APP-006465
CONTINUED OPERATIONS OF TOTALENERGIES MARKETING NAMIBIA'S BULK FUEL STORAGE FACILITY IN WALVIS BAY

UPDATED ENVIRONMENTAL MANAGEMENT PLAN

Prepared by:

Prepared for:

October 2025

Project:	**UPDATED ENVIRONMENTAL MANAGEMENT PLAN FOR CONTINUED OPERATIONS OF TOTALENERGIES MARKETING NAMIBIA'S BULK FUEL STORAGE FACILITY IN WALVIS BAY**	
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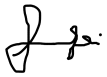
Report Approval:	 **André Faul** **Conservation Ecologist**	

I, Ingo Kavandja, acting as representative of TotalEnergies Marketing Namibia (Pty) Ltd, 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 Windhoek on the 8 day of October 2025.



TotalEnergies Marketing Namibia (Pty) Ltd

76072000231

Business Registration/ID No.

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1 INTRODUCTION

Geo Pollution Technologies (Pty) Ltd was appointed by TotalEnergies Marketing Namibia (Pty) Ltd to update their environmental management plan (EMP) for their existing Walvis Bay bulk fuel storage facility (Figure 1-1). The updated EMP will be submitted to the Ministry of Environment, Forestry and Tourism (MEFT) to renew the existing environmental clearance certificate (ECC-3557) of the depot. The ECC is a legal requirement for the continued operations of the depot as per the Environmental Management Act of 2007.

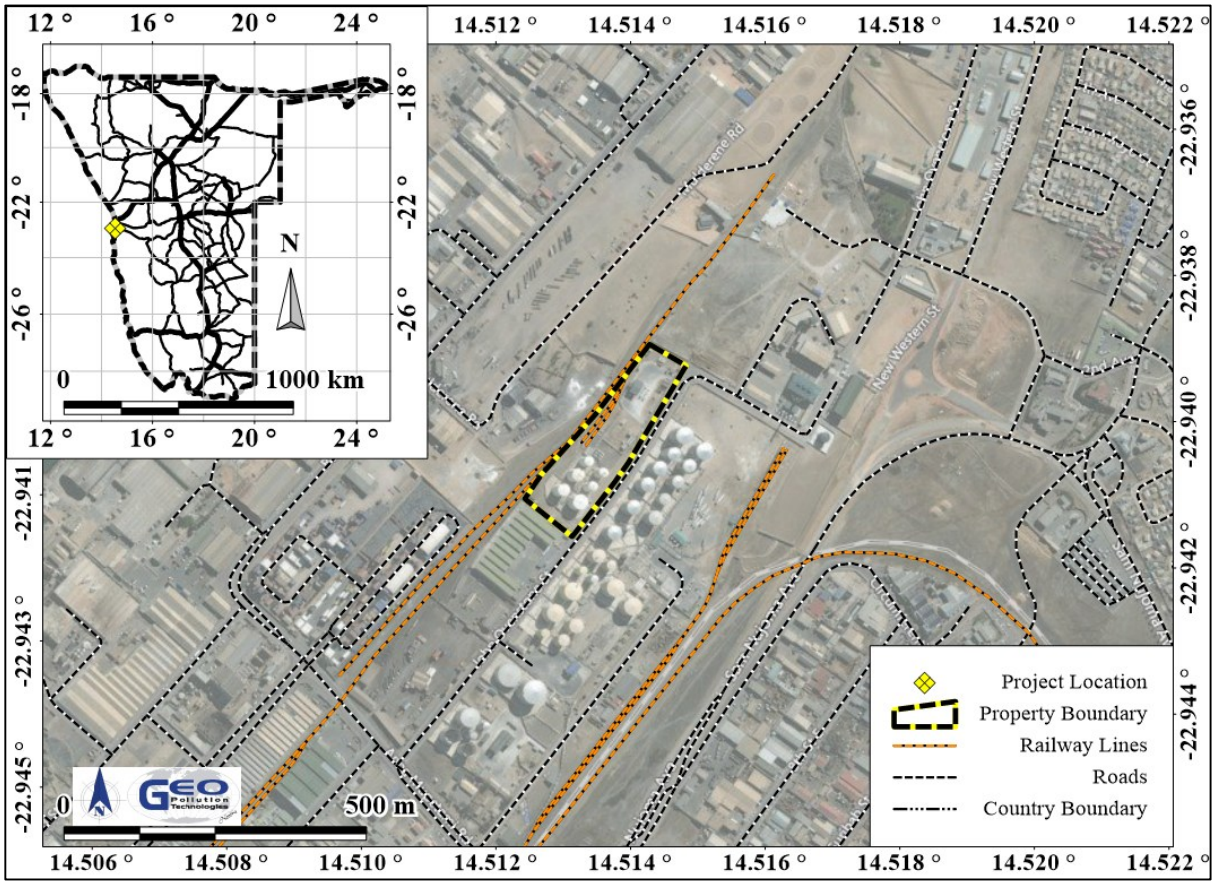

Figure 1-1 Project location

2 SCOPE

The scope of this EMP, in compliance with the requirements of EMA, is to:

- Provide a brief overview of all components and operations of the fuel depot.
- Summarise the legal and regulatory framework within which the project operates.
- To identify potential impacts of the project on the environment.
- Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels.
- To provide sufficient information to the relevant competent authorities and the MEFT to make informed decisions regarding the development.

3 PROJECT DESCRIPTION

The bulk fuel storage facility is situated along Ovenstone Street in the industrial area of Walvis Bay. The property is currently zoned for industrial purposes. The following is a short summery of the existing infrastructure and its operations.

3.1 FUEL TANK SHIP OFFLOADING

All products are brought to Namibia with fuel tank ships. Fuel is offloaded via a pipeline from the fuel terminal located at the Port of Walvis Bay North Port. Fuel is received one to two times per month.

3.2 STORAGE AND RETICULATION OF FUEL

The facility has 6 vertical steel tanks for the storage of fuel. All tanks are steel tanks used for the storage of ULP 95 and diesel.

3.3 RAIL LOADING FACILITY

Two rail sidings are available for rail tank car loading. Each siding has enough space for nine tank cars. Tank cars are bottom loaded and it takes place on suitable concrete spill control structures. Loading of fuel is metered according to pre-set volumes of the rail tank cars. The volume loaded is then confirmed by tank car dip. The rail gantry is equipped with spill control connected to an oil/water separator.

3.4 ROAD LOADING/OFFLOADING FACILITY

Four road loading/offloading bays are present at the road gantry on the premises. It is reached via an entrance gate from Ovenstone Sreet to the east. Trucks exit the premises through a separate exit gate onto Ovenstone Street.

The road gantry is used for product returns and uploading of diesel and ULP 95 to be transported by road to service stations in the region or to TotalEnergies depots elsewhere in the country, if rail transport is not possible. The road gantry is equipped with a concrete floor draining into an oil/water separator for spill control. Trucks park and wait in Ovenstone Street to gain access to the facility.

3.5 ADDITIVE INJECTION

Additives are added from two additive tanks situated at the pump farm, one for diesel and one for petrol. Addition is done with four additive pumps. Two additive meters connected to the fuel meter are used to regulate addition of additives and the operator can select fuel with or without additives.

3.6 OIL/WATER SEPARATOR

A drainage system is provided for water which could become contaminated during fuel spills. All bunding and spill control areas drain into oil/water separators of which there are two present on site.

4 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 4-1 to Table 4-4 govern the environmental assessment process in Namibia and/or are relevant to the facility.

Table 4-1 Namibian law applicable to the bulk storage 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 Act No. 7 of 2007, Government Notice No. 232 of 2007	♦ Defines the environment ♦ 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

Law	Key Aspects
Environmental Management Act Regulations Act No. 7 of 2007, Government Notice No. 28-30 of 2012	♦ Commencement of the Environmental Management Act ♦ List activities that requires an environmental clearance certificate ♦ Provide Environmental Impact Assessment Regulations
Petroleum Products and Energy Act Act No. 13 of 1990, Government Notice No. 45 of 1990	♦ Regulates petroleum industry ♦ Makes provision for impact assessment ♦ Petroleum Products Regulations (Government Notice No. 155 of 2000) o 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 o Regulations relating to the purchase, sale, supply, acquisition, possession, disposal, storage, transportation, recovery and re-refinement of used mineral oil
Water Resources Management Act Act No. 11 of 2013, Government Notice No. 269 of 2023	♦ Provide for management, protection, development, use and conservation of water resources ♦ Prevention of water pollution and assignment of liability
Local Authorities Act 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 4-2 Municipal by-laws, guidelines and regulations

Municipal By-laws, Guidelines or Regulations	Key Aspects

Integrated Urban Spatial Development Framework for Walvis Bay	♦ Overall vision to transform Walvis Bay to being the primary industrial city in Namibia. ♦ Aims to ensure that appropriate levels of environmental management is enforced for all developments in Walvis Bay.
Integrated Environmental Policy of Walvis Bay (Agenda 21 Project)	♦ Indicates the directions that the Municipality of Walvis Bay will move towards in the forthcoming years to fulfil its responsibilities to manage the environment of Walvis Bay together with the town's residents and institutions. ♦ Strong focus on conservation and protection of environment.

Table 4-3 Relevant multilateral environmental agreements for Namibia and the development

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 4-4 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 10089-1:2008 (ED. 4.03): The petroleum industry Part 1: Storage and distribution of petroleum products in above-ground bulk installations ♦ Spillage control procedures must be in place including impounding around the loading areas by bunding with appropriate slopes of 1:100, construction of bund walls and/or floors that are liquid tight and that are not prone to deterioration under the effects of any petroleum product.

The bulk storage 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 Hazardous Substances Ordinance, 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 Industries, 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." The depot stores and handles more than 30 m^3 of fuel.
- 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 stores fuel.

5 ENVIRONMENTAL MANAGEMENT PLAN

The EMP provides management options to ensure potential impacts from operational activities 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 the operational phases as well as the decommissioning phases of any activity or development. All personnel 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 and in an environmentally sound manner.

The objectives of the EMP are:

- to include all components of the various activities related to the facility;
- to prescribe the best practicable control methods to lessen the environmental impacts associated with the operations 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.

5.1 IMPLEMENTATION OF THE EMP

The section below outline the management of the environmental elements that may be affected by the different activities. 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 MEFT. Renewal of the ECC will require six monthly reports based on the standard conditions of ECCs.

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

5.1.1 Planning

During the phases of planning for construction (upgrades, maintenance etc.) continued operations and possible future 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 and operational activities are in place and remain 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 (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 on site, where reasonable, to prevent or deal with all potential emergencies:
  - EMP, risk management, mitigation, emergency response plan and HSE manuals
  - Adequate protection and indemnity insurance cover for incidents;
  - 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 a polluting incident occur or 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 ECC 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 ECC prior to expiry.

5.1.2 Employment

Operations of the facility rely on both skilled and professional labour. Employment is sourced locally while skilled labour/contractors may be sourced from other regions. Fuel is distributed throughout Namibia, which creates additional employment in the transport and downstream fuel supply industries.

Desired outcome: Provision of employment to local Namibians.

Actions

Enhancement:

- The Proponent must employ local Namibians contractors and employees 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.

5.1.3 Skills, Technology and Development

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

5.1.4 Revenue Generation

The sale of fuel contributes to revenue generation which is paid to the national treasury while also contributing to the local economy in terms of increased spending power of employees as well as through the sourcing of goods and services.

Desired outcome: The generation of income, payment of salaries and wages and overall contribution to national treasury.

Actions

Enhancement:

- Payment of salaries and taxes in accordance with the laws of Namibia.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Financial records on file.

5.1.5 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, especially given the increased spending power of employees and contractors. 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 includes, 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.

5.1.6 Fuel Supply

The operation of the facility aid in securing fuel supply to central Namibia.

Desired Outcome: Ensure a secure fuel supply remains available.

Actions

Enhancement:

- Ensure compliance to the petroleum regulations of Namibia.
- Record supply problems and take corrective actions.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Record supply problems and corrective actions taken.

5.1.7 Traffic

The operations of the facility increase traffic flow to and from the site through the distribution of fuel. This may increase congestion and increase the risk of incidents and accidents.

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.

Mitigation:

- Tanker trucks delivering fuel should not be allowed to obstruct any traffic in surrounding streets.
- If any traffic impacts are expected, such as during the collection of fuel by road tankers traffic management should be performed.
- The placement of signs to warn and direct traffic will mitigate traffic impacts.

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.

5.1.8 Health, Safety and Security

Activities associated with the construction, maintenance and operational phases 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), poses the main risks to employees. Lifting of heavy equipment can result in injuries. Access to site by unauthorised persons with the intent of arson, theft or sabotage of product or equipment.

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

Actions

Prevention:

- Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool, which includes: demarcation of dangerous areas and colour coding of pipes, operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, toolbox talks, material safety data sheets (MSDS) and signage requirements (personal protective equipment (PPE), flammable, etc.).
- All health and safety standards specified in the Labour Act should be complied with.
- Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- Provide all employees with required and adequate PPE.
- Ensure that all personnel receive adequate training on operation of equipment / handling of hazardous substances.
- Implementation of maintenance register for all equipment and fuel/hazardous substance storage areas.
- Security procedures and proper security measures must be in place to protect workers and clients.
- Equipment that will be locked away on site must be placed in a way that does not encourage criminal activities (e.g. theft).
- Strict security that prevents unauthorised entry.

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.
- All incidents should be reported to the designated supervisors and medical treatment provided for minor injuries. For serious injuries, emergency services should be called or the injured transported to the nearest medical facility if safe to do so.

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.

5.1.9 Fire

Construction, operational and maintenance activities may increase the risk of the occurrence of fires. The site is located in a partially developed area which increases the risk as well as the difficulty of fighting fires. Extremely flammable and explosive products are stored on site. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise.

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 and should be done in conjunction with the fire brigade and neighbouring developments.
- 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 gantry attendants are trained on the importance of correct filling procedures such as earthing when filling with unleaded petrol which can accumulate static electricity.
- Train locomotives may not enter the gantry area during fuel offloading.

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 emergency sirens, notifying the fire brigade and neighbouring depots, engaging emergency stops, using firefighting infrastructure, 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.

5.1.10 Air Quality

Quality air means "fresh" breathing air, required for respiration free from or with reduced levels of harmful gases, particularly also carbon dioxide, which can cause ill health effects such as headaches, tiredness and reduced concentration. 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. Construction and refurbishment activities may cause dust where soil surfaces are exposed.

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

Actions

Prevention:

- All buildings and offices should be well ventilated.

Mitigation:

- Employees should be coached on the dangers of fuel.
- 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.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Quarterly air quality (volatile organic compound) 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.

5.1.11 Noise

Noise pollution will exist due to heavy motor vehicles accessing the site to load fuel. 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 Health and Safety Regulations of the Labour Act and/or World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment.
- All machinery must be regularly serviced to ensure minimal noise production.

Mitigation:

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

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Health and Safety Regulations of the Labour Act / WHO Guidelines.
- Maintain a complaints register.
- Bi-annual report on monitoring and complaints and actions taken to address complaints and prevent future occurrences.

5.1.12 Waste production

Various forms of waste are produced during the construction, maintenance and operational phases. 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 waste 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 MSDS 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.

5.1.13 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 site is predicted as the site is currently void of natural fauna and flora. Groundwater can transport any pollution that reaches the groundwater to the sea. Pollution of the marine environment will impact on marine animals. Bright lighting used at nigh may disorientate birds flying at night and cause collisions of birds with man-made structures.

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

Actions

Prevention:

- Report any extraordinary sightings to MEFT.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Prevent scavenging of waste by fauna.
- Direct all lights down to working surfaces and use minimal lighting at night.
- The establishment of habitats and nesting sites at the facility should be prevented where possible.

Mitigation:

- Report any extraordinary animal sightings to the MEFT.
- 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.

5.1.14 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, pumps and pipelines, or spills and leaks associated with overfilling or human error. Such material may contaminate surface water, soil and groundwater.

Modern fuel storage 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, equipment, spill kits 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).
- Contingencies for the changes in pressure and temperature between Walvis Bay and the interior of Namibia must be in place when filling of rail tankers takes place in Walvis Bay. Overfilling of the tanks in Walvis Bay can cause product loss on route as release valves adjust the volume changes due to lower pressure and higher temperatures in Windhoek. Rail tankers arriving in the morning could release liquid fuel as temperatures rise. If these tankers are not positioned over bunded areas, soil contamination will result.

Mitigation:

- Implement an in-house oil spill response procedure.
- Regularly train employees on the actions to be taken if a major spill occurs.
- Any spillage of more than 200 litre must be reported to the Ministry of Industries, 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:

- Regular inspections and cleaning of oil water separators when hydrocarbons are visible.
- 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 Industries, Mines and Energy.

5.1.15 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 and routine maintenance on infrastructure will ensure that the longevity of structures is maximised and a low visual impact is maintained. However, it is important that the real integrity of the structures is considered in the long term and not just appearances.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

5.1.16 Cumulative Impact

Possible cumulative impacts associated with the operational phase include increased traffic on John Ovenstone Street. This will have a cumulative impact on traffic flow around the facility. This will also result in an increase in ambient noise.

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.

5.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the ECC. 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 or 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 Environmental Management Plan 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.

5.3 ENVIRONMENTAL MANAGEMENT SYSTEM

The Proponent could implement an Environmental Management System (EMS) for their operations. An EMS is an internationally recognised 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.

6 CONCLUSIONS

The above EMP if properly implemented will help to continually 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 EMP should continue to be used as an on-site reference document during all phases of the project, and auditing should take place in order to determine compliance with the EMP for the 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 MEFT on a bi-annual basis to allow for the future renewal of the ECC. This is a requirement by the MEFT.

Appendix A Current ECC

ECC – APP3557

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental Management Act (Act No. 7 of 2007)

TO

TotalEnergies Marketing Namibia (Pty) Ltd
P. O. Box 4223, Windhoek

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

The Operations of an Existing Bulk Fuel Storage Facility of TotalEnergies in Walvis Bay, Erongo Region.

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM
Private Bag 13306
WINDHOEK NAMIBIA
29 SEP 2022
ENVIRONMENTAL COMMISSIONER
REPUBLIC OF NAMIBIA

ENVIRONMENTAL COMMISSIONER

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