Eskom	Specification	Technology

Title:	**SCOPE OF WORK FOR MAINTENANCE OF HENDRINA POWER STATION RECLAIM AND OVERLAND CONVEYORS**	Unique Identifier:	**None**
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1. EXECUTIVE SUMMARY

The works is all maintenance as defined in the scope of work (mechanical and electrical) and relevant supervision, Defect correction and Equipment, Plant and Materials and labour required for the day-to-day maintenance of the overland and reclaim coal conveyor system of the Employer at Hendrina Power Station. The system consists of transfer houses, substations, weigh bridges, weigh bin and 12 conveyor belts of varying lengths, wiz:

- Conveyors 4A & 4B (740m) (Maintenance)
- Conveyors 5A & 5B (88m) (Maintenance)
- Conveyors 6A & 6B (204m) (Maintenance)
- Conveyors 7A & 7B (920m) (Maintenance)
- Conveyor 17 (310m) (Maintenance)
- Conveyor 18 (340m) (Maintenance)
- Conveyor 19 (200m) (Maintenance - Apart from the spares and maintenance for the sump pump, any other work on conveyor 19 to be treated as compensation)
- Conveyor 20 (120m) (Maintenance- Apart from the spares and maintenance for the sump pump, any other work on conveyor 20 to be treated as compensation)
- Weigh bin
- Weighbridge
- Conveyor 0A & 0B up to 3A & 3B are situated on Optimum premises and in the process of being de-classified (dismantled and removed)
- Conveyor 16 is situated on the Coal Stockyard and in the process of being de-classified (dismantled and removed).

The conveyor system starts at belt numbers 4A and 4B at Hendrina Power Station fence, running in parallel through to the 2 tripper cars (7A and 7B) at the top of staithes 1, 2, 3 and 4 at the Employer's plant at Hendrina Power Station. Conveyor 17 to 18 running from the stockpile and the weigh bridge as illustrated on drawing No: 0.15/577(Coal Handling Plant Diagrammatic Layout). Conveyor 19 and 20 are non-operational conveyors situated under the redundant train off-loading facilities.

The Contractor provides the complete maintenance of the complete conveyor system in such a manner to provide coal to Hendrina Power Station at a continuous rate and in conjunction with the tonnage scheduled for each month, so as not to constrain any operation of the Employer. The Contractor continues with the de-classification process on conveyors 0A&B up to 3A&B and 16. The Contractor completes the SOW for maintenance intervention to remove the redundant self-cleaning magnets on conveyors 4A & 4B and 18.

2. SCOPE OF WORK FOR COAL CONVEYORS AT HENDRINA POWER STATION

2.1 CO-OPERATION WITH OTHERS

The *Contractor* interfaces with ERI BMS for planned shutdown periods for maintenance purposes, taking due cognisance of the Power Station’s coal requirements.

The *Contractor* interfaces with ERI BMS and the Employer’s representative for any unplanned maintenance activities (e.g. breakdown recovery, etc.)

The *Employer* will, during the course of the contract, implement modifications or changes to the conveyor system and/or peripheral systems. The Employer may choose to utilise others, with whom the *Contractor* will co-operate or issue instructions to the *Contractor* if deemed within the scope of work.

The *Contractor* designs maintenance schedules according to the SAP Work Management schedule. These are submitted to the Project Manager for acceptance before the *Contractor* starts with any work on Site.
The *Contractor* liaises on an operational level with the Project Supervisor or delegated person responsible for the road transported coal.

2.2 GENERAL

This section stipulates the work to be performed by the *Contractor* for the *works*, is according to the *Employer* standards on the components of the plant. The standard of maintenance is specified by the *Employer.*
The *Contractor* ensures that the plant meets the criteria specified in this section.

The problem scenarios provided in this section are possible causes (from past experience) and are provided to assist the *Contractor*.

The *Contractor* must also investigate other possible causes.

All maintenance shall be done in accordance with the Hendrina Coal plant strategy Unique Identifier HSSTPMM002 or the latest version thereof.

The *Contractor*:
Provides maintenance schedules, compiled in liaison with the *Employer* and submits it to the *Project Manager* for acceptance before the *Contractor* starts with any work on Site.

Provides the complete maintenance of all mechanical plant, electrical plant and structures (as specified) in accordance with the maintenance requirements detailed in the Works Information, until the Completion Date of this contract. Any routine maintenance work and repairs are performed by prior scheduling.

Performs repairs and provides on-site support for breakdowns on a 24-hour basis (7 days a week). Response time for failure callouts is 60 minutes from call.

Collects from the *Employer's* yard, installs and performs the routine maintenance of the issued spares.

Obtains all maintenance parameters from the Original Equipment Manufacturers (OEMs). This forms the basis of the *Contractor's* maintenance procedures, for approval by *Employer* Engineering department and acceptance by the *Project Manager*.

Establishes and maintains a record keeping system, accepted by the *Project Manager*. The *Contractor* records all routine inspections, failures, causes, remedial actions taken, etc.

2.3 ELECTRICAL MAINTENANCE

The *Contractor* provides the electrical maintenance, repairs and inspections in accordance with the details and inspection frequencies indicated above, including that which the *Employer* stipulates in his Works Information.

2.3.1 **Motors**

The *Contractor* inspects and ensures that motors:

- are kept clean and free from any coal spillage and dust, at all times.
- are not to run if wet, and
- are not submerged in mud or coal slurry.

In the event of any of the above happening, the motor is thoroughly cleaned, dried out and serviced, before being made operational.

The costs endured to achieve the above for the *Contractor's* cost.

The *Contractor* inspects and records motor parameters during weekly inspections.
In addition, the *Contractor* ensures that:

- Monthly tests to monitor electrical current and vibration levels are received; and
- The findings of the tests are documented to determine when the motor must be serviced, or overhauled.
- Motors are not to run with abnormal vibrations; and
- In the event of abnormal vibrations being detected, the motor is rectified immediately.
- Motors are not to run when the cooling system is not in operation, or defective; and
- An abnormal rise in temperature is attended to.
- The thermal rating of the motor is not exceeded.
- Bearing temperatures to be monitored on monthly inspections
- Motors are not started more than that specified by the manufacturer of the motor, within a given time frame.

2.3.2 **Switchgear**

All switchgear, excluding the 6.6 Kv breakers, are maintained by the Contractor as per the Employer's maintenance procedure.

2.3.3 **Power Supply**

The *Contractor* is responsible for the total overland conveyor low voltage electrical reticulation.
For 6,6kV overland conveyor board 0A, 0B, 1A, 1B, 2A, 2B, 3A and 3B and 4A, 4B through to 5A, 5B, 6A, 6B, 7A, 7B, 16, 17 18, 19 and 20 maintenance, the *Contractor* is responsible to apply to the *Employer* for the high voltage permits.
The transformers are fed by a 6.6kV line from the Eskom grid and reduced to 380V. From the transformers, the following sub stations are fed:

- the sub-station 0A and 0B switchgears / ring feed
- the sub-station 1A and 1B links
- the sub-station 2A and 2B links
- the sub-station 3A and 3B links
- the substation 4A, 4B, to 6A, 6B and 16 to 20 switchgears;
- the substation 7A and 7B switchgears

2.3.4 **Junction boxes**

The *Contractor* inspects and ensures that:

- All junction boxes are kept always closed.
- Junction boxes are cleaned weekly.
- The hinges and locking devices are maintained and if found defective, repaired immediately.

2.3.5 **Lighting**

The *Contractor*:

- replaces defective lights on a daily basis.
- keeps continuity when replacing lights using the same type throughout the plant.
- cleans all lighting boards.
- cleans all light fittings and lenses.

2.3.6 **Pull key system**

The *Contractor* inspects and ensures weekly that:

- lids on switches remain on tight.
- switches are sealed to prevent dust or water from entering the electronic circuits.
- pull key switches are mechanically and electrically in working condition and a record be kept for tests done; and
- pull wires are well maintained and can move freely.

2.3.7 **Rotating speed sensors/switches**

The *Contractor* inspects and ensures weekly that:

The friction slots on the pick-up wheels are clear of dust build up and debris, to ensure wheel traction on the belt at all times.

2.3.8 Block chute detectors

The *Contractor* inspects and ensures that:

- the sensors and pickups are cleaned on a weekly basis to prevent unnecessary trips of the belt; and that
- the functionality of the pick-ups and sensors are maintained at all times.

2.3.9 Safety circuits (e.g. hooters, trip wires, under-speed switches, block chute detectors, emergency stops, local stops, take-up car limits).

In addition to the monthly test for correct operation, the *Contractor* inspects and ensures that:

- all above plants are operational at all times.
- repaired immediately when defective.
- cleaned; and
- the status is recorded on a weekly basis.

2.3.10 Tripper cars

The *Contractor* inspects and ensures that:

- tripper car hot-rails (bus bars) and brushes are in good, operational condition.

2.3.11 High mast lights

The *Contractor* inspects and ensures that:

- all lights on the high masts at the stockpile are working and repaired when defective.

2.3.12 Sub stations

The *Contractor* inspects and ensures weekly that:

- the area is clean.
- lights are maintained.
- maintain roof, gutters and down pipes, replace missing nails and bolts.
- report any structural damage to the Project Manager.
- maintain windows, replace broken glass panels.
- maintain doors, oil hinges.
- maintain fences and gates.

2.4 MECHANICAL MAINTENANCE

The *Contractor* provides the routine mechanical maintenance, repairs and inspections in accordance with the details and inspection frequencies indicated below, including that which the *Employer* stipulates in his *Works* Information.

2.4.1 Gearboxes

The *Employer* receives condition monitoring of all gearboxes monthly and action the Defects identified.
The *Contractor* performs fault diagnosis when Defects are detected and tops-up oil, whenever necessary.
The *Contractor*, furthermore, greases all backstops and anti-run back devices on all drive gearboxes on a weekly basis.

2.4.2 Pin and fluid drive couplings

The *Contractor* inspects:

- for uneven running due to damaged components; and
- removes covers and inspect for faulty couplings;
- uneven running, due to alignment; and bearings;
- for non-functional fusible plugs, due to low oil level or overload.

The *Contractor*:

- realigns where necessary; and
- replace bearings, where necessary.

2.4.3 **Mechanical holdback units**

The *Contractor*:

- inspects for oil leaks; and
- replaces seals, where necessary;
- does oil changes to the unit;
- visually inspects mechanical backstops for damages and or Defects;

The *Contractor* monthly cleans internals with degreasing agent and inspects stop lugs for wear / damage. If lugs are damaged / worn, overhaul.

2.4.4 **Conveyor Idlers**

The *Contractor*, as a minimum, three times a week inspects for:

- bearing noise.
- worn shells.
- worn end caps and spindles.
- broken bases.
- material build-up, and
- clean dirty areas
- replaces worn or defective idlers.

Idler frames are marked by the *Contractor* for unique identification for idler replacement purposes.

2.4.5 **Wire Rope / Tension Cars on the tension car**

The *Contractor*:

- inspects for fibre damage and corrosion;
- cleans and grease.
- replaces elongated or worn rope, when the diameter of the rope is reduced by 6%.

2.4.6 **Pulleys**

The *Contractor* inspects and attends to:

- noisy bearings or bearings running at high temperature;
- replaces worn bearings and faulty seals.
- repairs any fault found on the plant.
- all lagging will be supplied by the Employer's Contractor.

2.4.7 **Routine Belt Maintenance and operating**

The Contractor inspects all conveyor belts daily and completes the check sheet. Defects and deviations found are entered onto the computerized data system. Corrective action is planned in accordance with the Work Management System.

The *Contractor*:

- immediately trains the belt

2.4.8 **Belt splicing**

All conveyor belt splices are done by a separate contractor appointed by the *Project Manager*. All conveyor belt splicing is subject to accepted industry standards, the standard and procedure employed being subject to acceptance by the *Project Manager*.

The *Contractor* will carry out quality control on the agreed format. Each splice will be marked with a unique number which will be used for reference in the Splicing Register kept and maintained by the *Contractor*. The *Contractor* provides the format of the register for acceptance by the *Project Manager.*

Damaged splices need to be cut out and kept for analysis purposes. Damaged or cut out conveyor belt pieces must be removed by the *Contractor* and taken to the *Employer's* facility for scrap conveyor belt.

2.4.9 **Splice separation**

The *Contractor*:

- clips the belt and
- immediately adjusts the scraper.

2.4.10 **Scrapers**

The *Contractor* inspects daily for:

- scrapers to be in working condition.
- Scrapers are inspected to check for operability and cleanliness

2.4.11 **Improper belt cleaning**

In such event the *Contractor:*

- immediately replaces the blade when worn/damaged:
- and adjusts blade tension.
- ensures when tensioning the scraper that damage to conveyor belt is avoided.

2.4.12 **Rubber skirting**

The *Contractor* inspects daily for material build up and gaps, skirting wear and coal spillages and makes the necessary adjustments.
In such event the *Contractor* adjusts skirting to prevent spillages.

2.4.13 **Belt run-back protection**

The *Contractor*:

- performs visual inspections.

2.4.14 **Chutes**

The *Contractor*:

- inspects all chutes for coal build-up every shift.
- inspects chute liners for wear and erosion and repairs, if necessary.
- inspects for missing liner fastener caps and replaces if necessary.
- clears all blockages and coal build-ups.

2.4.15 **Take-up car and counter weight**

- The Contractor inspects on a daily basis, and ensures that the take-up car and counter weights are in a good working condition.
- The Contractor repairs all failures. Sheave wheels are greased fortnightly

2.4.16 **Tripper cars**

The *Contractor*:

- inspects gearbox oil bi-weekly.
- lubricates and inspects chain drives once a week.
- inspects pulley bearings once a week.
- inspects rails for deformation once a week and provides a report to the Employer for action.
- inspects belt detraining through tripper car once a week and aligns if necessary.
- inspects wheels for shape and functionality once every 6 months.
- inspects and function checks the effective operation of the tripper car brakes once a week.

2.4.17 **Pulley nip guards.**

The *Contractor* inspects on a daily basis:

- that all nip guards are in position;
- the guard condition;
- that all guards are properly secured, and those guards comply with legal requirements.

2.4.18 **Overland conveyor belt and drive house cladding**

The *Contractor*:

- maintains all cladding; and
- repairs loose and missing cladding.

In the event that cladding is removed to do maintenance work on plant areas, which are difficult to access, and it is replaced immediately after completion of the work.

2.4.19 **Coal Staithes**

The *Contractor*:

- maintains all walkways, grizzly bars, platforms and doors.

2.4.20 **Magnet Conveyor system**

The *Contractor*:

- Ensures that all magnet conveyor systems are operational and functional at all times.
- Maintains the magnet system in accordance with the OEM specification and training received.

2.5 SAFETY SIGNS

The *Contractor*:

- ensures that all safety loading signs and general safety signs are visible and clean at all times,
- ensures that the “NO UNAUTHORISED ENTRY” signs at drive houses are displayed at all doors, and
- repaints or refits signs whenever damaged or faded.

2.6 RIGGING EQUIPMENT

The *Contractor*:

- Provides, maintains and manages the rigging equipment required in executing the duties as described in the Scope of Work.
- Ensure that all rigging equipment is operational and functional at all times.
- Do monthly inspection on all lifting equipment.
- Yearly load test on all lifting equipment will be done by a separate contractor appointed by the *Project Manager.*
- Repair all defective equipment.
- Rigging equipment is maintained and managed in accordance to the relevant regulation.

2.7 ACCESS CONTROL

The *Contractor*:

- ensures that all the main doors at the bottom and the top levels of drive houses are always closed and kept locked when no work is in progress;
- ensures that duplicate keys are available in the control room at all times.
- ensures that all gates and/access points to Power Station property are locked at all times.

2.8 FIRE PREVENTION

The *Contractor* takes all necessary precautions for fire prevention on the *works.* The *Contractor* ensures that the plant is kept clean of combustible debris.

The *Contractor* monitors all fire protection equipment, portable and fixed installations on a daily basis and reports all defects immediately to the *Employer* for action.

2.9 DUST SUPPRESSION SYSTEMS

The Contractor performs the following operations, inspections and repairs

Daily for:

- Operate dust suppression daily
- mist at each transfer point;
- leaks in the piping system;
- Pump and motor
- Broken liquid strainers;
- Excessive build-up spillage.

Weekly:

- Open the nozzle cover plate, clean the inside of the nozzle spigots and outer surface of the nozzle and ensure that there is mist in each nozzle;
- Inspect pressures at the gauges on the ring main and ensure 4 to 6 bar);

- Close the valve in the front of the control box, unscrew the bottom cup of the liquid strainer, ensure that the mesh filter is clean and that the mesh and the seal ring are replaced & the valve is opened again;
- Clean the spillage of the roof plate of the tail chutes
- Ensure that there is no mist when belts are not running.

Monthly:

- Test the system to see if the dust suppression centrifugal switch under the belt activates the solenoid, i.e. no pressure on the gauge on the ring main when the belt is running;
- Open the control box and inspect for internal leaks and/or dust build-up inside the box.
- Clean build-up of mud on the inside of the transfer points.
- Check building, repair if necessary.
- Check make up tank and expedite repairs as require.

2.10 WEIGHBRIDGE MAINTENANCE

It is not the intention of this scope of work to specify in detail all the activities to be performed by the Contractor. The Contractor is responsible for carrying out all activities and supplying everything necessary to complete the Works in all respects, irrespective whether such an activity or item of plant is specifically listed in the contract document or not.

The following works must be performed:

- Ensure that all maintenance as recommended by the OEM is adhered to
- Required maintenance to be obtained from the OEM by the Employer
- Civil structures to be maintain in a good serviceable condition.

2.11 WEIGHBIN MAINTENANCE

The *Contractor* will maintain the Weighbin System as per the rest of the Scope of Work as described in the *Works Information.*

The Coal Gate operating arms plumber blocks will be cleaned, greased and replaced if required.

2.12 PERSONNEL RESOURCE REQUIREMENTS

The following shall apply to the contractor's personnel on site:

- The contractor shall provide suitably trained, qualified and experienced personnel on site to perform the work as per the works information.
- The Contractor will provide qualified and certified competent Responsible Persons in terms of the Employer's Plant Safety Regulations. These personnel are, on the initiative of the Contractor trained and authorised, free of charge, by the Employer's in the use of Employer's Plant Safety Regulations and the Operating Regulations for High Voltage Systems
- Each site shall have approved and agreed organogram
- All employees shall have an approved job description and performance contracts.
- Should the employer not be satisfied about the performance, (mis)conduct or any other issues that may affect the working trust relationship of some of the contractor's employees on site, the employer reserves the right to instruct the contractor to remove such employee/s from site and replace them with other employees of the same or higher capabilities.
- The contractor shall develop and maintain the training matrix of the employees on site
- Provides on-site supervision and ensure the availability of a qualified person to perform electrical resets and plant isolations to prevent delays in performing breakdown repairs, thus keeps a list of pre-authorised electricians who can handle electrical isolations/lock outs. The authorization will be given by the Employer, pending current legal requirements.

2.13 WHITE PLANT REQUIREMENTS

The white plant shall have the following:

- Shall be fitted with a tracking device

- Fitted with fire extinguishers that are securely mounted to prevent sliding, rolling, or vertical movements during operation.
- Be suited to transport personnel, tools and equipment in the execution of the scope of work.

2.14 CONSTRAINTS ON HOW THE *CONTRACTOR* PROVIDES THE SERVICE

2.14.1 Employer's site entry and security control, permits, and site regulations

- The Site Access Control Process will be strictly followed.
- Laws and procedures relating to NKP, strict adherence will be applicable.
- Each of the *Contractor's* employees, including sub-*Contractors*, will be required to undergo compulsory safety induction, medical screening and all other necessary assessments before access will be granted.
- The *Contractor* must comply with the speed limit on site.
- The *Contractor* must be mindful that construction activities might take plant at the Power Stations and that caution must be exercised at all times when working or driving on the Affected Property. Hence there will be movement of Plant, Materials, Equipment and People, that can impact on the *Contractor's* daily outputs. Site instruction will be issued from time to time, to which the *Contractor* must adhere too.
- The *Contractor* must note that areas that are PPE free zones are demarcated and indicated, but PPE must always be worn when required to do so.

2.14.2 People Restrictions

- People are restricted to the Affected Property only.

2.14.3 Hours of Work

- Normal working hours and shift cycle if required will be determined by the Parties
- A standby roster will be determined by the Parties if required
- Conduct
- The *Contractor* and his employees are required to maintain professional and ethical conduct at all times, that upholds the Eskom Values to the highest standard.
- Should the *Contractor's* employees be found to contravene the Eskom Values, Life Saving Rules and / or any of the aforementioned regulations, the *Contractor* must institute disciplinary action, which may include removal from site, until the disciplinary process is concluded.

2.14.4 Records

- The *Contractor* is expected to keep appropriate and sufficient records (including but not limited to) of his employees, including sub- *Contractors:*
- Attendance registers,
- Employee performance,
- *Contractor's* Performance,
- Production,
- Safety and environmental statistics or investigation or audits reports; and
- Any other required records as communicated by the *Employer.*

2.14.5 Records of Contractor's Equipment

- The *Contractor* shall keep a proper detailed list of all Equipment brought to site.
- A copy of the list will be submitted to the *Employer.*
- Revised and updated lists must be provided as the changes occur.

2.14.6 Meetings

The following meetings are compulsory for the *Contractor* to attend as a minimum

- Power Station Statutory SHEQ

- Contract meetings
- Lock down
- Plant focus

The Meeting list can change during the contract period and changes will be communicated when applicable

2.14.7 **Use of standard forms**

Formal communication on contractual matters will be in the NEC TSSC format

2.14.8 **Invoicing and payment**

In terms of core clause 50 the *Contractor* assesses the amount due and applies to the *Employer* for payment. The *Contractor* applies for payment with a tax invoice addressed to the *Employer* as follows:

_____

The *Contractor* includes the following information on each tax invoice:

- Name and address of the *Contractor*
- The contract number and title;
- *Contractor*'s VAT registration number;
- The *Employer*'s VAT registration number 4740101508;
- The total of
  - The Price for each lump sum item in the Price List or Task Order which the *Contractor* has completed;
  - Where a quantity is stated for an item in the Price List or Task Order, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate,
- Other amounts to be paid to the *Contractor*;
- Less amounts to be paid by or retained from the *Contractor*;
- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT;
- (add other as required)

The *Contractor* attaches the detail assessment of all work done for each item in the Price List to each tax invoice showing

- the Price for each lump sum item in the Price List or Task Order which the *Contractor* has completed and
- where a quantity is stated for an item in the Price List or Task Order, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate.

2.14.9 **Records of Defined Cost**

In the case of Compensation events, the Contractor will keep records of actual cost or invoices paid.3.5

Subcontracting

Preferred subcontractors

The *Contractor* is limited to subcontract a maximum of 25% of the Scope of Work It is the Contractor's duty to ascertain that the sub-Contractor is a suitably qualified and competent in the service being provided.
Any sub-*Contractor* appointed, must be agreed to by the Parties, prior to the sub-Contractor delivering a service to the Contractor.

Subcontract documentation, and assessment of subcontract tenders

Where the *Employer* deems it necessary to review subcontract documentation and assessment of subcontract tenders, the *Employer* will request such information from the *Contractor*, which will be provided in a timeous manner.

Limitations on subcontracting

The *Employer* may require that the Contractor must subcontract certain specialised work, or that the *Contractor* shall not subcontract more than a specified proportion of the whole of the contract. Refer to paragraph 4.2.1

Attendance on subcontractors

The same time and attendance procedure will be applicable to any sub-Contractors, as it is acceptable to the *Contractor* and *Employer*.

2.14.10 **The Employer's contractors**

The following contractor are currently used by the *Employer* and will visit the site carry out inspections and maintenance on request from the *Contractor* and the *Employer*;

Electrical Protections	PTM
Plant Condition Monitoring	ERI - Rotek
Scaffolding	ORAM INDUSTRIALS
Lifts	OTIS
Conveyor Splicing and Pulley Lagging	TBC
Scales	Micron Weighing Services
Weighbridges	Masskot
Densities	MAS - To be arranged by PED
Surveys (Quarterly)	Airborne Solutions - To be arranged by PED
Conveyor Operating	ERI – BMH
Coal Stockyard Management	ERI – BMH

The above contractors might change from time to time due to their agreements with the *Employer*. The amount of contractors might also increase or decrease from time to time.

2.14.11 **Plant and Materials**

Specifications
Plant and Materials provided by the *Contractor* and the preventative maintenance thereof forms part of the *Contractor's* responsibility as set out in the signed scope of work.

Correction of defects
The intention of the *Contractor* is preventative maintenance first and foremost; however corrective maintenance can be a result of component failure. In the event where plant components have failed, this will be dealt with in accordance with the maintenance strategies and plant maintenance schedules to restore the plant components to its original state i.e. by repairing and / or replacing components. Costs incurred for any re-work shall be at the contractor's own costs.

Contractor's procurement of Plant and Materials
The *Contractor*, as a service provider for Eskom Holdings SOC Limited, is required to comply to the SD&L as set out in the Contract Document.

Tests and inspections before delivery

- It is the *Contractor's* responsibility to ensure machinery and equipment intended for use on this contract, are inspected, tested and certified prior to delivery on site.
- Regular inspections can be carried out by the *Employer* on an as and when required basis.
- The *Contractor* and the *Employer* must maintain communication regarding the tests and inspections that must be done and give feedback on the results obtained. The *Contractor* must notify the *Employer* in time for a test or inspection to be arranged and done before doing work which will obstruct the test or inspection.

Plant & Materials provided "free issue" by the *Employer*
Plant and Materials to be provided by the *Employer*, include but is not limited to:

- Potable and non-Potable Water
- Office Building
- Wash-bay Facility
- Diesel only for yellow plant
- Stock Item spares for the maintenance of the plant

The *Contractor* must note that all other Plant and Materials are to be provided by the *Contractor.*

2.15 SPECIFICATIONS

Title	Date or revision	Tick if publicly available
General Specifications:		
Health and Safety requirements		
The Occupational Health and Safety Act (Act 85 of 1993)		√
The Road Traffic Act (Act 29 of 1989)		√
The Health Act (Act 63 of 1977)		√
Environmental requirements		
The Water Act (Act 54 of 1956)		√
The Atmospheric Pollution Prevention Act (Act 45 of 1965)		√
The Hazardous Substances Act (Act 15 of 1973)		√
Site regulations and access control		
34-1005 Environmental Management Policy		
ESKPBAAA9 Environmental Impact Assessment		
ESKPVAAL7 Environmental Impact Assessment		
ESKPBAAAC4 Waste Management Policy and Strategy		
HSPPIN003 Waste Management Procedure		
ESKADAAJ5 Waste Management Policy		
HSSPIS006 Fire risks pre-plan response standard		
HSSPIS007 Fire risk assessment standard		
HSPHO/020 Protective Services Access Control System Procedure		
Eskom Standard EVS 005 (Latest Revision) Quality Assurance requirements		

Technical specifications:		
drawing No: 0.15/577(Coal Handling Plant Diagrammatic Layout)		
Hendrina Coal plant strategy Unique Identifier HSSTPMM002		
VDI 2056 Criteria for assessment of mechanical vibration of machines		
BS 2971 Specification for Class II arc welding of carbon steel pipe work carrying fluids		
SABS 719 Electric welded low carbon steel pipe		
GGG 0330 Condition Monitoring, latest rev		
GGG 0428 In-service monitoring of lubricating oils and Hydraulic fluids, – latest rev.		
SOW for declassification of conveyor 16		
SOW for maintenance intervention on conveyor 0-3A&B		
SOW for maintenance intervention on self-cleaning magnets		