ENVIRONMENTAL MANAGEMENT PLAN

PROPOSED NEW MWENE FUEL SERVICE STATION
AT OMUNTELE, OSHIKOTO REGION

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1. INTRODUCTIONAND BACKGROUND

The EMP in the following sections has been developed specifically for use at the proposed worksite (s) meant for Mwene Fuel Service Station cc at Omuntele in Oshikoto Region. This EMP is designed to address potential issues based upon discussions among the appointed consultants, the proponent, concerns and interest from public participations and from a site visit by the consultants. The EMP is additional to and compliments Mwene Fuel Service Station cc environmental policy and safety management systems to be developed by the proponent. This Environmental Management Plan (EMP) provides guidance for managing the construction, operation and decommissioning of the new Mwene Fuel Service Station cc at Omuntele. The EMP is a working document which consists of a set of mitigation measures that will be implemented to eliminate, offset or reduce adverse environmental impacts to acceptable levels during the various phases (i.e. construction, operations and decommissioning).

The construction, operation and decommissioning involve:

- The installation of the new fuel storage facilities.
- Installation of fuel network pipelines and associated dispensing points.
- Transport of fuel with road transport tanker trucks.
- Dispensing and reticulation of fuel.
- Removal of tanks, pipelines and dispensing equipment.
- Removal of associated buildings and other infrastructure.

The fuel retail facility will be supplied with fuel via road transport tanker trucks.

This environmental management plan (EMP) aims to take a pro-active route by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigating measures might be included if necessary.

All Contractors and sub-Contractors taking part in any of the phases should be made aware of the contents of the EMP and of the Environmental Impact Assessment (EIA), so as to plan their activities accordingly in an environmental sound manner.

2. ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

The Environmental Management Plan (EMP) is the tool that can provide the assurance that the proponent has made suitable provisions for mitigation. The EMP describes the methods and procedures for mitigation and monitoring the impacts identified in the EIA report. The aim of the EMP is to:

- Ensure that the project complies with the goals of the Namibian Environmental Management Act (No. 7 of 2007) and;
- Provide a framework for implementing the management actions recommended in the EIA for construction, operational and decommissioning phases of the activities associated with the development of the proposed fuel retail facility.

The following legislation governs the EIA/EMP process in Namibia, pertaining to the proposed development.

2.1 The Namibian Constitution

The Constitution of Namibia encourages wise and sustainable use its resources. According to Article 95 of Namibia's Constitution provides that the State shall actively promote and maintain the welfare of the people by adopting policies aimed at the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources in a sustainable way for the benefit of all Namibians, both present and future.

Article 95 of Namibia's constitution stipulates that:

"The State shall actively promote and maintain the welfare of the people by adopting, inter alia, policies aimed at the following:

(l) management of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory."

This article recommends that a relatively high level of environmental protection is called for in respect of pollution control and waste management.

2.2 Environmental Assessment Policy (1994)

The environmental assessment policy details the principles of achieving and maintaining sustainable development that underpin all policies, programmes and projects undertaken in Namibia. This is related in particular, to the wise utilization of the country's natural resources, together with the responsible management of the biophysical environment, which is intended to benefit both

present and future generation. The policy also provides guidance on undertaking the assessment procedures.

It further provides a guideline list of all activities requiring an impact assessment. The proposed development is listed as a project requiring an impact assessment as per the following points in the policy:

- Transportation of hazardous substances & radioactive waste.
- Storage facilities for chemical products.
- Industrial installation for bulk storage of fuels.

The policy provides a definition to the term "environment" - broadly interpreted to include biophysical, social, economic, cultural, historical and political components and provides reference to the inclusion of alternatives in all projects, policies, programmes and plans. Cumulative impacts associated with proposed developments must be included as well as public consultation. The policy further requires all major industries and mines to prepare waste management plans and present these to the local authorities for approval.

Apart from the requirements of the Draft Environmental Assessment Policy, the following sustainability principles need to be taken into consideration, particularly to achieve proper waste management and pollution control:

2.2.1 Cradle to Grave Responsibility

This principle provides that those who manufacture potentially harmful products should be liable for their safe production, use and disposal and that those who initiate potentially polluting activities should be liable for their commissioning, operation and decommissioning.

2.2.2 Precautionary Principle

There are numerous versions of the precautionary principle. At its simplest it provides that if there is any doubt about the effects of a potentially polluting activity, a cautious approach should be adopted.

2.2.3 The Polluter Pays Principle

A person who generates waste or causes pollution should, in theory, pay the full costs of its treatment or of the harm, which it causes to the environment.

2.2.4 Public Participation and Access to Information

In the context of environmental management, citizens should have access to information and the right to participate in decisions making.

2.3 Environmental Management Act of Namibia (2007)

The Environmental Management Act, No.7 of 2007 specifies the environmental assessment procedures to be followed and the activities that require an EIA. The Act provides a procedure for environmental assessments as indicated under Part VII and Part VIII, which is set out to:

- ❖ better inform decision makers and promote accountability in decisions taken;
- ❖ strive for public participation and involvement of all sectors of the Namibian community in the environmental assessment process;
- ❖ take into account the environmental costs and benefits of proposed policies, programmes and projects;
- ❖ take into account the secondary and cumulative environmental impacts of policies, programmes and projects; and
- ❖ Promote sustainable development in Namibia, and especially ensure that a reasonable attempt is made to minimize the anticipated negative impacts and maximize the benefits associated with the development.

2.4 Environmental Management Act Regulations (2012)

The Environmental Management Act Regulations have been finalised (February 2012) and have been used as guidance in the compilation of this scoping report. Namibia's Environmental Assessment Policy was the first formal effort in the country to regulate the application of environmental impact assessment. The regulation set out the process to be followed during the compilation of EIA reports as well as the minimum requirements for such reports.

2.5 National Heritage Act No. 27 of 2004

The Heritage Act of 2004 makes provision for the developer to identify and assess any archaeological and historical sites of significance. The existence of any such sites should be reported to the Monuments Council as soon as possible. The Council may serve notice that prohibits any activities as prescribed within a specified distance of an identified heritage/archaeology site.

2.6 Water Resource Management Act (2004)

The Water Resources Management Act, No.24 of 2004 provides for the management, development, protection, conservation, and use of water resources; to establish the Water advisory Council, the Water Regulatory Board and the Water Tribunal; and to provide for incidental matters.
Section 25 imposes an obligation on the Minister responsible for health to ensure that the water supply is healthy and safe.

2.7 Water Resource Management Act of Namibia (2004)

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Section 25 imposes an obligation on the Minister responsible for health to ensure that the water supply is healthy and safe.

2.8 Petroleum Products and Energy Act of Namibia (Act No. 13 of 1990)

To provide measures for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance of a price therefore; for control of the furnishing of certain information regarding petroleum products; and for the rendering of services of a particular kind, or services of a particular standard, in connection with motor vehicles; for the establishment of the National Energy Fund and for the utilization thereof; for the establishment of the National Energy Council and the functions thereof; for the imposition of levies on fuel; and to provide for matters incidental thereto.

Regulated by the Ministry of Mines and Energy

2.9 Pollution Control and Waste Management Bill (guideline only)

The proposed development of the fuel retail facility *(Mwene Fuel Service Station cc)* at Omuntele in reference to the above, only applies to Parts 2, 7 and 8 respectively.

Part 2 states that no person shall discharge or cause to be discharged any pollutant to the air from a process except under and in accordance with the provisions of an air pollution licence issued under section 23.And also further provides for procedures to be followed in licence application, fees to be paid and required terms of conditions for air pollution licences.

Part 7 stipulate that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances.

The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions.

Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response strategies.

2.9.0 Atmospheric Pollution Prevention Ordinance of Namibia (No. 11 of 1976)

Part 2 of the Ordinance governs the control of noxious or offensive gases. The Ordinance prohibits anyone from carrying on a scheduled process without a registration certificate in a controlled area. The registration certificate must be issued if it can be demonstrated that the best practical means are being adopted for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.

Regulated by the Ministry of Health and Social Services

2.9.1 Hazardous Substances Ordinance (No. 14 of 1974)

The Ordinance applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary

purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.

Regulated by the Ministry of Health and Social Services

2.9.2 Public Health Act (Act 36 of 1919)

Section 111 makes provision that requires the local authorities to take measures for the prevention of water pollution. Section 119 provides that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.

Section 120 requires local authorities to take measures for maintaining their district at all times in a clean and sanitary condition and for preventing the occurrence therein of, or for remedying or causing to be remedies, any nuisance or condition liable to be injurious or dangerous to health.

Various forms of nuisances are set out in section 122. For present purposes the following are most relevant:

a) any dwelling or premises which is or are of such construction or in such a state or so situated or so dirty or so verminous as to be injurious or dangerous to health or which is or are liable to favour the spread of any infectious disease;

(e) any accumulation or deposit of refuse, offal, manure or other matter whatsoever which is offensive or which is injurious or dangerous to health;

g) any public building which is so situated, constructed, used or kept as to be unsafe, or injurious or dangerous to health;

(k) any area of land kept or permitted to remain in such a state as to be offensive, or liable to cause any infectious, communicable or preventable disease or injury or danger to health;

(l) any chimney (not being the chimney of a private dwelling) sending forth smoke in such quantity or in such manner as to be offensive or injurious or dangerous to health;

(n) any other condition whatever which is offensive, injurious or dangerous to health.

The local authority may serve a notice on the author of the nuisance. Should the author refuse or fail to comply the local authority must approach a magistrate to lodge a complaint where upon the latter is required to issue a summons on the author to appear before court.

3. ROLES AND RESPONSIBILITIES

This section describes the roles and responsibilities of the key stakeholders involved in the development, implementation and review of the EMP. The contractor in this report refers to Mwene Fuel Service Station CC and its appointed contractors.

3.1 Competent Authority

The Department of Environmental Affairs: Ministry of Environment and Tourism is responsible for the review of the EMP documents.

3.1.1 Mwene Fuel Service Station CC

The role of the applicant is as follows:

- *Review report regarding the implementation of the EMP and make payments to the Contractor if the EMP is being implemented in a satisfactory manner.*
- *Give warnings and impose fines and penalties on the Contractor if the Contractor neglects to implement the EMP satisfactorily.*

3.1.2 Mwene Fuel Service Station CC (Project Manager)

The Applicant will appoint the Project Manager. The role of the project manager will be:

- Liaising directly with the relevant authorities with respect to the preparation and implementation of the EMP and meeting the conditions documented in the environmental clearance certificate.
- Bear the overall responsibility for managing the project contractors and ensuring that the environmental management requirements are met.
- Inform the contractors of the EMP and Environmental clearance certificateobligations.
- Approve all decisions regarding environmental procedures and protocols that must be followed.
- Have the authority to stop any construction in contravention with the EMP and RoD.

- In consultation with the Environmental Control Officer (ECO) has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP.
- Maintainopen and direct lines of communication between the proponent, Contractor and Interested and Affected Parties (I&APs) with regards to environmental matters.
- Attend regular site meetings and inspections where required.

3.1.3 Mwene Fuel Service Station CC (Environmental Control Officer)

An Environmental Control Officer (ECO) should be employed by the Contractor. This person should be available for the duration of the construction period and should have appropriate training and experience in the implementation of the EMP and overseeing construction process. This ECO will implement EMP at all levels and sections (sub-contractors) during the construction of the Mwene Fuel Service Station cc. The responsibilities of the ECO include the following:

- Assist the Project Manager and Contractor in finding environmentally responsible solutions to challenges that may arise.
- Conduct environmental monitoring as per EMP requirements.
- Monitor performance of the contractors and ensure compliance with the EMP and associated method statements.
- Maintenance, update and review of the EMP.
- Liaison between the contractors, authorities and other key stakeholders on all environmental concerns.
- Validating regular site inspection reports which are prepared by the Contractor's Environmental Officer (EO).
- Checking the EO's record of environmental incidents as well as corrective and preventative actions taken.
- Checking the EO's public complaints register in which all complaints are registered and actions taken thereof.
- Issuing site instructions to the contractors ECO for corrective actions required.
- Assisting with the resolution of conflict.
- Communicate all amendments of the EMP to the relevant stakeholders.

- Conduct monthly audits to ensure that the system for implementing the EMP is effective.

3.5 Contractor's Safety Officer

- Implement the recommendations in the EIA and satisfy the conditions in the RoD.
- Ensure that safety is practiced for all activities on site.
- Prepare and implement safety procedures
- Communicate all safety related issues.

3.6 Contractors

The contractor should appoint the Contactor's representative who is suitably qualified to implement the EMP. The responsibilities of the Contractor include:

- Compliance with the relevant legislation and the EMP.
- Preparation and submission to the proponent through Project Manager the following Management Plans prior to commencing work:
- Environmental Awareness Training and Inductions;
- Emergency Preparedness and Response;
- Waste Management; and
- Health and Safety.
- Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
  - The importance of complying with the relevant Namibian, International and Best Practice Legislation.
  - Roles and Responsibilities, including emergency preparedness.
  - Basic Rules of Conduct (Do's and Don'ts).
  - EMP: aspects, impacts and mitigation;
  - Fines for Failure to Adhere to the EMP;
  - Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and
- Attend regular site meetings and environmental inspections.

4. ENVIRONMENTAL MANAGEMENT PLAN

In this EMP, distinction is made between the construction, operational and the decommissioning phases. The contractor in this report refers to Mwene Fuel Service Station cc and its appointed contractors.

Before commencement of any construction work, the Contractor shall brief his or her staff on the content of the EMP and the EIA. The Contractor has the responsibility for implementing the EMP and ensuring their staff complies with the guidelines. Daily audits must be carried out; and corrective action implemented when needed. Mwene Fuel Service Station cc should promote the implementation of this EMP.

4.1. Protection of flora, fauna and natural features

The Contractor is responsible for ensuring that the impacts on the environment around the fuel retail facility are minimised. The Contractor shall not deface, paint, damage or mark any natural features (e.g. endangered plant species) situated in or around the new fuel retail facility. Land disturbance should be minimised.

No flora shall be removed, damaged or disturbed outside the designated working areas. Removal, damage or disturbance to flora in the designated working areas is to be minimised. Sensitive, protected and endangered plant species are to be avoided during the removal of vegetation.

Washing of vehicles, machinery, clothes or any hydrocarbon polluted items within 20m of any surface water body is strictly prohibited.

In order to protect the environment and achieve sustainable development of the environment, it is necessary to incorporate sound environmental management objectives and targets for the designated fuel retail facility.

According to the Namibian legislation, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an EIA. The following legislations govern the process of EIA in the country pertaining to the proposed development:

4.2. Access routes and work sites

Road transport tanker trucks will transport fuel via the existing D3645 main gravel road from Onyaanya to Onanke, the same gravel road passes

through Omuntele. No new tracks shall be established and only existing roads may be used.

4.3. Site Management

Areas outside this designated working zone shall be considered "no go" areas. The fuel retail facility must be demarcated when offloading fuel to enhance safety around the proposed development.

4.3.1 Fire management

Hydrocarbons are volatile under certain conditions and their vapours in specific concentrations are flammable. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise.

No fire, whether for cooking or any other purpose, is to be made at the site during any of the three phases (construction, operational and decommissioning). The Contractor shall take all reasonable measures and active steps to avoid increasing the risk of fire through activities on site and prevent the accidental occurrence or spread of fire; and shall ensure that there is sufficient fire-fighting equipment (e.g. fire extinguishers) on site at all times. The Contractor should be prepared for such events.

4.3.2 Fuel and oil management

The Contractor shall take all reasonable measures to prevent the contamination of surface or groundwater from the release of oils and fuels.

Sufficient space should be left in fuel storage tanks to allow for fuel expansion and to prevent leakage of fuel from the fuel facility.

If any spillage occurs, contaminated soil shall be collected in a holding container or drum for later disposal at a licensed hazardous waste site. Any spillage of more than 200 litres must be reported to the Ministry of Mines and Energy as per the Petroleum Products Act.

4.3.3 Staff management

The Contractor must ensure that their employees have suitable personal protective equipment, are properly trained and that a fire fighting and a first aid officer is onsite.

4.3.4 Waste management

No on-site burning, burial or dumping of any waste materials, vegetation, litter or refuse shall occur at the fuel retail facility.

The developer shall remove all waste off-site to designated licensed disposal sites. The Contractor must provide sufficient bins or containers on-site to store any solid or liquid waste produced. The bins and containers should be weatherproof and scavenger-proof.

5. MANAGEMENT OF ENVIRONMENTAL ASPECTS

5.1. Construction / Decommissioning Phase

This section details mitigation measures proposed for the implementation during the construction phase.

5.1.1 Dust

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Dust	Dust may be generated during the construction/decommissioning phase and might be aggravated when strong winds occur. These are expected to be site specific and will potentially pose a nuisance to the neighbouring properties. The construction of the proposed facility should have minimal impact on the surrounding air quality.	It is recommended that regular dust suppression be included in the construction phase, when dust becomes an issue.	Regular visual inspection.	Mwene Fuel Service Station CC/ Appointed Contractor

5.1.2 Noise

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Noise	Noise pollution due to construction equipment and machinery on site.	Ensure engines are fitted with mufflers. Equipment and machinery operators should be equipped with ear protection equipment.	Strict operational times. Regular inspection.	Mwene Fuel Service Station CC/ Appointed Contractor

5.1.3 Safety and Security

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Safety and Security	During the construction and decommissioning phase, earthmoving equipment will be used on site. This increases the possibility of injuries. Presence of equipment may encourage criminal activities (theft).	The responsible contractor must ensure that all staff members are briefed about the potential risks of injuries on site. The contractor is further advised to ensure that adequate emergency facilities, including first aid kits, are available on site.	Security System Monitoring. Safety Procedures. First Aid Training.	Mwene Fuel Service Station CC/ Appointed Contractor

5.1.4 Traffic

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Traffic	Construction/decommissioning related activities are expected to have a minor impacts on the movement of traffic on the D3645 gravel road . Diversion of traffic or closure of roads will not be required.	It is recommended that the responsible contractor liase with the Local Traffic Authority to ensure that traffic flow along the affected route is accordingly channelled or diverted if the need arises.	Observations of the traffic flow.	Mwene Fuel Service Station CC/ Appointed Contractor

5.1.5 Nuisance Pollution

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Nuisance pollution	Aesthetics and inconvenience caused to persons trying to access/exit immediate neighbouring buildings and/or destinations	Take cognition when parking vehicles and placing equipment and infrastructure.	Regular visual inspection.	Mwene Fuel Service Station CC/ Appointed Contractor

5.1.6 Groundwater Contamination

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Groundwater contamination	Leakage might occur during removal of tanks, dispensing points and associated reticulation pipelines in the decommissioning phase. Minimal groundwater contamination can be caused by leakages of fuel from machinery and heavy-duty vehicles during construction/decommissioning phase. Care must be taken to avoid contamination of soil and groundwater.	Drain tanks and pipelines prior to removal. Prevent spillages of any chemical.	Regular visual inspection.	Mwene Fuel Service Station CC/ Appointed Contractor

5.1.7 Generation of Waste

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Generation of waste	This can be in a form of contaminated soil and building rubble. Excavated soil from the installation of the underground tank.	Ensure that no excavated soil, refuse or building rubble generated on site are placed or dumped on surrounding properties or land. This includes road reserves etc. Clear dumping area with Omungwelume Village Council or Local Authority in the area.	Housekeeping procedure monitoring. Observation of site appearance by the facility manager.	Mwene Fuel Service Station CC/ Appointed Contractor

5.2. Operational Phase

This section details mitigation measures proposed for the implementation during the operational phase. Main responsible party in this section is

5.2.1 Hydrocarbon Spillage

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Hydrocarbon Spillage	Spillages might occur during delivery to the tanks.	Risk of impact from this can be lowered through proper training of staff and the installation of suitable containment structures	Regular visual inspection.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.2 Overfilling of Tanks

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Overfilling of Tanks	Overfilling of the tanks may take place.	Proper monitoring of the product levels in the tanks must take place to eliminate overfilling.	Regular inspection of the level of fuel in tanks.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.3 Overfilling of Vehicles

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Overfilling of Vehicles	Overfilling of vehicles	This impact can be reduced by the installation of spill containment areas around the pumps and through proper training of the operators.	Regular visual inspection.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.4 Fire and Explosion Hazard

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Fire and Explosion Hazard	Hydrocarbons are volatile under certain conditions and their vapours in specific concentrations are flammable. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise.	It must be assured that sufficient water is available for fire fighting purposes. Ensure that all fire-fighting devices are in good working order. In addition to this, all personnel have to be sensitised about responsible fire protection measures and good housekeeping such as the removal of flammable materials.	Regular inspections should be carried out to inspect and test fire fighting equipment and pollution control materials at the fuel facility.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.5 Damage to Pipelines

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Damage to pipelines	Damages to pipelines and tanks may occur due to vehicle movements and excavations. Leakage of the damaged structure is most likely to follow.	This can be mitigated through careful designs, warning signs and sensible operations in the area.	Flow meters to be installed on either sides of an underground pipeline to monitor the input and output through the pipe. If input does not equal the output, then a leakage can be assumed on the pipeline. For above ground level storage tanks, regular visual inspections for leakages should be made, when filling tanks.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.6 Groundwater Contamination

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Groundwater Contamination	Spillages might occur during delivery from road transport tanker trucks and overfilling of vehicles. Leakages of underground pipelines may take place.	All operational surfaces at the fuel retail facility must be installed with spill containment areas as per the relevant SANS standards (or better).	The risk can be lowered further through proper training of staff and the installation of suitable containment materials. Procedural inspection of tank and pipeline tightness tests. Groundwater monitoring point sampling.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.7 Noise

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Noise	Noise pollution already exists around the site in the form of vehicles frequenting the town.	Delivery of fuel by heavy-duty tankers should be limited to normal working hours (07h00 to 19h00). Volume of public address systems should be kept low and no loud music should be allowed.	Strict fuel delivery times. Observation of on-site noise levels by the Site Officer. A complaints register regarding noise should be kept and acted on if it becomes a regular complaint.	Mwene Fuel Service Station CC

5.2.8 Air Quality

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Air Quality	In terms of air quality, hydrocarbon vapours will normally be released during delivery as liquid displaces the gaseous mixture in the tanks.	All venting systems and procedures have to be designed according to SANS standards and placed in a sensible manner.	A complaints register regarding vapour smells should be kept and acted on if it becomes a regular complaint.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.9 Health and Safety

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Health and Safety	The operations of fuel retail facility can cause serious health and safety risks to workers on site. Occupational exposures are normally related to the dermal contact with fuels and inhalation of fuel vapours during handling of such products.	Adequate measures must be brought in place to ensure safety of staff on site, and includes: 1) Proper training of operators; 2) First aid treatment; 3) Medical assistance; 4) Emergency treatment; 5) Prevention of inhalation of fumes; 6) Protective clothing	Monitoring should be carried out on a regular basis, including accident reports.	Mwene Fuel Service Station CC/ Puma Energy Namibia

5.2.10 Generation of waste

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Generation of waste	Waste in the form of contaminated soil due to spillage might occur, but should be prevented through the use of containment areas as provided.	Waste minimization policy. Bioremediation of contaminated soil. Regular cleaning of oil / water separator. Removal of sand and other material from containment areas.	Regular monitoring of the oil water separator outflow is required. Containment area inspections. Inspection for soap in oil / water separator water. The following parameters must be monitored as indicators of potential organic contamination: Total petroleum hydrocarbon (TPH) levels - Diesel range organics, total oil & grease.	Mwene Fuel Service Station CC

5.2.11 Ecological Impacts

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Ecological Impacts	No conservation worthy vegetation and fauna exists at the site.	Some vegetation should be planted at the site to minimize surface run-off.	Visual inspection	Mwene Fuel Service Station CC

5.2.12 Economic Impacts

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Economic Impacts	The number of jobs that might be created	Locals should be highly considered when hiring for temporary or permanent jobs	Regular inspections	Mwene Fuel Service Station CC

6. CONCLUSIONS

The above Environmental Management Plan, if properly implemented, will help to minimise adverse impacts on the environment. Where impacts occur, immediate action must be taken to reduce the escalation of effects associated with these impacts. To ensure the relevance of this document to the specific stage of project, it needs to be reviewed throughout all phases.

The Environmental Management Plan should be used as an on-site reference document during all phases of the proposed project, and auditing should take place in order 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.