APP NO: 002704

OPERATIONS OF BAHNHOF SERVICE CENTRE'S FUEL RETAIL FACILITY, WINDHOEK

UPDATED ENVIRONMENTAL MANAGEMENT PLAN



Prepared by:

Prepared for:



SL Service Station (Pty) Ltd

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	Ltd.			
Report				
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a de la la la della cic	, acting as representative of SL Service Station (Pty)
Ltd, hereby confirm that we approve the	environmental management plan as presented in this
have the potential of influencing environ	ne possession of the Proponent that reasonably has or may amental management plan was provided to the consultant.
	plan has provided to the consultant.
Signed at _NINDHOEK	and he III do a Todaway
1 /11	on the 24 day of JANURY 2024.
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SL-Service Station (Pty) Ltd	

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1 INTRODUCTION

SL Service Station (Pty) Ltd trading as Bahnhof Service Centre (the Proponent) operates an existing fuel retail facility on erven 300 and 301 in Mandume Ndmufayo Ave, Windhoek. The facility supplies both unleaded petrol and diesel from below ground tanks via dispensers in a forecourt area. All surfaces where fuel is handled are covered with concrete with spill catchment traps and drains leading to an oil water separator.

The Proponent has an existing environmental clearance certificate (ECC) for the facility. The Proponent now requested Geo Pollution Technologies (Pty) Ltd to update their existing environmental management plan (EMP) in order to renew their ECC.

2 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an environmental assessment, as per the Namibian legislation. The legislation and standards provided in Table 2-1 to Table 2-4 govern the environmental assessment process in Namibia and/or are relevant to the facility.

Table 2-1 Namibian law applicable to the fuel retail facility

Law	Key Aspects			
The Namibian Constitution	• Promote the welfare of people			
	• Incorporates a high level of environmental protection			
	♠ Incorporates international agreements as part of Namibian law			
Environmental Management Act	♦ Defines the environment			
Act No. 7 of 2007, Government Notice No. 232 of 2007	♦ Promote sustainable management of the environment and the use of natural resources			
	♦ Provide a process of assessment and control of activities with possible significant effects on the environment			
Environmental Management Act Regulations	♦ Commencement of the Environmental Management Act			
Government Notice No. 28-30 of 2012	♦ List activities that requires an environmental clearance certificate			
	♦ Provide Environmental Impact Assessment Regulations			
Petroleum Products and Energy Act	♦ Regulates petroleum industry			
Act No. 13 of 1990, Government Notice No.				
45 of 1990	♦ Petroleum Products Regulations (Government Notice No. 155 of 2000)			
	♦ Prescribes South African National Standards (SANS) or equivalents for construction, operation and decommissioning of petroleum facilities (refer to Government Notice No. 21 of 2002)			
	♦ Used Mineral Oil Regulations (Government Notice No. 48 of 1991			
	♦ Regulations relating to the purchase, sale, supply, acquisition, possession, disposal, storage, transportation, recovery and re-refinement of used mineral oil			

Law	Key Aspects
Water Resources Management Act Act No. 11 of 2013	 Provide for management, protection, development, use and conservation of water resources Prevention of water pollution and assignment of liability
Act No. 23 of 1992, Government Notice No. 116 of 1992	 ◆ Define the powers, duties and functions of local authority councils ◆ Regulates discharges into sewers
Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015	 Provides a framework for a structured more uniform public and environmental health system, and for incidental matters Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation
Labour Act Act No 11 of 2007, Government Notice No. 236 of 2007	 Provides for Labour Law and the protection and safety of employees Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997)
Atmospheric Pollution Prevention Ordinance Ordinance No. 11 of 1976	 Governs the control of noxious or offensive gases Prohibits scheduled process without a registration certificate in a controlled area Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process
Hazardous Substances Ordinance Ordinance No. 14 of 1974	 Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export Aims to prevent hazardous substances from causing injury, ill-health or the death of human beings
Pollution Control and Waste Management Bill (draft document)	 ♦ Not in force yet ♦ Provides for prevention and control of pollution and waste ♦ Provides for procedures to be followed for licence applications

Table 2-2 City of Windhoek regulations, plans and policies

Groundwater Protection Regulations	♦ Provides for the protection of groundwater, landscape and vegetation sensitivity		
	♦ Requires an EIA and EMP for projects that may potentially impact on groundwater		
	♦ Identifies three groundwater control zones: medium, high and very high.		
Windhoek Environmental Structure Plan and Environmental Policy	◆ Integrates spatial planning decision-making, environmental planning and environmental impact management		
Town Planning Scheme	• Enables the comprehensive management of all property and related public sector functions across the city.		
	• Provides for the protection of groundwater and the environment.		
	♦ Prohibits any sewer, septic tank, pit latrine, VIP or		

	French drain within 500 m of any private production borehole without council's consent.				
	♦ Sets the Southern Development Limit for Windhoek.				
Municipal Council of Windhoek: Noise Control Regulations General Notice No. 77 of 2006	♦ Resolution 215/09/2006 dealing with noise				
	◆ Impose various noise limits for residentia commercial and industrial areas for day and nigh time.				
	♦ Restricts noise reaching single residential areas at 55 dBA during the day and 45 dBA at night.				
Drainage and Sewage Regulations	• Regulates discharges into sewer systems.				
	• Provides standards to which effluents entering a sewer system must adhere.				
	• Regulates storm water run-off.				

Table 2-3 Relevant multilateral environmental agreements for Namibia and the development

Agreement	Key Aspects		
Agreement	Key Aspects		
Stockholm Declaration on the Human Environment, Stockholm 1972.	♦ Recognizes the need for a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment		
1985 Vienna Convention for the Protection of the Ozone Layer	♦ Aims to protect human health and the environment against adverse effects from modification of the Ozone Layer are considered		
	♦ Adopted to regulate levels of greenhouse gas concentration in the atmosphere		
United Nations Framework Convention on Climate Change (UNFCCC)	◆ The Convention recognises that developing countries should be accorded appropriate assistance to enable them to fulfil the terms of the Convention		
Convention on Biological Diversity, Rio de Janeiro, 1992	♦ Under article 14 of The Convention, EIAs must be conducted for projects that may negatively affect biological diversity		

Table 2-4 Standards or codes of practise

Standard or Code	Key Aspects
South African National Standards (SANS)	♦ The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and demolition of petroleum facilities
	 ♦ SANS 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and consumer installations ○ Provide requirements for spill control infrastructure

The fuel retail facility is listed as an activity requiring an ECC as per the following points from Section 9 of Government Notice No. 29 of 2012:

Hazardous Substance Treatment, Handling and Storage

- 9.1 "The manufacturing, storage, handling or processing of a hazardous substance defined in the <u>Hazardous Substances Ordinance</u>, 1974." (The facility stores and handles hazardous substances in the form of fuel.)
- 9.2 "Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste." (The facility stores and handles hazardous substances in the form of fuel which is permitted by the Ministry of Mines and Energy.)

- 9.4 "The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location." (Total storage capacity for fuel exceed 30 m³).
- 9.5 "Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin." (The facility is a filling station that stores diesel and unleaded petrol below ground.)

3 OBJECTIVES OF THE EMP

The EMP provides management options to ensure impacts originating from the facility are 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 EMP acts as a stand-alone document, which can be used during construction, operational and decommissioning phases of any proposed activity or development. All contractors and sub-contractors taking part in the operations of this facility should be made aware of the contents of the EMP, so as to plan the relevant activities accordingly in an environmentally sound manner.

The objectives of the EMP are:

- to include all components of the various activities;
- to prescribe the best practicable control methods to lessen the environmental impacts associated with operations (including periodic maintenance and upgrades) of the facility;
- 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.

The Proponent may choose to an Environmental Management System (EMS) for its 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 includes 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.

4 THE IMPLEMENTION OF THE EMP

Table 4-1 and Table 4-2 outline the management of the environmental elements that may be affected by the different activities. This document act as a guideline for the EMP to be established by the proponent. Impacts addressed and mitigation measures proposed are seen as minimum requirements which have to be elaborated on. Delegation of mitigation 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. All monitoring results must be reported on as indicated. These are important for any future renewals of the environmental clearance certificate and must be submitted to the Ministry of Environment, Forestry and Tourism on a bi-annual basis.

Table 4-1 Planning for continued operations and future decommissioning of the project

Activity	Objective	Action	Timing	Proof of Compliance	Responsible Body
Compliance		Apply for the necessary permits from the various ministries, local authorities and any other bodies that governs the operations of the facility. Finalise negotiations and resolve any outstanding issues, if any, over the allocation of user rights and zoning of the property on which the proposed activity will		All contracts, permits, certificates and other legal documents on file.	Proponent
		be located.			
Appointments			operational phase	Contracts on file	Proponent; Contractor
Management	to implement and monitor	Make provisions to have a Health, Safety and Environmental (HSE) 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 in place to deal with all emergencies:	operational phase	Documentation on file Personal Protection Equipment (PPE) on site Signage related to restricted areas, dangerous areas, and PPE requirements on site Emergency response material on site	Proponent; Contractor
		 Risk Management / Mitigation / Environmental Management Plan/ Emergency Response Plan and HSE Manuals Adequate protection and indemnity 			
		insurance cover for incidents.			

Activity	Objective	Action	Timing	Proof of Compliance	Responsible Body
		 Comply with the provisions of all relevant safety standards including SANS. Procedures, equipment and materials required for emergencies. 			
Restoration Fund/Insurance	for future environmental	To establish 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.		Financial statements of restoration fund/insurance	Proponent; Independent Specialist Consultant
Reporting	to report on monitoring aspects	Establish a reporting system to report on aspects of operations and decommissioning as outlined in the EMP. Submit monitoring reports on a bi-annual basis, or as specified in the conditions of the ECC and keep monitoring reports on file for inspection by MEFT officials.	operational phase	Monitoring Reports	Proponent; Contractor
Environmental Clearance Renewal	To renew the ECC every three years.	Appoint a specialist environmental consultant to update the EMP and apply for renewal of the ECC.	Prior to expiry of ECC	Renewed ECC	Proponent; Independent Specialist Consultant

Table 4-2 The operational phase

Criteria	Nature	Mitigation	Monitoring	Responsible Body
and technology transfer to Windhoek and	People need skills to perform their jobs. The technology to do something is often not found locally. Development of people and technology are key to economic development.	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 the practise should be justified appropriately.	Proof of appointment of local contractors on file.	Proponent
Community Health	people who seek work. This in turn can increase the extent of informal settlements and its associated problems. The increased trucking and distribution	Restricted employment for Windhoek residents only should be practiced. Deviations from this practice should be justified appropriately. Training of local people should be considered from the start. These measures will reduce the influx of newcomers to the town and thereby reduce growth in the informal settlement and maintain property prices.		Proponent
	labour has and will continue to take place due to the operations of the facility.	If the skills exist locally, employees must first be sourced from the town, then the region and then nationally. Deviations from the practice must be justified.	based on employee records.	•
	The operation of the facility will aid in securing fuel supply to locals, travellers and the transport industry.	Regular tank dips and fuel volume reconciliation to ensure fuel is ordered before it is depleted. Plan in advance for peak tourist seasons and holidays when the demand of fuel increase.	Fuel volume reconciliations on file.	Proponent
Traffic		Tanker trucks delivering fuel should not be allowed to obstruct any traffic in Mandume Ndemufayo Avenue or Bahnhof Street. If any traffic impacts is expected traffic management should	regarding traffic issues should be recorded.	Proponent

Criteria	Nature	Mitigation	Monitoring	Responsible Body
		be performed to prevent these. Ensure that enough pump attendants are on duty when and increases number of clients are expected to visit the facility to refuel.	be compiled of all incidents reported, complaints received and action taken.	
Fire Hazards	Products kept on site are flammable and therefore a fire risk exists. Unleaded petrol is a static accumulator and can ignite if not handled correctly.	All fire precautions and fire control at the site must be in accordance with relevant SANS regulations or better. Firefighting measures as per the Material Safety Data Sheets of the products should be adhered to. All operational personnel must be trained in the correct handling of fuel, especially unleaded petrol, and correct refuelling techniques. This includes only filling approved containers with fuel and earthing of such containers to prevent static build-up and ignition of unleaded petrol.	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.	Proponent
		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 including rubbish and dry vegetation. Regular inspections should be carried out to check for these materials at the site.		
		A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.		
		Experience has shown that the best chance to rapidly put out a major fire is in the first 5 minutes. It is important to recognise that a responsive fire prevention plan does not solely include the availability of firefighting equipment, but more importantly, it involves premeditated measures and activities to timeously prevent, curb and avoid conditions that may result in fires. An integrated fire prevention plan should be drafted. 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).		

Criteria	Nature	Mitigation	Monitoring	Responsible Body
Health, Safety & Security	Risks include work related injuries or exposure to harmful products, theft and sabotage.	Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool.	A bi-annual report should be compiled of all incidents reported. The report should	Proponent
	Fuel, especially unleaded petrol, is carcinogenic and dermal contact and breathing of fumes should be prevented.		contain dates when training were conducted and when safety equipment and structures were inspected and maintained.	
		Clearly label dangerous and restricted areas as well as dangerous equipment and products.		
		Lock away or store all equipment and goods in a manner suitable to discourage criminal activities (e.g. theft).		
		Provide all employees with required and adequate personal protective equipment (PPE) where required.		
		Ensure that all personnel receive adequate training on the operational procedures and the handling of hazardous substances.		
		Train selected personnel in first aid and ensure first aid kits are available.		
		The contact details of all emergency services must be readily available.		
		Apply and adhere to all industry specific health and safety procedures and regulations applicable to the handling of hazardous substances.		
		Treat all minor work related injuries immediately and obtain professional medical treatment if required.		
		Assess any health and safety problems and implement corrective action to prevent future occurrences.		
Noise	Noise will exist due to vehicles accessing the site to offload fuel or refuel.	The facility is situated in a business commercial area so there is no restriction on the times of operation. It is important to refer and adhere to the City of Windhoek Council Resolution Guidelines 215/09/2006 with regards to noise emissions.	regarding excessive noise should be recorded with notes on action taken. All complaints and	Proponent
			additional data, if available, to be compiled in a bi-annual	

Criteria	Nature	Mitigation	Monitoring	Responsible Body
			report.	
Waste Production	Waste can be of domestic origin or hazardous waste that include contaminated materials such as packaging materials, contaminated soil, etc.	Waste should be disposed of regularly and at appropriate disposal facilities. Products that can be re-used or re-cycled should be kept separate and treated as such. Due to the nature of some hazardous materials they should be disposed of appropriately and at an appropriately classified waste disposal facility. See the material safety data sheets available from suppliers if the user is not sure how to dispose of the substance. The oil water separator should be cleaned regularly and waste disposed of at a suitably classified hazardous waste disposal facility. No surfactants (soap) should be allowed to enter the separator as it will reduce its ability to separate the hydrocarbons from water.	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. All data to be compiled in a bi-annual report.	Proponent
	Porous surface substrate can allow unwanted hazardous and ecologically detrimental substances to seep down to the water table.	Liaise with the municipality regarding waste and handling of hazardous waste. The following measures must be employed to prevent spillage into surface water drainage channels and groundwater sources:- ◆ 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. ◆ The oil water separator should be cleaned regularly and waste disposed of at a suitably classified hazardous waste disposal facility. No surfactants (soap) should be allowed to enter the separator as it will reduce its ability to separate the hydrocarbons from water. ◆ 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, including the correct	or leakage is expected, samples must be taken from monitoring holes and analysed for any hydrocarbon pollution present. A bi-annual report should be compiled of all spills or leakages reported. The report should contain the following information: • date and duration of spill • product spilled • volume of spill	Proponent

Criteria	Nature	Mitigation	Monitoring	Responsible Body
		 use of sumps and regular reporting of spillages must be audited and corrections made where necessary. ◆ Proper training of operators must be conducted on a regular basis. ◆ Any spillage of more than 200 <i>l</i> must be reported to the Ministry of Mines and Energy and remediation instituted. 	exposure baseline data with post remediation data (e.g. soil hydrocarbon	
Visual Impact	This is an impact that affects the aesthetic appearance.	Routine maintenance of infrastructure will ensure that the longevity of structures is maximised. However, it is important that the real integrity of the structures is considered in the long term and just appearances.	be compiled of all	*
Cumulative Impact	_	Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact. Reviewing bi-annual and annual reports for any new or reoccurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient.	based on all other impacts must be created to give an overall assessment of the impact of the Operational Phase	

4.1 Decommissioning and Rehabilitation

Decommissioning is not foreseen during the validity of the ECC. 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, waste production and pollution as structures are dismantled. Noise must be kept within City of Windhoek 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 and updated at the time of decommissioning to include preventative and mitigating measures specific to decommissioning activities and to cater for changes made to the site.

5 CONCLUSIONS

The EMP, if properly implemented, will ensure adverse impacts on the environment are continually mitigated and prevented. 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 EMP should continue to be used as an on-site reference document during all phases of the existing facility, and internal auditing should take place in order to determine compliance with the EMP. Parties responsible for transgression of the EMP 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 updated documents.

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

6 REFERENCES

Brews L, Botha P, Faul A. 2016. Environmental Impact Assessment for the Construction and Operations of Bahnhof Service Centre's Fuel Retail Facility situated in Windhoek.