ENVIRONMENTAL AUDIT REPORT  
2014

EXAMPLE EXPORTS LTD

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INITIAL NEMA ENVIRONMENT AUDIT
EXECUTIVE SUMMARY

Regular environmental audits as well as social audits are conducted to ensure that the facilities conform to good practices, and maintain environmental standards and favourable working conditions for their workforce.

This Environmental Audit was designed to provide information on the impact of the EXAMPLE Exports Ltd on the immediate surroundings. The company has administration offices, grading hall, cold rooms, stores and the related farms in Narok Oluunga area and Kirinyaga farms.

Adherence to health and safety standards is considered good. The health and safety of workers is ensured through provision of necessary PPE, creating a safe working environment and the provision of medical care.

The company has endeavoured to establish a well elaborate environment policy which is all embraced by the management and the general workers. The policy lays emphasis on environmental awareness by the workers, and the general principle on the environment.

Operations within EXAMPLE Exports Ltd. are accordance to practices which are environmentally friendly. There is an overall effort of reducing the pollution load on the environment. Water conservation techniques, energy and waste management practices have being instituted by the facility.

Continuous audits and analysis have ensured minimisation of pollution and good health and safety management. Various recommendations have been made towards the overall improvement of the facility’s operations.

…………………………  ……………..  
Director.  EIA/EA Expert
ABSTRACT

One of the important tools in environmental management is the Environmental Audit (EA). This EA represents the results of a study conducted to determine the environmental impacts the EXAMPLE Exports Ltd has on its site currently and what effects it is likely to have in the future.

The report, in addition to other facts, illustrates impacts that the enterprise has on the Biological, Economic, Social and Physical dimensions of the environment. Positive impacts are examined and evaluated with a view of encouraging continuity of the same while mitigation measures are suggested where negative impacts were observed.

There is no doubt that the management of the company is greatly concerned with environmental safety, as they not only initiated the evaluation exercise but also provided all the required assistance while conducting the study. The company’s need to meet all environmental requirements could not be sidelined.

The auditor anticipates that the management will find the recommendations and mitigation measures advanced herein valuable and useful to their aspired environmental safety endeavours.
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STATEMENT OF ENVIRONMENT POLICY

EXAMPLE Exports Ltd is committed to being a leader in environmentally responsible practices and we strive to continually analyze our operations and insure ongoing improvement in light of technology advancements and best management practices. Protecting our shared environment is fundamental to our company, as it is to our employees, customers and other stakeholders. To support this common goal, we will:

- Comply with applicable Local, state and Regional Environmental laws and statues.
- Continually improve the Environmental performance of our products and processes.
- To protect the health and safety of our employees and the surrounding human Communities and ecosystems.
- To use natural resources, including raw materials, energy and water, as efficiently as Possible.
- To promote health, safety and environmental awareness throughout the organization.
- To maintain a safe and healthy working environment for its employees, with adequate facilities appropriate to the nature of the business activities.
- To minimize the social impact of the company activities and avoid damage to the environment through regular reviews of the business from environmental and management systems audits.
- To undertake environmental impact studies as part of any company relocation or enlargement of existing facilities.
- To provide a clear and concise decommissioning phase of the company.

We will work to achieve these commitments by:

1. Requiring environmental awareness training of all our employees.
2. Working collaboratively with our customers, suppliers and the surrounding community on environmental issues.
3. Evaluating products and processes from the point of view of pollution, dedicating ourselves to finding better alternatives based on preserving pollution in the first place.
4. Consideration the risks of our raw materials and products at all stages of our products life placing priority on risk present during production process and during customers' use of our products.
1.0 INTRODUCTION

The horticulture sub-sector of agriculture has grown in the last decade to become a major foreign exchange earner, employer and contributor to food needs in the country. Currently the horticulture industry is the fastest growing agricultural sub-sector in the country and is ranked third in terms of foreign exchange earnings from exports after tourism and tea. Fruits, vegetable and cut flower production are the main aspects of horticultural production in Kenya. Kenya has a long history of growing horticultural crops for both domestic and export markets. Kenya’s ideal tropical and temperate climatic condition makes it favourable for horticulture production and development. The climate is highly varied supporting the growth of a wide range of horticultural crops.

The sub-sector generates over US$ 300 million in foreign exchange earnings. The total horticultural production is close to 3 million tonnes making Kenya one of the major producers and exporters of horticultural products in the world. Europe is the main market for Kenyan fresh horticultural produce with the main importing countries being United Kingdom, Germany, France, Switzerland, Belgium, Holland and Italy. Other importing countries include Saudi Arabia and South Africa. The industry has had remarkable growth, with exports climbing steadily from 200.6 thousand tonnes to over 346.1 thousand tonnes over the previous years. The increase in exports has been mainly attributed to good weather, improved crop husbandry and conducive horticulture export environment, as well as increased markets for fruits and flowers in Europe.

A well-developed and dynamic private sector has profitably marketed a wide range of horticultural products to diverse international markets. Government intervention in this area has been minimal, mainly facilitating the sectoral growth through infrastructure development, incentives and support services. Structural and macroeconomic reforms, plus the introduction of more liberal
trading environment has also provided a major boost to the country’s horticultural prospects.

Kenya’s horticultural export expansion has also been aided by the country’s preferential duty-free access to EU markets under the Lome Agreement, which currently runs through 2008. If this agreement is not renewed, or if other developing countries obtain similar benefits, Kenya can expect to face even stiffer competition in these markets. Kenya currently faces major competition in its horticulture industry from Cote d’Ivoire, Morocco, Zimbabwe, South Africa and Cameroon.

The company is fully committed to environmental stewardship as displayed by its compliance and adherence to the Environment Management and Coordination Act (EMCA 2000) which states that facilities of this nature need to carry out annual environment audits.

The company has provided all its workers with the necessary personal protective equipments and it is fully concerned about their welfare in terms of health and safety and general well-being. The company does not in any manner use banned chemicals, and their use of chemicals follows strict code of practices. The company has instituted systems which ensure that solid wastes and liquid wastes are effectively managed to prevent pollution of the environment, as it is going to be elaborated in the report.

The company conducts periodic medical check-ups for its workers, it has hired NEMA registered waste collectors who dispose their waste appropriately. Generally the facility is aesthetically appealing and has good neighbourliness with its surrounding facilities.
Plate one: workers at the packhouse.
2.0 ENVIRONMENTAL AUDIT REPORT

This Environmental Audit was designed to provide information on the environmental performance of the EXAMPLE Exports Ltd. on the immediate surroundings, to show how they have progressed and complied with the environmental legislation and avail suggestions and guidelines to mitigate any negative performances by the facility.

2.1 Objectives

This audit was undertaken in order to:

a) Determine environmental impacts of EXAMPLE Exports Ltd
b) To show how the facility complies with National Legislative requirements related to the environment.
c) Predict likely impacts on the environment of EXAMPLE Exports Ltd. If such impacts are not currently visible.
d) Propose cost-effective mitigation measures for the significant negative impacts of the company on the environment.
e) Verify the environmental management plan in operation at the site and make an independent and constructive evaluation of compliance to the same.
f) Evaluate and provide input into the company’s education and training activities including health and safety of the employees.
g) Generate baseline data for monitoring and evaluation of the application of mitigation measures during the project cycle.
h) Demonstrate EXAMPLE Exports Ltd. management’s commitment to safeguard the environment and provide motivation for improvement.
2.2 Assessment scope

The scope of this assessment is governed by the format developed by the Environmental Management and Co-ordination Act 1999 and Environmental (Impact Assessments and Audits) rules and regulations 2003 and the NEMA guidelines and the new format for doing self-environmental audits.

2.3 Environmental legislation

The government’s concern for the environment and its citizens’ welfare by the protection of the same from the harmful effects of pollutants from industries is quite evident. The laws governing the industries and other facilities from polluting the environment are very explicit. Though contained in different government documents and executed by different arms of the government, they all endeavour to protect the environment and human health. The following is a summary of the laws and legislation that protect the environment from environmental pollution by industries and other facilities. The Environmental Management and Coordination Act of 1999 summarize all these laws. NEMA is the national body charged with the execution of the law. The following is a summary of the relevant sections of the law to this environmental audit report of 2009.


Section 68(1)

The Authority (NEMA) shall be responsible for carrying out Environmental Audit of all activities that are likely to have significant effect on the environment.

| COMPLIANCE: |
The company has complied by carrying out this 2014 Environmental Audit.

Section 72 (1)

Any person, who upon the coming into force of this Act (14/1/2000), discharges, applies any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permits any person to dump or discharge such matter into the aquatic environment in contravention of water pollution control standards established under this Part shall be guilty of an offence and liable to imprisonment for a term not exceeding two years or to a fine not exceeding one million shillings or to both such imprisonment and fine.

COMPLIANCE:

The company has complied by not discharging toxics substances into the aquatic environment. It carries out water quality analyses annually, during the environmental audits by laboratories accredited to NEMA.

Section 72 (2)

A person found guilty under subsection (1) shall, in addition to any sentence or fine imposed on him:

Pay the cost of the removal of any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants, including the cost of restoration of the damaged environment, which may be incurred by a Government agency or organ in that respect;

Pay third parties reparation, cost of restoration, restitution or compensation as may be determined by a court of law on application by such third parties.

Other relevant sections for this report include:
• Section 68, - Environmental Audit

**COMPLIANCE:**

The company has complied by carrying out this 2014 environmental audit, as stipulated by the EMCA 1999.

• Section 69, - Environmental Monitoring
• Section 78-85, - Air quality standards and emission
• Section 86, - Standards for waste
• Section 87, - Prohibition against dangerous handling
• Section 90, - Court order to cease operation
• Section 91-93, - Hazardous wastes

- **Single Business License:** - The local authority within which the project operates levies single business licence fee to enable it to offer services to the licensee. These include waste collection and disposal.

**Compliance:**

The company has complied by acquiring the licence. (see the appendices)

- **Registration of factories and other places of work permit:** -

The Factories and other Places of work Act requires every place of work to be registered with registrar of factories. The importance of this is to ensure that all places of work are inspected and found to be safe for the proposed work in the premises.
Other laws that govern protection of the environment which the company needs to adhere to include:

**COMPLIANCE:**
The company is in the process of training its staff on health and safety, and a committee will be formed that oversees the aspects are put in place of the workers.

The Ministry of Labour brought forth Legal Notices on the amended Factories and Other places of work Act which have a direct bearing on the running of the facility. This includes:

1. **Safety and Health Committees rule of 2004 (legal Notice No.31 of April 2004)**

   Compliance:
   
   Been done.

2. **Medical Examination Rules 2005 (Legal Notice No. 24 of April 2005)**

   Compliance:
   
   The company has complied by requiring pre-employment medical certificates and it does periodic medical check ups for its workers.
3.0 PROJECT DESCRIPTION

3.1 Project Location

EXAMPLE Exports Ltd. is situated along North Airport road in Nairobi City, in a leased out godown. This is a packhouse enterprise whose business is exclusively the packaging and export of horticultural produce. The predominant activities in the area are commercial and industrial.(see the appendices)

3.2 Available Utilities:

Kenya Power and Lighting Company (KPLC) supply electricity to the facility through both overhead cables from the main grid and sub-terrain within the facility. During power outages its able to rely upon their diesel generator to supply power. Communication is carried out through landlines, mobile telephony, fax and the Internet.

3.3 Structures

Structures put up at the facility include:
- Administration office
- Packhouse
- Coldstores
- Water tanks
- Changing rooms both for male and females
- Grading hall
- Stores.
- Powerhouse (air receivers and compressors)
- Generator 100 KVA house
- Parking space
3.4 Environmental Conditions

3.4.1 Rainfall and Climate

The zone experiences a double rain-shadow effect from the escarpments and as a result, the basin receives less rainfall than the surrounding highlands. Rainfall received range from 750-900mm per year. There are two rain seasons with the long rains between April and June and the short rains in the period between October and December. The mean annual rainfall for the area is 793 mm, the pattern is however irregular and rainfall quite erratic. Wind speed range from 11-15kms/hr blowing normally towards the Southwest. Temperatures vary throughout the year between a maximum daytime temperature of 20-30°C and a minimum night temperature of 10-14°C. Monthly means vary from 15.9-18.5°C. July has the coolest means and the least range while January and February have the warmest but the greatest mean range of temperatures.

3.4.2 Geology and Soils

This facility is situated in an area whose geology is greatly affected by two main phenomena. First, it lies within the Nairobi County of Kenya Thus the soil distribution in this area is complex having been influenced by the extensive variation in relief, climate, volcanic activity, flow of water and underlying rock types. The soils are derived primarily from weathered volcanic and basement system rocks. The major soil types are: Andesols derived from volcanic ashes, Cambisols rich and young soils, Regosols high in organic matter and Lithosols limited in depth by rock within 10 centimetres. Planasolic alluvial and Lacustune soil deposits are common in the region. Planasolic soils that are dark
brown clays are poorly drained but have highly developed textured topsoil, hence are very fertile soils.

### 3.4.3 Drainage

The land in this area slopes on a North-South aspect producing perfect drainage topography. This gives the facility natural drainage, which would normally guide run-offs without any undue problem. Availability of a network of drainage channels constructed and maintained by the enterprise effectively directs the storm water properly.

Plate Two: coldroom storage.

### 3.4.4 Flora and fauna
The construction and developments put up within the site has removed a significant section of the natural flora and fauna.

4.0 SUMMARY OF FINDINGS/ INVESTIGATION

4.1 General site observation

Preventive measures are key when addressing the work environment. (both indoor and outdoor) The health issues in indoor environment range from those that influence the causation of specific diseases to issues relating to the state of human physiological, perceptual and emotional well being.

The indoor environment greatly influences the productivity of workers. Conditions that cause diseases or the impairment of the ability of the workers to perform are responsible for low work output. This ultimately leads to the reduction of economic development.

In order to effectively evaluate the environmental impacts, it is important to assess the operations of the company. The work environment involves exposure to the physical hazards of weather, terrain, fires and machinery; toxicological hazards and health insults of dust and congestion.

4.1.2 Internal environment

The internal environment of EXAMPLE Exports Ltd:

➤ Office

The facility has the main office that houses the administrative offices. The building was well ventilated and adequately lighted up. Adequate toilets and washroom facilities are also available and the electrical implements including
computers are well set, regular check-ups of electrical appliances should be
done in order to prevent incidences of electrical fires.

➢ **Cold room**

Because of the below normal room temperatures the personnel working within
them were provided with Eskimo-suit to prevent adverse effects to their health
due to exposure to the low temperatures within which they operated. There is
one First-Aid Kit that serves both the grading hall. Eskimos suits are used when
staying in cold store. The storage cold-room operates at $5^0\ C$. The produce is
delivered to the cold-rooms. The shelving system is well organized and
spacious so there is no congestion.

➢ **Grading Hall**

The grading hall is well maintained and without water collections that would
pose hazardous risks to the workers. The hall has proper ventilation, and is also
fitted with adequate lighting fittings. The waste vegetable cuttings are collected
in bins, and then finally disposed.

➢ **Kitchen**

The kitchen is a restricted area and the staffs there were in their necessary attires
at the time of this audit. The kitchen floor was clean and dry to prevent slippery
and accidental falls.

➢ **Stores**

The store is generally restricted and with the necessary appropriate signs on the
management of the store.
Changing rooms

Both male and female are provided for adequate rooms for their personal belongings.

5.0 IDENTIFICATION AND PREDICTION OF IMPACTS

5.1 Socio-Economic Impacts

5.1.1 Economic

1) Employment

EXAMPLE Exports Ltd employs 25 workers including the permanent and general staff and 60 casuals. By employing this number of people the company has played a positive role in elevating their living standards.

2) Licenses to Practise

EXAMPLE Exports Ltd holds several licenses to practise thereby generating the government revenue. Employees also submit taxes to the government.

3) Foreign Exchange

The horticulture industry is one of the major foreign exchange earners for Kenya. It generates millions of dollars every year. For instance, according to HCDA, in 2004, the industry earned KShs. 18,719 billion. Therefore, the sector is a major contributor to the country’s foreign exchange

(3) Personnel Training
It trains its personnel, thereby equipping them with practical skills which would be beneficial to them in the long run.

5.1.2 Social

(1) Cultural Aspects

It employs people from various communities in Kenya creating opportunities for all.

(2) Training

Though the enterprise is not a training institution, it can offer, on-job training to school leavers, students on attachments and other members of the community. The training is practical oriented and impacts important skills to career trainees.

5.1.3 Environmental Impacts

(1) Aesthetics

Aesthetic value generally describes a facilities visual appeal with respect to the living organisms (people) and its environs. Aesthetic appeal incorporates the general state of the environment. When aesthetic value is high it positively influences working conditions and vice versa. The company has endeavoured to maintain its external and internal environment in good order.

5.1.1.1 Fire prevention System

Fires are caused by various activities but from technical point of view, three elements must be concurrently present for fire to erupt. These elements include:

- Oxygen
- Fuel and
- Heat/ignition

Fuel is any combustible material. Examples include, paper, wood, fibre, petroleum fuels, combustible gases, organic solvents, metal, etc.

Examples of ignition include; friction, open fires, spontaneous or explosive reactions, sparks sunlight, etc. Absence of one or more of these elements means non-existence of fire. This forms the basis of fire extinguishing that in essence is: -

- Removal of combustible materials or subdivision of the burning materials.
- Reduction of the oxygen content in the neighbourhood of the fire by use of sand, rags, or powders.
- Cooling by using water.

The facility fire exits. Their fire extinguishers are inspected and are in good condition. There is also water available for extinguishing any fire. There is no incidence of fire reported in the facility. Furthermore, handling of flammable substances and oxidising agents can be extremely hazardous. Diesel fuels are also flammable. Improper storage and handling of these materials could lead to a fire incidences and result in loss and damage to property, and even worse, loss of life and limbs. Majority of fire accidents are caused by electronic equipment or electrical faults.

Plate Four: fire extinguishers present.

5.1.1.2 Run-off prevention systems

Runoff includes effluent as well as rainwater that drains from the building and paved areas. Ideally, all drainage water should be contained on site. The facility channels potential wastewater into a septic tank. The waste water of offices, and
washrooms are channelled into the septic tanks. All rainwater is collected from building roofs and channelled into the storm water drainage.

5.1.1.3 Health and Safety

• **Visual Display Units (VDU)**
Front desk personnel often use computer terminals. It has been shown that computer use under some conditions can cause various repetitive strain injuries (RSIs), such as carpal tunnel syndrome (in the wrist) as well as in the shoulder, neck and back problems. Employees are at special risk if workstations are poorly adjusted and require awkward body postures, or if VDU work is continuous without adequate breaks. VDU work can also produce eyestrain and other visual problems.

• **Lighting**
Good lighting in all areas of facility operations including office rooms is vital because light exerts both biological and socio-economic influence. When a person is deprived of light, that person is deprived of visual information about the environment. This means that the individual’s personal development, social life and general well-being are influenced. There is adequate light in most of the structures.

• **Ventilation**
The company has adequate ventilation in the internal environment.

• **Personal Protective Equipment (PPE)**
Even though workers are provided with appropriate PPE and are conversant with how to use them, there should be a system to enforce their actual usage. At the facility no incentives or disincentives are given to those that adhere to the requirements or act as a deterrent for those who on their own volition refuse to wear the protective clothing.
• **Floors**
Floors, particularly in busy areas, must be kept dry and non-slippery at all times. Slippery floors can endanger the lives of those working at the facility through falling and resultant incapacitation.

• **Housekeeping**
General considerations include:
- Every effort should be made to ensure that every room and compound is always clean and tidy
- Every tool, equipment and machine should be well set and maintained
- Any form of spillage should always be immediately cleared
- Solid wastes (having been separated) should be stored well awaiting disposal
- Gangways should be free of obstruction
- Electrical system should be monitored on a regular basis

The condition of most of the above aspects was good and commendable.

• **Training of Workers**
The company is in the process of training its workers on Occupational Health and Safety and two on first aid. This however should be a continuous process done on a regular basis. The workers attitude towards trainings is good.

• **Ergonomics**
All personnel should be trained on the basic ergonomic principles. This should cover the correct lifting and setting down techniques to prevent incidences of hernias, sprains, strains, back injuries and other muscular-skeletal disorders due to improper handling of heavy objects.
Appropriately designed and diligently practiced preventive measures will do much to lower the frequency of occupational injuries and illnesses among the workers.

Language barriers and relatively low educational levels often represent formidable challenges to the effectiveness of training and indoctrination programmes, while the high rate of turnover dictates the frequent repetition of these programmes. It is important to remember that the health and safety of workers in this industry is an essential element in the enjoyment and satisfaction of patrons upon whose goodwill of success and the eventual survival of the enterprise depends.

- Sanitation Provisions

There are several and well kept sanitary facilities that adequately cater for its workers. The toilets and the wash rooms are well maintained.

5.1.1.4 Soil Quality management

Soil is a rich but fragile ecosystem. It is also living. One handful of good soil is home to millions of micro-organisms, which ensure and sustain fertility. In some areas of the world, even a centimetre of soil can take centuries to develop. But it can be lost forever- blown away by wind, washed off deforested slopes by rain, sterilized by salts, poisoned by chemicals, bled dry of nutrients or buried under swamps or buildings. The soil situation at EXAMPLE Exports Ltd farms in Narok and Kirinyaga is not affected by the chemicals nor pollution, negligible amounts of chemicals go to the ground.

5.1.1.5 Water resource management

EXAMPLE Exports Ltd fosters the efficient use of water through a range of conservation techniques, which minimize threat to the environment. To ensure
continual improvement based upon Audit and Risk Analysis, the following guidelines are observed.

- Implementation of any action recommended during the Environmental Assessment Risk Analysis.
- All water utilized should be metered and recorded.
- Water should be harvested and stored utilised.

5.1.1.6 Air Quality

Ambient air quality affects the quality of life enjoyed in an area. If the air components are in greater quantities than the norm or if there are contaminants in quantities, characteristics and duration such as to be deemed directly or indirectly injurious to humans, plants, animals, life support systems, other media and or property then the quality of life within that region would be compromised. Ambient air quality however is not only as a result of emissions from the vicinity, but rather it is influenced by extent and type of pollutant emitted from or towards the area and meteorological conditions such as temperature, wind and stability.

5.1.1.7 Waste management

Solid waste
These wastes include runner beans and baby corn stalks, old vehicle batteries, packaging, scrap, paper, spent chemical containers, rejected products, plastics and general domestic refuse.

Solid waste management depends primarily on waste volumes and characteristics. The following illustrates available waste management alternatives and their impacts on human health and the environment. Management of solid wastes begins with storage at the source. The main factors in the selection of a storage
device are its compatibility with the source of generation, health risk, efficiency of
collection and cost. The volume of storage is based on the density of wastes and
the frequency of collection.

Collection process essentially involves transfer of solid wastes from the storage
receptacle to the place of disposal. Both manually operated and motorized
equipment are used for this purpose.

The most common treatment and disposal methods of solid waste are: -

- Land filling,
- Compacting,
- Composting,
- Incineration (pyrolysis) and
- Anaerobic digestion.

**Solid waste types generated:**

- Organic waste (in form of french bean and baby corn stalks)
- Empty containers, plastics for agricultural chemicals
- Paper from office work
- Scrap metal & old tyres from obsolete machinery, tractors and cars.
- Packaging materials i.e., cartons.

**Liquid wastes**

Packhouse, washroom and office block liquid waste is directed to the septic
tanks for treatment and eventually exhausted by reputable exhausters.

**Noise**

Noise is an unwanted or undesired sound. Extremely high noise levels may rapture
the internal ear membranes resulting in severe hearing loss. High-frequency noise
will produce more damage than low frequency noise, however, the longer the duration of exposure, the greater the potential hazard. Noise that is continuous for more than 5 hours a day at a level of 85 to 90 decibels or more is injurious to hearing. Other than causing permanent hearing impairment, noise is known to cause a host of other non-auditory effects. It may interfere with speech communication, cause annoyance or distraction. It has been reported to reduce output and efficiency and lead to fatigue.

Noise source at this facility includes the diesel generator (94.5 db) and air compressors. (65.6) However the compressor operates below the statutory limit of 90dBA, the generator needs to be sound proofed. This means that the magnitude and length of exposure of the noise is unlikely to cause noise induced hearing loss.

**Energy use**

Human activity and development require energy. The main sources of energy today are hydroelectricity, oil, gas, coal, solar, wind and nuclear energy. Studies (ECE, 1976) show that more than one-half of the daily energy consumption is wasted due to losses induced by technology and human negligence. Measures to encourage energy conservation and to improve efficiency have been rather limited in developing countries, where industries often consume two to five times as much fuel for a given process due to the use of old industrial equipment (Flavin, 1986). Many buildings and transport systems in developing countries are old and lack proper maintenance, and hence subsidisation of energy prices to all types of consumers, poor metering of consumption (or its total absence in some cases) and high losses in energy transmission (World Bank, 1986). Energy use at the facility is used to run most of the machines and lighting. Main types of energy in use are electricity. Energy use at the facility is limited to the running of machines and lighting requirements.
6.0 MITIGATION MEASURES

The following measures should be undertaken in order to achieve even greater levels of environmental protection within the facility.

6.1 Mitigation Measures

6.1.1 Aesthetics

EXAMPLE Exports Ltd the company has managed to green the facility with vegetation and its aesthetic appeal is greatly improved specifically in the farms.

6.1.2 Water consumption

The water abstraction points should be metered and amounts of water quantified.

6.1.3 Waste Management

The company waste management systems are up to date and should ensure that they send the water samples for analysis thrice a year.

6.1.4 Health and Safety

An authorized safety officer should carry out periodic inspection of all storage areas. It is also recommended that persons should not work alone in a storage
area containing toxic substances. Storage areas should be located away from process areas, occupied buildings and other storage areas. In addition, they should not be in close proximity of fixed sources of ignition.

6.2 Health Risk Factors

In general the risks to health in floricultural enterprises are mainly due to:
- Extreme temperatures—cold
- Infectious disease
- Ergonomic factors
- Mechanical factors
- Psychosocial factors.

6.3 General Considerations

Lighting (illumination)

All workstations must be adequately lighted to avoid injury. All workstations at EXAMPLE Exports Ltd were well lit.

Ventilation

Ventilation in the internal environment at EXAMPLE Exports Ltd. was good.

Personal Protective Equipment (PPE)

Workers at EXAMPLE Exports Ltd were provided with suitable PPE’s.

Housekeeping

General considerations include:
- Every room and the compound outside should always be clean and tidy
Every tool, equipment and machine should be well set and well maintained.

Spilled oils should immediately be cleared.

Solid wastes (having been separated) should be stored well awaiting disposal.

Gangways should be free of obstruction.

Electrical system should be monitored on a regular basis. The company has an annual maintenance program with complete check every 3 months.

**Employees’ pro-active safety attitudes**

Regular training on pro-active safety attitudes for employees would instil a sense of responsibility upon the employees thus, avoiding occurrence of incidents due to negligence, ignorance or carelessness.

**Training in Occupational Health and Safety**

This is most important and should be carried out regularly.

**First Aid**

First aid training has been undertaken.

**Changing rooms**

There were sufficient numbers of toilets and showers within the facility and were separated for both sexes.

**Falls**

Spills of hazardous nature must be cleaned immediately. In case of spills notices must be put around the area to warn oncoming persons to steer clear off the area or
to walk with caution. Floors should always be kept clean and high standards of hygiene upheld.

**Control of health hazards**

Health Hazards can be prevented by ensuring that:

- First aid kits must be readily available and adequate numbers of personnel trained in providing first care.

**Ergonomics**

All personnel involved in manual handling of heavy objects should be trained on the basic ergonomic principles.