OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT (LOCAL), ISLAMABAD
SCHEDULE OF REQUIREMENT

Material :**HSEQ EQUIPMENT**

Due Date:

Tender Enquiry No: **PROC-LC/PT/DRL/18220 – A**

Bid Bond Value : RS: 50,000/=

Attachment(if any) : YES

EVALUATION WILL BE CARRIED OUT ON FULL

Sr No	Description	Quantity	Make/Brand offered	Unit	Unit Price (PKR) Inclusive Of All Taxes Except GST	Unit Price (PKR) Inclusive of GST	Total Price (PKR) Inclusive of GST	Delivery Period Offered	deviation from Tender Spec. If Any
1	JUNIOR BREATHING AIR COMPRESSOR 330 BAR 3 PH MOTOR 50 HZ OPR VOLT 380 VAC "BAUER" OR EQUIVALENT EQUIPMENT.	1		Number					
2	MANUAL GEAR HOOTER SIREN; APPROXIMATELY 01 KM/MILE WITHSTAND.	1		Number					
3	DETECTOR,(H2S),RANGE 0-500 PPM. |P# 620773 |ASSY SAFETY EQUIPMENTS OR EQUIVALENT EQUIPMENT	4		Number					
4	BREATHING APPARATUS, SABRE BREATHING APPARATUS, EMERGENCY ESCAPE BREATHING APPARATUS, COMPOSED OF MASK AND 15 MINUTES OXYGEN CYLINDER, MEETS EN 1146 OR EQUIVALENT EQUIPMENT.	4		Number					
5	BLOWER, BUG,50",SUPPLY 440 VOLT AC,HEAVY DUTY STEEL FRAME,IMPELLER 48" (CAST AL),5+ HP EX-PROOF MOTOR WITH IEC EXPROOF STARTER,1450 RPM,CORROSION RESISTANT,WEATHER PROOF CABLE 100 METER,10/4 90 DEG C OR EQUIVALENT EQUIPMENT.	1		Number					
6	MULTI GAS DETECTOR FOR 04 GASES, DETECTION, RANGE: H2S=2-200 PPM, S02: 0-100 PPM, LEL: 0-99%, CO: 0-500 PPM, OXYGEN 02: 0-25% WITH PUMP MODEL GAS ALERT MICRO 5, BW TECHNOLOGIES OR EQUIVALENT EQUIPMENT	2		Number					
7	BREATHING APPARATUS SIGMA-2-PS SCBA C/W STEEL CYLINDER 30M. ASSY SAFETY EQUIPMENT OR EQUIVALENT EQUIPMENT	4		Number					

Special Note: The prospective bidders also download the master set of Tender Document

- The prospective bidders may keep in touch with OGDCL web site for downloading the clarifications/amendments (if any) issued by OGDCL.
- BID VALIDITY 120 DAYS FROM TECHNICAL BID OPENING. DELIVERY AT I-9 BASE STORE ISLAMABAD WITHIN 120 DAYS AS PER TOR. PAYMENT AS PER TOR.

OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT (LOCAL), ISLAMABAD
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Mandatory Checklist

Please confirm the compliance of the following mandatory information along with the bid(s) (failing which bids(s) will not be accepted)

Documents	To be Attached with the Technical/Financial Bids	Compliance	
Original Bid Bond	Technical Bid	Yes ☐	No ☐
Copy of NTN Certificate	Technical Bid	Yes ☐	No ☐
Copy of GST Certificate	Technical Bid	Yes ☐	No ☐
Confirmation that the Firm is appearing on FBR's Active Taxpayer List	Technical Bid	Yes ☐	No ☐
Duly signed and stamped **Annexure–A (Un–priced)**	Technical Bid	Yes ☐	No ☐
Duly filled, signed and stamped **Annexure–B**	Technical Bid	Yes ☐	No ☐
Duly filled, signed and stamped **Annexure–D**	Technical Bid	Yes ☐	No ☐
Duly filled, signed and stamped **Annexure–L** on Company's Letterhead	Technical Bid	Yes ☐	No ☐
Duly signed and stamped **Annexure–M** on Company's Letterhead	Technical Bid	Yes ☐	No ☐
Duly signed and stamped **Annexure–N** on Non–Judicial Stamp Paper duly attested by Notary Public	Technical Bid	Yes ☐	No ☐
Duly filled, signed and stamped **Annexure–A (Priced)**	Financial Bid	Yes ☐	No ☐
Duly filled, signed and stamped **Annexure–C**	Financial Bid	Yes ☐	No ☐
Duly filled, signed and stamped **Annexure–E**	Financial Bid	Yes ☐	No ☐

OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT (LOCAL), ISLAMABAD
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For the Vendors/Contractors who opt to submit Bank Draft/Call Deposit/Pay order against Bid Bond/Performance Bond, our Accounts Department has finalized an arrangement for online payment to such Vendors/Contractors, which will be processed through (IBFT & LFT) for which following information is required:

i.	IBAN No. (International Bank Account Number 24 Digits)	
ii.	Vendor Name as per Title of their Bank Account	
iii.	Contact No.of Company's CEO/ Owner (Mobile & Landline)	
iv.	Bank Name.	
v.	Bank Branch Name and Code	

Name, Sign and Stamp of the authorized official of the Bidder(s) _____

TERMS OF REFERENCE (TOR)

For Procurement of H_2S Monitoring and Rescue Equipment for OGDCL Rig-N5 at OGDCL Islamabad

1. Background:

OGDCL is planning to procure H_2S Monitoring and Rescue equipment for OGDCL Rig N-5, in order to proactively strike and swiftly combat the any untoward incident related to Toxic Gas (H_2S) Release at Rig site.

2. Applicable Standard and Publications:

The H_2S Safety Equipment shall be in accordance with the applicable requirements set forth in the latest specification / standards of NFPA and NIOSH.

3. Requirements:

The financial bids shall be quoted for H_2S Safety Equipment and subsequently finalizing the specifications in accordance with the applicable standards.

4. Manufacturing:

- The manufacturer/OEM of H_2S safety equipment shall be standardized and having good repute/track record.
- The entire Material / Equipment shall be checked out, inspected and functionally tested by qualified, trained personnel, in accordance with the technical specs / standards.
- The all equipment shall be functionally tested, in the presence of OGDCL officials or their representative prior to the final acceptance. Each detector shall be tested in accordance with the recommended procedures, and test values recorded.

5. Technical Specifications;

5.1. Technical Specifications of Breathing Apparatus (SCBA)

Self-Contained Breathing Apparatus-SCBA. (200 ~ 300 Bar) 30 – 40 min. with half face Mask.
NIOSH Approved with below specs;

1. Positive Air Pressure
2. SCBA shall be approved to NIOSH 42 CFR, Part 84 for chemical, Biological, radiological and nuclear protection (CBRN).
3. Comply NFPA 1981 AND 1982, 2013 EDITION,
4. Face-piece should meet NFPA/CBRN/NIOSH Standard (AV-3000 HT).
5. The cylinder shall be available in a 30-minute, 45-minute, 60-minute or 75-minute duration based on the NIOSH breathing rate of 40 liters per minute (lpm). The cylinder shall be available in an approved 30-year life design as defined by the International standards (DOT/NIOSH).
6. The unit shall be covered by a warranty providing protection against defects in materials or workmanship.

First breath activation	-20 to -30 mbar
Peak flow performance	In excess of 1000 liters/minute
Bypass flow	150 liters/minute nominal
Static positive pressure	1.0 – 4.0 mbar

Reducing Valve	
First stage pressure reducing valve featuring non-adjustable, spring loaded piston mechanism and outlet supply protected by pressure relief valve. Valve body and cap machined from nickel-plated brass with stainless steel spring and hose retainer Uclips	
200 bar inlet	5.5 to 9.5 bar
300 bar inlet	6.0 to 11.0 bar
Pressure relief valve protected	Approx. 13.5 bar
Flow restrictor to gauge supply hose	<25 liters minute
Pressure Indicator & Warning Whistle	
Accuracy	+/- 10 bar between 40-300 bar
Hoses	
Stainless Steel swivel hose fittings	
Medium Pressure Hose	
Maximum working pressure	16 bar
Minimum burst pressure	80 bar
High Pressure hose	
Maximum working pressure	450 bar
Minimum burst pressure	800 bar
Weight/ Dimensions	
Single configuration (less cylinder)	2.3kg
Single configuration & facemask (less cylinder)	3.0kg
Length	600mm
Width	278mm
Depth (with 6.0-liter 200 bar cylinder)	200mm
Cylinder (lightweight, composite type, consisting of an aluminum alloy inner shell, with a total overwrap of carbon fiber fiberglass and an epoxy resin)	300 bar,

5.2- Technical Data for Emergency Escape Breathing Apparatus (SABRE)

Emergency Escape Breathing Apparatus (EEBA) , 200 ~ 300 Bar, with full face Mask (Dual purpose type). NIOSH Approved With below specs;

1. 5- or 10-minute apparatus deliver emergency air at a rate of 1.4 cfm (40L/min.)
2. 5-minute standard flow (2216 psi), TC-13F-486; 10-minute standard flow (3000 psi), TC-13F-487; 5-minute high-flow (3000 psi), TC-13F-488.
3. Elastomeric neck seal allows for easy donning, proper neck fit and repeated usage and can be worn by those who wear glasses or have beards.
4. Clear polyurethane hood provides 360° visibility
5. Easily detachable hood for cleaning and replacement
6. Safety orange PVC coated polyester bag is easy to maintain and resists aging
7. Can be worn on shoulder or neck
8. Donning instructions printed on pouch

Dimensions (H × L × T)	260 × 510 × 190 mm
Cylinder charging pressure	200 bar
Airflow to the hood	35 – 37 L/min

Operating temperature range	-15 °C to +60 °C
Approvals	EN1146:2005, ISO 23269-1:2008, ISO 23269-4:2011
Weight (Kg) including cylinder	
Hard case	5.9 kg
Soft bag	4.2 kg
Cylinder (Light weight)	3 L 200 bar (Steel)
Regulatory Approvals	NIOSH-42 CFR : ELSA 15-Minute Emergency Escape Device -TC-13F-530
Air Quality	Compressed Gas Association (CGA) Specification G-7.1 Grade D or Better
Weight	ELSA 15-Minute Emergency Escape Device – 9.5 lbs (4.3 Kg)
Type Working Pressure Capacity	ELSA 15-Minute – 3000 psig 24 Cubic Feet / 679.6 liters
Warning Whistle	Whistle indicating the CO_2 level within the hood exceeds the performance specification

5.3- Technical Specifications for Portable Multi Gas Detector (Gas Alert Micro 5)

Portable Multi Gas Detector with 4 Gases Censors ; i-e, O_2, CO_2, CO, H_2S, LEL. With following specs:

1. Complete with: Re-chargeable battery pack, global battery charger, colour display, built-in pump, motion alert, instant alert, calibration cap assembly, data logging and instructions manual CD; with 10 ft. sampling line, 1ft. probe.
2. Explosion-Proof battery and circuit.
3. All electronic components shall be approved for Intrinsic Safety under NFPA 70 (National Electrical Code) & UL-913.
4. Approved to NIOSH 42 CFR, Part 84 for Chemical, Biological, Radiological and Nuclear protection (CBRN) & NFPA/CBRN.

Measuring Range (ppm)	**H_2S:** 0-500 **CO:** 0-999 **Combustible gases:** 0-100% LEL **O_2:** 0-30.0% **SO_2:** 0-150
Size:	5.7 x 2.9 x 1.5 in. / 14.5 x 7.4 x 3.8 cm
Weight:	13.01 oz. / 370g
Temperature:	-4 to 122°F / -20 to 50 °C 14 to 104 °F/ -10 to 40 °C (PID)
Alarms:	- Visual, vibrating, audible (95 dB) - Low High STEL, TWA, OL (over limit)
Tests:	Sensor Integrity, circuitry, battery and audible/ visible alarms on activation, battery (continuous)
Pump:	Optional ; Sample from up to 66 ft. / 20 m
Warranty	Full 2 years warranty including sensors

5.4 - Technical Specifications for Portable Single Gas Detector (Gas Alert Extreme)

Portable Single Gas Detector with 4 Gases Censors ; i-e. O_2, CO_2, CO, H_2S, LEL. With following specs: 1. Complete with re-chargeable battery pack, global battery charger, colour display, built-in pump, motion alert, instant alert, calibration cap assembly, data logging and instructions manual CD; with 10 ft. sampling line, 1ft. probe. 2. Explosion-Proof battery and circuit. 3. All electronic components shall be approved for Intrinsic Safety under NFPA 70 (National Electrical Code) & UL-913. 4. Approved to NIOSH 42 CFR, Part 84 for Chemical, Biological, Radiological and Nuclear protection (CBRN) & NFPA/CBRN.	
Measuring Range (ppm)	0-100 ppm
Size:	1.1 x 2.0 x 3.75 in. / 2.8 x 5.0 x 9.5 cm
Weight:	2.9 oz. / 82 g
Alarms:	- Visual, vibrating, audible (95 dB) - Low High STEL, TWA
Tests:	Sensor Integrity, circuitry, battery and audible/ visible alarms on activation, battery (continuous)
Pump:	Compatible with the Sampler motorized pump
Typical Battery life	2-year battery life (typical) with replaceable 3 V battery
Warranty	Full 2 years warranty including sensors (1-year NH_3 sensor)

5.5- Technical Data of Portable Air Compressor

Portable Air Compressor Providing Grade-D Air for refilling of SCBA as per OSHA requirements.	
Medium	breathing air
Intake pressure	atmospheric
Delivery	100 l/min. (3,5 Scfm, 6 m3/h)
Operating pressure	PN200/PN300
Pressure setting, final pressure safety valve	225/330 bar
Pressure setting, pressure maintaining valve	160 bar
Sound (immersion) power	95 dB(A)
Dry weight, max.	53 kg
Dimensions (LxBxH), standard unit	655x360x415 mm
Dimensions (LxBxH), Anlage with automatic condensate drain	760x430x480 mm
Compressor block	
Number of stages	3
Number of cylinders	3
Cylinder bore 1st stage	60 mm
Cylinder bore 2nd stage	28 mm
Cylinder bore 3rd stage	12 mm
Piston stroke	24 mm
Speed	2,300 min^{-1}
Intermediate pressure 1st stage	6-7 bar

Pressure setting, safety valve 1st stage	10 bar
Intermediate pressure 2nd stage	40-60 bar
Pressure setting, safety valve 2nd stage	80 bar
Compressor block oil capacity	360 ml
Oil volume between min. and max. marks	50 ml
Oil type	lubrication
Max. ambient temperature	+5 ... +45 °C
Air outlet temperature	ambient temperature + 20 °C
Max. inclination of compressor	5°
Max. operating height	0 ... 1500 m above sea level
Compressor drive	
Drive motor	Three phase current motor
Power	2,2 kW (3 PS)
at nominal speed	2.900 min-1
Operating voltage	400 V, 50 Hz
Nominal current	4.6 A (400V/50Hz)
Type of enclosure	IP55
Size	A90 L
Type of construction	B3
Compressor unit	
Filter system	P21
Residual moisture content	< 10 mg/m3
Residual oil content	< 0,1 mg/m3
Pressure dew point	-20°C, corresponds to 3 mg/m3 at 300 bar
Filter capacity	0,57 l
Automatic condensate drain unit	**Scuba diving version**
Type	dual
Control voltage	24 VDC
Interval switching (closed / open)	15 min / 6 sec

5.6- Technical Data for Blower Bug

Type	Direct Drive
Impeller Size	24"
Electric Motor (Ex)	2 HP
Speed (Rpm)	1450
Air Flow Capacity (Cfm)	10300
Voltage (V)	380/440
Cycle (Hz)	50
Phase	3
Overall Height (mm)	940
Overall Width (mm)	750
Overall Depth (mm)	640
Approximate Weight (kg)	150

5.4- Technical Data for Hooters Siren:

Manual Gear Hooter Siren (Industrial Type with Horizontal Single Mounting Siren)	
Electric Motor (Ex)	2 HP
Voltage (V)	Single-phase 220/250 V
Body Production	Water-proof body cover
Mounting Type	Horizontal with stand

6. Operation and Maintenance:

- Prior to final acceptance, the contractor firm shall provide complete operation and maintenance instructions, four (4) copies, to OGDCL.
- Checklists and procedures for emergency situations, troubleshooting techniques, maintenance operations and procedures shall be included in the instructions.

7. As-Built Drawings:

- The contractor firm shall provide two (2) copies of all equipment "As-Built" drawings to OGDCL.
- The Test Plan shall include a step-by-step description of all tests to be performed and shall indicate the type and location of test apparatus to be employed.
- The tests shall demonstrate that the operational and installation requirements of this specification have been met. All tests shall be conducted in the presence of the OGDCL officials and shall not be conducted until the Test Plan has been approved.

8. Warranty:

All safety components under the contract shall be warranted against defects in design, materials and workmanship for the full warranty period, which is standard with the manufacturer, but in no case less than one (1) year from the date of equipment acceptance. The bidder will have to replace the defected items during the warranty period at its own without additional charges.

9. Completion Time:

The bidder will have to submit the time schedule for provision of H_2S safety equipment and testing of the Equipment but in no case it should be more than 60 working days.

10. Bid Submission Time:

11. Technical Evaluation Criteria:

Sr #	Description	Maximum Marks	Marks Obtained
1.	General Experience of the Firm in provision of H_2S Safety Equipment (List/Detail of projects/clients over last 03 years) Specific Experience for provision of H_2S Safety Equipment	20	
2.	(List/Detail of projects/clients over last 03 years along with client address and contact numbers)	20	

3.	Competence of Technical Staff (provide CVs of all employees along with contact numbers)	20	
4.	Spares availability (details of spares available) to be verified by OGDCL personnel	20	
5.	Financial Capability (balance sheets for the last 03 years etc., Average Annual Turn Over of the bidder should be 3 times the estimated cost of the project for the last 03 years)	20	
Total Marks		100	
Minimum requirement for qualification: 65%			

12. Financial Bid Form:

Sr #	Description	Qty	Unit Price	Unit Price including GST/Taxes	Total
1.	Self-Contained Breathing Apparatus (SCBA)	04			
2.	Emergency Escape Breathing Apparatus (EEBA)	04			
3.	Multi Gas Detector (Gas Alert Micro 5)	02			
4.	Single Gas Detector (Gas Alert Extreme)	04			
5.	Portable Air Compressor	01			
6.	Blower Bug Fan	01			
7.	Hooters Siren	01			
8.	Professional/Logistics Charges	-			
GRAND TOTAL (PAK RUPEE)					

Note:

- No amount other than quoted in the above matrix shall be paid to the contractor. All the prices should be inclusive of all applicable taxes.
- 50% payment shall be paid after installation of the system and remaining 50% shall be paid after successful testing of the system in accordance with the specifications/guidelines for testing.
- The bidder shall have to submit 10% performance bond which shall be valid up to the warranty period and shall be released accordingly.

1. TECHNICAL DATA FOR EMERGENCY ESCAPE BREATHING APPRATUS

Dimensions (H × L × T)	260 × 510 × 190 mm
Cylinder charging pressure	200 bar
Airflow to the hood	35 – 37 L/min
Operating temperature range	-15 °C to +60 °C
Approvals	EN1146:2005, ISO 23269-1:2008, ISO 23269-4:2011
Weight (Kg) including cylinder	
Hard case	5.9 kg
Soft bag	4.2 kg
Cylinder	3 L 200 bar (Steel)

2. TECHNICAL DATA FOR BLOWER BUG

Type	Direct Drive
Impeller Size	24"
Electric Motor (Ex)	2 HP
Speed (Rpm)	1450
Air Flow Capacity (Cfm)	10300
Voltage (V)	380/440
Cycle (Hz)	50
Phase	3
Overall Height (mm)	940
Overall Width (mm)	750
Overall Depth (mm)	640
Approximate Weight (kg)	150

3	Multi Gas Detector for 04 Gases Detection Range: H2S = 2-200 ppm, SO2 = 0-100 ppm, LEL 0-99%, CO= 0-500ppm, Oxygen O2= 0-25% with Pump.
4	H2S Detector Range 0-500 ppm I Assy Safety Equipment.
5	Manual Gear Hooter Siren: Approx. 01 Km / Mile with stand.

6 · TECHNICAL SPECIFICATIONS OF BREATHING APPRATUS SIGMA 2-PS		
Tempest Demand Valve		
Compact positive pressure demand valve featuring servo-assisted, tilting diaphragm mechanism with low inspiratory resistance and responsive dynamic performance, automatic first breath actuation and hands free bypass facility. Components injection moulded from Polyamide with rubber seals and diaphragms		
First breath activation	-20 to -30 mbar	
Peak flow performance	In excess of 1000 litres/minute	
Bypass flow	150 litres/minute nominal	
Static positive pressure	1.0 – 4.0 mbar	
Reducing Valve		
First stage pressure reducing valve featuring non-adjustable, spring loaded piston mechanism and outlet supply protected by pressure relief valve. Valve body and cap machined from nickel-plated brass with stainless steel spring and hose retainer Uclips		
200 bar inlet	5.5 to 9.5 bar	
300 bar inlet	6.0 to 11.0 bar	
Pressure relief valve protected	Approx. 13.5 bar	
Flow restrictor to gauge supply hose	<25 litres minute	
Pressure Indicator & Warning Whistle		
Accuracy	+/- 10 bar between 40-300 bar	
Hoses		
Stainless Steel swivel hose fittings		
Medium Pressure Hose		
Maximum working pressure	16 bar	
Minimum burst pressure	80 bar	
High Pressure hose		
Maximum working pressure	450 bar	
Minimum burst pressure	800 bar	
Weight/ Dimensions		
Single configuration (less cylinder)	2.3kg	
Single configuration & facemask (less cylinder)	3.0kg	
Length	600mm	
Width	278mm	
Depth (with 6.0 litre 200 bar cylinder)	200mm	

APPARATUS DURATION

All durations quoted are nominal, based on an Average Wearer Consumption Rate of 40 litres/minute and FULLY CHARGED cylinders. Actual Wearer Consumption rates vary due to many factors, such as: 1. Workload: high work rates increase consumption rates. 2. Weight of apparatus and use of heavy or restrictive clothing. 3. Work environments with extremes of heat or cold. 4. Physical fitness of the wearer. 5. Other factors include emotional stress and fatigue. It is important that all wearers are aware of these factors and take account of them when assessing cylinder duration.

7. TECHNICAL DATA OF AIR COMPRESSOR

Medium	breathing air
Intake pressure	atmospheric
Delivery	100 l/min. (3,5 Scfm, 6 m3/h)
Operating pressure	PN200/PN300
Pressure setting, final pressure safety valve	225/330 bar
Pressure setting, pressure maintaining valve	160 bar
Sound (immersion) power	95 dB(A)
Dry weight, max.	53 kg
Dimensions (LxBxH), standard unit	655x360x415 mm
Dimensions (LxBxH), Anlage with automatic condensate drain	760x430x480 mm
Compressor block	
Number of stages	3
Number of cylinders	3
Cylinder bore 1st stage	60 mm
Cylinder bore 2nd stage	28 mm
Cylinder bore 3rd stage	12 mm
Piston stroke	24 mm
Speed	2,300 min-1
Intermediate pressure 1st stage	6-7 bar
Pressure setting, safety valve 1st stage	10 bar
Intermediate pressure 2nd stage	40-60 bar
Pressure setting, safety valve 2nd stage	80 bar
Compressor block oil capacity	360 ml
Oil volume between min. and max. marks	50 ml
Oil type	lubrication
Max. ambient temperature	+5 ... +45 □C
Air outlet temperature	ambient temperature + 20 □C
Max. inclination of compressor	5□
Max. operating height	0 ... 1500 m above sea leve
Compressor drive	
Drive motor	Three phase current motor
Power	2,2 kW (3 PS)
at nominal speed	2.900 min-1
Operating voltage	400 V, 50 Hz
Nominal current	4.6 A (400V/50Hz)
Type of enclosure	IP55
Size	A90 L
Type of construction	B3
Compressor unit	
Filter system	P21
Residual moisture content	< 10 mg/m3
Residual oil content	< 0,1 mg/m3
Pressure dew point	-20°C, corresponds to 3 mg/m3 at 300 bar
Filter capacity	0,57 l
Automatic condensate drain unit	**Scuba diving version**
Type	dual
Control voltage	24 VDC
Intervall switching (closed / open)	15 min / 6 sec