

**APP-00433**  
**OPERATIONS OF THE EXISTING CIC CONSUMER FUEL**  
**INSTALLATION IN ONDANGWA**

**UPDATED ENVIRONMENTAL MANAGEMENT PLAN**



Assessed by:



Assessed for:



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<b>Project:</b>	<b>UPDATED ENVIRONMENTAL MANAGEMENT PLAN FOR THE OPERATIONS OF THE EXISTING CIC CONSUMER FUEL INSTALLATION IN ONDANGWA</b>	
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## 1 INTRODUCTION

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TotalEnergies Marketing Namibia (Pty) Ltd requested Geo Pollution Technologies to update their existing EMP for the operations of an existing consumer fuel installation operated by CIC (Pty) Ltd, situated on erf 2894, Dr Kenneth Kaunda Road, Ondangwa. CIC runs a large vehicle fleet which requires significant volumes of fuel. TotalEnergies Marketing Namibia was contracted by CIC to install the infrastructure for the consumer fuel installation as well as supply its fuel. General operations involve the receipt of fuel from road tankers, dispensing fuel to fleet vehicles and day to day administrative tasks. The updated EMP is based on the original environmental assessment conducted for the facility (Faul et al., 2019).

## 2 OBJECTIVES OF THE EMP

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This environmental management plan (EMP) provides management options to ensure impacts of operations 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 both 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 in an environmentally sound manner.

The objectives of the EMP are:

- ◆ to include all components of the various activities of the consumer fuel installation;
- ◆ 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.

## 3 IMPLEMENTATION OF THE EMP

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Section **Error! Reference source not found.** 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 by the client where required. 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 environmental clearance certificate 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 bi-annually to the Ministry of Environment, Forestry and Tourism.

## 4 MANAGEMENT OF IMPACTS

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### 4.1 Construction and Operations

The following section provide management measures for both the operational phase as well as construction activities related to the proposed construction and operations of the consumer fuel installation. All monitoring results must be reported on as indicated.

#### 4.1.1 Planning

During the phase 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:
  - 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.
- ◆ Submit bi-annual reports to the MEFT to allow for environmental clearance certificate renewal after three years. This is a requirement by MEFT.
- ◆ Appoint a specialist environmental consultant to update the EMP and apply for renewal of the environmental clearance certificate prior to expiry.



#### **4.1.2 Skills, Technology and Development**

This is mostly an indirect impact which is related to the maintenance of the installation and the operations associated with CIC. During various phases of the various activities, training is provided to a portion of the workforce. Skills are transferred to an unskilled workforce for general tasks. 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.

#### **Actions**

##### **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

##### **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.
- ◆ Summary report based on records kept.

### **4.1.3 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 CIC which in turn rely on fuel supplied from their consumer fuel installation. Employment is sourced locally while skilled labour/contractors may be sourced from other regions.

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

#### **Actions**

##### **Mitigation:**

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

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ Summary report based on employee records.

#### **4.1.4 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 believed to have 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 trucking of 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. Spills and leaks may present risks to employees.

**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 sanitation requirements where applicable.

##### **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.
- ◆ Summary report based on educational programmes, training conducted and employee demographics.

#### **4.1.5 Fuel Supply**

The operation of the facility will aid in securing fuel supply to the fleet of CIC and lower the amount of traffic at fuel retail facilities in the vicinity.

**Desired Outcome:** Ensure a secure fuel supply remains available.

#### **Actions**

##### **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 summary report.

#### **4.1.6 Traffic**

CIC itself may have increased traffic flow to the site, however the consumer fuel installation itself is not expected to result in traffic impacts since it is located on the CIC premises and fuel deliveries are infrequent.

**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, or CIC fleet vehicles collecting fuel, should not be allowed to obstruct any traffic in Dr. Kenneth Kaunda Road.
- ◆ 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

##### **Data Sources and Monitoring:**

- ◆ 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 actions taken.

#### **4.1.7 Health, Safety and Security**

Every activity associated with the operational phase is reliant on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery (during maintenance) and handling of hazardous chemicals (inhalation and carcinogenic effect of some petroleum products), poses the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage.

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

#### **Actions**

##### **Prevention:**

- ◆ 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.
- ◆ 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.
- ◆ 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.
- ◆ Strict security that prevents unauthorised entry.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ 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.

#### **4.1.8 Fire**

The facility currently only stores diesel which is not as flammable as more volatile fuels. Operational and construction 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.

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

#### **Actions:**

##### **Prevention:**

- ◆ Ensure all fuel or 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.
- ◆ Emergency shutoff systems should be in place.

##### **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

##### **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 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.

#### **4.1.9 Air Quality**

Fuel vapours are released into the air during refuelling of storage tanks. 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.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

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



#### **4.1.10 Noise**

Noise pollution will exist due to heavy motor vehicles accessing the site to offload or receive fuel. Construction (maintenance and upgrade) may generate excessive noise.

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

#### **Actions**

##### **Prevention:**

- ◆ Follow the World Health Organisation (WHO) guidelines for limits on noise pollution. The facility is situated in an industrial area.
- ◆ 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:**

- ◆ Maintain a complaints register.
- ◆ Report on complaints and actions taken to address complaints and prevent future occurrences.

#### **4.1.11 Waste production**

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

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

#### **Actions**

##### **Prevention:**

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

##### **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).
- ◆ Spill catchment infrastructure should be cleaned regularly and waste disposed of appropriately.
- ◆ See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- ◆ Liaise with the municipality regarding waste and handling of hazardous waste.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/facility.
- ◆ Any complaints received regarding waste should be recorded with notes on action taken.
- ◆ Spill catchment infrastructure must be regularly inspected and all hydrocarbons removed once detected.
- ◆ All information and reporting to be included in a report.

#### **4.1.12 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 and Tourism.
- ◆ 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 report.

#### **4.1.13 Groundwater, Surface Water and Soil Contamination**

Operations entail the storage and handling of hydrocarbons 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 spills may contaminate surface water, soil and groundwater.

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

##### **Actions**

##### **Prevention:**

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

##### **Mitigation:**

- ◆ Any spillage of more than 200 litre must be reported to the relevant authorities.
- ◆ Spill clean-up means must be readily available on site as per the relevant MSDS.
- ◆ Any spill must be cleaned up immediately.
- ◆ Spill catchment infrastructure should be cleaned regularly and waste disposed of appropriately.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ A 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, 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

#### **4.1.14 Visual Impact**

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

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

#### **Actions**

##### **Mitigation:**

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

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

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

#### **4.1.15 Cumulative Impact**

Possible cumulative impacts associated with the operational phase include increased traffic in the area and along gravel roads, and potential groundwater contamination.

**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.
- ◆ Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.
- ◆ Reviewing compiled 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:**

- ◆ Summary report based on all other impacts must be created to give an overall assessment of the impact of the operational phase.

#### **4.2 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 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 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 CONCLUSION**

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The EMP should continue to be used as an on-site reference document during construction and operations of the facility. Parties responsible for transgressing 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 documents. Monitoring reports must be submitted to the Ministry of Environment, Forestry and Tourism every six months (bi-annually) to allow for the future renewal of the ECC.

### **6 REFERENCES**

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Faul A, Botha P, Short S; 2019 July; Operations of the Existing CIC Consumer Fuel Installation, Ondangwa: Environmental Assessment Scoping Report