OPERATIONS OF THE EXISTING OMEGA SERVICE STATION WALVIS BAY

UPDATED ENVIRONMENTAL MANAGEMENT PLAN



Prepared by:



Prepared for:

Omega Service Station CC

November 2023

WALVIS BAY: UPDATED ENVIRONMENTAL MANGEMENT PLAN Report: Final Version/Date: November 2023 Prepared for: Omega Service Station CC (Proponent) P O Box 4786 Walvis Bay. TEL.: (+264-61) 257411 Lead Consultant Geo Pollution Technologies (Pty) Ltd Main Project André Faul FAX.: (+264) 88626368 Windhock Namibia Main Project André Faul (B.Sc. Zoology/Biochemistry); (B.Sc. (Hons) Zoology); (M.Sc. Conservation Ecology); (Ph.D. Medical Bioscience) Johann Strauss (BA Geography/Psychology/Environmental Management) Cite this Faul A, Strauss J. 2023 November; Operations of the Existing Omega Service document as: Station: Updated Environmental Management Plan Copyright Copyright on this document is reserved. No part of this document may be utilised without the written permission of Geo Pollution Technologies (Pty) Ltd. Report Approval Without the written permission of Geo Pollution Technologies (Pty)	Project:	OPERATIONS OF THE EXISTING OMEGA SERVICE STATION,				
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André Foul	Approval	Andrá Foul				

I,, acting as representative of Omega Service Station CC, hereby confirm that the project description contained in this report is a true reflection of the information which the Proponent provided to Geo Pollution Technologies. All material information in the possession of the Proponent that reasonably has or may have the potential of influencing any decision or the objectivity of this assessment is fairly represented in this report and the report is hereby approved.						
Signed at	on the	e day of 202	3.			
Omega Service Station CC	Ĩ	2011/0091 Business Registration/ID Number				

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1 BACKGROUND AND INTRODUCTION

Geo Pollution Technologies (Pty) Ltd was appointed by Omega Service Station CC (the Proponent) to prepare an updated environmental management plan (EMP) for the operations of their existing fuel retail facility on erf 0527 at the corner of Sam Nujoma Avenue and 15th Road, Walvis Bay. The updated EMP is based on the environmental impact assessment conducted for Omega Service Station CC in 2019 (Bosman et al. 2019). The property is currently zoned for business purposes. Operations of the fuel retail facility include filling of the underground storage tanks from road transport tankers; dispensing of fuel to customers; tank dips and fuel volume reconciliation; and general operational activities and maintenance procedures associated with a fuel retail facility.

2 EVIRONMENTAL MANGEMENT PLAN

The EMP provides management options to ensure impacts of the facility is minimised. 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 tables and descriptions below. These management measures should be adhered to during the various phases of the operation of the facility. This section of the report can act as a stand-alone document. All personnel taking part in the operations of the facility should be made aware of the contents in this section, so as to plan the operations 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 project;
- to monitor and audit the performance of operational personnel in applying such controls; and
- to ensure that appropriate environmental training is provided to responsible operational personnel.

2.1 IMPLEMENTATION OF THE EMP

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

As depicted in the tables below, impacts related to the operational phase are expected to mostly be of medium to low significance and can mostly be mitigated to have a low significance. The extent of impacts are mostly site specific to local and are not of a permanent nature. Due to the nature of the surrounding areas, cumulative impacts are possible and include groundwater contamination and traffic impacts.

2.1.1 Planning

During the phases of planning for future operations, construction and decommissioning of the facility, it is the responsibility of 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 construction (maintenance) activities and operations of the project remains valid.
- Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the 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:
 - o 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.
- If one has not already been established, 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.
- Keep monitoring reports on file for submission with environmental clearance certificate renewal applications where needed.
- Appoint a specialist environmental consultant to update the EA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

2.1.2 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.

<u>Actions</u>

Mitigation:

- 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

- Record should be kept of training provided.
- Ensure that all training is certified or managerial references provided (proof provided to the employees) inclusive of training attendance, completion and implementation.

2.1.3 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.

<u>Actions</u>

Mitigation:

- 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:

• Summary report based on employee records.

2.1.4 Demographic Profile and Community Health

The project is reliant on labour during the operational phase. 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, associated with possible foreign clients collecting fuel. 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 which can be linked to the fuel retail facility.

Desired Outcome: To prevent the in-migration and growth in informal settlements, prevent the spread of communicable disease 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 includes but is not limited to sand and grease traps for the various facilities and sanitation requirements.
- Prohibit illegal parking on and around the site.

Mitigation:

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

Responsible Body:

• Proponent

- Facility inspection sheet for all areas which may present environmental health risks, kept on file.
- Summary report based on educational programmes and training conducted.
- Report and review of employee demographics.

2.1.5 Fuel Supply

The operation of the facility aids in securing fuel supply to the residents, patrons and business in Walvis Bay.

Desired Outcome: Ensure a secure fuel supply remains available.

<u>Actions</u>

Mitigation:

- Ensure compliance to the petroleum regulations of Namibia.
- Proper 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 and compile a bi-annual summary report.

2.1.6 Traffic

The facility may have increased the traffic flow to the site through the provision of fuel. An increase in traffic to the 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.

<u>Actions</u>

Prevention:

• Erect clear signage regarding access and exit points at the facility.

Mitigation:

- Tanker trucks delivering fuel should not be allowed to obstruct any traffic in surrounding streets.
- If any traffic impacts are expected, traffic management should be performed to prevent these.
- The placement of signs to warn and direct traffic will mitigate traffic impacts.

Responsible Body:

Proponent

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

2.1.7 Health, Safety and Security

Activities associated with the operational phase are reliant 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), pose the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage.

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

<u>Actions</u>

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: colour coding of pipes, 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

- Any incidents must be recorded with action taken to prevent future occurrences.
- A 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.

2.1.8 Fire

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

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

Actions:

Prevention:

- 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.
- The Proponent should liaise with the local Fire Brigade to ensure that all fire requirements are met. This includes, but is not limited to SANS 10400 T: 2011.

Mitigation:

- A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.
- 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).
- Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).

Responsible Body:

- Proponent
- Contractors

- 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 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.

2.1.9 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

- 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.

2.1.10 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 upgrade) may generate excessive noise.

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

<u>Actions</u>

Prevention:

- The Health and Safety Regulation of the Labour Act and World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment and nuisances.
- All machinery must be regularly serviced to ensure minimal noise production.
- Keep volume of public address systems on a level where neighbours are not impacted on.
- 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

- Health and Safety Regulation of the Labour Act and WHO Guidelines.
- Maintain a complaints register.
- Report on complaints and actions taken to address complaints and prevent future occurrences.

2.1.11 Waste production

Various waste streams are produced during the operational phase. Waste may include hazardous waste associated with the handling of hydrocarbon products etc. 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.

<u>Actions</u>

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 waste storage.
- All regulations and by-laws relating to environmental health should be adhered to.

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

- 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.

2.1.12 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 currently 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.

Mitigation:

- Report any extraordinary sightings to the Ministry of Environment, Forestry and Tourism (MEFT).
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Avoid scavenging of waste by fauna.
- The establishment of habitats and nesting sites at the facility should be prevented where possible.

Responsible Body:

Proponent

Data Sources and Monitoring:

• All information and reporting to be included in a bi-annual report.

2.1.13 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 reduce leakages and spillages form contaminating soil and water.

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

<u>Actions</u>

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 of fuel 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.
- Any spill 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 e.g. soap usage on spill control surfaces.

Responsible Body:

- Proponent
- Contractors

- 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.

2.1.14 Visual Impact

The facility forms part of the urban landscape associated with the area. The site should be kept clean, tidy and maintained to ensure it remains aesthetically pleasing and does not add the urban decay.

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

<u>Actions</u>

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

- A maintenance record should be kept.
- A report should be compiled of all complaints received and actions taken.

2.1.15 Cumulative Impact

Possible cumulative impacts associated with the operational phase include increased traffic in the area. This will have a cumulative impact on traffic flow on surrounding streets.

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:

• Annual summary report based on all other impacts must be created to give an overall assessment of the impact of the operational phase.

2.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the environmental clearance certificate. Decommissioning was however assessed as construction activities 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. 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 Health and Safety Regulations of the Labour Act and 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.

2.3 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;
- Periodic (internal and external) audits and reviews of environmental performance and the effectiveness of the EMS; and
- The EMP.

3 CONCLUSION

The EMP should be used as an on-site reference document for the operations of the facility. Parties responsible for transgressing of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. The proponent could use an in-house Health, Safety, Security and Environment Management System in conjunction with the EMP. All operational personnel must be taught the contents of these documents.

Should the Directorate of Environmental Affairs (DEA) of the MEFT find that the impacts and related mitigation measures, which have been proposed in this report, are acceptable, an environmental clearance certificate may be granted to the Proponent. The environmental clearance certificate issued, based on this document, will render it a legally binding document which should be adhered to.

4 REFERENCES

Bosman Q, Botha P, Brunette C, Coetzer W, 2019 May; Operations of the Existing Omega Service Station: Environmental Assessment Scoping Report