



LICENCE CONDITIONS FOR THE OPERATION OF A GAS STORAGE FACILITY IN THE PORT OF RICHARDS BAY OF THE UMHLATHUZE LOCAL MUNICIPALITY IN THE KWAZULU-NATAL PROVINCE

Licence Number: Gala.s.F3/1738/2021

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DEFINITIONS

For the purpose of this licence and its conditions, any word or expression to which a meaning has been assigned in the Act and the Rules shall have the meaning so assigned, unless the context indicates otherwise

In these licence conditions, the following expressions shall have the following meanings:-

“Regulations” means the Piped-Gas Regulations made in terms of section 34(1) of the Act. **Piped Gas Regulations published under GN R321 in GG 29792 of 20 April 2007.**

“Rules” means Rules made by NERSA in terms of section 34(3) of the Act.

“the Act” means the Gas Act, 2001(Act No. 48 of 2001), and includes Regulations made under the Act.

“NERSA” means the National Energy Regulator established in terms of section 3 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004)

“FSRU” means floating, storage and storage unit;

“LNG” means liquefied natural gas

CHAPTER ONE: LICENSED ACTIVITIES

1 Licensed Activities

1.1 NERSA grants the Licensee a licence to operate a gas storage facility in the Port of Saldanha of the uMhlathuze Local Municipality in the KwaZulu-Natal Province with the following specifications: liquefaction facility comprising of:

Table 1: Specifications of the LNG four storage tanks

	Tank 1	Tank 2	Tank 3	Tank 4
Operational Capacity	Confidential	Confidential	Confidential	Confidential
Minimum operating pressure	5 kPa	5 kPa	5 kPa	5 kPa
Maximum Operating pressure	65kPa	65kPa	65kPa	65kPa
Maximum Inlet flowrate	Confidential	Confidential	Confidential	Confidential
Maximum outlet flow	Confidential	Confidential	Confidential	Confidential
Average outlet flow	Confidential	Confidential	Confidential	Confidential

1.2 The storage facility will amongst other things include the following auxiliary equipment:

- a. 2 x LNG booster pumps with a capacity of Confidential each;
- b. LNG daily storage tank with a capacity of Confidential;
- c. Boil off gas booster compressor;
- d. Boil off gas warm up heater; and
- e. Boil off gas re-condenser.

1.3 The Licensee must carry out the licensed activities in a manner consistent with the provisions of the Act.

1.4 The Licensee must commence with the operation of the storage facility contemplated in paragraph 1.1 above within thirty-six (36) months of the date of issue of the licence.

1.5 The Licensee may not assign this licence to another party.

2 Duration of Licence

- 2.1 The licence is valid for a period of 25 years from the date of issue, unless revoked by NERSA in accordance with the provisions of the Act.
- 2.2 The Licensee may apply to have its licence renewed subject to the provision of the Act.

CHAPTER TWO: GENERAL CONDITIONS

3. General Conditions of Licence

Sections 21(1)(a), (b), (c), (i), (j), (k), (p), (q), (r), (t) and (u) of the Act are conditions of this licence

4 Amendment of Licence

This licence may be amended by NERSA in accordance with the provisions of the Act and the Rules.

5 Revocation of Licence

This licence may be revoked by NERSA in accordance with the provisions of the Act.

6. Compliance

- 6.1 The Licensee must at all times comply with the conditions of this licence, the Act and the Rules.
- 6.2 The Licensee must comply with the applicable standards, legislations and codes relevant to the storage, use and handling of the LNG and pressurised vessels including those listed in **Annexure E**.
- 6.3 This licence is granted only in terms of the Act and for the activities specified and described in paragraph 1.1 above. This licence does not exempt the Licensee from compliance with any other legislation.

7. Changes in details of the Licensee Particulars

- 7.1 The Licensee must notify NERSA if control of the licensed company as contemplated in section 12(2) of the Competition Act, 1998 (Act No. 89 of 1998) changes.
- 7.2 The Licensee must at all times provide NERSA with the details of any changes in the registered name, operating or trading name, registered address and other contact details, including but not limited to, the names, telephone numbers, facsimile numbers and email addresses of contact persons.
- 7.3 The notifications contemplated in paragraphs 7.1 and 7.2 above must be provided within 14 days of the event giving rise to them

8. Correspondence with NERSA

- 8.1 All official communication by the licensee with NERSA must be in writing, signed and addressed to NERSA.
- 8.2 The Licensee must in all correspondence with NERSA quote the licence reference number as it appears on the licence certificate.

9. Entry, Inspection and Gathering of Information

The Licensee must permit any person authorised in terms of the Act to, at all reasonable times, enter any property on which a licensed activity is taking place and inspect any facility, equipment, machinery, book, account or other document and gather any information in accordance with the Act and the Rules.

10. Participation of Historically Disadvantaged South Africans

- 10.1 The Licensee must annually provide NERSA with the information regarding Historically Disadvantaged South Africans as prescribed in the Piped Gas Regulations.

10.2 The Licensee must submit the information contemplated in paragraph 10.1 above to NERSA within thirty (30) days of its financial year end.

11. Transaction recording and Regulator Financial Reporting

11.1 The Licensee must keep detailed records of all gas liquefaction transactions and agreements entered into.

11.2 The Licensee must maintain separate accounts for its gas storage activities and compile gas storage data separately from any other accounts or data collection. These separately maintained accounts must be prepared in accordance with the Regulator Reporting Manuals ("RRM") as prescribed by NERSA.

11.3 The Licensee must comply with the requirements on Regulator Financial Reporting as prescribed by NERSA in the Regulatory Reporting Manuals.

12. Monitoring and Provision of Information

12.1 The Licensee must keep all records relating to the compliance or non-compliance with the conditions of this licence. Such records shall be made available to NERSA within 14 days of receipt of a written request for such records.

12.2 The Licensee must provide NERSA with reports indicating the progress made it terms of executing the licensed activities, every three (3) months, from the date of issue of the licence.

12.3 The Licensee must furnish NERSA with any information in such form and manner and at such times as NERSA may require in the performance of its duties or functions under the Act and the Agreement.

12.4 The Information that the Licensee must furnish NERSA must include, but not limited to, the following:

- a) detailed audited annual financial statements, consisting of a balance sheet, income statement and cash flow statement for the licensed activity;
- b) current tariff structures; and

- c) an updated plan of the gas storage facility, including details of any amnesties that are no longer operational. This plan must be furnished to NERSA within three calendar months of the end of the Licensee's financial year.

12.5 The Licensee must submit the information requested in section 12.4 (a) and (b) annually, within three (3) calendar months of the end of the Licensee's financial year.

13. Non-discrimination

The Licensee may not discriminate between customers or classes of customers regarding access, tariffs, prices, conditions or service, except for objectively justifiable and identifiable differences regarding such matters as quantity, transmission distance, length of contract, load profile, interruptible supply or other distinguished feature approved by NERSA in terms of section 22(1) of the Act.

CHAPTER THREE: SPECIFIC CONDITIONS

14. Operation and Maintenance of the storage Facility

14.1 The Licensee must operate, maintain, decommission, recommission or abandon the liquefaction facility in accordance with the relevant and applicable standards and codes including those listed in **Annexure E**.

14.2 The Licensee must upon commencement of this licence develop, maintain and submit the following management plans to NERSA in accordance with the applicable and relevant standards, codes and legislation including those listed in **Annexure E**:

14.2.1 An operating and maintenance plan;

14.2.2 An emergency plan; and

14.2.3 A decommissioning plan, where applicable

14.3 The plans contemplated in 14.2 above form part of the licence conditions of this licence.

14.4 The Licensee must submit the management plans contemplated in 14.2.1 to 14.2.3 above to NERSA within three months of the date of issue of this licence.

14.5 In the event of amendments to or change in the requirements of the standards and codes listed in **Annexure E**, the Licensee must submit the consequent amendments or changes to the plans mentioned in 14.2 above to NERSA within three (3) months of such amendments or changes in the requirements of the standards and codes.

14.6 The Licensee must submit the procedures for decommissioning, re-commissioning or abandonment to NERSA prior to commencement of such activities. Once those procedures are submitted to NERSA, they will become conditions of this licence.

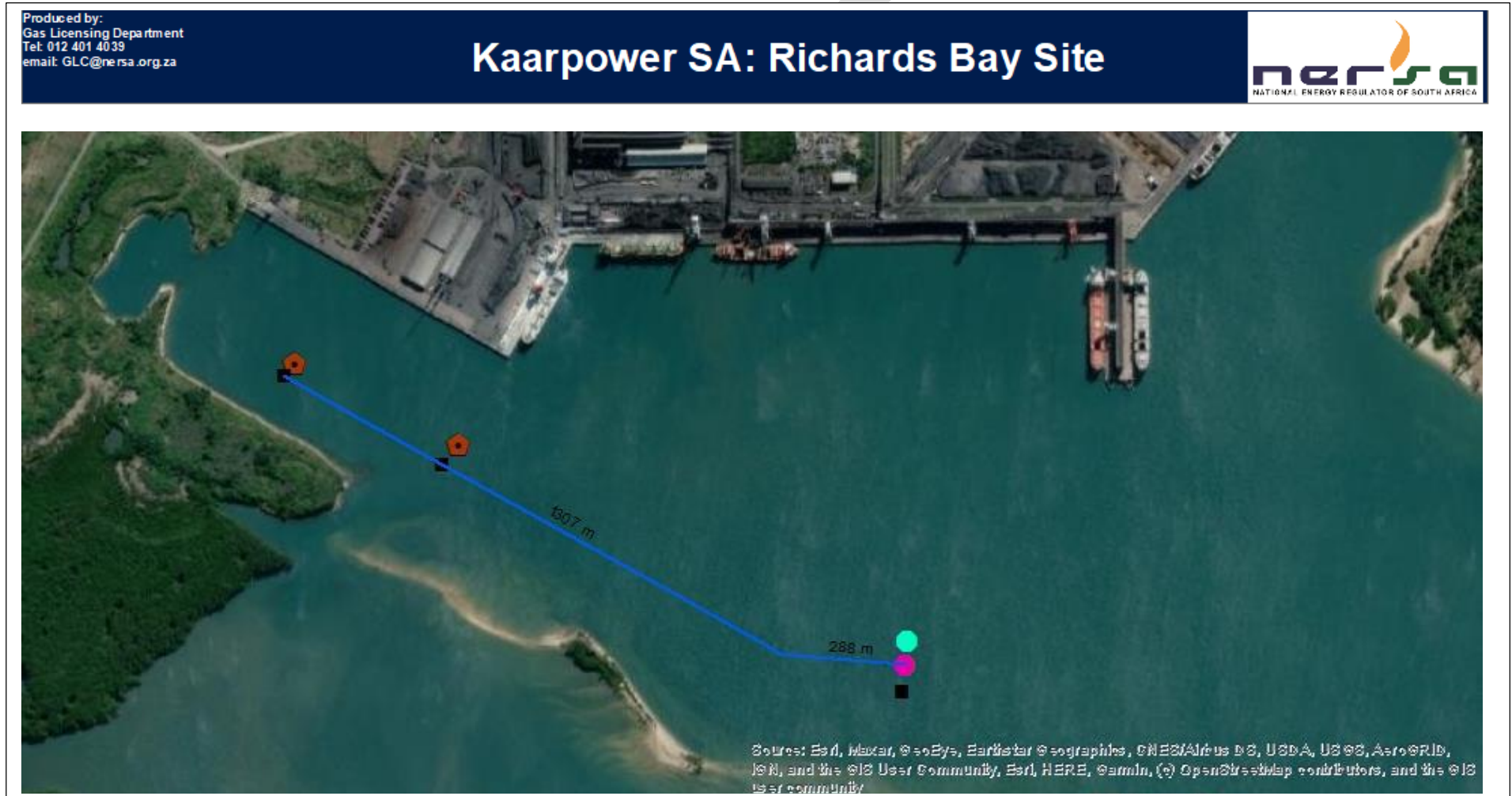
15. Ancillary Obligations

The Licensee is responsible for compliance with these licence conditions regarding any contracted work on the liquefaction facility, any components thereof or services that are the subject of this licence.

17 Whole Licence

This licence and licence conditions constitute the entire licence and supersedes all prior understandings and agreements between the Licensee and NERSA.

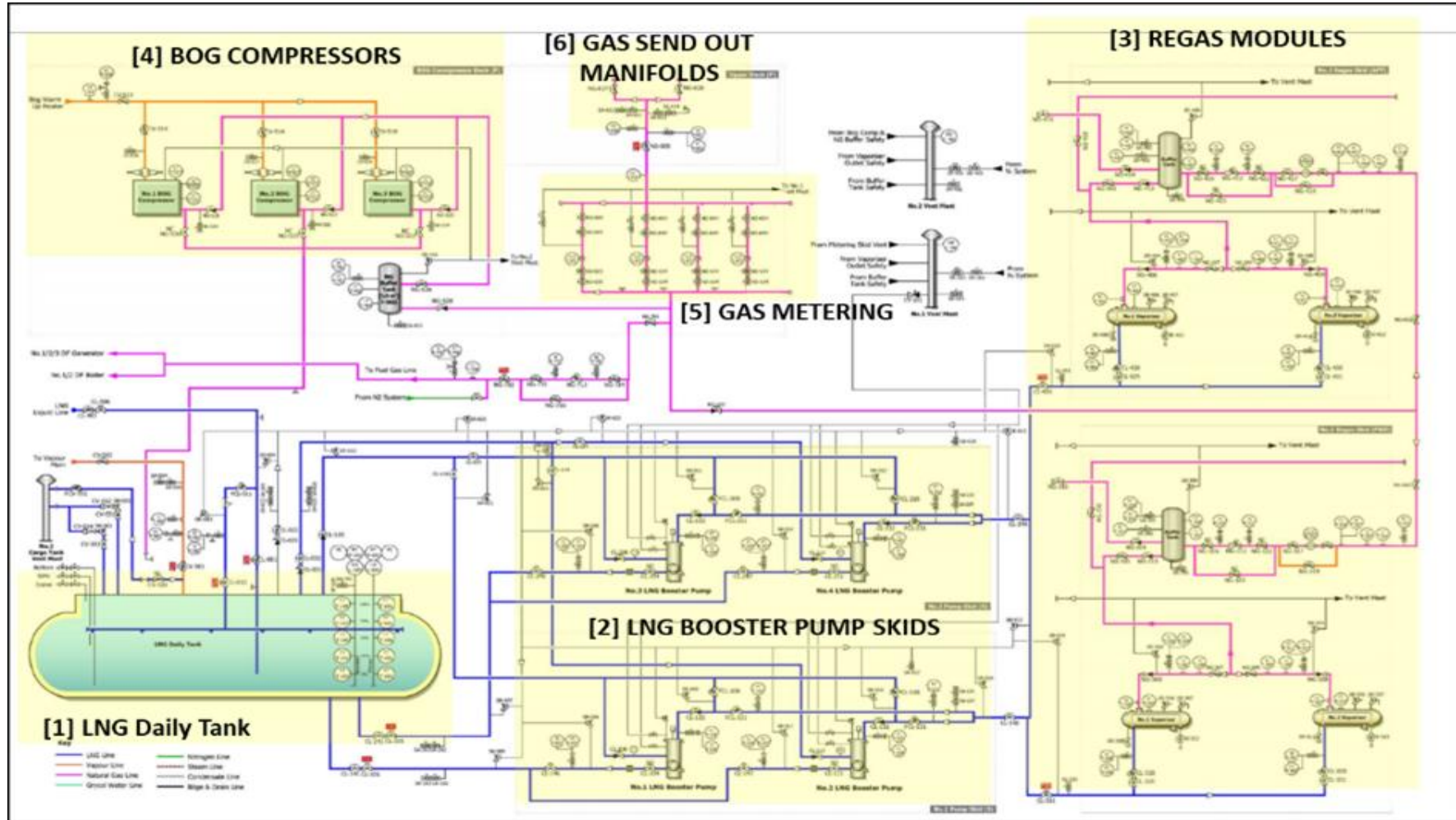
ArcGIS Map for the location of the FSRU



Annexure B

Confidential

FSRU Typical Layout



Annexure D

FSRU process and Instrumentation Diagram

Confidential



General Codes and Standards used in gas liquefaction facilities

INFORMATION		
Code/Standard	Revision	Description
ANSI/ISA 5.1	2009	Instrumentation Symbols and Identification
ASME B31.3	2016	Process Piping
ASME B31.8	2016	Gas Transmission and Distribution Piping Systems
ASME BPVCV	2015	ASME Boiler and Pressure Vessel Code, Section V: Non-destructive Examination
ASME BPVCI	2015	ASME Boiler and Pressure Vessel Code, Section IX: Welding and Brazing Qualifications
ASME PCC-1	2013	Guidelines for Pressure Boundary Bolted Flange Joint Assembly
ASME B16.47	2017	Pipe Flanges and Flanged Fittings NPS ½ Through NPS 24
ASME B 16.5	2009	Pipe Flanges and Flanges Fittings
API 520	2014	Sizing, Selection, and Installation of Pressure relieving Devices
API 521	2014	Pressure-relieving and Depressurising Systems
API 671	2007	Special Purpose Couplings for Petroleum, Chemical and Gas Industry Services
API 1104	21st Edition, Includes Errata 1 (2013), Errata 2 (2014), Errata 3 (2014), and Addendum 1 (2014)	Welding of Pipelines and Related Facilities
API RP 2003	2015	Protection against ignition arising out of static, lightning and stray currents
API 4589	1993	Fugitive Hydrocarbon Emissions from Oil and Gas Production Operations

BS EN 12068		Cathodic protection. External organic coatings for the corrosion protection of buried or immersed steel pipelines used in conjunction with Cathodic protection. Tapes and shrinkable materials
EN 1473	2016	Installation and Equipment for Liquefied Natural Gas
EN 1160	2005	Installation and Equipment for Liquefied Natural Gas — General characteristics of liquefied natural gas
EN 12066	1997	Installation and Equipment for Liquefied Natural Gas — Testing of insulating lining for liquefied natural gas compounding areas.
NFPA 10	2018	Portable fire extinguishers
NFPA 11/11A	2016	Standard for low, medium and high expansion foam/foam systems
NFPA 11C	1995	Standard for mobile foam apparatus
NFPA 13	2016	Standard for the installation of sprinkler systems
NFPA 15	2017	Standard for water spray fixed systems for fire protection
NFPA 30	2018	Flammable and combustible liquids code
NFPA 52	2006	Vehicular Fuel Systems Code
NFPA 55	2016	Compressed gases and cryogenic fluids code
NFPA 56	2017	Standard for fire and explosion prevention during cleaning & purging of flammable gas piping systems
NFPA 59A	2016	Standard for the production, storage and handling of LNG
NFPA 329	2015	Recommended practice for handling of flammable and combustible liquids and gases
NACE SP 0169		Control of external corrosion on underground or submerged, metallic piping systems
NACE SP 0286		Electrical isolation of cathodically protected pipelines
NACE TM 0102		Measurement of protective coating electrical conductance on underground pipelines
SANS 347	2012	Categorization and conformity assessment criteria for all pressure equipment
SANS 1091	2012	National colour standard
SANS 1411	2014	Materials of insulated electric cables and flexible cords

SANS 1507	2007	Electric cables with extruded solid dielectric insulation for fixed installations
SANS 2001 all sections	Latest Edition	Construction works
SANS 4427-1	2008	Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 1: General
SANS 4427-2	2008	Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 2: Pipes
SANS 4427-3	2008	Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 3: Fittings
SANS 4427-5	2008	Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 5: Fitness for purpose of the system
SANS 4437-1 (ISO 4437-1)	2014	Plastics piping systems for the supply of gaseous fuels – Polyethylene (PE) – Part 1: General
SANS 4437-2 (ISO 4437-2)	2014	Plastics piping systems for the supply of gaseous fuels – Polyethylene (PE) – Part 2: Pipes
SANS 4437-3 (ISO 4437-3)	2014	Plastics piping systems for the supply of gaseous fuels – Polyethylene (PE) – Part 3: Fittings
SANS 4437-4 (ISO 4437-4)	2014	Plastics piping systems for the supply of gaseous fuels – Polyethylene (PE) – Part 4: Valves
SANS 4437-5 (ISO 4437-5)	2014	Plastics piping systems for the supply of gaseous fuels – Polyethylene (PE) – Part 5: Fitness for purpose of the system
SANS 10086	Latest Edition	Installation, inspection and maintenance of equipment used in explosive atmospheres
SANS 10089-1	2008	The petroleum industry - Part 1: Storage and distribution of petroleum products in above-ground bulk installations
SANS 10089-2	2017	Electrical and other installations in the distribution and marketing sector
SANS 10100-1	2000	The Structural Use of Concrete Part 1: Design
SANS 10100-2	2014	The Structural Use of Concrete Part 2: Materials and execution of work
SANS 10114	2005	Artificial lighting of interiors
SANS 10142-1	2017	The wiring of premises; Part 1: Low voltage installations
SANS 10160-1	2011	Basis of structural design

SANS 10160-2	2011	Self-weight and imposed loads
SANS 10160-3	2011	Wind action
SANS 10160-4	2011	Seismic actions and general requirements
SANS 10160-5	2011	Basis for geotechnical design and actions
SANS 10160-6	2011	Actions induced by cranes and machinery
SANS 10160-7	2011	Thermal actions
SANS 10160-8	2011	Actions during execution
SANS 10162-1	2011	The structural use of steel – Part 1: Limit-states design of hot-rolled steelwork
SANS 10162-2	2011	The structural use of steel – Part 2: Limit-states design of cold-formed steelwork
SANS 10164-1	1980	The Structural use of Masonry – Part 1: Unreinforced masonry walling
SANS 10164-2	2008	The Structural use of Masonry – Part 2: Structural design and requirements for reinforced and prestressed masonry.
SANS 10400 all sections	2010	The Application of the National Building Regulations
SANS 10199	2016	Design and installation of earth electrodes
SANS 10268 all parts	2009	Welding of thermoplastics – Welding processes
SANS 10269	2015	Welding of thermoplastics – Testing and approval of welders
SANS 10270	2015	Welding of thermoplastics – Approval of welding procedures and welds
SANS 10292	2013	Earthing of Low Voltage Distribution System
SANS 60079/1 EC 60079	2018	Explosive atmospheres
SANS 5772	2004	Profile of blast cleaned surfaces for painting (Determined by a micro meter profile gauge).
SANS 53509		Cathodic protection measurement techniques
SANS 8502 -3	2008	Cleanliness of blast cleaned surfaces for painting (assessed by freedom from dust and debris).

SANS 10108	2017	Classification of hazardous locations and selection of electrical apparatus use in such location
SANS ARP 0108	2005	Recommended practise: Regulatory requirements for explosion protected apparatus
SANS 60529/I EC 60529	2013	Degrees of protection provided by enclosures (IP Code).
SABS ISO 2808	2007	Paints and varnishes – determination of film thickness.
ISO 3834	2006	Quality requirements for fusion welding of metallic materials
ISO 8501-1	2007	Preparation of steel substrates before application of paints and related products –Visual assessment of surface cleanliness.
ISO 8504 –1	2000	Preparation of steel substrates before application of paint and related products – Surface preparation methods.
ISO 8504 –2	2000	Preparation of steel substrates before application of paint and related products – Surface preparation methods
ISO 8504 –3	1993	Preparation of steel substrates before application of paints and related products –Surface preparation methods -- Part 3: Hand- and power-tool cleaning
ISO 9001	2015	Quality Management System
ISO 14000	2010	Environmental Management
ISO 17637	2016	Non-destructive testing of welds – Visual testing of fusion-welded joints
ISO129 44	Latest Edition	Paint and Varnishes – Corrosion protection of steel structures by protective paint systems. Parts 1 to 8.
ISO 9712	2012	Non-destructive testing – Qualification and certification of NDT personnel
ISO 17025	2005	General requirements for the competence of testing and calibration laboratories

B3. Electrical and Instrumentation installation standards

1. **NRS 037-1** – Telecontrol Protocol Part 1: Telecontrol protocol for stand-alone Remote Terminal Units.
2. **SANS ETS 300386-1** – Equipment engineering (EE): Telecommunication network equipment – Electromagnetic compatibility (EMC).
3. **Requirements Part 1:** – Product family overview, compliance criteria and test levels.
4. **SANS ETSI EN 300386:** – Electromagnetic Compatibility and radio spectrum matters (ERM) – Telecommunication network equipment – Electromagnetic Compatibility (EMC) requirements.
5. **ARP 0108:** – Regulatory requirements for explosion protected apparatus.
6. **SANS IEC 60079:** – Electrical apparatus for explosive atmospheres.

7. SANS IEC 61131: – Programmable Controllers.
8. **SANS IEC 61643-1:** – Surge protective devices connected to low-voltage power distribution systems Part 1: Performance requirements and testing methods. Low-voltage surge protective devices Part 1: Surge protective devices connected to low-voltage power distribution systems Requirements tests.
9. **SANS 10313:** – Protection against lightning – Physical damage to structures and life hazards.
10. **SANS 10086:** – The installation, inspection and maintenance of equipment used in explosive atmospheres.
11. **SANS 10089-2:** – The Petroleum Industry Part 2: Electrical installations in the distribution and marketing sector.
12. **SANS 10108:** – The classification of hazardous locations and the selection of apparatus for use in such locations.
13. **SANS 10119:** – Reduction of explosion hazardous presented by electrical equipment – Segregation, ventilation and pressurization.
14. **SANS 10123:** – The control of undesirable static electricity.
15. **SANS 10142-1:** – Code of Practice for Wiring and Premises.
16. **SANS 10198-2:** – Part 2: Choice of cable type and method of installation.
17. **SANS 10198-3:** – Part 3: Earthing systems- general provision.
18. **SANS 10198-5:** – Part 5: Determination of thermal and electrical resistivity of soil.
19. **SANS 10198-8:** – Part 8: Cable laying and installation.
20. **SANS 10198-9:** – Part 9: Jointing and termination of extruded solid dielectric-insulated cables up to 3.3 kV.
21. **SANS 10198-12:** – Part 12: Installation of earthing system.
22. **SANS 10198-13:** – Part 13: Testing, commissioning and fault location.
23. **SANS 10200:** – Neutral earthing in medium voltage industrial power systems.
24. **SANS 10199:** – The design and installation of earth electrodes.
25. **SANS 10340-1:** – Installation of telecommunication cables Part 1: Fibre optic cable in buildings.
26. **SANS 0398-2:** – The selection, handling and installation of electric power cables of rating not exceeding 33 kV Part 2: Cable selection – low voltage cables up to 3.3 kV.

27. **SANS 314-2:** – Flame Proof Enclosures for Electrical Apparatus Part 2: National requirements.
28. **SANS 970:** – Ex N (Non-Sparkling) Electrical Equipment for use in Potentially Flammable Atmospheres (Zone II Locations).
29. **SANS 1063:** –Earth rods and couplers.
30. **SANS 1069-1:** – Land mobile communication equipment Part 1: Technical characteristics and test conditions for radio equipment with an internal or external RF connector and intended primarily for analogue speech.
31. **SANS 1085:** –Wall outlet boxes for the enclosure of electrical accessories.
32. **SANS 1222:** –Enclosures for electrical equipment classified by IP code
33. **SANS 1507-1-6:** – Electric cables with extruded solid dielectric insulation for fixed installations
34. **SANS 60079-10:** – Electrical apparatus for explosive gas atmospheres, Part 10: Classification of hazardous areas.
35. **SANS 62305-1:** – Protection against lightning, Part 1: General principles.
36. **SANS 62305-2:** – Protection against lightning, Part 2: Risk management.
37. **NACE SP 0177:** – Mitigation of alternating current and lightning effects on metallic structures and corrosion control systems.
38. **SANS IEC 60079:** – Electrical apparatus for explosive atmospheres.

B3. Quality Management

39. **ISO 9001: 2015** – Quality Management System
40. **ISO 14001:2015** – Environmental Management System
41. **OHSAS 18001: 2015** – Occupational Health and Safety Association Standards

Standards and Codes for Regasification

- (a) EN 1473: “Installation and equipment for LNG – Design of onshore installations” for storage capacities over 200 tones;
- (b) ISO 16903: “Installation and equipment for Liquefied Natural Gas – Characteristics of LNG, influencing the design and material selections”. This standard contains guidance on properties of material that may come in contact with LNG in the facility;
- (c) ASME VIII DIV1 – Requirements applicable to the design, fabrication, inspection, testing and certification of pressure vessels;

- (d) ASME/ANSI B31.3 – Requirements for materials and components, design, fabrication, assembly, erection, examination, inspection and testing of piping;
- (e) SANS 347 – Pressure vessels and pressurized systems;
- (f) SANS 10227 – Inspection in terms of the Pressure Equipment Regulations;
- (g) EN 1473: “Installation and equipment for LNG – Design of onshore installations” for storage capacities over 200 tones;
- (h) PER R734- Pressure equipment regulation;
- (i) NFPA 59A- Codes, Standards, Research, Training & Education on fire hazards; and
- (j) API RP 520-Sizing and selection of pressure relief devices.

Storage Facility Standard and Codes

1. The Licensee must comply with all relevant codes and standards including but not limited to the following:
 - (a) AGA 9 – Measurement of Gas by Multipath Ultrasonic Meters 2nd Edition [Ref 1] in April 2007;
 - (b) ISO 16904 - 2016: Design & testing of LNG marine transfer arms for conventional onshore terminal (Design and testing of LNG loading/ unloading arms);
 - (c) ISO 28460: Installation and equipment for LNG – Ship to shore interface and port operations;
 - (d) 33 CRF Part 127 – Waterfront Facilities handling liquefied natural gas and liquefied hazardous gas.

2. The Licensee must also comply with all other relevant legislation, including but not limited to the following:
 - (a) The Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);
 - (b) The National Environmental Management Act, 1998 (Act No. 107 of 1998);
 - (c) The Environment Conservation Act, 1989 (Act No.73 of 1989);
 - (d) The National Water Act, 1998 (Act No. 36 of 1998);
 - (e) The Water Services Act, 1997 (Act No. 108 of 1997);
 - (f) The National Environmental Management Air Quality Management Act, 2004 (Act No. 39 of 2004);
 - (g) The Hazardous Substances Act, 1973 (Act No. 15 of 1973);
 - (h) The Health Act, 1977 (Act No. 63 of 1977);
 - (i) National Health Act, 2003 (Act No. 61 of 2003);

- (j) The Gas Act, 2001(Act No. 48 of 2001); and
- (k) The National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977).

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