

ENVIRONMENTAL MANAGEMENT PLAN

SANDVELD SERVICE STATION

EPUKIRO POST 3 VILLAGE

EPUKIRO CONSTITUANCY, OMAHEKE REGION



1. BACKGROUND

Omaheke Agri and General Dealer CC (Sandveld Service Station) operate in Epukiro Post 3, Omaheke Region.

The Environmental Management Plan (EMP) has been developed to address potential environmental impacts associated with activities related to the hazardous substance treatment, handling, and storage of fuel facilities including petrol, diesel, liquid petroleum gas or paraffin at the operation of Sandveld filling station.

The EMP has been developed in terms of the Environmental Management Act (EMA), 2007, the EIA Regulations – 2012, the EIA policy of 1995 and international environmental treaties and conventions binding Namibia.

According to the Environmental Management Act (2007) and its Regulations (2012), operation of filling station require an Environmental Clearance Certificate issued by the Directorate of Environmental Affairs under the Ministry of Environment and Tourism.

2. SERVICE STATION ACTIVITIES

Sandveld Service Station operating with the following activities.

- Fuel distribution
- Off-loading of fuel
- Dispensing of fuel into vehicles
- Yard cleaning
- Corrective
- Maintenance (Replacing of nonfunctioning equipment)
- Removal of infrastructures
- Transportation off-site
- Site rehabilitation and landscaping

3. OBJECTIVES

The Environmental Management Plan (EMP) is to take a pro-active route by addressing potential problems before they occur.

The objectives of the EMP are:

- To outline mitigation measures to manage environmental and socio-economic impacts associated with the filling station site.
- Provide a framework for implementing the management actions recommended in the plan for operational and decommissioning of the activities associated with the management of a filling service station.
- To ensure that Sandveld service station will operate according to the stipulated requirements of Namibia Environmental Management Act (No 7 of 2007)
- To ensure that Sandveld filling station will comply with relevant environmental legislations of Namibia and other legal requirements as per Namibia Constitution.

4. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

Legislations are used as guiding tools during the implementation of the EMP. The proponent will be required to abide to different policies, laws, regulation relating to the operation of Sandveld filling station.

- 4.1. The Environmental Management Act No. 7 of 2007 is the primary custodian of the environment which aims to.
 - promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment.
 - of assessment and control of activities which may have significant effects on the environment; and
 - to provide for incidental matters.)

- 4.2 The following are the relevant legislation and policies that will govern Sandveld filling service station.
 - The Constitution Namibian
 - Environmental Management Act 7 of 2007
 - Waste management strategy that follows recycling, reuse and reducing will be commissioned throughout the operations.
 - Soil Conservation Act 76 of 1969
 - Provisions for hazardous waste “for the control of substances
 - The proponent shall separate waste at site.
 - The Act requires that there be need to register a controlled area with certificate to operate air polluting activities.
 - The retail license covers all elements and requirements of this Act from the Ministry of Mines and Energy.
 - Water Resources Management Act 24 of 2004
 - Liability of clean-up costs after closure/ abandonment of an activity
 - Protection from surface and underground water pollution
 - Health and Safety Labour Act (No 11 of 2007)

- Welfare of employees and protects employees from unfair labour practices.
- Hazard management plans and enforcing Occupational Health and Safety (OHS) management systems
- Oil and Gas Petroleum Products & Energy Act (1990)
- The installation of underground storage tanks, pumps/dispensers and pipe work at service stations and consumer installations.
- The Service Station must be constructed according to SANS standards.

5. ENVIRONMENTAL MANAGEMENT

There is a strong need to clearly outline the roles and responsibilities of all stakeholders to ensure that the EMP is fully implemented. There is also a need for the proponent to appoint an overall responsible person (Environmental Control Officer) to ensure the successful implementation of the EMP. The Environmental Control Officer needs to have qualifications and knowledge in environmental management /sciences and understanding of EMP administration.

6. ROLES AND RESPONSIBILITIES

6.1. Sandveld filling Service Station has overall responsible for all financial and manpower obligations to implement this EMP and the appointment of other personnel responsible for the implementation and operation of this EMP to ensure that all required resources and mechanisms for environmental management are in place. Required to take responsibility of all environmental issues i.e. waste management and safety of employees. The management will record and report all incidents on site.

6.2. Monitoring authority

Management will responsible for the review and approval of the EMP documents, including regular auditing for compliance to the approved EMP framework, and required to take independent responsibility of the implementation of this EMP for renewal of the environmental clearance certificate.

7. MANAGEMENT OF ENVIRONMENTAL ASPECTS AND IMPACTS

Service stations are associated with spillages which have a consequence of contaminating water sources, underground water, and soil. Waste management is also among the issues which need more attention. The following guidelines give clarity on some of the issues that Sandveld Service Station shall consider in this plan.

7.1. Hydrocarbons management

- If any spillage occurs, contaminated soil shall be collected in a holding tray or drum and disposed at a licensed hazardous waste site.
- Any spillage of more than 200 liters must be reported to the Ministry of Mines and Energy as per the Petroleum Products Act.
- Sandveld Service Station shall take all reasonable measures to prevent surface or groundwater pollution from the release of oils and fuels.
- In addition, sufficient space should be left in fuel storage tanks to allow fuel expansion and to prevent leakage of fuel from the fuel storage facility.

7.2. Access routes and work sites

Fuel tanker trucks shall access the service station via the C46 road (Gobabis – Epukiro) road) or via Otjinene Epukiro Road C... In Epukiro village sign board will direct the allocation of Sandveld filling station.

8. POTENTIAL IMPACTS ON THE OPERATION OF SERVICES STATION

8.1. Fire and Explosion Hazard

Fire and Explosion can happen during the operation phase. Hydrocarbons are volatile under certain conditions and their vapors in specific concentrations are flammable. If precautions measures are not taken to prevent their ignition, fire and subsequent safety risks may arise, and the following measures shall be adhered to:

- Sufficient water should always be available for firefighting purposes.
- Good housekeeping such as the removal of flammable materials including rubbish, dry vegetation, and hydrocarbon-soaked soil from the vicinity of the service station.
- Firefighting trainings
- The Emergency Response Plan should be implemented and should address the potential spills.
- Regular inspections to inspect and test firefighting equipment and pollution control measures at the service station.
- Fuel tanks should be established Operation
- All fire precautions and fire control at the service station must be in accordance with SANS 10089-1:2008, or better.
- There shall be an emergency evacuation point.

8.2. Surface/groundwater contamination

Spillages might occur when offloading fuel from the trucks and when dispensing fuel to customer vehicles. Precaution measures will be therefore taken to prevent contamination of water as follows:

- Risks of such an impact can be lowered through proper training of staff and installation of suitable containment structures
- Install oil interception and leak detection systems.
- Install isolating surface drainage system.
- Implement integrity tests on the tanks.
- Concrete slabs/interlocks to cover the ground.
- Proper toilet facilities
- Empty containers of chemicals should not be dumped anywhere, all the garbage should be collected by the city garbage collectors.
- Overfilling of the tanks may also take place and proper monitoring of the product levels in the tanks.
- Equipment and materials to deal with spill clean-up will be readily available on site and staff will be trained in the usage of these products
- Spillage control procedures must be in place according to SANS 10089-1:2008 and SANS 100131-2 standards, or better,
- The condition of the fuel reticulation system will have to be checked regularly and repaired to prevent leakages.
- Any spillage of more than 200 liters shall be reported to the relevant authorities and remediation instituted (refer to section 49 of the Petroleum Products and Energy Act, 1990 (Act No. 13 of 1990))
- The condition of the fuel reticulation system will be checked regularly and repaired to prevent 39 leakages.

8.3. Air quality

Fuel will be off-loaded into the tanks for storage consequently this can affect the air quality. Hydrocarbon vapors will normally be released during off-loading as liquid displaces the gaseous mixture in the tanks. Hydrocarbons are a class of compounds primarily composed of carbon and hydrogen and there are major components of oil, natural gas, and pesticides. These substances contribute to the greenhouse effect and global warming, depletion of the ozone, increase occurrences of cancer, respiratory disorders and reduce the rate photosynthetic in plants.

- Vent pipes shall be placed in such a manner as to prevent impact on potential receptors

- Vehicle idling time shall be minimized by putting up educative signs. All venting systems and procedures must be designed according to SANS standards and placed in a sensible manner.
- Regular check tests and audits
- Vehicle idling time shall be minimized by putting up educative signs.

8.4. Hydrocarbon waste

Liquid waste in the form of oils, petrol and diesel is normally the potential waste generated at the service station. Hydrocarbon waste is flammable hence it can cause fires. It can also contaminate underground water bodies.

- Construct oil/water separator
- This impact can be reduced through proper training of the operators.
- All spills shall be cleaned up immediately and if spill is more than 200 L, it will be reported to the Ministry of Mines and Energy.
- The presence of an emergency response plan and suitable equipment is advised, to react to any spillage or leakages properly and efficiently.
- Proper monitoring of the product levels in the tanks shall take place to eliminate overfilling.

8.5. General waste

Litter in the form of papers and plastics is likely to be produced. In general, the impact of waste is expected to be localized and it will be of low significance if mitigation measures are implemented.

- Strictly, no burning of waste on the site or at the disposal site, as it possesses environmental and public health impacts.
- Place bins around the service station
- Separation of waste should clearly indicate.
- Waste shall be dumped at an authorized designated area
- Regular inspection of the site

8.6. Risk of Occupational Health and Safety

Hazards which are likely to be encountered include fire, explosion, occupational stress, and skin related diseases like dermatitis.

- Conduct Hazard identification and risk assessments
- All Health and Safety standards specified in the Labour Act shall be complied with.
- Provide all staff on site with protective equipment
- Train workers how to use adequately the equipment

- Training on occupational health and safety will be provided.
- Safety talks to be done every day before commencement of work
- Implementation of Behavior Based Safety System
- Provisions of First Aid Box and trained person in first aid.
- Any leakage/spillage shall be immediately attended and provision of urgent cleaning.
- Work area will be monitored to maintain work environment free from any hazards.
- Provision of adequate and maintenance of Fire Extinguishers at site
- Provisions of immediate accident/incident reporting and investigation.
- Safety Posters and slogans should be exhibited at conspicuous places

8.7. Traffic impact

Traffic impacts are expected to be of low significance because an entry and exit point is included in the design of the service station. An entrance and exit way will prevent congestion and accidents at the service station. If mitigation measures are put into action, the probability of traffic congestion and accidents happening will be unlikely and the significance will be low.

8.8. Safety and Security

Robbers might be attracted, and the following measures is implemented on site:

- 24 hours employing security officer
- Install CCTV cameras
- No keeping of safe keys on site
- Emergency numbers should be displayed clearly at the filling station

8.9. Cumulative

Fuel is going to be offloaded which can result in the release of hydrocarbon vapors which have an impact of reducing the air quality and causing fires and explosions. Hydrocarbon vapors if released in the atmosphere can also cause global warming, reduction of photosynthesis of plants and cancer as follows:

- All possible sources of ignition in the entire area shall be eliminated
- Sufficient water shall always be available in case of fire for firefighting purposes.
- Vent pipes shall be placed in such a manner as to prevent impact on potential receptors.
- Regular check tests

9. POSITIVE ECONOMIC IMPACTS

9.1. Employment creation

Definite jobs shall be created during the life span of the business. Currently Sandveld Service Station has employed three fuel attendance, manager, supervisor, and a cashier etc.

9.2. Accessibility of fuel

The service station has brought positive impacts to the inhabitation of Epukiro Constituency with regular availability of fuel. Moreover, a Grocery shop which sells a variety of fast foods, Agri product is also available on site. The probability of fuel supply is going to be definite; the severity will be very beneficial, and the overall significance will be very high, and we will maintain a consistent supply of the fuel and related products.

9.3. Improvement of general welfare for locals

The business has a high improve the general welfare for the local population and the locals will benefit during the life span of the business.

10. DECOMMISSIONING AND TANK REMOVAL/REPLACEMENT

The decommissioning of tanks should be overseen by a professional from the oil industry and the Environmental Officer. The old tanks should be disposed of at a suitable landfill site and disposal certificates provided.

During the decommissioning phase of the service station or replacement of tanks, a contamination assessment will be carried out. This assessment will be used to determine whether any contamination of the site has occurred and if so whether it presents any additional risk to human health and the environment.

11. ENVIRONMENTAL MONITORING

An environmental monitoring plan provides a delivery mechanism to address the adverse environmental impacts of a project during its execution, to enhance project benefits and to introduce standards of good practice to be adopted. An environmental monitoring plan is important as it provides useful information and helps to assist in detecting the development of any unwanted environmental situation, and thus, provides opportunities for adopting appropriate control measures.

12. CONCLUSIONS

The above Environmental Management Plan, if properly followed and implemented, will help to minimize unfavorable impacts on the environment. Where impacts occur, instant action will be taken to reduce the increase of effects related with these impacts.

The Environmental Management Plan should be used as an on-site reference document during the operation and auditing should take place to determine compliance with the EMP for the proposed site. Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken.