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DATE:

# **ENVIRONMENTAL AUDIT REPORT**

## **FOR THE**

CONSTRUCTION OF THE ORIGINAL STEAM
GENERATOR INTERIM STORAGE FACILITY (OSGISF) AT
KOEBERG NUCLEAR POWER STATION

PREPARED FOR: ESKOM HOLDINGS SOC LIMITED

Koeberg Nuclear Power Station R27 Off West Coast Road

Melkbosstrand

**REPORT NO:** ECO/KOE/OSGISF/03/2022 **DEA EIA REF NO:** 14/12/16/3/3/2/947



March 2022

Environmental Impact Assessments
 Basic Assessments
 Environmental Management Planning

<sup>•</sup> Environmental Control & Monitoring • Water Use License Applications • Aquatic Assessments

## **PROJECT DETAILS**

TITLE:

The construction of the Original Steam Generator Interim Storage Facility (OSGISF) at Koeberg Nuclear Power Station on Cape Farm 1552, Duynefontein, Cape Town.

LOCATION:

Koeberg Nuclear Power Station R27 Off West Coast Road Melkbosstrand

ENVIRONMENTAL CONSULTANCY:

Sharples Environmental Services cc.

PRIMARY ECO & AUTHOR:

Ms Betsy Ditcham (Supervising ECO)

**EXPERTISE:** 

Betsy has a Bachelor of Science Honours Degree in Wildlife Management from the University of Pretoria and a Bachelor of Science Degree (Zoology and Ecology) obtained from the University of Cape Town in 2005. She has 9 years' experience in the environmental field, including environmental assessments, legal compliance, on-site compliance monitoring, cleaner production and business greening and sustainability (carbon and environmental footprinting). In her time as a consultant, she has compiled a number of environment assessments and management plans for both private and governmental clients. Betsy is co-owner of SES and is registered with EAPASA (Reg no. 1480)

**CLIENT:** 

REPORT CLASSIFICATION:

ESKOM HOLDINGS SOC LIMITED

**Environmental Monitoring Report** 

SES REFERENCE NUMBER:

ECO/KOE/OSGISF/03/22

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ECO: CONSTRUCTION OF THE ORIGINAL STEAM GENERATOR INTERIM STORAGE FACILITY (OSGISF) AT KOEBERG NUCLEAR POWER STATION



Sharples Environmental Services cc (SES) has been appointed by Trans-Africa Projects (Pty) Ltd on behalf of ESKOM HOLDINGS SOC LIMITED (the client), as the Environmental Control Officer (ECO) to monitor the construction of the Original Steam Generator Interim Storage Facility (OSGISF) at Koeberg Nuclear Power Station (KNPS) on Cape Farm 1552, Duynefontyn, Cape Town. SES has been appointed to undertake monitoring inspections for the duration of the contract period, to ensure that measures outlined in the Environmental Management Programme (EMPr) and Environmental Authorisation are implemented and that environmental degradation is kept to a minimum. This report has been compiled to indicate compliance with the Environmental Authorisation (EA) issued by the Department of Environmental Affairs (DEA) and the EMPr compiled by SRK Consulting (South Africa) (Pty) Ltd (dated November 2016).

Environmental Authorisation was granted by DEA on May 17<sup>th</sup>, 2017. An application to amend the Environmental Authorisation was submitted by NCC Environmental Services and granted in October 2018.

| Section |                         |
|---------|-------------------------|
| 2       | Description of Activity |

Eskom proposes to construct an Interim Storage Facility for the temporary storage of the original steam generators at Koeberg Nuclear Power Station (KNPS) (now referred to as the "project"), thereby ensuring the continued operation of KNPS.

SRK Consulting (South Africa) (Pty) Ltd (SRK) undertook the Scoping and Environmental Impact Reporting (S&EIR) process required in terms of the National Environmental Management Act 107 of 1998, as amended (NEMA). The Environmental Impact Assessment (EIA) Report (SRK Report No.: 478317/06) contains a detailed description of the project and its impacts.

In terms of the National Environmental Management Act, 1998 (Act No.107 of 1998) and the Environmental Impact Assessment Regulations, 2014. The authorisation of the following activities was granted by DEA;

- GN R.983 Activity number 27
- GN R.984 Activity number 3

| Section |          |
|---------|----------|
| 3       | Location |

KNPS is located on a sandy coastline of the West Coast, approximately 27 km north of the Cape Town Central Business District and 1.5 km north of the residential area of Duynefontein (Figure 1). KNPS is situated on Cape Farm Duynefontyn No. 1552 (previously consisting of Farm Duynefontyn No. 34 and Farm No. 1375 which were consolidated by the City of Cape Town in 2015). Access to KNPS is via the R27 which runs along the property's eastern boundary or alternatively via Otto du Plessis Drive. Cape Farm Duynefontyn No. 1552 is owned by Eskom and measures approximately 1 294 ha and is zoned for Risk Industry and Agricultural.

The OSGISF will be located within the Security Protected Area (SPA) of KNPS, a flat area mostly disturbed by previous construction activities and by current operational activities at KNPS.



Figure 1: Locality of Koeberg Nuclear Power Station (site).

Section 3.1

## Site Camp

The site camp is located directly adjacent to the working area. The site camp consists of a number of office containers, ablution facilities and eating areas.



Figure 2: Site locality within Koeberg Nuclear Power Station.

ECO: CONSTRUCTION OF THE ORIGINAL STEAM GENERATOR INTERIM STORAGE FACILITY (OSGISF) AT KOEBERG NUCLEAR POWER STATION

| Section |                   |
|---------|-------------------|
| 4       | Construction work |

This section highlights and discusses the key construction activities observed during the site inspection.

At the time of the site visit, the working area was clearly demarcated, and construction of the entrance road was underway.

Building 1 was in the process of being finalised, with internal electrical works being conducted which would be followed by the installation of the roller doors.

The foundations of Building 2 were being prepared for additional work.

| Section |                       |
|---------|-----------------------|
| 5       | Environmental Matters |

SES is appointed to undertake a monitoring role in terms of this project and will conduct monthly Environmental visits as per the contract. Ad hoc visits may be conducted, should these be required.

# Section 5.1 Waste Management

Waste separation is evident at the site camp, with the provision of separate temporary waste storage areas. A larger waste laydown area is situated outside of the site camp. This area consists of large waste skips for the various waste streams to be removed from site.

It is understood that general waste would be removed to the KNPS designated waste area, with hazardous waste and builders' rubble being disposed of off-site at a licenced landfill site through a contracted waste company.

| Section |                      |
|---------|----------------------|
| 5.2     | Vegetation clearance |

Search & Rescue was conducted prior to the commencement of clearing activities. A copy of the Search & Rescue report is available on request.

No further vegetation is impacted by the construction activities on site.

| Section |                        |
|---------|------------------------|
| 5.3     | Weekly DEO Inspections |

A Designated Environmental Officer conducts weekly inspections, based on the conditions of the EA and EMPr. The findings of these inspections are circulated to the ECO for review and record.

The DEO identified no Non-Compliances.

ECO: CONSTRUCTION OF THE ORIGINAL STEAM GENERATOR INTERIM STORAGE FACILITY (OSGISF) AT KOEBERG NUCLEAR POWER STATION

The following **Partial Compliance** was noted during the weekly inspections:

- Suitably maintain firefighting equipment
  - o Three FE found on site were due for next service.

| March 2022  COMPLIANCE WITH THE EMPR AND EA   |                                 |  |                                |
|---|---------------------------------|--|--------------------------------|
|   | Compliance<br>Full/Part/<br>Non | Comments/<br>Observations  | Action to be taken             |
| SITE C  | CAMP .                          |  |                                |
| Submit a method statement for Site Camp establishment for approval by the ECO at least two weeks prior to the start of construction activities  | Full                            | Site Establishment Method Statement has been drafted and submitted during Tender Phase. Method Statement has been signed by all parties (ERI and ESKOM)  | No further action to be taken. |
| Establish a suitably fenced Site Camp at the start of the contract, which will allow for site offices, vehicle, equipment, material and waste storage areas to be consolidated as much as possible. Locate the Site Camp at a position approved by the ECO. Provide water and / or washing facilities at the Site Camp for personnel. | Full                            | Site Camp has been fenced off as per instruction. Fence has sufficient Safety Signage available.  Waste Bins have been allocated and placed strategically for different waste streams. Waste streams identifiable by means of labels.  Drinking water is available to workers. Source of water CCT. No washing will take place on site |                                |
| Demarcate construction site boundaries upon establishment. Control security and access to the site. Fence off site boundaries to the satisfaction of the ECO and ensure that plant, labour and materials remain within site boundaries.   | Full                            | Site Area has been properly demarcated. Construction Footprint is clearly marked, and  |                                |

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non employees are well aware of where footprint ends. Designate the area beyond the boundary of the site as No go areas for all personnel on site. No vehicles, machinery, materials or people shall be Full permitted in the No-go area at any time without the express permission of the RE in consultation with the ECO. **SAFETY & SECURITY** Ensure that emergency procedures (in relation to fire, spills, contamination of the ground, accidents to employees, use of hazardous substances, etc.) are Full established prior to commencing construction. Make all emergency procedures available, including responsible personnel, As per Accountability List all contact details of emergency services, etc. to all the relevant personnel. Full Emergency Personnel Clearly demarcate emergency procedures at the relevant locations around Details has been updated. the site. The site does have Hazardous Substances and Containers Secure the Site Camp, particularly to restrict unauthorised access to fuels and has been Full any other hazardous substances. purchased where Haz Chem will be stored with SDS attached. Stores has been allocated where all material has been Store all construction material and equipment in locked containers within the Full stored. Stores are locked Site Camp. and store man has been appointed. Provide suitable emergency and safety signage on site, and demarcate any Emergency Signage has Full areas which may pose a safety risk (including hazardous substances, etc. been posted strategically.

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| March 2022  | COMPLIANCE WITH THE EMPR AND EA  |                           |   |  |  |
|---|--|---------------------------|---|--|--|
|   |  | Compliance Full/Part/ Non | Comments/<br>Observations   | Action to be taken   |  |
| Advise the ECO of a taken.  | ny emergencies on site, together with a record of action   | Full                      |   |  |  |
|   | <u>EMPLO</u>   | <u>YMENT</u>              |   |  |  |
| Prioritise the employr  | ment of local people   | Full                      | As per SD&L requirements.   |  |  |
| Procure locally prod possible.  | uced goods (plant and materials) and services, where   | Full                      | As per Procurement Procedure  |  |  |
| Promote on-the-job t  | raining wherever possible.   | Full                      |   |  |  |
|   | ENVIRONMENTAL AWARENESS TRAINING   |                           |   |  |  |
| of their employment.  Potential impact o  Suitable disposal o  Key measures in th How incidences ar Ensure that all atter | al awareness training to all personnel on site at the start. Training should include discussion of: f construction waste and activities on the environment; f construction waste and litter; e EMPr relevant to worker's activities; and and suggestions for improvement can be reported. Indees remain for the duration of the training and on attendance register that clearly indicates participants' | Full                      | Register of environmental training kept on site   | Environmental Toolbox Talks<br>23/03/2002 Snake Awareness<br>24/03/2002 Lessons Learned<br>on Environmental Legal<br>Contravention Oil Spillage. |  |
| HAZARDOUS MATERIALS   |  |                           |   |  |  |
| storage, with suita   | ct hazardous material storage facilities, especially fuel<br>ble impermeable materials and a minimum bund<br>ity equal to 110% of the largest container  | Full                      | Haz -Chem stores has been allocated on site. All Fuel is brought to site and refuelled by Service provider. | Refuelling discussed in Mitigation Plan and Hazardous Management Procedure.  |  |
|   | nants (including cement) are not placed directly on the nent on plastic sheeting).   | Full                      | No hand mixing of cement is currently on site. Readymix on site are handled                                 | Housekeeping has been ongoing on site, most concrete spillages has been  |  |

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| March 2022  COMPLIANCE WITH THE EMPR AND EA  |                           |  |                           |
|--|---------------------------|--|---------------------------|
|  | Compliance Full/Part/ Non | Comments/<br>Observations  | Action to be taken        |
|  |                           | accordingly. If and when spillages occur cement is left until it hardens and cleaned and placed on PVC sheeting until disposal.  | isolated and some removed |
| Avoid unnecessary use and transport of hazardous substances.   | Full                      | No transfer or transportation of hazardous substances has occurred on site. All Hazardous waste generated thus far is kept in a hazardous waste bin.   |                           |
| Compile a procedure for the storage, handling and transport of different hazardous materials and ensure that it is strictly adhered to.  | Full                      |  |                           |
| Keep Material Safety Data Sheets for all hazardous materials on site and ensure that they are available for reference by staff responsible for handling and storage of materials | Full                      | All chemicals brought on site has SDS attached. File is kept in SHEQ Office.   |                           |
|  | NAGEMENT                  |  |                           |
| Limit the footprint area of the construction activity to what is absolutely essential.   | Full                      | No Flora Management will be applicable for the project as all Flora has already been covered by Permit allocated for Koeberg Nuclear Power Station. All protected species has been identified and removed from site. |                           |
| Designate areas outside the construction footprint as No Go areas.   | Full                      |  |                           |

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non Ensure that no vegetation is removed or disturbed outside the delineated Full construction site boundary Confine construction vehicles to designated roadways and strictly prohibit the indiscriminate movement of construction vehicles through vegetation Full falling outside of the construction / disturbance footprint. Prohibit temporary storage of building material or soil within areas of natural Full vegetation falling outside of the construction footprint Remove all alien and weed species encountered within areas disturbed by construction activities: Alien And Weed Clearance ☐ Where possible, remove alien species by hand; has been done around the Keep footprint areas as small as possible when removing alien plant site camp. Camp to be kept Full clear of overgrown weeds species; and □ Dispose of removed alien plant material at a licensed waste disposal and alien vegetation. facility. Copy of Search & Rescue Botanist to be appointed to confirm presence of Species of Conservation Full Concern (SCC) and protected species within the area report available in request Rescue and relocation of SCC prior to the commencement of activities. Full Permit must be obtained for the removal / destruction of SCC, indigenous, n/a protected or endangered plant or animal species. **FAUNA MANAGEMENT** Contractor in contact with Do not allow contractors or staff to harm, catch or kill birds or animals by any Full handler snake should means, including poisoning, trapping, shooting or setting of snares. sightings occur. Attempt, as far as possible to flush fauna within the construction footprint towards more suitable habitat within the surrounding areas. Clear vegetation Full towards the security fence line, thereby enabling any fauna to naturally

relocate through the fence into the surrounding natural areas.

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non Backfill trenches / excavations as soon as possible to ensure that the time the Full trench is exposed is kept to a minimum. Open trenches / excavations must be inspected on a daily basis for animals Full which may have fallen or become trapped. Safely remove and relocate any fauna that may be physically harmed by Full construction activities. **TOPSOIL STORAGE** Laydown areas has been Limit construction and lay down areas to areas within the development Full identified and utilised with footprint. proper demarcation poles Existing stockpiling of Top Designate and demarcate areas to be used for topsoil stockpiling. Soil has been identified. Full Remove topsoil (up to a maximum of 30 cm depth) Full Stockpile topsoil prior to the commencement of construction activities Full (stockpile no higher than 2m) and conserve topsoil for rehabilitation. Locate topsoil stockpiles in an area protected from the wind, and agreed to Full with the ECO. Replace harvested topsoil in areas that are to be rehabilitated as soon as sections of the works are completed (i.e. not only following the completion of Full all works) **CONCRETE / CEMENT WORK** Ready Mix has been used on site. Batching takes Use Ready-Mix concrete rather than batching where possible. Full place at the Batching Plant. Only Slumps are taken on

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non site. Ensure that no cement truck delivery chutes are cleaned on site. Cleaning No chutes are cleaned on operations are to take place off site at a location where wastewater can be site. Contractor is aware Full disposed of in the correct manner. If this is not possible a suitable washing that no cleaning can facility is to be developed on site in consultation with the ECO. happen on site Batch cement in a bunded area within the boundaries of the development Batching activities takes Full footprint only (where unavoidable). place at the plant. Ensure that cement is mixed on mortar boards / plastic sheeting and not Full directly on the ground (where unavoidable) Remains of concrete pours Physically remove any remains of concrete, either solid, or liquid, immediately are stored on plastic Full and dispose of as waste. sheeting to solidify prior to disposal. Place cement bags in bins and dispose of bags as waste to a licensed waste Cement bags are washed Full disposal facility. on site prior to disposal. Sweep / rake / stack excess aggregate / stone chip / gravel / pavers into Full piles and dispose at a licensed waste disposal facility **WASTE MANAGEMENT** Submit a Method Statement for waste management (including hazardous Full waste). RRR is emphasised during induction Aim to minimise waste through reducing and re-using (packaging) material. Full as per Environmental Policy. Recycling material cannot Collect recyclables separately and deliver these to suitable facilities or be exercised on site. n/a arrange for collection. Recycling items is kept to a

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minimum.

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non Waste Bins have been Collect all waste in bins and/or skips at the construction site labelled and placed Full strategically on site. The avoidance of litterina Prevent littering by construction staff at work sites by providing bins or waste Full on site is emphasised during baas in sufficient locations. induction. Provide separate bins for hazardous / polluting materials and mark these clearly. Full Store hazardous / polluting materials on impermeable ground until it is disposed of / collected. Dispose of waste appropriately to prevent pollution of soil and groundwater. Full **Emphasised during Toolbox** Talks and Environmental Do not allow any burning or burying of waste on site. Full Induction. **CONTAMINATED WATER/RUN-OFF MANAGEMENT** Prevent discharge of any pollutants, such as cements, concrete, lime, chemicals, and other contaminated wastewater and fuels into the Full environment. Direct run-off from fuel/workshop/equipment washing areas and concrete swills into conservancy tanks to be disposed of at a site approved by the Full ECO. All vehicles have drip trays Place drip trays / sand trays under engines of vehicles or mechanical placed underneath if and Full equipment when parked or stored overnight or longer. when standing. No spills noted during the Clean up any hydrocarbon spills immediately, through containment and removal of free product and dispose of contaminated material at a licensed site inspection. Multiple spill n/a kits available on site. waste disposal facility.

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non STORMWATER MANAGEMENT Collect stormwater from bunded areas in a suitable container and remove Full from the site for appropriate disposal. Use berms and stormwater drainage systems to prevent surface run-off from Full entering site excavations. Implement measures to maximise the infiltration of stormwater on site. Full Install temporary cut-off drainage channels to prevent stormwater runoff from Full entering the construction footprint Implement the Stormwater Management Plan. Full **EROSION MANAGEMENT** Ensure that all roads and tracks used for construction have the appropriate Full water diversion / erosion control structures. Restrict construction to drier summer months, if possible, to avoid erosion of Full exposed soils and sedimentation of surrounding habitats. **AIR QUALITY MANAGEMENT** Avoid clearing of vegetation until absolutely necessary (i.e. just before Full earthworks) Stabilise exposed surfaces as soon as is practically possible Full Avoid excavation and handling and transport of materials which may generate dust under high wind conditions or when a visible dust plume is Full present. Minimise dust generated off stockpiles: □ Locate piles in sheltered areas where possible; ☐ Place the stockpile lengthwise into the wind; Full ☐ Minimise the slope of the stockpile (maximum slope of 2:1); ☐ Limit stockpile sizes;



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#### March 2022 COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non □ Install barriers on three sides of the stockpile (maximum 50% material porosity) if required; ☐ Limit activity to the downwind side of the pile; ☐ Use the last in – first out system of stockpile management; and □ Cover stockpiles when not in active use for some time and / or use an environmentally friendly chemical spray to bind soil. Reduce airborne dust at construction sites through: Dampening measures □ Dampening dust-generating areas with freshwater; and Full conducted on site using □ Covering dumps or stockpiles of loose material with plastic sheeting or non-potable water. netting, especially during windy conditions. Limit vehicle speeds to 20 km/h on unconsolidated and non-vegetated Full areas. Cover trucks transporting loose material to or from site with tarpaulins, plastic Full or canvas. Ensure that any material spilled from trucks during transport to or from the site Full is cleaned up immediately. Use bedliners to minimise seepage and spillage of material from bottom-Full dumping trucks Pre-water material to be moved, if possible. Full Check weather reports daily and closely observe weather patterns to enable Full action to be taken immediately if conditions change. Wash wheels of vehicles before vehicles exit the site to ensure that dust is not No washing of vehicles carried off-site. Use manual or automated sprayers and / or drive-through n/a occurring on site. wheel washing bays. Limit the number of vehicles allowed on-site and restrict the movement of these vehicles over unsurfaced or unvegetated areas once they are on site Full to reduce dust problems.

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non Sweep roads leading from the site if wheel washing facilities do not Full effectively prevent mud being deposited on access roads. Sweep roads at site entrance and exit points regularly, to prevent the spread Full of mud / dust by construction vehicles Maintain all generators, vehicles, vessels and other equipment in good Full working order to minimise exhaust fumes. Respond rapidly to complaints and take appropriate corrective action. Full **NOISE MANAGEMENT.** Working times are normally Saturday Monday to Limit noisy construction activities to day-time from Monday to Saturday or in 7:00am to 19:00PM. Any Full accordance with relevant municipal bylaws, if applicable. additional working hours will be communicated Comply with the applicable municipal and / or industry noise regulations. Full Notify adjacent residents before particularly noisy construction activities will adjacent affected No n/a take place residents All generators are checked Maintain all generators, vehicles, vessels and other equipment in good by the storeman prior to Full working order to minimise excess noise. booking out for any leaks or deformities. Enclose diesel generators used for power supply on site to reduce Full unnecessary noise. Respond rapidly to complaints and take appropriate corrective action Full FIRE MANAGEMENT No fires are allowed on site Ensure that no fires are permitted on or adjacent to the site. Full unless permitted by Eskom

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Action to be taken Full/Part/ **Observations** Non Fire Department. Designated smoking areas Ensure that no smoking is permitted on the site Full has been allocated as per Eskom Requirements. Ensure that sufficient fire-fighting equipment is available on site. Full Equip all fuel stores and waste storage areas with fire extinguishers Full Ensure that all personnel on site are aware of the location of firefighting Full equipment on the site and how the equipment is operated. Three FF found on site due Ensure FE is checked and Suitably maintain firefighting equipment **Partial** for next service serviced regularly. TRANSPORTATION AND REFUELLING Daily checks on vehicles Undertake regular maintenance of vehicles and machinery to identify and and machines done Full repair minor leaks and prevent equipment failures. accordina to driver's perception. Undertake any on-site refuelling and maintenance of vehicles/machinery in Refuelling of machinery are designated areas. Line these areas with an impermeable surface and install Full done by M&M Training. oil traps. Sufficient drip trays have Use appropriately sized drip trays for all refuelling and/or repairs done on been allocated for all machinery – ensure these are strategically placed to capture any spillage of Full vehicles and or machinery fuel, oil, etc containing fuel. Employees are well aware Clean up any spills immediately, through containment and removal of free of Oil Spill remediation and product and dispose of contaminated material at a licensed waste disposal n/a have trained been facility. accordingly.

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#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non Keep spill containment and clean-up equipment at all work sites and for all Full polluting materials used at the site. PROTECTION OF ARCHAEOLOGICAL AND PALEONTOLOGICAL RESOURCES Empower staff to stop works on (chance) discovery of artefacts at the site. Full human graves or Report the presence of graves or human remains, fragments of fossil bone, remains, fragments of fossil ostrich egg and stone fragments to Heritage Western Cape (HWC) or a bone, ostrich egg and stone n/a suitably qualified archaeologist. fragments found during excavation. Agree on suitable mitigation with HWC or the archaeologist. n/a Obtain a permit for the removal of artefacts from the site if any are n/a discovered during construction. TRAFFIC MANAGEMENT Manage construction sites and activities so as to minimise impacts on road traffic as far as possible, e.g.: ☐ Attempt to arrange delivery of materials when it will least disrupt traffic; All internal movement of □ Stagger deliveries if possible rather than concentrating them during "rush" vehicles are adhered to by Full hours: and max speed limit of 35km/h. □ Keep construction materials and machinery at the construction site throughout the construction period, where possible. Ensure that large construction vehicles are suitably marked to be visible to All external vehicles are Full other road users and pedestrians. clearly branded. Ensure that all safety measures are observed and that drivers comply with the Full rules of the road. Ensure that vehicle axle loads do not exceed the technical design capacity Full of roads utilised by the project.

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| March 2022  COMPLIANCE WITH THE EMPR AND EA   |                                 |   |                    |
|---|---------------------------------|---|--------------------|
|   | Compliance<br>Full/Part/<br>Non | Comments/<br>Observations                                   | Action to be taken |
| Investigate and respond to complaints about traffic.  | Full                            |   |                    |
| <u>VISUAL</u>   | ASPECTS                         |   |                    |
| Control litter and keep construction site as clean and neat as possible.  | Full                            | Housekeeping is on -going                                   |                    |
| Avoid excavation, handling and transport of materials which may generate dust under high wind conditions.   | Full                            |   |                    |
| Keep construction sites tidy and all activities, material and machinery contained within an area that is as small as possible.                                    | Full                            | Housekeeping is on -going                                   |                    |
| Minimise the use of night-lighting.   | Full                            | Night-lighting is directly only at the working area.        |                    |
| RESPONSE TO ENVIRO  | NMENTAL POL                     | LUTION  |                    |
| In the event of environmental pollution, e.g. through spillages, immediately stop the activity causing the problem.   | Full                            | Spillages will be cleaned according to Oil Spill Management |                    |
| Only resume activity once the problem has been stopped or (in the case of spillages) the pollutant can be captured.   | Full                            |   |                    |
| Repair faulty equipment as soon as possible.  | Full                            |   |                    |
| Install additional bunding / containment structures around the equipment that was the source of the leak / spillage to prevent further incidents.                 | Full                            |   |                    |
| Treat hydrocarbon spills, e.g. during refuelling, with adequate absorbent material, which then needs to be disposed of at a suitable landfill.                    | n/a                             | No hydrocarbon spills noted during the site inspection      |                    |
| Ensure vehicles and equipment are in good working order and drivers and operators are trained with respect to actions to be taken in the case of a spill or leak. | Full                            |   |                    |
| SITE REHABILITATION, TEMPO  | DRARY CLOSUR                    | E & CLOSURE   |                    |
| Remove all construction equipment, vehicles, equipment, waste and surplus materials, including site offices, temporary fencing and other facilities, from         | n/a                             | Will be implemented when site closes.                       |                    |



<sup>•</sup> Environmental Impact Assessments • Basic Assessments • Environmental Management Planning • Environmental Control & Monitoring • Water Use License Applications • Aquatic Assessments

all works).

#### **March 2022** COMPLIANCE WITH THE EMPR AND EA Compliance Comments/ Full/Part/ Action to be taken **Observations** Non the site. Clean up and remove any spills and contaminated soil in the appropriate n/a manner. Ensure that no discarded materials are buried on site or on any other land not n/a designated for this purpose Ensure that affected areas are rehabilitated following construction. n/a Rehabilitate areas adjacent to the site (if disturbance is unavoidable) to at n/a least the same condition as was present prior to construction. Use harvested topsoil for rehabilitation following construction. n/a Appoint a suitably qualified professional to undertake or supervise n/a rehabilitation. Rehabilitate all project areas as soon as possible after completion of activities in each area, including removing and/or remediating any contaminated n/a soils. Replace harvested topsoil in areas that are to be rehabilitated as soon as sections of the works are completed (i.e. not only following the completion of n/a



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<sup>•</sup> Environmental Control & Monitoring • Water Use License Applications • Aquatic Assessments

| Section |            |
|---------|------------|
| 6       | Conclusion |

SES has compiled this Environmental Monitoring Report to detail compliance with the EA and EMPr for the site inspection conducted on 23 March 2022.

One partial compliance was noted during the site visit, with relation to Fire Fighting Equipment. Construction should continue to be undertaken in compliance with the EA and EMPr.



<sup>•</sup> Environmental Impact Assessments • Basic Assessments • Environmental Management Planning

<sup>•</sup> Environmental Control & Monitoring • Water Use License Applications • Aquatic Assessments