

**ENVIRONMENTAL ASSESSMENT AND MANAGEMENT PLAN
FOR A RADIOACTIVE SOURCE MATERIAL STORAGE AND
HANDLING FACILITY ON ERF 3954, SWAKOPMUND, ERONGO
REGION**

BACKGROUND INFORMATION DOCUMENT



Prepared by



Prepared for

**Namaquanum Investment
Two CC**

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1 INTRODUCTION

Namaquanum Investment Two CC (the Proponent) has an existing workshop on erf 3954, Einstein Street, in the industrial area (Extension 10) of Swakopmund, Erongo Region (Figure 1). The Proponent plans to refurbish the workshop and to construct a dedicated storage facility for radioactive source material used to calibrate and test drilling equipment (well logging equipment) used in the offshore oil exploration industry. Clients from the offshore exploration industry will utilise the workshop and source materials on erf 3954, to perform the necessary calibrations and tests on their drilling equipment.

The Proponent has requested Geo Pollution Technologies (Pty) Ltd (GPT) to apply for an environmental clearance certificate (ECC) for the proposed facilities and operations. The ECC is required as per the Environmental Management Act No. 7 of 2007 (EMA). As part of the ECC application, an environmental assessment report and environmental management plan (EMP) will be submitted to the Ministry of Environment, Forestry and Tourism's Directorate of Environmental Affairs (DEA).

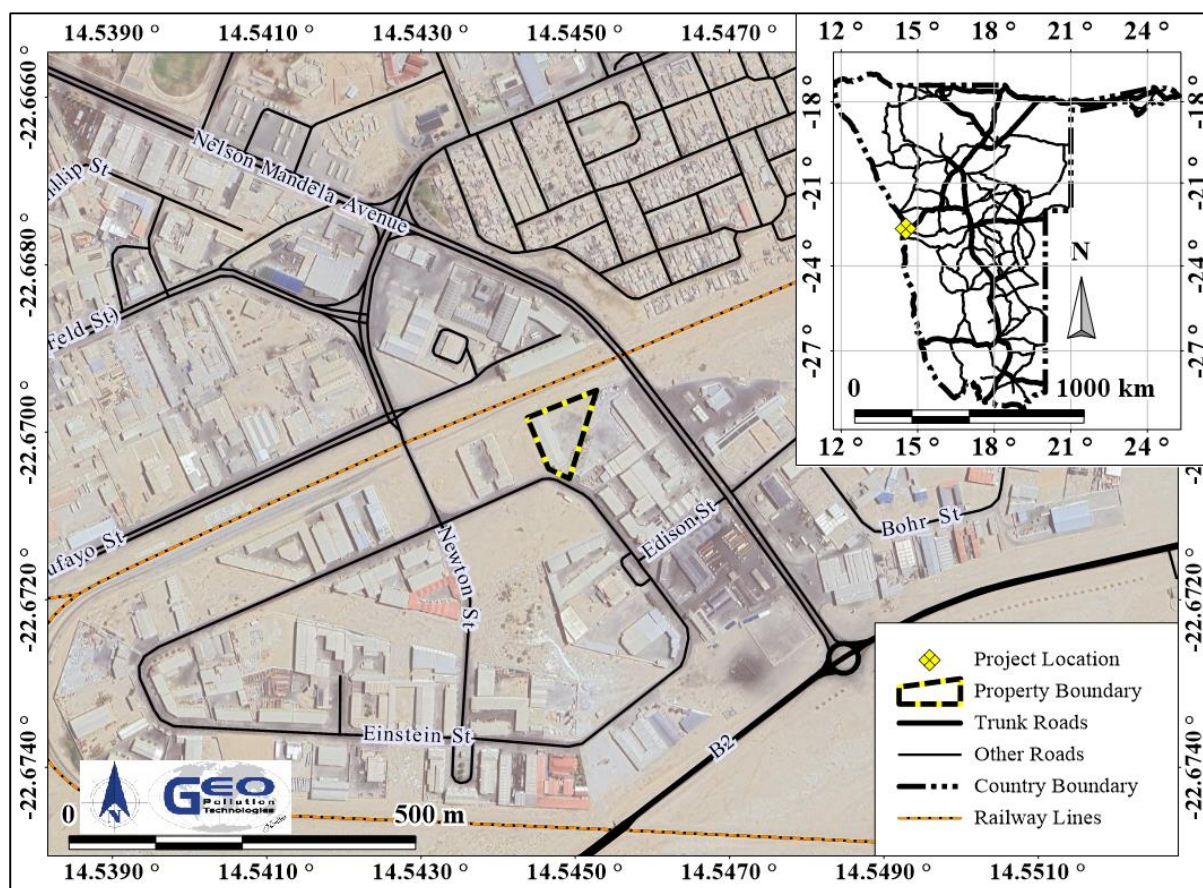


Figure 1 Project location

2 PURPOSE OF THE BID

With this background information document (BID), GPT aims to provide the DEA, authorities and interested and affected parties (IAPs) with information about the facility, and to register the ECC application with the Ministry of Health and Social Services' National Radiation Protection Authority and the DEA. IAPs are also invited to register with GPT in order to receive more information on the project, to provide comments, and to review all documents submitted to the DEA as part of the application for an ECC.

3 PROJECT DESCRIPTION

Activities considered for the assessment have been divided into the following phases: planning, construction and maintenance, operational and a decommissioning phases. A brief outline of expected activities for each phase is detailed below.

3.1 PLANNING PHASE

Continuously during construction and operations, and prior to possible future decommissioning activities of the project, 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 and safety measures are in place prior to, and during all phases, to ensure potential risks and impacts are minimised. Typical planning activities include:

- ◆ Where not in place, obtain permits and approvals from local and national authorities including authorisation from the National Radiation Protection Authority and municipal consent.
- ◆ Make provisions to have a health, safety and environmental coordinator to implement the EMP.
- ◆ Ensure provisions for a fund to cater for restoration or rehabilitation activities in the event of environmental incidents or pollution.
- ◆ Ensure all appointed contractors and employees enter into an agreement with the Proponent which includes adherence to relevant sections of the EMP.
- ◆ Maintain a reporting system to report on aspects of construction and maintenance, operations and decommissioning as outlined in the EMP. This is a requirement of the DEA.

3.2 CONSTRUCTION AND MAINTENANCE

The Proponent plans to construct an aboveground storage facility for the storage of the radioactive source material. The facility will conform to stringent industry safety specifications. The preferred structure will be a six meter steel shipping container, placed on a concrete or paved surface. The four interior sides of the container will be lined by an approximately 50 cm thick, high density concrete layer. A prefabricated concrete slab will be placed on top of the container. The container will have intruder alarms and the area around it will be fenced and locked and entry strictly controlled. Warning signs will be placed, at minimum, at all entrances to the fenced area. The facility will be under 24 hour closed circuit television (CCTV) surveillance (outside and inside the container).

The existing workshop will be transformed into a state of the art workshop for the calibration and testing of drilling equipment. The floor of the workshop will be covered with a new 15 cm thick, reinforced and sealed concrete floor. Various workspaces will be created for the various tests and calibrations to be performed. Utilities like telecommunications, electricity and earthing, water, drainage, ventilation and compressed air will be upgraded or newly installed. An equipment wash bay will be constructed and this, together with various drains, will be connected to an oil water separator. Additional emergency infrastructure and equipment will include a fire detection system, firefighting equipment, emergency eye wash stations, radiation detectors with audible and/or visual alarms, etc. A standby generator of 350 kVA will also be installed.

As an alternative option, the facility to store radioactive source material can also be partially underground. This will entail constructing a small building above ground, with a bunker pit below ground. The radioactive source material will be stored in this pit. The pit will be lined by concrete and covered with a sliding lockable pit cover. The same safety and security measures will be installed as for the container storage unit i.e. CCTV, alarms, fencing, etc.

Throughout the life of the facility, regular maintenance and refurbishments will be performed to ensure the facility's integrity does not become compromised and to ensure a low visual impact. This may include cleaning, painting and replacing of equipment and structures.

3.3 OPERATIONAL PHASE

Only suitably trained, qualified and authorised personnel will have access to the radioactive source material storage area, as well as handle and work with such material. Any movement of the radioactive source material must be logged (logged out and in). Continuous radiation exposure

monitoring will be performed to ensure employees' exposure remains within the approved limits. Regular leak tests will be performed as per the individual sources' requirements, to ensure it remains within the threshold limits. All faulty radioactive source material that cannot be repaired as well as any obsolete materials will be returned to the supplier for safe disposal. The necessary security and emergency response plans will be implemented at all times to ensure safety and protection of the environment and local community.

3.4 DECOMMISSIONING PHASE

Decommissioning of the facility is not foreseen during the validity of the ECC. Decommissioning will however be assessed. Decommissioning will entail partial or complete removal of all infrastructure. Where decommissioning occur, rehabilitation of the area may be required. After decommissioning, any pollution present on the site must be removed or remediated.

3.5 PRELIMINARY IDENTIFIED IMPACTS

During the preparation of the environmental assessment and EMP, all components of the environment will be considered. However, only those components which are, or may be, significantly impacted, or are deemed to be sensitive, will be assessed. These include the following:

- ◆ Human component (employee, visitor and community health and safety)
- ◆ Infrastructure (aesthetics, fire, integrity, damage to services, etc.)
- ◆ Neighbours (noise, aesthetics, waste, traffic)
- ◆ Groundwater, surface water and soil (radioactive pollution, hydrocarbon spills, waste)
- ◆ Ecosystem and biodiversity (habitat, pollutants, birds)
- ◆ Socio economic characteristics (service to the oil exploration industry, employment, training and skills development, revenue)

4 PUBLIC CONSULTATION

Public consultation is an integral part of all environmental assessments. Geo Pollution Technologies thus invites all interested and affected parties (IAPs) to provide in writing, any issues and suggestions regarding the project. This correspondence must include:

- ◆ Name and surname
- ◆ Organization represented or private interest
- ◆ Position in the organization
- ◆ Contact details
- ◆ Any direct business, financial, personal or other interest which you may have in the approval or refusal of the application.

All contributions become public knowledge and will be included in the environmental assessment report. The environmental assessment and EMP reports will be circulated to all registered IAPs for review as per the EMA requirements. The comments, inputs and suggestions will also be submitted to the DEA along with how any issues have been addressed in the environmental assessment.

The public participation process will remain ongoing during the environmental assessment. However, all comments and concerns should be provided to GPT timeously, to ensure incorporation into the final report. For any additional information the project team may be contacted at:

