



**Bulk supply of liquid nitrogen to the ARC-OVR with  $\pm$ 4200 litres usages per month for a 60-month period. Liquid nitrogen to be stored on-site in appropriate vessel owned and maintained by the supplier.**

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## **PART ONE**

### **1.1 GENERAL CONDITIONS**

A professional service provider of liquid nitrogen is required at the ARC–OVR Campus for the supply of bulk liquid nitrogen ( $\pm 4200$  litres/month) for a period of 60-months. Liquid nitrogen is to be stored on-site in an appropriate vessel installed, owned and maintained by the supplier.

### **1.2 SITE LOCATION:**

GPS Location -25.650173° S, 28.187228°E  
Physical address: 100 Old Soutpan Road, Onderstepoort, 0110

### **1.3 SITE INSPECTIONS**

The service provider shall inspect and examine the site and its surroundings and satisfy himself/herself before submitting his/her quotation as to the layout of the area for the installation of the vessel and the practicality thereof. The service provider must inspect the means of access to the site and in general shall obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect his/her work.

It remains the service provider's responsibility to arrange for labour, transport, off-loading, storage and safekeeping of the material, workshop provisioning, scaffolding, equipment and tools required for the execution of the work in general. No claims arising (money wise or time) from a lack of knowledge in this regard is to be considered.

The service provider shall be deemed to have satisfied himself/herself before submitting the quotation as to the correctness and sufficiency of his/her quotation for the works, rates and prices he/she has stated in the quotation. It shall cover all his/her obligations under the work to be done for the proper completion of the work/project.

### **1.4 GUARANTEES**

The service provider shall guarantee the installation, workmanship and materials being used for this project for a period of sixty (60) months. The guarantee will commence on the date of receipt of the total and complete installation.

## **1.5 OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 AS AMENDED**

The refurbishment and/or installation of the work must be in accordance with the conditions as set out in the Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.

## **1.6 UNAUTHORISED PERSONS**

The service provider shall at all times keep un-authorized persons strictly away from work being done. Under no circumstances may any person be allowed to sleep or keep any possessions (material) on the installation site during the project period or thereafter unless prior arrangement is made.

## **1.7 DISTURBANCE**

The service provider shall perform all work with as little noise and mess as possible and with the minimum disturbance for adjacent and existing buildings and their occupants.

The service provider shall take all the precautions to protect adjacent buildings from damage and he/she alone shall be held liable for any damage to persons or property because of insufficient precautions.

The service provider shall take the necessary steps to ensure that the workers do not walk around in existing buildings unless necessary for the activities.

### **NOTE:**

After the issuing of the order, it shall be the service provider's duty to arrange for an inspection of the buildings, etc. and the adjacent sites in the presence of the Institute 's representative to identify any defects such as cracks, etc. in buildings, rainwater canals, kerb stones, etc. that may possibly be damaged during execution of this project.

Such defects shall be recorded to refute any allegations that they have been caused by the building operations under this project. If such defects are in fact present, the service provider shall record them and submit, this in writing to the representative before work commences.

If the service provider fails to inform the representative in writing, it shall be assumed that there are no such defects.

## **1.8 SITE MEETINGS AND PROCEDURES**

The site meeting is compulsory. The service provider and site manager shall promptly attend the site meeting and shall also ensure that all interested persons under his/her jurisdiction, etc. are notified timely of the site meeting.

## **1.9 PROGRESS SCHEDULE**

A provisional project plan is required as part of the bid that clearly indicates major deliverables and their associated times. Before any work shall commence the service provider shall submit to the representative a full detailed project plan in which all aspects of the works have been taken into consideration. Strict adherence to the provisions of this plan shall be required.

## **1.10 ALTERATIONS AND OLD MATERIAL**

With the removal of existing work, the utmost care shall be taken to avoid any structural and/or other damage to the remaining parts of the buildings or equipment. The contractor shall repair any damage that may occur during the undertaking of the work at his/her own expense, to the full satisfaction of the Institute.

Old material, except if specifically described to be re-used, may not be used in the new construction, except with the specific written permission of the representative.

## **1.11 RUBBLE**

The service provider shall make provision for the clearing of rubble from the work and, on completion, the cleaning of the work area and shall leave the site in a clean and perfect condition for immediate use.

## **1.12 IMPLEMENTS, ETC.**

The service provider shall supply, maintain and remove on completion or if so requested all implements, scaffolding, tools, labour, etc. that may be required for the proper and timely execution of the work.

On completion of the project, the service provider shall remove at his/her own expense all construction implements belonging to him/her and leave the building site and adjacent grounds in a clean and orderly condition.

## **1.13 LOSS**

The contractor shall be liable for any loss through theft, damage, etc. of materials for the project as well as the contents of the buildings from the time the site is handed over. Therefore, the service provider shall take the necessary precautions for protection against such losses.

#### **1.14 INJURY TO PERSONS**

The service provider will be responsible for injuries to persons and indemnify the Institute against any liability, loss, claim or law-suit of any nature in accordance with the **Common Law or Acts of the Republic**, on an account of an injury, death of anybody, due to the acts of the person undertaking the service except where the injury arises on account of actions undertaken by personnel of the Institute.

#### **1.15 SPECIAL SAFETY EQUIPMENT**

The service provider must supply all safety clothes and equipment as stipulated by law. The service provider will be responsible for all safety aspects as stipulated by industry.

## PART TWO

### 2.1 TECHNICAL SPECIFICATIONS

**The supply, delivery, installation, and commissioning of a bulk liquid nitrogen vessel to be able to supply the ARC-OVR (EPV) with an average of  $\pm 4200$  litres of liquid nitrogen per month over a 60-month period.**

**2.1.1** Vessel and associated equipment shall be designed, manufactured and installed in accordance with recognised pressure requirements and storage tank and piping codes that meet the requirements of the Pressure Equipment Regulations. All components shall be constructed from materials compatible with the liquefied gas in service, and with the temperature and pressure conditions to which they will be subjected.

**2.1.2** A pre-existing vessel will be considered with certification that the tank still adheres to all safety specifications and regulations.

#### **2.1.3 Foundation**

Foundation must be able to carry the weight of the fully filled bulk liquid nitrogen storage vessel installed.

#### **2.1.4 Bulk liquid nitrogen storage vessel**

The bulk liquid nitrogen storage vessel must comply with all technical and safety standards and regulations as determined by industry to safely supply and store liquid nitrogen. The bulk liquid nitrogen storage vessels minimum capacity must be 2490kg. - 2.49m<sup>3</sup> (2490L). The liquid nitrogen must be delivered from the bulk tank to the cabinets inside the building at a pressure of between 4 and 5 Bar (not lower than 4 Bar and not higher than 5 Bar pressure).

#### **2.1.5 Bulk liquid nitrogen storage vessel infrastructure (Valves, pipes, isolation of pipes and taps)**

- Install all necessary connections, taps and valves to the bulk liquid nitrogen storage vessel to be able to safely deliver the liquid nitrogen to the vessel by cryogenic tanker trucks. The installation must comply with all technical and safety standards and regulations as determined by industry to safely supply and store the liquid nitrogen.
- Install all necessary connections, taps and valves to be able to safely fill all the liquid nitrogen cabinets from the bulk liquid nitrogen storage vessel with liquid nitrogen. Installation must comply with all technical and safety standards and regulations as determined by industry to safely supply, store and use liquid nitrogen.

### 2.1.6 Safeguard, access and fencing of installation

Fencing and/or appropriate measures are required to prevent access to vessel and vessel infrastructure by unauthorised persons.

## 2.2 SPECIFIC CONDITIONS

- There will be a **compulsory site inspection/meeting**. Failure to attend this meeting or inspection will lead to the bidder being automatically disqualified.
- A period of two days has been allocated for the FULL completion of this project (or as stipulated during site visit). This INCLUDES the snag list corrections and final sign-off of the project.
- Non-submission of a provisional project plan is deemed as non-compliance and the bid might be removed from the process. The project plan must indicate a time line with clearly stated deliverables.
- The awarding of this bid is subject to a sound related profile of the bidder. To this end the bidder is to provide at least three (3) contactable (e-mail or phone/fax) references of clients (complete with physical address where similar work was done) for work done in the last 12 months, and a company profile.
- The Campus is providing an essential services to the industry, hence the work must be executed in such a manner that it will not have a negative impact on the companies service delivery.
- Any damages to the Campuses' equipment due to the negligence of the service provider will be repaired or replaced by the service provider at his/her own costs.
- The successful bidder must provide a Safety File to the OHS officer.
- All the work done and the material used must comply with the requirement of the Occupational Health and Safety Act, National building regulation, South African National Standard and any other relevant legislation.
- The service provider is to ensure that all the work is completed within the planned time schedule from the date the service provider receives the order.

## 2.3. PRICE BREAKDOWN

	Item	Price/month (Exc Vat)	Price/Year (Exc Vat)
Year 1	Facility/equipment fee	R	±R /Year 1
	Supply and deliver of liquid nitrogen ±4200kg/month	R	
	(Add item)	R	
	(Add item)	R	
	Total	R	
Year 2	Facility/equipment fee	R	
	Supply and deliver liquid nitrogen	±R	

	±4200kg/month		±R	/Year
	(Add item)	R	2	
	(Add item)	R		
	Total	±R		
Year 3	Facility/equipment fee	R	±R 3	/Year
	Supply and deliver liquid nitrogen ±4200kg/month	±R		
	(Add item)	R		
	(Add item)	R		
	Total	±R		
Year 4	Facility/equipment fee	R	±R 4	/Year
	Supply and deliver liquid nitrogen ±4200kg/month	±R		
	(Add item)	R		
	(Add item)	R		
	Total	±R		
Year 5	Facility/equipment fee	R	±R 5	/Year
	Supply and deliver liquid nitrogen ±4200kg/month	±R		
	(Add item)	R		
	(Add item)	R		
	Total	±R		
<b>Total Contract value</b>			R	