High Risk Scope of Work Form

Document Reference:	Revision Number	Original Issue Date	Review Date
BGC-CORP-FORM-004	0	January 20, 2025	January 18,2030

Project Name:	**Installation of the CS Dn400 Pipeline from Plant to CTSF**
Site Location:	**KIBALI GOLD DOKO DRC**
Risk Rating of SOW: **(Based on Pre-Job Risk Assessment)**	☐ **High** ☒ **Very High** *(Check one)*

Stakeholders	Name	Signature	Date
Requestor	RICHARD MOGALE		Click here to enter a date.
Technical Representative	JEANPIERRE KALEND TSHISWIL		Click here to enter a date.
Health and Safety Manager	AUBIN BAKOLE		Click here to enter a date.
Environmental Manager If applicable	JERRY ZOZO		Click here to enter a date.
Community Relations Manager If applicable	Click or tap here to enter text.		Click here to enter a date.
Department Manager	NATHAN MADU		Click here to enter a date.
Contract Specialist	YVES ASOMA		Click here to enter a date.

1. Project Overview 3
2. General Description of Work 6
3. Health and Safety Requirements 8
4. Environmental Requirements 9
5. Social Requirements 10
6. Certifications and Competencies 11
7. SOW Management 12
8. Appendix 12

1. PROJECT OVERVIEW

Outline the specific deliverables, objectives and boundaries of the project.

The purpose of this project is Fabricate, weld, and install a DN400 (16-inch) Schedule 40 Carbon Steel pipe segment with Class 300 Carbon Steel weld-neck flanges on the Plant-to-CTSF Standby Tailings Line, ensuring full compliance with ASME B31.3 structural and pressure piping standards.

1. Key Technical Specifications

Pipe Specification: DN400 (16" Nominal Pipe Size / 406.4 mm OD), Carbon Steel, Schedule 40 wall thickness (12.7 mm nominal). Diatance Plant to CTSF= 1,920 meters (DN400 SCH 40 x 6 meters: 320 Each)

- **Flange Specification:** Class 300 Carbon Steel Raised Face (RF) Weld-Neck Flanges matching SCH40 bore, conforming to ASME B16.5. Outside Diameter (OD): 25.50 in (647.7 mm) Flange Thickness (Min, t): 2.25 in (57.2 mm) Raised Face Diameter (RF): 18.50 in (470.0 mm) Raised Face Height: 0.25 in (6.4 mm).
- **Gasket & Bolting:** Spiral-wound gaskets (Class 300 rated, graphite filler) and ASTM A193 B7 stud bolts with A194 2H nuts.

2. Detailed Scope of Work

- **Site Survey & Layout:** Mark the 1,920 meters pipeline route, alignment, high/low points, and Tie-in points (Process Plant and Tailings Storage Facility).
- **Mobilization:** Transfer labor, tools, lifting Equipment, welding machines, ...
- **Safety:** Issue the Risk Assessment, Work Permits (Hot Work, Excavation, lifting plan, FLRA and set up site barricades.
- **Fit-Up, Welding & Joint Assembly**
  - ✓ Align the DN400 SCH40 pipe and Class 300 weld-neck flange, ensuring uniform root gap (1.6 mm–3.2 mm) and zero internal misalignment (hi-lo check ≤1.5 mm).
  - ✓ Perform qualified GTAW (TIG) root pass followed by SMAW (Stick) fill and cap passes using approved ASME IX Welding Procedure Specifications (WPS) and E7018-1 low-hydrogen electrodes.

WPS (Welding Procedure Specification)

- General & Base Metal Parameters
  - Standard Code: ASME B31.3 / ASME Section I
  - Welding Process: GTAW (TIG) for Root/Hot Pass + SMAW (Stick) for Fill/Cap
  - Pipe Specification: ASTM A106 Gr. B / A53 Gr. B
  - Flange Specification: ASTM A105
  - Pipe Wall Thickness: 12.7 mm (0.500 in) DN400 Sch 40

- Joint Design & Preparations
  - Joint Type: Single-V Butt Joint (for Weld Neck Flange)
  - Bevel Angle: $37.5^\circ \pm 2.5^\circ$ (Included Angle: 75°
  - Root Gap: 2.0 mm to 3.2 mm (1/16" to 1/8")
  - Root Face (Land): 1.6 mm to 2.4 mm (1/16" to 3/32")
- Filler Metals & Gases

- Root & Pass 2 (GTAW): ER70S-6 | Diameter: 2.4 mm – 3.2 mm
- Fill & Cap (SMAW): E7018 / E7018-1 | Diameter: 3.2 mm – 4.0 mm

- Thermal Parameters
  - Preheat Temperature: $10°C$ ($50°F$) minimum (increase to $100°C$ if ambient drops below $10°C$ or moisture is present).
  - Interpass Temperature: $250°C$ ($480°F$) maximum.
  - Post-Weld Heat Treatment (PWHT): Not required under ASME B31.3 for P-No. 1 carbon steel under 20 mm thickness.

Welding Electrical Parameters

Pass / Layer	**Process**	**Filler Metal**	**Current Type**	**Amperage (A)**	**Voltage (V)**	**Travel Speed**
Root (Pass 1)	GTAW	ER70S-6	DCEN	90 – 130	10 – 14	50 – 80 mm/min
Hot Pass (Pass 2)	GTAW / SMAW	ER70S-6 / E7018	DCEN / DCEP	110 – 140	12 – 22	80 – 120 mm/min
Fill Passes	SMAW	E7018	DCEP	120 – 160	20 – 24	100 – 150 mm/min
Cap Pass	SMAW	E7018	DCEP	110 – 150	20 – 24	100 – 140 mm/min

✓ Fit Class 300 gaskets and lubricated stud bolts; torque in a 4-pass cross-pattern sequence to specified torque limits using calibrated torque wrenches.

3. **Lifting Equipment and Machine and Tools**
   - Mobile crane or boom truck (inspected and tagged) for pipes transportation and installation (slings, chackles, chain blocks need to be inspected and tagged)
   - Welding Machine GTAW (TIG)
   - Grinding Machines with consumables
   - Box of tools (spanners…)
4. **Inspection, Testing & Protective Coating**
   - Conduct 100% Visual Examination (VE) on all circumferential butt welds.
   - Perform the Dye Penetrant Testing (DPT) for any surface-breaking cracks

- Prepare surface and apply high-build epoxy or specified anti-corrosion coating system to exposed welds and carbon steel flanges.

5. Deliverables & Safety Compliance

- Permits: Approved Hot Work Permit, and LOTOTO sign-off.
- Handover: Fully tested, coated, and pressure-certified DN400 Class 300 flange assembly ready for continuous slurry service.

2. GENERAL DESCRIPTION OF WORK

2.1. DELIVERABLES (KPI'S)

Deliverable	Description	Expected Date
Deliverable 01	Perform a detailed site survey and route layout for the 1,920 m DN400 SCH40 standby tailings pipeline. Confirm alignment, high and low points, tie-in locations, installation constraints, and submit a Survey and Alignment Report for approval.	Click or tap to enter a date.
Deliverable 02	Mobilize all personnel, welding equipment, lifting equipment, tools, consumables, and support resources required for the project. Submit approved Risk Assessment, FLRA, Hot Work Permits, Excavation Permits, Lifting Plans, and other HSE documentation prior to commencing work.	Click or tap to enter a date.
Deliverable 03	Supply, fit-up, weld, and install approximately 1,920 m of DN400 SCH40 Carbon Steel pipeline (320 pipe sections x 6 m each) complete with Class 300 Weld Neck Flanges in accordance with ASME B31.3, ASME B16.5, and approved ASME IX Welding Procedure Specifications (WPS).	Click or tap to enter a date.
Deliverable 04	Execute all welding activities including GTAW root passes and SMAW fill and cap passes. Install spiral wound gaskets, stud bolts, and nuts. Perform flange alignment and controlled bolting torque sequence using calibrated torque wrenches.	Click or tap to enter a date.
Deliverable 05	Carry out quality inspections including 100% Visual Examination (VE) of all welds, Dye Penetrant Testing (DPT) where required, dimensional verification, flange inspection, and bolting verification. Submit inspection and quality control reports. Prepare all exposed carbon steel surfaces and apply the approved anti-corrosion coating system, including weld joints and flange assemblies. Submit coating inspection and compliance records.	Click or tap to enter a date.

Deliverable 06	Complete final testing, commissioning readiness checks, and handover documentation. Submit the complete Quality Dossier including material certificates, WPS/PQR records, welder qualifications, inspection reports, coating records, and As-Built documentation.	Click or tap to enter a date.

2.2. PROJECT LOCATION

Provide an address and describe the specific location of the scope of work.

KIBALI GOLD PROCESS PLANT AND TSF

2.3. EQUIPMENT AND TOOLS REQUIRED

List all equipment and tools required to perform the Job.

Items supplied by Contractor

Click or tap here to enter text.

Items supplied by Barrick

Click or tap here to enter text.

2.4. INSURANCE AND WARRANTY REQUIREMENTS

Provide list of applicable insurances or warranties.
Requirements to be identified by the Contract Specialist

Click or tap here to enter text.

2.5. PROJECT RISK IDENTIFICATION

All project risks shall be identified within the Pre-Bid Risk Assessment taking into consideration all safety, environmental and community risks. Please attach the Pre-Bid Risk assessment to this document.

3. HEALTH AND SAFETY REQUIREMENTS

The Contractor shall apply all requirements established in Barrick's Health and Safety standards, as well as policies and procedures. The Contractor must consider all the requirements to prepare and submit a specific health and safety plan for the project using Barrick's Safe Work Plan form (please attach).

3.1. SPECIFIC SAFETY REQUIREMENTS

List the specific safety requirements associated with the job/work and all applicable procedures.

Click or tap here to enter text.

3.2. HEALTH AND SAFETY PROCEDURES

List all applicable Health and Safety operational procedures.

Click or tap here to enter text.

4. ENVIRONMENTAL REQUIREMENTS

The Contractor shall apply all the requirements established in Barrick's Environmental Guidelines for Contractors, comply with Barrick's Environmental Policy, and meet all other applicable environmental requirements, procedures or standards to present the specific environmental management plan for the project if applicable.

4.1. ENVIRONMENTAL SPECIFIC REQUIREMENTS

List the specific Environmental requirements associated with the job/work and all applicable procedures.

Click or tap here to enter text.

4.2. ENVIRONMENTAL PROCEDURES
List all applicable Environmental operational procedures.
Click or tap here to enter text.

5. SOCIAL REQUIREMENTS
For the development of this project, the Contractor must apply all the social requirements established in Barrick's social performance policy, with the objective to support the company's social commitment to sustainable development.

5.1. SOCIAL SPECIFIC REQUIREMENTS
List the specific social requirements associated with the job/work and all applicable procedures.
Click or tap here to enter text.

5.2. SOCIAL PROCEDURES
List all applicable Social operational *procedures.*
Click or tap here to enter text.

6. CERTIFICATIONS AND COMPETENCIES

Mark an X in the box next to all applicable certifications and competencies.

COMPETENCE	Applies	COMPETENCE	Applies
Fall From Heights	☒	Fire (Hot Work)	☒
Confined Space	☒	Hazardous Substances	☒
Stored Energy (LOTOTO)	☒	Excavations and Penetration (trenching)	☒
Lifting	☒	Working with High Voltage Lines	☐
Hazards Recognition/ Risk Assessment	☒	Mobile Equipment	☒
Blasting and Explosives	☐	Other:	☒

Other Applicable Competencies/Certifications
Click or tap here to enter text.

7. SOW MANAGEMENT

The following documents must be attached when submitting this form to the Contract Specialist:

- ☒ Pre-Bid Risk Assessment
- ☒ Reference Documents: Images, documents, drawings
- ☐ Other: Click or tap here to enter text.

8. APPENDIX

Documents:
Drag and drop documents from your files here…

Images/drawings:
Drag and drop images from your files here…

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Stakeholders	Name	Signature	Date
Requestor	RICHARD MOGALE		Click here to enter a date.
Technical Representative	JEANPIERRE KALEND TSHISWIL		Click here to enter a date.
Health and Safety Manager	~~AUBAIN WA NATKO~~ AUBIN L. BAKOLE		Click here to enter a date.
Environmental Manager If applicable	JERRY ZOZO		Click here to enter a date.
Community Relations Manager If applicable	Click or tap here to enter text.		Click here to enter a date.
Department Manager	NATHAN MADU	07/10/2026	Click here to enter a date.
Contract Specialist	YVES ASOMA	09/10/26	Click here to enter a date.

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PRE-BID RISK ASSESSMENT FORM

Document Reference:	Revision Number	Original Issue Date	Review Date
BGC-CORP-FORM-002	0	January 20, 2025	January 18, 2030

Project Name: (Reference SOW)	**CTSF Standby pipeline**
Project Description:	**Welding and Installation 2,250meters of 400ND CTSF from Met Plant to CTSF**

Tasks	Hazards	Controls
Heavy Handling, Lifting and rigging	Pipe drop, boom truck or crane rollover -Manual handling -Fall from heights -Falling objects -Suspended loads	Use appropriate hand gloves when doing manual handling -Proper and clear communication -Use the fall protection equipment and ensure it is inspected and tagged -Ensure all the lifting equipement and accessories are inspected and tagged Lift plan when moving pipes with crane or boom truck. Establishment of exclusion zones with signage and barriers
400ND pipes supporting, cutting (oxy-cut), grinding and welding	-Fire -burns - Electrocution -Rotating equipment -Store Energie -Manual handling -Hot metal	- Ensure the team used the right PPE for welding, manual handling and cutting with gaz -proper and clear communication -Establishement of exclusion zones with signage and barriers. -Obtain hot work permit and ensure all critical controls are in place before commencing the task -Daily toolbox talks and risk assessments -Ensure the fire extinguisherand first aid are available.

Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

Select all the Fatal Risks present:

☑ Stored Energy	☑ Falling from Heights	☐ Lifting	☐ Blasting and Explosives	☑ Hazardous Substances and Chemicals
☑ Confined Spaces	☐ Mobile Equipment	☐ Fall of Ground	☑ Rotating Equipment	☐ Fire

Control Effectiveness:	Click or tap here to enter text.
Additional actions needed before job start:	Click or tap here to enter text.
Identified Risk Level:	☐ Low ☐ Medium ☒ High ☐ Very High

Responsible	Name	Signature	Date
Technical Representative	MUNGU DJAIKISA	08/10/2026	Click or tap to enter a date.
Safety Representative	LEBON AMISI	10th oct 2026	Click or tap to enter a date.

Consequence Criteria:
Consequence levels will be chosen from the table below based on the expected impact on Barrick, choosing the worst case of the consequence types that are pertinent. This should reflect the assessment of the existing controls and their effectiveness.

Level	Financial (Operating cash flow)	Shareholder Value (NPV/ Market cap)	Health and Safety	Environment	Society (Community, NGO, Government, Media)	Legal
5	>$250m	>$1b	Multiple fatalities or significant loss of quality of life to multiple people.	Severe regional impact resulting in permanent long-term impact to the environment. Immediately reportable to Government or State	Significant loss of trust by affected, national and/ or government threatening the continued viability of the operation. International and national government, NGO and media condemnation. Systemic pattern of gross human rights violations affecting multiple people.	Prolonged litigation likely. Potential jail terms and/or high fines for executives and directors. Potential very high fines for the company.
4	>$100m<$250m	>$500m<$1b	Single fatality or critical injury with a permanent negative impact to quality of life for one person	Significant impact with medium to long-term impairment and residual ecosystem effects. Regulatory agency mandated remediation and/ or monitoring over a long-term period to determine extent of adverse environmental impact. Immediately reportable to Government or State.	Community unrest and/or protest requiring intervention and substantial management attention. National and/or regional media coverage over several days and/or NGO condemnation. Individual gross human rights violation or systemic negative human rights impacts.	Prosecution of individuals and/or significant fines for individuals and/or the company.
3	>$20m<$100m	>$50m<$500m	Serious injury to one or more persons resulting in temporary negative impact to quality of life. (RDI & LTI)	Moderate impact resulting in medium – term impacts to the environment. Remediation completed in compliance with regulations over a medium-term period without any anticipated residual adverse environmental impacts. Potentially reportable to State or government, but not immediately.	Persistent community grievances, complaints, unrest or protests. National and/ or regional media coverage and/ or NGO scrutiny. Systemic or severe individual negative impacts on human rights.	Significant legislation or permit non-compliance or litigation likely resulting in settlement costs and/or fines.
2	>$1m<$20m	>$10m<$50m	Reversible injury to one person, (no lost time to work performance) but requiring medical treatment. (MTI)	Localized, minor impact within the current or planned disturbance area (or isolated offsite impacts.) Limited remediation, and/ or controls required to meet regulatory standards. Potentially reportable to State or Government but not immediately	Persistent complaints and grievances, unrest or protests. Local Media coverage. Isolated negative impacts on human rights	Legislation or permit non-compliance or litigation likely resulting in need for legal engagement.
1	<$1m	<$10m	Minor injury not affecting work performance and requiring only a single first aid treatment.	Environmental incident with an area already distributed by operations, with short-term impacts. Remediation carried out as part of routine processes. Not reportable to the government.	Minor complaints and grievances from local communities. No impact on human rights.	Minor non-compliance with legislation or permits.

Fatal Risk	Critical Controls
Stored Energy	De-energize: Identify sources of energy and ensure they are zero-state
	LOTOTO: Remember to always lock out – tag out – try out
	Guards, Barriers, and Barricades: Ensure they are in position and effective
	Lock-out Device: Use the appropriate lock out device to isolate the energy source
	Personal Lock and Tag: Have your OWN lock and tag, with unique key
Falling from Heights	Rescue Plan: Ensure a rescue plan is in place before starting work above 1.8m.
	Fall Equipment: Inspect and wear the correct fall-restraint or arrest equipment when working above 1.8m.
	Tie Off: Stay 100% tied off at all times on approved anchor points.
	Elevated Platforms: Only work from certified elevated platforms.
	Barriers: Ensure barriers are in place to precent people or objects from falling over edge; ensure exclusion zones are demarcated.
Lifting	Lift Plan: Determine how the lift will be carried out with input from all persons involved.
	Equipment and Rigging: Ensure all lifting equipment is inspected, certified, and load is secured and controlled.
	Calculate and Confirm: Analyze the weight of the load and all associated equipment parameters.
	Drop Zone: Erect barricades and exclusion zones to restrict access to the area under a suspended load or within a drop zone.
	Communication: Positive communication from a single person to operator.
Blasting & Explosives	Communication: Scheduled and effective blast notification to all site personnel.
	Blast Design: Compliance with the approved drill and blast design.
	Transport Equipment: Safely transport explosives using approved, certified, and maintained explosives-transport equipment.
	Exclusion Zones: Establish and restrict access of personnel and equipment to blast exclusion zones with barricades.
	Access Control: Lock out – tag out on stinger and blast tag boards, to ensure all individuals are accounted for.
Hazardous Substances and Chemicals	PPE: Wear correct hazardous-materials PPE in line with Safety Data Sheet (SDS)
	Access: Restrict access to authorized personnel only
	Emergency Response: Containment: and exposure measures must be on hand and working according to SDS guidance
	Detection and Alarm Systems: Correct detection devices and alarms are in place and fully functional.
	Handling and Transfer: Protection protocols are in place when handling and transferring chemicals based on SDS.
Confined Space	Rescue Plan: Formulate a rescue plan and ensure that a spotter is in place at all times.
	Permit: Ensure you have a signed and complete permit to access entry point.
	Energy Isolation: All possible energy sources have been identified and controlled per lock out – tag out – try out (LOTOTO)
	Access Control: Work area to be demarcated and access control to be managed by a spotter at all entry points.
	Atmosphere: Test and confirm atmosphere is life-sustaining and continue monitoring.

BOQ of Installation of CTSF standby line 400ND SCH40.

Item No.	Description	Unit	Quantity	Est Rate (USD)	Total Cost (USD)	Comment
1	Supply of Carbon Steel Pipe 400ND (16" NPS), SCH 40, 12.7mm WT, Seamless/ERW to ASTM A106 Gr. B / A53 Gr. B (6m lengths).	Metres	2,250	-	-	supply by KGM
2	Supply of 16" Class 150 (or Class 300) Carbon Steel Weld Neck Flanges, ASME B16.5, ASTM A105.	Pcs	750	-	-	supply by KGM
3	Supply of 16" Gaskets (Spiral Wound, 150#, Graphite/SS316).	Pcs	375	-	-	supply by KGM
4	Supply of Stud Bolt Sets with Heavy Hex Nuts (ASTM A193 B7 / A194 2H), sized for 16" Flanges.	Sets	375	-	-	supply by KGM
5	End preparation, beveling, alignment, and fit-up of 400ND SCH40 pipe ends. 3 pipes welded = 18 metres	Joint	250		-	
6	Full-penetration butt welding of 16" Weld Neck Flanges to Pipe ends of 18Meters Both end flanges welded (SMAW/GTAW process per ASME IX).	joint	250		-	
7	External surface preparation (Blast cleaning to Sa 2.5) and 3-coat industrial painting system (Primer, Intermediate, Topcoat).	m2	2,872		-	
8	Lifting, rigging, handling, and position alignment of 6m pre-fabricated spools onto pipe supports/sleepers.	Meter	2,250		-	
9	Flange joint assembly including gasket installation, bolt torqueing, and tensioning.	Joint	125		-	
10	Fabrication and installation of structural pipe supports, guides, and anchors.		50		-	if required
11	Total w/o Painting				-	
12	Profit	%			-	
13	**Total G**				**-**	
	Total with Painting				-	
	Profit	%			-	
14	**Total G**				**-**	