OPERATIONS OF THE MARIENTAL TOYOTA FUEL RETAIL FACILITY

UPDATED ENVIRONMENTAL MANAGEMENT PLAN

Assessed by:

GEO Pollution Technologies Namibia

Assessed for:

HH Simon t/a Mariental Toyota

November 2022

Project:	**UPDATED ENVIRONMENTAL MANAGEMENT PLAN FOR THE OPERATIONS OF THE MARIENTAL TOYOTA FUEL RETAIL FACILITY**
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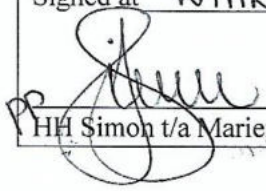
Report Approval	 **André Faul**

I HEINRICH SIMON acting as the representative of Mariental Toyota, hereby confirm that we approve the Environmental Management Plan as presented in this document. All material information in the possession of the proponent that reasonably has or may have the potential of influencing the Environmental Management Plan was provided to the consultant.

Signed at MARIENTAL on the 10TH day of NOVEMBER 2022.



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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
HIV	Human Immunodeficiency Virus
HSE	Health, Safety & Environment
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	Material Safety Data Sheet
PPE	Personal Protective Equipment
SANS	South African National Standards
WHO	World Health Organization

1 OBJECTIVES OF THE EMP

Mariental Toyota requested Geo Pollution Technologies (Pty) Ltd to update their existing Environmental Management Plan (EMP) in order to renew their existing environmental clearance certificate (ECC) for the continued operations of their fuel retail facility in Mariental. The updated EMP are based on the environmental impact assessment (EIA) conducted for the facility in 2016 (Faul et al., 2016) and it provide management options to ensure negative impacts of the facility are minimised while positive impacts are maintained or enhanced.

An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included, if necessary. The environmental management measures are provided in the descriptions below. These management measures should be adhered to during the various phases of the operation of the facility. This EMP act as a stand-alone document. All contractors and personnel taking part in construction (care and maintenance) and operations of the facility should be made aware of the contents in this report, so as to plan such activities accordingly and in an environmentally sound manner.

The objectives of the EMP are:

- to include all components of construction activities (upgrades, maintenance, etc.) and operations of the facility;
- to prescribe the best practicable control methods to lessen the environmental impacts associated with the facility;
- to monitor and audit the performance of contractors and operational personnel in applying such controls; and
- to ensure that appropriate environmental training is provided to responsible operational personnel.

1.1 Implementation of the EMP

Section 1.2 outline the management of the environmental elements that may be affected by the different construction and operational activities at the facility. Impacts addressed and mitigation measures proposed are seen as minimum requirements which have to be elaborated on. Delegation of mitigation measures and reporting activities should be determined by the Proponent and included in the EMP. The EMP is a living document that must be prepared in detail, and regularly updated by the Proponent as the project progress and evolve.

The EMP and ECC must be communicated to the site managers. A copy of the ECC and EMP should be kept on site. All monitoring results must be reported on as indicated. Reporting is important for any future renewals of the ECC and must be submitted to the Ministry of Environment, Forestry and Tourism. Renewal of ECC will require six monthly reports based on the monitoring prescribed in this EMP.

Various potential and definite impacts will emanate from the operations, construction and decommissioning phases. The majority of these impacts can be mitigated or prevented. The prevention and mitigation measures are listed below.

1.2 Management of Impacts: Operations and Construction

The following section provides management measures for both the operational phase as well as construction activities related to facility.

1.2.1 Planning

During the phases of planning for operations, construction and decommissioning of the facility, it is the responsibility of the Proponent to ensure they are and remain compliant with all legal requirements. The Proponent must also ensure that all required management measures are in place prior to and during all phases, to ensure potential impacts and risks are minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

- Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the facility are in place and remains valid. This includes the petroleum products licence and municipal approvals.
- Ensure that design parameters, where required, are approved by relevant authorities prior to any construction activities at the facility.
- Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the relevant contents of the EMP are understood by the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- Make provisions to have a health, safety and environmental coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- Have the following emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies:
    - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals
    - Adequate protection and indemnity insurance cover for incidents;
    - Comply with the provisions of all relevant safety standards;
    - Procedures, equipment and materials required for emergencies.
- Establish and maintain a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Submit bi-annual reports to the MEFT to allow for environmental clearance certificate renewal after three years. This is a requirement by MEFT.
- Appoint a specialist environmental consultant to update the EMP and apply for renewal of the environmental clearance certificate prior to expiry.

1.2.2 Skills, Technology and Development

During various phases of the facility, training is provided to a portion of the workforce to be able to maintain and operate various features of a fuel retail facility according to the required standards. Skills are transferred to an unskilled workforce for general tasks. The technology required for the development of the facility is often new to the local industry, aiding in operational efficiency. Development of people and technology are key to economic development.

Desired outcome: To see an increase in skills of local Namibians, as well as development and technology advancements in the fuel retail industry.

Actions

Enhancement:

- If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practice must be justified.
- Skills development and improvement programs to be made available as identified during performance assessments.
- Employees to be informed about parameters and requirements for references upon employment.
- The proponent must employ Namibians where possible. Deviations from this practise should be justified appropriately.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Record should be kept of training provided.
- Ensure that all training is certified or managerial reference provided (proof provided to the employees) inclusive of training attendance, completion and implementation.
- Summarise all training (formal and informal) in a bi-annual report.

1.2.3 Revenue Generation and Employment

The change in land use has led to changes in the way revenue is generated and paid to the national treasury. An increase of skilled and professional labour has and will continue to take place due to the operations of the facility. Employment is sourced locally while skilled labour/contractors may be sourced from other regions.

Desired outcome: Contribution to national treasury and provision of employment to local Namibians.

Actions

Enhancement:

- The Proponent must employ local Namibians where possible.
- If the skills exist locally, employees must first be sourced from the town, then the region and then nationally.
- Deviations from this practice must be justified.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Bi-annual summary report based on employee records.

1.2.4 Demographic Profile and Community Health

The facility relies on labour during construction and operational phases. The scale of the project is limited and it is not foreseen that it has created a change in the demographic profile of the local community. Community health may be exposed to factors such as communicable disease like HIV/AIDS and alcoholism/drug abuse. During construction and maintenance events, an increase in foreign people in the area may potentially increase the risk of criminal and socially/culturally deviant behaviour. However, such trends have not been observed since the site became operational. Spills and leaks may present health risks to employees and members of the public.

Desired Outcome: To prevent the in-migration and growth in informal settlements and to prevent the spread of communicable diseases and prevent / discourage socially deviant behaviour.

Actions:

Prevention:

- Employ only local people from the area, deviations from this practice should be justified appropriately.
- Adhere to all municipal by-laws relating to environmental health which include, but is not limited to, sand and grease traps for the various facilities and sanitation requirements.

Mitigation:

- Educational programmes for employees on HIV/AIDs and general upliftment of employees' social status.
- Appointment of reputable contractors.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Facility inspection sheet for all areas, which may present environmental health risks, kept on file.
- Bi-annual summary report based on employee demographics, educational programmes and training conducted.

1.2.5 Fuel Supply

The operation of the facility aid in securing fuel supply to the residents, patrons and business in Mariental.

Desired Outcome: Ensure a secure fuel supply remains available.

Actions

Mitigation:

- Ensure compliance to the petroleum regulations of Namibia.
- Proper fuel management to ensure constant supply.
- Record supply problems and take corrective actions.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Record supply problems and corrective actions taken.

1.2.6 Traffic

The facility may have increased the traffic flow to the site through the provision of fuel. An increase in traffic to and from the site may increase congestion and increase the risk of incidents and accidents, especially during delivery of fuel.

Desired Outcome: Minimum impact on traffic and no transport or traffic related incidents.

Actions

Prevention:

- Erect clear signage regarding access and exit points at the facility.
- Tanker trucks delivering fuel should not be allowed to obstruct any traffic in surrounding streets.

Mitigation:

- Traffic management during fuel deliveries or when traffic impacts are expected.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Any complaints received regarding traffic issues should be recorded together with action taken to prevent impacts from repeating itself.
- A bi-annual report should be compiled of all incidents reported, complaints received, and action taken.

1.2.7 Health, Safety and Security

The operations of the facility rely on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery and handling of hazardous chemicals (inhalation and carcinogenic effect of some petroleum products), poses the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage.

Desired Outcome: To prevent injury, health impacts and theft.

Actions

Prevention:

- Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- Equipment that will be locked away on site must be placed in a way that does not encourage criminal activities (e.g. theft).
- Provide all employees with required and adequate personal protective equipment (PPE).
- Ensure that all personnel receive adequate training on operation of equipment / handling of hazardous substances.
- All Health and Safety standards specified in the Labour Act should be complied with.
- Implementation of maintenance register for all equipment and fuel/hazardous substance storage areas.

Mitigation:

- Selected personnel should be trained in first aid and a first aid kit must be available on site. The contact details of all emergency services must be readily available.
- Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool, which includes: operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, MSDS's and signage requirements (PPE, flammable etc.).
- Security procedures and proper security measures must be in place to protect workers and clients, especially during cash in transit activities.
- Reduce the amount of cash kept on site to reduce the risk of robberies.
- Strict security that prevents unauthorised entry during construction phases.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any incidents must be recorded with action taken to prevent future occurrences.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

1.2.8 Fire

Fuel, especially unleaded petrol, is highly flammable and therefore presents a fire risk. Operational and maintenance activities may increase the risk of fires. The site is located in a built-up area which increases the difficulty of fighting fires.

Desired Outcome: To prevent property damage, possible injury and impacts caused by uncontrolled fires.

Actions:

Prevention:

- A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.
- Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).
- Ensure all chemicals are stored according to MSDS and SANS instructions.
- Maintain regular site, mechanical and electrical inspections and maintenance.
- Clean all spills / leaks.
- Special note must be taken of the regulations stipulated in sections 47 and 48 of the Petroleum Products and Energy Act, 1990 (Act No. 13 of 1990).
- Follow SANS standards for operation and maintenance of the facility.
- All dispensers must be equipped with devices that cut fuel supply during fires.
- Ensure all pump attendants are trained on the importance of filling only suitable containers with fuel as well as earthing of such containers when filling with unleaded petrol which can accumulate static electricity.

Mitigation:

- In case of a fire, the firefighting plan must be initiated immediately and all emergency procedures must be performed as practiced during training. This includes notifying the fire brigade, engaging emergency stops, using fire extinguishers, evacuation, etc.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

1.2.9 Air Quality

Fuel vapours are released into the air during refuelling of bulk storage tanks as well as at filling points. Prolonged exposure may have carcinogenic effects. Dust may be generated should any construction take place.

Desired Outcome: To prevent health impacts and minimise the dust generated.

Actions

Mitigation:

- Personnel issued with appropriate masks where excessive dust or vapours are present.
- A complaints register should be kept for any dust related issues and mitigation steps taken to address complaints where necessary e.g. dust suppression.
- Employees should be coached on the dangers of fuel vapours.
- Vent pipes must be properly placed as per SANS requirements.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any complaints received regarding dust or fuel vapours should be recorded with notes on action taken.
- All information and reporting to be included in a bi-annual report.

1.2.10 Noise

Noise pollution will exist due to heavy and light motor vehicles accessing the site to offload fuel or refuel. A fuel retail facility is a 24 hour operation which means that vehicle noise is generated throughout the day and night. Construction (maintenance and upgrades) may generate excessive noise.

Desired Outcome: To prevent any nuisance and hearing loss due to elevated noise levels.

Actions

- Prevention:
- Follow World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment and not become a nuisance to neighbours.
- All machinery must be regularly serviced to ensure minimal noise production.
- Keep volume of public address systems at levels that will not be a nuisance to neighbours.
- Manage noise caused by clients – loud music, etc.

Mitigation:

- Hearing protectors as standard PPE for workers in situations with elevated noise levels.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- WHO Guidelines.
- Maintain a complaints register.
- Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

1.2.11 Waste production

Various waste streams are produced during the operational phase. Waste may include hazardous waste associated with the handling of hydrocarbon products. Domestic waste is generated by the facility and related operations. Waste presents a contamination risk and when not removed regularly may become a fire hazard. Construction waste may include building rubble and discarded equipment contaminated by hydrocarbon products. Contaminated soil and water is considered as a hazardous waste.

Desired Outcome: To reduce the amount of waste produced, and prevent pollution and littering.

Actions

Prevention:

- Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate.
- Ensure adequate disposal storage facilities are available.
- Ensure waste cannot be blown away by wind.
- Prevent scavenging (human and non-human) of stored waste.

Mitigation:

- Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty chemical containers, contaminated rugs, paper water and soil).
- The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of appropriately. Surfactants (soap) may not be allowed to enter the oil water separator.
- See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- Liaise with the municipality regarding waste and handling of hazardous waste.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/facility.
- Any complaints received regarding waste should be recorded with notes on action taken.
- The oil water separator must be regularly inspected and all hydrocarbons removed once detected. Outflow water must comply with effluent quality standards.
- All information and reporting to be included in a bi-annual report.

1.2.12 Ecosystem and Biodiversity Impact

The nature of the operational activities is such that the probability of creating a habitat for flora and fauna to establish is low. No significant impact on the biodiversity of the area is predicted as the site is already developed and void of natural fauna and flora. Impacts are therefore mostly related to pollution of the environment.

Desired Outcome: To avoid pollution of and impacts on the ecological environment.

Actions.

Prevention:

- Contain all food related waste as to prevent animals from scavenging and dispose of such waste regularly to prevent the attraction of vermin by such waste.
- Discourage birds from utilising structures on site for purposes of nesting.

Mitigation:

- Report any extraordinary animal sightings to the Ministry of Environment, Forestry and Tourism.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- All information related to extraordinary sightings or problems with animals to be included in a bi-annual report.

1.2.13 Groundwater, Surface Water and Soil Contamination

Operations entail the storage and handling of various hydrocarbons (such as fuels and lubricants) which present a contamination risk. Contamination may either result from failing storage facilities, or spills and leaks associated with fuel handling. The facility provides fuel to public vehicles which may further present contamination risks through overfills. Such material may contaminate surface water, soil and groundwater.

Modern retail facilities are well designed to prevent leakages and spillages form contaminating soil and water, and where leaks or spills occur, that it is contained.

Desired Outcome: To prevent the contamination of water and soil.

Actions

Prevention:

- Spill control structures and procedures must be in place according to SANS standards or better and connection of all surfaces where fuel is handled, with an oil water separator.
- All fuelling should be conducted on surfaces provided for this purpose. E.g. Concrete slabs with regularly maintained seals between slabs.
- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.
- Proper training of operators must be conducted on a regular basis (Fuel handling, spill detection, spill control).

Mitigation:

- Any spillage of more than 200 litre must be reported to the Ministry of Mines and Energy.
- Spill clean-up means must be readily available on site as per the relevant MSDS.
- All spills must be cleaned up immediately.
- The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of at a suitably classified hazardous waste disposal facility.
- Surfactants (soap) may not be allowed to enter the oil water separator. Importantly, the use of soap on spill control surfaces connected to the separator should not be allowed.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Inspection holes at the ends of the tanks must as a minimum be inspected every 14 days and measurements must be recorded for future reference. Inspection must include the evaluation of LNAPL on the water surface, if water is present.
- A report should be compiled bi-annually of all spills or leakages reported. The report should contain the following information: date and duration of spill, product spilled, volume of spill, remedial action taken, comparison of pre-exposure baseline data (previous pollution conditions survey results) with post remediation data (e.g. soil/groundwater hydrocarbon concentrations) and a copy of documentation in which spill was reported to Ministry of Mines and Energy.

1.2.14 Visual Impact

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility.

Desired Outcome: To minimise aesthetic impacts associated with the facility.

Actions

Mitigation:

- Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A bi-annual report should be compiled of all complaints received and actions taken.

1.2.15 Cumulative Impact

Possible cumulative impacts associated with the operational phase include increased traffic, and its associated noise, in the area.

Desired Outcome: To minimise cumulative all impacts associated with the facility.

Actions

Mitigation:

- Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.
- Reviewing biannual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Bi-annual reports based on all other impacts will provide an overall assessment of the impact of the operational and maintenance phases.

1.3 Decommissioning and Rehabilitation

Decommissioning is not foreseen during the validity of the ECC. Construction activities may however include modification and decommissioning. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure including buildings and underground infrastructure, if any, not forming part of post decommissioning land use. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. The EMP for the facility will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures.

1.4 Environmental Management System

The Proponent could implement an Environmental Management System (EMS) for their operations. An EMS is an internationally recognized and certified management system that will ensure ongoing incorporation of environmental constraints. At the heart of an EMS is the concept of continual improvement of environmental performance with resulting increases in operational efficiency, financial savings and reduction in environmental, health and safety risks. An effective EMS would need to include the following elements:

- A stated environmental policy which sets the desired level of environmental performance;
- An environmental legal register;
- An institutional structure which sets out the responsibility, authority, lines of communication and resources needed to implement the EMS;
- Identification of environmental, safety and health training needs;
- An environmental program(s) stipulating environmental objectives and targets to be met, and work instructions and controls to be applied in order to achieve compliance with the environmental policy; and
- Periodic (internal and external) audits and reviews of environmental performance and the effectiveness of the EMS.
- The EMP.

2 CONCLUSION

The above EMP, 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 the project, it needs to be reviewed throughout all phases.

The EMP 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.

Monitoring reports must be submitted to the Ministry of Environment, Forestry and Tourism every six months to allow for the future renewal of the ECC.

3 REFERENCES

Faul A, Botha P, Brews L. 2016. Environmental Impact Assessment for the Operations of the Mariental Toyota, Total Fuel Retail Facility.