UPGRADE AND OPERATIONS OF KAAP AGRI'S FUEL RETAIL FACILITY IN ARANOS

UPDATED ENVIRONMENTAL MANAGEMENT PLAN

Prepared by:

Prepared for:

October 2021

Project:	**UPGRADE AND OPERATIONS OF KAAP AGRI'S FUEL RETAIL FACILITY IN ARANOS: UPDATED ENVIRONMENTAL MANAGEMENT PLAN**	
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Report Approval	 **André Faul** Conservation Ecologist	

I SW Pienaar acting as a representative of Kaap Agri (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 17th day of November 2021.

Kaap Agri (Namibia) (Pty) Ltd

CY/1990/0288
Business Registration/ID Number

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
DEA	Directorate of Environmental Affairs
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMA	Environmental Management Act No 7 of 2007
EMP	Environmental Management Plan
EMS	Environmental Management System
ES	Environmental Classification
GPT	Geo Pollution Technologies
HIV	Human Immunodeficiency Virus
mbs	Meters below surface
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	Material Safety Data Sheet
PPE	Personal Protective Equipment
SANS	South African National Standards
WHO	World Health Organization

GLOSSARY OF TERMS

Alternatives - A possible course of action, in place of another, that would meet the same purpose and need but which would avoid or minimize negative impacts or enhance project benefits. These can include alternative locations/sites, routes, layouts, processes, designs, schedules and/or inputs. The "no-go" alternative constitutes the 'without project' option and provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid undesirable negative impacts.

Assessment - The process of collecting, organising, analysing, interpreting and communicating information relevant to decision making.

Competent Authority - means a body or person empowered under the local authorities act or Environmental Management Act to enforce the rule of law.

Construction - means the building, erection or modification of a facility, structure or infrastructure that is necessary for the undertaking of an activity, including the modification, alteration, upgrading or decommissioning of such facility, structure or infrastructure.

Cumulative Impacts - in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Environment - As defined in the Environmental Assessment Policy and Environmental Management Act - "land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, palaeontological or social values".

Environmental Impact Assessment (EIA) - process of assessment of the effects of a development on the environment.

Environmental Management Plan (EMP) - A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.

Environmental Management System (EMS) - An Environment Management System, or EMS, is a comprehensive approach to managing environmental issues, integrating environment-oriented thinking into every aspect of business management. An EMS ensures environmental considerations are a priority, along with other concerns such as costs, product quality, investments, PR productivity and strategic planning. An EMS generally makes a positive impact on a company's bottom line. It increases efficiency and focuses on customer needs and marketplace conditions, improving both the company's financial and environmental performance. By using an EMS to convert environmental problems into commercial opportunities, companies usually become more competitive.

Evaluation – means the process of ascertaining the relative importance or significance of information, the light of people's values, preference and judgements in order to make a decision.

Hazard - Anything that has the potential to cause damage to life, property and/or the environment. The hazard of a particular material or installation is constant; that is, it would present the same hazard wherever it was present.

Interested and Affected Party (IAP) - any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.

Mitigate - The implementation of practical measures to reduce adverse impacts.

Proponent (Applicant) - Any person who has submitted or intends to submit an application for an authorisation, as legislated by the Environmental Management Act no. 7 of 2007, to undertake an

activity or activities identified as a listed activity or listed activities; or in any other notice published by the Minister or Ministry of Environment & Tourism.

Public - Citizens who have diverse cultural, educational, political and socio-economic characteristics. The public is not a homogeneous and unified group of people with a set of agreed common interests and aims. There is no single public. There are a number of publics, some of whom may emerge at any time during the process depending on their particular concerns and the issues involved.

Scoping Process - process of identifying: issues that will be relevant for consideration of the application; the potential environmental impacts of the proposed activity; and alternatives to the proposed activity that are feasible and reasonable.

Significant Effect/Impact - means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.

Sustainable Development - "Development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs and aspirations" – the definition of the World Commission on Environment and Development (1987). "Improving the quality of human life while living within the carrying capacity of supporting ecosystems" – the definition given in a publication called "Caring for the Earth: A Strategy for Sustainable Living" by the International Union for Conservation of Nature (IUCN), the United Nations Environment Programme and the World Wide Fund for Nature (1991).

1 INTRODUCTION

Kaap Agri (Namibia) (Pty) Ltd requested Geo Pollution Technologies (Pty) Ltd prepare an updated Environmental Management Plan (EMP) in order to renew their existing Environmental Clearance Certificate (ECC) (Appendix A) for the upgrade and continued operations of their existing fuel retail facility in Aranos. The fuel retail facility is located on erf 132, Nossob Street, Aranos. It operates under an existing retail licence as issued by the Ministry of Mines and Energy (Appendix B). It is Kaap Agri's intention to construct an upgraded fuel retail facility on the erf (Figure 1-1). The proposed upgrade will ensure compliance with South African National Standards (SANS 10089) as prescribed by Namibian law. The upgraded facility will have two underground fuel storage tanks, a forecourt area with pump islands and associated reticulation, as well as support infrastructure such as spill control, offices, ablution facilities and parking. General operations involve the receipt of unleaded petrol and diesel from road tankers, dispensing fuel to tanker trucks and vehicles, operations of related infrastructure and day to day administrative tasks.

The EMP provides management options to ensure environmental impacts of the facility is minimised. The environment being defined in the Environmental Management Act as "land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values".

The EMP is thus a tool used to take pro-active action by addressing potential problems before they occur. This limits potential future corrective measures that may need to be implemented and allows for application of mitigation measures for unavoidable impacts. This document should be used as an on-site reference document during all phases (planning, construction (upgrades, care and maintenance), operations and decommissioning of the facility. All monitoring and records kept should be included in a report to ensure compliance with the EMP. Parties responsible for transgression of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. A Health, Safety, Environment and Quality policy as well as Environmental Policy could be used in conjunction with the EMP. Operators and responsible personnel must be taught the contents of these documents. Municipal or national regulations and guidelines must be adhered to and monitored regularly as outlined in the EMP.

The EMP will be used to apply for a renewal of the ECC in compliance with Namibia's Environmental Management Act (Act No 7 of 2007).

2 SCOPE

The scope of the EMP is to:-

- Provide a brief overview of all components and related operations of the facility.
- Summarise the legal and regulatory framework within which the fuel storage facility operates.
- To identify potential impacts of the facility 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 Ministry of Environment, Forestry and Tourism to make informed decisions regarding the development.

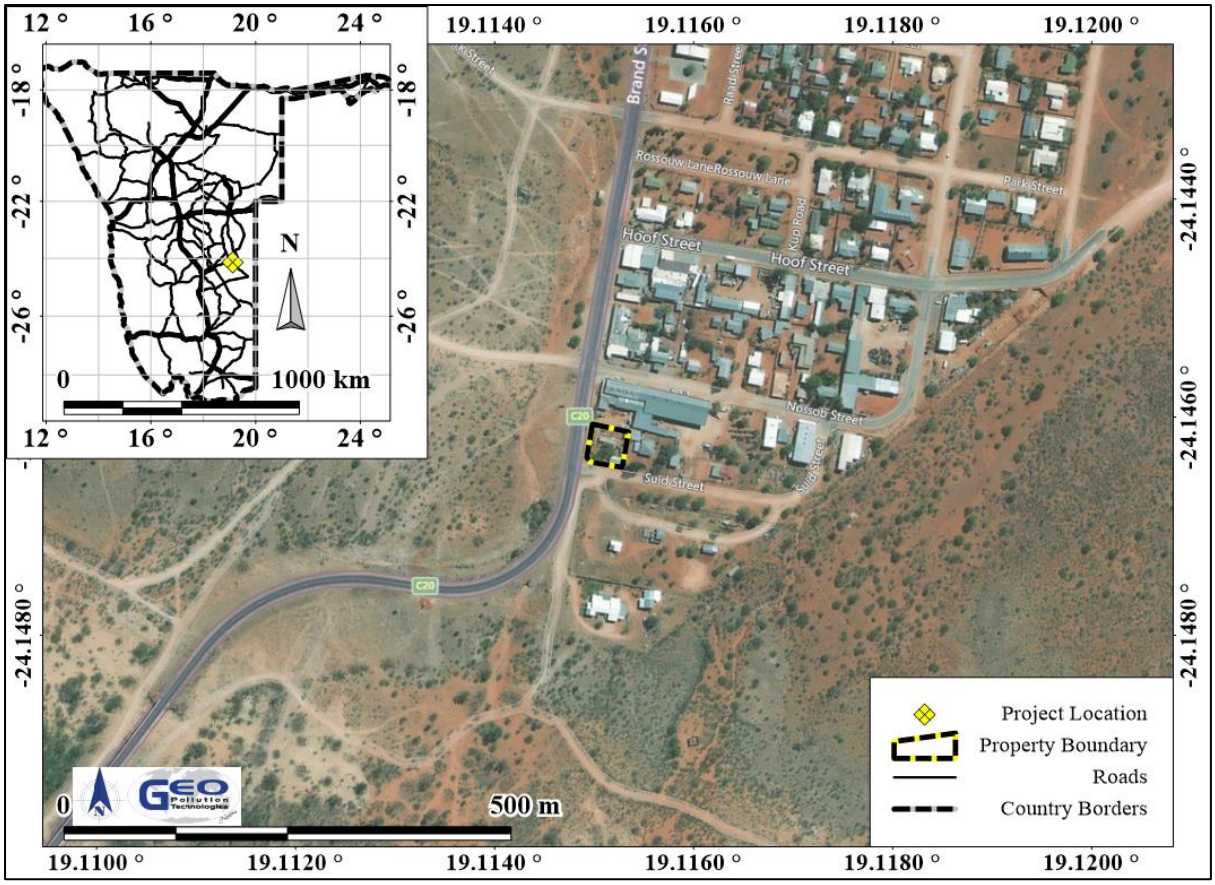

Figure 2-1. Project location

3 METHODOLOGY

The following methods were used to prepare the EMP:

1. Baseline information about the site and its surroundings was obtained from primary information and existing secondary information.
2. Potential environmental impacts emanating from the operations, construction / maintenance and decommissioning of the facility were considered and possible enhancement measures were listed for positive impacts while mitigation / preventative measures were provided for negative impacts as part of the EMP.

4 FACILITY OPERATIONS AND RELATED ACTIVITIES

The fuel retail facility is situated on erf 132, Nossob Street, Aranos. It is Kaap Agri's intention to construct an upgraded fuel retail facility on the erf. It is anticipated that the proposed upgrades will commence once an ECC has been issued by the MEFT.

4.1 EXISTING INFRASTRUCTURE

The facility currently hosts one pump island and one horizontal, aboveground steel diesel storage tank situated within a bunded area. The tank has a capacity of 23 m^3.

4.2 PLANNED INFRASTRUCTURE

The upgraded facility will have two underground tanks, a forecourt area with pump islands and associated reticulation, and support infrastructure such as spill control, offices, ablution facilities and parking. The upgraded facility will be constructed and maintained according to SANS 10089 or better as per Namibian law. Construction activities will entail the following:

- Installation of underground fuel storage tanks;

- Construction of spill control slabs, oil water separator an associated infrastructure;
- Construction of forecourt area, buildings and support structures.

The forecourt area will host two pump islands with dispensers underneath a canopy. A third separate and uncovered pump island will have one dispenser for the refuelling of trucks. The tank filler points will also be situated on this island. The facility will be constructed in a way to allow for the addition of a fourth pump island in the future, should the need arise (see Figure 4-1). Fuel will be supplied to the pump islands from the belowground storage tanks. All surfaces where fuel is handled will be covered with concrete spill control slabs and spill catchment pits draining to an oil water separator. See Figure 4 1 for the site layout.

4.3 OPERATIONAL ACTIVITIES

Normal operations associated with fuel retail facilities will continue to take place. This mainly involves the receipt of fuel (diesel and unleaded petrol) from road tankers, storage of fuel in underground storage tanks, dispensing of fuel to vehicles and daily activities involved with tank dips, fuel reconciliations and cleaning of the site.

Additional operations of the facility may include daily administrative activities as well as general care and maintenance of the property. Maintenance may include minor construction activities. Any domestic waste produced will be stored in a designated waste storage area. From here it will be removed regularly and transported to, and disposed of at, an approved municipal waste disposal facility.

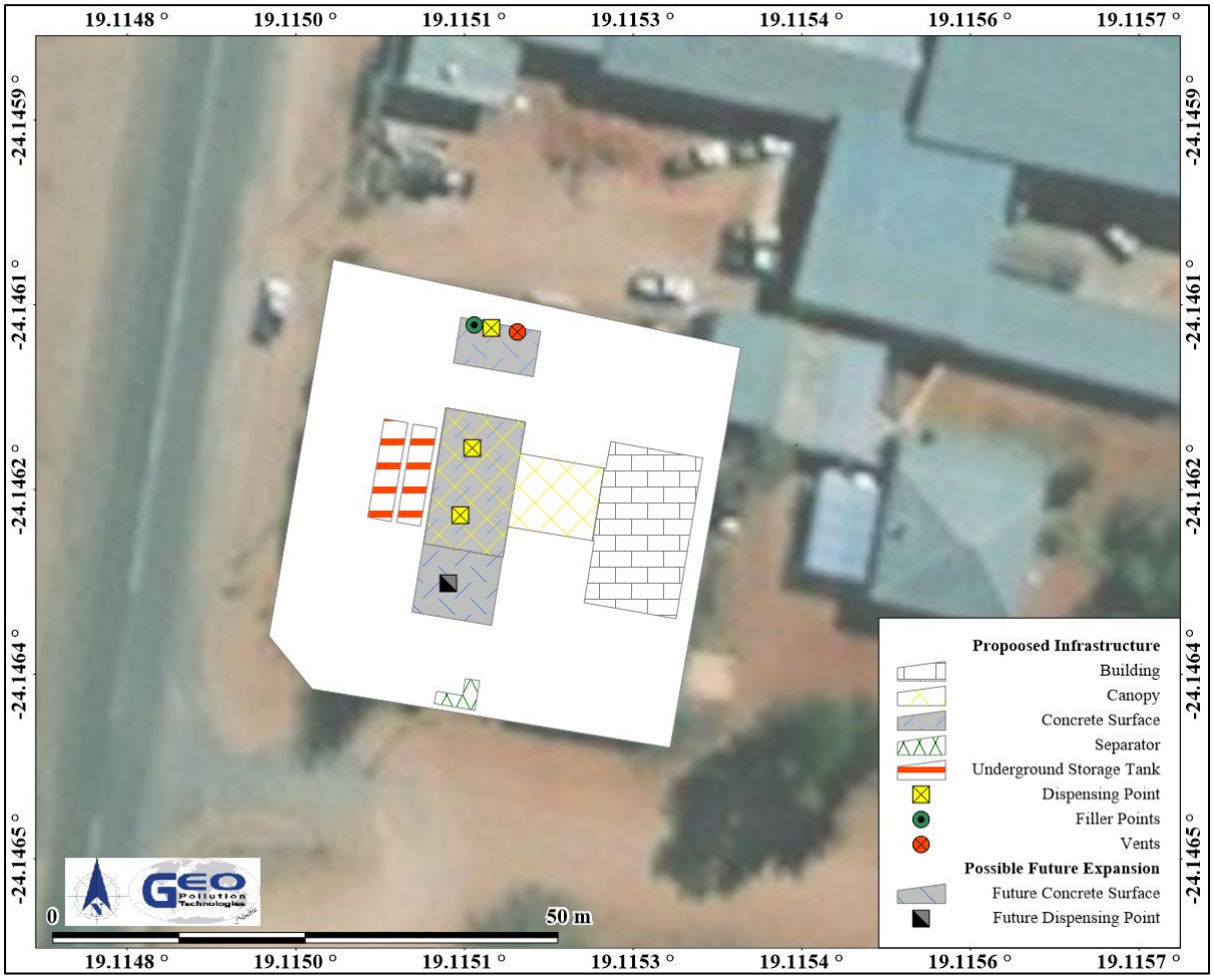

Figure 4-1. Proposed site layout

5 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 5-1 to Table 5-3 govern the environmental assessment process in Namibia and/or are relevant to the facility.

Table 5-1. 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 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.
Environmental Management Act Regulations 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).
The Water Act Act No. 54 of 1956	♦ Remains in force until the new Water Resources Management Act comes into force. ♦ Defines the interests of the state in protecting water resources. ♦ Controls the disposal of effluent. ♦ Numerous amendments.
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. ♦ Not in force yet.
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 Health Act Act No. 36 of 1919	♦ Provides for the protection of health of all people.

Law	Key Aspects
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 5-2. 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. o Provide requirements for spill control infrastructure

Table 5-3. 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.
UN Convention for the Prevention of Marine Pollution from Land-based Sources	♦ Concerns itself with the protection of marine fauna and flora by preventing marine pollution from land-based sources. ♦ Contracted parties, are committed to take all possible steps to prevent pollution of the sea as well as the direct or indirect introduction of substances or energy by humans into the marine environment resulting in such adverse effects as harm to living resources and to marine ecosystems, hazards to human health, damage to services/ facilities or interference with other legitimate uses of the area.

The project is listed as an activity requiring an environmental clearance certificate as per the following points from Section 9 of Government Notice No. 29 of 2012:

- 9.1 “The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.”
- 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.”
- 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.”
- 9.5 “Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquefied petroleum gas or paraffin.”

6 ENVIRONMENTAL MANAGEMENT PLAN

The purpose of this section is to list the most pertinent environmental impacts that are expected from the operational, construction (upgrades, maintenance, etc.) and potential decommissioning activities of the facility.

6.1 OBJECTIVES OF THE EMP

The EMP provides management options to ensure impacts of the facility is minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary. The environmental management measures are provided in the tables and descriptions below. These management measures should be adhered to during the various phases of the facility. All personnel taking part in the construction, operations or decommissioning of the facility should be made aware of the contents in this section, so as to plan the operations accordingly and in an environmentally sound manner.

The objectives of the EMP are:

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

6.2 IMPLEMENTATION OF THE EMP

Section 6.3 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 Environmental Clearance Certificate (ECC) must be communicated to the site managers. A copy of the ECC and EMP should be kept on site. All monitoring results must be reported on as indicated. Reporting is important for any future renewals of the ECC and must be submitted to the MEFT. Renewal of ECC will require six monthly reports based on the monitoring prescribed in this EMP.

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

6.3 MANAGEMENT OF IMPACTS: OPERATIONS AND CONSTRUCTION

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

6.3.1 Planning

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

- Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction activities and operations of the project are in

place and remains valid. This includes the petroleum products licence and town council approvals.

- Ensure that design parameters, where required, is approved by relevant authorities prior to construction activities at the facility.
- 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.
- 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.

6.3.2 Skills, Technology and Development

During various phases of the facility, training is provided to a portion of the workforce to be able to operate and maintain various features of the fuel retail facility according to the required standards. The upgrade of the fuel retail facility will further add to training requirements and development of the area in general. Skills are transferred to an unskilled workforce for general tasks. Development of people and technology are key to economic development of the town, region and nationally.

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

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:

- Bi-annual report should be compiled 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.

6.3.3 Revenue Generation and Employment

Operations and construction activities of the facility relies on employment. Skilled and unskilled labourers are employed or contracted for various tasks of construction (upgrade and maintenance) and operations. Unskilled labour may be sourced locally while it is expected that skilled contractors within Namibia will be used for specialised work required during construction. The presence of the facility therefore contributes to employment creation in the skilled and unskilled labour sector.

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 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.

6.3.4 Demographic Profile and Community Health

The project relies on labour for operations and construction activities. The facility is an existing facility and the scale of the project is limited and it is not that is has / will result in changes in the demographic profile of the local community. Exposure to factors such as communicable disease like HIV/AIDS, often associated with the transport industry, as well as alcoholism/drug abuse may impact the local community.

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

Actions:

Prevention:

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

Mitigation:

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

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 educational programmes and training conducted.

6.3.5 Fuel Supply

The upgrade of the facility, which includes the addition of unleaded petrol supply and additional filler points, will aid in securing fuel supply to the residents, farmers and businesses operational in the area.

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 bi-annual summary report.

6.3.6 Traffic

The facility may increase the traffic flow to the site as a result of tanker trucks delivering and vehicles and trucks collecting diesel and petrol. An increase in traffic to and from the site 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 and trucks collecting fuel should not be allowed park within adjacent streets outside of designated parking areas or to obstruct any traffic of entrances / exists of facilities in surrounding streets.
- If any traffic impacts are expected, traffic management should be performed to prevent these.
- The placement of signs to warn and direct traffic will mitigate traffic impacts.

Responsible Body:

- Proponent

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.

6.3.7 Health, Safety and Security

Activities associated with the construction 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. Security risks are related to unauthorized entry, theft and sabotage.

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

Actions

Prevention:

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

Mitigation:

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

6.3.8 Fire

Construction activities associated with the upgrade of the facility as well as maintenance activities may increase the risk of the occurrence of fires. Fuel, especially petrol, is highly flammable and therefore presents a fire and explosion risk.

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

Actions:

Prevention:

- Ensure all chemicals are stored according to MSDS and SANS instructions.
- Maintain regular site, mechanical and electrical inspections and maintenance.
- Clean all spills / leaks.
- Special note must be taken of the regulations stipulated in sections 47 and 48 of the Petroleum Products and Energy Act, 1990 (Act No. 13 of 1990).
- Follow SANS standards for design, operation and maintenance of the facility, this includes refuelling locations and distances from boundaries.
- All dispensers must be equipped with devices that cut fuel supply during fires.
- The proponent should liaise with the local Fire Brigade to ensure that all fire requirements are met. This includes, but is not limited to SANS 10400 T: 2011.

Mitigation:

- A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.
- 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 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.

6.3.9 Air Quality

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

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

Actions

Mitigation:

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

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

6.3.10 Noise

Construction (maintenance and upgrades) may generate noise. During operations, noise pollution will exist due to vehicles accessing the site to offload fuel or collect fuel. A fuel retail facility is a 24 hour operation which means that vehicle noise is generated throughout the day and night. Noise impacts are further related to impacts on onsite personnel such as hearing loss.

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

Actions

Prevention:

- Follow 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.
- Keep volume of public address systems on a level where neighbours are not impacted on.
- Manage noise caused by clients – loud music etc.

Mitigation:

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

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

6.3.11 Waste production

Waste is produced during the construction and operational phase. Waste may include hazardous waste associated with the handling of hydrocarbon products etc. Domestic waste may be generated by the facility and related operations. Construction (upgrade and maintenance) waste may include building rubble and discarded equipment contaminated by hydrocarbon products. Waste presents a contamination risk and when not removed regularly may become a fire hazard. 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.
- All regulation and by-laws relating to environmental health should be adhered to.

Mitigation:

- Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty chemical containers, contaminated rugs, paper water and soil).
- The spill catchment traps /drip trays should be cleaned regularly and contaminated waste disposed of as hazardous waste.
- See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- Liaise with the town council 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 spill catchment traps must be regularly inspected and all hydrocarbons removed once detected.
- All information and reporting to be included in a bi-annual report.

6.3.12 Ecosystem and Biodiversity Impact

The site is void of the majority of natural vegetation due to previous and current human activities on and around the site, some vegetation, such as trees, may however require removal during the upgrade of the facility. Construction and operations may present a pollution risk to the surrounding biophysical features.

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

Actions.

Mitigation:

- Where possible, removal of trees, especially protected species and large trees, must be avoided.
- The necessary permits from the Directorate of Forestry, Ministry of Environment, Forestry and Tourism, must be obtained for removal of all protected species.
- Report any extraordinary sightings to the Ministry of Environment, Forestry and Tourism.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Avoid scavenging of waste by fauna.
- The establishment of habitats and nesting sites at the facility should be avoided where possible.

Responsible Body:

- Proponent

Data Sources and Monitoring:

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

6.3.13 Groundwater, Surface Water and Soil Contamination

During construction, heavy machinery may present a contamination risk to the soil, surface and groundwater through breakdowns. Operations will entail the storage and handling of various hydrocarbons (such as fuels and lubricants) which present a contamination risk. Such material may contaminate surface water, soil and groundwater. Contamination may either result from failing storage facilities, or spills and leaks associated with fuel handling. The facility will provide fuel to public vehicles which may further present contamination risks through overfills, spills and leakages. Modern retail facilities are well designed to reduce leakages and spillages from contaminating soil and water.

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

Actions

Prevention:

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

Mitigation:

- Any spillage of more than 200 litre must be reported to the relevant authority (Ministry of Mines and Energy).
- Spill clean-up means must be readily available on site as per the relevant MSDS.
- Any spill must be cleaned up immediately.
- The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of at a suitably classified hazardous waste disposal facility.
- Surfactants (soap) may not be allowed to enter the oil water separator e.g. no soap usage on spill control surfaces.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A report should be compiled bi-annually of all spills or leakages reported. The report should contain the following information: date and duration of spill, product spilled, volume of spill, remedial action taken, comparison of pre-exposure baseline data (previous pollution conditions survey results) with post remediation data (e.g. soil/groundwater hydrocarbon concentrations) and a copy of documentation in which spill was reported to Ministry of Mines and Energy.

6.3.14 Visual Impact

This impact is not only associated with the aesthetics of the site, but also the structural integrity. The upgrade of the fuel retail facility will add to the aesthetic value of the site. The site should be kept clean, tidy and maintained to ensure it remains aesthetically pleasing and does not add the urban decay.

Desired Outcome: To minimise negative 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 maintenance record should be kept.
- A bi-annual report should be compiled of all complaints received and actions taken.

6.3.15 Cumulative Impact

Possible cumulative impacts associated with the operational phase include increased traffic in the area and possible hydrocarbon spills. The facility will have a negative cumulative impact on traffic flow on surrounding streets.

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

Actions

Mitigation:

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

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Bi-annual summary reports will provide an overall assessment of the impact of the construction and operational phases.

6.4 DECOMMISSIONING AND REHABILITATION

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

6.5 ENVIRONMENTAL MANAGEMENT SYSTEM

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

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

7 CONCLUSION

The operations of the fuel retail facility has a positive impact on the town by generating revenue and contributing locally to skills transfer and training which in turn develops the local workforce during operations of the facility. The proposed upgrade of the fuel retail facility will further aid in ensuring a reliable supply of fuel to residents, businesses and farmers in the area.

Negative impacts can be successfully mitigated. SANS standards relating to the petroleum industry and prescribed by Namibian law must be followed during all operations of the fuel retail facility. Noise pollution should at all times meet the prescribed WHO requirements to prevent hearing loss and not to cause a nuisance. Fire prevention should be adequate, and health and safety regulations should be adhered to in accordance with the regulations pertaining to relevant laws and internationally accepted standards of operation. Any waste produced must be removed from site and disposed of at an appropriate facility or re-used or recycled where possible. Hazardous waste must be disposed of at an approved hazardous waste disposal site.

The EMP should be used as an on-site reference document for the 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 environmental management plan. All operational personnel must be taught the contents of these documents.

Appendix A: Environmental Clearance Certificate

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT AND TOURISM

Tel: (00 26461) 284 2111
Fax: (00 26461) 232 057
E-mail: johannes.hambia@met.gov.na

Cnr Robert Mugabe &
Dr Kenneth Kaunda Street
Private Bag 13306
Windhoek
Namibia

Enquiries: Mr. J. Hambia

31 January 2019

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Managing Member
Kaap (Namibia) (Pty) Ltd
P O Box 5824
Windhoek
Namibia

Dear Sir /Madam

SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED SERVICE STATION ON ERF 132 IN ARANOS, HARDAP REGION

The Environmental Impact Assessment report and the Environmental Management Plan submitted are sufficient as these made provisions of the environmental management concerning the project's activities. From this perspective regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project.

On the basis of the above, this letter serves as an environmental clearance for the project to commence. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Kaap (Namibia) (Pty) Ltd and its consultants.

This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

Yours sincerely,

Teofilus Nghitila
ENVIRONMENTAL COMMISSIONER

"Stop the poaching of our rhinos"

All official correspondence must be addressed to the Permanent Secretary

Appendix B: Fuel Retail Licence

MINISTRY OF MINES AND ENERGY

PETROLEUM PRODUCTS AND ENERGY ACT, 1990
PETROLEUM PRODUCTS REGULATIONS (2000)

RETAIL LICENCE

[Regulation 5(4)]

RETAIL LICENCE		**Licence No. R/350/2017**
Name of licence-holder	Kaap Agri Namibia (Pty) Ltd	
Address of licence-holder	**Physical Address**	**Postal Address**
	Nossob Street 132 Aranos Namibia	P.O Box 5824 Ausspannplatz Windhoek Namibia
Name of Retail Outlet	Kaap Agri Namibia (Pty) Ltd	
Name of Supplying Wholesaler	Vivo Energy Namibia Ltd	
Premises to which licence relates	Nossob Street 132Aranos S 24° 08′ 38,3" E 19° 07′ 7"	
Conditions applicable to licence ***See overleaf of page for general and special conditions applicable to licence.***		
Date of issue of licence	17 February 2017	
Issued by the Minister of Mines and Energy in terms of regulations 5(4), on 17 February 2017 **at** Windhoek		

MINISTRY OF MINES AND ENERGY
OFFICE OF THE MINISTER
21 MAR 2017
Official Stamp
(For office use)
PRIVATE BAG 13297, WINDHOEK
OFFICIAL

.....
Minister: Mines and Energy

Appendix C: Curriculum Vitae

ENVIRONMENTAL SCIENTIST **André Faul**

André entered the environmental assessment profession at the beginning of 2013 and since then has worked on more than 130 Environmental Impact Assessments including assessments of the petroleum industry, harbour expansions, irrigation schemes, township establishment and power generation and transmission. André's post graduate studies focussed on zoological and ecological sciences and he holds a M.Sc. in Conservation Ecology and a Ph.D. in Medical Bioscience. His expertise is in ecotoxicological related studies focussing specifically on endocrine disrupting chemicals. His Ph.D. thesis title was The Assessment of Namibian Water Resources for Endocrine Disruptors. Before joining the environmental assessment profession he worked for 12 years in the Environmental Section of the Department of Biological Sciences at the University of Namibia, first as laboratory technician and then as lecturer in biological and ecological sciences.

CURRICULUM VITAE ANDRÉ FAUL

Name of Firm	:	Geo Pollution Technologies (Pty) Ltd.
Name of Staff	:	ANDRÉ FAUL
Profession	:	Environmental Scientist
Years' Experience	:	18
Nationality	:	Namibian
Position	:	Environmental Scientist
Specialisation	:	Environmental Toxicology
Languages	:	Afrikaans – speaking, reading, writing – excellent
		English – speaking, reading, writing – excellent

EDUCATION AND PROFESSIONAL STATUS:

B.Sc. Zoology	:	University of Stellenbosch, 1999
B.Sc. (Hons.) Zoology	:	University of Stellenbosch, 2000
M.Sc. (Conservation Ecology)	:	University of Stellenbosch, 2005
Ph.D. (Medical Bioscience)	:	University of the Western Cape, 2018

First Aid Class A	EMTSS, 2017
Basic Fire Fighting	EMTSS, 2017

PROFESSIONAL SOCIETY AFFILIATION:

Environmental Assessment Professionals of Namibia (Practitioner and Executive Committee Member)

AREAS OF EXPERTISE:

Knowledge and expertise in:

- Water Sampling, Extractions and Analysis
- Biomonitoring and Bioassays
- Biodiversity Assessment
- Toxicology
- Restoration Ecology

EMPLOYMENT:

2013-Date	:	Geo Pollution Technologies – Environmental Scientist
2005-2012	:	Lecturer, University of Namibia
2001-2004	:	Laboratory Technician, University of Namibia

PUBLICATIONS:

Publications:	5
Contract Reports	+130
Research Reports & Manuals:	5
Conference Presentations:	1

ENVIRONMENTAL GEOLOGIST **Wikus Coetzer**

Wikus has 6 years' experience in environmental science related fields with 4 years' experience in conducting environmental impact assessments and preparation of environmental management plans. He holds an honours degree in Environmental Sciences – Environmental Geology from the Northwest-University Potchefstroom (NWU) South Africa. He first completed a B.Sc. degree in Geology and Botany in the required time also from the Northwest University Potchefstroom, South Africa. His honours project focused on the rehabilitation and phytoremediation of various tailings types and soils.

He has working experience as an environmental monitor / assisting environmental officer at Petra Diamonds, Cullinan Diamond Mine (CDM) where he gained a proper understanding of environmental monitoring responsibilities as well as legislations, regulations and the implementation of EMS/ISO14001. He started working at Geo Pollution Technologies in 2017, and regularly conducts/assists and report on environmental impact assessments, environmental management plans and pollution surveys.

CURRICULUM VITAE WIKUS COETZER

Name of Firm	:	Geo Pollution Technologies (Pty) Ltd.
Name of Staff	:	WIKUS COETZER
Profession	:	Environmental Geologist
Nationality	:	South African
Position	:	Environmental Geologist
Specialisation	:	Environmental Geology/ Geochemistry
Languages	:	Afrikaans – speaking, reading, writing
		English – speaking, reading, writing

EDUCATION AND PROFESSIONAL STATUS:

B.Sc. Environmental and Biological Sciences – Geology & Botany	: NWU Potchefstroom 2013
B.Sc. (Hons.) Environmental Sciences – Environmental Geology	: NWU Potchefstroom 2014

First Aid Class A	EMTSS, 2017
Basic Fire Fighting	EMTSS, 2017

AREAS OF EXPERTISE:

Knowledge and expertise in:

- Phytoremediation
- Environmental Geology / Geochemistry
- Environmental Monitoring
- Environmental Compliance
- Environmental Impact Assessments
- Environmental Management Plans

EMPLOYMENT:

2017 - Date:	Geo Pollution Technologies
2015 - 2016:	Petra Diamonds CDM – Environmental monitor / Assisting environmental officer
2015:	Petra Diamonds CDM – Graduate program: Environmental Officer
2014:	NWU Potchefstroom department of Geo and Spatial Sciences – Research assistant

PUBLICATIONS:

Contract Reports: +40