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C3.2	<i>Contractor's Works Information</i>	
	Total number of pages	45

C3.1: EMPLOYER'S WORKS INFORMATION

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1. Description of the works

1.1. Executive overview

Kusile Power Station has a fleet of vehicles consisting of petrol and diesel vehicles and require an on-site Fuel Filling Station with a Fuel Management System to provide fuel for these vehicles. Fleet vehicles to use the filling station be of minority use of trucks, tractors and forklifts. The Fuel Filling Station shall consist of two 30 000L approved non-flammable corrosion resistant underground tanks; one tank for 50ppm diesel and one tank for 95 octane unleaded petrol. Each tank is required to service two fuel dispensers.

The *Contractor* shall be responsible for the complete detailed design (where applicable), supply of materials, factory and site testing, transport to site, unloading from road or rail/ship, storage and preservation on site, supply of plant and earth moving equipment, construction and erection, quality control and management, testing, painting, finishing, commissioning, performance testing, training and handover of a complete, fully functional self-operated Fuel Filling Station.

The Fuel Filling Station shall be installed in accordance with SANS 10089-3 Part 3 - The installation, modification, and decommissioning of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations [40] , specified Eskom standards and relevant National Standards.

Each dispenser shall be fitted with one filling point per fuel type. The dispensers shall be capable of filling vehicles simultaneously. The fuel shall be offloaded at the on-site fuel off-loading bay via road tankers into the respective fuel tanks (off-loading system). There shall be one off-loading system for 50ppm diesel and one off-loading system for 95 octane unleaded petrol. The off-loading bay shall contain all the necessary off-loading piping, valves, fittings, filters and earthing to perform this operation efficient, safely and within environmental framework. The fuel dispensers and pumps (if required) shall transfer the fuel from the underground storage tanks (via necessary pipework) to the motor vehicles.

As illustrated in Figure 1, which outlines the proposed layout and location of the Fuel Filling Station in relation to adjacent buildings, the Contractor shall be responsible for the following:

- Preparation of all associated detailed designs for the facility.
- Determination of the position of underground storage tanks.
- Layout of the off-loading slab and Fuel Filling Station canopy, including dispenser locations.
- Design and construction of access roads linking the facility to existing station roads.
- Installation of a dirty drainage network with oil separator and tie-in to the existing dirty drain system.
- Positioning of the distribution board (DB) and provision of cable sleeves from the DB to the dispenser island.
- Provision and routing of compressed air supply interfacing points.
- Installation of fire protection systems.
- Installation of two potable water taps beneath the canopy.
- Provision of safety signage beneath the canopy.
- Installation of explosion-rated lighting (Ex-rated lights).
- Installation of an earthing mat and tie-in to the station earth grid
- Notes:
 - Use of filling station will be mainly for fleet vehicles with minority use of trucks, tractors and forklifts. (Heaviest vehicle will be 20 tons, with estimated length of 10m)

Refer to figure 1 below for indication of the proposed fuel filling station location.

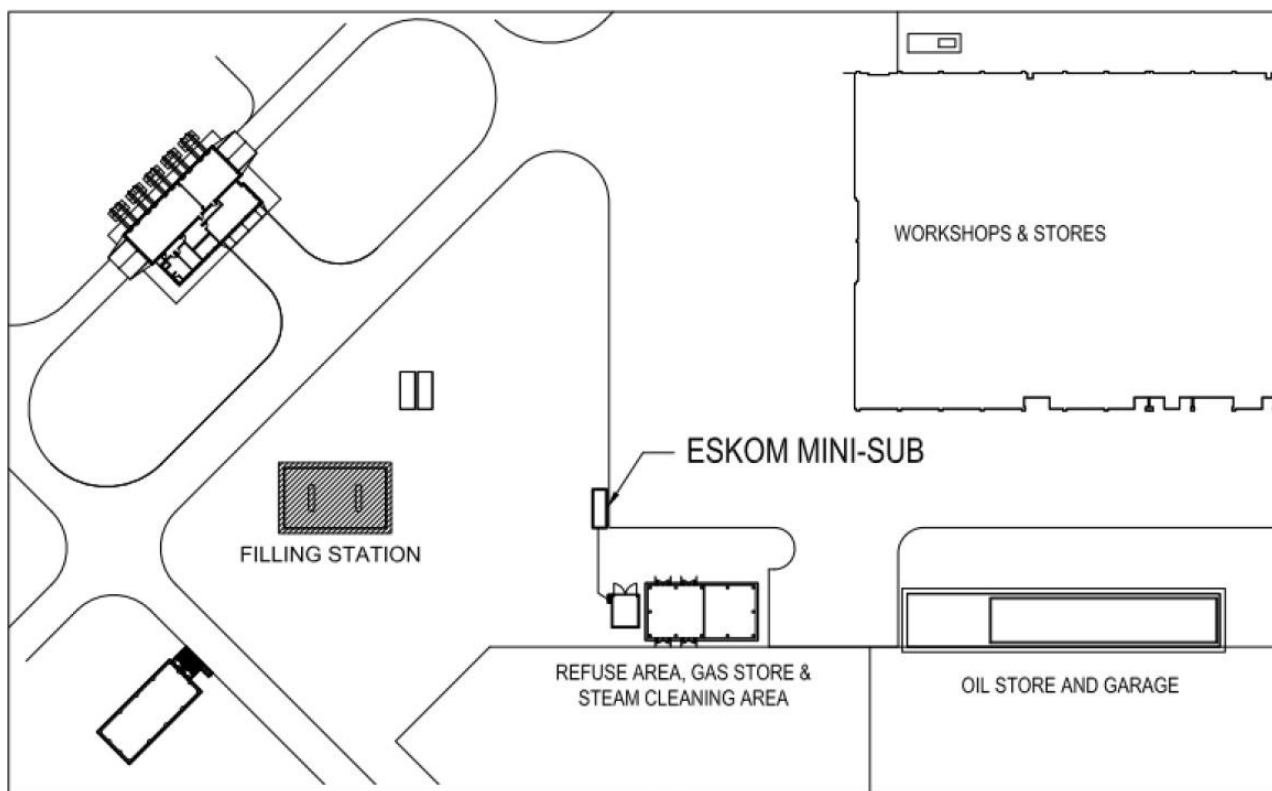


Figure 1: Fuel Station Overview

1.2. Employer's objectives and purpose of the works

The Employer's objective is to provide an on-site Fuel Filling Station with a Fuel Management System to provide fuel for the Kusile fleet which consist of petrol and diesel vehicles.

The Fuel Filling Station shall consist of two 30 000L approved non-flammable corrosion resistant underground tanks; one tank for 50ppm diesel and one tank for 95 octane unleaded petrol. Each tank is required to service two fuel dispensers.

For detailed information, please refer to Kusile Fuel Station Technical Specification

1.3. Interpretation and terminology

The following definitions, abbreviations, and roles and responsibilities are used in the Works Information.

For detailed information, please refer to Kusile Fuel Station Technical Specification

1.3.1. Definitions

Definition	Description
Automatic fuel nozzle	The fuel nozzle that automatically shut off when the vehicle/machinery tank being filled is full, preventing too much fuel from being dispensed and an overflow situation from occurring.
Automatic Tank Gauge	An Automatic Tank Gauge is a device that automatically measures the level of crude oil, LNG and petroleum products in storage tanks and raises an alarm when the level goes down or up the threshold limits. It operates electronically and keeping track of any leakages in the tank. When the upper limit of re-filling the tank is reached, it cuts off the supply from the inlet pipeline and intimates the operator on their human machine interface.

Detail Design	Process to develop and issue Approved for Construction documents and drawings in accordance with the Design Base, including Quality Control, Quality Assurance and Change Management.
Digital tyre inflator	Tyre inflating device which stops automatically once pre-set tyre pressure is reached.
Fuel Management System	Fuel Management system effectively monitors and manages the use of fuel.
Pipework	Pipes and fittings used for the conveyance of fuel, water, gases or other fluids.
Piping	Pipes, tubes or flexible pressure hose elements intended for the transport or distribution of any fluid.
Pump	A pump is a device that moves a fluid by mechanical action.
System	An integrated set of constituent pieces that are combined in an operational or support environment to accomplish a defined objective. These pieces include people, hardware, software, firmware, information, procedures, facilities, services and other support facets.
Valve	A device for shutting-off or controlling the flow of a fluid through a pipe or duct.

1.3.2. Abbreviations

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AIA	Approved Inspection Authority
C&I	Control and Instrumentation
DA	Design Authority
FL	Floor Level
HAZLOC	Hazardous Location Classification
IP	Ingress Protection
MDL	Master Document List
OEM	Original Equipment Manufacturer
RACI	Responsibility, Accountability, Consult and Inform
SANS	South African National Standards
SHE	Safety, Health & Environmental
VDSS	Vendor Document Submittal Schedule

1.3.3. Roles and Responsibilities

The following roles and responsibilities are used in this Works Information:

Role	Responsibility
Contractor	The contractor is responsible for executing the design for construction. The Contractor can perform both roles as Design Authority (DA) and Contractor or appoints a DA.
Design Authority	The DA shall be responsible for - Developing the design as per requirements provided by the employer and ensuring that the design output documents accurately reflect the design basis. - Design control and ultimate technical adequacy of the design process. Important to note that the professional accountability rest with the DA. The DA also remains responsible and accountable for the correctness of the design documents, irrespective of whether these documents have been reviewed by Eskom or not.
Employer	The employer refers to Eskom. Also known as the Client.
Engineer	Refers to the Eskom Engineer and assures that the technical integrity of a fully functional and operational plant meets the user requirement and Eskom Engineering expectations and requirements. This individual is responsible to review design documentation, construction- and commissioning activities and ensures that all handover requirements have been met.
Project Manager	The Project Manager shall be responsible for; - Ensuring that this Technical Specification is executed - Executing their responsibilities and powers as delegated on the contractual relationship

2. Management and start up.

2.1. Management meetings

Regular meetings of a general nature might be convened and chaired by the *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Project Progress Meetings	Weekly or as required determined by rate of progress	Kusile Power Station	Project Manager, Supervisor, Lead Engineer, Contractor and Others as required.
Quality/ Technical Meetings	Weekly, Time to be confirmed	Kusile Power Station	Supervisor, Quality Officers, Lead Engineer, Contractor, and Others as required.
Health, Safety and Environmental Meetings	Weekly, Time to be Confirmed	Kusile Power Station	Supervisor, SHE Officers, Contractor

			and Others as required.
Project Risk Meetings	Every 2 weeks	Kusile Power Station	Project Manager, Project Administrator, Supervisor, Risk Officer, Contractor and Others as required.
Commercial Meetings	Monthly prior to assessment period	Kusile Power Station	Project Manager, Supervisor, Finance /QS, Contractor and Others as required.
Planning and Scheduling Meetings	Weekly	Kusile Power Station	Supervisor, Planner, Contractor and Others as required.
Overall Contract Progress and Feedback Meetings	Monthly on / or before last Thursday of the month	Kusile Power Station	Project Manager, Supervisor, Lead Engineer, Finance /QS, Contractor, and Others as required.

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *works*. Records of these meetings shall be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

The *Contractor* shall comply with the above, and the criteria and constraints as stipulated in the Employer Policies & Procedures Rev 4_0121 Part 3 Annexure X.2 - Programme, Progress Reporting & Meeting Requirements in this Works Information.

2.2. Documentation control

The documentation requirements cover the various engineering stages, from the design stage through fabrication, installation, testing and commissioning and most importantly for the operating, maintenance and training stage of the project. The *Contractor* ensures that the Technical Documents and Records Management Work Instruction (240-76992014) is used for any documentation requirements.

The *Contractor* is responsible for the compilation and the supply of the documentation during the various project stages and to provide the documentation programme to link with the milestone dates. Documentation and drawings are programmed for delivery to meet the milestone dates and in accordance with the agreed VDSS.

2.2.1. Document Identification

The *Contractor* ensures that a document has the following minimum attribute on the cover page:

- Title of the document
- Document Unique Identification number (Eskom number)
- *Contractor* Document number, if applicable
- Document status
- Revision number
- Document Type
- Document security level
- Document revision table/history
- Page number on the footer
- Document Author/Authoriser/

- Document Originator *Contractor*

The following additional attributes are important for technical documents:

- Package/System name, sub-system if applicable
- Unit/s number
- *Contractor* name
- *Contractor* number
- Plant Identification Codes

Format and Layout of Documents

For consistency it is important that all documents used within a specific domain follow the same layout, style and formatting standard.

Layout and Typography

Every document should comply with the following font specifications:

- Font Colour: Black
- Main Headings Font Type: Arial, Bold, Capital Letters
- Main Heading Font Size: 12pt
- Sub Headings Font Type: Arial, Bold, Title Case
- Sub Headings Font Size: 11pt
- Body Font Type: Arial, Sentence Case i.e., only the first letter of the first word is a capital letter.
- Body Text Font size: 11pt
- Line Spacing: 1.5 line spacing
- Margins: standard
- Alignment: full justification to be used
- Paragraphing: one line skip between paragraphs
- Pagination: centred page numbers (about 0.5 inches from bottom)
- Indentations: standard tab for all paragraphs (about 0.4 to 0.5 inches)

Document Headers

The header should include the project name, document title, document number, revision number and page number.

Naming of files

The *Contractor* to comply with the Eskom standard for naming documentation files. The standard is as follows:

For documents that have approval date and signature

- (YYYYMMDD_DocType_DocumentTitle_UniqueIdentifier_Revision.FileExtention)

For documents that do not necessarily require the 'Approved Date' and 'Revision & Versioning', use the date of update

- (YYYYMMDD_DocType_DocumentTitle_UniqueIdentifier_Revision.FileExtention)

All further requirements will be according to IEC 61355 – 1:2008 (Edition) Classification and designation of documents for plants, systems and equipment – Part 1: Rules and classification tables.

Document Submission

- The *Contractor* engineering program to allow a minimum of 21 days for mailing, processing, and review of drawings and data by *Employer*. The *Contractor* is responsible for the compilation and the supply of all the documentation required during the various project stages and to provide the documentation programmed to link with the milestone dates. Documentation and drawings are programmed for delivery to meet the milestone dates and in accordance with the agreed VDSS (**Error! Reference source not found.**). The VDSS is revisable, and changes shall be discussed and agreed upon by all parties and properly documented.
- *Contractor* documents submittals are provided in accordance with the Vendor Document Submittal Schedule (VDSS) which is included in Appendix 12.3**Error! Reference source not found.** The VDSS to indicate the format of documents to be submitted. The *Employer* is responsible for the

management of the schedule i.e. to create a document register that shall be used to track submission progress of documentation by the *Contractor* as per the committed dates on the VDSS.

- *Contractor* documents all documentation that will be sent to the *Employer* in the Master Document List (MDL) as provided by the *Employer***Error! Reference source not found..** All documentation, including reports, manuals, etc. is in the English language.
- If the *Contractor* makes further changes to the equipment and materials shown on submittals that have been reviewed by the *Employer*, the changes will be clearly marked on the submittal by the *Contractor* and the submittal process will be repeated. If changes are made by *Contractor* after delivery to the Plant, as-built drawings indicating the changes would be prepared by *Contractor* and submitted to *Employer* for review. Any resubmittal of information to clearly identify the revisions by footnote or by a form of back-circle, with revision block update, as appropriate.

Transmittals

All document exchange to be done using formal Transmittals. The following is the minimum information required for sending transmittals:

- Title of the document
- Reason for issuing/submission
- Transmittal Number
- Transmittal Name
- Transmittal Description
- Contract Number:
- Package Number
- Transmittal purpose
- Sender Name
- Sender E-Mail
- Sender Organisation
- Recipient Name
- Recipient E-Mail
- Recipient Organisation
- Disclosure Classification
- Date received
- Quantity of documentation referenced on the transmittal
- Number of copies
- Format/medium submitted (e.g. paper, External Drives, etc.)
- Sender signature
- Recipient signature, once submitted, to acknowledge receipt

If a transmittal is in response to an Eskom communication via transmittal, the Eskom Transmittal Number will be referenced in the transmittal response and will be provided in addition to the meta-data requirement above.

The *Contractor* to follow a structured and standard definition for Transmittal Descriptions, i.e. subject line convention of **YYYYMMDD – <Contract & Package Number> – <Vendor> – <Short Description> – <Sender Initials>**.

The *Contractor* to follow a structured method of communication as defined within Communication Interface Memorandum (CIM) for any correspondence

The *Contractor* to follow a structured and standard definition for email subjects i.e. a subject line convention of **YYYYMMDD – < Package File Number> – > – <Email Subject line>**.

The *Contractor* to select the purpose for transmittal in line with the standard Eskom Selection Criteria:

- Issued for Approval
- Issued for Award
- Issued for Basic Design
- Issued for Commissioning
- Issued for Concept Design
- Issued for Consideration
- Issued for Construction
- Issued for Detail Design

- Issued for Document Review
- Issued for Handover
- Issued for Information
- Issued for Installation
- Issued for Manufacturing
- Issued for Procurement
- Issued for Review
- Issued for Tender

Issuing of documents with different transmittal purposes is to be done separately and not combined into one transmittal. This would ensure fast and efficient processing of incoming and outgoing transmittals and information exchange.

Electronic technical data submittals are processed using the Eskom Document Control email address (KusileDocControl@eskom.co.za) and Zendto, a Web-based file transfer service. If *Contractor* does not already have Zendto transmittal capability, information is available at <https://zendto.eskom.co.za/>. (The Uniform Resource Locator [URL] to be used for electronic file submittals will be made available upon Contract award.)

In case of email submission, the Contractor should note that if a single file to be transmitted is over 20MB in size, then the document shall be uploaded on Zendto portal.

Notification to *Employer* that submittals have been posted to Zendto should be in accordance with the correspondence requirements of this Contract. *For the Zendto submission, a transmittal record must be submitted to the project email document control address information and notify the Employer of such submission.*

The hard copy prints are to be submitted to the address indicated for Technical Documents in the Supplementary Terms and Conditions of this Contract. The following number of prints is submitted unless otherwise indicated in the Schedule of Submittals:

Submittal Description	Copies Required
Performance Curves	2
Design Data	2
Test and Inspection Data	2
Drawings	2

The *Contractor* submits documentation to the *Employer* as well as the Project's Documentation Centre in the following media:

- Electronic copies can be submitted to Eskom Documentation Centre through generic email address agreed to by the project. Electronic copies large for email will be delivered on external drives/USBs, large file transfer protocol and/or hard drives to the Project Documentation Centre. A notification email, with the transmittal note attached, shall be sent to the project generic email address. The *Employer* will be copied on the email as well.
- Hard copies would be submitted to the *Employer* accompanied by the Transmittal Note.

Drawings

The creation, issuing and control of all Engineering Drawings will be in accordance to the latest revision of 240-86973501 (Engineering Drawing Standards – Common Requirements) to be supplied as part of the enquiry documents. All drawings must be issued to Eskom in both native CADD format and PDF format as per 240-86973501 (Engineering Drawing Standards – Common Requirements).

Drawings shall be in sufficient detail to indicate the kind, size, arrangement, component weight, breakdown for shipment, and operation of component materials and devices; the external connections, anchorages, and supports required; the dimensions needed for installation and correlation with other materials and equipment; and the information specifically requested in the Schedule of Submittals.

Contractor to fully complete and certify drawings for compliance with the Contract requirements. Drawings to have title block entries that clearly indicate the drawing is certified.

Each submitted drawing to be project unique and clearly marked with the name of the project, unit designation, *Employer's* Contract title, *Employer's* Contract file number, project equipment or structure nomenclature, component identification numbers, and *Employer's* name. Equipment, instrumentation, and other components requiring Engineer-assigned identification tag numbers must be clearly identified on the drawings. If standard drawings are submitted, the applicable equipment and devices furnished for the project would be clearly marked.

Transmittal letters to identify which Schedule of Submittals item (by item number) is satisfied by each drawing or group of drawings. The transmittal letter to include the manufacturer's drawing number, revision number, and title for each drawing attached. Each drawing title to be unique and be descriptive of the specific drawing content. Transmittal letters for resubmitted drawings to include the *Employer's* drawing numbers.

The *Contractor* includes the *Employer's* drawing number in the drawing title block. This requirement only applies to design drawings developed by the *Contractor* and his Subcontractors. It does not apply to drawings developed by manufacturers for equipment and material such as valves, instruments, etc. Drawing numbers will be assigned by the *Employer* as drawings are developed.

The project name to be listed on all drawings, including manufacturers' drawings. Tag numbers and equipment names to be listed on all manufacturers' drawings. A separate sheet may be attached to the submittal if needed to adequately list all tag numbers associated with the drawings such as valves or instruments which may have numerous tag numbers associated with it.

The language of all documentation would be in the English language. The units of measure to be metric. The *Contractor* retains project design calculations and information for the entire life cycle of the plant and provides these to the *Employer* on prior written notice at any time notwithstanding the expiry or termination of the contract.

Drawing Submittal

All documents and records management will be performed according to Project/Plant Specific Documents and Records Process. Any uncertainty regarding this should be clarified with the *Employer*. The *Contractor* to comply with all minimum document metadata as specified in Technical Documentation Classification and Designation Standard (240-54179170).

The *Contractor* is to use Smartplant Owner Operator (SPO) for documents and records management. The *Contractor* is to submit electronic copies of the documents using a fully secure web-based solution providing carefully controlled access to appropriate project information for authorized personnel. All electronic design data and documents shall be in such a form which will enable importing such data, documents and drawings, including 3-dimensional drawings, seamlessly into the Intergraph SPF (Smart Plant Foundation) system. Hard copy submittals will only be required for the IOM Manuals and final as-built submittals.

Transmittal letters would be provided with each document submittal. The transmittal letter to include the *Contractor* drawing number, revision number, and title for each drawing attached. Each drawing title is to be unique and descriptive of the specific drawing content.

Catalog pages are not acceptable, except as drawings for standard non engineered products and when the catalog pages provide all dimensional data, all external termination data, and mounting data. The catalog page to be submitted with a typed cover page clearly indicating the name of the project, unit designation, specification title, specification number, component identification numbers, model number, *Contractor* drawing number, and *Employer's* name. Drawings to be submitted with all numerical values in metric units.

Information Requirements

The *Employer* requires drawings, documentation, plans, information and data (collectively "Information") from the *Contractor* for two fundamental purposes; namely for the management and execution of the Contract and for the operation, maintenance and support of the *Works* during its entire operational phase until disposal and decommissioning.

The *Contractor* to, during the progress of and upon completion of the *Works*, supply the Information required in terms of the Contract and all such Information as may usually be supplied in connection with similar *Works*, including, whether or not specified in the Contract, all Information necessary or useful for:

1. Design reviews and the interface management of the *Works* with the Project works;
2. Quality assurance and control; and
3. The operation, maintenance, support, inspection, integrity management, training and technical optimization of the *Works*, over the lifecycle thereof.

The scope of supply of Information from the *Contractor* to include drawings, documents, lists and data according to the types defined in **Error! Reference source not found.**4 as referred to in the Scope of Work - Kusile Fuel Station Technical Specification. Under section 12.6.1.7 Drawings, Subsection; Information Requirements.

In addition to the official documentation submittals, the *Contractor* is to provide additional information for review and design coordination as requested by the *Employer* from time to time.

The *Contractor* to use the *Employer's* SmartPlant Environment and all design tools as the delivery mechanism for all project data and document deliverables. The EDMS and design tools will be provided to the *Contractor* pre-configured based on *Employer's* data handover requirements. Any project data and document deliverables not generated from design tools provided by the *Employer* shall be supplied in a format specified by the *Employer*.

The *Employer* reviews the *Contractor's* submitted documents. The *Contractor* ensures adherence to the contract and that a technically sound design approach is incorporated. Specific information required from the *Contractor* during tender phase and as part of the *Works* is as set-out in the VDSS, in Appendix 12.3 **Error! Reference source not found.** Each document submitted to the *Employer* requires a transmittal note (refer to *Employer's* template 240-71448626 for minimum metadata requirements) from the *Contractor*. The *Contractor* includes interpretation of results in every report compiled. All project documents shall be submitted to the *Employer* in accordance with Project / Plant Specific Technical Documents and Records Management Work Instruction (240-76992014). The *Contractor* is required to submit documents in electronic and hard copies and both copies must be delivered to the *Employer* with a transmittal note.

Documentation Recording

The *Contractor* develops, document and maintain the Master Document List (MDL) with all the required metadata which will be submitted to the *Employer* in the monthly basis for tracking purposes irrespective of whether there are updates or not. The MDL to include a list of drawings and documents and shall contain the following minimum information for each document:

- Date of submission
 - Transmittal number
 - Transmittal title
 - Document description
- I. Document number (both *Contractor* and *Employer*)
- Document Type
 - Revision number
 - Document Approval Status
 - Document Authorisation Status (i.e. Accepted with Comments, Rejected, Accepted)
 - Transmittal Reason for Issue

In addition, the *Contractor* to adhere to the following standards:

- Project / Plant Specific Technical Documents and Records Management Procedure (240-53114186).
- SmartPlant for Owner Operators (SPO) Documentation Metadata Standard (240-58552870)
- SmartPlant Data Take-On Standard (240-107305502)

Documentation Requirements

All documents supplied by the *Contractor* are subject to *Employer's* approval. For consistency, it is important that all documents used within the project follow the same layout, style and formatting as described in the Technical Documents and Records Management Work Instruction (240-76992014). Documents such as QCP's, Method Statements and other documents impacting the work are approved by the *Employer* at least 3 working days prior to commencement of the *Works*.

Each revision of a document or drawing is accompanied with a list of the comments made by the *Employer* on the previous revision if applicable and the response/corrective action taken by the *Contractor*. Changes are recorded in a revision table contained in each drawing/document.

Documents and drawings to indicate the *Employer's* number as allocated by the *Employer*. The *Contractor* may have his own internal document or drawing number on the document or drawing, but where reference is made among documents, the *Employer's* number is used as the reference number.

The *Contractor* compiles a complete data book for all work done during manufacturing, construction and commission containing the following as a minimum if applicable:

- 1 Scope of work
- 2 Approved "As built" drawings
- 3 Design calculations
- 4 Approved QCP / ITP
- 5 Inspection reports
- 6 Pipe ovality reports if applicable
- 7 As built drawings (isometric drawings and P&IDs)
- 8 Material summary that gives full traceability between components used, drawings and material certificates
- 9 All material certificates for pipes, fittings and all components used.
- 10 Pressure test certificate and the calibration certificates of the gauges used.
- 11 Pressure test procedures
- 12 The manufacturer's/repairer's certificate as defined in PER.
- 13 All CAR's and corrective actions
- 14 Operating Philosophy including all alarm and trip values
- 15 Parts catalogue
- 16 Maintenance manual
- 17 Storage, packing and transportation instructions

2.3. Health and safety risk management

In addition to the requirements of the laws governing health and safety, The *Contractor* shall comply with safety regulations specified in SANS 10089-3 Part 3 - The installation, modification, and decommissioning of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations as well as the Occupational Health and Safety Act.

Eskom is committed to safeguarding its contractors (principal contractors, appointed contractors, suppliers, vendors, service providers and consultants) and the environment against undesired exposure to its operations, which is in line with its Safety, Health, Environmental and Quality Policy. Therefore, as an organisation, processes have to be in place to identify all possible practical occupational health and safety risks to which contractors are exposed and to take the appropriate measures that are necessary to prevent any incidents, injuries or environmental damage resulting from accidental exposure.

Contractors have the crucial responsibility for executing work safely on a site or project, including taking measures to ensure contractor health, safety and environment during their activities/services to prevent any injury to employees and/or other people and members of the public, or damage to the environment. Each contractor is responsible for ensuring that its employees and the employees of any appointed contractors comply with all the applicable occupational health and safety legislative requirements and the policies and procedures of Eskom.

The minimum safety requirements for this contract include but not limited to the following:

- Risk assessment
- Acknowledgement of Eskom's rules & requirements
- Health and Safety Plan
- Valid Letter of Good Standing

- SHE policy

The *Contractor* shall comply with the Occupational Health and Safety Act 85 of 1993 and its regulations as well as Kusile Site requirements contained in relevant Annexures of the Employer Policies and Procedures and shall refer to the following normative and informative documents for SHE related requirements:

- 32-727: Safety, Health, Environment and Quality Policy
- 240-62196227: Life-saving Rules Standard
- 240-126456962: Waste Management Plan
- 240-62946386 Vehicle & Driver Safety Management Procedure
- 32-37 Substance Abuse
- 32-124 Eskom Fire Risk Management
- 32-136 Contractor Health and Safety Requirements
- 32-95 Eskom Environmental, Occupational Health and Safety Incident Management procedure
- 32-93 Eskom Vehicle and Driver Safety Management
- 240-43848327 Employees' right of refusal to work in an unsafe situation
- 32-418: Working from Heights Procedure
- 32-520: Procedure Manual for Performing Occupational Health and Safety Management and Environmental Management: Conducting EH&S Risk Assessment
- 32-123: Emergency Planning
- 32-407 Behaviour Safety Observation Procedure
- 32-726: SHE Requirements for the Eskom Commercial Process
- 39-98: Safe use of Lifting Machines and Lifting Tackle
- ISO 45001: Health and Safety Management Systems-Requirements
- ISO 9001: 2015 Quality Management Systems- Requirements
- ISO 14001:2015 Environmental Management Systems Specification with guidance for use
- All remaining sections of Section 4, Employees Policies and Procedures of the Contract
- Relevant SANS codes
- 32-1134 Access Control at Eskom Premises
- 32-524 Developing a SHE Specification
- Kusile SHEQ statement of commitment
- All relevant South African legislation-provincial, municipal by-laws

The *Employer* has additional requirements particular to the works and the Working Areas for this contract. The following requirements shall be met.

- Annexure B (Acknowledgement of Health and Safety Rules)- To be signed
- OHS plan (Must address the scope of work OHS risk(s) and aligned with the health and safety specification or requirements)
- Costing for Health and Safety management (must submit detailed costing for SHE -the cost should be broken down not provided as a lump sum). The costing must be based on the overall scope of work/service to be performed.
- Baseline Risk Assessment (BRA): Identification, assessment, and management of OHS risks related to the scope of work. The methodology and applicable risk matrix used for the risk assessment must be provided together with the BRA
- Valid Letter of Good Standing (COIDA or equivalent)
- OHS policy signed by CEO (The submitted policy document must comply to OHS Act Section 7)
- OHS Competency (Consider scope of work, risks, SHE plan and applicability) CV's and qualifications/certificates such as SACPCMP registration, Incident Investigator, First aider, Risk Assessor.

Furthermore, the Contractor is referred to the attached documents.

- Kusile SHE Specification Rev 8

The Contractor shall ensure compliance with the requirements as stated and make sure that whatever is included in the annexures follows on from Core Clause 27.4 together with Z7 in the additional conditions of contract.

2.4. Environmental constraints and management

Environmental management is concerned not only with the results of the Contractor's operations to carry out the Works but also, and most importantly, with the manner in which his operations are carried out. It is thus a requirement that the Contractor shall comply with the environmental requirements on an ongoing basis. The Contractor shall take full responsibility for protecting the natural environment and eliminating or minimising the negative impacts of construction on the environment during construction. The Contractor shall prevent or limit the occurrence of accidents which may cause damage to the environment, prevent or limit the consequences of such accidents and shall return the environment to a state as close as possible to its condition prior to any such accident occurring.

Nothing specified herein shall relieve the Contractor of any obligations or responsibilities in this regard. The requirements of the Environmental Specification apply to all areas under the Contractor's control, including but not limited to the Working Area, all borrow pits, the construction camp and offices, all access/ haul routes and all labour accommodation areas.

Environmental Requirements:

- Qualified Environmental Officer with Environmental Science / Management degree / diploma.
- Environmental Officer should have a minimum of 2 years relevant experience on Environmental Management.
- Environmental Management Plan which will cover environmental aspects in line with the scope of works. This EMP must be submitted and approved before the contractor start with any works.
- Relevant Method Statements in line with Environmental Management Plan - Standard Environmental Specification, Record of Decision (RoD), Safety, Health and Environment Specification
- Environmental Policy signed by the company CEO
- Aspect and Impact Register in line with the works. SHEQ documents are attached.

The Contractor shall refer to the following normative and informative documents for SHE related requirements:

2.5. Quality assurance requirements

Overview

- 1) The fundamental objective of the set of quality requirements stated within this contract is to ensure that the Contractor produces goods/products/services that the Employer are wholly satisfied with whilst ensuring that work is done right the first time. To achieve this, the Contractor shall ensure that three approaches are taken. These are as follows:
 - a) Ensuring that the Contractors Quality Management System (QMS) is set up and maintained
 - b) Quality Assurance
 - c) Quality Control

Codes, standards and documents to be complied with

The Contractor shall comply with the following documents as well as all documents referenced therein:

- 240-105658000 "Supplier Quality Management: Specification" (QM 58)
- ISO9001:2015 "Quality Management Systems – Requirements" (Take note that the level of compliance to this standard are determined by document 240-105658000 "Supplier Quality Management: Specification" (QM 58) above and section 1.3 below)
- ISO10006:2003 "Quality Management Systems – Guidelines for Quality Management in Projects"
- 240-132155951 "Kusile Project RFI/PA001 Process"
- 240-150475305 "Kusile Defects Management Process Work Instruction"
- 240-132156363 "Kusile NC Process"

- 240-43921898 “Kusile Project Audit Process Flow”
- 240-134232676 “Data book Review and Final Submission Process”
- ISO 10005 – Quality Management – Guidelines for Quality Plan
- 240-56246601 “Personnel and Entities Performing Welding Related Special Processes on Eskom Plant”
- 240-83539994 “Standard for Non-Destructive Testing (NDT) on Eskom Plant”

Quality Management System Requirements

- 1) The Contractor shall ensure that a Quality Management System is setup and fully maintained during the entire duration of the contract. The Contractor shall submit a copy of the latest ISO 9001 certificate or certificate applicable. The QMS shall comply with the latest ISO 9001 standard or any applicable certificate of quality management system (latest applicable revision) and the Contractor shall comply with the requirements of 240-105658000 “Supplier Quality Management: Specification”. Compliance to Category 1 requirements is mandatory. The following documents (approved copies) shall be submitted:
 - a) The Contractor shall submit the latest copy of an internal and external management system audit reports. The audit reports must include, if applicable, nonconformity identified, and the resulting remedial actions (correction and/ or preventative action reports).
 - b) The Contractor shall submit a draft contract quality plan that is specific to the scope of work as described in the tender documents. The plan must address the minimum requirements as per ISO 10005.

- c) The Contractor shall submit an example of an inspection and test plan (ITP) or quality control plan (QCP) on similar and/ or previous work done. The plan must address the minimum requirements as per ISO 10005.
 - d) Documented information for Control of Externally Provided Processes, Products and Services Processes, Products and Services
 - e) Information for roles, responsibilities and authorities
- 2) The Quality Management System shall drive the Contractor's business management processes to ensure that all of the Employers requirements are fully met on a consistent basis.
 - 3) The Contractor shall comply with all requirements specified in section 3.1 of the Supplier Quality Management Specification.
 - 4) The Employer has the right to conduct formal audits on any or all parts of the Contractor's Quality Management System as well as any documentation, materials, or equipment associated with the work, at any time and at any project work location.
 - 5) The Employer also has the right to carry out assessments and audits on the Contractor's sub-contractors at planned intervals.
 - 6) Should the Employer be dissatisfied with the Contractor's work for any reason, the Employer has the right to conduct additional audits of the Contractor.
 - 7) The Contractor shall address all audit findings to the satisfaction of the Employer within a time frame acceptable to the Employer.

Quality Assurance Requirements

- 1) The Contractor shall ensure that Quality Assurance is performed at all levels and phases of work carried out for the Employer.
- 2) The Contractor shall use processes to ensure that quality is built into their products/services i.e. its business processes are organized such that quality is built into the process of producing goods and rendering services.
- 3) The Contractor shall ensure that it can be relied on to deliver quality goods and services without the need for the Employer to have to inspect all the time.
- 4) The Contractor shall provide a proposed Quality Table of Payments (Quality Payment Schedule) showing the relationships between Bill of Quantities/Activity Schedule Items, Client Acknowledged Programme Items, Inspection & Test Plans/Quality Control Plans (ITPs/QCPs), Sign off by the Employer's Quality department and proposed Payment (Invoices/Certificates) which will attest to the works having been done to required quality. This table shall be reviewed, Employer comments addressed by the Contractor and approved by the Employer within 30 days of contract award.
- 5) The Contractor shall keep the Quality Table of Payments (Quality Payment Schedule) updated with progressive Employer sign-off (as the work is done and payments applications are submitted) and it shall accompany all payment applications (invoices). The Contractor shall attach the signed (or partially signed if applicable) ITPs/QCPs to the payment application. Payment will only be made if the ITPs/QCPs are signed.

Quality Control Requirements

- 1) Quality Control is a product-oriented set of activities for ensuring quality in products/services. These activities focus on inspection and identifying defects before these reach the Employer.
- 2) The Contractor shall ensure that Quality Control is performed at all levels and phases of work carried out for the Employer.
- 3) The Contractor shall comply with all requirements specified in section 3.4 of the Supplier Quality Management Specification [1].
- 4) The Contractor shall complete a Quality Control Plan (QCP) and Inspections and Test Plan (ITP) before contract award. This shall be reviewed and signed off by the Employer within 30 days after contract award.
- 5) The Contractor shall submit the following documents within 30 days after the contract date, prior to the commencement of work, for acceptance by the Employer:
- 6) QCPs and ITPs for review and acceptance by Eskom prior to the commencement of any work, inclusive of subcontracted work, within 30 days after contract award.

- 7) The sub- contractor QCPs and ITPs shall be submitted for review and comment by the Contractor and by the Employer within 30 days after the award of the tender. All Contractor and Employer comments shall be resolved prior to commencing work.
- 8) The QCPs and ITPs show each activity/requirement of the Works Information.
- 9) Data book index for acceptance by the Employer.
- 10) Note: these documents are to be compiled in line with Eskom's requirements and will have to be discussed with and approved by the Employer prior to any work commencing.
- 11) The project programme shall show all quality intervention points such as witness, hold, verification, surveillances and review points. These shall be updated if changes are made to the programme.
- 12) The Contractor shall make use of the Kusile Project RFI/PA001 Process to request the Employers personnel to perform inspections. The Contractor shall ensure that all inspections have been "Passed" by their in-house quality control representative prior to requesting the Employers personnel to perform any inspection.
- 13) In the event of poor quality, re-work or incidents where products inspected by the Employer fail to meet requirements, the Contractor shall receive a Non-conformance (NCR) if deemed so by the Employer. The Contractor shall be liable for the Employers costs of re-inspection as well as be liable to pay penalties as specified in this contract.

Inspections

- 1) The Contractor shall be responsible for the inspection of all the Works that is performed and the Employer only verifies that the Works is acceptable.
- 2) The Contractor conducts all inspections in accordance with the accepted QCP / ITP.
- 3) The Contractor provides suitably qualified personnel to conduct on-and-offsite inspections
- 4) The Contractor ensures that all Works are inspected and approved before the Employer is invited for the inspections.
- 5) The Contractor shall submit the results of their internal/in-house inspection when sending the RFI to the Employer. Failure of the Contractor to perform adequate internal/in-house inspections shall result in NCRs and would necessitate the Contractor replacing their Quality Control personnel.
- 6) The Contractor provides a minimum of 5 working days' notice for local inspections (onsite and offsite) and 21 working days' notice for foreign inspections. The notice contains copies of the Contractor's inspection reports.
- 7) For onsite inspections, the Contractor shall send a Request for Inspection (RFI) reminder 4 hours prior to the inspection so that the Quality Department may mobilise to perform the inspection. This shall be done via the Communication Interface Memorandum. This is over and above the aforementioned 5 working days' notice period.
- 8) The Contractor shall provide all tools and equipment required by the Employer's inspectors/Quality Controllers to perform any verification during the inspection for example measuring equipment etc.
- 9) The Contractor shall plan their work to ensure that no inspection is scheduled to start later than 15h30. This prevents Contractor and Employer personnel from rushing or hurrying to complete inspections in order to knock off work.

Quality Plan

- 1) The Contractor shall submit a Quality Plan within 30 days of contract award for acceptance by the Employer.
- 2) The Contractor shall comply with all requirements specified in sections 3.2, 3.3 and 3.4 of the Supplier Quality Management Specification.
- 3) The Contractor shall submit a detailed contract organogram showing the quality personnel to be used in the Contract. The Contractor shall provide CVs of the quality management employees who will be responsible for quality on site.

Quality Documentation Requirements

- 1) For all products and services, the Contractor shall submit the following quality documents as a minimum:
 - a) Data book Index

- b) Method statement (describing how work will be executed)
 - c) Equipment list
 - d) Drawings
 - e) ITPs, QCPs and check sheets
 - f) Inspection notifications accompanied by their inspection report
 - g) Updated onsite, off site and offshore inspection schedules
 - h) Inspection and or factory acceptance test dates as applicable
 - i) Inspections completed / outstanding.
 - j) Inspection and test reports
 - k) Weekly and monthly contract quality progress report
 - l) Materials used
 - m) Material certificates
 - n) Data sheets
 - o) Equipment list
 - p) Welding documents (if applicable) include Welding Procedure Specification (WPS), Procedure Qualification Record (PQR), welder qualifications, Welding Procedure Qualification Record (WPQR), welding consumables and all other documents required by relevant welding standards
 - q) Quality Plan (as earlier described)
 - r) Non-conformance and Defects registers and reports
- 2) The Contractor shall submit data books for all work for acceptance by the Employer if applicable. These are defined as follows:
- H1 – Fabrication
 - H2 – Construction
 - H3 - Commissioning
- 3) The Contractor shall submit data books in accordance with the Employers requirements. The Employers requirements vary depending on the type of component or system hence the Contractor shall modify the data books to meet the requirements of the Employer.
- 4) The Contractor shall submit 2 hard copies of data books and one software copy (on a DVD/CD).
- 5) Components may only be released for delivery to site once the H1 data book(s) has been accepted by the Employer if applicable.
- 6) Commissioning may only commence once the H2 data book(s) has been accepted by the Employer if applicable.
- 7) The Contractor shall ensure that all data book(s) have been submitted to and accepted by the Employer as per the Employers requirements and meet the time frames specified by the Employer.
- 8) Failure of the Contractor to submit data book(s) and obtain the Employer's approval at 100 % work completion shall affect payment.
- 9) Failure of the Contractor to submit H1 data book(s) and obtain the Employer's approval prior to construction will affect payment.
- 10) Failure of the Contractor to submit H2 data book(s) and obtain the Employer's approval prior to Commissioning will affect payment.
- 11) Failure of the Contractor to submit H3 data book(s) and obtain the Employer's approval prior to takeover will affect payment.
- 12) Failure of the Contractor to submit all data book(s) and obtain the Employer's approval will prevent take-over of the Works by the Employer.
- 13) The Employer has 21 days to review a data book from the time the Contractor transmits the data book to the document controller until feedback is received.
- 14) The Contractor shall specify the review status and discipline on the transmittal when transmitting data books to the Employers Doc control.
- 15) The Employer shall only take handover subject to meeting and Employer approval of all quality requirements and three copies of the data books accepted by the Employer respectively.

Contract Execution

- 1) Correspondence shall be directed to the Project Manager, and periodic quality review meetings shall be convened by Project Manager with the Contractor.
- 2) The mandatory quality review meetings are to be convened by the nominated project quality manager or his/her representative for the Contractor.
- 3) Quality Management employee's responsibilities shall include but are not limited to the following:
 - a) Implementation of the QMS on site
 - b) Administration of QA/QC systems on site
 - c) Verification of approval status of Subcontractor's QCP and procedures
 - d) On-and -offsite inspections
 - e) Co-ordination, inspection and verification of the *Employer's* intervention points
 - f) Review of *Contractor* testing and inspection documents (procedures, test results)
 - g) Weekly and monthly progress reporting on quality performance
- 4) The Contractor shall comply with section 5 of the Supplier Quality Management Specification.
- 5) Monthly quality performance and management reports shall be prepared by the Contractor during contract execution. The content of these reports shall be agreed by the Employer when submitted to the Employer on a monthly basis.

Quality Reporting

- 1) The Contractor shall submit a monthly quality report, on the last working day of the month. The report includes but not limited to the following:
 - a) A register of NCRs and defects
 - b) Updated QCP / ITP register
 - c) QA monthly report summary
 - d) Planned and completed local and foreign inspection dates
 - e) Completed and outstanding Inspections
 - f) Audit findings report

Supplier Quality Performance Monitoring Phase

- 1) During the contract execution phase, the Contractor shall be monitored by the Employer for performance on quality-related aspects. The outcomes of such monitoring will enable the Employer to take any appropriate actions pertaining to the Contractor.
- 2) The monitoring shall be carried out periodically by the Employer or at predetermined intervals during the execution of a contract.
- 3) The monitored key performance areas include the following:
 - a) Quality
 - b) Delivery
 - c) Design
 - d) Cost
 - e) Management system
- 4) Subsequent key performance indicators associated with these areas will include the following:
 - a) Nonconformity monitoring
 - b) Audit and assessment evaluation scoring
 - c) Management system compliance and accreditation
 - d) Achievement of delivery targets as per contractual agreements
 - e) Process improvements
 - f) Corrective and preventive action response and closure

Preservation, Shipping and Transportation to be Addressed

- 1) The Contractor is responsible for ensuring that all products are preserved in their appropriate manner as described in their specifications or in Eskom preservation, shipping and transportation procedures as applicable.
- 2) The Contractor shall submit the preservation, shipping and transportation procedures to the Employer for review and acceptance.
- 3) The Employer may choose to witness the packaging, loading and offloading of the products depending on their criticality, this will be indicated in the intervention points on the QCP / ITP document.
- 4) The Contractor shall ensure that all storage requirements for products are properly implemented to preserve the products against adverse conditions, deterioration, damages, etc. Storage and preservation procedures for the different products must be submitted to the Employer for review and acceptance.
- 5) The Employer may request to inspect the stored products at any given point during the storage period of the product.
- 6) Requirements for preservation, shipping and transportation are addressed in 240-105658000

General Quality Requirements

- 1) The Contractor shall comply with all requirements specified in section 6 of the Supplier Quality Management Specification.
- 2) All documents shall be approved by the Employer. If the Employer is dissatisfied with a document then it is the Contractors responsibility to ensure that the Employers requirements are met.
- 3) All planning Quality Assurance and Quality Control documents shall be submitted for approval by the Employer within 30 days of contract award.
- 4) The Contractor shall make use of qualified and experienced Quality Controllers to ensure that products/services are of a high quality prior to inspection by the Employers quality representative(s).
- 5) The Contractor shall ensure that all defects and NCRs are addressed correctly and timeously.
- 6) Defects and NCRs shall be closed within a time frame or period specified or accepted by the Employer.
- 7) When NCRs and Defects notifications are issued, the Contractor shall acknowledge receipt within (5) working days and include the Root cause(s), Correction(s) and Corrective action(s) and proposed implementation dates to the Employer as per the contract response period.
- 8) The corrective actions will include the implementation and completion dates. Progress on all NCRs and Defect notifications issued to the Contractor must be reported to the Employer on weekly basis.
- 9) The Contractor's quality manager keeps a register of all NCRs and Defect notifications issued.
- 10) Deviations from the Contract are treated as a non-conformance.
- 11) Records of NCRs and Defect notifications are kept and form part of the data book records.
- 12) During the contract execution phase, the Contractor will be monitored by the Employer for performance on quality related aspects. The monitoring will be in the form of audits and assessments. The Employers quality department will be involved in every assessment to ensure that all NCRs and Defects raised are closed or the necessary penalties are implemented as stipulated contractually.
- 13) The Contractor is accountable for the quality of the output and liable for any failures.
- 14) The interventions points include all witness, hold, verification, surveillances and review points required by the Employer. The Contractor's failure to allow the intervention points will constitute a non-conformance. The Employer has the right to approve or reject intervention points and may add or remove these points as desired.
- 15) The Contractor shall only be paid subject to meeting and Employer approval of all quality requirements and three copies of the data books accepted by the Employer.
- 16) The Contractor shall provide all information, material and records required to comply with the Eskom Quality Management System and such further information, material and records as may be requested by the Employer from time to time.
- 17) The Contractor shall ensure that no inspections are missed and all schedules are observed.

- 18) The Contractor shall comply with all relevant Eskom governance documents (codes, standards etc.) whether specified in this contract or not.
- 19) The Contractor shall make use of an Authorised Certification Authority such as SABS to certify Contractor QMS if applicable.
- 20) The Contractor shall make use of Recognised International Accreditations such as SANAS which accredits the Authorised Certification Authority if applicable.
- 21) The quality requirements shall be met by the contractor and all sub-contractors.
- 22) The Contractor shall ensure that all measuring and test equipment is calibrated at all times and proof thereof must be readily available.
- 23) In the event of poor quality, re-work or incidents where products inspected by the Employer fail to meet requirements, the Contractor shall receive a Non-conformance (NCR) if deemed so by the Employer. The Contractor shall be liable for the Employers costs of re-inspection.

The Quality 3-Way Matching Requirements are as follows:

"The Contractor shall provide a proposed Quality three-way matching register showing the relationships between Bill of Quantities/Activity Schedule Items, Client Acknowledged Programme Items, Inspection & Test Plans/Quality Plans/Check Sheets/Requests-for-Inspections and Sign off by the Employer's Quality department which will attest to the works having been done to required quality. This table shall be reviewed, Employer comments addressed by the Contractor and approved by the Employer within 30 days of contract award."

Costs incurred due to the *Contractor's* failure to comply with the inspection requirements as specified in this section will be borne by the *Contractor* and no compensation event or variation order will arise out of this.

Furthermore, The *Contractor* shall comply with the Quality requirements stated in the Scope of Work - Kusile Fuel Station Technical Specification (Rev 2), and the referenced documents stated as forming part of the Works Information.

2.6. Programming constraints

The *Contractor* shall comply with the following requirements for the Project in terms of programming,

- Level 4 programme in Primavera P6 format and submitted in electronic XER format together with a PDF copy.
- Work break-down structure (WBS) clearly shown and acceptable as per the provided WBS structure.
- Milestones clearly shown for Engineering, VDSS, Procurement & Construction and indicated as either start or finish milestone while linked to Task dependant activities
- Programme duration indicates that the project can be complete within the contract Key dates supplied.
- Construction and design activities include major component installation and major disciplines included civil, mechanical, C&I, electrical and services

The *Contractor* shall be responsible for the compilation of level 3 programme (which includes key dates, milestone dates, hold points, etc.) for the Works, and shall submit to the Project Manager for acceptance. The *Contractor* shall provide a bi-weekly programme indicating progress of the Works.

The focus areas will be executed in accordance with Key Dates and Access in the Contract Data by the Employer.

2.7. Contractor's management, supervision and key people

The Contractor complies with all relevant South African statutory requirements in terms of the employment of people on Site. No site-specific requirement takes precedence over any statutory requirement.

It is the Contractor's responsibility to ensure that competent persons having the knowledge, training, experience and qualifications specific to the work or task being performed, provided that, where appropriate, qualifications and training are registered in terms of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995) are utilised.

Contractor's Personnel employed at the Project Site (or at other places, if any, as may be specified under the Contract as forming part of the Site) for any semi-skilled or skilled operation is tested by the Project Manager at any time at the Project Site. This may include, at the Project Manager's discretion, the actual performance of the operation and/or training and testing related to performance of the operation. The Project Manager reserves the right to prevent any person from carrying out any operation that such person is not fit or qualified to perform. The satisfactory passing of the induction operation test requirements will result in the certification of the Contractor's Personnel to perform that specific operation on the Project Site (and/or at such other places, if any, as may be specified under the Contract as forming part of the Site). This certification does not reduce in any way the Contractor's responsibilities to perform the Works as per the Contract requirements, including in a safe manner. The certification may be revoked by the Project Manager if such person ceases to be fit or qualified to perform the work in question at any time.

The Contractor is responsible for his work coordination process and the manner of execution necessary to carry out the Works. Work coordination includes the general and specific workflow, planning and sequence of execution of the Works by the Contractor. The Contractor is required to provide certain information under Part 3 (Technical Specification and the Employer Policies and Procedures), to facilitate the coordination of all field construction and erection on the Project Site by the Project Manager.

The Contractor submits monthly progress reports to the Project Manager. The reports are submitted in writing in a form approved by the Project Manager. An electronic copy and two hard copies of each progress report are submitted to the Project Manager.

For detailed requirements on Contractor's management, supervision and key people refer to the Scope of Work document .Kusile Fuel Station Technical Specification (Rev 2), and the referenced Employers Policies and Procedures documents stated below

- Part 3, Annexure X.4 – Project Site Regulations & General Requirements, Rev 4_0121.
- Part 3, Annexure X.4.1 – Site Access and Mobilisation, Work Coordination Process & Work, Rev 4_0121.
- Part 3, Annexure X.4.1 – Work Coordination Plan Requirements Schedule, Rev 4_0121.

Furthermore, The *Contractor*:

- The *Contractor* appoints an Environmental Officer for the acceptance by the *Employer*
- The *Contractor* appoints a Health and Safety Officer for the acceptance by the *Employer*
- The *Contractor* provides an Organisational Organogram to the level required by the *Employer*.
- The details of the *Contractor's* manpower on Site are submitted together with the proposed execution plan/programme.

The *Employer* encourages a sound and fair management and Employee relation that are essential to the promotion of goodwill and the economic wellbeing of the Employees of the *Contractors*.

Project Attendance (PA) bonus provisions in the Employers Policies and Procedures shall not apply in this Contract.

2.8. Invoicing and payment

Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd
Kusile Power Station Project
R545 Kendal/Balmoral Rd Haartebeesfontein Farm Witbank
Postnet Suite 46 Emalahleni
1035

South Africa
Vat 4740101508

and include on each invoice the following information:

Name and address of the *Contractor* and the *Project Manager*.

The contract number and title.

Contractor's VAT registration number.

The *Employer's* VAT registration number 4740101508.

Description of service provided for each item invoiced based on the Price List.

Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT.

(add other as required)

NB: Payment is calculated from the correct invoice received date, not invoice date.

Checklist for Invoices

- Invoice addressed to: Eskom Holdings Limited
- Read "Tax Invoice"
- Company Vat Registration
- Eskom Vat Number 4740101508
- Invoice Number
- Invoice Date (not later than last day of month of assessment)
- 45 Purchase Order Number
- Suppliers Name and Address
- Vat % (15% or zero rated)
- Assessment to be attached to invoice, together with back-up
- Rate/ Activity to be claimed in accordance with contract
- Where retention/ delay damages are applicable, need to be deducted before vat.
- CPA needs to refer back to Basic Invoice, together with calculations in accordance with contract.
- CPA invoice need to be invoiced separately
- Local and Foreign invoices to be invoiced separately
- Units to be invoice separately
- Where supplier has claimed incorrect, they have to cancel their invoice with a credit note referring to incorrect invoice and issue a new invoice

2.9. Insurance provided by the *Employer*

The *Project Manager* submits policies and certificates for insurances provided by the *Employer* to the *Contractor* for acceptance before the *starting date* and afterwards as the *Contractor* instructs. The *Contractor* accepts the policies and certificates if they comply with this contract.

Refer to Core Clause 87.1 as well as Z Clauses as stated on Contract Data.

2.10. Contract change management

The *Employer* may instruct changes to the scope at any time; each instruction shall set out the change and the date on which it becomes effective; and must be issued to the *Contractor* in writing to be valid.

To manage change in Contract requirements/conditions refer to Part One - Data by the *Employer*, Core Clauses 60 Compensation Events and Core Clause 90 Termination as well as Z Clause 8, for additional information regarding Notifying Compensation Events.

Standardised forms for Notifications and other Communication are provided and/or agreed with the *Project Manager*.

The above include sequence numbering, headings as well as subject matter etc.

2.11. Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

2.12. Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor*

The *Contractor* keeps these records

- accounts of payments of Defined Cost,
- proof that the payments have been made,
- communications about and assessments of compensation events for Subcontractors and
- other records as stated in Employers Policies and Procedures.

The *Contractor* allows the *Project Manager* to inspect at any time within working hours the accounts and records which he is required to keep.

The *Contractor* retains project design calculations and information for the entire latent defect period and provides these to the *Employer* on prior written notice at any time notwithstanding the expiry or termination of the contract.

2.13. Training workshops and technology transfer

Appropriate training must be given to employees so that they are competent to perform the tasks assigned to and expected of them. Training also gives an employee an opportunity to develop additional skills which will benefit any organisation.

The contractor shall have a training matrix for its organisation.

The Contractor shall comply with the Contractor Health and Safety Requirements Document Identifier: 32-136.

3. Engineering and the *Contractor's* design

Refer to Scope of Work document Kusile Fuel Station Technical Specification

The extent of the Employer's design is as stated in the Scope of Work Kusile Fuel Station Technical Specification

3.1. Parts of the *works* which the *Contractor* is to design

The Contractor shall be responsible for the complete detailed design (where applicable), supply of materials, factory and site testing, transport to site, unloading from road or rail/ship, storage and preservation on site, supply of plant and earth moving equipment, construction and erection, quality control and management, testing, painting, finishing, commissioning, performance testing, training and handover of a complete, fully functional self-operated Fuel Filling Station.

For detailed information, please refer to Scope of Work - Kusile Fuel Station Technical Specification

3.2. Procedure for submission and acceptance of *Contractor's* design

In accordance with core clause 21, and the requirements stated in the Scope of Work Kusile Fuel Station Technical Specification must be addressed.

3.3. Other requirements of the *Contractor's* design

3.3.1. General Requirements

1. Where this document is not clear about the location of an item to be installed or work to be performed, it is the *Contractor's* responsibility to determine the correct location from the *Employer's* engineering representatives via Request for Information process. The *Contractor* shall only act upon confirmation by receipt of an Engineering Instruction via the Project Manager. Incorrectly positioned items, or incorrect work done (where Engineering Instructions were not issued) shall be moved / removed / replaced / changed / reinstalled by the *Contractor* at his cost.
2. All referenced Eskom standards shall be made available to the *Contractor* to be used as required.
3. Should any referenced document, standard or drawing not be available in the consolidated technical pack, the contractor is to request this from the Project Manager.
4. The *Contractor* shall label the plant according to Kusile Power Station Label specification.
5. Each drawing, diagram and list shall refer to the area of plant by means of the plant labelling in accordance to Engineering Drawing Standard Common Requirements.
6. The contractor is responsible for providing a fully functional fuel filling station on site. The contractor is required to make provisions for all associated plant equipment
7. The *Contractor* shall take full professional accountability for all of the Works in their scope and shall provide the following for review and acceptance:
 - Consolidated detailed design report signed by a Professional Civil Engineer which includes:
 - Survey results, outcomes of Geotechnical investigation, design criteria/parameters, specifications and standards used, loadings, assumptions, calculations results including detailed design calculations, design models, sources of information and any record of other information associated with the completed Works.
 - Detailed drawings for construction. Drawings shall be submitted in native CAD – and PDF format.
 - Professional engineering certificate, signed by an ECSA registered professional once construction work is completed.
8. The *Contractor* shall submit as-built data and drawings of the completed works upon handover. As-built drawings shall be submitted in PDF and native CAD formats.

9. Any discrepancy or ambiguity between the *Employer's* Specifications or requirements shall immediately be brought to the attention of the Project Manager for clarification.

For detailed information, please refer to Scope of Work -Kusile Fuel Station Technical Specification

3.4. Use of *Contractor's* design

In accordance with Core clause 22.1, which states The *Employer* may use and copy the *Contractor's* design for any purpose connected with construction, use, alteration, operating, maintaining, completing or demolition of the works unless otherwise stated in the Works Information and for other purposes as stated in the Works Information, and for purposes as stated in the Scope of Work Kusile Fuel Station Technical Specification

3.5. Design of Equipment

Refer to core clause 23.1: The Contractor submits particulars of the design of an item of Equipment to the Project Manager for acceptance

For detailed information, please refer to Scope of Work - Kusile Fuel Station Technical Specification

3.6. Equipment required to be included in the works

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2)

3.7. As-built drawings, operating manuals and maintenance schedules

The creation, issuing and control of all Engineering Drawings is in accordance with the latest revision of 36-943 (Engineering Drawing Office and Engineering Documentation Standard), 36-945 and 36-946 (associated Work Instructions) to be supplied as part of the enquiry documents.

Within 2 weeks after commissioning of the works has been completed by the Contractor, the Contractor revises drawings where necessary and sends two copies for acceptance. Drawings are also submitted in an electronic format compatible with MicroStation Ver.8 supplied by Bentley Systems Inc. and one PDF copy. After acceptance, 1 print is to be provided for archiving purposes. Drawings include those drawings necessary for the efficient maintenance of the Plant. The specific KKS code of each plant, equipment and component appears on all drawings.

The prints and electronic files are deemed to form part of the works for the purpose of the Defects Liability Certificate.

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2)

4. Procurement

4.1. People

4.1.1. Minimum requirements of people employed on the Site

The Contractor is required to recruit 100% of Unskilled and Semi-Skilled and 30% of Skilled Labour respectively in Nkangala District and Bronkhorstspuit Municipality Areas.

4.1.2. BBBEE and preferencing scheme

Awarded Contract is expected to maintain or improve their B-BBEE Recognition Level for the duration of the contract.

Refer to SDL&I Compliance Requirements.

4.1.3. Supplier Development, Localisation and Industrialisation (SDL&I) Mandatory Requirements – South Africa (SDL&I)

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Supplier Development, Localisation and Industrialisation (SDL&I) Mandatory Requirements - South Africa in accordance with and as provided for in the *Contractor's* SDL&I Compliance Schedule

For detailed information, the *Contractor* is referred to the SDL&I Requirements

4.2. Subcontracting

4.2.1. Preferred subcontractors

Not applicable to this contract.

4.2.2. Subcontract documentation, and assessment of subcontract tenders

If the Contractor subcontracts work, he is responsible for Providing the Works as if he had not subcontracted. This contract applies as if a Subcontractor's employees and equipment were the Contractor's.

Refer to Clause 26

4.2.3. Limitations on subcontracting

The Contractor is required, whenever feasible to procure goods and services within the Nkangala District and Bronkhorstspuit Municipality Areas for supporting services such as transportation, pest control, etc as per SDL&I Compliance Schedule.

If the Contractor subcontracts work, he is responsible for Providing the Works as if he had not subcontracted. This contract applies as if a Subcontractor's employees and equipment were the Contractor's.

The Contractor does not appoint a Subcontractor on the proposed subcontract conditions submitted until the Project Manager has accepted them.

Refer to Clause 26.

4.2.4. Attendance on subcontractors

No additional requirements

4.3. Plant and Materials

4.3.1. Quality

The Contractor shall ensure compliance and adherence of quality management to the Employer's documentation but not limited to the below stated requirements

- The Supplier shall comply with the quality requirements as stated in 240-105658000 - Supplier Quality Management Specification.
- Compliance with Category 4 quality requirements and all other relevant requirements are mandatory.
- Compliance with all Eskom standards and governance is essential for all aspects of the works including mechanical, C&I, civil, metallurgical, non-destructive testing, electrical, structural, administration and all other aspects.

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2)

4.3.2. Plant & Materials provided "free issue" by the *Employer*

No items are free issued by the Employer, although the Employer, at his expense, arrange for, develop, and maintain the various facilities and services indicated in the attached Project Site Facilities and Services Matrix at or near the Project Site, as applicable.

All facilities or services not specifically indicated as provided by the Employer in the attached Project Site Facilities and Services Matrix, but required for the Works (including roads, assigned lay-down yard improvements, and access needed by the Contractor in the performance of the Works), are provided, maintained and removed when no longer required, by the Contractor. Except as otherwise stated in the Contract, all Contractor provided facilities and services are to the satisfaction of the Project Manager. The provision or cessation of such Contractor provided facilities or services, and the erection, installation, and removal thereof and/or of related equipment, requires the Project Manager's approval.

4.3.3. *Contractor's* procurement of Plant and Materials

The Employer obtained authority from the South African Revenue Services ("SARS") to import all equipment destined for the Kusile Power Station, whether supplied by the Employer or others, into the Republic of South Africa free of Customs Duties under the tariff subheading 8406.81, covered by Ruling Ref No. H.S: 3/84.06 dated 30 September 2008 ("the SARS Ruling").

In addition to the requirements of [Transport of Goods], the Contractor coordinate with the Project Manager regarding the arrival, unloading and inspection of Goods and the release of carrier's equipment at the Project Site. The Contractor must take all necessary steps to ensure that all Plants and Materials are adequately protected against damage during shipping, transport, off-loading and storage.

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification the following standards and procedures attached as part of the Works Information

- Part 3, Annexure X.7 Plant and Material Import Policy and Procedure, Rev 4_0121.
- Part 3, Annexure X.8 Shipping Policy and Procedure, Rev 4_0121.

4.3.4. Spares and consumables

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2).

4.4. Tests and inspections before delivery

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2).

Furthermore, The Contractor shall refer to Core Clauses 40 and 41 which make reference to the Works Information regarding tests and inspections.

4.5. Marking Plant and Materials outside the Working Areas

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2).

Furthermore, the Contractor is referred to Core clauses 70.1 and 71.1 which make reference to the Works Information regarding Marking Plant and Materials which is outside the Working Areas if they are to be paid for before delivery to the Working Areas.

4.6. Contractor's Equipment (including temporary works).

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification (Rev 2).

See also section 3.6 above relating to the design phase of the Contractor's Equipment.

4.7. Cataloguing requirements by the Contractor

For detailed information, please refer to Scope of Work -- Kusile Fuel Station Technical Specification and Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974.

5. Construction

5.3. Temporary works, Site services & construction constraints

5.3.1. Employer's Site entry and security control, permits, and Site regulations

The Employer provides perimeter security and access control for the Project Site. Strict access control is implemented 24 hours a day at all entrances to the Project Site. All persons and vehicles entering or exiting the Project Site may be subjected to searches and the Employer reserves the right to refuse entrance to Project Site to any person not meeting security and/or access requirements.

Only a limited number of Contractor and Subcontractor non-construction vehicles are allowed onto the Project Site. As a general rule, however, Contractors' and visitors' personal vehicles are not allowed within the Project Site and are parked in the designated area and the Contractor is required to collect his visitors from the access point.

Vehicle entry discs are issued at the discretion of the Project Manager on receipt of an application signed by the Contractor. Applications for vehicle entry discs are made in a form prescribed by the Project Manager.

The Contractor's Personnel and any visitors on the Project Site is in possession of a valid identification card supplied by the Employer. Applications for identification cards are made in the form prescribed by the Project Manager. The identification cards and finger identification be used to gain access to the Project Site and only persons with legitimate business on the Project Site and in possession of such identification cards are allowed access.

Applications for identification cards and fingerprint imaging are made in good time prior to access being required.

Eskom Holdings SOC Limited ("Employer") as an entity is a State-Owned Company and is therefore subject to regulatory compliance as is applicable to the Government. Eskom Power Stations are of strategic importance and are declared as National Key Points in terms of the National Key Points Act 102 of 1980. The Employer therefore needs to ensure that all Personnel granted access to its premises can be trusted. Furthermore, the State Security Agency, in the execution of the National Strategic Intelligence Act 39 of 1994, requires the Employer, as a State-Owned Entity, to comply with the requirements of Chapter 5 of the Minimum Information Security Standard ("MISS") and implement a security screening process.

In light of the above, and further to the issuance of the New Access Permit Procedure earlier this year, the Employer hereby advises that with effect from Monday 18th September 2023, all new employees engaged on the Kusile Site, including those switching employment between companies, will be required to submit a valid SAPS Clearance Certificate when submitting their application for Site Access.

A SAPS Clearance Certificate can be obtained from either SAPS or any accredited supplier linked to SAPS AFIS system. A SAPS Police Clearance Certificate (PCC) will also be recognised. Only valid Certificates, issued within 90 days of the Site Access Permit Application, will be accepted. No receipts/proof of application will therefore be permissible after 18th September 2023.

Contractors/Employers must ensure that their respective recruitment process allows sufficient time for a SAPS Clearance Certificate to be obtained. Access cards will only be issued to employees who have provided a valid SAPS Clearance Certificate with their respective Site Access Permit Application. Lost, stolen or damaged cards shall be reported to the Project Manager immediately. A fee shall be charged for replacement cards. Identification card holders will be required to produce their identification cards for a photo-to-face and fingerprint check at the security check points. Where a card holder's right of access to the Project Site is withdrawn, his identification card will be electronically cancelled. It is the responsibility of the Contractor to ensure the card is returned to the Project Manager.

Refer to Revised Kusile Access Control Work Instruction 240-128446322.

5.3.2. Restrictions to access on Site, roads, walkways and barricades

The Employer provides and maintains construction parking and general use roads on the Project Site. A construction parking lot is located outside the Main Security Fence for Contractor's personnel and visitors. Parking facilities are limited. Contractor's personnel and visitors failing to park in the designated parking as directed may have their vehicle clamped, removed and/or banned from future use on site.

The Contractor is solely responsible for the protection and security of the Works and all areas allocated to him, including his allocated laydown areas and areas outside the Project Site, if any, which are specified under the Contract as forming part of the Site.

5.3.3. People restrictions on Site; hours of work, conduct and records

The Basic Conditions of Employment Act, 1997 (Act No. 75 of 1997), stipulates the permissible working hours for individuals to perform their duties optimally.

The submitted and approved program show resourced material and manpower quantities and units per Activity, while the Monthly report details of actual and planned resources including number of each class of Contractor's Personnel and of each type of the Contractor's Equipment at the Project Site (and/or at other places, if any, as may be specified under the Contract as forming part of the Site) for the relevant period.

Staff consistently working excessive hours of overtime risk their health and safety and that of their colleagues due to fatigue. Fatigue can have deadly consequences, especially in environments where a loss of alertness can threaten the health and safety of the employee or others.

The Contractor shall comply with the Contractor Health and Safety Requirements Document Identifier: 32-136.

Wage Administration

The Contractor is required to utilise the Eskom Wage Bureau. The Contractor is referred to WB Implementation Instruction Kusile Build NEC Contracts for additional aspects concerning the Eskom Wage Bureau that must be noted and observed. Non-compliance with any of the requirements set out will be subject to action by Eskom.

5.3.4. Health and safety facilities on Site

The Contractor is referred to the Employer's HSE Requirements as stated in Section 2.3, Core Clause 27.4 and the following documents for detailed information.

5.3.5. Environmental controls, fauna & flora, dealing with objects of historical interest

The Employer's Environmental Requirements form part of the completed HSE Requirements, as such Core Clause 27.4 and the stated requirements in Section 24 applies.

5.3.6. Title to materials from demolition and excavation

The Contractor has no title to an object of value or of historical or other interest within the Site. The Contractor notifies the Project Manager when such an object is found, and the Project Manager instructs the Contractor how to deal with it. The Contractor does not move the object without instructions.

The Contractor has title to materials from excavation and demolition only as stated in the Works Information.

Refer to Employer Policies and Procedures, Part 3, Annexure X.10 –Environmental Requirements Rev 4_0121.

5.3.7. Cooperating with and obtaining acceptance of Others

The Contractor co-operates with Others in obtaining and providing information which they need in connection with the works. He co-operates with Others and shares the Working Areas with them as stated in the Works Information.

Refer to Clause 25.1.

Except as directed by the Project Manager, the Contractor in no way interfere with, remove, adjust or operate plant, materials and/or equipment of or being supplied or operated by Other Project Contractors. Without derogating from the foregoing, the Contractor does not cut reinforcing steel, remove concrete, drill holes into concrete or structural steel, weld on to reinforcing bars or structural steel without the approval of the Project Manager.

The Contractor shall always keep the work of Other Project Contractors free from dropping, dripping and spattering of materials used in the Works.

5.3.8. Publicity and progress photographs

The taking of photographs of the Kusile Power Station including the Project Works is restricted and subject to the approval of the Project Manager as provided for under the Contract.

Colour photographs in digital format showing progress in the course of manufacture and on the Site, with each set comprising at least 20 colour photographs, individually marked with the date taken, a description of the subject and the direction of view.

5.3.9. Contractor's Equipment

Records are to be kept of Equipment on Site including whether it is owned or hired.

This includes scaffolding, rigs, heavy lifts and cranes, when it came to and was removed from the Working Areas.

Contractors requiring removal of any equipment, tools, components, materials, spares etc from Site will require an OV28 release form to be signed by an authorised Employer's representative. No contractor will be permitted to remove any item from Site without the Employer's prior approval.

Refer to the following documents for further information

- Scope of Work -- Kusile Fuel Station Technical Specification
- Employer's Health, Safety and Environmental Requirements Schedule

5.3.10. Equipment provided by the *Employer*

No equipment is made available by the Employer except plant which needs to be tied into will be made accessible for the tie-in process.

Refer to Scope of Work -- Kusile Fuel Station Technical Specification for detailed information.

5.3.11. Site services and facilities

The *Employer*, at his expense, arrange for, develop, and maintain the various facilities and services indicated in the attached Project Site Facilities and Services Matrix at or near the Project Site, as applicable. These services and facilities are provided on the basis detailed in the table below.

Site Facilities, Utilities and Services	Provided by		Details
Item	Contractor	Employer	
Field Office			
Field office structure	X		
Field office furniture	X		
Field office equipment	X		
Field office supplies	X		
Artisans change facilities	X		
Fabrication shops	X		
Equipment			
Construction equipment	X		
Contractor construction elevator	X		
Contractor equipment operator testing	X		
Communication			
Internet connection	X		
Radio & cell phone communication	X		
Telephone			
Construction telephone main service line	X		
Construction telephone line connection to Contractor field office	X		
Contractor's telephone equipment and system wiring	X		
Electrical Power			
Construction main power source and maintenance		X	
Construction power primary distribution system and maintenance		X	

Site Facilities, Utilities and Services		Provided by		Details
Item	Contractor	Employer		
Construction power Contractor's distribution system	X			
Construction power Contractor's distribution system maintenance	X			
Construction power energy usage payment		X		
Construction Lighting				
Structures interior temporary lighting and maintenance	X			
Contractor specific work area temporary lighting and maintenance	X			
General areas site lighting and maintenance		X		
Contractor areas site temporary lighting and maintenance	X			
Water - potable and non-potable				
Construction water source		X	Contractor collects from identified point	
Construction water Contractor's distribution and maintenance system	X			
Construction water usage payment		X		
Drinking water distribution	X			
Heat				
Temporary heating facilities/system	X			
Sanitary Facilities				
Construction primary sanitary facilities and maintenance	X			
Contractor's structures construction sanitary facilities and maintenance	X			
Access Roads				
Primary access roads and maintenance		X		
Contractor specific access roads and maintenance	X			
Primary access road dust control		X		
General Work-related dust control	X			
Provide construction parking area and maintenance		X		
Storage Facilities				
Onsite lay-down space		X		
Contractor storage area maintenance	X			
Construction warehousing	X			
Tool storage facilities	X			
Climate controlled storage facilities	X			
Construction equipment fuelling facilities	X			
Security				
Overall site security		X		
Contractor specific areas security	X			
Overall site security access card and fingerprint system and materials		X		

Site Facilities, Utilities and Services		Provided by		Details
Item	Contractor	Employer		
Medical Facilities				
Onsite first aid/medical services		X		
Project emergency ambulance		X		
Heliport Area		X		
Fire Protection				
Construction fire protection – fire extinguishers	X			
Construction fire protection - stand pipe	X			
Overall site fire brigade participation	X			
Construction fire equipment & vehicles		X		
Clean-up				
General refuse offsite disposal		X		
Contractor general refuse collection and onsite disposal	X			
Contractor field office cleaning service	X			
Hazardous waste disposal and clean-up / rehabilitation	X			
Concrete source				
Concrete source	X			
Concrete usage payment	X			
Concrete test facilities and testing	X			
Scaffolding				
Scaffolding supply/erection	X			
Welding				
Welder testing	X			
Welder test facilities	X			
Welding/cutting consumables	X			
Railroad				
Railroad siding install & maintenance				None
Food Services				
Allowed onsite - Yes/No	No	Yes		
Canteen		X		
Canteen fee payment	X			

5.3.12. Facilities provided by the Contractor

To be communicated

Furthermore, the Contractor provides everything else required to successfully complete the Works

5.3.13. Existing premises, inspection of adjoining properties and checking work of Others

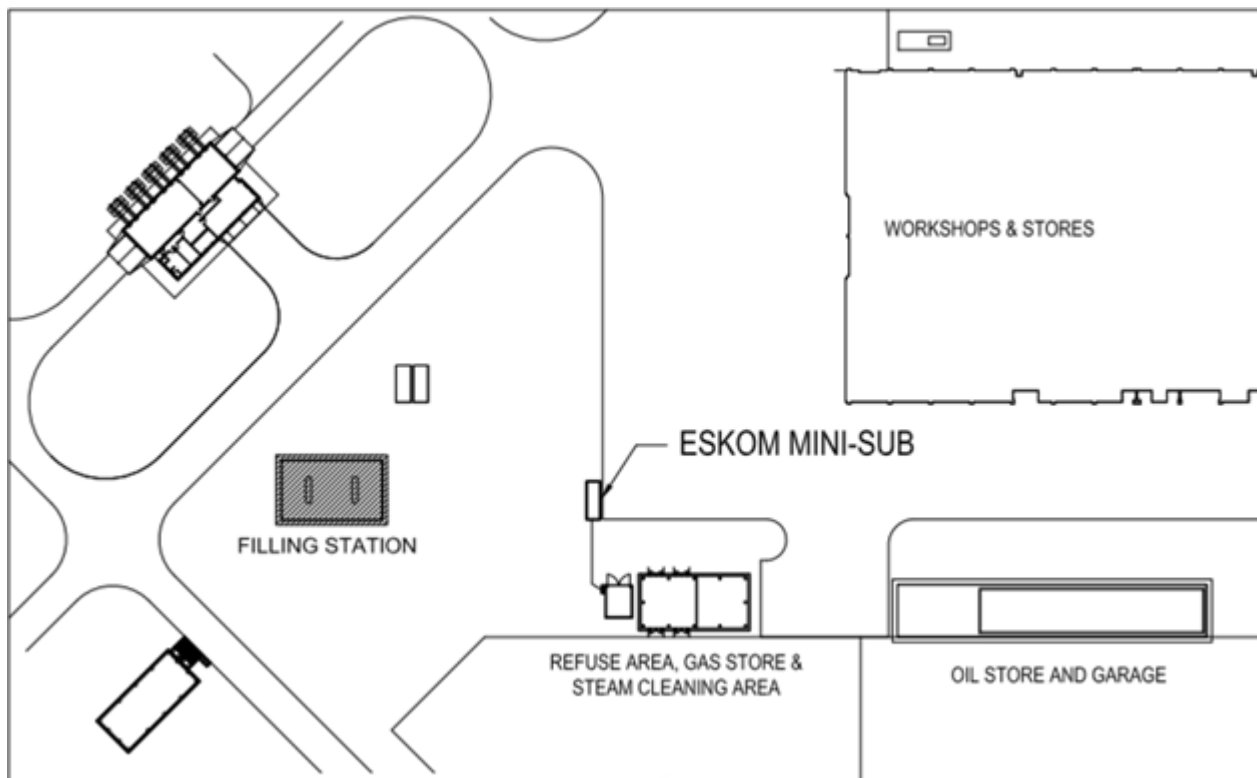


Figure 2: Fuel Filling Station Proposed Location

Information, if any, on existing services and structures, including underground installations ("services and installations"), at the Project Site (and/or at other places, if any, as may be specified under the Contract as forming part of the Site) is made available solely to assist the Contractor in the execution of the Works.

The Contractor carries out the Works on the basis that services, and installations may exist that are not indicated on drawings provided.

The Contractor is responsible for locating and identifying all services and installations (such as, but not limited to, oil, water, air, and gas lines, sewers and other drains, circulating water lines, oil separators, septic tanks, telephone lines, electrical duct banks and racking or buried structures within the Project Site and/or at other places, if any, as may be specified under the Contract as forming part of the Site) where any penetration (such as, but not limited to, excavation, ploughing, trenching, driving of well points, or insertion of any tool or device below the surface) is anticipated or required or where construction operations may subject services and installations to damage, prior to the performance of such work.

The Contractor hand excavates and positively identifies all services and installations. All information relative to the services and installations are recorded by the Contractor and incorporated into the construction records in accordance with the requirements of the Contract.

5.3.14. Survey control and setting out of the works

The Contractor is responsible for setting out the Works.

5.3.15. Excavations and associated water control

Prior to commencing work on any trench or excavation, the Contractor shall first submit a completed Trench and Excavation Notice to the Project Manager. The Contractor shall submit the required Excavation Method Statements to the Project Manager detailing the methodologies and procedures to be implored on Site when interceptions of water is encountered for review

5.3.16. Underground services, other existing services, cable and pipe trenches and covers

There are numerous underground services installed, commissioned and in operation within the vicinity of the Proposed Site Location for the Fuel Filling Station, which are, but not limited to those stated in the Works Information.

Information, if any, on existing services and structures, including underground installations ("services and installations"), at the Project Site (and/or at other places, if any, as may be specified under the Contract as forming part of the Site) is made available solely to assist the Contractor in the execution of the Works. The Contractor carries out the Works on the basis that services and installations may exist that are not indicated on drawings provided.

The Contractor is responsible to determine the location of all underground services, uses correct detection equipment for locating them and such services are clearly marked.

Should the Contractor damage any services, known and unknown, the Contractor reinstates these services at its own cost according to the Project Manager's procedures and method statements and to Project Manager's satisfaction.

All incidents of damaged services are immediately reported to the Project Manager.

The Contractor is referred to the following documents for further details.

- Environmental Requirements Schedule
- Scope of Work Kusile Sandblast Workshop Technical Specification

5.3.17. Control of noise, dust, water and waste

The Contractor maintains a high standard of cleanliness during the conduct of his activities on the Project Site (and at other places, if any, as may be specified under the Contract as forming part of the Site). The Contractor, at all times maintain, clean and attend to the upkeep of the Site and such other areas as may be allocated for storage of materials, site offices, etc. to the satisfaction of the Project Manager. The Contractor at all times keeps these areas, clean and free from accumulation of waste materials and refuse regardless of the source.

During sweeping and dusting, the Contractor ensures that a minimum amount of dust is liberated into the atmosphere. Cleaning by vacuum cleaners is preferred and the use of compressed air for cleaning is prohibited.

Except as otherwise directed by the Project Manager, the Contractor provides dust suppression for the Contractor's yard and for the Contractor's working areas. The Employer, however, provides dust suppression for roads and other common areas which are not used exclusively or primarily by the Contractor.

The Contractor is responsible for the prompt removal of all waste to a designated disposal area. The disposal area is on or in the vicinity of the Project Site and is designated by the Project Manager. Waste is only disposed of at a designated area.

The Contractor is referred to the following documents for further details.

- Environmental Requirements
- Scope of Work -- Kusile Fuel Station Technical Specification
- Kusile SHE Specification Rev 8

5.3.18. Sequences of construction or installation

The Contractor is responsible for his work coordination process and the manner of execution necessary to carry out the Works.

Work coordination includes the general and specific workflow, planning and sequence of execution of the Works by the Contractor. The Contractor is required to provide certain information under Part 3 (Technical Specification and the Employer Policies and Procedures), to facilitate the coordination of all field construction and erection on the Project Site by the Project Manager.

5.3.19. Giving notice of work to be covered up

Before the Contractor covers up any Works, the Supervisor is contacted to arrange for the final inspection of the Works by the Employer's Quality Department

Only when the Final Quality inspection is done and signed off by both the Quality Department and the Supervisor may that particular piece of Works be covered up.

5.3.20. Hook ups to existing works

The contractor is required to design, procure, install and commission the dirty drainage system, fire protection system, potable water, earth mat and provision and routing of compressed air supply interfacing points, which all tie into existing services. The Employer shall furnish the designs and drawings for the Contractor to connect to the Employer's existing pipe and the routing.

The contractor is referred to the Scope of Work Kusile Fuel Station Technical Specification for further details.

5.4. Completion, testing, commissioning and correction of Defects

5.4.1. Work to be done by the Completion Date

Core clause 11.2(2) defines Completion as when the Contractor has done all the work which the Works Information states he is to do by the Completion Date.

On or before the Completion Date the *Contractor* has done everything required to Provide the Works except the work listed below which may be done after the Completion Date but in any case, before the dates as stated. The Project Manager cannot certify Completion until all the work, except that listed in the table below has been done and is also free of Defects which would have in his opinion prevent the Employer from using the Works and Others from doing their work.

Item of work	To be completed by
As built drawings of Works	Within two weeks after Completion
Performance testing of the works in use as specified in the Scope of Work - Kusile Fuel Station Technical Specification of this Works Information.	See performance testing requirements

Data Books submission	Within two weeks after Completion
Site de-establishment	Within two weeks after rectifying the last defect

The contractor is referred to the Scope of Work - Kusile Fuel Station Technical Specification and 240-125815990 – Kusile Commissioning Completion Work Instruction for further details.

5.4.2. Use of the works before Completion has been certified

The *Employer* may use any part of the *works* before Completion has been certified should the Project Manager deem it necessary for whatever reason.

The Project Manager certifies the date upon which the Employer takes over the Works and to its extent within one week of the date.

Refer to Clause 35

5.4.3. Materials facilities and samples for tests and inspections

The Contractor submits his drawings, designs and calculations for acceptance prior to the start of manufacture, as required by the Project Manager. All such material becomes the property of the Employer. Calculations are supplied to substantiate the Contractor's designs of leading items of the supply and are submitted to the Project Manager for acceptance before the start of manufacture in accordance with the technical specification.

The contractor is referred to the Scope of Work Kusile Fuel Station Technical Specification for further details.

5.4.4. Commissioning

The Project Manager provides subsystem and system turnover packages and schedule to facilitate the sequential initial testing and operation of equipment groupings and systems. The individual components of equipment groups and systems are identified in turnover packages issued to the Contractor.

The Contractor finishes the part of the Works for each turnover packages in a manner to support the overall sequence and schedule of testing and initial operation of subsystems and systems to allow timely turnover for extended operation. The Contractor participates in meetings, walk downs, corrections, and punch list completion to support the established turnover for initial operation process.

The Kusile Filling Station shall be commissioned in line with Kusile Commissioning Procedure and handed over as fully functional system that conforms to applicable standards. The handover documentation shall be in line with Documentation Handover List as agreed between the Employer and Contractor.

The following documents shall be referenced.

- Scope of Work - Kusile Sandblast Workshop Technical Specification, for further details.
- Kusile Commissioning Completion Work Instruction 240-128515850 - Documentation Handover Specification
- Employers Policies and Procedures, Part 3, Annexure X.4.2 – Work Coordination Plan Requirements Schedule, Rev 4_0121
- Employers Policies and Procedures, Part 3, Annexure X.4 – Project Site Regulations & General Requirements, Rev 4_0121

5.4.5. Start-up procedures required to put the works into operation

The Contractor is referred to Scope of Work -- Kusile Fuel Station Technical Specification and 240-125815990 - Kusile Commissioning Completion Work Instruction for further details.

5.4.6. Take over procedures

Refer to clause 35.

The Employer need not take over the Works before Completion Date if it is stated in the Contract Data that he is not willing to do so. Otherwise, the Employer takes over the Works not later than two weeks after Completion.

The Employer may use any part of the Works before Completion has been certified. If he does so, he takes over the part of the Works he begins to use except the use is for a reason stated in the Works Information or to suit the Contractor's method of working.

The Project Manager certifies the date upon which the Employer takes over any part of the Works and its extent within one week of the date.

Prior to the issue of the Taking-Over Certificate for the Works or for the Section in question, all holes, ruts, settlements and depressions resulting from the Works or use of areas are filled and graded to match elevations of adjacent surfaces, and all areas disturbed by the Works (including lay-down areas) are restored to their original condition to the maximum extent practicable and to the satisfaction of the Project Manager.

5.4.7. Access given by the Employer for correction of Defects

The Project Manager establish an operation control system (OCS) to protect personnel and equipment as the individual equipment and functional systems are completed and capable of energization. The OCS procedures establish control over the placement of appropriate tags on equipment and functional system components to indicate their status and the required mandatory clearance procedures to allow operation, testing, energization, or removal from service of the equipment or system.

The Contractor ensures the OCS procedures are strictly followed by all personnel performing the Work under this Contract.

The Contractor ensures that any services and installations damaged in the execution of the Works are repaired and fully restored, by suitably qualified and competent persons, to a condition at least equal to that which existed just prior to the time of damage. All such repair and restoration work are carried out at the cost of the Contractor and is done to the satisfaction of the Project Manager.

5.4.8. Performance tests after Completion

The Contractor shall demonstrate that the works through performance and reliability testing up to take-over, that the plant can operate as guaranteed by the Contractor (in Contractor's Works Information) and demonstrate.

Refer to Scope of Work -- Kusile Fuel Station Technical Specification and 240-125815990 - Kusile Commissioning Completion Work Instruction, for further information.

5.4.9. Training and technology transfer

To allow the Employer's personnel to gain first-hand experience of the Permanent Works, the Contractor affords every opportunity for authorised Employer's personnel to witness erection.

The Contractor is required to give necessary training where necessary to the Employer's employees for equipment installed and requires operating and maintenance by the Employer

Refer to Scope of Work - Kusile Fuel Station Technical Specification for further details.

5.4.10. Operational maintenance after Completion

Refer to Scope of Work -- Kusile Fuel Station Technical Specification and 240-125815990 - Kusile Commissioning Completion Work Instruction, for further information.

6. Plant and Materials standards and workmanship

6.1. Investigation, survey and Site clearance

The Contractor shall carry out further investigation of existing facilities or of the Site before commencing final design.

The Contractor is responsible for locating and identifying all services and installations (such as, but not limited to, oil, water, air, and gas lines, sewers and other drains, circulating water lines, oil separators, septic tanks, telephone lines, electrical duct banks and racking or buried structures within the Project Site and/or at other places, if any, as may be specified under the Contract as forming part of the Site) where any penetration (such as, but not limited to, excavation, ploughing, trenching, driving of well points, or insertion of any tool or device below the surface) is anticipated or required or where construction operations may subject services and installations to damage, prior to the performance of such work.

Refer to Scope of Work - Kusile Fuel Station Technical Specification.

6.2. Building works

Refer to Scope of Work -- Kusile Fuel Station Technical Specification for detailed information.

6.3. Civil engineering and structural works

Refer to Scope of Work -- Kusile Fuel Station Technical Specification for detailed information.

6.4. Electrical & mechanical engineering works

Refer to Scope of Work -- Kusile Fuel Station Technical Specification for detailed information.

6.5. Process control and IT works

Refer to Scope of Work -- Kusile Fuel Station Technical Specification for detailed information.

6.6. Other [as required]

Refer to Scope of Work -- Kusile Fuel Station Technical Specification for detailed information.

7. List of drawings

7.1. Drawings issued by the Employer

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Refer to Scope of Work -- Kusile Fuel Station Technical Specification, for detailed information.