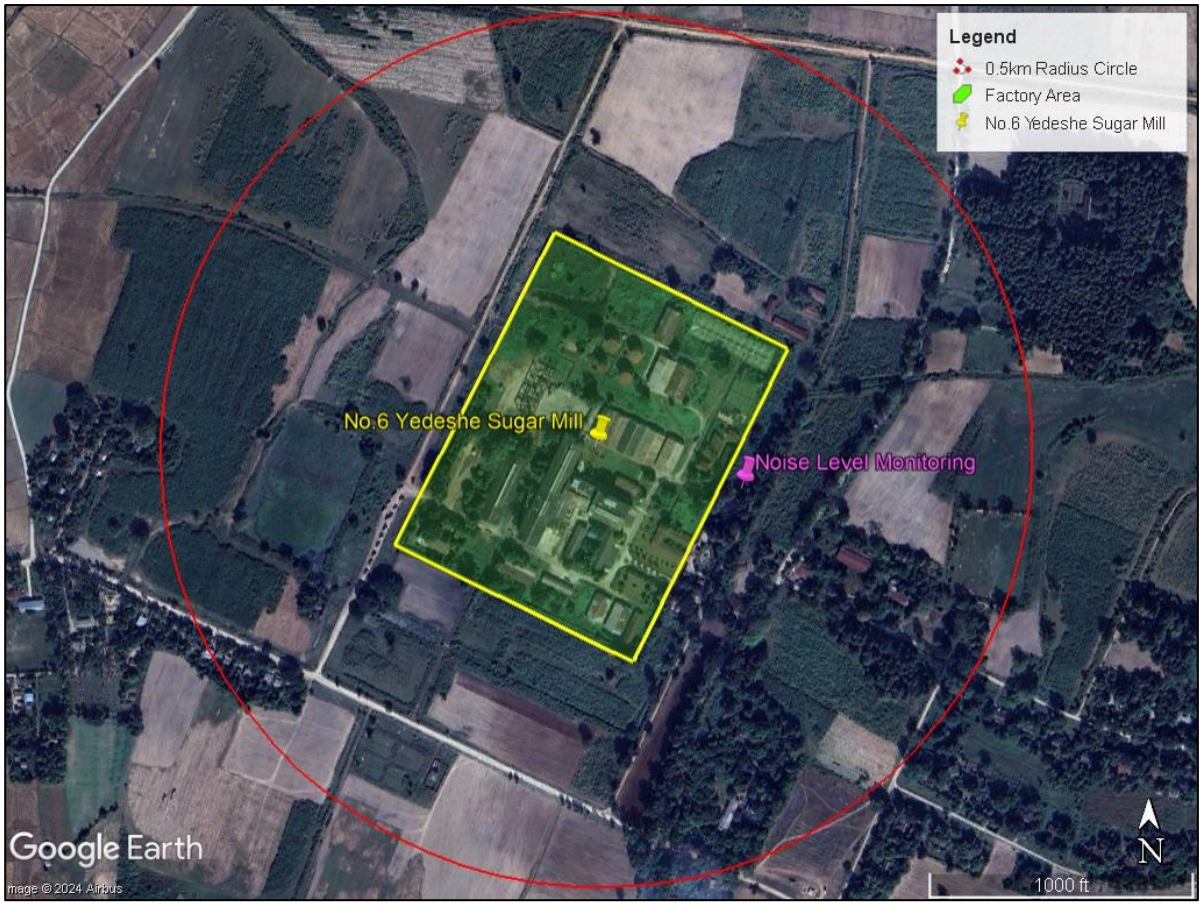


Figure 4.21: Noise Level Measurement Location

Table 4.13: Ambient Noise Level Measuring

Date	Period	Subject	Latitude	Longitude	Location
21.9.2023 to 22.9.2023	24 hours	Noise Level Measurement	19°11'57.06"N	96°21'7.42"E	Infront of factory boundary

Using materials to measure noise level are shown in below table.

Table 4.14: Using materials for noise level measurement

No.	Type	Description	Remark
1	Digital Noise Meter	To measure ambient noise level	
2	GPS Tracker	To record location points	

Noise level in the project area is lower than NEQEG standards. Below Table shows ambient noise level at the project area compare with National Environmental Quality (Emission) Guidelines; Noise Emission Standards.

Table 4.15: Ambient Noise Level Result

Date	Time	Average Result of Project Area	EQEG Standard		Weight	Day/ Night
			Daytime	Nighttime		
21.9.2023	09:05:30-10:05:00	50.4	55	45	A	Day
	10:05:30-11:05:00	44.7	55	45	A	Day
	11:05:30-12:05:00	45.5	55	45	A	Day
	12:05:00-13:05:00	53.9	55	45	A	Day
	13:05:30-14:05:00	46.8	55	45	A	Day
	14:05:30-15:05:00	48.4	55	45	A	Day
	15:05:30-16:05:00	46.1	55	45	A	Day
	16:05:30-17:05:00	43.4	55	45	A	Day
	17:05:30-18:05:00	41.8	55	45	A	Day
	18:05:30-19:05:00	42.7	55	45	A	Day
	19:05:30-20:05:00	43.2	55	45	A	Day
	20:05:30-21:05:00	42.4	55	45	A	Day
	21:05:30-22:05:00	44.9	55	45	A	Day
	22:05:30-23:05:00	41.1	55	45	A	Night

	23:05:30-00:05:00	45.4	55	45	A	Night
22.9.2023	00:05:00-01:05:00	45.2	55	45	A	Night
	01:05:30-02:05:00	49.6	55	45	A	Night
	02:05:30-03:05:00	46.4	55	45	A	Night
	03:05:30-04:05:00	41.5	55	45	A	Night
	04:05:30-05:05:00	44.9	55	45	A	Night
	05:05:30-06:05:00	45.4	55	45	A	Night
	06:05:30-07:05:00	42.3	55	45	A	Night
	07:05:30-08:05:00	44.2	55	45	A	Day
	08:05:30-09:05:00	43.3	55	45	A	Day

Note: Noise level results are in EQEG noise emission standard

4.2.5 Biological Assessment

The proposed project is located in Yedashe Township. According to the General Administration Department Data, fourth-third of the township area is cover with forest. There are no environmental conservation activities during 2019 in the township. Natural vegetations of the township are Kyun, Pyin-ka-toe, Thit-yar, Thin-win, Ya-ma-nay and verities of bamboo species, etc. Wildlife such as are elephant, tiger, leopard, hog, bull, wild buffalo, elk, deer, gazelle, wild cat and monkeys can be found in the township.

During the site visit, the different biodiversity features, habitat and landscape units present at the site were identified. Walk-through-surveys were conducted across the site and all flora species observed were recorded.

Table 4.16: Recorded Flora Species on Field Survey

Sr.	Scientific Name	Myanmar Name	Family	Habit	IUCN Status
1	*Acacia auriculiformis*	Malaysia- Padauk	Papilionaceae	T	LC
2	*Alpinia nutans*	-	Zingiberaceae	H	-
3	*Bambusa binghami*	Waa	Graminaceae	ST	-
4	*Cocos nucifera*	Ohn	Palmaceae	T	LC

5	*Ficus glomerata*	Tha-phan	Moraceae	T	-
6	*Ixora collinear*	Pona-yate	Rubiaceae	S	-
7	*Jasminum arborescens*	Sa-pel	Oleaceae	S	-
8	*Laucaena glauca*	Baw-sa-gaing	Mimosaceae	S	-
9	*Mangifera indica L.*	Thayet	Anacardiaceae	T	DD
10	*Mimosa pudica*	Hti-kayone	Fabaceae	H	LC
11	*Moringa oleifera*	Dan-ta-lon	Moringaceae	ST	LC
12	*Psidium guajava*	Malakar	Myrtaceae	ST	LC
13	*Sabal bermudana*	-	Arecaceae	S	LC
14	*Tamarindus Indica*	Man-gyi	Fabaceae	T	LC
15	*Tectona grandis*	Kyun	Verbenaceae	T	
16	*Zizyphus mauritiana*	Zee	Rhamnaceae	T	LC
DD=Data deficient, LC= Least-concern					

Figure 4.22: Some Plant Species Near the Project Area

4.3 Socio-Eco Component

Yedashe township was composed with 4 towns, 17 quarters, 48 village tracts and 295 villages. The township is an economically important township and most of people living in the township are mainly work in agriculture. Rice is the main product of Yedashe township.

4.3.1 Economic Development and Infrastructure

There is one industrial zone called Tha Ga Ya in the township. Other small industries and workshops are scattering in the township. Below table show economic development and infrastructure of Yedashe Township.

Table 4.17: Economic development and infrastructure of Yedashe Township

No.	Type	Quantity
1	River water project	1
2	Drinking water project	22
3	Electricity project	1
4	Home craft industry	7
5	Commercial forestry	23
6	Private petroleum station	14

7	Guest house	11
8	Transport service	10
9	Market	5
10	Government bank	2
11	Private bank	3
12	Stores and shops	457
13	Print and studio	45
14	Media	2

4.3.2 Land Use

Township area of Yedashe is 1011.11 square miles. The existing land use pattern of Yedashe township according to General Administration Department data info (September 2020) is presented in below Table.

Table 4.18: Land Use

Land use	Area in Acre
Agricultural land	101551
Vacant land	14
Pasture land	14099
Industrial land	-
Urban	994
Rural	12296
Other Land	435
Reserved Forest/Park	475170
Wild Forest	249
Wild Land	4743

Not agricultural area	37554
Total	**647105**

4.3.3 Population Profiles

The population of Bago Region is above 4.8 million. People living in Yedashe Township is total 221139 (major race Bama). Below Table shows the population profiles of Yedashe Township.

Table 4.19: Population Profiles

Total Population		221,139
Population males		107,521 (48.6%)
Population females		113,618 (51.4%)
Sex ratio (males per 100 females)		94
Percentage of urban population		32.0%
Township Area (per square miles)		1,011
Population density (per square miles)		218.7 persons
Number of private households		49,905
Mean household size		4.4 persons
Percentage of population by age group	**Under 18 years**	32.23%
	Over 18years	67.77%

(Ref: Sept 2022 Yedashe Township report, General Administration Department)

4.3.4 Religion

Above 97 percent of the people in the township are Buddhists. There are 3 Pagoda, 317 Monastery, 14 Nunnery, 4 Church, 4 Mosque, 1 Hindu Temple and 1 Chinese Temples in Yedashe Township. There is no historical buildings and places within the township area. Distinct pagoda and monastery are show in below Table.

Table 4.20: Distinct pagoda and monastery in Yedashe Township

No.	Name of Pagoda/Monastery	Location
1	Dat Taw Pagoda	1 Quarter, Yedashe
2	Mal Dat Kal Pagoda	Aung Chan Thar Village
3	Choan Inn Monastery	Choan Inn Village

(Ref: Sept 2022 Yedashe Township report, General Administration Department)

4.3.5 Occupation and Income

Average per capita income is estimated about 1746717 kyats in 2019-2020 according to Sept 2022 Yedashe Township report, General Administration Department. The unemployment rate in the township is 4.01% and below Table shows number of employed people by occupation.

Table 4.21: Number of employed people by occupation

No.	Occupation	No. of employed people
1	Government staff	4965
2	Service worker	35
3	Agricultural worker	27392
4	Livestock worker	5380
5	Sales worker	93816
6	Craft & industrial worker	850
7	Fishery worker	290
8	Casual worker	1280
9	Other	6015

4.3.6 Education

There are no college or university in Yedashe Township. Matriculation pass rate in 2019-2022 was 26.54 and the literacy rate for age over 15 is 100%. The enrolment rate for school-age children was 100%. Basic educational schools in the Township area according to General Administration Department data info (Sept 2020) as in follow:

- Ten Basic Education High Schools
- Eight Basic Education Sub-High Schools
- Twenty-three Basic Educational Middle Schools
- Forty-nine Basic Educational Sub-Middle Schools
- One hundred and forty Basic Educational Post Primary School
- Twenty Basic Education Primary Schools
- One Nursery School
- Five Monasteries base schools

4.3.7 Health

There are 4 hospitals in Yedashe Township. A lot of rural health division are operated with good healthcare system within the Township. Brief description of Hospital located in the township is shown in below table.

Table 4.22: Hospitals of Yedashe Township

No.	Hospital Name	Location	Government/ Private	No. of Bedded
1	Yedashe Township Hospital	Yedashe	Government	25
2	Swar Hospital	Swar Town	Government	16
3	Myo Hla Hospital	Myo Hla Town	Government	16
4	Yay Ni Hospital	Yay Ni Town	Government	16

Common health disease usually happened in the township area is brief as below.

Table 4.23: Common health disease usually happened in Yedashe Township

Malaria		Diarrheal		Tuberculosis		Dysentery		Hepatitis	
Cause	Dead	Cause	Dead	Cause	Dead	Cause	Dead	Cause	Dead
6	-	1679	-	364	19	300	-	27	-

(Ref: Sept 2022 Yedashe Township report, General Administration Department)

5.0 SCREENING OF POTENTIAL ENVIRONMENTAL RISK AND MITIGATION MEASURES

Identification and assessment of potential Environmental Impacts including assessment and description of Adverse Impacts and Residual Impacts with presentation of the spatial and temporal characteristics of the impacts using maps, images, aerial photos and satellite images identification and assessment of potential Environmental Impacts including assessment and description of Adverse Impacts and Residual Impacts with presentation of the spatial and temporal characteristics of the impacts using maps, images, aerial photos and satellite images

5.1 Initial Environmental Examination Methodology

Screening of environmental impacts has been based on the impact magnitude (negligible/moderate/severe – in the order of increasing degree) and impact duration (temporary/permanent). The following Table 5.1 shows the screening of impacts; N/T represents the lowest impact while S/P represents the highest impact. Numerator represents the Degree of Impact and denominator represents the Duration of impact.

Table 5.1: SCREENING OF IMPACTS

Duration of Impact	Magnitude (Degree of Impact)		
	Negligible (N)	*Moderate (M)*	*Severe (S)*
Temporary (T)	N/T	M/T	S/T
Permanent (P)	N/P	M/P	S/P

The following section shows the potential environmental impacts and mitigation measures of all the components proposed for Delicious Food Limited.

5.1.1 Study Area of the Proposed Project

The study area of the project will cover the operation area within rented land area. The areas will be used to identify sensitive receptors in the assessment of impacts on physical resources, biological resources, human use values, and quality of life values. Examples of sensitive receptors are schools, temples, water resources, industrial areas, etc.

5.1.2 Data Collection

Data collected for this EMP include details of the proposed project environmental baseline conditions of the potentially affected areas. Data were obtained from primary and secondary sources.

Primary data sources include:

- Environmental quality baseline survey for surface water, groundwater quality, and soil survey conducted in 2023
- Environmental quality baseline survey for noise and air quality survey conducted in 2023;
- Focus Group interview meetings with staff in 2023

Secondary data sources came from internet and literature, relevant authorities, and previous reports conducted in and around the project area. The secondary data sources are cited throughout this report.

5.1.3 Public Consultation

The proposed project includes operating of within rented land area locating in Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). The public involvement for this EMP consisted of four parts: focus groups from officials of Union Government, Regional Government, key informant interviews, Factory staff, and representative of DFL.

5.2 Scope of Assessment

The EMP study for the proposed project has been done following the scope outlined. The EMP Method is organized with environmental data collection, conducting of potential environmental risk & impact assessment, considering mitigation measures for the calculated environmental risk, and planning and commitment of environmental management plan for the proposed project; DFL "Delicious Food Limited" enterprise and details is provided in Section5: Screening of Potential Environmental Risk Assessment and Mitigation Measures.

The Initial Environmental Examination for the proposed project has been carried out for potential impacts during the following stages of the project planning and implementation:

(v) **Location impacts.** Impacts associated with site selection, including impacts on environment and resettlement or livelihood related impacts on communities

(vi) **Design impacts.** Impacts arising from project design, including the technology used, scale of operations, discharge standards etc.

(vii) **Construction impacts.** Impacts result from upgrading/construction activities including site clearance, earthworks, civil works, etc.

(viii) **O&M impacts.** Impacts associated with the operation and maintenance of the infrastructure built in the proposed project; Delicious Food Limited.

5.2.1 Environmental Impacts and Mitigation: Location and Design

In many environmental assessments there are certain effects that, although they will occur during either the construction or operation stage, should be considered as impacts primarily of the location or design of the project, as they would not occur if an alternative location or design was chosen.

In the case of this project there are no impacts that can clearly be said to result from the design or location. This is because:

(i) The proposed project will be sited at the rented total land area 729.50 Acre (from landlord; No. 6 Sugar Mill; 729.50 Acre, Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). The landlords; No.6 Sugar Mill are cleared for the land ownership before by making suitable land grant (industrial land grant for industrial business usage) from relevant authority; land management committee, so there is no land acquisition involved.

(ii) The proposed project site within existing land is categorized as Industrial Land Area; the Relevant Authority, Ministry of Industry has officially granted for 60 years period.

(iii) The proposed project is developing within its capacity to operate Refined Sugar Production for local market which is currently in developing stage.

(iv) The infrastructure involved relatively construction of main building for factory & warehouse, and installation of facility will be conducted by qualified contractor and operation will be performed by competent staff and well-trained workers, so it is unlikely that there will be major environmental impacts;

(v) Any sensitive environmental receptors (surface waters) have been protected by detailed design and proper engineering of landlord. Proper operation and maintenance of the site will be critical to protecting the environment; therefore, training for staff is built into the project.

(vi) The project site is sufficiently elevated above water bodies to avoid flooding and impacts to groundwater.

(vii) The collected wastes throughout the business will be disposed at designated disposal site in accordance with standing instruction from Authority of Bago Region; YCDC, so the project will not have impacts on surrounding inhabitants.

(viii) There is no evidence of sensitive receptors occurring within 500 m of the site.

(ix) The proposed project will be generated by the employee (Local personnel totally estimated 207 Nos.) and expected in supporting significant benefits to add as part of the country GDP.

If new / different operations / activities arise, the potential environmental impacts should be assessed by the DFL. Accordingly, all proposed operations modifications should be referred to the DFL General Manager at the conceptual or design stage to ensure timely input.

5.2.1.1 Land Acquisition and Resettlement

There are no resettlement issues anticipated for the location of proposed project area; DFL land, Yedashe Township, Bago Region. The project of Refined Sugar Production is proposed on available private own reserved industrial land, Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar). Hence, permanent land acquisition is not envisaged.

5.2.2 Environmental Impacts and Mitigation: Construction/Installation

There will be physical changes in pre-operational phase at the site as a result from developing activities by the awarded contractor (such as building construction, facility installation and commissioning works, etc.), and this relatively some amount of quantity of construction waste will be produced with minor physical impacts on environment (such as air quality (dust), soil quality, topography, etc.) at the contractor work site. DFL ensures that awarded contractor is following in good waste management practices throughout construction period, even for short term activity, targeting to maintain zero environmental impact.

The adjacent and or within proposed project area does not define as special area for protecting biodiversity. There are no protected areas in the vicinity of this site and no special ecological interest; because the proposed factory area, is established as Industrial Zone , Yedashe Township, Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar) Region under national development purposes. Developing and Installation should therefore have no major ecological impacts.

5.2.3 Environmental Impacts and Mitigation: Operation & Maintenance

DFL is going to operate the proposed project; Refined Sugar Production; using International Standard Facility accordingly estimated after completion of development phase while maintaining good practices in Health, Safety, & Environmental Standard under Myanmar laws & regulations, and procedures & instructions.

DFL will be responsible for operating DFL facilities and necessary staff training and financial assistance will be given by the DFL. All management activity is complying with the Myanmar Rules & Regulation, Procedures & Standing Instructions. Clearly it is imperative that DFL maintains in proper working order in accordance with exciting law.

Daily waste produced from operating of normal operation is mainly general waste and utility wastewater. Waste management for the proposed project will be included in the environmental management plan; general solid waste will be disposed at TDC designated area and domestic waste water will be treated properly prior to dispose into drains location within DFL rented land area by Operation & Maintenance team.

General waste which may come out from the operation is cut pieces of wool, packing paper, etc., only and it can be controlled by using 3R rules (reducing, reusing, and recycling) by skilled workers through proper training by DFL. Canteen waste generated can attract flies, rats/rodents' population and creation of related diseases inside project area if there is proper canteen waste manage system not in place so that requiring regular monitoring and it will be included in EMP.

Wastewater source from project operation is domestic wastewater (estimated 10 cum/day) and produced sewage water are treated using septic tank system at proposed project site. Proposed project area has concrete open drainage system for rainwater and the drainage system is immediately connecting Industrial Zone drain within Industrial Zone, Yedashe Township, Bago Region.

Operation of proposed project & Storage of raw materials and products required precaution as it has potential to cause fire easily. The materials store, warehouse and factory building have been properly designed with proper ventilation system to control

room temperature and fire protection system (such as fire extinguisher, etc.) and dedicated staff will be trained for systematic firefighting.

DFL plans to operate by using national grid of Myanmar Government power supply system for normal operation and arranged to maintain continuous operation with emergency power supply system by using standby diesel generator and gas turbine while experiencing power supply outage from national grid. Therefore, there will be minimum impact from the operation of diesel generator and can be considered as negligible.

DFL environmental management plan will be run by Factory workforce team. Capacity building, worksite education campaigns and other support provided by DFL are aimed at promoting the long-term successful operation of the project.

To ensure further environmental protections of surrounding area as well as factory workers, the DFL should be required to ensure that:

a. Identified Materials/Chemicals come with MSDS/CSDS are to store separately in terms of its category at designated chemical storage area
b. Chemical storage area to set up with necessary safety gear; First Aid Point / Eye wash station, etc., (which already included in designed stage)
c. No unidentified or expired chemicals at chemical storage area on site
d. No toxic materials (fuel, oil, cement, etc.) are stored at or near the site;
e. The DFL's Method Statement includes adequate safety measures to prevent fuel and other spills as a result of accidents.

The other aspect of the work that may have economic implications is the transportation materials/products to/from project worksite/destination locations. This will require a few numbers of vehicle movements if use road transport method, which could not disrupt traffic, particularly if such vehicles were to enter the town. This activity will be implemented by the DFL, and the following precautions should be adopted to reduce effects on traffic:

(i) Plan transportation routes carefully to prevent heavy vehicles entering Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar); and ensure that if this cannot be avoided, vehicles use main roads only, and do not use narrow local roads,

(ii) Schedule transportation activities to avoid peak traffic periods.

Operation activities of DFL inevitably produce minimum to medium level noise is generally the factors that disturb people who live or work in the vicinity. These should however not be major problems in this case as the facility is located in Industrial Zone, Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar), separated from the living area of the town, and there are other working business operating nearby and high background noise environment in place.

The health and safety of workers will be protected by measures included in a Health and Safety Plan, which the Bago Region, Taung Oo district/province, Yadashe Township, In-Dine village (between north of Yedashe and south of Swar) will be required to produce and apply. Even though areas are sparsely populated as densely developed with other industrial activities, this should include measures to assure the safety of the public.

The plan should thus require:

(i) Exclusion of the public from project operating work site;

(ii) Provision and use of appropriate Personal Protective Equipment (PPE) by all workers;

(iii) Health and Safety Training for all site personnel;

(iv) Documented procedures to be followed for all site activities;

(v) Accident reports and records; etc.,

Operation work can provide long-term socio-economic gains for local communities if DFL employ local people in the workforce. To ensure that these benefits are directed to

communities those are most affected by the work, DFL encouraged employing at least 50% of their workforce from communities in the vicinity of operation site. This will help to mitigate the impacts of any disturbance as well as creating a positive impression of the project. Building a workforce from mainly local people will also avoid problems that can occur if workers are imported, including social difficulties in the host community and issues of health and sanitation in poorly serviced temporary accommodation camps.

Operation Impacts:

a. Project operating activities associated with will result in increase in daytime noise levels. Impacts have to be mitigated through procurement of equipment/vehicles with inbuilt mechanism to arrest high noise levels. Operating during the night time is to be strictly avoided.

b. Health impact on Operation workers associated with back pain, stress, eye sight problem, and noise generation. Workers to be provided with appropriate PPEs and proper equipment & tools.

5.2.4 Environmental Impacts and Mitigation: Abandonment

DFL Project Workforce Team will be responsible for DFL Project facilities and will be supervised by the DFL BOD. All DFL management activity is required to comply with the Myanmar Rules & Regulation, Procedures & Standing Instructions. Clearly it is imperative DFL maintains DFL proposed project in proper working order in accordance with joint venture agreement.

The Proposed Project abandonment phase will include the following activities:

- Reinstate & perform housekeeping the Project area rented land and building;
- Solve any environmental & other related issue which may come out from the project;
- Check & clarify by relevant authority to ensure no issues left from the project; and
- Fade out of DFL Project activities

Environmental Impact Assessment and Mitigation Action for DFL

Most of the potential impacts associated with normal operation of the DFL relate to the storage and disposal of wastes. A waste management plan in complying with standing instruction under Yedashe City Development Committee. Other activities with potential to significantly impact the environment are presented detailed in Table 5.3 and 5.4.

Environmental Impact Screening Checklist for the proposed project and presented in below table

Table 5.2: Environmental Impact Screening Checklist for proposed project

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area			
• Densely populated?		X	
• Heavy with development activities?		X	
• Adjacent to or within any environmentally sensitive areas?		X	
• Cultural heritage site		X	
• Protected Area/ Reserve Forest		X	
• Wetland		X	
• Mangrove		X	
• Estuarine		X	
• Buffer zone of protected area		X	
• Special area for protecting biodiversity		X	
• Bay		X	
B. Potential Environmental Impacts Will the Project cause…			
• Impacts on the sustainability of associated with sanitation and solid waste disposal systems and provided their interactions with other urban services.		X	Not envisaged Mitigation measures

• Deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed?		X	Not envisaged Mitigation measures
• Degradation of land and ecosystems (e.g. loss of wetlands, coastal zones, watersheds and forests)?		X	
• Impairment of historical/cultural monuments/areas and loss/damage to these sites?		X	
• Degradation of aesthetic and property value loss?		X	
• Nuisance to neighboring areas due to noise, etc.?		X	
• Dislocation or involuntary resettlement of people		X	
• Public health hazards from odor, smoke from fire, and diseases transmitted by flies, insects, birds and rats?		X	
• Deterioration of water quality as a result of contamination of receiving waters?		X	
• Contamination of ground and/or surface water by domestic water from disposal?		X	Proper drainage design together with suitable waste water treatment system to be installed to meet international

			industrial standard port within proposed project area
• Land use conflicts?		X	The land is cleared for the proposed project under administration of Yangon Region Government and with acknowledgement from Bago Region Parliament
• Social conflicts between construction workers from other areas and community workers?		X	No impact will take place
• Traffic disturbances due to construction material transport and wastes?		X	The Project involves major construction activity. Project Vehicles will be managed through Journey Management Plan and follow YCDC instruction.
• Temporary silt runoff due to construction?		X	Not envisaged but will be mitigated through better management practices if some such situation emerges
• Noise and dust from installation activities?	X		Temporary noise from installation activities will generate, the noise can be minimized by working only at day time while background noise from other activities is high.
• Emission of potentially toxic volatile organics from site?		X	

• Surface and ground water pollution from operation?		X	The Design consideration will take care of surface and ground water pollution from operation
• Contamination of air quality from standby diesel generator operating?		X	The Design consideration will take care of contamination of air quality from standby generator operating

5.3 Summary of Mitigation Actions Required for Proposed Project Activities with Significant Environmental Impacts (Low, Medium, High and Critical)

Based on the assessment of potential environmental impact presented in the Attachment 1, there is no activity identified having significant (HIGH and CRITICAL) adverse environmental impacts whilst one MEDIUM as of indirect environmental impact. They are either LOW or NEGLIGIBLE after taking into account specific engineering design features. However, in line with Myanmar Environmental Law & Regulation requirement and good industrial practices, a number of actions have been prescribed to ensure continual environmental management improvement.

The summary of those activities and their respective required actions and person responsible is presented in below Table.

There are no critical and high environmental impact categories identified for the proposed project. (Critical = 0; High = 0; Medium = 1; Low = 6; Negligible = 6)

Table 5.3: Summary of EMP Action Required and Person Responsible

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
(A)	Project Development (Project Building Construction & Facility Installation)				
1	Movement of project cargo vehicle	M	1. Optimize transportation facility. 2. Assign vehicle & driver minimum one day ahead. Conduct Morning safety briefing 3. Vehicle inspection & report immediately if any anomaly observed. Select route & time to minimize disturbance to other road users 4. To follow YCDC instruction and notification on construction project vehicle	Project Director Transport Supervisor Vehicle Driver	Throughout the project Daily Every morning & before drive
2	Waste, Dust, & Noise from Land Clearing	L	1. All plants and grass inside project area to clear and send designated location under supervision and approval by YCDC	DFL	Daily during land clearing period

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			2. Excavated ground soil to use inside project area for levelling the ground and only extra soil to send designated location using safe transportation system as per YCDC instruction 3. To wash down the truck contaminated with muds using for waste transport prior to move in and out. 4. To operate using sound proof type machine at only daytime when background noise is high		
3	Noise & Vibration from Piling	L	1. To use High technique (Hydraulic) Piling machine		Throughout piling time
4	Waste, Dust, Noise, from Superstructure	L	1. To follow YCDC instruction and notification on construction waste 2. Segregate and reuse to maximize usage as much as possible	DFL Assigned Contractor	Throughout project period

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			3. Dispose non-reusable waste to appropriate/approved recycling Center or dumping ground defined by YCDC 4. All waste generated from construction to collect, record, and dispose at YCDC designated location 5. The truck using for waste transport to wash down all contaminated muds prior to move in and out. 6. To operate using sound proof type machine at only daytime when background noise is high 7. To use proper scaffolding and cover net for the high rise building which complying with YCDC instruction	Truck Driver Project Director Project Director	Daily Throughout the project
(B)	Project Operation (Beer Production and Beverages)				
5	Noise from Power Generator / Gas Turbine / Air Compressor operation	L	1. To use sound proof type	Project Manager	Throughout the

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			2. To plan Routine maintenance to minimize downtime 3. To monitor and record ambient sound level regularly		operation period
6	Domestic wastewater and operational produced water	L	Carry out necessary treatment system on domestic water and produced water from operational activities prior to dispose off Regular water quality monitoring program	Project Director	Throughout the project period
7	Fuel and Oil Spill at fuel and chemicals Storage area	L	1. To store at designated fuel and chemical storage area 2. To construct storage area with secondary containment system and fencing 3. Only identified fuel and chemicals with relevant MSDS/CSDS to be stored separately to avoid any oxidation / reaction	Project Director	Before Development operation Once a month during operation

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			4. Regular inspection and recording as of monthly basic		Before Development operation
8	Social conflict between local people and project workforce	Negligible	Corporate social responsibility program 1. Create opportunity for the local community to work at project 2. Enhance in health care of local community with providing necessary medical assistance to local people 3. Enhance education sector development for local community in providing with school buildings, equipment and tools, scholarship program for students, etc. 4. Respect traditional custom each other and support to the local community,	Project Director	Throughout the project period

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			5. Providing necessary training to people 6. Actively participating and sponsoring in local religious events and activities 7. Always inform, get advice and agreement from local authority and local community leader prior to precede the project activities.		
9	Hazardous waste management	Negligible	Segregate waste type Monitor the quantity of each type of hazardous waste using waste consignment note Return recyclable waste e.g., waste paint, solvent, chemicals, drilling fluids, etc. to supplier Recycle waste used oil Dispose non-recyclable waste to YCDC	Transport Supervisor & Driver	Throughout the project period

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			Audit on the waste management at project worksite and the supplier's / YCDC's waste disposal site	HSE Representative	
10	Fuel and chemicals spill during transfer	Negligible	To obtain fuel and chemicals transfer procedure from contractor To verify personnel has been given training to transfer fuel and chemicals safely To ensure volume of fuel and chemicals transfer is not more than maximum allowable of the storage capacity To ensure supply vehicle has in place an oil spill response plan and oil spill response capability	Project Director	Before Development operation Before Development operation During the fuel and chemicals transfer
11	Air Pollution from Operation of standby diesel generators	Negligible	Use of low Sulphur diesel that are readily available in the market Regular air quality monitoring program	Project Director	Prior to commence project activity

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
12	Non-hazardous solid waste management (e.g., earth, plastics, etc.)	Negligible	1. To follow YCDC instruction and notification on construction waste 2. Segregate and reuse to maximize usage as much as possible 3. Dispose non-reusable waste to appropriate/approved recycling Center or dumping ground defined by YCDC 4. Monitor the quantity of each type of non-hazardous waste using waste register	Transport Supervisor & Driver	Throughout the project period
13	Kitchen and Sanitary Waste	Negligible	To develop Waste management procedure Food waste to be optimized by feeding farm animals as part of wise waste management Sewage will be discharged using septic tank	Project Director	Before operation Throughout the project period

No.	Category/Aspect	Impact Significance	Actions Required to mitigate impact	Person Responsible	Timing
			Routine inspection and monitoring of discharging area and feeding practice		

Table 5.4: Environmental Impact Assessment and Proposed Mitigation Measures for the Proposed Project

#	ACTIVITY	ASPECT	ENVIRONMENTAL IMPACT	F	L	M	S	SIGNIFICANCE before Mitigation Measures	OVERALL ASSESSMENT	PROPOSED MITIGATION MEASURES	
1	Land Clearing (Development phase)	Waste, Dust, & Noise	Potential soil and ground water contamination	3	0.35	2	2.1	LOW	NEGLIGIBLE		
									Extent: Localized within the project station **Duration:** Short term **Action:** Directly from the project	1) 2) 3)	All plants and grass inside project area to clear and send designated location under supervision and approval by YCDC Excavated ground soil to use inside project area for levelling

										4)	the ground and only extra soil to send designated location using safe transportation system as per YCDC instruction To wash down the truck contaminated with muds using for waste transport prior to move in and out. To operate using sound

											proof type machine at only daytime when background noise is high
2	Movement of project vehicle (Development phase and operation phase)	Physical presence of cargo vehicle	Interference with other road users	3	1.0	2	6.0	MEDIUM	LOW		
									Extent: Regional. Number of vehicle for Chill Beverages Beer Production and Beverages Company Limited Central Business District Development project with 5 - 8 cargo vehicles is estimated daily usage **Duration:** Driving time in the region will be optimized	1) 2) 3) 4)	Optimize transportation facility. Assign vehicle & driver minimum one day ahead. Conduct Morning safety briefing Vehicle inspection & report immediately if

									Action: Directly from the project		any anomaly observed. Select route & time to minimize disturbance to other road users To follow YCDC instruction and notification on construction project vehicle
3	Project activities (Development phase and	Non-hazardous waste disposal on	Potential soil and ground water contamination	5	0.1	1	0.5	NEGLIGIBLE	NEGLIGIBLE		
									Extent: Volume of non-recyclable general wastes will be low, and	1)	Site waste management procedure will

	operation phase)	land (e.g. wood, scrap metals, plastics, etc.)							will be disposed at an appropriate and approved dumping ground will be low. **Duration:** project period **Action:** Directly from the project	2) 3) 4)	be in place covering waste segregation, disposing by using burning method or landfill method due to nature of waste. Reuse and recycle waste materials such as wooden, metal, paper and plastics as much as possible. Dispose non-reusable and

											non-recyclable wastes to an appropriate dumping ground approved by local authority if applicable. Routine inspection and monitoring as part of WMP
6	Project activities (Development phase and operation phase)	Hazardous waste if used necessary chemicals (e.g. acids, paints,	Environment & public health	5	0.1	1	0.5	NEGLIGIBLE	NEGLIGIBLE		
									Extent: Volume of hazardous wastes will be low, and will be disposed at an appropriate and approved dumping ground will be low.	1) 2)	Reuse and Recycle if possible (e.g. used oil and batteries).

		pesticide, etc.)							**Duration:** project period **Action:** Directly from the project		Disposal of hazardous wastes (waste paint, used oil, and solvent) on approved facilities.
7	Kitchen and Sanitary Waste	Generate bacterial that can spark on health disease (such as diarrhea)	Soil and ground water contamination	3	0.1	1	0.3	NEGLIGIBLE	LOW		
									Extent: Localized within the project station **Duration:** project period **Action:** Directly from the project	1) 2)	Sewage will be discharge in septic tank. Food waste can be managed by feeding to farm animal instead of disposing
8		Noise	Ambient noise	3	0.35	2	2.1	LOW	LOW		

	Standby Generator / Air Compressor operation								**Extent:** Site standby generator room and its surrounding area **Duration:** project period **Action:** Directly from the project	1) 2) 3)	Soundproof generator to be used. Generator running time will be under control together with to minimize fuel consumption. Ambient sound monitoring program
9	Standby Generator operation	Release of combustion gases containing SOx, NOx, CO2,	Air pollution with global warming potential.	5	0.1	1	0.5	NEGLIGIBLE	NEGLIGIBLE		
									Extent: Localized within 2 km from the source of emission. No cumulative effects expected as emissions are distant	1) 2)	Use of low sulphur diesel. Air quality monitoring program

		particulate matter							from other continuous sources of emissions. **Duration:** Emissions are of short duration and will be rapidly dispersed and diluted. **Action:** Directly from the project		
10	Storing of fuel and chemicals at Storage area	Oil / fuel / chemical spill	Potential soil and ground water contamination.	3	0.35	2	2.1	LOW	NEGLIGIBLE		
									Extent: Volume of wastes will be low, and will be disposed at an approved disposal site. **Duration:** project period **Action:** Directly from the project	1) 2) 3)	To store at designated area which including of secondary containment system and waste collection point.

											To establish an adequate spill response capability. Operator to ensure all MSDS and spill kit is standby at storage area. Routine inspection, inventory and reporting need to be done to ensure no leak of loss of stored items.
11				3	0.35	2	2.1	LOW	LOW		

	Domestic wastewater and operational produced water	Discharging of domestic wastewater and operational produced water to ground	Degrading of groundwater quality by discharging of untreated waste water						**Extent:** Localized and the amount of produced wastewater is small. **Duration:** project period. **Action:** Directly from the project	1) 2)	Carry out necessary filtering and/or treatment system on domestic water and produced water from operational activities prior to dispose off Regular water quality monitoring program
12	Operating DFL project	Sharing of public area with existing	Possible Social conflict between local people and	2	0.35	1	0.7	NEGLIGIBLE	NEGLIGIBLE		
									Extent: Regional. within and around project area	1)	Conduct public hearing to get

		local people	project workforce						**Duration:** very short, conflict can be negotiable by working together **Action:** Directly from the project	2) 3) 4)	agreement from local authority as well as local people on public land usage between project and local community Corporate social responsibility program to create opportunity for local people to work at project

											Enhance in health and education sector development for local community Develop sustainable socio eco program
	F=Frequency of Impact Occurrence										
	L= Likelihood of the Impact Occurring										
	M= Magnitude of the size of the impact in relation to set of standards										
	S= Significant - Overall importance of the impact										

6.0 PUBLIC CONSULTATION AND DISCLOSURE

Consultations with stakeholders on environmental issues have been taken up as an integral part of the process. These consultations provided inputs to the various sector specialists in identification of the felt needs of the communities, and the relevant stakeholders. Results of the public consultation and public participation processes, recommendations received from the public, and the Project Proponent's written responses to comments received during that process is present in this section.

6.1 Introduction

For the reporting of environmental management plan, the purpose of consultation meeting is to inform and request comments about of the project to the local community. Public consultations on environmental management programs are designed to provide a real understanding of project issues and the aim is to make the public aware of the environmental impact of project operations and the increase in job opportunities caused by the proposed project. By participating in the consultation process with anyone affected by the proposed project, the business community will be able to resolve any issues that may arise in advance.

6.2 Purpose

Public consultation is held with the purpose such as ability to present of information about the project to local community, being able to know about CSR and local development performance of the proposed project, being able to know the opinions of the local community on the proposed project, being able to know and participate in activities that will not impact the environment and monitoring etc., by consulting with local community around the project area. It is a mutually beneficial process as the project and the local community can establish a mutual understanding and relationship by continuing the implementation of commerce complaints, advices and grievances mechanism.

6.3 Methodology and Approach

Methodology applied as personal meeting, formal meeting, and official meeting method, discussion method, interview method, visual inspection method, etc. to consult with relevant parties for the proposed project. The outputs of the consultation sessions are documented in on Stakeholder Consultations. Consultations held with the following stakeholders:

- Officials of Union Government Departments;
- Officials of Regional Government Departments;
- Local Authority
- Contractors and employee, and,
- Local Communities; adjacent/around of the project factory area.

6.4 Public Consultation and Public Participation Process

In conducting of public consultation process, consultation will be held with not only with the local communities but also with the regional relevant authorities within region of the proposed project by project proponent.

The consultation will be held by DFL as follows:

- Invitation to local community, relevant authority and stakeholders around the proposed project, Invitation to interested parties to attend from the project website, Invitation by invitation method of standing poster/vinyl near the project for the public consultation.
- Presentation of proposed project information and Environmental Conservation Information at public consultation.
- Discussion with participants and if there are any requests, replying action points and responsibilities with action plans.
- Implementation of comments and suggestions of attendees, necessary action by preparing and recording meeting minutes.

6.5 Summary of Consultation Activities Undertaken

Consultation has been done during developing phase by DFL to get permission for the proposed project with officials of Union Government Departments, Relevant Authority and also with staff from local community. Environmental study team has visited, interviewed, and consulted with DFL staff and local community during Environmental assessment period in September 2023.

On 23th September 2023, a public consultation meeting and disclosure ceremony was held at DFL's office meeting hall of the proposed project site located in, No. 6 Yedashe Sugar Mill, Yedashe Township, Bago Region in order to disclose the project information and to request comments about of the project

DFL held the public consultation in collaboration with NeoTech environmental study team to present project activities, affects & impacts, background condition & management plan for environmental conservation. The representatives of proposed project, environmental consultants and relevant stakeholder person are actively participated and discussed.

Consultation will be included are briefed as below:

- Encourage conducting of public consultation meeting and welcome to this project type which is suitable for local community
- Explained about environmental policy, procedures and laws
- Consulted with all relevant government officials and local authority to get clearance for approval on proposed project.
- Welcome on conducted CSR activity and expecting more CSR activities for the local community
- Guideline to comply under existing Myanmar Law & regulations as well as procedures & instruction.
- Expression from local community to create more job opportunity for local people.
- Pleased to know about information sharing and asking for feedback

There will be cooperation between DFL, local authority, and local community to find alternative ways of living such as farming, plantation, etc., as part of CSR program. Local community development, corporate social responsibility (CSR) programs and more job creation for local community were also taken by the promoter

6.6 Public Consultation Meeting Minutes

Table 6.1: Summary Notes on the Public Consultation Meeting

Chill Beverages Co., Ltd. Manufacturing of Beer and Beverages Factory Project Public Consultation	
Venue	No.6 Yedashe Sugar Mill Factory Office Meeting Hall located at Yedashe Township, Bago Region
Date	23th September 2023
Time	9:30 - 11:30 am
Organized by	Delicious Food Limited incorporation with NeoTech Myanmar Co., Ltd.
Invited Person	Relevant and Local authority, Representatives of Local community and other relevant person were invited to attend the Public Consultation Meeting
Number of Participants:	24 participants (Including invited persons, representative of Local community, stakeholders, Project proponent (Representative of DFL) and Third-Party Organization (NeoTech Myanmar Company Limited).




Figure 6.1: Photo Records of Public Consultation Meeting

6.6.1 Agenda

Agenda (1)	Registration and Announcing the Opening Ceremony
Agenda (2)	Opening Remarks by Manager of No. 6 Yedashe Sugar Mill
Agenda (3)	Presentation about Refined Sugar Production by Manager of No. 6 Yedashe Sugar Mill
Agenda (4)	Presentation of Initial Environmental Examination by Daw Nu Nu Aye, Environmental Consultant of NeoTech Myanmar Co., Ltd.
Agenda (5)	Exchange Opinions, Questions and Answers
Agenda (6)	Announcing Closing Ceremony and Filling, Collecting the Comment Survey Forms

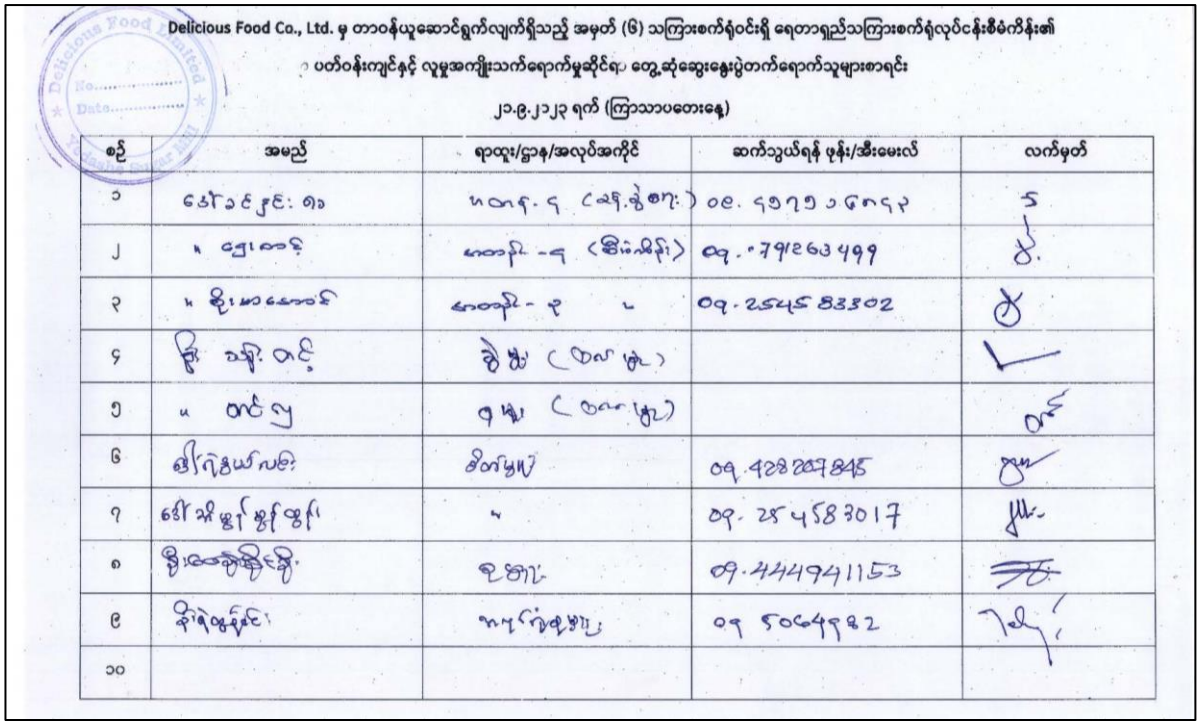
6.6.2 Attendance list

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်း၏

ပတ်ဝန်းကျင်နှင့် လူမှုအကျိုးသက်ရောက်မှုဆိုင်ရာ တွေ့ဆုံဆွေးနွေးပွဲတက်ရောက်သူများစာရင်း

၂၁.၉.၂၀၂၃ ရက် (ကြာသပတေးနေ့)

စဉ်	အမည်	ရာထူး/ဌာန/အလုပ်အကိုင်	ဆက်သွယ်ရန် ဖုန်း/အီးမေးလ်	လက်မှတ်
၁	ဦးလှအောင်မြေ	[illegible]	0942176041	
၂	ဦးတင်မြေ့	[illegible]	09428173311	
၃	ဦးကျော်ဝင်းနိုင်	[illegible]	09 423663900	
၄	ဦးအေးနိုင်	[illegible]	09970545827	
၅	ဦးအောင်ကိုလတ်	[illegible]	09·789882582	
၆	ဦးဆိုဝင်း	[illegible]	09-254583133	
၇	ဦးသက်ဝေနိုင်	[illegible]	09.888865430	
၈	ဒေါ်မြမြနွယ်	[illegible]	09 254583279	
၉	ဒေါ်ခင်နှင်းယု	[illegible]	09 428207815	
၁၀	ဒေါ်ကြည်ကြည်ဝင်း	[illegible]	09-428126289	



Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်း၏
ပတ်ဝန်းကျင်နှင့် လူမှုအကျိုးသက်ရောက်မှုဆိုင်ရာ တွေ့ဆုံဆွေးနွေးပွဲတက်ရောက်သူများစာရင်း

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စဉ်	အမည်	ရာထူး/ဌာန/အလုပ်အကိုင်	ဆက်သွယ်ရန် ဖုန်း/အီးမေးလ်	လက်မှတ်
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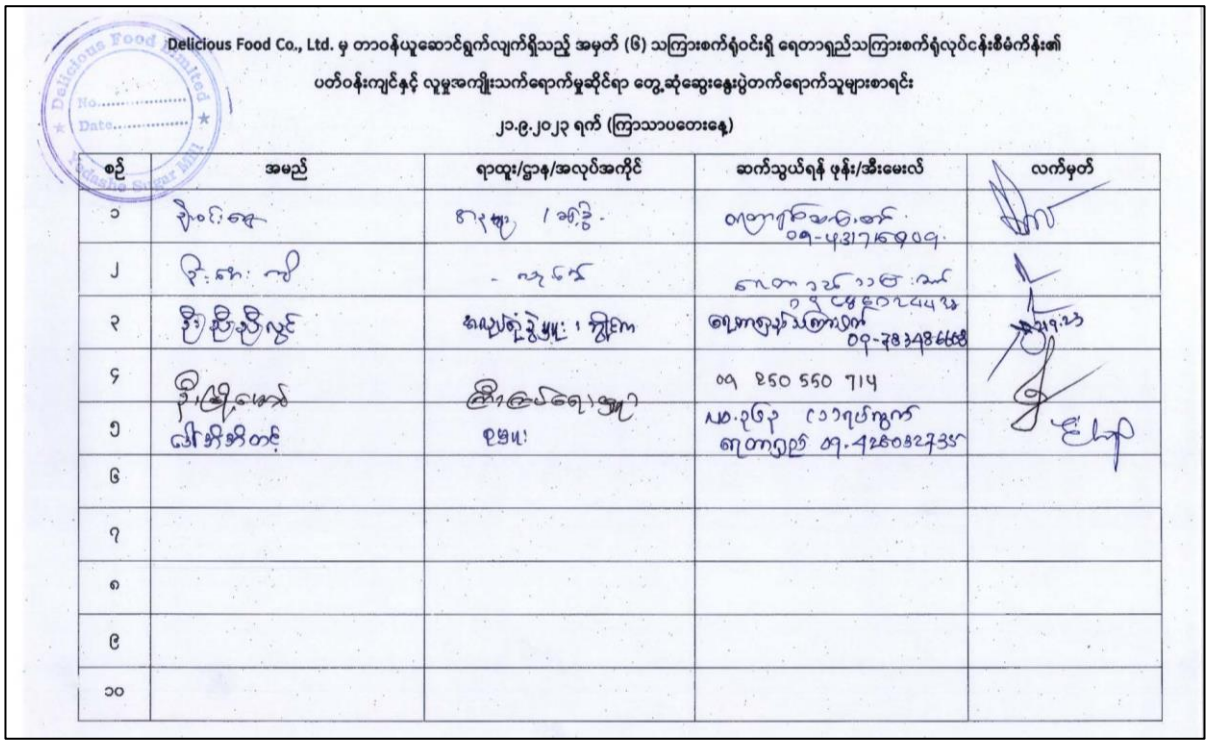

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၂၁.၉.၂၀၂၃ ရက် (ကြာသာပတေးနေ့)

စဉ်	အမည်	ရာထူး/ဌာန/အလုပ်အကိုင်	ဆက်သွယ်ရန် ဖုန်း/အီးမေးလ်	လက်မှတ်
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Figure 6.2: Signed Attendance List Sheet

6.6.3 Consultation Outcomes

Table 6.2: Summary of Outcomes result

Description	Yes	No
Is any local community living within proposed project area?		✓
Is any local community earning for daily living in the project area?		✓
Is any conflict regarding project development activity?		✓
Is any conflict regarding setting location for the project development?		✓
Is Local community agreed to develop the project?	✓	
Is Relevant Authority agreed to develop the project?	✓	
Is any suggestion from local community on proposed project?	✓	
Is any further negotiation required to overcome conflicts/issues?		✓
Is any recommendations for the proposed project	✓	
Are there any conflicts/issues		✓

Figure 6.3: Record of Presentation and Explaining,

6.6.3.1 Recommendation

There are a lot of recommendations from local community, relevant authority about the proposed project. According to results of meeting, it has been found that most of local community accept and welcome this proposed project. The relevant department recommended that the proposed project can support domestic manufacturing and develop the job opportunities for local people. They see that the implementation of the project can support to develop their agriculture and job opportunities. They also

appreciate about that implementation of environmental conservation systematically and commented it is very well.

Figure 6.4: Record of Requesting and Planning for Proposed Project

6.6.3.2 Key Conflicts/Issues

There are no conflicts/issues about the proposed project. During the public consultation meeting, any conflicts/issues was not found between the local community, relevant government department and representative of DFL. Local community and relevant government department suggested about the proposed project and commented the necessary plan to be followed and undertaken by the proposed project (i.e., to follow the relevant laws, rules and guidelines, to take health care for employees and, to implement CSR, etc.,).

Figure 6.5:P Record for Consultation and Discussing

6.6.3.3 Comment Survey Forms

After presentations, to get local community's idea on the project, attitude survey sheets were giving to attendees and survey. Totally (19) sheets of all given attitude survey sheets were got back and according to that survey sheets, it was found that all fully supported the proposed project and noted project's activity is good. As the opinions on the proposed project from survey sheets, noted, it provides job opportunities and as suggestion on the proposed project, it was found that noted to take special care of the staff health care and fire safety, to keep a record of CSR 2% budgeting and spending, to carry out environmental conservation activities in accordance with the instructions, etc.

Figure 6.6: Filling in Attitude Survey Sheets

The scanned attitude survey sheets are detailed as follows:

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၁	အမည်	-	[illegible]
၂	မှတ်ပုံတင်အမှတ်	-	[illegible] 129013
၃	အသက် (မွေးသက္ကရာဇ်)	-	- 60 3.3.63
၄	ပညာအရည်အချင်း	-	- [illegible]
၅	အလုပ်အကိုင်	-	Delicious Food Co Ltd
၆	နေရပ် / ဖုန်း	-	[illegible] - 09 [illegible] 24432
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	
၉	လက်မှတ်	-	[signature]

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

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၁	အမည်	-	[illegible]
၂	မှတ်ပုံတင်အမှတ်	-	[illegible]
၃	အသက် (မွေးသက္ကရာဇ်)	-	[illegible]
၄	ပညာအရည်အချင်း	-	B.com
၅	အလုပ်အကိုင်	-	[illegible]
၆	နေရပ် / ဖုန်း	-	[illegible] 09-970545827
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	[illegible]
၉	လက်မှတ်	-	[illegible signature] 21/9/2023

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

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၁	အမည်	-	ဦးကျော်ဝင်းနိုင်
၂	မှတ်ပုံတင်အမှတ်	-	၈/မအနု(နိုင်)၀၁၁၂၉၄
၃	အသက် (မွေးသက္ကရာဇ်)	-	၁၁.၂.၁၉၇၀ .(၅၂)နှစ်
၄	ပညာအရည်အချင်း	-	B.E. (Mech.)
၅	အလုပ်အကိုင်	-	လ/ထ စက်ရုံမှူး
၆	နေရပ် / ဖုန်း	-	[illegible]
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	[illegible]
၉	လက်မှတ်	-	

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍ လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဦးတင်ဌေး
၂	မှတ်ပုံတင်အမှတ်	-	၇/ပခန (နိုင်) ၀၅၂၇၉၉
၃	အသက် (မွေးသက္ကရာဇ်)	-	၄-၅-1960
၄	ပညာအရည်အချင်း	-	B.A. (ကျ)
၅	အလုပ်အကိုင်	-	[illegible]
၆	နေရပ် / ဖုန်း	-	[illegible]
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	[illegible]
၉	လက်မှတ်	-	[illegible]

Delicious Food Co., Ltd. ၏ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

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၁	အမည်	-	ဦးလှမောင်မြဲ
၂	မှတ်ပုံတင်အမှတ်	-	၁၁/ဥတန(နိုင်)၀၀၆၄၄၈
၃	အသက် (မွေးသက္ကရာဇ်)	-	၂၈.၁၁.၁၉၆၄
၄	ပညာအရည်အခြင်း	-	BE (Mech)
၅	အလုပ်အကိုင်	-	[illegible]
၆	နေရပ် / ဖုန်း	-	သကြား စက်ဝင်း ကျေး မြို့နယ် (ရေတာရှည်)
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	[illegible]
၉	လက်မှတ်	-	

Delicious Food Co., Ltd. ၏ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	[illegible]
၂	မှတ်ပုံတင်အမှတ်	-	[illegible]
၃	အသက် (မွေးသက္ကရာဇ်)	-	၂၄၊ ၃၊ ၇၄
၄	ပညာအရည်အခြင်း	-	B.A (Myanmar)
၅	အလုပ်အကိုင်	-	[illegible]
၆	နေရပ် / ဖုန်း	-	[illegible]
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	[illegible]
၉	လက်မှတ်	-	[signature]

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဒေါ်ခင်နှင်းရီ
၂	မှတ်ပုံတင်အမှတ်	-	၇/ရတရ(နိုင်)၀၇၅၅၅၈
၃	အသက် (မွေးသက္ကရာဇ်)	-	၈.၅.၁၉၆၉
၄	ပညာအရည်အခြင်း	-	BA. ဒဿနပညာ
၅	အလုပ်အကိုင်	-	ဝန်ထမ်း (မော်တော်ယာဉ်)
၆	နေရပ် / ဖုန်း	-	အမှတ်(၆)သကြားစက် (ရေတာရှည်) ၀၉-၄၅၇၅၁၆၈၄၃
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	စက်ရုံရှိနေသောကြောင့် ပတ်ဝန်းကျင်အနီးအနားမှ လူများ အလုပ်အကိုင်ရရှိခြင်း၊ စားဝတ်နေရေး အဆင်ပြေခြင်း၊ ကြံတောင်သူများ စားဝတ်နေရေး ပြေလည်၍ လူနေမှု ဖွံ့ဖြိုးတိုးတက်လာပါသည်-
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	ကြံများများ ရရှိပါက ပိုမိုကောင်းမွန်ပါသည်-
၉	လက်မှတ်	-	[signature] ၂၁.၉.2023

Delicious Food Co., Ltd. ၏ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

No..............

Date.............. လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဒေါ်စိုးမာအောင်
၂	မှတ်ပုံတင်အမှတ်	-	၇/ရတန(နိုင်)၀၇၆၆၁၃
၃	အသက် (မွေးသက္ကရာဇ်)	-	(၅၀) နှစ် (၁၁.၁၂.၁၉၇၃)
၄	ပညာအရည်အချင်း	-	B.A (Hist)
၅	အလုပ်အကိုင်	-	ဝန်ထမ်း
၆	နေရပ် / ဖုန်း	-	ဝန်ထမ်း[illegible]၊ အမှတ်(၆)သကြားစက် (ရေတာရှည်)၊ 09.254583302
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	စက်ရုံနှင့်နီးသော ဒေသခံများ အလုပ်အကိုင်များ ရရှိ ပေါ်ပေါက်ခြင်း၊ ဒေသဖွံ့ဖြိုး တိုးတက်ခြင်း ကောင်းကျိုးများ ရှိပြီး စီးပွားရေး ဝင်ငွေရရှိခြင်း လူမှုဘဝ မြင့်မားခြင်း
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	ကြံခင်းကြံတန် (၁၀၀၀၀၀) ကျော် ရရှိပါက [illegible]
၉	လက်မှတ်	-	(signature) 21.9.23

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဦးသက်ဇော်နိုင်
၂	မှတ်ပုံတင်အမှတ်	-	၇/ကမန (နိုင်) ၀၀၉၅၅၈
၃	အသက် (မွေးသက္ကရာဇ်)	-	၄၉ နှစ် ၊ ၂၇.၆.၇၅
၄	ပညာအရည်အချင်း	-	B.E (Chemical)
၅	အလုပ်အကိုင်	-	အလုပ်ရုံခွဲမှူး (ထုတ်လုပ်ရေးဌာန)
၆	နေရပ် / ဖုန်း	-	၂/၃၃ ၅၃-ခန်း လမ်း ရေတာရှည်မြို့ ၀၉၈၈၈၈၆၅၄၃၀
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	စီမံကိန်းကြောင့် ဒေသဖွံ့ဖြိုးခြင်း၊ ဒေသခံများ အလုပ်အကိုင်များ ဖန်တီးပေးနိုင်ခြင်း၊ တောင်သူများ စိုက်ပျိုးရေး ဝင်ငွေများ ရရှိခြင်း၊ လုံခြုံမှုရှိခြင်း၊
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	၁ ကုန်ထုတ်လုပ်မှု ပိုမိုတိုးတက်ကောင်းမွန်စေရန် ၂ နိုင်ငံခြားမှလည်း သကြားနည်းပညာများ တိုးတက်ဖွံ့ဖြိုးရန် ကမ္ဘာ (၁၁)ရပ်ဖွင့် ဖွဲ့စည်းရှိ သင်တန်းများ၊ ပညာသင်များ စေလွှတ်ခြင်း၊ ဈေးနှုန်းများ ထုတ်ဈေးခြင်း အသည်ဖြင့် စီစဉ်ပေးရန်
၉	လက်မှတ်	-	(signature)

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဦး[illegible]
၂	မှတ်ပုံတင်အမှတ်	-	၆/[illegible](နိုင်) [illegible]
၃	အသက် (မွေးသက္ကရာဇ်)	-	၃၁.၃.၆၃
၄	ပညာအရည်အချင်း	-	B.Sc (Chem)
၅	အလုပ်အကိုင်	-	သကြားစက် (ရေတာရှည်)
၆	နေရပ် / ဖုန်း	-	[illegible] (သကြားစက်၊ ရေတာရှည်) 09-254583133
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	1 2	[illegible] [illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	1	[illegible]
၉	လက်မှတ်	-	[signature]

Delicious Food Co., Ltd. ၏ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဦးအောင်ကိုလတ်
၂	မှတ်ပုံတင်အမှတ်	-	၇/ရဝဝရ (နိုင်) ၀၆၆၆၁၇၅
၃	အသက် (မွေးသက္ကရာဇ်)	-	၆.၉.၁၉၆၈
၄	ပညာအရည်အချင်း	-	မြန်မာစာ ပဉ္စမတန်း
၅	အလုပ်အကိုင်	-	[illegible]
၆	နေရပ် / ဖုန်း	-	သကြားစက်ဝန်ထမ်း အိမ်ယာ 09.789 882 182
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	- [illegible] - [illegible] - [illegible] -
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	- [illegible] - [illegible]
၉	လက်မှတ်	-	

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	ဒေါ်မြမြနွယ်
၂	မှတ်ပုံတင်အမှတ်	-	၁၂/ဒဂန (နိုင်) ၀၀၃၄၄၃၈
၃	အသက် (မွေးသက္ကရာဇ်)	-	၄-၇-၆၈
၄	ပညာအရည်အချင်း	-	BSc. Chemistry
၅	အလုပ်အကိုင်	-	ဝန်ထမ်း
၆	နေရပ် / ဖုန်း	-	ရေတာရှည်၊ ၀၉ 254583279 စော့ရပ်ကွက်၊ ရေတာရှည်
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	ကြံဝါးကြိတ်တန် ၁၀၀၀၀၀ နှင့်အထက် ကြံဝါးနိုင်လျှင် စီမံကိန်း အောင်မြင်ပြီး ဝန်ထမ်းနှင့် ဒေသခံ များ စားဝတ်နေရေး အဆင်ပြေမည် ဖြစ်ပါ သည်။ ကြံစိုက်ပျိုးရေး ရေးတောင်သူများ အဆင်ပြေမည်။
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်		ကုမ္ပဏီလုပ်ငန်း တိုးတက်လာ၍ ဝန်ထမ်းသစ် များ မွေးမြူ၍ သင်တန်းပေးခြင်းများ ဆောင်ရွက်သင့်ပါသည်။
၉	လက်မှတ်		

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

လူမှု-စီးပွားနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာသဘောထားများအား စစ်တမ်းကောက်ယူခြင်း

၁	အမည်	-	[illegible]
၂	မှတ်ပုံတင်အမှတ်	-	[illegible]
၃	အသက် (မွေးသက္ကရာဇ်)	-	[illegible]
၄	ပညာအရည်အချင်း	-	[illegible]
၅	အလုပ်အကိုင်	-	[illegible]
၆	နေရပ် / ဖုန်း	-	[illegible] 09-250550714
၇	စီမံကိန်းအပေါ် သဘောထားအမြင်	-	[illegible]
၈	စီမံကိန်းနှင့်ပတ်သက်၍ အကြံပြုချက်	-	[illegible]
၉	လက်မှတ်	-	[signature]

Delicious Food Co., Ltd. မှ တာဝန်ယူဆောင်ရွက်လျက်ရှိသည့် အမှတ် (၆) သကြားစက်ရုံဝင်းရှိ

ရေတာရှည်သကြားစက်ရုံလုပ်ငန်းစီမံကိန်းနှင့်ပတ်သက်၍

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၅	အလုပ်အကိုင်	-	Sugar Factory
၆	နေရပ် / ဖုန်း	-	No.6 Sugar mill YEDASHE 09. 428032735 No.363, 1st Quarter, Yedashe Township
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၅	အလုပ်အကိုင်	-	[illegible]
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6.7 Results of Consultation

These issues raised during public consultation, together with the findings of the baseline data gathering, have been considered when compiling the EMP. Requests for community development, corporate social responsibility (CSR) programs and local job creation were also raised. MONREC provided details on the regulatory submission and approvals process. Relevant Industrial Zone Committee highlighted the proposed project to apply business by following complete project description and by using proper methods/system; which minimizes possible impacts; environment, social, & health; and to have proper fire protection system whilst conserving the environment and suggested to reserve 2% of annual net profit from the proposed project for CSR.

There is no objection from the authorities of host country in general as well as no complaint received from staff regarding the current refine sugar production operation while study team consulting during assessment period. Providing necessary skill factory training as of voluntary nomination system for the eligible staff to develop local staff is built in as ongoing process throughout project period.

Project proponent will continue the implementation of Environmental Conservation activities, mutual relationship with neighboring factory and local people will be established, commerce complaints and grievances mechanism. \

6.8 Information Disclosure

As per Myanmar regulations, this prepared IEE Report will be made available for public comment. The full report will be made available to the public in English and a non-technical summary will be made available in Myanmar. The report will be disclosed to stakeholders, at proposed project factory and at DFL office in Yedashe.

Environmental conservation activities and CSR activities Notice Board will have similar display erected at DFL Factory. There is merit in expanding the scope of the Notice Board displays to include data generated through the project period on the environmental

performance and CSR activities. This will have the effect of increasing staff awareness, interest and involvement in the environmental conservation & CSR program.

Approved report of DFL Project (summary) will display at DFL factory while full report can be found at Head Office. DFL and ECD will include EMP info in their website respectively. Softcopy of EMP report and information of the proposed project will be available in DFL and ECD website.

The Proposed Project IEE will be submitted to ECD by DFL and the softcopy of IEE Report will be displayed at DFL's Notice Board of Head office and available website for the disclosure of information.

6.9 DFL CSR Programs

Delicious Food Limited's corporate social responsibility (CSR) activities based on the conviction that all business activities must take CSR into consideration. DFL is vigilant in their enforcement of corporate ethics and compliance and constantly work to improve educational programs and strengthen our internal control system. At the same time, DFL pursue initiatives related to quality management, environmental preservation, philanthropy and improved communication with all stakeholders.

The Proposed Project CSR program has been outlined as per below in sponsoring educational sector, healthcare of local community as well as staff and its family by arranging clinic & medical doctor, providing necessary equipment & training which relating to DFL Office, and factory throughout operational period without fail to promote CSR.

DFL is planning budget for the Proposed Project CSR program to spend 2 % of annual net profit for the following sectors at the factory and it's surrounded area as the Corporate Social Responsibility program. (Detailed in Annexure – 11)

Education	20%
Health	20%

Social	20%
Natural Disaster	20%
Local Community	20%

DFL will administer in implementation of proposed project CSR program activities in collaboration with local authority

6.10 Complaints and Grievances Mechanism

Given the social and environmental setting of the project is anticipated that, from time to time, employees, contractors, government agencies, Non-Government Organizations, and the general public (including the media) will request information on the project's environmental performance and management.

The current procedure for handling external and internal queries on the project in general is as follows:

- If the communication is from the media, it is directed to the Managing Director.
- If the communication is from another source, it is referred to the Director.

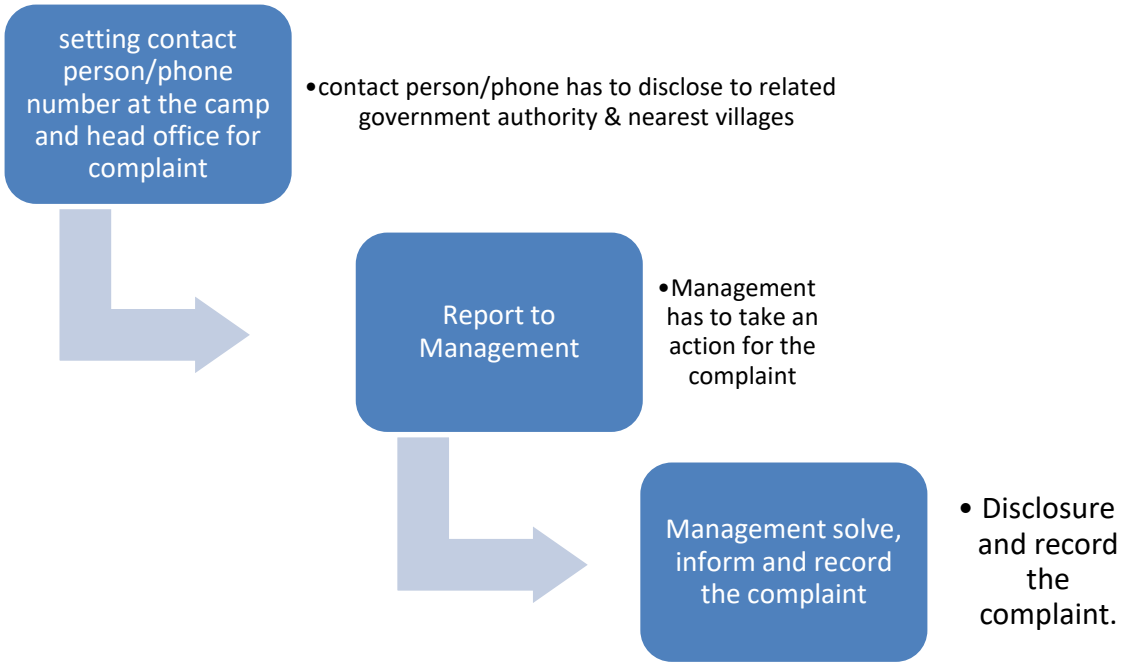
In future, internal environmental queries will be referred to the Production and Sale of Corn Seed Project Manager or Environmental Officer, while external queries will be referred to the Production and Sale of Corn Seed Project Manager.

Production and Sale of Corn Seed Project Manager / Environment Officer will have to retain complaints/communications register and record progress of complaint (refer to document control section).

6.10.1 Complaint System

Project component has to establish the following complaint system in overall project period (construction, operation and abandonment) to know the requirements/attitude of local people about the project:

The Factory Notice Board will have similar display erected at CMACL. There is merit in expanding the scope of the Notice Board displays to include data generated through the EMP on the environmental performance and CSR activities of CMACL. This will have the effect of increasing staff awareness, interest and involvement in the environmental conservation & CSR program.



7.0 ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan has been carried out for the proposed project on the existing situation of proposed area as well as possible impact from all 3 phases (development, operation, and abandonment) of Delicious Food; Refined Sugar Production proposed area.

The environmental management plan EMP for the proposed project has been prepared which related to environmental baseline data and calculated possible environmental impact from daily operational of Delicious Food Limited; Refined Sugar Production.

7.1 Project Component's Environmental and Social Commitment

7.1.1 Environmental and Social Commitments

DFL will commit environmental and social as mentioned in the Environmental and Social Policy. There will be separate budget allotted for the implementation in environmental management plan of DFL throughout project period. Initial Environmental budget is estimated 3000 USD/year and budget allotment will be reviewed yearly basis to suit with requirements.

In addition, DFL has undertaken to spend 2% of annual net profit in CSR program. The proposed project area is placing within Industrial Zone, Bago Region and can be considered as partially developed based on current living standard status. DFL plans to cooperate with local community as part of CSR programs to be supported by DFL is as below:

- Providing in Education Sector by funding in school library, stationary, exercise book, etc., for the students from local community
- Providing in health care service sector by funding in clinic, doctor & medicine for the patients from local community

7.2 Institutional Arrangements

The operational - level for the environmental management plan will be responsible for overall environmental management of the proposed project for Delicious Food Limited; Refined Sugar Production. It will be headed by a Managing Director and consist of at least Fifteen person-team of marketing, operation, engineering, administrative & financial, and social/environmental.

Proposed Project EMP will be included in contract terms and conditions to ensure Awarded Contractor following Project EMP accordingly and DFL will be monitored during developing phase. Contractor HSE Representative will liaise with DFL Factory Development Site Manager to achieve set EMP goals.

There will be institutional framework set with categorized level to educate the person involved for the implementation of Project EMP, as described below:

Category 1: Customer / Visitor – Environmental Awareness
Category 2: - General Environmental Awareness
Category 3: Specific Environmental Awareness
Category 4: Specific Environmental Training

7.2.1 Project's Environmental Standards for Institutional Framework

Category 1: Customer/Visitor Environmental Awareness– general introduction to environmental issues, as part of site induction, for visitors who will be visiting at DFL facilities. This training is to be given via DFL induction video display prepared by DFL Team, as part of the general DFL induction.

ENVIRONMENT

The environment of the DFL is sensitive in term of its location. It is encouraging disposing waste into designated waste bin at site as it will prevent contamination to factory as well as its environment (i.e., soil/floor, waterways, etc.) and it may able to control possible fire from waste. Should you witness others improper waste disposing or see any fires, please report

this to the Health, Safety, & Environment (HSE) Officer. Chewing beetle nuts is not allowed in the Factory facility as it may lead undesirable contamination to others as well as environment. Smoking inside DFL Perimeter is limited as it allowed at the designated smoking area only.

ENVIRONMENTAL INCIDENTS

Please report all incidents, including spills or leaks of fuels, oils or other chemicals, to the HSE officer.

Category 2: General Environmental Awareness: 1 hr session for DFL management and technical personnel who are not directly involved in operations. The awareness program will cover general environmental issues; typical impacts associated with daily operations, and describe the importance of the EMP in underpinning good environmental performance. Training will be given by the Training Officer.

Category 3: Specific Environmental Awareness: 2 hr session for site operational personnel. The course will cover descriptions of specific environmental impacts which can occur as a result of operations. Training will also describe the importance of the EMP in underpinning good environmental performance. Training will be given by the Training Officer.

Category 4: Specific Environmental Training – task based: This will involve a day session day one-on-one for HSE Officers and maintenance personnel with responsibility for monitoring and reporting. This will be conducted by the Training Officer.

Note: Safety and Emergency training is not included here, but an environmental aspect will be incorporated into these courses.

DFL currently has developing a register indicating who has attended which courses, and which procedures each person is familiar with, as a way of tracking development through the organization. Environmental training could be included on this register.

Below Table Summarized training needs for the proposed project EMP Implementation

Table 7.1: Training Matrix

Personnel	Training Category required (see above) and specific focus of training
DFL management and technical personnel	Category 2
All DFL staff personnel	Category 3
HSE Officer	Category 4 Noise Observation Water quality monitoring Air Quality Monitoring Rehabilitation / Housekeeping works Monitoring Recording fires
Maintenance personnel	Category 4 Waste Management
Visitors/Customer	Category 1

7.2.2 Environmental Management Plan

DFL undertake to commit Environmental Management Plan for the Delicious Food Limited; Refined Sugar Production Project Operation which complies with Myanmar Laws & Regulations, and Procedures & Standing Instructions.

7.2.3 Guidelines

DFL undertake to commit Environmental Management Plan for the Delicious Food Limited; Refined Sugar Product Project Operation complies with National Environmental Quality Emission Guideline out of enacted Myanmar Laws & Regulations, and Procedures & Standing Instructions, MONREC (former MOECAF).

There will have other procedures and guidelines in terms of interest in relevant area such as FDA guidelines in cakes & buns processing & production, social and cultural, labor, regional, industrial, etc.

The DFL Fire & Emergency Response Plan has been made available which compliance with Fire Fight Department require the reporting of fire.

7.3 Summary of Impacts and Mitigation Measures

Summary of potential Impacts which may generate from the proposed project operation activities throughout the project period and Mitigation Measures are describe here.

7.3.1 Development

7.3.1.1 Location and Design

Proposed project DFL is locating in an industrial land granted area. The proposed project site within existing land is categorized as Industrial Land Area; the Relevant Authority, Government has officially granted for 60 years period to the Landlord. Land rental (including existing infrastructure, building, facility, ground water source, 1000 KVA transformer power supply from national grid, etc.,) agreement has been made for initial 5 years by project proponent, DFL, and landlord. The land is cleared by the landlord and therefore there is no acquisition issue, no resettlement issue, and no relocation issue regarding the location. There is no environmental impact from design as proposed project may take renovation on existing built building and resources without major building design changes and no mitigation measure is required for the proposed project. Proper operation and maintenance of the site will be critical to protecting the environment; therefore, training for staff is built into the project.

Table 7.2: Impact Assessment & Mitigation activity for the operation of proposed project activity

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
Land Clearing & levelling, Ground Floor concrete levelling & polishing (Development phase)	Waste, Dust, & Noise	Potential soil and ground water contamination	All plants and grass inside project area to clear and send designated location under supervision and approval by YCDC Excavated ground soil to use inside project area for levelling the ground and only extra soil to send designated location using safe transportation system as per YCDC instruction	Waste Management Plan	Audit of waste storage and disposal practices monthly	Number of non-compliances with waste management plan identified during the audit	Zero non-compliance identified during audit.

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
			To wash down the truck contaminated with muds using for waste transport prior to move in and out. To operate using sound proof type machine at only daytime when background noise is high				
Movement of project vehicle (Development phase and	Physical presence of cargo vehicle	Interference with other road users	Optimize transportation facility. Assign vehicle & driver minimum one day ahead. Conduct Morning safety briefing	Road Transport Management Plan	Audit of Road Transport Management Plan	Number of non-compliance with RTMP identified	Zero non-compliance identified during audit.

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
operation phase)			Vehicle inspection & report immediately if any anomaly observed. Select route & time to minimize disturbance to other road users To follow YCDC instruction and notification on construction project vehicle		practices monthly	during the audit	
Project activities (Development phase and	Non-hazardous waste disposal on land (e.g.	Potential soil and ground water contamination	Site waste management procedure will be in place covering waste segregation, disposing	Waste Management Plan	Audit of waste storage and disposal	Number of non-compliances with waste management	Zero non-compliance identified during audit.

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
operation phase)	wood, scrap metals, plastics, etc.)		by using burning method or landfill method due to nature of waste. Reuse and recycle waste materials such as wooden, metal, paper and plastics as much as possible. Dispose non-reusable and non-recyclable wastes to an appropriate dumping ground approved by local authority if applicable.		practices monthly	plan identified during the audit	

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
			Routine inspection and monitoring as part of WMP				
Project activities (Development phase and operation phase)	Hazardous waste if used necessary chemicals (e.g. acids, paints, pesticide, etc.)	Environment & public health	Reuse and Recycle if possible (e.g. used oil and batteries). Disposal of hazardous wastes (waste paint, used oil, and solvent) on land or approved facilities.	Waste Management Plan	Audit of waste storage and disposal practices monthly	Number of non-compliances with waste management plan identified during the audit	Zero non-compliance identified during audit.

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
Kitchen and Sanitary Waste	Generate bacterial that can spark on health disease (such as diarrhea)	Soil and ground water contamination	Sewage will be discharge in septic tank. Food waste can be managed by feeding to farm animal instead of disposing	Waste Management Plan	Audit of waste storage and disposal practices every 6 months	Number of non-compliances with waste management plan identified during the audit	Zero non-compliance identified during audit.
Standby Generator operation	Ambient Noise	Operation of generator may impact surrounding residents	Soundproof generator to be used.	Ambient sound monitoring program	Quarterly monitoring of noise from standby generator operation	The level of audible noise from the operations at the nearest residences	Zero audible noise

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
Standby Generator operation	Release of combustion gases containing SOx, NOx, CO2, particulate matter	Air pollution with global warming potential.	Use of low sulphur diesel. Generator running time will be under control together with to minimize fuel consumption. Optimized power consumption plan (OPCP) to optimize power consumption by using 1. Computerized power distribution system and less power consumed electronics; LEDs.	Optimized Power Consumption Plan	Audit of power usage and Generator running practices every 6 months	Number of non-compliances with power management plan identified during the audit	Zero non-compliance identified during audit.

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
			2. maintaining maximum efficiency of Standby Generator Annually monitoring generator running hour, diesel fuel usage volume, & power output for standby generator				
Storing of fuel and chemicals at Storage area	Oil / fuel / chemical spill	Potential soil and ground water contamination.	To store at designated area which including of secondary containment system and waste collection point.	Oil/Chemical Spill Response Plan (OSRP)	Monthly routine inspection, inventory and reporting	No. of oil / chemical spills in a month	Zero oil / chemical spill / loss

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
			To establish an adequate spill response capability. Operator to ensure all MSDS and spill kit is standby at storage area. Plan and action to ensure no leak of loss of stored items.				
Transferring of Fuel and chemicals	Potential loss of diesel and / or chemical to the	Resulting in potential soil contamination.	To obtain fuel and chemicals transfer procedure from contractor To verify personnel has been given training to	Oil/Chemical Spill Response Plan (OSRP)	Monthly	No. of oil / chemical spills in a month	Zero oil / chemical spill / loss

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
	environment.		transfer fuel and chemicals safely To ensure volume of fuel and chemicals transfer to the site is not more than maximum allowable of the storage capacity To ensure site has in place an oil spill response plan and oil spill response capability To monitor the volume of fuel transfer. Fuel transfer is to be carried				

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
			out during day time and good weather.				
Domestic wastewater and operational produced water	Discharging of domestic wastewater and operational produced water to ground	Degrading of groundwater quality by discharging of untreated waste water	Carry out necessary filtering and/or treatment system on domestic water and produced water from operational activities prior to dispose off	None	Regular water quality monitoring program	Discharged water quality standard	YCDC standard discharged water quality
Operating DFL project	Sharing of public area with	Possible Social conflict between local	Conduct public hearing to get agreement from local authority as well	CSR program	Annually monitoring	The relationship	Zero Conflict with local people

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
	existing local people	people and project workforce	as local people on public land usage between project and local community Corporate social responsibility program to create opportunity for local people to work at project Enhance in health and education sector development for local community Develop sustainable socio eco program			with local people	

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
Standby Generator operation	Ambient Noise	While the operations are not particularly noisy, the background noise levels are very low, therefore any change could impact surrounding residents	Monitoring at the nearest residences to the DFL. Initially, monitoring will involve observations only, to determine if noise is audible at the nearest residences at day and night time. If noise is audible, more detailed monitoring may be required	None	Quarterly monitoring of noise from standby generator operation	The level of audible noise from the operations at the nearest residences	Zero audible noise
Discharge of storm & rain water	Soil and surface water	Discharge of storm & rain water onto	Discharging of storm & rain into proper drains	None	Weekly checking	Storm & rain water not	Zero leakage of discharged storm

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
onto ground		ground could result in flooding, decrease of surface water quality and potentially impact human health			of the drain ways	flowing into drain line	& rain water onto ground
Disposal of general solid waste	Air quality (for incineration)	Incineration of solid waste will result in emission of particulates	Ensure wastes are disposed according to waste management plan	Waste Management Plan	Audit of waste storage and disposal practices	Number of non-compliances with waste management plan identified	Zero non-compliance identified during audit.

Activity	Environmental Aspect	Potential Impact	Mitigation Action	Management Action	Monitoring Activity	Environmental Performance Indicator	Environmental Performance Objective
					every 6 months	during the audit	
Disposal of Canteen waste	Human Health	Improper discharge of the waste could result potentially impact human health by spread diseases from the population of flies / rats / rodents, etc.	Encourage to supply for feeding farm animal	Waste Management Plan	Audit of waste storage and disposal practices every 6 months	Number of non-compliances with waste management plan identified during the audit	Zero non-compliance identified during audit.

7.3.2 Decommissioning/Closure/Post Closure

Decommission/Closure/Post Closure activities may include de-installation of facilities and housekeeping together with reinstatement activities according to agreement between landlord and DFL. There will be no environmental impact due to nature of and Environmental risks which may come out from its closure of are generation of domestic general solid waste and domestic wastewater only. However, there will be social impact to the employee working at DFL and therefore it is requirement to comply with existing Myanmar rules & regulations, and procedures & standing instruction especially for the employee has been included.

7.4 Environmental Monitoring and Management Plan

This section was summarized for the environmental management plan for the proposed project and implementation. Environmental management and monitoring plan has been organized with four main parts: -

- **Impact Assessment and Mitigation Measure** - prepare Environmental Management Plan for the proposed project by environmental experts;
- **Environmental Management Plan** – perform environmental conservation activities to minimize impacts which may arise from the proposed project operation activities by the operator;
- **Auditing & Inspection EMP Performance** – audit & inspect EMP performance to ensure EMP performance of DFL is acceptable which complying with Myanmar laws & regulations, and procedures & standing instructions by relevant authority; and
- **Reviewing and updating of EMP** – to update EMP periodically for the applicable of EMP to suit with changes in operation activity or changes in Myanmar laws & regulations, and procedures & instructions

In the impact assessment, a number of potentially significant impacts were identified. For each of these project activities, mitigation measures were defined to prevent and/or reduce the likelihood or magnitude of impacts and/or to limit the extent of an impact if one does occur. The proposed mitigation measures take into account applicable guidelines, industry practices, expert judgment, design techniques, and operational control.

In addition, environmental monitoring measures were designed to monitor the environment and project activities. The purpose of these monitoring measures is: to evaluate the effectiveness of the mitigation measures that will be put in place; to assess compliance with Myanmar legislation, guidelines and standards; and to compare environmental conditions after implementation of the project to environmental baseline conditions to document possible change and/or impact. Detailed summarized planning and implementation of environmental management plan based on outcome from mitigation measure for the proposed project has been presented in previous Section – 5.

7.4.1 Planning

Environmental Monitoring Plans, which detail tasks to be undertaken and monitoring to be conducted as part of achieving objectives and targets, with frequency and responsibility, has been prepared and any further improvement or modification will be generated by the Factory Manager in line with daily operation. A Monitoring Plan is presented in Appendix B.

Monitoring tasks could, in the future, be incorporated into the Maintenance Management System, which puts together daily work instructions, and was planned for implementation.

A Waste Management Plan has been partially developed by DFL. This should incorporate auditing and waste tracking procedures, which have been developed as part of the EMP.

The only Emergency Preparedness and Response Plan available for review were: the Emergency Response Manual, which had little relevance to operations, and the Oil Spill

Contingency Plan, which referred to environmental measures. The level of implementation of these plans needs to be assessed.

7.4.2 Objectives

The principal objective of the EMP is to develop an effective management tool that will ensure that the diverse range of management and monitoring tasks and activities originally defined in the Environmental Management Plan can be systematically and efficiently performed. The EMP will allow environmental performance trends to be monitored and problem areas identified. This will assist DFL to adopt a pollution prevention approach to environmental management, thereby potentially avoiding environmental damage, costly remedial action, and adverse public reaction.

The outcome will:

- Assure conformance with the Environmental Policy and specifically the dual objectives of pollution protection and continual environmental improvement;
- Demonstrate such conformance to others;
- Ensure the efficient and effective use of resources;
- Seek certification/registration of its EMP by an external organization, should this be deemed desirable.

Development and implementation of an EMP is an evolving process. The first stage, as described in this document, represents a formalization of the EMP initiated during the takeover and upgrading phase on the existing facility and location from the land owner which preferred to be used for project, and modified to take account of the fact that the project is moving into a normal operations phase.

This stage of the EMP focuses on those activities that were initiated during the upgrading phase and those operational activities that can be managed. These can be summarized as:

- Hazardous and non-hazardous waste management;

- Effluent water treatment and discharge;
- Storage and handling of fuels and chemicals;
- Modification and Maintenance of the facility;
- Monitoring of air emissions;
- Environmental noise monitoring;

Subsequent stages will provide additional detail and allow greater external scrutiny and public disclosure.

The structure and hence key elements of this document conform to the ISO 14001. The EMP described herein therefore forms the base upon which an internationally certifiable EMP can be developed.

The following table summarizes the areas where additional detail and resources will need to be applied to achieve this international status, should this be desired. It is understood that DFL's initial goal is to reach the Corporate-level standard within 12 months, at which time it will evaluate the merits of achieving ISO 14001 compliance.

Table 7.3: Comparative Assessment: DFL EMP and ISO 14001

Element of the Environmental Management System	Specific requirements under ISO 14001	UBMCLEMP (Jun 2021)
Policy	Appropriate commitment to continual improvement and pollution prevention Commitment to compliance with legislation Provides framework for objectives and targets Documented and communicated to all employees Publicly available	Yes* Yes* Yes* Yes* Yes*
Planning		
-Environmental Aspects	Maintain procedures for identifying environmental aspects of activities Ensure aspects related to significant impacts are considered in setting environmental objectives	Yes Yes
-Legal and Other Requirements	Maintain a procedure to identify applicable requirements	Yes
-Objectives and Targets	Document environmental objectives Review objectives and targets Must be consistent with Policy (local/corporate)	Yes No Yes
-Environmental Management Programs	Establish and maintain programme for achieving objectives and targets, designating a) responsibilities, b) method and time frame	Yes
Implementation and Operation		
-Structure and Responsibility	Document and communicate roles and responsibilities	Yes Partial

	Management to provide resources required for implementation of EMP Appoint specific representative(s) responsible for ensuring implementation, and reporting on performance	Yes
-Training awareness and competence	Identify training needs Ensure appropriate training received Make employees aware of environmental impacts, and their roles and responsibilities Ensure competency	Yes No Yes No
-Communication	System for internal communication on environmental issues System for external communication on environmental issues Consider and document whether to communicate environmental impacts to external parties	Yes Yes No
-Environmental Management System documentation	Maintain documentation of the core elements of the EMP, and related documents	Partial
-Document Control	Maintain procedures for document control to ensure that documents: a) can be located b) are periodically reviewed c) are readily available d) obsolete documents removed e) are dated, identifiable, and maintained for a specified period	No
-Operational Control	Identify operations associated with significant environmental aspects	Yes Yes

	Establish and maintain procedures for operations which could result in significant impact Stipulate operating criteria Establish procedures relating to the use of goods and services by UBMCL, which have associated significant environmental impacts, and communicate these procedures to suppliers	Yes No
-Emergency preparedness and response	Establish procedures to respond to accidents and emergencies Review and revise procedures Periodically test procedures	No No No
Checking and Corrective Action		
- Monitoring and measurement	Maintain monitoring procedures and record results Calibrate monitoring equipment and maintain records Establish documented procedure to evaluate compliance with environmental legislation	Yes No Yes
- Non-conformance and corrective and preventive action	Establish procedures for investigating non-conformance and undertaking corrective action Ensure corrective action is of the appropriate scale Implement and record changes required to the procedure	Yes Subject to audit Yes
-Record	Maintain procedures for the identification, maintenance and storage of environmental records Establish and record retention times for environmental records	No No

-EMP audit	Establish a programme and procedures for EMP audits	Yes
Management Review	Conduct and document periodic EMP audits by top management Management to address the need for change to the EMP, based on the findings of the audit	No No

**A draft Environmental Policy has been prepared as part of this EMP but will require endorsement by DFL Management.*

7.4.3 Document Control

The guiding principles for document control are as follows:

- They can be located;
- They are periodically reviewed, revised as necessary and approved for adequacy by authorized personnel;
- The current versions of all relevant documents are available at all locations where operations essential to the effective functioning of the EMS are performed;
- Obsolete documents are promptly removed from all points of issue and points of use, or otherwise assured against unintended use; and
- Any obsolete document retained for legal and/or knowledge preservation purposes are suitably identified.

Official documents forming part of the EMP, together with their storage location and the person responsible for their maintenance and upkeep, are summarized in Below Table.

Table 7.4: Document and Data Control

DOCUMENT	MAINTENANCE RESPONSIBITY & PRINCIPAL STORAGE LOCATION	DISTRIBUTION
EMP	Managing Director	Director Manager HSE Coordinator

Individual Roles & Responsibilities	Manager	All individuals with responsibilities for providing input into the EMP
Monthly Monitoring Plan	Maintenance Engineer/Technician	Manager Assistant Manager
Data Record	Maintenance Engineer/Technician	Manager
Corrective Action Record	Maintenance Engineer/Technician	Manager
Environmental Data File	Maintenance Engineer/Technician	N/A
Waste Disposal Inventory	Maintenance Engineer/Technician	Manager Assistant Manager
Waste Disposal Manifest	YCDC (Yedashe) Materials Logistics Controller	Maintenance Engineer
Environmental Site Audit	Manager	Managing Director Director(s) Assistant Manager Maintenance Engineer
EMP Audit	Managing Director	Director(s) Manager
Complaints Register	Maintenance Engineer / Assistant Manager	Managing Director Manager
Incidents Report	Maintenance Engineer / Assistant Manager	Managing Director Manager

All documents will be dated (with dates of revisions), referenced by the descriptors outlined in the above table, and maintained as hard copy in a ring-backed file as a minimum (except the Photographic Database) and as an electronic copy as appropriate. Sample documents for EMP are presented in Appendix A. All environmental documents are to keep according to respective retention period defined by the authority.

7.4.4 Environmental Records

Environmental Data Records are listed below in below Table.

Table 7.5: List of Environmental Data Record for the proposed project

Activity	Monitoring	Data Record Required
UBMCL		
1. Noisy Operations	1. Quarterly monitoring at the nearest residences to the Site. Initially, monitoring will involve observations only, to determine if noise is audible at the nearest residences at day and night time. Monitoring should be conducted during operation. If noise is audible, more detailed monitoring may be required	The level of audible noise from the operations at the nearest residences
2. Air emission	2. Air quality monitoring from established site	The air emission from the operation at established site
3. Usage of domestic water	3.(a) Water quality monitoring 3.(b) Domestic water consumption quantity monitoring	The quality & quantity of domestic water usage from established water sources
4. Discharge of domestic wastewater	4. Weekly checking of the drain way & septic tank	Condition of drain way & septic tank
5. Disposal of general solid waste and hazardous waste	5A. Audit of waste storage and disposal practices every 6 months 5B. Audit of hazardous waste tracking documentation every three months	Number of non-compliances with waste management plan identified during the audit
6. Operation of standby diesel generators for	6. Back-calculate estimated emissions, based on diesel usage, using E&P Guidelines, every year	Estimated emissions per year

emergency power supply		
7. Operation works activities	Maintain a photographic record of the length of the facility throughout the project period	Photos
8. Process fire	Keep a record of manmade fires in the proposed project area	Record
9. EMP Implementation	9.(a) Audit of Environmental Management Plan implementation by DFL Management (internal) 9.(b) Inspection on EMP implementation by relevant authority (external)	Number of non-compliances with environmental management plan identified during the audit

7.4.5 EMP Implementation and Monitoring Procedures

In the development of the DFL EMP, the following DFL EMP Procedures were reviewed:

- Draft Safety Procedures – cover a range of environmental issues:
    - Water Source & Supply System
    - Power Source & Supply System
    - Fire Safety & Emergency Management Practice
    - Traffic Control & Security Practice
    - Public Recreational Area Allotment Practice
    - Decious Food Limited; Refined Sugar Production Housekeeping Practice
    - Waste Management Practice (Waste Handling, transportation and disposal)
    - General Solid Waste Disposal Practice
    - Sewage Wastewater Treatment System
    - Safety and Administration Practice
    - Health and Hygiene Procedures
    - Safe Working Procedures
    - Tools & Equipment
- Draft Operational Procedures for the Proposed Project.

It was identified that procedures are required for:

- Various monitoring and analysis tasks (including Environmental and Waste Auditing) (developed as part of the EMP)
- Taking Corrective Action (developed as part of the EMP)
- EMP auditing (developed as part of the EMP)
- Schedule for reviewing EMP periodically and revising EMP as necessary by DFL Management Team and/or as per standing instruction by relevant authority (developed as part of the EMP)

7.4.6 Summary of EMP

This section sets out the actions/ mitigation measures that must be undertaken during Development. Mitigation measures are an integral part of environmental management, and may include both engineered design features, and a variety of monitoring and management practices.

In Section 5 above, some forms of actions or mitigation measures have been recommended for environmental impacts that have significance assessment of LOW, MEDIUM, HIGH and CRITICAL to ensure significant impacts are manage to acceptable level consistent with legislative requirements. No action or mitigation measures have been recommended for NEGLIGIBLE environmental impacts.

Environmental studies for the proposed project; DFL, has been carried out covering impact assessment and mitigation measures in previous section 5 and EMP for the proposed project operation has been summarized in below Table.

Table 7.6 : Summary of EMP for the UBMCL

Activity	Monitoring & Managing Task	Frequency	Responsibility
Project Development	Monitoring & reporting to ECD	3 monthly	DFL
Waste, Dust, & Noise from Land Clearing	Monitoring amount of general solid waste prior to send YCDC Dust & Mud control by regular water spray at dry season & wash down the truck prior to go in and out	Weekly/ when required	DFL / Assigned Sub-Contractor
Noise & Vibration from Piling	Manage to use High tech (Hydraulic) Piling machine and monitor	Daily (work day only)	DFL / Assigned Sub-Contractor
Waste, Dust, & Noise from Superstructure development	To follow YCDC instruction and notification on construction waste Segregate and reuse to maximize usage as much as possible Dispose non-reusable waste to appropriate/approved recycling Center or dumping ground defined by YCDC All waste generated from construction to collect, record, and dispose at YCDC designated location The truck using for waste transport to wash down all contaminated muds prior to move in and out.	Daily (work day only)	DFL / Assigned Sub-Contractor

	To operate using sound proof type machine at only daytime when background noise is high To use proper scaffolding and cover net for the high rise building which complying with YCDC instruction		
Movement of cargo vehicle/truck using in project development	Optimize transportation facility. Assign vehicle & driver minimum one day ahead. Conduct Morning safety briefing Vehicle inspection & report immediately if any anomaly observed. Select route & time to minimize disturbance to other road users To follow YCDC instruction and notification on construction project vehicle	Daily (work day only)	DFL / Assigned Sub-Contractor
Discharge of industrial waste (if any)	Monitor & pack securely with label prior to dispose at YCDC designated area	when required only	DFL / Assigned Sub-Contractor
Project Operations	Monitoring & reporting to ECD	3 monthly	DFL
Discharge of treated domestic wastewater	Monitoring leakage / overflow of domestic wastewater	Weekly	DFL
Discharge of general solid waste	Monitoring amount of general solid waste prior to send YCDC	Weekly/ when required	DFL / YCDC
Discharge of industrial waste (if any)	Monitor & pack securely with label prior to dispose at YCDC designated area	when required	DFL / YCDC

Discharge of Canteen waste	Monitor amount of canteen waste prior to supply for animal feeding purpose	Daily (work day only)	DFL
Water Usage	Monitor water usage for the project	Daily/Yearly	DFL
Power Usage	Monitor electricity usage for the project	Monthly/Yearly	DFL
Diesel Fuel Usage	Monitor Diesel Fuel Usage for the standby generator (if any)	Monthly/Yearly	DFL

EMP of the proposed project has been presented in details at next Section EMP.

7.5 Emergency Plan

Inevitable Natural Disaster (such as cyclone and earthquake) can be happened in the Yangon Region due to its geological condition and therefore preparedness of DFL disaster management plan in collaboration with local disaster management committee is encouraged.

Inevitable Fire and other accident can also be happened in the proposed project area and its surrounding area due to dense living style around project area. DFL has prepared to response for fire & emergency events in collaboration with Dagon Seiken Township Fire Service Department.

7.6 EMP Implementation Program

The EMP Implementation Program developed as part of the Environmental Management Plan (EMP) are listed in below Table and details are presented in Appendix B.

Table 7.7: DFL EMP Implementation Program

1	Noise Monitoring
2	Air quality Monitoring
3	Monitoring supply water quality, quantity, and storage system
4	Monitoring treated wastewater quality, quantity, and drain system
5	Monitoring Energy Consumption (Electricity Power, Fuel)
6	Monitoring General Solid Waste Generate, Storage & Disposing Practices
7	Monitoring number of Fire, Environmental & Social Accident, and Complaints
8	Digital Photographic Data Recording in Project Activities
9	Audit of supply water source & storage, wastewater treatment and disposing practices
10	Audit of energy source & fuel storage, and maintenance practices
11	Audit of waste storage and disposal practices
12	Audit of Delicious Food Limited; Refined Sugar Production housekeeping services and maintenance practices
13	Compilation of Project EMP Implementation Data for Reporting (Operation Team)
14	Project EMP Implementation Operation Team Meeting & Reporting (Management Team)
15	EMP Implementation Performance Audit (Management Team)
16	Management Team Review for EMP Implementation Performance Reporting (MONREC)
17	EMP Implementation Performance Audit (MONREC)
18	Update Environmental Management Plan based on outcome from DFL Management Review and Instruction from relevant Authority (MONREC)

7.7 The Persons Identified for Implementation of the EMP

7.7.1 Project Component Team Capacity Building for EMP Implementation

The following personnel have been identified as key person as Project Team to the implementation of EMP:

- Managing Director – Responsible for environmental performance of DFL

- Director –Responsible for effective implementation of the EMP across all operating units
- Manager – Management Champion for EMP
- Health, Safety, & Environmental (HSE) Coordinator – EMP Champion, to be the key person involved in development and implementation of EMP

7.8 The Organizations Needed for Implementation of the EMP

7.8.1 Responsibilities of DFL in the Implementation of EMP for Proposed Project

Organization and personnel resources required to effectively implement the EMP is presented detail in below Table.

Table 7.8: Roles and Responsibilities

Position	Role	Responsibility	Specific Tasks
DFL Management			
Managing Director	Management Commitment	Promote commitment to EMP amongst all staff	Ensure EMP is on Management agenda and discussed where appropriate at weekly management meetings
Director	Business Unit responsibility for DFL EMP Check on a) performance of DFL EMP b) Environmental support requirements	Oversee implementation of EMP Internal EMP auditing Provide support to all personnel on technical environmental issues Maintain register of legal and other requirements,	Conduct EMP auditing every 6 months Update register of legal and other requirements every 6 months Ensure EMP is discussed at weekly information exchanges Ensure sufficient resources are available for the successful implementation of the EMP

Position	Role	Responsibility	Specific Tasks
		particularly changing requirements of Myanmar government Handle environmental complaints Provide input to contacts and logistics department on environmental aspects of purchasing decisions	Maintain a register of Environmental Complaints. Address environmental complaints
Delicious Food Limited; Refined Sugar Production Operation Manager (TBA)	Operational Management Commitment	Promote implementation of EMP among all staff	Ensure EMP is on agenda and discussed at regular Operations meetings
Training Officer (TBA)	Training Officer	Conduct environmental awareness training and specific environmental training	Conduct environmental awareness training at induction Conduct environmental training annually,
DFL Operations			

Position	Role	Responsibility	Specific Tasks
Operation Manager (TBA)	Site EMP coordinator	Ensure EMP is implemented by Factory personnel	Ensure Site EMP and environmental issues are discussed at regular Operations meetings Review environmental comments in weekly reports from the DFL Supervisor
Assistant Operation Manager (TBA)	Commitment to EMP	Promote implementation of EMP Environmental reporting Oversee waste management	Discussion of EMP and environmental issues at regular staff meetings Weekly review of environmental comments from Environment officer, and summarize in report to DFL Manager
Engineer Teams (TBA)	Monitoring and Reporting	Ensure monthly monitoring plan is completed Conduct environmental monitoring and reporting required as part of EMP: a) facility rehabilitation b) water quality c) noise d) check waste management practices	Complete monthly monitoring plan Monitoring / observation and recording of noise levels at the nearest residence, quarterly Visual inspection of drain ways weekly. Monitor along the length of the DFL facility for condition of the developed works – every month in the dry season, and every 2 weeks in the wet season, or following a storm. Maintain a photographic record of the facility of the DFL before and after the construction works.

Position	Role	Responsibility	Specific Tasks
			Measure and record quality in surface waters monthly. Keep a record of fires in the project area Check that record of waste being sent for disposal and review
Maintenance Personnel	Waste management	Record on dispose of waste	Record the nature and quantity of waste sent for proper disposal.

b

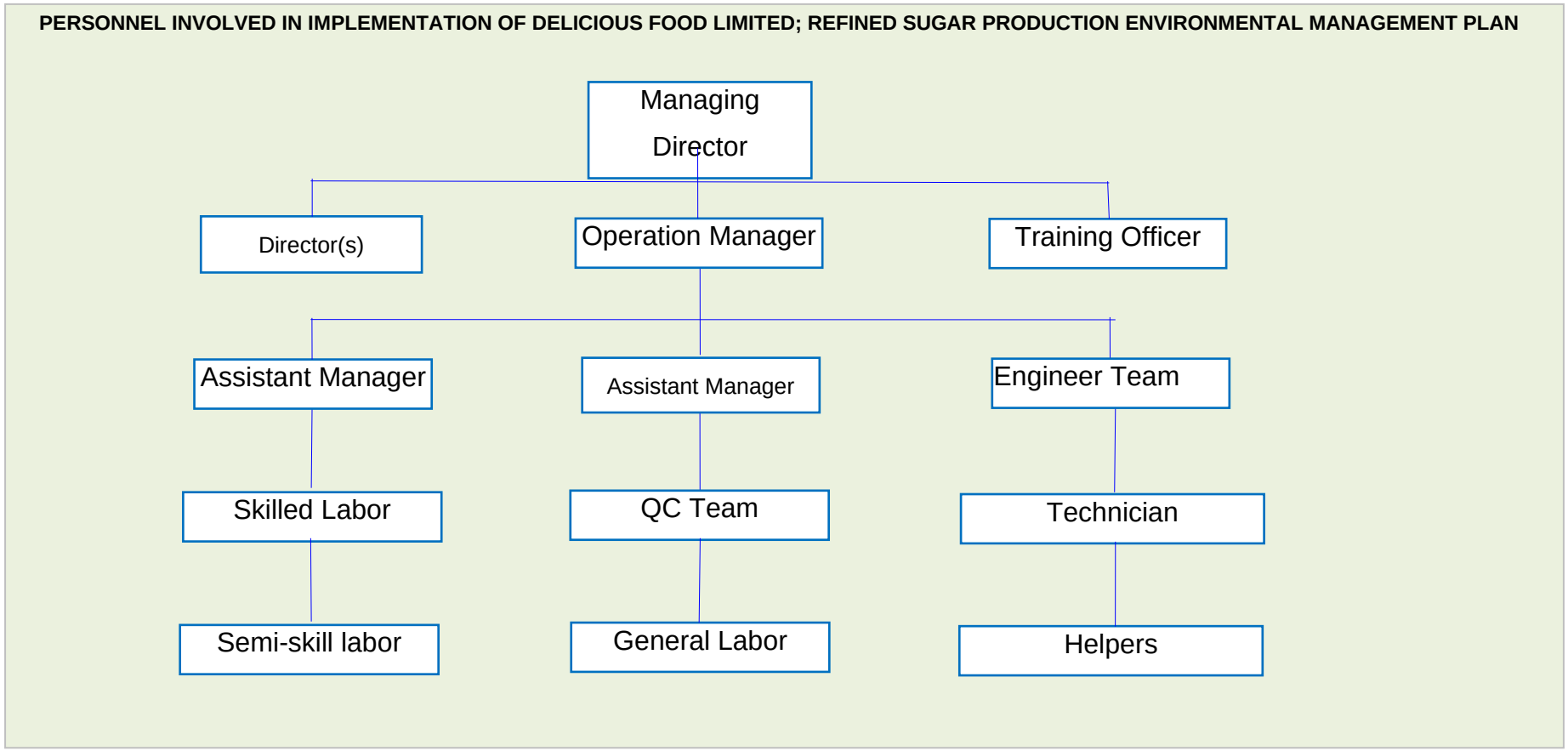


Figure 7.1: Delicious Food Limited EMP Implementation Team Organogram

7.9 Budget for Implementation of EMP

Separated EMP budget (estimated 3000 USD) reserves from DFL Proposed Project will be used in implementation of EMP activities without fail which complying with existing laws & regulation of Myanmar. The separated and dedicated budget will be reserved by the operator (DFL EMP Team mentioned in above Figure 9.1) to implement effective environmental management plan EMP.

(a) Development of Environmental awareness induction, training program and launching
(b) Providing required laboratory use tools & equipment, personal protective equipment (PPE) & tools to run effective environmental management plan
(c) Enhancing proposed Delicious Food Limited; Refined Sugar Production waste management system by management supporting in necessary budget (apart from allowed budget), tools & equipment as and when required.
(d) Some flexible amount of environmental budget will be reserved for EMP audit team (both internal and external auditors) apart from allotted EMP budget.

7.10 Budget for Implementation of CSR

The Proposed Project CSR program has been outlined as per below in sponsoring educational sector, healthcare of local community as well as staff and its family by arranging clinic & medical doctor, providing necessary equipment & training which relating to Delicious Food Limited; Refined Sugar Production throughout operational period without fail to promote CSR.

(a) 50% of 2% annual net profit for the education section
(b) 50% of 2% annual net profit for the health care section

DFL will administer in implementation of proposed project CSR program activities.

Environmental monitoring plan (EMP) for the proposed project operation activities has been programmed are summarized in below Tables

Table 7.9: DFL EMP Implementation Program

Sr.	Activity	Frequency	Action By	Verified by
1	Noise Monitoring	Quarterly	Third party	DFL
2	Air quality Monitoring	Quarterly	Third party	DFL
3	Monitoring of water quality in the Project Area	Monthly	Third party	DFL
4	Monitoring domestic water consumption in the proposed project operation	Monthly	Internal	DFL
5	Diesel Consumption for Standby Power Generator Operating	Monthly	Internal	DFL
6	Inspection of the domestic wastewater drains	Weekly	Internal	DFL
7	Monitoring General Waste Storage & Disposing Practices	Monthly	Internal	DFL
8	Digital Photographic Data Recording for Operations & Maintenance activities	Monthly	Internal	DFL
9	Monitoring Manmade Fire in the project area	Monthly	Internal	DFL
10	Audit of waste storage and disposal practices	Quarterly	Internal	DFL
11	Audit of hazardous waste tracking documentation	Quarterly	Internal	DFL
12	Environmental audit	6 Monthly	Internal & external	DFL, ECD
13	DFL Management Review on EMP implementation	Annually	Internal	DFL
14	Update Environmental Management Plan based on outcome from DFL Management Review and Instruction from relevant Authority	2 Yearly / (or) defined by Authority	Internal & external	Internal & external
15	Environmental Awareness Poster Disclosure	Monthly/Quarterly	Internal	DFL

Corrective Action Procedures and an EMP Auditing Procedure are presented in Appendix

8.0 Finding and Recommendation

The proposed project of Delicious Food Limited is Refined Sugar Production project. All components in the project effectively avoid encroachment direct impact onto environmentally sensitive locations or protected area networks within Yedashe. To minimize environmental impacts associated with installation/upgrading facilities, the site selection for these components has been done carefully. Environmental Management Plan Report of Proposed Project has been prepared in September 2023 which complying with instruction from MONREC. This Report will take into account in the implementation of the proposed project EMP based on the responses to this Report from relevant officials; ECD.

The proposed Delicious Food Limited; Refined Sugar Production project has potential in promotion of domestic mass food product market from its operation and will support improvements in flow of local currency & foreign currency from Food Processing Sector. The benefits accrued due to the present project components are:

i. Manufacturing, distribution, and marketing standard quality refined sugar product for domestic customers;
ii. Utilization of certified machinery and enhancement of machinery efficiency in the business;
iii. Creating more opportunity for local human resources to work Delicious Food Limited Refined Sugar Production Operation.
iv. Enhancement of different level of skills of the International standard manpower by providing appropriate trainings to employee;
v. Created more opportunity for local human resources to work at proposed Project; local personnel manpower 207 nos. will be appointed;
vi. Direct income generation to the Union Government from operations service charges charged by relevant authorities has been accrued;

vii. Myanmar nationals working at proposed Project will be able to acquire International Standard technical know-how from the operation. This will contribute to the personal capability of the national workforce in the long term;

viii. From the standpoints of the Government of the Republic of the Union of Myanmar, personal income tax revenue will increase firstly and other tax revenue like income tax and commercial tax will also be generated;

ix. Implementation of EMP for the proposed project can enhance environmental awareness for the local community as well as other investors to comply properly;

x. 2% of net profit reserves from proposed Project yearly income will be used in CSR activities (such as funding in educational sector, healthcare of local community as well as staff and its family by arranging clinic & medical doctor, etc.) without fail which complying with existing laws & regulation of Myanmar.

The significance of the environmental impacts shall be more due to the normal operation of the DFL relate to the storage and disposal of wastes related impacts than any impacts associated with areas of rich environmental sensitivity. It is to be noted that the resultant potential impacts from these proposals can be offset through provision of proven mitigation measures by waste management plan in complying with standing instruction under Yedashe City Development Committee, YCDC during operation and implementation. While no further detailed EIA shall be required for the proposed components, the addressable of the following key provisions have been included in the TOR for the environmental specialist of the DFL:

- Site Management Plan to address impacts during upgrading /construction;
- Waste Management Plan to address disposal of wastes generated during upgrading;
- Occupational Safety Plan to address occupational hazard during upgrading and operation;
- Waste Management & Disposal Plan to address handling and management during operation of the service apartment;

It is found that there is no activity identified having significant (HIGH and CRITICAL) adverse environmental impacts whilst one MEDIUM as of indirect environmental impact. They are either LOW or NEGLIGIBLE after taking into account specific engineering design features. However, in line with Myanmar Environmental Law & Regulation requirement and good practices, a number of actions have been prescribed to ensure continual environmental management improvement.

There will be thirteen types of impacts due to the implementation of project activities that may have potential negative impact of the project. In thirteen types of impacts, it is found that six types are Negligible and Low impacts and one of them is Medium impact.

It is recommended that the mitigation measures included in the Environmental Management Plan (EMP) report be followed to avoid these impacts and risks.

Therefore, the proposed project of, Delicious Food Limited operate Refined Sugar Production project which is locating at Bago Region, Taung Oo district/province, Yedashe Township, In-Dine village (between north of Yedashe and south of Swar), total area 729.50 acre is a project that should be implemented. It should be noted that there may be no need to continue the Environmental Impact Assessment.

1. **Baseline Assessment**:
- Identify the current environmental state of the production facility.
- Analyze energy consumption, water usage, waste generation, and emissions.

2. **Regulatory Compliance**:
- Ensure compliance with local, regional, and national environmental regulations and standards.

3. **Stakeholder Engagement**:
- Engage with local communities, NGOs, and relevant authorities to gather input and address concerns.

4. **Resource Efficiency**:
- Implement measures to reduce resource consumption (water, energy, raw materials) through
efficient processes and technologies.

5. **Waste Management**:
- Develop a comprehensive waste management plan, including recycling, composting, and proper disposal methods.

6. **Emissions Reduction**:
- Implement technologies to minimize emissions of greenhouse gases and other pollutants.

7. **Water Management**:
- Utilize water-saving technologies and implement water reuse and recycling programs.

8. **Biodiversity Conservation**:
- Identify and protect areas of ecological significance around the production facility.

9. **Training and Education**:

- Train employees on environmentally responsible practices and promote awareness within the community.

10. **Monitoring and Reporting**:
- Establish regular monitoring programs to track environmental performance and report progress.

11. **Continuous Improvement**:
- Regularly review and update the environmental management plan to incorporate new technologies and best practices.

Regarding specific recommendations, it would be beneficial to consult with experts in environmental engineering or sustainable production methods. They can provide tailored suggestions based on the specific circumstances of the refined sugar production facility.

Additionally, consider conducting an Environmental Impact Assessment (EIA) to thoroughly evaluate potential environmental effects and propose mitigation measures.

9.0 Conclusion

The proposed components should proceed through to design and implementation, subject to mitigation measures and monitoring programs identified in the Environmental Assessment and Management Plan, which has been updated during detailed design stage, and based on above recommendations. It may be emphasized that, owing to: (i) scale of activity, (ii) location of the proposed project component, and (iii) 'no environmental sensitivity' of the project, none of the components required to go through the process of IEE & EIA. It may be emphasized that the present EMP report, which identifies potential impacts and suggests appropriate mitigation measures, is sufficient enough to safeguard the environment. There are no significant adverse impacts, which are irreversible or may lead to considerable loss/destruction of environment, envisaged. Proven mitigation measures exist to minimize/mitigate the same. Hence, no further study such as an EIA is required.

As such, an Environmental study has been conducted, and no significant adverse impact has been envisaged, as mentioned above. To further mitigate any environmental impacts, an Environmental Management Plan (EMP) is included.