Eskom	Scope of Works	Arnot Power Station

Title:	**Provision of an Approved Professional Person for Dam Safety Surveillance and Related Professional Services for Dams at Arnot Power Station**	Unique Identifier:	**AEP 0166**
		Alternative Reference Number:	**N/A**
		Area of Applicability:	**Eskom Holdings SOC Ltd**
		Documentation Type:	**Engineering**
		Revision:	**0**
		Total Pages:	**24**
		Next Review Date:	**N/A**
		Disclosure Classification:	**CONTROLLED DISCLOSURE**

Compiled by	Supported by	Functional Responsibility	Authorised by
.....	.....	.....	.....
A Tsitsa	**T Menziwa**	**C Mosehla**	**T Mokgatle**
Civil Engineer	**Civil Engineer**	**Auxiliary Engineering Manager**	**Engineering Manager**
Date: 14/01/2026	Date: 19/01/2026	Date: 19/01/2026	Date: 20/01/2026
.....	.....	.....	.....

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

CONTENTS

Page

1. DESCRIPTION OF THE *SERVICES*.....3

1.1 EXECUTIVE OVERVIEW.....3
1.2 INTERPRETATION AND TERMINOLOGY.....3
1.2.1 Definitions.....3
1.2.2 Abbreviations.....5

2. SPECIFICATION AND DESCRIPTION OF THE RELATED DAMS.....6

2.1 DESCRIPTION OF VARIOUS DAMS.....6
2.1.1 Station's Drains.....6
2.1.2 Sewage Plant Maturation Ponds.....6
2.1.3 Ash Dams.....6
2.1.4 AWR Low Level Dams.....8
2.1.5 AWR High Level Dams.....8
2.1.6 Raw Water Reservoirs.....8
2.1.7 Coal Stock Yard Dam.....8

3. SCOPE OF WORKS FOR PROFESSIONAL SERVICES FOR ARNOT PS DAMS.....9

3.1 ALL DAMS (ASH DAMS, AWRS, SCHOEMAN DAMS AND STATION DRAIN).....10
3.2 DESIGN AND/OR MODIFICATIONS.....10
3.3 ARNOT POWER STATION ASH DAM.....11
3.3.1 Regulatory Compliance & Guidance.....11
3.3.2 Monitoring and Surveillance.....12
3.4 TECHNICAL SUPPORT & ADVICE.....13
3.5 OPERATIONAL STRATEGY & LIFECYCLE MANAGEMENT.....13
3.6 DAM SAFETY EVALUATIONS & RISK ASSESSMENTS.....14
3.7 EMERGENCY PREPAREDNESS.....15
3.8 ASH WATER RETURN DAMS AND STATION DRAINS.....15
3.9 CLOSURE PLANNING.....16
3.10 SKILLS TRANSFER.....16

4. CONSTRAINTS ON HOW THE CONSULTANT PROVIDES THE SERVICES.....17

4.1 REGULATIONS AND POLICIES.....17
4.2 MANAGEMENT MEETINGS.....17
4.3 CONSULTANT'S KEY PERSONS.....17
4.4 PROVISION OF BONDS AND GUARANTEES.....17
4.5 DOCUMENTATION CONTROL AND RETENTION.....17
4.5.1 Identification and communication.....17
4.5.2 Retention of documents.....18
4.6 INVOICING AND PAYMENT.....18
4.7 QUALITY MANAGEMENT.....18
4.7.1 System requirements.....18
4.7.2 Information in the quality plan.....18
4.8 THE PARTIES USE OF MATERIAL PROVIDED BY THE *CONSULTANT*.....18
4.8.1 *Employer*'s purpose for the material.....18
4.9 HEALTH AND SAFETY.....18
4.10 WORKING ON THE *EMPLOYER*'S PROPERTY.....20
4.10.1 People restrictions, hours of work, conduct and records.....20

5. LIST OF DRAWINGS.....21

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

1. DESCRIPTION OF THE *SERVICES*

1.1 EXECUTIVE OVERVIEW

Arnot Power Station requires a *Consultant* to render professional services to ensure that the design, construction, monitoring, operation, performance, and maintenance of the ash dam complex and associated Ash Water Return Dams comply with the requirements of the National Water Act (NWA) Chapter 12 and Regulation GNR 139, acceptable dam engineering practices, statutory requirements, and industry standards such as SANS 0286, GISTM (2020), SANCOLD Guidelines, and ICOLD Bulletin 181.

The Scope of Works includes regulatory compliance, dam safety evaluations, aerial surveys, ongoing monitoring and surveillance, dam break analysis, flood frequency analysis, geotechnical investigations, and lifecycle and operational planning to ensure long-term stability and operational reliability. The *Consultant* shall be team of persons that are professionally registered with the Engineering Council of South Africa, led by an Approved Professional Person(s) authorised to carry out the tasks as stipulated in the Scope of Works.

The *Consultant* shall provide technical advice, skills transfer, and mentorship to Eskom engineers, review operations and maintenance manuals, and oversee deposition and structural integrity. Design and remedial works, optimisation of ash deposition systems, hydraulic and stormwater management, and emergency preparedness shall be included, with all designs submitted to the DWS Dam Safety Office as required. Reporting, risk assessment, and ongoing professional oversight shall ensure that the ash dams and associated facilities operate safely, efficiently, and in compliance with all legal and technical standards.

1.2 INTERPRETATION AND TERMINOLOGY

The following abbreviations and definitions are used in this Scope:

1.2.1 Definitions

Definition	Description
Approved Professional Person	A person registered as a Professional Person with the Engineering Council of South Africa (ECSA) in terms of the Engineering Profession of South Africa Act, 1990 (Act No. 114 of 1990) and approved by the Minister of the Department of Water & Sanitation as an APP after consultation with ECSA, and has sufficient experience of the type of dam and of the size, complexity and safety classification of the facility or the environmental conditions (or both) pertaining to the specific project.
Ash Water Return Dams	Water retaining dams that store decanted supernatant water from the surface of the Ash Dams.
Consultant	A person or company that undertakes a contract to provide professional services to their clients.
Dam Break Analysis	Technical analysis assessing the potential consequences of a dam failure, including inundation mapping and impact assessment.
Dam Safety Office	Regulatory authority within the Department of Water and Sanitation responsible for dam safety oversight.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

Emergency Preparedness Plan	Formal document that identifies potential emergency conditions at a dam and which specify pre-planned actions to be followed to minimise loss of life, damage to property and adverse effects on resource quality.
Eskom Engineer/ Professional Engineer	Eskom employed Professional/Candidate civil engineer assigned to some or all Arnot Power Station dams for monitoring, oversight, and coordination.
Global Industry Standard on Tailings Management	International standard outlining best practice for tailings facility management which strives to achieve the ultimate goal of zero harm to people and the environment with zero tolerance for human fatality. It requires Operators to take responsibility and prioritise the safety of tailings facilities, through all phases of a facility's lifecycle, including closure and post-closure. It also requires the disclosure of relevant information to support public accountability.
GoldSim	Dynamic simulation software used for water balance modelling, risk analysis, and tailings facility management.
Professional team	One or more persons with expertise in disciplines in which expertise is required, and which disciplines have been determined by the approved professional person concerned with the concurrence of the Department of Water and Sanitation Director-General. And who after submission of particulars of their names, qualifications and professional experience have been approved by the Department of Water and Sanitation Director-General.
SANS 10286	South African Code of Practice for Mine Residue Deposits – includes dam classification, design, safety, and risk management practices.
Satellite Surface Movement	Monitoring of dam deformation or settlement using satellite technology.
Visual Basic	Programming language used for developing automated models in Excel spreadsheets, such as stochastic water balance models.
Dam with a safety risk	A Dam which can contain, store or dam more than 50 000 m³ of water, whether that water contains any substance or not, and has a vertical wall height of more than 5 m or has been declared to be a dam with a safety risk by the Department of Water & Sanitation Minister in terms of Section 118(2) or 118(3a) of the NWA.
Rate of Rise	The rate at which the water level or ash deposition height increases within the dam, typically measured in meters per day or year.
Piezometer	Instrument installed within the dam embankment or foundation to measure pore water pressure for stability monitoring.
Inclinometer	Instrument used to measure lateral movement or deformation within the embankment or foundation.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

1.2.2 Abbreviations

Abbreviation	Definition
APP	Approved Professional Person
AWRD	Ash Water Return Dam
DSE	Dam Safety Evaluation
DSO	Dam Safety Office
DWS	Department of Water and Sanitation
ECM	Engineering Change Management Procedure
ECSA	Engineering Council of South Africa
EPP	Emergency Preparedness Plan
GISTM	Global Industry Standard on Tailings Management
GNR	Government National Regulation
HLAWRD	High Level Ash Water Return Dam
InSAR	Interferometric Synthetic Aperture Radar
IR	Infrared
IWUL	Integrated Water Use Licence
LLAWRD	Low Level Ash Water Return Dam
NEMA	National Environmental Management Act
NEMWA	National Environmental Management Waste Act
NWA	National Water Act, 1998 (Act No. 36 of 1998)
OMM	Operations and Maintenance Manual
SACPCMP	South African Council for Project and Construction Management Professionals
SANCOLD	South African National Council on Large Dams
SANS	South African National Standards
SHEQ	Safety Health Environmental Quality
SMM	Satellite Surface Movement
SoW	Scope of Work

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

2. SPECIFICATION AND DESCRIPTION OF THE RELATED DAMS

2.1 DESCRIPTION OF VARIOUS DAMS

Arnot Power Station has 6 dam complexes in and around the station. These are:

2.1.1 Station's Drains

The Station Drains are situated on the North Western side of the station. The Station Drains ponds (dams) house polluted water. The polluted water originate from underground drain tunnels in and around the Power Station. About 50% of the stormwater also enters these dams having run over dirty areas. The rest is diverted directly to the environment and do not form part of the Station Drains i.e. Clean surface runoff emanating from the switch yard is diverted along the southern perimeter of the dam through a pipe culvert to be discharged downstream of the dam wall.

2.1.2 Sewage Plant Maturation Ponds

There are three maturation ponds. The water enters the 1st pond at the one end and is allowed to flow through the entire length of the pond and the 1st pond outlet is also the 2nd ponds inlet and the same for pond no3. The ponds are situated on the south of the Sewage Plant and serves as third stage processing, processing effluent from the bio filter and secondary treatment for the polishing of the final effluent. An Aerobic environment is created on the ponds. Typically the embankment slopes of the ponds range from 1:3 and 1:4 and should be kept clean to avoid breeding of mosquitoes. These dams are not often used.

2.1.3 Ash Dams

The ash disposal facility, Ash Dam, is situated approximately 1,5 km to the south-east of the Power Station in the Rietkuilspruit valley between 25°57' and 25°59' South and 29°47' and 29°49' East. The ash dam complex (including the silt trap and the ash water return dams) covers a total area of approximately 200 hectares.

The site was chosen because of the absence of major coal deposits in the immediate area. The dam was constructed between and across the upper tributaries of the Rietkuilspruit. The two tributaries were diverted to make the site suitable for ashing. These diversions form part of the complex and responsibility of the *Consultant.*

The following design parameters are applicable to the ash disposal facility:

Bulk density of deposited ash	1.5 ton/m^3
Dry density of deposited ash	0.95 ton/m^3
Approximate ash to water ratio by mass for fly ash slurry	1:4 to 1:7
Approximate ash to water ratio by mass for coarse ash slurry	1:4 to 1:7
Quality of ash water for release into a public stream	unsuitable
Maximum design elevation of ash dams	1706 m.a.m.s.l
Percentage ash from coal burnt	24 - 30%

Due to the size and life expectancy of the ash dam, the civil works have been split into three phases. This has had the advantage of postponing capital expenditure and allowed the performance of the dam to be monitored in the interim.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

1) Phase One - Ash Dam 1

There is no information available on the original design of Ash Dam 1 and many assumptions therefore have to be made.

The original ash dam, Ash Dam 1, was constructed on the north western portion of the ash disposal facility complex. The dam was constructed to a maximum height of 32 m, on its southern side. During this time an ash terrace was constructed to the south and east of the Ash Dam 1, on which the Ash Water Return Dams were established. The terrace was later also used as a "starter platform" for Ash Dam 2.

Ash deposition on Ash Dam 1 was reduced early in 1990 and eventually stopped in April 1992 to allow the construction of Ash Dam 2. Flamingo pan construction commenced during 1996 and developed to the stage that its height is currently above that of ash dam 2.

Ash dam 1 was re-commissioned during 2001 to reduce the rate of rise on Flamingo pan and ash dam 2. This was done in preparation of the planned filter drain installation.

Research by Megawatt Park led to the final decision that filter drains does not contribute to the dam stability and therefore does not warrant this expenditure. During the beginning of 2003 it was decided in Arnot Technical Forum not to install filter drains but rather to reduce the wall slope. Ash deposition on dam 1 has been reduced to the absolute minimum at the end of 2004 with only occasional depositions taking place to reduce dust and to cater for blocked ash deposition lines at the other areas. Deposition on Flamingo pan and dam 2 is currently the main focus areas of the ash dam complex. This has now become more common due to the availability of ash lines.

2) Phase Two - Ash Dam 2

Construction of the second phase of the ash disposal facility, ash dam 2, began in 1989 with the installation of a main filter drainage system, followed by the construction of starter walls. The main filter drains were installed behind the day wall on the original ash terrace.

Unfortunately, the addition of Ash Dam 2 to the ash disposal facility has resulted in the ash dam complex becoming elongated and irregular in plan. This has resulted in a higher perimeter to stored volume ratio with the consequent higher associated wall building costs than for the more regular shaped ash dam.

The irregular shape of the combined dam complex will make it more difficult to control the position of the pool of water on top of the ash dams. However, both these negative factors may be mitigated by means of "rationalization" of the perimeter walls and the correct location of any new penstock inlet.

During 1996 a permanent penstock was installed on ash dam 2, situated in the far western side about 50 meters east of dam 1. This penstock has two inflows that cater for better inflow control. One of the inflows has since been blocked off. The old penstock was sealed during 1998 when the new facility was put into service. This penstock has also blocked and a new penstock project is now underway with the designs completed.

3) Phase Three - Flamingo Pan

Initially the third phase, ashing into Flamingo Pan would only have had to come into operation if Dam 1 and Dam 2 did not have sufficient capacity to cater for the operating life of the power station. It has since been decided that the area provided by Flamingo Pan will be required for ashing. Ash was deposited into Flamingo Pan in order to fill the Pan up to the natural ground level. Daywall construction started during 2000 on this complex and will continue until it reached the same height as dam 1 where after it will be operated as one complex.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

2.1.4 AWR Low Level Dams

AWRD 1 collects water from the penstocks on the ash dams. The optimum operating level of the dam must however remain at 2m, i.e. at a level of 1633,5 m.a.m.s.l. The water level is therefore to be kept as close to 1633,5 m.a.m.s.l during normal operating conditions as possible. This will allow an extra emergency capacity of 0,8m plus the minimum required freeboard of 0,8m. The water level in the dam is controlled by means of a penstock outlet. Water from this dam is decanted into either AWRD 2A or 2B.

The prime objectives of the operation of the AWRD 1 is:

- To prevent spillage of polluted water into the natural environment.
- To have sufficient storage capacity for stormwater runoff from large storms.
- To minimize the need for make-up water for ashing at the station by having sufficient water in the ash water return dam.

AWRD 2A or 2B in turn provides suction to the AWR pumps and thus need to be full in order to provide maximum suction head. These pumps provide water to the AWR High Level Dams.

2.1.5 AWR High Level Dams

There are 4 AWR High Level dams. They gravity feed into the station. They provide ashing water to various pumps inside the station. This water will transport more ash to the ash dam complex. This is a closed system to ensure that polluted water does not enter the ground or river courses.

2.1.6 Raw Water Reservoirs

The source for the station's raw water is the Komati River via three catchment's dams along the river, Nooitgedaght Dam, Bosloop Weir and Vygeboom dam. From these the water is pumped to the two buffer dams or reservoirs. The formation of Arnot Power Station Raw Water dam is a natural depression on the ground (Pan) with a constructed dividing wall separating the dam into two equal halves. The dam has a combined storage capacity of ± 100 Million Gallons (about 380Ml) volume of water. The dividing wall is a three part wall, the clay inner core with a slope of 1:0,5 compacted to 90% MOD AASHO Density, a fill material on either side of the inner core compacted to 95% MOD AASHO and the outer layer comprises of crusher run stone, 2" rolled to form a tight 6" layer similar to road base material. On the Eastern side of the dam are two control towers situated on either side of the divisional wall.

2.1.7 Coal Stockyard Pollution Control Dam

The pollution control dams collect water from the drainage system of the coal stockyard that is conveyed to the dams by means a trench (snake trench). These dams are a collection of two earth-filled ponds and one earth-filled dam. The first two pond are silt traps, where most of the suspended particles are allowed to settle before inflowing to the third final dam where water is recovered to the Station Drains Dams. These dams are found outside the station next to the Mafube conveyor belt from the mine.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

3. SCOPE OF WORKS FOR PROFESSIONAL SERVICES FOR ARNOT PS DAMS

The *Consultant* shall provide professional services for dam safety management and related engineering works as defined in this Scope. The services are divided into two distinct packages:

Package A – Approved Professional Person Functions

- Appointment and execution of duties as the Approved Professional Person (APP) under GNR139 National Water Act (36/1998): Regulations: Safety of dams, including oversight, sign-off, and statutory submissions to the Department of Water and Sanitation (DWS).
- Coordination with *Eskom Engineers* and internal staff in executing dam safety surveillance and inspections.
- Certification of dam safety reports and surveillance documentation.

Package B – Professional Team Services

- Provision of multidisciplinary professional services (civil, hydraulic, geotechnical, hydrological, structural) to support the Approved Professional Person and Eskom Engineer as required.
- These services include design and operation support, technical investigations, monitoring data analysis, dam breach studies, and engineering input to dam safety risk assessments.

Eskom may, at its discretion, instruct the *Consultant* to perform either Package A or Package B services, or a combination thereof, as required. Where *Eskom* undertakes portions of the work using its own *Engineer(s)*, the corresponding activities under this Scope shall be deemed not required, and no payment shall be due for those services. This is excluding work that may be completed during the secondment or supervision of an *Eskom Engineer*.

The duties and responsibilities will include but not, limited to the following:

In line with the requirements tabled in Chapter 12 of the NWA and its regulation GNR139, as well as SANS 10286, the dam owner (Arnot Power Station General Manager) is required to appoint Approved Professional Person(s) (APP) to assist in the ongoing management and safe operations of Category II Earth Embankment Ash Water Dams & Category III Ash Dams with a Safety Risk at Arnot Power Station.

The APP(s) are to take full Professional responsibility for appointed tasks at the Power Station Ash Dams and Ash Water Return Dams and related facilities, as described in the National Water Act and Government National Regulation 139 and SANS 10286. For Category II or III categorized facilities, each task for Design and Quality Control or Evaluation must be separately applied for authorization by DWS-DSO by the APP, before any work may commence, except for emergency circumstances affecting the safety of the facility.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

3.1 ALL DAMS (ASH DAMS, AWRS, SCHOEMAN DAMS AND STATION DRAIN)

- The *Consultant* shall confirm whether the associated dams with a 'Safety Risk' are duly registered and comply with the requirements of the National Water Act (NWA) Chapter 12 and Regulation GNR 139. If any dam is found to be operating without the required registration or without a valid Licence to Construct, Impound or Enlarge (as applicable), the *Consultant* shall appoint the relevant APP to undertake a Design Review of the existing design, drawings, and related documentation particularly where these were completed prior to the implementation of the NWA and GNR 139. The reviewed and updated design, drawings, and documentation must be signed off by the APP (and the Professional Team in the case of Category III dams) and submitted to the DWS-DSO for approval and issuance of the applicable licence under the NWA.
- The *Consultant* shall ensure that dams across the ash dam complex with a 'Safety Risk' are registered on the DW 693E form issued by the DWS.
- The *Consultant* shall, as part of the Dam Safety Inspections for the dam complex, identify all dams that meet the definition of a "Dam with a Safety Risk" and register the respective dam with the DWS: DSO.
- The *Consultant* shall conduct an annual dam safety inspection on the Coal Stockyard Pollution Control Dam.
- The *Consultant* shall conduct 1:50 and 1:100-year flood lines for Arnot Power station in accordance with the requirements of the National Water Act. Moreover, indicate wetlands on the drawings (DWG, KML files etc.) and delineates these on site with wooden poles marked in yellow and orange.
- The *Consultant* reviews the pollution reports from the bore hole monitoring and creates a ground water pollution plume.
- The *Consultant* shall carry out a 5-yearly Dam Safety Evaluation for all dams with a 'Safety Risk' in accordance with the requirements of SANS 10286 and GNR139 National Water Act (36 of 1998): Regulations: Safety of dams except for the ash dam, which must be evaluated every 3 years.
- The *Consultant* should ensure the professional team that they provide for the completion of tasks for the Category II ash dam is also skilled in the provision of support for the compilation of Category I/II or smaller AWR dams.
- The *Consultant* shall advise *Eskom* on any assumptions that may have been made to support the findings and recommendations contained in the previous dam safety evaluations, that require an update and/or improvement.
- The *Consultant* shall provide feedback on engagements with the DSO and other relevant authorities, including matters related to failures, emergency activities, notifications, new legislation, and any developments within the dam safety and management space.

3.2 DESIGN AND/OR MODIFICATIONS

- Provide professional advice and develop appropriate strategies or designs to ensure the long-term structural integrity and stability of the ash dam and AWRs. The designs shall cover AWR pump house structures/sumps, hydraulics, stormwater management, access roads, and other ancillary structures. All strategies and/or designs shall include design reports, technical specifications, drawings, and construction recommendations to ensure structural stability in compliance with dam safety standards, and operational reliability.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

- Provide designs and drawings for the replacement of the existing dirty water channel, as well as new channels on the south and west sides. An additional channel shall be designed along the dam slope to prevent the dirty water system from becoming excessively large. All channel designs must consider the final dam height and incorporate stormwater management provisions aligned with the step-in elevations for future implementation as the dam rises.
- The *Consultant* shall provide a detailed design for the roads on the ash dam. The design includes the road for the planned 14 m step-in and includes the layout of the new 14 m step-in and a dirty water channel.
- The *Consultant* shall Identify new works or modifications needed for the Category I, II (Ash Return Water Dams) or III Ash Dam (e.g. new penstock, horizontal seepage drains) based on the monthly inspections and Dam Safety Evaluations. The design of these new works or modifications to the ash dam will be handled as a separate task based on the suitable APP (and Professional Team in the case of Category III) for Design and Construction Quality Control.
- The *Consultant* may not use the authorisation of an APP that is registered for Evaluation to carry out work related to Design and Quality Control, except in the event where an application to conduct such work has been sent to DSO.
- The *Consultant* shall submit the APP approved design(s) to the DSO for approval and issuance of a Licence to Construct, before any construction may start (except in emergency circumstances affecting the safety of the dam, where an immediate response is needed to prevent failure of the facility or spillage of contaminated water. In such a case, the DSO must be informed of the emergency and repair / modification within 7 days.).
- Provide support for tasks related to the requirements of the Integrated Water Use Licence (IWUL). This may include but not limited to, provision of designs, as-built drawings, models, detailed reports etc.
- The *Consultant* shall design a new filter drain system for the ash dam complex. The designs are to be implemented 2 years after the designs have been submitted to the Client and Approved by DSO.
- The *Consultant* shall develop an outlet drain numbering system and prepare a layout drawing showing the positions and function of the drains, based on the original design drawings and any new drains (e.g. main drain, toe drain, horizontal drain).

3.3 ARNOT POWER STATION ASH DAM

3.3.1 Regulatory Compliance & Guidance

- The *Consultant* must provide ongoing guidance to Arnot Power Station on requirements of SANS 0286, Global Industry Standard on Tailings Management (2020), ICOLD Bulletin 181, to ensure compliance at all aspects and keep up to date with Dam Safety Office regulations.
- The dam must be operated and maintained in a responsible manner. The *Consultant* shall visit and conduct physical monthly inspections at the ash dams and chair the monthly dam safety surveillance meetings to discuss findings, required actions, responsibilities, operation and maintenance of the ash dams.
- The *Consultant* shall perform ad-hoc investigations in accordance with the Employer's instructions to assess and recommend improvements to the operation of the ash dam. This

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

includes on-site inspections, physical oversight of the dam and associated infrastructure, and preparation of technical reports documenting findings.

- Prior to the commencement of any alterations, repairs, or remedial works on the ash dam, the *Consultant* shall obtain all necessary regulatory approvals or written authorization/confirmation from the Regional Director of the relevant region of the Department of Water and Sanitation (DWS). No construction or modification activities shall commence until such approvals are secured, and evidence of compliance shall be provided to *Eskom*.
- The *Consultant* shall on behalf of *Eskom* apply for Licence to Enlarge the ash dam in correspondence with the projected operation of the facility as determined by the *Eskom Engineer*. The *Consultant* shall appoint the relevant APP to undertake a Design Review of the existing design, drawings, and related documentation particularly where these were completed prior to the implementation of the NWA and GNR 139. The reviewed and updated design, drawings, and documentation must be signed off by the APP (and the Professional Team in the case of Category III dams) and submitted to the DWS-DSO for approval and issuance of the applicable licence under the NWA.

3.3.2 Monitoring and Surveillance

- The *Consultant* shall prepare monthly inspection reports for the Ash Dam and the identified Ash Water Return Dams. The monthly Ash Dam Inspection Report shall, at a minimum, comprise on-site inspection findings and a review of the following: Access Roads, Solution Trench, Penstock Management, Ash Deposition Points, Seepage Monitoring, Stability, Phreatic Surface, Rainfall Data, Rehabilitation Plan, Other Waste Disposal, Groundwater Monitoring, Pool Levels and Extents, Policies & Legislation, Facility Risks, and Design Intent & Operating Manual Compliance.
- The *Consultant* shall establish three (3) permanent benchmarks to provide consistent datum reference points for all survey work.
- Carry out an aerial survey annually with details as determined by the *Eskom Dams Professional Engineer*. The *Consultant* shall assess the following but not limited to, the remaining capacity of the Ash dam, as-built wall geometry and freeboard levels.
- The *Consultant* shall compile a report signed off by a Professional Surveyor on the geometry and levels of the dam, including wall crest levels and widths, beach slopes, freeboard, penstock invert levels, and an assessment of design storage capacity compared to actual measured capacity.
- The *Consultant* shall compile a rate of rise study, life expectancy study and determine the current and maximum possible amount of supernatant water that can be stored on the facility.
- The *Consultant* shall review the current life cycle plan of the Ash Dam and develop an operational strategy in terms of the capacity and rate of rise of the ash dam.
- The *Consultant* shall establish a Satellite Surface Movement Monitoring InSAR baseline for the ash dam and provide (every 7 days) SMM InSAR acquisitions using X-band 8-12 GHz frequency range (2.5-3.75 cm wavelength range) to ±0.1cm accuracy.
- The *Consultant* shall conduct monthly Satellite Pool Position Monitoring from the acquisition of 50 cm or better orthorectified satellite imagery data. This includes processing of satellite imagery and integration into a change detection platform for monitoring the pool position. Only cloud free imagery (less than 15% cloud cover) to be produced.

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

- The *Consultant* shall conduct a monthly aerial thermal survey of the ash dam using high-resolution infrared (IR) imaging to detect temperature anomalies on the embankment surface and surrounding areas. The survey shall be capable of identifying zones of abnormal heat flux that may indicate seepage, internal saturation, or potential structural weaknesses.
- In addition, the *Consultant* shall provide a detailed scope of works and technical specification for the installation of inclinometers and vibrating wire piezometers at the ash dam. This shall include provision for continuous monitoring of lateral movements and porewater pressures, regular data downloading, interpretation, and reporting.
- The *Consultant* shall compile a detailed monthly monitoring report. Moreover, the *Consultant* shall provide oversight during the collection of monitoring data at the Ash Dam *Contractor* on a quarterly basis.
- Perform all minor modifications, including the preparation and updating of drawings, related to ash dam operations and other associated AWR earthfill embankment dams. These modifications shall apply to all works including those that require the approval of an Approved Professional Person (APP) in accordance with dam safety regulations for earth embankment/tailings dams.
- Provision of a Flood Frequency Analysis Report for the ash dam complex considering a variety of methodologies as per best practice Flood Frequency Estimation Methods.
- The *Consultant* shall perform high-pressure jet rodding followed by closed-circuit television (CCTV) inspections of all toe drain systems to assess condition and functionality.
- The *Consultant* shall design and install horizontal drains along the perimeter of the ash dam in areas of high seepage, as identified by the Approved Professional Person, to intercept seepage and improve drainage performance.
- The *Consultant* shall raise and upgrade the penstock in line with the ash dam's rate of rise to maintain operational and dam safety requirements.

3.4 TECHNICAL SUPPORT & ADVICE

- The *Consultant* shall assess and monitor the ash dam for signs of structural distress, including but not limited to cracking, wet spots on the downstream face, and critical settlement. Document observations and provide analysis, interpretations, and recommendations to address identified issues and maintain dam safety and operational reliability.
- The *Consultant* shall analyse the current and projected ash line configuration around the ash dam and provide recommendations.
- Provide professional advice and develop appropriate strategies or designs to ensure the long-term structural integrity and stability of the ash dam. The design shall include hydraulics, stormwater, roads and other ancillary structures. The strategies and/or designs shall include technical specifications, drawings, and construction recommendations to ensure structural stability in compliance with dam safety standards, and operational reliability.

3.5 OPERATIONAL STRATEGY & LIFECYCLE MANAGEMENT

- Review and update the Operation and Maintenance Manual of the Category II or III Ash Dams and Process Water Dams every 2 years, or when any critical changes to the dam's structure or operating requirements occur, in accordance with Chapter 12 of the NWA (and SANS 10286 in the case of the ash dams). The latest approved Eskom document EAP0064 Maintenance Execution Strategy for Civil & Structures must also be referred to.

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

- The updated manual shall reflect all relevant changes in ash dam operation procedures and shall be issued to the ash dam contractor to ensure that all activities are carried out in accordance with current operational requirements and standards. The *Consultant* should seek to identify practises, procedures, schematics etc that are of importance to improve and not simply issue a version of the OMM in a different format.
- The *Consultant* shall analyse the current and projected ash line configuration around the ash dam and provide recommendations. Produce updated drawings showing the new ashlines and proposed deposition points, marking problematic areas and maintaining records of ash line leaks and the performance of the ring feed system. The *Consultant* shall also prepare a bill of quantities for all required materials and components associated with the recommended configuration.
- Provide optimisation of the ash dam deposition ring feed system, including the evaluation and design of crossover configurations to improve ashing and dusting regimes. Furthermore, provide recommendations for operational efficiency and safe deposition.
- The *Consultant* shall develop a detailed lifecycle and deposition plan based on the yearly topographical survey and aligned with the configuration of the ring-feed deposition system, ensuring consistency with the approved life-cycle plan. The plan shall be carried out on Muk3D™, Bentley MicroStation or similar approved software. Additionally, the *Consultant* shall facilitate the compilation of a quarterly deposition report including timelines and percentage ashing and dusting splits for each paddock as referenced by each day wall to ensure that Dam 2 and Dam 3 reach their maximum height simultaneously.
- The *Consultant* shall develop and provide an interactive and continuous stochastic Water Balance Model in both the Excel spreadsheet environment, programmed in Visual Basic, as well as the GoldSim™ Modelling environment as determined by the complexity of the system.
- The *Consultant* shall verify whether the existing penstocks and ash deposition methods are sufficient for proper pool control on the existing and final height of the ash dams, in order to ensure the safe operation of the ash dam.
- Develop and assist in an overall operational strategy to coordinate activities between engineering, maintenance and operating functions related to the ash dam management. The *Consultant* shall review and update the Operations and Maintenance Manual every second year to ensure alignment with the latest operational, technical, and safety requirements.
- The *Consultant* shall review and approve all the procedures and checklists used or to be used by the appointed operations *Ash Dam Contractor* to ensure environmental, legal and safety compliance.

3.6 DAM SAFETY EVALUATIONS & RISK ASSESSMENTS

- The *Consultant* shall carry out a Comprehensive Dam Break Analysis (DBA) on the ash dam and identified Category I and II ash water dams including inundation maps showing the affected areas every 2 years. The *Consultant* does dam break studies for the following areas:
  a) Coal Stockpile Pollution Control Dams
  b) Ash Dam Complex which includes the AWR Low Level Dams
  c) Final Station Drains Dam
  d) Buffer Dam

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

- Compile a periodic (at least every 3 years) hazard potential and risk assessments of the Ash Dam complex, aligning with Department of Water and Sanitation Level-0 risk assessment, SANS 10286 Code of Practice for Mine Residue and GISTM's risk management requirements.
- Perform an annual slope stability analysis considering both Limit Equilibrium and Finite Element Methodologies using Slide2/RS2 or similar approved software, following the completion of an updated aerial survey. The analysis shall evaluate and quantify the stability conditions. The *Consultant* shall assess potential safety and environmental risks and provide a detailed report to *Eskom*, including findings, interpretation of results, and clear recommendations for corrective or preventive actions.
- Carry out a Geotechnical Investigation and Stability Analysis every 2 years or as and when required in the case of signs of instability. On an ongoing basis, ensure that the ash dam structural safety and stability is not compromised in any way by any action.
- Design appropriate remedial measure(s) to improve the slope stability of sections of the dam that are not deemed to meet the acceptable Factor of Safety of 1.3 for operational slopes,1.5 for post closure slopes and 1.1 for seismic analysis.
- The *Consultant* shall develop and document implementation strategies to address identified defects and potential defects affecting the stability and integrity of the ash dam and other associated dams to upgrade the dams to acceptable safety standards.
- The *Consultant* shall perform seepage analysis of the ash dam using Slide 2 or similar approved software. The analysis shall include the development of theoretical phreatic lines across critical cross-sections and identification of trigger levels for piezometers to support early warning and stability assessments.

3.7 EMERGENCY PREPAREDNESS

- The *Consultant* shall review, update, and maintain all existing Emergency Preparedness Procedures (EPPs) for the ash dam in accordance with the latest dam break studies, inundation mapping, and consequence assessments. This includes evaluating, recommending, and incorporating Eskom updates to emergency procedures, trigger levels, communication protocols, and stakeholder contact lists.

3.8 ASH WATER RETURN DAMS AND STATION DRAINS

- The C*onsultant* shall take full responsibility for reporting on the safe operation of the Ash water return dams 1, 2, 3 and 4 and river diversion at the toe of the dam.
- The *Consultant* shall provide as-built drawings for the Coal Stockpile Pollution Control Dam, River Diversion next to the ash dam, Final Station Drains Dam, Buffer dam, AWR Low Level Dams, AWR High Level Dams and the road crossing at the Ash Dam. The drawings include the capacity of each dam with and without the required 0,8 m freeboard.
- The *Consultant* shall carry out bathymetric survey of the LLAWR and HLAWRs every two years, or at frequency as determined by the *Eskom Engineer*. The Bathymetric Survey shall also include divers to assess the condition of silt around the Process Water Dam's intake structures.
- The *Consultant* shall provide designs for the provision of barrier liner and seepage cut-off system as promulgated by National Norms and Standards for Disposal of Waste to Landfill for the Coal Stockyard Pollution Control Dam (which includes the snake trench), Final Station Drains Dam, AWR Low Level and High-Level dams.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

- The *Consultant* shall provide a Professional Civil Engineer that performs the function of supervisor on the Coal Stockyard Pollution Control Dam and Ash Dam as envisaged in Arnot's Internal Water Use License.
- The Professional Civil Engineer shall be responsible for providing technical oversight and making recommendations on site-related issues as and when required, on a weekly basis or at a frequency dictated by the operational requirements of the site.
- The *Consultant* may identify additional Dirty water dams and related facilities that must also be inspected, monitored, evaluated, or modified to ensure continued safety and availability to the power station, even if they are not classified as Dams with a Safety Risk, due to their critical nature to the continued operation of the power station.

3.9 CLOSURE PLANNING

- The *Consultant* shall comply with Global Industry Standard on Tailings Management – Principle 5 and Section 40 of the Dam Safety Regulation GNR 139 in relation to closure, compile a closure plan and provide the application for a licence to decommission the ash dams. This will include the preparation of, but not limited to the DW697E application form, design report, project specifications, bill of quantities and engineering drawings for the closure of the facility.

3.10 SKILLS TRANSFER

- The *Consultant* shall facilitate effective knowledge transfer by making provision for the secondment of an *Eskom Engineer* to the Consultant's offices and construction sites, as and when required, to gain exposure to design processes, modelling tools, design reviews, multidisciplinary coordination, and project workflows. Secondments will be scheduled by mutual agreement and form part of the *Consultant's* contractual training obligations.
- The *Consultant* shall provide ongoing technical support and mentorship throughout the contract, including design reviews, professional guidance, recommendations, and corrective actions where necessary.
- This shall include providing guidance and support to the *Eskom Professional Dams Engineer* regarding the appropriate level of involvement (Level 3 and Level 2 as per DW691A and E) and nature of tasks required for registration as an *Approved Professional Person (APP).* The *Consultant* shall provide the necessary exposure for the *Eskom Professional Dams Engineer* to perform in a Professional Team for dams engineering tasks similar the scope of this contract (Design and Quality Control, and/or Evaluation). The confirmation of competence of the *Eskom Professional Dams Engineer* shall be the issuance of a letter detailing competence with reference to the task completed under the supervision of the *Approved Professional Person (APP).*
- The *Consultant* shall provide structured training and mentorship to the *Eskom Candidate Engineer* in line with Eskom's ECM process across all selected core competencies required for planning, design, and execution of civil engineering projects, including design, construction methodologies, monitoring, and project management, with the objective of equipping the *Eskom Candidate Engineer* to independently perform design and construction monitoring duties in line with industry best practice and applicable standards. The confirmation of competence of the *Eskom Candidate Engineer* shall be an ECSA Training and Experience Report.

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

4. CONSTRAINTS ON HOW THE CONSULTANT PROVIDES THE SERVICES.

4.1 REGULATIONS AND POLICIES

The *Consultant* must adhere to the following:

- Compliance with SHEQ Policy, Environmental Statement and Waste Water Management Plan
- Ensure all the facility are in compliance with GN 704 Regulation on Mining Water
- Compliance with Arnot's IWUL
- National Water Act, 1998
- Regulations Regarding The Safety of Dams in Terms of Section 123(1) of the National Water Act, 1998
- The South African National Standards
- All other legal requirements applicable

4.2 MANAGEMENT MEETINGS

Regular meetings of a general nature may be convened and chaired by the *Employer's Agent* as and when required. Records of these meetings shall be submitted to the *Employer's Agent* by the person convening the meeting within five days of the meeting.

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

4.3 CONSULTANT'S KEY PERSONS

An organogram must be submitted to indicate lines of communication in line with the services provided.

4.4 PROVISION OF BONDS AND GUARANTEES

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

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

4.5 DOCUMENTATION CONTROL AND RETENTION

4.5.1 Identification and communication

All contractual communications will be in the form of properly compiled letters or forms attached to emails and not as a message in the email itself. Any form of communication shall be directed to the *Employer's Agent* at all times.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

4.5.2 Retention of documents

The *Consultant* retains copies of drawings, specifications, reports and other documents which record the services in the form stated in the Scope. Note the time period for which the Consultant is to retain such documents is the period for retention stated in the Contract Data.

4.6 INVOICING AND PAYMENT

Clause 50.2 states invoices submitted by the *Consultant* include the details stated in the Scope to show how the amount due has been assessed.

The following details shall be shown on or attached to each Invoice to show how the amount due has been assessed:

The *Consultant* shall address the tax invoice to the *Employer* using the following email address: **invoiceseskomlocal@eskom.co.za** and include on it the following information:

- Name and address of the *Consultant* and the *Employer's Agent;*
- The contract number and title;
- *Consultant's* VAT registration number;
- The *Employer*'s VAT registration number 4740101508;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- (add other as required)

4.7 QUALITY MANAGEMENT

4.7.1 System requirements

Clause 40.1 requires that the *Consultant* operate a quality management system as stated in the Scope.

4.7.2 Information in the quality plan

Clause 40.2 requires that the *Consultant* provide a quality policy statement and quality plan which complies with requirements stated in the Scope.

4.8 THE PARTIES USE OF MATERIAL PROVIDED BY THE *CONSULTANT*

4.8.1 *Employer*'s purpose for the material

Clause 70.1 states that the Employer has the right to use the material provided by the *Consultant* for the purpose stated in the Scope.

4.9 HEALTH AND SAFETY

The *Consultant* shall at all times comply with the health and safety requirements prescribed by law as they may apply to the *service*s.

Compliance to 5 identified lifesaving rules (Compulsory Adherence):

Rule1: Open, Isolate, Test, Earth, Bond, and/or Insulate before touch

(That is, any plant operating above 1 000 V)

No person may work on any electrical network unless:

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

- He/she is trained and authorised as competent for the task to be done.
- A pre-task risk assessment to identify all risks and hazards has been conducted prior to any work commencing.
- An equipotential zone is created for each worker on the job site by earthling, bonding, and/or insulating according to approved procedures.
- All conducting material is connected together, all staff on site wear electrical safety shoes, and insulating techniques are applied according to standards; and
- The authorised person (team leader) has certified and shown all team members that the apparatus is safe to work on.

Rule 2: Hook up on heights

Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.

No person may work at height where there is a risk of falling unless:

- A pre-task risk assessment to identify all risks and hazards has been conducted prior to commencing any work at height;
- He/she is appropriately trained;
- He/she is appropriately secured during ascending and descending; and
- He/she is using an approved fall arrest system where applicable.

Rule 3: Buckle up

No person may drive any vehicle on Eskom business and/or on Eskom premises:

- Unless the driver and all passengers are wearing seat belts.

Rule 4: Be Sober

No person is allowed to work under the influence of drugs and alcohol.

"Under the influence" means the use of alcohol, drugs, and/or a controlled substance to the extent that:

- His individual faculties are in any way impaired by the consumption or use of the substances; or
- The individual is unable to perform in a safe, productive manner; or
- The individual has a level of any such substance in his/her body that corresponds to or exceeds accepted medical/legal standards; or
- The individual has a level of alcohol in his/her body that is greater than 0% blood alcohol concentration.

This includes any level of an illegal substance in the body, irrespective of when the substance was used.

Rule 5: Ensure that you have a permit to work

Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW), which is governed by the Plant Safety Regulations, Operating Regulations for High Voltage Systems (ORHVS) etc.

- No plant is to be returned to service without the cancellation of all permits on that plant in accordance with procedure.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

NB: in the case of live work, a "live work declaration form" is to be completed by the authorised person who is the person responsible for the safe execution of work according to relevant standards and procedures.

Please ensure that these rules are understood and communicated with the urgency that they deserve. If any of these rules are unclear or the consequences not understood, please do not hesitate to discuss it with Eskom.

We would like to continue our current partnership and therefore urge your support in the implementation and upholding of these rules.

4.10 WORKING ON THE *EMPLOYER*'S PROPERTY

This part of the Scope addresses constraints, facilities, services and rules applicable to the *Consultant* whilst he is doing work on the *Employer*'s property.

4.10.1 People restrictions, hours of work, conduct and records

It is very important that the *Consultant* keeps records of his people working on the *Employer*'s property, including those of his Subconsultants. The *Employer's Agent* shall have access to these records at any time. These records may be needed when assessing compensation events.

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

5. LIST OF DRAWINGS

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

TITLE	DRAWING NO
ARNOT POWER STATION ASH RETURN WATER RESERVOIR OVERFLOW CHAMBER DETAILS	0.41/403
ARNOT POWER STATION ASH DAM ASH WATER RETURN DAM 6 G.A. OF TEMPORARY PENSTOCK PLATFORM & HOIST	0.41/24526
ARNOT POWER STATION ASH DAM ASH WATER RETURN DAM 5 G.A. OF TEMPORARY PENSTOCK PLATFORM & HOIST	0.41/24524
ASH DAM SEEPAGE RECOVERY NEW DAM LAYOUT AND DETAILS	0.41/18478
LAYOUT AND DETAILS OF NEW HIGH-LEVEL RESERVOIR	0.41/18149
DAM WALL TYPICAL SECTIONS & DETAILS	26.41/38530
DAM DETAIL LAYOUT PLAN	26.41/38529
ARNOT POWER STATION STORM WATER RUNOFF DAM AND PIPELINE STORM WATER DAMS LAYOUT	26.41/38072
LAYOUT & DETAILS OF NEW STORMWATER CATCH DAM	0.41/18365
ELECTRICAL LAYOUT OF LOWER A.W.R DAM	0.41/18443
ARNOT POWER STATION RAW WATER RESERVOIR PIPING LAYOUT	0.41/1094
ARNOT POWER STATION 100 MILLION GALLON RAW WATER RESERVOIR LAYOUT AND DETAILS	26.41/38528
POLLUTION CONTROL DAM AT STATION DRAINS GENERAL LAYOUT PLAN	26.41/38528
LAYOUT AND DETAILS OF STATION DRAIN TRAP DAMS & S/W CATCH DAM	0.41/18143
ARNOT POWER STATION WET ASH DAM RING FEED SYSTEM PRELIMINARY LAYOUT	0.41/20066
ARNOT POWER STATION ASH HANDLING PLANT DAMS & PIPING LAYOUT	0.41/657
ELECTRICAL LAYOUT OF LOWER A.W.R. DAM	0.41/18443
ASH WATER RETURN RESERVOIR LAYOUT	0.41/402
NEW 160ML ASH WATER RETURN DAM LAYOUT	26.41/
NEW 160ML ASH WATER RETURN DAM SECTIONS	26.41/
NEW 160ML ASH WATER RETURN DAM DAM OUTLET: LAYOUT	26.41/

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

TITLE	DRAWING NO
NEW 160ML ASH WATER RETURN DAM DAM OUTLET: SECTIONS	26.41/
NEW 160ML ASH WATER RETURN DAM DAM OUTLET: INTAKE	26.41/
NEW 160ML ASH WATER RETURN DAM DAM OUTLET: OVERFLOW CHAMBER	26.41/
NEW 160ML ASH WATER RETURN DAM DAM OUTLET: OVERFLOW CHAMBER SECTIONS	26.41/
NEW 160ML ASH WATER RETURN DAM HERRINGBORNE DRAINAGE SYSTEM: LAYOUT	26.41/
NEW 160ML ASH WATER RETURN DAM HERRINGBORNE DRAINAGE SYSTEM: SECTIONS	26.41/
NEW 160ML ASH WATER RETURN DAM HERRINGBORNE DRAINAGE SYSTEM: SECTIONS	26.41/
NEW 160ML ASH WATER RETURN DAM DAM INLET: PIPELINE LAYOUT	26.41/
NEW 160ML ASH WATER RETURN DAM DAM INLET: PIPEWORK DETAIL OF NEW CONNECTION	26.41/
NEW 160ML ASH WATER RETURN DAM DAM INLET: PIPEWORK SECTION AND DETAIL OF NEW CONNECTION	26.41/
NEW 160ML ASH WATER RETURN DAM DAM INLET: PIPEWORK SECTION AND DETAIL INLET STRUCTURE	26.41/
NEW 160ML ASH WATER RETURN DAM DAM INLET: PIPE SCHEDULE	26.41/
WATER POLLUTION CONTROL LAYOUT AND DETAILS OF ASH DAM SEEPAGE RECOVERY NEW DAM	0.41/18478
ASH DISPOSAL PLANT WET ASH DAM - GROWTH OF ASH DAM AND STAGE CAPACITY CURVES	0.41/19903
WET ASH DAM GROWTH OF ASH DAM AND STAGE CAPACITY CURVE	0.41/19903
ASH HANDLING PLANT WET ASH DAM - TEMPORARY PENSTOCK SCHEDULE OF REINFORCEMENT	0.41/20059
ASH HANDLING PLANT WET ASH DAM - TEMPORARY PENSTOCK DETAILS OF REINFORCEMENT	0.41/20060
ASH HANDLING PLANT WET ASH DAM -TEMPORARY PENSTOCK FOR REMEDIAL WORKS	0.41/20061
ASH HANDLING PLANT WET ASH DAM - LAYOUT OF PRELIMINARY RINGFEED SYSTEM	0.41/2006
ASH HANDLING PLANT - SOUTH ASH DAMS REMEDIAL WORKS PLAN AND LONG SECTION OF FILTER DRAIN AND SOLUTION TRENCH	0.41/21009/001
ASH HANDLING PLANT - SOUTH ASH DAMS REMEDIAL DETAILS AND SECTIONS OF FILTER DRAIN AND SOLUTION TRENCH	0.41/21009/002

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

TITLE	DRAWING NO
ASH HANDLING PLANT - WET ASH DAM LAYOUT DETAILS AND SECTIONS OF MAIN PANSTOCK PLAN ON INLET DECANT BOX	0.41/21420/001
ASH HANDLING PLANT - WET ASH DAM MAIN PENSTOCK INLET DECANT BOX DETAILS OF REINFORCING AND BENDING SCHEDULE	0.41/21420/002
WET ASH DAM MAIN PENSTOCK ENERGY DISSIPATOR STRUCTURES LAYOUT AND DETAILS OF CONCRETE	0.41/21420/003
ASH HANDLING PLANT WET ASH DAM - MAIN PENSTOCK ENERGY DISSIPATOR STRUCTURES PANELS A, B AND C DETAILS OF REINFORCEMENT	0.41/21420/004
ASH HANDLING PLANT WET ASH DAM - MAIN PENSTOCK ENERGY DISSIPATOR STRUCTURES PANELS D, E AND F DETAILS OF REINFORCEMENT	0.41/21420/005
ASH HANDLING PLANT WET ASH DAM MAIN PENSTOCK ENERGY DISSIPATOR STRUCTURES SCHEDULE OF REINFORCEMENT	0.41/21420/006
ASH HANDLING PLANT - ASH DAM GENERAL ARRANGEMENT OF ASH WATER RECOVERY PUMP STATION	0.41/24297
ASH HANDLING PLANT ASH DAM - ASH WATER RECOVERY PUMP STATION GENERAL ARRANGEMENT OF PIPING	0.41/24298
ASH DAM - ASH WATER RETURN DAM 2 TEMPORARY PENSTOCK MOVEABLE PLATFORMS AND MODULE DETAILS	0.41/35420
ASH HANDLING PLANT - SOUTH KEY PLAN AND DETAILS OF ASH PIPE TRENCHES	0.41/12356/001
ASH HANDLING PLANT - SOUTH ASH PIPE TRENCHES SCHEDULE OF REINFORCEMENT	0.41/12362/001
ASH HANDLING PLANT - SOUTH ASH PIPE TRENCHES SCHEDULE OF REINFORCEMENT	0.41/12362/002
ASH HANDLING PLANT - DAM 3 SCHEMATIC DIAGRAM OF LEVEL CONTROL FOR ASH WATER RETURN MCC –DISTRIBUTION BOARD 3	0.41/19182/005
ASH HANDLING PLANT - ARRANGEMENT OF SECTION NORTH	0.41/197/001
ASH HANDLING PLANT - NORTH ARRANGEMENT SECTIONS	0.41/198/002
ASH HANDLING PLANT - FLOW DIAGRAM OF SLURRY PUMPING SYSTEM	0.41/20961
ASH HANDLING PLANT - ASH SLURRY PUMPING SYSTEM SOUTH PIT DIAGRAM OF PIPING AND INSTRUMENTATION	0.41/21274
ASH HANDLING PLANT - ASH SLURRY PUMPING SYSTEM PLAN AT 3480 LEVEL DETAILS OF OPENINGS CONCRETE	0.41/21275
ASH HANDLING PLANT - FLOW DIAGRAM OF SLURRY PUMPING SYSTEM	0.41/20961
ASH HANDLING PLANT - ASH SLURRY PUMPING SYSTEM NORTH PIT DIAGRAM OF PIPING AND INSTRUMENTATION	0.41/21274

CONTROLLED DISCLOSURE
When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

TITLE	DRAWING NO
ASH HANDLING PLANT - ASH SLURRY PUMPING SYSTEM SOUTH PIT DIAGRAM OF PIPING AND INSTRUMENTATION	0.41/21275
ASH HANDLING PLANT - ASH SLURRY PUMPING SYSTEM PLAN AT 3480 LEVEL DETAILS OF OPENINGS CONCRETE AND REBAR	0.41/21296
ASH HANDLING PLANT - DETAILS OF SLURRY PIPELINE	0.41/21332/001
ASH HANDLING PLANT - DETAILS OF SLURRY PIPELINE	0.41/21332/002
ASH HANDLING PLANT - DETAILS OF SLURRY PIPELINE	0.41/21332/003
GENERAL ARRANGEMENT OF PERMANENT PENSTOCK CATWALK AND PENSTOCK RING (ASH DISPOSAL FACILITY)	0.41/25466/001
ASH HANDLING PLANT DETAILS OF PERMANENT PENSTOCK AND PENSTOCK RINGS (ASH DISPOSAL FACILITY	0.41/25466/002
ASH HANDLING PLANT - ASH DISPOSAL AND RETURN DIAGRAM OF WATER PIPING	0.41/4644
ASH HANDLING PLANT - ASH DISPOSAL AND RETURN WATER LAYOUT AND DETAILS OF PIPING	0.41/5041/001
ASH HANDLING PLANT - ASH DISPOSAL AND RETURN WATER LAYOUT AND DETAILS OF PIPING	0.41/5042/002
ASH HANDLING PLANT - ASH DISPOSAL AND RETURN WATER LAYOUT AND DETAILS OF PIPING	0.41/5043/003
ASH HANDLING PLANT - NORTH AND SOUTH ASH DISPOSAL AND RETURN WATER OUMO HOUSE DETAILS OF CONCRETE	0.41/8832
ASH WATER RETURN PLANT - ASH WATER RETURN DAM 5 GENERAL ARRANGEMENT OF PENSTOCK PLATFORM AND HOIST	0.41/24524
ASH WATER RETURN PLANT - ASH WATER RETURN DAM 2 GENERAL ARRANGEMENT OF PERMANENT PENSTOCK MODULE AND HOIST	0.41/24525
ASH WATER RETURN PLANT - ASH WATER RETURN DAM 6 GENERAL ARRANGEMENT OF PERMANENT PENSTOCK MODULE AND HOIST	0.41/24525
ASH WATER RETURN PLANT - ASH WATER RETURN DAM 2 GENERAL ARRANGEMENT OF TEMPORARY PENSTOCK PLATFORM AND HOIST	0.41/24526
ASH WATER RETURN PLANT - ASH WATER RETURN DAM 6 GENERAL ARRANGEMENT OF TEMPORARY PENSTOCK PLATFORM AND HOIST	0.41/24526
ASH DAM - ASH WATER RETURN DAM 2 TEMPORARY PENSTOCK MOVEABLE PLATFORMS AND MODULE DETAILS	0.41/35420
ASH DAM NEW SOLUTION TRENCH AND RING FEED	26.41/38937
LAYOUT OF THE ASH DELIVERY LINES AND TAKE OFF'S	26.41/38918

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.