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ESKOM

KOEBERG NUCLEAR POWER STATION

User Requirement Specification (URS)

The provision of lifting machinery service and lifting tackle, including maintenance, load testing and the supply of required spares and overhead refurbishment on an as and when required basis for a period of 60 months at Koeberg Operating Unit (KOU).

PREPARED BY:	L Magatya		Service Manager
AUTHORISED BY:	K Phiri		Manager
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1. DESCRIPTION

1.1 Contract Purpose

The Maintenance Support Services Group (MSS) maintains lifting machinery and lifting tackle at Koeberg Operating Unit. MSS is responsible for the maintenance of approximately 112 overhead cranes and lifting equipment (approximately 100 overhead cranes and 12 winches). Occupational Health and Safety Act Driven Machinery Regulation 18 (DMR18) requires that all lifting machinery, lifting equipment and lifting tackle must be inspected, functional and load tested by a lifting machinery inspector (LMI) and a Lifting Tackle Inspector (LTI), both these are provided through a Lifting Machinery Entity (LME). The *Employer* requires the stated services through a service contract for a period of 60 months at Koeberg Operating Unit. The service extends to all, relevant SANS standards, *Employer's* procedure and OHSA periodic maintenance, preventative maintenance, corrective maintenance, and on an as when required basis the refurbishments and the supply of critical spares for lifting machinery, lifting equipment and lifting tackle at Koeberg Operating Unit. These services are required both online and during outages.

Maintenance Philosophy Compliance

All services must support the *Employer's* core maintenance philosophy, which emphasizes:

- **Productivity**-Timely and efficient execution of tasks;
- **Quality**-Adherence to specifications and rigging accuracy;
- **Safety**-Zero harm to personnel, plant, equipment and the environment.

The *Contractor* shall proactively contribute to a safe and high-performance work culture.

Scope of Services

The *Contractor* shall serve as the site Lifting Machinery Entity (LME) through which the services of Lifting Machinery Inspector (LMI) and the Lifting Tackle Inspector (LTI) shall be provided. The service will include the execution of the *Employer's* preventative, periodic and corrective maintenance. The lifting tackle, and lifting machinery refurbishment, spares and component supply will be provided by the *Contractor* on an as when required basis. The service shall be provided both online and during outages. The works include but is not limited to the following:

1. Planning and execution of lifting tackle and lifting machinery tasks ensuring that adequate resources are assigned to the Scope of Work. Lifting machine means a power-driven machine that is designed and constructed for the purpose of raising or lowering a load or moving it in suspension, but does not include an elevator, escalator or hand-powered lifting device.
2. The statutory inspections, servicing, functional testing and load testing of lifting machinery and lifting tackle in accordance with the Occupational Health and Safety Act (OHSA), Driven Machinery Regulations (DMR-18), and relevant SANS standards such as SANS10375, 4038-1, 4309-06, 4308, 500, 60204 part 32) and relevant *Employer's* procedures at the *Employer's* site.
3. The *Contractor* shall perform the service in accordance with the list and frequency of the *Employer's* maintenance programme.
4. The *Contractor* shall provide capable personnel, in accordance with the *Employer's* requirements, including quality assurance, quality control and safety management, and acceptable supervision for the performance of the service.
5. Perform lifting tackle inspection, servicing, certification, tagging, load testing and colour coding. Lifting tackle simple means nylon slings, ropes slings, eyebolts, shackles, spreaders or similar lifting appliances.
6. Responding to defects and repairing of all identified defects on lifting machinery, lifting equipment, and lifting tackle.
7. Administrative support by ensuring that the information related to the service and defects is captured and adequately stored in accordance with applicable SANS standards, Occupational

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Health and Safety Act (OHSA), Driven Machinery Regulations (DMR-18) and applicable *Employer's* procedures.

8. The planning, and execution of refurbishments of lifting tackle and lifting machinery, including but not limited to structural, mechanical and electrical systems on an as when required basis.
9. The supply and installation of critical mechanical and electrical spares and components on an as when required basis for lifting machinery and lifting tackle.
10. The *Contractor* shall keep up to date history documentation for each of the lifting equipment and shall retain documentation for the period prescribed in Occupational Health and Safety Act, Section 18 of Driven Machinery Regulations.
11. The *Contractor* (Supervisor) records all "As Found Conditions", "Corrective Actions", "Measuring & Testing Equipment", "Craftsman" and his signature on the work package. The above information serves as history for the *Employer* when referring to the works.
12. The *Contractor* must keep comprehensive service records and all related history documentation and make it available for perusal by the *Employer* as and when required.
13. The *Contractor* shall submit a weekly report of completed work vs planned work, including defects. Work is not completed until history is captured and confirmed (CNF) on the *Employer's* work management system. A transmittal for daily completed work shall be signed by both the *Contractor's* administrator and the *Employer's* supervisor.
14. Progress meetings shall be held with the *Employer's* Representative or his/her delegate monthly (non-outage periods) and on weekly basis (Outage periods) to discuss any technical details, or concerns.
15. The *Employer's* Representative with the *Contractor* shall prioritize online work and outage, to ensure crane service availability during both non-outage and outage periods. Should a malfunction occur, the *Contractor* is to make every effort to provide the lifting machinery service required to restore plant to operating order, in the shortest time possible.
16. The *Contractor* shall plan and coordinate load testing of lifting machinery and lifting tackle with the *Employer's* Rigging Section. On completion of load testing the *Contractor* shall provide load tests certificates in hard copy and electronic format.
17. No work may be done before the Permit to work (PTW) requirements for the job are in place.
18. No private work is allowed on site by the *Contractor*, and all instructions are subject to approval by the *Service Manager*.
19. Site establishment, effective resource scheduling and pre-job planning to ensure no delays to the *Employer's* scheduled maintenance activities.
20. The *Contractor* shall provide suitably qualified labour, with PPE (including fire retardant coverall), and suitable tools to execute the service.
21. The *Contractor* shall performance the service in accordance with general site requirements for controlled access and safe working practices.
22. All the *Contractor's* personnel must be qualified Radiation workers (Training will be provided by the *Employer*).
23. On outage periods the *Contractor* must provide 24/7 onsite coverage to support outage activities.

NOTE: The *Contractor* to note that the activities may be required outside normal working hours.

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2. SCOPE OF WORK

2.1 *Employer's requirements for the service*

2.1.1 Online Maintenance Service Requirement

The *Contractor* shall serve as the site Lifting Machinery Entity (LME) through which the services of Lifting Machinery Inspector (LMI) and the Lifting Tackle Inspector (LTI) shall be provided. The service will include the execution of the *Employer's* preventative, periodic and corrective maintenance, functional and load testing activities in accordance with the Occupational Health and Safety Act, Section 18 of Driven Machinery Regulations, various SANS standards (SANS10375, 4038-1, 4309-06, 4308, 500, 60204 part 32) and relevant *Employer's* procedures at the *Employer's* site. This includes but is not limited to:

- a. Overhead Cranes,
- b. Lifting Tackle,
- c. Hand powered lifting Devices,
- d. Calibration of load cells and weights.

The *Contractor* performs the *service* in accordance with the list and frequency provided in the *Employer's* maintenance program. (Refer to the Appendix C – Typical Calendar of Online work scope and Appendix D - List of the Equipment to be serviced, attached as a guide to the type and frequency of activities to be expected).

As part of the Service, it is expected that the Artisans and semi-skilled workers are qualified to operate lifting machinery and are adequately trained and authorized to utilize the following equipment to support the maintenance service and troubleshooting of the cranes and lifting machinery.

- Pendant Crane (Code C31),
- Overhead crane (Code C28)
- Manual Elevated Working Platform, MEWP (Code C55)

Any queries, reports, concerns, and requests resulting from walk downs, unacceptable worker practices, incidents, accidents, and safety concerns will be directed to the Site manager. No work will commence without a work order and it is the Contractor's responsibility to ensure that no work is executed prior to the receipt of the required documentation and instructions.

All work shall be performed based on "do-it-right-first-time."

Corrective/Breakdown Maintenance:

The *Contractor* attends to breakdown maintenance as notified by *Service Manager* or via SAP which is the *Employer's* Work Management system. The *Contractor* performs fault finding to investigate the root cause, plans and prepares the remedial maintenance intervention.

2.1.1.1 Spares and Services

All services and spares to be supplied as per *Employer's* instruction in support of lifting equipment, crane maintenance and restoration requirements. The *Contractor* shall comply with *Employer's* supplier quality general requirements (238-103).

2.1.2 Lifting Tackle and hand powered lifting devices inspection, servicing, certification, tagging, colour coding and Load testing

Lifting tackle: Lifting tackle simply means nylon slings, rope slings, eyebolts, shackles, lifting or spreader beams, tongs ladle etc. as defined in the Occupational Health and Safety Act, Section 18 of Driven Machinery Regulations.

Hand powered lifting devices include chain blocks, lever hoists hand chain hoists, steel wire rope pullers, winches etc. as defined in Occupational Health and Safety Act, Section 18 of Driven Machinery Regulations.

The *Contractor* is required to conduct lifting tackle inspection, servicing, certification, tagging, load testing and colour coding on 3-month frequency. All inspections and tests to be in line with the SANS standards for the relevant equipment and to reflect as such in the inspection certificates provided by the *Contractor*.

During the 3-monthly inspection and test of the lifting tackle, a quarter ($\frac{1}{4}$) of the inventory of the Hand powered lifting devices are to be serviced as part of the 6 months service and annual Load tested. This equipment is located on different buildings on site, an excerpt of the different lifting equipment with locations is shown as Appendix E. A report shall be provided for inspected lifting tackle and lifting tackle that has failed during inspection shall be disposed off in accordance with the applicable procedure. The *Contractor* may provide an additional team to complete the requirements of this task order, the price for the 3-monthly lifting tackle and hand powered lifting devices remain fixed.

Th stated service has historically been accomplished by two lifting tackle inspectors that come to site for a six-week duration,

2.1.3 Outage maintenance service requirements

Over and above the daily online lifting machinery and lifting tackle services, the *Employer* requires the services to extend to provisional planned future outages. In outage periods the amount of work increases due to availability of lifting machinery and lifting tackle that are not available online, furthermore, the increased use of lifting machinery and lifting tackle requires 24/7 site coverage to timeously respond to defects. To support these two requirements (online service and outage coverage) the *Contractor* may need to increase personnel head count. Historically the additional personnel consisted of the personnel mixture shown in Table 7.

2.1.3.1 Outage provisional schedule

During the contract period the *Employer* will have 6 (six) Outages based on the 10-year production plan.

Table 9: Provisional outage schedule

UNITS	OUTAGE	START	DURATION	END
UNIT 1	128	09-Nov-26	42 DAYS	20-Dec-26
	129	22-May-28	72 DAYS	01-Aug-28
	130	07-Jan-30	42 DAYS	17-Feb-30
UNIT 2	227	09-Nov-25	150 DAYS	09-Apr-26
	228	30-Aug-27	42 DAYS	10-Oct-27
	229	12-Mar-29	72 DAYS	22-May-29
	230	28-Oct-30	42 DAYS	08-Dec-30

Note:

- The above schedule is only a provisional schedule, and it may change as the *Employer's* 10-year Production Plan is revised. The *Contractor* shall be notified within 30 days if the requirement is to change.
- The *Contractor* shall obtain its own ministerial determination waiver during Outages for the hours worked exceeding the normal working hours during Outages.**

2.1.4 Crane Restoration and special services

The restoration projects require dedicated resources so that they can be completed within a limited time and without affecting the OH&SA required maintenance, inspections, and services.

The *Employer* is to request the *Contractor* on an as and when required basis to assess cranes and compile a report detailing all recommended upgrades, spares, special tools, resources, price, and durations to complete upgrades. For the list of cranes selected for upgrades, refer to Table 10. Restorations are removed and included based on the production needs of the *Employer*, therefore, the *Contractor* may be requested to assess cranes that are not on Table 10.

Furthermore, there are special services that require specialised skills and resources. Below are a few common services the *Employer* requires from the *Contractor*; the list is not exhaustive.

- Servicing of Drives i.e., ABB and MH Automation Drives – Cost + handling Fee
- Servicing of lifting Equipment e.g., Skj-jacks, Air winches, servicing of specialized gripper devices - Cost +handling Fee,
- Rewinding of crane motor,
- Calibration of test weights,
- Calibration and servicing of load cells,
- Hydraulic Power Pack Servicing
- Hydraulic Power Pack Servicing.

Table 10: Provisional Projects

ITEM	TRIGRAMME	TYPE OF RESTORATION	PLANNED FOR YEAR	LOCATION	CAPACITY	TYPE	MANUFACTURER
1	9DM002PR	Electrical & Mechanical	2026	CRF outside Pump station	20 Ton	Double girder semi-portal overhead crane	DEMAG
2	1/2DMW003PR	Electrical & Mechanical	2027	VVP valve cranes	5 Ton	Double girder electrical overhead crane	
3	1DMW005PR	Electrical & Mechanical	2025	Gantry crane	5 & 60 Ton	Gantry crane	
4	1/2DMM001PR	Electrical & Mechanical	2026	9.5m Turbine Hall	30 & 190 Ton	Double girder electrical overhead crane	CFEM
5	0DMX003/004PR	Access platforms	2026	Decon workshop	10 Ton	Single girder electrical overhead crane	DEWET

2.1.4 Work in controlled areas

The *Contractor* is urged to manage the radiation dose levels of its workforce by working carefully and thoroughly in containment and to strive not to exceed the prescribed radiation dose levels.

Any queries, reports, concerns, and requests resulting from walk downs, unacceptable work practices, housekeeping, incidents, accidents, and safety concerns will be directed to the *Supervisor*. No work will commence without a notifications/work order, and it is the *Contractor's* responsibility to ensure that no work is executed prior to the receipt of the required documentation and instructions.

Note:

- Eskom supervisor will decide which defects to be prioritised as per production plan of the day. The *Contractor* shall maintain its work area clean and tidy condition. Strict control on the number, type and condition of tools are to be maintained to ensure that all tools and remnants or scrap material are removed from affected property before the end of every shift for the duration of the *service*.
- The *Contractor* shall indicate the readiness of the Plant, materials, and documentation to the *Employer*, by informing the *Service manager* in writing that the services may proceed. The *Contract* shall provide tools to execute the services
- The *Contractor* shall survey the worksite and notify the *Service Manager* of its requirements for work to start.

- The *Contractor* prepares work packages for preventive maintenance activities in accordance with the *Employer's* Maintenance Standard, refer to KSA-147. The *Contractor* in consultation with Work Control, plans and schedule maintenance intervention required to restore malfunctioning plant equipment.
- The *Contractor* shall display all relevant signage and barricading at all sites in accordance with the *Employers'* procedures, KSA-069, KSM-029 and KAA-816.

3.CATERGORIES OF LABOUR REQUIRED

The number of staff indicated below is only an estimate based on historical information. This will be managed by the *Contractor* as the part of the *Service*. The roles are detailed in Appendix A.

3.1 Historical Workload and service capacity

Based on historical operational data, the scope of the lifting machinery and lifting tackle and related services has included:

- Approximately 895 to 1342 (4 to 6 daily activities) operations during planned outages;
- Approximately 692 to 1038 (3 to 5 daily activities) operations per year during online periods.

The *Contractor* is required to ensure adequate resourcing, planning, and capability to fulfil all service requests in a safe, efficient and timely manner.

3.1.1 Online service capacity

Although not prescriptive, it is noted that historically, the effective execution of online activities was consistently achieved using an onsite base team of 11 personnel (see Table 6 below), comprised of execution crews, LMI, supervisor, safety, technician and site administration and support functions. The structure serves as a guide only, the *Contractor* remains fully responsible for determining and deploying the appropriate mix necessary to deliver the required service.

Table 6: Maximum on site base personnel

Base team		
Item	Description	Quantity
1	Site Manager	1
2	Supervisor (LMI)	1
3	Safety Officer	1
4	Administrator Clerk	1
5	Technician	1
6	Artisan (Millright/Electrician)	2
7	Semi-skilled labourer	2
8	Assistant	2
Total		11

The *Contractor* shall provide maintenance teams able to manage two statutory crane services simultaneously or one statutory crane service and a defect.

One (1) work technician will compile work packages for both weekly and defects in accordance with the relevant *Employer's* procedures and will also support with defects assessments, planning, determination of required spares, updating of procedures and service notes required for maintaining cranes and lifting equipment.

The Site manager among other things is to support the team and the *Service Manager* by being on site to administer the contract for the *Contractor*, as well as to liaise with the Lifting Machinery Entity (LME) offices and crane and related components' Original Equipment Manufacturers (OEM) for data and drawings, obsolete spares and any special lifting machinery services as and when required by the *Employer*. The Site manager with input from the *Service manager* will perform resource balancing by ensuring leave is managed to prevent absence of key persons for critical maintenance services and minor projects.

The Supervisor shall be registered as a Lifting Machinery Inspector for overhead crane (LMI) and provide support with Quality assurance, weekly execution resource planning, task allocation, liaise with Work control department and provide oversight and perform OH&SA load tests.

3.1.2 Outage service capacity

The role of the additional personnel is to supplement the online capacity, and the 24/7 coverage required to conduct maintenance services, inspections, load tests, and defects resolution on lifting machinery and lifting tackle, refer to Table 7.

Table 7: Maximum additional personnel for Outage

Maximum additional outage personnel		
Item	Description	Quantity
1	Artisan (Millwright/Electrician) (LMI) team leader	1
2	Artisan	1
3	Semi-skilled labourer	2
4	Technical assistant	2
Total		6

The *Contractor* arranges outage personnel to ensure outage work schedule adherence. This may include arranging personnel such that personnel take NDO while they also maintain 24/7 coverage. The *Contractor* in consultation with the *Service Manager* shall draw up the work schedule.

Historically the *Contractor* has always, during the outage maintenance windows maintained a minimum number of personnel as follows. On day shift the minimum personnel has been 2 x technical assistants and 1 x Supervisor (LMI)). The night shift has consisted of a minimum of 1 x Artisan (LMI), 1 x Artisan, 2 x Semi-skilled labourer, 2 x technical assistant and 1 x Technician. This has ensured a 24/7 coverage, as both night and day shift worked 12-hour shifts. The outage and night personnel has consisted of the following, as a minimum (Refer to Table 8):

Table 8: Minimum outage night shift personnel composition

Item	Description	Quantity
1	Artisan (Millwright/Electrician) (LMI)	1
2	Semi-skilled labourer	1
3	Assistant	1
4	Technician / Supervisor	1
Total		4

The *Employer* shall not entertain any delays or disruptions because of the *Contractor* in the period leading to and during each outage. The *Contractor* is required to effectively schedule his resources to comply with *Employer's* planned completion dates.

Note:

- The *Contractor* can increase or reduce the number of personnel at any time *after* or during the outage maintenance window based on the plant needs.

4. TIMING AND PLANNING

All work will be coordinated by the *Employer's* Eskom Senior Supervisor dedicated to the Cranes section. It may be required that overtime be worked, this will be communicated to the *Contractor* as applicable.

On-line

Monday – Thursday

07h30 – 16h35

Friday

07h30 – 13h30 (no lunch break)

Outage

Monday – Sunday

07h00 – 19h00 (day shift)

19h00 – 07h00 (night shift)

Or

06h00 – 18h00 (day shift)

18h00 – 06h00 (night shift)

Last Friday of the month

07h30 – 12h00 (no lunch break)

The duration of the contract is 60 Months (5 Years)

5. SHIFT REGIME

The *Employer* requires the *Contractor* to work shifts on Outages and any other time plant condition may dictate, the *Service Manager* will communicate the request timeous to allow the *Contractor* to plan resources.

6. TRAINING

6.1 Work specific training

Prior to start of work, all new employees coming on-site are expected to pass a theoretical and practical crane assessment before being allowed to perform any maintenance activities at Koeberg Nuclear Power Station.

6.2 Technical Training

- Confined space training
- Diesel room entry
- Respirator training
- Clean condition training
- Technical FME
- Arc Flash training
- Working at height/ Material Handling

6.3 Generic training

All staff brought onto site will need to have gone on the following training:

- Plant Access Training (1/2 day) if required
- Medical evaluation (1 day) if required
- Radiation Workers training (2 days) if required
- Fitness for duty program
- *Contractor's* Induction Program (1/2 day) if required
- Safety Induction Course. (Prior to start of work, 1 hour)

Note:

- The duration of all courses will vary according to the experience of the individual. Medical Assessments are to be completed by the *Contractor* and proof supplied to the Client for verification by the onsite Medical Centre. See Appendix G for requirements.

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- II. Three weeks prior to start of an Outage, the *Contractor* must submit a list of new staff that will be used for the execution of work during the Outage. The *Contractor* must provide personnel details timeously.

Note: The list of names submitted (individuals) shall not be changed during Outage period unless instructed by the *Employer Service Manager*

7. ACCESS FORMALITIES

After successful completion of the generic training as stipulated in Section 6, each member of the *Contractor's* team will be issued with a personal Identification Access Card. Lost or damaged cards will be for the cost of the *Contractor*. Hard hat, safety boots and safety glasses are mandatory safety equipment at Koeberg Nuclear Power Station. The *Contractor* is responsible to supply all his staff with this safety gear prior to the start of the work. Personal protective equipment must comply with SABS standards.

8. EQUIPMENT

8.1 *Employer* equipment

All lifting, scaffolding, and rigging equipment are supplied by the *Employer*.

9. EMPLOYER – KOEBERG'S SCOPE OF SUPPLY

9.1 *Employer* will supply:

- Full Time Radiation Protection coverage for on-line and outage work in the controlled zone.
- Decontamination Services if required.
- Work authorizations and Permits to commence the work.
- Crane availability if required.
- All site equipment transport means required.
- Assistance with regards to ordering spares.
- Access to work areas for personnel and equipment.

Note: Should, the *Employer* provide tools and equipment to the *Contractor*, it will be formally signed over for use. The *Contractor* is liable for any damage caused due to wrong utilization and carelessness of this equipment.

9.2 *Employer* will supply:

- Site establishment, all hand tools, effective resource scheduling and pre-job planning to ensure no delays to the *Employer's* scheduled maintenance activities

10. QUALITY REQUIREMENTS

QA/QC actions and controls may be required for the *service* as well as a final inspection and tests if so requested.

Quality control plans to be generated and provided.

The tasks will be executed in accordance with *Employer* procedures.

11. REFERENCES

N/A

12. DOCUMENTATION

Additional documentation, e.g., Outage schedule, additional procedures not given with the contract, etc. will be supplied to the *Contractor*, as it becomes available.

13. PRICING STRUCTURE

The pricing structure will be in accordance with the rates in the *contract*, refer to Part 2: PRICING DATA.

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14. APPENDICES

- Appendix A- Job descriptions and requirements.
- Appendix B- Typical types of Cranes on Site
- Appendix C- Typical Year Planner
- Appendix D- List of Cranes to be serviced, inspected, and maintained on Site
- Appendix E- Excerpt of Lifting Tackle and Hand powered lifting Devices
- Appendix F- Medical requirements

APPENDIX A

Job descriptions and requirements

1.0 THE TECHNICAL CRITERIA

The contractor must meet the following criteria:

- i) have a proven track record in industry
- ii) be able to supply references to previous projects undertaken
- iii) supply medically fit and suitably qualified staff as specified
- iv) supply staff who can be declared medically fit in terms of heat stress/confined space
- v) be able to supply staff with no criminal record
- vi) supply staff who are radiation workers or provide a comprehensive plan to indicate how the contractor will ensure that the required staff becomes radiation workers
- vii) provide 24-hour standby coverage
- viii) provide 24-hour service during outage periods
- ix) pay a market related wage to workforce
- x) supply Personal Protective Equipment (PPE) to workforce to Koeberg standards

2.0 JOB DESCRIPTIONS & REQUIREMENTS

2.1 Site Manager

Site Manager shall:

- a) have a minimum of 5 years' experience in the cranes services environment;
- b) ensure that all OHSA requirements and regulations are complied with;
- c) be fully conversant with the New Engineering Contracts (NEC) used by Eskom or be prepared to be trained in the NEC, at the contractor's cost;
- d) Hazard Identification and Risk Assessment (HIRA)
- e) Incident investigation training,
- f) Supervisor training,
- g) Legal liability
- h) be fully conversant with Koeberg procedures and processes or be able to ensure that he/she will be fully conversant within one-month after contract award;
- i) be computer literate, and be conversant with MS-Projects, MS-Excel, MS-Word and MS-Access;
- j) to have the ability to converse with own staff and *Employer's* staff on technical and operational matters.

- k) develop / implement safe work procedures.
- l) analyse work methods to improve productivity.
- m) initiate and control investigations of recurring plant problems in sub section.
- n) verify that maintenance activities meet quality requirements. Identify and correct non-compliances.
- o) verify that staff comply with certification requirements. In case of any non-compliance, initiate specific action.
- p) check that work performed is in accordance with contract / standards / requirements.
- q) check that services provided are as per contract requirements

2.2 Supervisor

Supervisors shall:

- a) have Grade 12;
- b) Completed a Supervisory training program (evidence to be provided)
- c) Hazard Identification and Risk Assessment (HIRA)
- d) Incident investigation training,
- e) Legal liability
- f) Recognised Crane Trade Certificate
- g) 5 years post trade test experience in a maintenance environment with in-depth crane knowledge.
- h) Registered Lifting Machinery Inspector
- i) have a minimum of 7 years related working experience;
- j) be competent to complete Koeberg Plant Systems and Plant Safety Regulation courses;
- k) ensure sufficient quality control and assurance;
- l) be computer literate and must be able to read and write English;
- m) be able to interface with engineers/technicians/managers with regard to Lifting Machine Entity concerns as the competent person;
- n) study daily work plan, identify priorities and allocate work;
- o) issue work instructions, monitor progress and report progress to Senior Supervisor;
- p) check quality of work performed. Identify and address non-quality activities;
- q) do job observations, identify and attend to non-adherence to work procedures;

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- r) check workshop cleanliness;
- s) check that equipment history records are correctly completed;
- t) hold sub section meetings;
- u) assist staff with problems and Identify training needs;
- v) ensure that staff authorisations do not lapse;
- w) arrange and hold safety talks with staff;
- x) conduct inspections of all tools, protective clothing and equipment of staff;
- y) attend and participate in statutory monthly safety meetings;
- z) do job and critical task observations. And complete all related documentation;
- aa) check that information in Work Packages and Notifications are correct;
- bb) allocate defects to Execution Supervisor and verify that work is completed;
- cc) check that maintenance programme is executed.

2.3 Artisan/ Crane technician

Artisans shall:

- a) Have a recognised Trade Test Certificate
- b) have a minimum of 5 years related working experience;
- c) be computer literate and must be able to read and write English;
- d) perform plant walk-downs of work packages;
- e) in the absence of the Supervisor issue work instructions, monitor progress and report progress to Senior Supervisor;
- f) check the quality of work performed. Identify and report non-quality activities to Supervisor;
- g) perform direct supervision on medium to high risk activities;
- h) do job observations, identify and attend to non-adherence to work procedures;
- i) in the absence of the Supervisor check that equipment history records are correctly completed;
- j) in the absence of the Supervisor hold sub section meetings;
- k) ensure that staff authorisations are valid;
- l) attend and participate in statutory monthly safety meetings;
- m) check that information in Work Packages and Notifications are correct;

2.4 Lifting Machine Inspector (LMI)

LMI shall:

- a) have a minimum of 2 years related post certification working experience;
- b) be able to read and write English;
- c) perform plant walk-downs of work packages;
- d) Recognised Crane Trade Certificate
- e) 3 years post trade test experience in a maintenance environment with an in depth crane knowledge
- f) Registered Lifting Machinery Inspector
- g) Be responsible for the co-ordination of the work on site.
- h) monitor work progress and report progress to Supervisor.
- i) ensure tools and equipment are maintained in a serviceable and clean condition.
- j) sign on/off the LAR.
- k) perform pre-job briefs.
- l) complete equipment history records.

2.5 Semi-skilled

Semi-skilled shall:

- a) have a minimum of 2 years related working experience;
- b) be able to read and write English;
- c) Minimum of 2 years' experience in the Maintenance environment with an in depth crane knowledge.
- d) operate powered tools such as grinders, drills
- e) use various manual tools such as scrapers, shovels, squeegees, brooms, wheelbarrows etc.
- f) perform housekeeping and safety related tasks (i.e., pre/post maintenance cleaning, preventative cleaning).

2.6 Technician

The Compiler has the primary responsibility for compiling the work package to ensure work can be completed safely, efficiently, and at a high level of quality.

- a) have a minimum of 2 years related working experience.
- b) be able to read and write English.

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- c) Minimum of 2 years' experience in the Maintenance environment with in-depth crane knowledge.
- d) Must at a ND Mech or NHD N6 minimum.
- e) The Compiler shall ensure that the final work package issued:
 - i) Clearly defines the reason for, and the scope of work to be performed.
 - ii) Identifies likely changes or additions to the work scope and prepares the work package to address the primary work scope as well as reasonable contingencies where applicable.
 - iii) Has been prepared at a level of appropriate detail to the complexity of the anticipated activities.
 - iv) Provides documentation needed to complete the primary task and all anticipated contingencies in a safe and timely fashion where applicable.
- f) The Compiler shall perform a physical walk down of the job site (if accessible).
- g) The Compiler shall consider additional requirements upfront such as SACs etc. that requires support from OH&S and FRM which is not loaded on SAP as an operation but is required to complete the task.
- h) The Compiler shall consult with the relevant departments to establish at what unit state the work could be carried out at.
- i) The Compiler is to determine whether contingency operations are required.
- j) The Compiler shall determine the level of work package to be compiled.
- k) The Compiler shall determine the relevant spares required for both the primary scope as well as for the contingency to carry out the corrective actions to restore the plant.
- l) The Compiler shall take into consideration for activities that are performed over a period that separate operations are raised to flag the history capturing, pre-job briefings, risk assessment, etc.

2.7 Safety Officer

Safety Officer shall:

- a) have Grade 12.
- b) have a minimum of 2 years working experience.
- c) Have SAMTRAC/NQF Level 5 OHS qualification,
- d) Have Hazard Identification and Risk Assessment (HIRA),
- e) Have Incident investigation training,
- f) Have Legal liability training,
- g) provide advice, information, and instruction on local OH&S issues.

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- h) assist in the application of OH&S procedures.
- i) help manage risks and hazards in their area.
- j) record and investigate incidents, injuries and hazards and implement agreed control measures.
- k) liaise with the on-site OH&S Department and other safety personnel.
- l) develop injury and incident prevention strategies for their area.
- m) audit compliance regarding risk, emergency, and hazardous waste management.
- n) help promote OH&S awareness.
- o) manage company H&S systems.
- p) have successfully completed Risk Assessment training.
- q) have a sound working knowledge of safety, health, and environmental affairs principles and regulatory requirements.

2.8 Assistant

- a) Minimum of 1 years' experience in the Maintenance environment with an in-depth crane knowledge.

2.9 Admin Clerk

An Admin Clerk shall:

- a) have a minimum Grade 12.
- b) have a minimum of 3 years' experience.
- c) be computer literate.
- d) have sufficient knowledge of office administration.
- e) be able to interface with workers/site manager and *Service Manager* regarding issues and concerns related to administrate all payroll activities and issues that may arise.
- f) keep an accurate record of the training competencies of the staff
- g) Support with filling crane history on SAP and in the physical files
- h) accurately capture the history on SAP
- i) be able to administer the *Employers* fitness for duty database.
- j) Keep a complete record of employees' attendance records on site.

The statements above are intended to describe the general nature and level of work being performed by the incumbent(s) of this job. They are not intended to be an exhaustive list of all responsibilities and activities required of the position.

APPENDIX B

Typical types of Cranes on Site

ITEM NO	MAKE	QUANTITY	WEIGHT
1.	CFEM (TURBINE HALL CRANES)	2	190T
2.	DE WET (OVERHEAD CRANES)	1	1T (WINCH)
3.	DE WET (OVERHEAD CRANES)	3	1.5T
4.	DE WET (OVERHEAD CRANES)	9	2T
5.	DE WET (OVERHEAD CRANES)	4	3T
6.	DE WET (OVERHEAD CRANES)	6	4T
7.	DE WET (OVERHEAD CRANES)	8	5T
8.	DE WET (OVERHEAD CRANES)	2	6T
9.	DE WET (OVERHEAD CRANES)	1	6.3T
10.	DE WET (OVERHEAD CRANES)	3	8T
11.	DE WET (OVERHEAD CRANES)	8	10T
12.	De Wet (Overhead cranes)	3	13T
13.	DE WET (OVERHEAD CRANES)	1	30T
14.	DELATTRE LEVIVIER	2	6T
15.	DELATTRE LEVIVIER	2	60/5T
16.	DELATTRE LEVIVIER	2	130T
17.	DEMAG (OVERHEAD CRANES)	1	1T
18.	DEMAG (OVERHEAD CRANES)	1	2T
19.	BLACK BEAR	2	10T
20.	GIS	4	2.5T
21.	NITCHI	2	3T
22.	YALE	1	180KG
23.	SEW	2	300KG
24.	FAST SERVICES	1	1T
25.	INGERSOLL RAND	1	1T
26.	COME UP	1	200KG
27.	COME UP	1	300KG
28.	HAND WHEEL	10	500KG
29.	DEMAG (OVERHEAD CRANES)	1	100T
30.	DEMAG (OVERHEAD CRANES)	2	10T
31.	DEMAG (OVERHEAD CRANES)	2	20T (PORTAL & SEMI-PORTAL)
32.	DEMAG (OVERHEAD CRANES)	1	30T
33.	GOODS HOIST FOR NAB HOT LAUNDRY		
34.	Merger (Overhead cranes)	4	8T
35.	MORRIS (INCLUDING MONO-RAIL)	3	1T
36.	MORRIS	2	6.3T
37.	MORRIS	1	50/5T
38.	MUNCK	1	32/5T
39.	POLAR CRANE (SIEV-VEVEY)	2	190/10T
40.	REEL (PMC CRANES)	2	5/2T
41.	UNILEC	1	3T

APPENDIX C

Typical Year Planner

2022 Cranes PM Calendar

January	February	March	April	May	June	July	August	September	October	November	December
1 Sa	1 Tu 38-12CMW002PR (FIC) 38-6HAW000B (S) 38-1PMCISLPT (S)	1 Tu 38-12CMW002PR (FIC)	1 Fr	1 Su	1 We 38-0CMW001PR (S) 38-12CMW001PR (FIC)	1 Fr	1 Mo	1 Th	1 Sa	1 Tu 38-12CMW002PR (FIC)	1 Th
2 Su	2 We 38-12CMW002PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S)	2 We 38-12CMW001PR (FIC)	2 Sa	2 Mo	2 Th	2 Sa	2 Tu 38-12CMW002PR (FIC)	2 Fr	2 Su	2 We 38-12CMW002PR (FIC)	2 Fr
3 Mo	3 Th 38-0CMW001PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S) 38-12CMW002PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S)	3 Th	3 Su	3 Tu 38-6HAW000B (S)	3 Fr	3 Su	3 We 38-12CMW001PR (FIC)	3 Sa	3 Mo	3 Th	3 Sa
4 Tu 38-12CMW002PR (FIC)	4 Fr 38-0CMW001PR (FIC) 38-6HAW000B (S)	4 Fr	4 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)	4 We 38-6HAW000B (S)	4 Sa	4 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)	4 Th	4 Su	4 Tu 38-12CMW002PR (FIC)	4 Fr	4 Su
5 We 38-12CMW001PR (FIC)	5 Sa	5 Sa	5 Tu 38-0CMW001PR (FIC) 38-6HAW000B (S)	5 Th	5 Su	5 Tu 38-12CMW002PR (FIC)	5 Fr	5 Mo	5 We 38-12CMW001PR (FIC)	5 Mo 38-0CMW001PR (FIC) 22 Sa	5 Mo 38-0CMW001PR (FIC)
6 Th	6 Su	6 Su	6 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	6 Fr	6 Mo	6 We 38-12CMW002PR (FIC)	6 Sa	6 Tu 38-12CMW002PR (FIC)	6 Th	6 Tu 38-12CMW002PR (FIC)	6 Tu 38-12CMW002PR (FIC)
7 Fr	7 Mo	7 Mo	7 Th	7 Sa	7 Tu 38-12CMW002PR (FIC)	7 Th	7 Su	7 We 38-12CMW001PR (FIC)	7 Fr	7 Mo 38-0CMW001PR (FIC)	7 We 38-12CMW001PR (FIC)
8 Sa	8 Tu 38-0CMW001PR (FIC) 38-6HAW000B (S)	8 Tu	8 Fr	8 Su	8 We 38-12CMW001PR (FIC)	8 Mo	8 Mo	8 Th	8 Sa	8 Tu	8 Th
9 Su	9 We 38-12CMW001PR (FIC)	9 We 38-12CMW001PR (FIC)	9 Sa	9 Mo	9 Th	9 Sa	9 Tu	9 Fr	9 Su	9 We 38-12CMW002PR (FIC)	9 Fr
10 Mo 38-0CMW001PR (S)	10 Th	10 Th	10 Su	10 Tu 38-12CMW002PR (FIC)	10 Fr	10 Su	10 We 38-12CMW001PR (FIC)	10 Sa	10 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S) 38-12CMW002PR (FIC) 38-6HAW000B (S)	10 Th	10 Sa
11 Tu	11 Fr	11 Fr	11 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S) 38-12CMW002PR (FIC)	11 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	11 Sa	11 Mo 38-0CMW001PR (S)	11 Th 38-6HAW000B (S)	11 Su	11 Tu	11 Fr	11 Su
12 We 38-12CMW001PR (FIC)	12 Sa	12 Sa	12 Tu 38-12CMW002PR (FIC)	12 Th	12 Su	12 Tu	12 Fr	12 Mo 38-0CMW001PR (FIC)	12 We 38-12CMW001PR (FIC)	12 We 38-12CMW001PR (FIC)	12 Mo
13 Th	13 Su	13 Su	13 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	13 Fr	13 Mo	13 We 38-12CMW001PR (FIC)	13 Sa	13 Tu 38-0CMW001PR (FIC)	13 Th	13 Tu 38-12CMW002PR (FIC)	13 Tu
14 Fr 38-6HAW000B (S)	14 Mo	14 Mo	14 Th	14 Sa	14 Tu	14 Th	14 Su	14 We 38-12CMW001PR (FIC)	14 Fr	14 Mo	14 We 38-12CMW001PR (FIC)
15 Sa	15 Tu 38-12CMW002PR (FIC)	15 Tu 38-12CMW002PR (FIC) 38-6HAW000B (S)	15 Fr 38-6HAW000B (S)	15 Su	15 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	15 Fr	15 Mo 38-12CMW001PR (FIC) 38-6HAW000B (S)	15 Th 38-0CMW001PR (FIC)	15 Sa	15 Tu 38-12CMW002PR (FIC)	15 Th
16 Su	16 We 38-12CMW001PR (FIC)	16 We 38-12CMW001PR (FIC)	16 Sa	16 Mo	16 Th 38-0CMW001PR (S)	16 Sa	16 Tu 38-12CMW002PR (FIC)	16 Fr	16 Su	16 We 38-12CMW002PR (FIC)	16 Fr
17 Mo	17 Th 38-0CMW001PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S) 38-12CMW002PR (FIC)	17 Th 38-0CMW001PR (S)	17 Su	17 Tu	17 Fr	17 Su	17 We 38-12CMW001PR (FIC)	17 Sa	17 Mo	17 Th	17 Sa
18 Tu	18 Fr 38-0CMW001PR (FIC) 38-6HAW000B (S) 38-12CMW001PR (S) 38-12CMW002PR (FIC)	18 Fr	18 Mo 38-12CMW001PR (S)	18 We 38-12CMW001PR (FIC)	18 Sa	18 Mo 38-0CMW001PR (S)	18 Th	18 Su	18 Tu 38-12CMW002PR (FIC) 38-6HAW000B (S)	18 Fr	18 Su
19 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	19 Sa	19 Sa	19 Tu 38-12CMW001PR (FIC) 38-6HAW000B (S)	19 Th	19 Su	19 Tu 38-12CMW002PR (FIC) 38-6HAW000B (S)	19 Fr	19 Mo	19 We 38-12CMW001PR (FIC)	19 We 38-12CMW001PR (FIC)	19 Mo
20 Th 38-0CMW001PR (FIC) 38-6HAW000B (S)	20 Su	20 Su	20 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	20 Fr	20 Mo	20 We 38-12CMW001PR (FIC)	20 Sa	20 Tu 38-12CMW002PR (FIC) 38-6HAW000B (S)	20 Th	20 Tu 38-12CMW002PR (FIC)	20 Tu 38-12CMW002PR (FIC)
21 Fr	21 Mo	21 Mo	21 Th 38-12CMW001PR (FIC) 38-6HAW000B (S)	21 Sa	21 Tu	21 Th 38-12CMW001PR (FIC) 38-6HAW000B (S)	21 Su	21 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	21 Fr	21 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)	21 We 38-12CMW001PR (FIC) 38-6HAW000B (S)
22 Sa	22 Tu	22 Tu 38-0CMW001PR (S)	22 Fr	22 Su	22 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	22 Fr	22 Mo 38-0CMW001PR (S) 38-6HAW000B (S)	22 Th	22 Sa	22 Tu	22 Th
23 Su	23 We 38-12CMW001PR (FIC)	23 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	23 Sa	23 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)	23 Th 38-0CMW001PR (FIC) 38-6HAW000B (S)	23 Sa	23 Tu	23 Fr	23 Su	23 We 38-12CMW001PR (FIC)	23 Fr
24 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)	24 Th	24 Th	24 Su	24 Tu 38-12CMW002PR (FIC)	24 Fr	24 Su	24 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	24 Sa	24 Mo	24 Th	24 Sa
25 Tu 38-0CMW001PR (FIC) 38-6HAW000B (S)	25 Fr	25 Fr	25 Mo 38-12CMW001PR (FIC) 38-6HAW000B (S)	25 We 38-12CMW001PR (FIC)	25 Sa	25 Mo	25 Th	25 Su	25 Tu 38-6HAW000B (S)	25 Fr 38-0CMW001PR (FIC) 38-6HAW000B (S)	25 Su
26 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	26 Sa	26 Sa	26 Tu 38-12CMW001PR (FIC) 38-6HAW000B (S)	26 Th	26 Su	26 Tu 38-6HAW000B (S)	26 Fr 38-0CMW001PR (FIC) 38-6HAW000B (S)	26 Mo	26 We 38-12CMW001PR (FIC)	26 We 38-12CMW001PR (FIC)	26 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)
27 Th 38-0CMW001PR (FIC) 38-6HAW000B (S)	27 Su	27 Su	27 We 38-12CMW001PR (FIC)	27 Fr 38-0CMW001PR (S) 38-6HAW000B (S)	27 Mo	27 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	27 Sa	27 Tu	27 Th	27 Th	27 Tu 38-12CMW002PR (FIC)
28 Fr 38-0CMW001PR (FIC) 38-6HAW000B (S)	28 Mo 38-0CMW001PR (FIC)	28 Mo 38-0CMW001PR (FIC)	28 Th 38-0CMW001PR (FIC) 38-6HAW000B (S)	28 Sa	28 Tu	28 Th 38-0CMW001PR (FIC) 38-6HAW000B (S)	28 Fr	28 Su	28 We 38-12CMW001PR (FIC)	28 Fr	28 We 38-12CMW001PR (FIC)
29 Sa		29 Tu 38-12CMW002PR (FIC)	29 Fr	29 Su	29 We 38-12CMW001PR (FIC) 38-6HAW000B (S)	29 Fr	29 Mo	29 Th	29 Sa	29 Tu 38-12CMW002PR (FIC)	29 Th 38-1PMCISLPT (S)
30 Su	30 We 38-12CMW001PR (FIC)	30 We 38-12CMW001PR (FIC)	30 Sa	30 Mo 38-0CMW001PR (FIC) 38-6HAW000B (S)	30 Th 38-1PMCISLPT (S + LUT)	30 Sa	30 Tu 38-12CMW002PR (FIC) 38-6HAW000B (S)	30 Fr	30 Su	30 We 38-12CMW002PR (FIC) 38-6HAW000B (S)	30 Fr
31 Mo 38-0CMW001PR (FIC)		31 Th		31 Tu 38-0CMW001PR (S)		31 Su	31 We 38-12CMW001PR (FIC) 38-6HAW000B (S)		31 Mo	31 Th	31 Sa

L/T - Load Test

S - Service

FIC - Functional Check

I - Inspection

Days provided in 15 minute intervals

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APPENDIX D (Page 1 / 2)

List of Cranes to be serviced, inspected, and maintained on Site

TRIGRAM	SWL	LOCATION	CRANE TYPE	CRANE MANUFAC	TYPE OF SERVICE AND FREQUENCY	LOAD TEST FREQUENCY
0 DMX 001 PR	10 TON	SITE STORES	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 002 PR	30 TON	MACHINE SHOP	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 003 PR	10 TON	DECON WORKSHOP	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 004 PR	10 TON	DECON WORKSHOP	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 006 PR	2 TON	WELDERS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEMAG	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 007 PR	10 TON	RIGGING WORKSHOP	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	DEMAG	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 008 PR	10 TON	ROTORK WORKSHOP	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	DEMAG	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 009 PR	5 TON	STAINLESS STEEL WORKSHOP	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEMAG	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
0 DMX 010 PR	3.2 TON	ROTORK SERVO MOTOR WORKSHOP	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEMAG	3M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMG 001 PR	4 TON	SEC	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMG 002 PR	4 TON	SEC	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMG 003 PR	2 TON	SEC - TRAIN A	MONORAIL WITH UNDERSLUNG HOIST	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMG 004 PR	2 TON	SEC - TRAIN B	MONORAIL WITH UNDERSLUNG HOIST	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMK 001 PR	5 TON	14.25M FUEL BUILDING	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	FEMII	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMK 002 PR	6 TON	0M FUEL BUILDING	MONORAIL WITH UNDERSLUNG HOIST		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMK 003 PR	130 TON	20M FUEL BUILDING	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMK 004 PR	190/30 TON	9.5M TURBINE HALL	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	CFEM	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMK 005 PR	300 KG	DRUM SCREEN WINCH	WINCH	SEW	6M OHSa SERVICE CRANE-WINCH	1Y OHSa LAOD TEST CRANE
1 DMW 002 PR	10 TON	DEG	MONORAIL WITH UNDERSLUNG HOIST		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMW 003 PR	5 TON	VVP	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMW 005 PR	60/4 TON	GANTRY	GANTRY CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMX 001 PR	8 TON	TURBINE HALL (APP)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMX 002 PR	8 TON	TURBINE HALL (APP)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMX 003 PR	3 TON	TURBINE HALL (-6M)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMX 004 PR	7.5 TON	ATE	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMX 005 PR	2 TON	DIESELS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		3Y SERVICE CRANE	3Y OHSa LAOD TEST CRANE
1 DMX 006 PR	2 TON	DIESELS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		3Y SERVICE AND OHSa LAOD TEST CRANE	3Y OHSa LAOD TEST CRANE
1 DMX 007 PR	4 TON	SAP COMPRESSORS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
1 DMR 001 PR	190/10/5 TON	20M REACTOR BUILDING	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		1RO ELECTRICAL & MECHANICAL SERV	1RO LOAD TEST CRANE
1 DMR 002 PR	2 TON	14.5 REACTOR BUILDING	JIB WITH UNDERSLUNG ELECTRIC HOIST	DEWET	1RO B-SERVICE	1RO LOAD TEST CRANE
1 DMR 003 PR	10 TON	0M REACTOR BUILDING	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET FEMI	1RO B-SERVICE PRE-OPERATIONAL INS	1RO LOAD TEST CRANE
1 DMR 004 PR	1.5 TON	20M REACTOR BUILDING	WINCH		1RO OHSa SERVICE WINCH	1RO LOAD TEST WINCH
1 DMR 005 PR	500 KG	20M REACTOR BUILDING(PRESSURISER)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	1RO SERVICE CRANE	1RO LOAD TEST CRANE
1 DMR 006 PR	500 KG	20M REACTOR BUILDING(PRESSURISER)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	1RO B-SERVICE PRE-OPERATIONAL INS	1RO LOAD TEST CRANE
1 EEP 001 PA	15 TON	20M REACTOR BUILDING	WINCH		1RO B-SERVICE	1RO LOAD TEST WINCH
1 EEP 002 PA	15 TON	20M REACTOR BUILDING	WINCH		1RO B-SERVICE	1RO LOAD TEST WINCH
1 PMC 351 PT	5/2 TON	20M FUEL BUILDING	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMG 001 PR	4 TON	SEC	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMG 002 PR	4 TON	SEC	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMG 003 PR	2 TON	SEC	MONORAIL WITH UNDERSLUNG HOIST	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMG 004 PR	2 TON	SEC	MONORAIL WITH UNDERSLUNG HOIST	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMK 001 PR	5 TON	14.25M FUEL BUILDING	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMK 002 PR	6 TON	0M FUEL BUILDING	MONORAIL WITH UNDERSLUNG HOIST		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMK 003 PR	130 TON	20M FUEL BUILDING	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	DELATRE LEVIVIER	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMK 004 PR	190/30 TON	9.5M TURBINE HALL	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	CFEM	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMK 005 PR	300 KG	DRUM SCREEN WINCH	WINCH		6M OHSa SERVICE CRANE-WINCH	1Y OHSa LAOD TEST CRANE-WINCH
2 DMW 002 PR	10 TON	DEG	MONORAIL WITH UNDERSLUNG HOIST	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMW 003 PR	5 TON	VVP	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE
2 DMW 005 PR	60/5 TON	GANTRY	GANTRY CRANE		6M OHSa SERVICE CRANE	1Y OHSa LAOD TEST CRANE

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List of Cranes to be serviced, inspected and maintained on Site

TRIGRAM	SWL	LOCATION	CRANE TYPE	CRANE MANUFAC	TYPE OF SERVICE AND FREQUENCY	LOAD TEST FREQUENCY
2 DMW 006 PR	5 TON	VVP	MONORAIL WITH UNDERSLUNG HOIST	KUNG DONG	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
2 DMX 001 PR	8 TON	TURBINE HALL (APP)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
2 DMX 002 PR	8 TON	TURBINE HALL (APP)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
2 DMX 003 PR	3 TON	TURBINE HALL (-6M)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
2 DMX 004 PR	7.5 TON	ATE	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
2 DMX 005 PR	2 TON	DIESELS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		3Y SERVICE CRANE	3Y OSHA LAOD TEST CRANE
2 DMX 006 PR	2 TON	DIESELS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		3Y SERVICE CRANE	3Y OSHA LAOD TEST CRANE
2 DMX 007 PR	4 TON	SAP COMPRESSORS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
2 DMR 001 PR	190/10/5 TON	20M REACTOR BUILDING	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	SIEV-VEVEY	1RO ELECTRICAL & MECHANICAL SERV	1RO LOAD TEST CRANE
2 DMR 002 PR	2 TON	14.5 REACTOR BUILDING	JIB WITH UNDERSLUNG ELECTRIC HOIST		1RO B-SERVICE	1RO LOAD TEST CRANE
2 DMR 003 PR	10 TON	0M REACTOR BUILDING	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	1RO B-SERVICE PRE-OPERATIONAL INS	1RO LOAD TEST CRANE
2 DMR 004 PA	1.5 TON	20M REACTOR BUILDING	WINCH	MORRIS	1RO OSHA SERVICE WINCH	1RO LOAD TEST WINCH
2 DMR 005 PR	500 KG	20M REACTOR BUILDING(PRESSURISER)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	1RO SERVICE CRANE	1RO LOAD TEST CRANE
2 DMR 006 PR	500 KG	20M REACTOR BUILDING(PRESSURISER)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	1RO B-SERVICE PRE-OPERATIONAL INS	1RO LOAD TEST CRANE
2 EPP 001 PA	15 TON	20M REACTOR BUILDING	WINCH		1RO B-SERVICE	1RO LOAD TEST WINCH
2 EPP 002 PA	15 TON	20M REACTOR BUILDING	WINCH		1RO B-SERVICE	1RO LOAD TEST WINCH
2 PMC 351 PR	5/2 TON	20M FUEL BUILDING	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
6 DMX 600 PR	62/5 TON	ISI WORKSHOP	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
6 DMX 601 PR	3 TON	EMS MOTOR WORKSHOP	MONORAIL WITH UNDERSLUNG HOIST		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
6 DMX 900 PR	6.3 TON	LOW LEVEL WASTE	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	MORRIS	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
6 DMX 901 PR	6.3 TON	LOW LEVEL WASTE	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	MORRIS	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
6 DMX 962 PR	1 TON	VALVE WORKSHOP MSS	MONORAIL WITH UNDERSLUNG HOIST		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMG 100 PA	200 KG	CLEANERS WINCH	WINCH	COME UP	6M OSHA SERVICE CRANE-WINCH	1Y OSHA LAOD TEST CRANE-WIN
9 DMM 001 PR	10 TON	PORTAL CRANE-TURBINE HALL	DOUBLE GIRDER PORTAL ELECTRIC OVERHEAD CRAN	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMM 002 PR	10 TON	PORTAL CRANE-TURBINE HALL	DOUBLE GIRDER PORTAL ELECTRIC OVERHEAD CRAN	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 001 PR	10 TON	FILTER FLOOR	MONORAIL WITH UNDERSLUNG HOIST & SINGLE GIR	DEWET	13W OSHA SERVICE CRANE	
9 DMN 002 PR	6.3 TON	0M TES DRUMMING (N 265)	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 003 PR	8 TON	FILTER FLOOR	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 004 PR	8 TON	FILTER FLOOR	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 005 PR	6.3 TON	TES DRUMMING (-6M N030)	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 006 PR	1.5 TON	BORON ROOM	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 007 PR	8 TON	FILTER FLOOR	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 008 PR	1.5 TON	FILTER FLOOR	SINGLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMN 010 PA	1 TON	FILTER FLOOR	WINCH		6M OSHA SERVICE CRANE-WINCH	1Y OSHA LAOD TEST CRANE-WIN
9 DMN 100 PR	50 KG	HOT LAUDRY	GOODS LIFT		6M OSHA SERVICE LIFT	1Y OSHA LAOD TEST LIFT
9 DMP 001 PR	30 TON	CRF PUMPSTATION - INSIDE	DOUBLE GIRDER ELECTRIC OVERHEAD CRANE	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMP 002 PR	20 TON	CRF PUMPSTATION - OUTSIDE	DOUBLE GIRDER SEMI PORTAL ELECTRIC OVERHEAD	DEMAG	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 DMX 007 PR	2 TON	DIESELS	SINGLE GIRDER ELECTRIC OVERHEAD CRANE		3Y OSHA SERVICE CRANE	3Y OSHA LAOD TEST CRANE
9 DMX 008 PA	10 TON	GANTRY WINCH	WINCH		6M OSHA SERVICE CRANE-WINCH	1Y OSHA LAOD TEST CRANE-WIN
9 DMW 100 PA	1.5 TON	PNEUMATIC WINCH	WINCH		6M OSHA SERVICE CRANE-WINCH	1Y OSHA LAOD TEST CRANE-WIN
9 DMX 950 PR	32/5 TON	BULK STORES	DOUBLE GIRDER PORTAL ELECTRIC OVERHEAD CRANE		6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 TES 002 PR	5 TON	BATCHING PANT	DOUBLE GIRDER PORTAL ELECTRIC OVERHEAD CRAN	DEWET	6M OSHA SERVICE CRANE	1Y OSHA LAOD TEST CRANE
9 TES 001 DM		DRUMMING AREA	CHATEAU		6M INSPECT LEAD CAST	1Y LOAD TEST
EH 001 B	2.5 TON	RIGGING WORKSHOP	ELECTRIC HOIST	GIS	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 002 B	2.5 TON	RIGGING WORKSHOP	ELECTRIC HOIST	GIS	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 003 B	2.5 TON	RIGGING WORKSHOP	ELECTRIC HOIST	GIS	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 004 B	2.5 TON	RIGGING WORKSHOP	ELECTRIC HOIST	GIS	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 005 B	10 TON	RIGGING WORKSHOP	ELECTRIC HOIST	BLACK BEAR	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 006 B	10 TON	RIGGING WORKSHOP	ELECTRIC HOIST	BLACK BEAR	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST

TRIGRAM	SWL	LOCATION	CRANE TYPE	CRANE MANUFAC	TYPE OF SERVICE AND FREQUENCY	LOAD TEST FREQUENCY
EH 007 B	1 TON	RIGGING WORKSHOP	ELECTRIC HOIST	FITOP	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 008 B	3 TON	RIGGING WORKSHOP	ELECTRIC HOIST	KING	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 009 B	3 TON	RIGGING WORKSHOP	ELECTRIC HOIST	KING	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
EH 010 B	3 TON	RIGGING WORKSHOP	ELECTRIC HOIST	KING	3M OSHA SERVICE HOISTS	1Y OSHA LAOD TEST HOIST
6 HSW 000 BG		MWS WORKSHOP (RIGGING)	LIFTING EQUIPMENT		3M OSHA INSPECT LIFTING GEAR	
6 HAI 000 BG		ISI WORKSHOPS	LIFTING EQUIPMENT		3M OSHA INSPECT LIFTING GEAR	
6 HGO 000 BG		FFD CENTER	LIFTING EQUIPMENT		3M OSHA INSPECT LIFTING GEAR	
6 HSM 000 BG		MMS WORKSHOP AREA	LIFTING EQUIPMENT		3M OSHA INSPECT LIFTING GEAR	
9 HNC 000 BG		NAB AREA	LIFTING EQUIPMENT		3M OSHA INSPECT LIFTING GEAR	
6 HSW 000 BG		MWS WORKSHOP (RIGGING)	MOBILE ELEVATED PLATFORMS	SKY-JACK	6M SERVICE SKY-JACKS AND STEEPLE	1Y LOAD TEST SKY-JACKS AND S

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APPENDIX E

Excerpt of Lifting Tackle and Hand powered lifting Devices

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APPENDIX F

Medical requirements

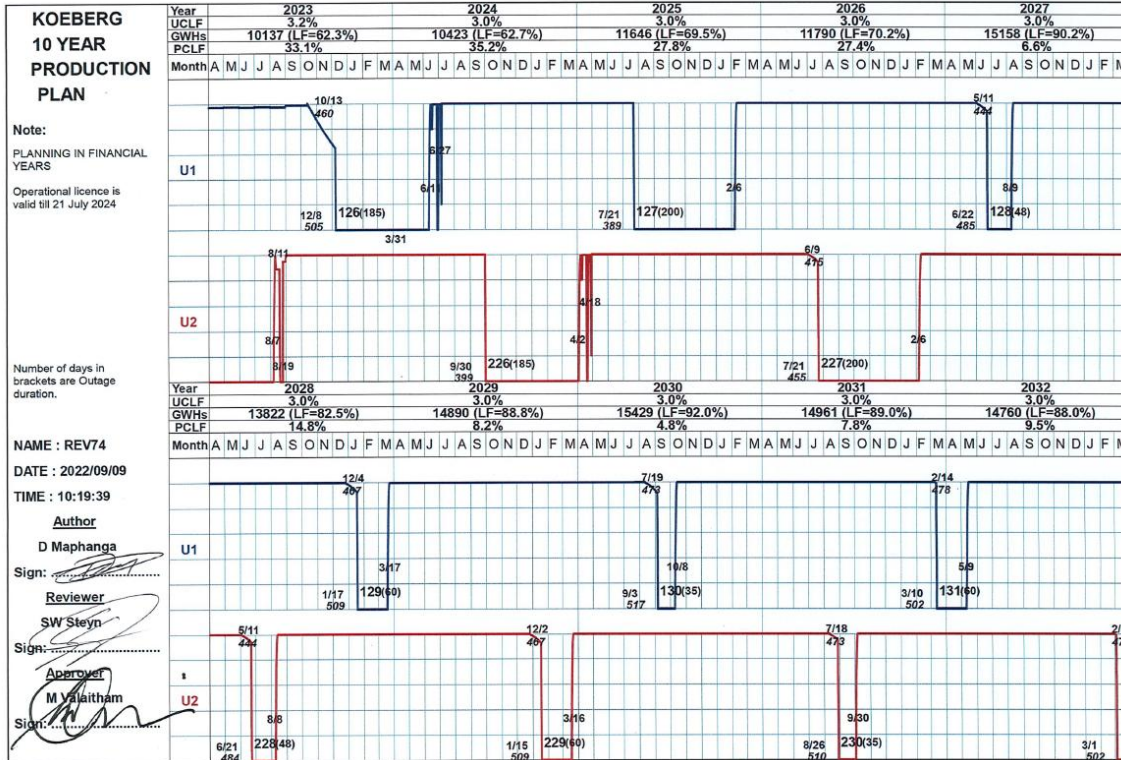
1. The following will be presented on arrival at KNPS, for perusal and assessment for approval by the Site Occupational Practitioner:
2. Copy of recent (within 6 months of arrival at KNPS) medical examination, **NOT A CERTIFICATE OF FITNESS.**
3. Name, Qualifications, and registration number of examining Occupational Medical Practitioner (OMP) whose credentials should be clearly written on the medical examination form. OMP should be currently registered with his/her country's Medical Council (in the case of non-SA personnel). Medical examination conducted by an Occupational Health Nurse Practitioner is acceptable but must be verified and signed by the responsible OMP.
4. **Copies of relevant special investigations should accompany the medical record**, e.g., Spirogram and asbestos chest x-ray.
5. A **valid passport** to be presented as identification on arrival at Koeberg NPS Medical centre. A South African ID in the case of South African citizens is mandatory.
6. An appropriately completed and signed "Man Job Spec" to be acquired from the Eskom Site Representative and presented on arrival at the Medical centre.
7. Issuing of the Certificate of Fitness to work at Eskom sites in the responsibility of the Eskom Occupational Medical Practitioner.

Without the above said requirements the individuals' application will not be processed.

APPENDIX G

Koeberg Nuclear Power Station 10 Year Production Plan

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