May 2026

ENVIRONMENTAL MANMAGEMENT PLAN

AGL Energies Lüderitz Logistics Base

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1 INTRODUCTION

The EMP is the part of the environmental impact assessment which ensures design and management actions are put in place to address environmental risks on the site.

It is recommended that the Environmental Management Plan is translated into an Environmental Management System (EMS). The system will enable the company to manage these risks and impacts as part of the overall company management system.

1.1 RESPONSIBILITIES

The responsibility for the implementation of the EMP ultimately lies with AGL Management. A Health, Safety and Environmental Officer (HSE), needs to be made responsible for the implementation of this EMP and ensure all the steps mentioned in it are taken, also that ongoing maintenance, refinement and adapting of it takes place. The below explains the duties of the HSE Officer :

He/she should have the background to implement and oversee the tasks at hand. If the HSE officer has no training in an understanding of the issues mentioned in this EMP, and health, safety, environmental and social matters generally, the individual needs to receive training.

The HSE Officer duties include the following:

- Take responsibility for ensuring all HSE related permits are up to date.
- Take responsibility for coordinating and following up (full circle) the initiatives and management actions listed in this EMP.
- Take responsibility for all monitoring actions listed under each section;
- Take responsibility for continuously reviewing this EMP so that changes in legislation, plant components, designs, operations, technology etc. may be considered and changes made where necessary.
- Take responsibility for maintaining a stakeholders list, complaints register and regular open and constructive communication with such stakeholders, giving feedback of how concerns are being considered.
- Take responsibility for non-compliance on site and devising a penalty/incentive strategy for the company.
- Take responsibility for initiating a record keeping system for keeping track of the implementation of this EMP.

- Consider with Management the need for an EMS, and implement following the decision.

1.2 CONTRACTORS

When AGL solicits contractors for building projects, the handling and disposal of waste, supplies of chemicals, etc. then they need to adhere to the various permit requirements, environmental management principles and laws as applicable. This needs to be integrated into the various contractors with such suppliers and updated regularly.

1.3 MANAGEMENT REQUIREMENTS

The management requirements in this EMP have the following three main categories:

- Permit and relevant legal requirements
- Construction, Operational and maintenance requirements.

2 PERMITS AND RELEVANT LEGAL PROVISIONS

Table 1: Relevant permit and legal requirements

THEME	LEGISLATION INSTRUMENT	MANAGEMENT REQUIREMENTS	CONTACT PERSON
Blasting	Explosives Act 26 of 1956 Explosives Regulations (1972-1604)	A blasting permit to be obtained and the blasting to be done according to the conditions.	
Fuel storage	Petroleum Products and Energy Act of 1990 and the Petroleum Products Regulations of 2000	Consumer Installation Certificate: Required for businesses storing fuel for their own use (e.g., construction sites, farms).	
Environmental	Environmental Management Act 7 of 2007 EIA Regulations (EIAR) GN 29-30 (GG 4878)	The amendment, transfer or renewal of the Environmental Clearance Certificate "(EIAR, GN 29: S19 & 20). After this specific Clearance Certificate has been obtained, it needs to be renewed every three years. Six-monthly monitoring reports to be submitted on the EIA Portal.	Ms Saima Angula Tel: 0819528609
Labour	Labour Act 11 of 2007 Health and Safety Regulations (HSR) GN 156/1997 (GG 1617).	Adhere to all applicable provisions of the Labour Act and the Health and Safety regulations.	Labour Law Advice: Tel: (061) 309 957
Water	Water Resources Management Act (No 11 of 2013) and its 2023 Water Regulations Lüderitz bylaws.	Identify standards pertaining to the Lüderitz sewage and solid waste disposal systems. (generally no chemicals may be disposed of in these systems, to be separated and disposed of at an approved hazardous waste disposal site, or treatment facility or the effluent first treated to meet standards.	
Fitness Certificate	Town Planning Scheme General Health Act	Obtain and renew fitness Certificate.	
Factory permit	General Health Act	Obtain and renew factory permit.	

3 MITIGATION DETAILS: CONSTRUCTION, OPERATION AND MAINTENANCE REQUIREMENTS

The following table provides a large-scale overview of all the major environmental management themes pertaining to both generic and site-specific construction, operation and maintenance mitigation details. This table serves to act as quick reference, for the detailed mitigation details that follow below, for the implementation of the of this EMP.

Table 2: Generic and site-specific environmental management actions for the construction phase

THEME	OBJECTIVE	SECTION
Design, clearance and Construction	To plan ahead for the EMP requirements during construction and operation, including design requirements. TO ensure the contractor is aware of EMP requirements and is committed to their implementation.	Section A
Waste management	Avoid and where not possible minimise all waste pollution associated with Construction and operations.	Section B
Labour, Health and safety	Safeguard health and safety of workforce and general public.	Section C
Environmental training and awareness	Awareness creation regarding the provisions of the EMP as well as importance of safeguarding environmental resources.	Section D
Communication with Interested and Affected Parties (I&APs)	Provide a platform for I&APs to raise grievances and receive feedback and hence minimise negative conflict	Section E
Resource conservation	Conservation of energy through pursuing renewable energy alternatives and reducing energy consumption	Section F

3.1 SECTION A: DESIGN, SITE CLEARANCE AND CONSTRUCTION

Targets:

- 100% compliance of EMP by the Contractor.
- Planning and confirmation of design aspects
- Financial provision for EMP by the contractor.

ASPECT	MANAGEMENT ACTIONS
Design considerations	• Identify aspects, which require design attention according to this EMP, including water and energy conservation design aspects, and final effluent and chemicals disposal details.
Construction tender documentation	• Ensure the relevant conditions of the EMP are included in the construction tender documentation. •
Labour relations	• Comply with the Labour Act as far as employment contracts are concerned. • Provide a grievance mechanism to staff from dealing with grievances. • Communicate with the Town Council and the Regional Council, as to how recruitment will be conducted to prevent job seekers flocking to the site. • Consider how meals will be provided keeping in mind vendors may set up stalls at the entrance of the site. • Employ people from Lüderitz as far as available, opt to train where skills are needed. The company is to have a skills transfer plan, where skills in Namibia/region are currently lacking. • Provide equal opportunities to women as may be suitable. • No construction workers should be accommodated on site, except for one security guard.
Site clearance conditions	• Demarcate the site with iron pegs, ensuring the boundary is clearly visible, following exactly the boundary coordinates of the AGL site. • Ensure that all the construction works, site office, laydown area, stockpiles, etc. are accommodated within the site, or if not possible, on already disturbed sites or as a last resort, on areas approved for development such as the neighboring industrial site. No part of the AGL project should be allowed on the undisturbed hills north of the site. • No construction workers should be allowed to roam outside the construction site at any time. The selling of meals by vendors should be controlled according to company policy. • No poaching or vegetation and rock collecting should be allowed.
Working in windy conditions	• Over and above regular health and safety issues, specified further in this document, the Contractor should make specific provision for health and safety

ASPECT	MANAGEMENT ACTIONS
	issues caused by windy conditions, requiring extra protection, e.g. Head covering, extra water, wind breaks, working at heights, dust, etc. • All Stockpiles should be protected to such an extent that the material does not cause windblown dust. All waste should be covered to prevent windblown waste.
Archaeological chance-find procedure.	• The Chance find procedure for archaeological remains in Appendix A is applicable.
Compliance with remaining EMP	• The Contractor should comply with the relevant sections of this EMP.

3.2 SECTION B: WASTE MANAGEMENT

Targets:

- All waste to be as a matter of preference 1) avoided 2) reused and 3) recycled, with no waste remaining that does not fall into either of these categories.
- Minimum general waste disposed of at Lüderitz Waste Disposal site, but rather re-used, re-purposed, or recycled ((paper, plastics, cardboard, glass).
- Minimum hazardous waste at an approved Hazardous waste disposal site, but rather limited with minimally required quantities at inputs, neutralised, re-used or treated before disposal.

ASPECT	MANAGEMENT ACTIONS
Waste streams	• Identify the various categories of waste on the site, including general waste (paper, cardboard, plastic, tin, etc.), electronic waste, hazardous waste, post-digestive waste and high-risk waste. • Identify the source of each category, and record the volumes and/or weight at each source as well as collectively. • Monitor the volumes and/or weight of each category.
Waste disposal methods	• Identify the disposal destination of each category.
Waste disposal on site	• Waste containers for the various waste streams should be clearly marked and in case of hazardous substances, covered and contained in a bunded, restricted area. • In line with health and safety regulations, no waste shall cause health and safety complications for the staff or visitors to the site. ‘

ASPECT	MANAGEMENT ACTIONS
	• The handling and storage of waste shall be in line with the Health and Safety Regulations and Luderitz bylaws. All waste categories shall be regularly disposed of and collected from site.
Monitoring	• Maintain records of waste generated, per product delivered, and methods of disposal. Set targets for continual improvement per year.

3.3 SECTION C: LABOUR RELATIONS, WORKER AND COMMUNITY HEALTH AND SAFETY

Targets:

- Zero incidents on site
- 100% compliance with Health and Safety Regulations
- 100% compliance with Labour law
- Zero complaints about noise, vibrations and dust
- Maintenance of standards.

ASPECT	MITIGATION MEASURE
Fuel storage	• Obtain fuel consumer licence according to regulations. Manage according to conditions, which normally includes the following: • Annual Reporting: Licence- or certificate-holders must report annually (by 28 February) on reporting Form PP/1 to the Minister regarding storage tanks if capacity is: o Above-ground: 2,200 litres or more. o Below-ground: 4,500 litres or more. • Installation Standards: Installations must comply with specific codes of practice regarding design, construction, and maintenance (including pipework and pumps). • Fire Safety: Sites must adhere to fire precautions and emergency measures, including potential separation distances from property boundaries and buildings. • Bund Walls: Storage tanks must have appropriate secondary containment (bund walls) to prevent environmental contamination from spills or leaks. • Fuel Specifications: Stored fuel must meet Namibian specifications (e.g., Unleaded Petrol 95, 50 PPM or 10 PPM Diesel). • Inspections: The MME may conduct routine and/or random inspections at retail outlets, bulk storage facilities, and consumer installations.

ASPECT	MITIGATION MEASURE
Blasting	• Manage the blasting to be done according to the conditions of the blasting permit, which ordinarily includes the following: • Safety & Handling: Blasters must possess a valid blasting certificate issued by the Chief Inspector. Explosives must be used in accordance with the regulation, ensuring secure storage and handling to prevent unauthorized access. • Operational Constraints: o Time: Blasting activities, particularly near communities, are often restricted to daytime hours, such as 7:00 am to 5:00 pm. o Blast Control: Use of approved, waterproofed cable, with the blaster keeping the firing key/handle in their possession at all times. o Environmental Control: Manage to control dust (blast on wind quitter days if possible, control noise, and vibration to avoid damage to • Permit Specifics: Permits are required for importing, storing, supplying, and using explosives. • Safety Zones: Security personnel must remain at their posts until the charge is detonated and the "All Clear" signal is given.
Health and Safety Regulations	• Identify all aspects of the Health and Safety Regulations that are applicable to the site, including training of staff (include forklift operators), medical surveillance and monitoring, identification, handling and storage of hazardous chemical protocols, airborne emissions and noise, occupational exposure, according to regulations, their exposure limits in regulations, machinery guarding, and PPE. Other requirements include mandatory forklift inspections, records to be kept, bi-annual reporting, inspections, etc.
Labour Relations	• Company with the Labour Act as far as employment contracts are concerned. • Provide a grievance mechanism to staff from dealing with grievances. • Communicated with the Town Council and the Regional Council, as to how recruitment will be conducted to prevent job seekers flocking to the site. • Consider how meals will be provided keeping in mind vendors may set up stalls at the entrance of the site. Consider company policy in this regard. • Employ people from Lüderitz as far as available, opt to train where skills are needed. The company is to have a skills transfer plan, where skills in Namibia/region are currently lacking. • Provide equal opportunities to women.
Traffic safety and Access road	• Make arrangements with the Luderitz Town Council regarding the maintenance of the access road. • Strict regulations pertaining to drivers licences, safety on the road including speed limits, zero alcohol, vehicle roadworthiness, etc. should be maintained at all times.

3.4 SECTION D: HSE TRAINING AND AWARENESS

Targets:

- 100% attendance of all staff at HSE induction training.
- 100% attendance of all staff of annual HSE training refresher courses

ASPECT	MANAGEMENT ACTIONS
HSE Training	The entire staff complement of AGL should undergo HSE induction and refresher training which should include as a minimum the following: • Explanation of the importance of health, safety and environmental management with its legal requirements and implications. • Discussion of the potential HSE implications of AGL activities • Employees' roles and responsibilities, including waste reduction, health and safety, correct handling and disposal of waste and hazardous substances. • For each division, the specific environmental, health and safety provisions that are applicable. • Maintain the training for each staff member periodically.

3.5 SECTION E: COMMUNICATION WITH INTERESTED AND AFFECTED PARTIES (I&APS) AND AUTHORITIES

Targets:

- Establish an open communication policy
- List of I&APs compiled and constantly updated as new parties lodge complaints
- Updated complaints register.
- Responses sent within a period of 1 week of receipt of a complaint (acknowledgement of receipt), with a commitment of how the matter will be investigated and when feedback will be given.
- Honouring all commitments made above.
- Communication sent on any changes at the laboratory that could affect the stakeholders.

ASPECT	MANAGEMENT MEASURES
General communication matters	• List I&APs which include the neighbours and nearby instututions/activities those that have complained in the past, as well as authorities. • Continually update this list to include new correspondees, new appointees at Authorities, and new organisations with an interest. • A complaints register should be developed, which includes a record of complaints received (date, time and contents), as well as the details of how the matter is being dealt with. • All communication to stakeholders, particularly when it involves a complaint, is to be channelled through the HSE Officer. • Complaints are to be acknowledged and referred to the department involved, with a commitment of how the matter will be dealt with and when feedback can be expected. • All decisions which involve complainants directly are to be communicated to them without delay. • AGL shall communicate to the stakeholders if there are any changes made to the laboratory that could affect them.

3.6 SECTION F: RESOURCE CONSERVATION

Targets:

- Energy consumption target below **80 kWh/m²** annually (operation only)
- Optimum non-renewable energy sources
- Water management efficiency target at least 80%

ASPECT	MANAGEMENT MEASURES
Renewable energy and CO_2 efficiency	• Consider solar installation as a supplementary energy source • Electrification of Operations: Transitioning material handling equipment (e.g., forklifts, terminal tractors) to electric power to reduce direct diesel reliance. • Renewable Energy Integration: Installing solar panels on-site to reduce grid reliance and move toward becoming energy producers rather than mere consumers.
Energy conservation	• Lighting Consider LED lighting systems t0 lower consumption in large storage areas.
	• Compile an energy conservation plan for the operations. Light pollution should be prevented by reducing lighting at night time hours and turning them downwards only to areas requiring lighting.

	• Implement energy audit practices throughout the organisation.
Water conservation	• Set targets for water conservation and implement throughout the organisation. • Water Management Efficiency: A high-performing target is a water management efficiency rate exceeding 80%, aimed at optimizing reuse of produced water and reducing reliance on freshwater sourcing. • Recycling Targets: Consider ways of recycling wash water at the site. • Consider efficiency of washing equipment, e.g. high-pressure spraying.
Monitoring	• Records shall be kept of the amount of energy used per unit output (e.g., kWh per pallet, water consumption per pallet/pipe cleaned).

4 MONITORING AND RECORDS

The following should be monitored on site, for inclusion in the b-annually monitoring reports, to be submitted to the Directorate of Environmental Affairs, we well as to other institutions according to permits.

ASPECT	MANAGEMENT MEASURES
BLASTING	• Blasting occasions and details as per blasting permit.
HEALTH AND SAFETY	• Monthly Records to be kept in terms of the Health and Safety Regulations. • Reports produced according to health and safety regulations. • Will include training undertaken, accidents and incidents, noise levels, health surveillance, etc.
LABOUR	• Monthly staff employed according to nationality, occupation, gender, age. • Grievances per month, and details of how resolved.
ENERGY CONSUMPTION	• Monthly records kept according to unit per output.
WATER CONSUMPTION	• Monthly records according to unit consumed per output. • Leakages per month, repairs done.
FUEL STORAGE	• Fuel stored and used according to Fuel Installation Licence
WASTE	• Volumes of different waste streams generated and disposed of (where disposed). Per month.
EFFLUENT	• Water quality according to Luderitz Town Council standards. • Volumes of sewage and other effluent removed per month.
CHEMICAL STORAGE AND HANDLING	• Incidences of spills and leakages per month • Volumes of oils and other hazardous substances removed to oil removal company.
STAKEHOLDERS	• Stakeholder list and communication sent and received. Monthly grievances and details of how resolved.

5 DECOMMISSIONING

Decommissioning activities need to be planned and this EMP updated to make provision for any specific tasks.

The EMP is updated in a three-year cycle, and when planning is envisaged, this should be incorporated.

APPENDIX A: CHANCE FIND PROCEDURE

Areas of the proposed development activity are subject to heritage survey and assessment at the planning stage. Since the entire site has been subject to an ESIA, it is assumed that such an assessment has been carried out. It is nevertheless possible that sites or items of heritage significance will be found in the course of development works. The procedure set out herein covers the reporting and management of such finds.

Scope: The ''chance finds'' procedure covers the actions to be taken from the discovery of a heritage site or item, to its investigation and assessment by a trained archaeologist or other appropriately qualified person.

Compliance: The ''chance finds'' procedure is intended to ensure compliance with relevant provisions of the National Heritage Act (27 of 2004), especially Section 55 (4): '' a person who discovers any archaeological .... object .....must as soon as practicable report the discovery to the Council''. The procedure of reporting set out below must be observed so that heritage remains reported to the NHC are correctly identified in the field.

Responsibility:

Operator	To exercise due caution if archaeological remains are found.
Foreman	To secure site and advise management timeously.
Superintendent	To determine safe working boundary and request inspection.
Archaeologist	To inspect, identify, advise management, and recover remains.

Procedure:

Action by person identifying archaeological or heritage material includes the following:

a) If operating machinery or equipment stop work.

b) Identify the site with flag tape.

c) Determine GPS position if possible.

d) Report findings to foreman.

Action by foreman:

a) Report findings, site location and actions taken to superintendent.

b) Cease any works in immediate vicinity.

Action by superintendent:

a) Visit site and determine whether works can proceed without damage to findings.

b) Determine and mark exclusion boundary.

c) Site location and details to be added to project GIS for field confirmation by archaeologist.

Action by archaeologist:

a) Inspect site and confirm addition to project GIS.

b) Advise NHC and request written permission to remove findings from work area.

c) Recovery, packaging and labelling of findings for transfer to National Museum.

In the event of discovering human remains:

a) Actions as above.

b) Field inspection by archaeologist to confirm that remains are human.

c) Advise and liaise with NHC and Police.

d) Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed.