

अनुबंध | Contract



अनुबंध क्रमांक | Contract No: GEMC-511687798905040

अनुबंध तिथि | Generated Date : 30-Jan-2024

बोली/आरए/पीबीपी संख्या | Bid/RA/PBP No.: [GEM/2023/B/3879063](#)

संगठन विवरण Organisation Details	खरीदार विवरण Buyer Details
प्ररूप Type : Central PSU मंत्रालय Ministry : Ministry of Coal विभाग Department : Materials Management संगठन का नाम Organisation Name : Western Coalfields Ltd कार्यालय क्षेत्र Office Zone : Western Coalfields Limited / Nagpur	पद Designation : Asstt Manager MM संपर्क नंबर Contact No. : 0712-2511381-5585 ईमेल आईडी Email ID : vsgajbhiye@westerncoal.gov.in जीएसटीआईएन GSTIN : 27AAACW1578L1ZW पता Address : WCL Hqrs, Coal Estate, Civil Lines, NAGPUR, MAHARASHTRA-440001, India

वित्तीय स्वीकृति विवरण Financial Approval Detail	भुगतान प्राधिकरण विवरण Paying Authority Details
आईएफडी सहमति IFD Concurrence : No प्रशासनिक अनुमोदन का पदनाम Designation of Administrative Approval : D(T)OP वित्तीय अनुमोदन का पदनाम Designation of Financial Approval : GM(fin)	Role: PAO भुगतान का तरीका Payment Mode: Offiine पद Designation : Dy Manager Fin ईमेल आईडी Email ID : sprathi@westerncoal.gov.in जीएसटीआईएन GSTIN : 27AAACW1578L1ZW पता Address: WCL Hqrs, Coal Estate, Civil Lines, NAGPUR CITY, MAHARASHTRA-440001, India

विक्रेता विवरण Seller Details	
जेम विक्रेता आईडी GeM Seller ID : 188A200001408337 कंपनी का नाम Company Name : SWAN TECHNICAL SERVICES PRIVATE LIMITED संपर्क नंबर Contact No. : 04040216185 ईमेल आईडी Email ID : swantechnical@swanenviron.com पता Address : PLOT NO 922 & 935, SWAMY AYYAPPA CO-OP SOCIETY, MADHAPUR, HYDERABAD, Hyderabad, TELANGANA-500081, - एमएसएमई पंजीकरण संख्या MSME Registration number : UDYAM-TS-09-0015953 एमएसई सामाजिक श्रेणी MSE Social Category : General एमएसई लिंग श्रेणी MSE Gender : OTHERS जीएसटीआईएन GSTIN: 36AAWCS7296M1Z2	

*जिसके नाम के पक्ष में GST/TAX इनवॉइस पेश किया जाएगा | GST / Tax invoice to be raised in the name of - Consignee

वितरण निर्देश | Delivery Instructions : As per NIT

उत्पाद विवरण Product Details						
#	आइटम विवरण Item Description	आइटम विवरण Ordered Quantity	इकाई Unit	इकाई मूल्य (INR) Unit Price (INR)	कर विभाजन (INR) Tax Bifurcation (INR)	मूल्य (INR में सभी शुल्क और कर सहित) Price (Inclusive of all Duties and Taxes in INR)
1	उत्पाद का नाम Product Name : SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED Continuous Ambient Air Quality Monitoring System (CAAQMS) NA (IF Rack Server Not Supplied) ब्रांड Brand : SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED ब्रांड प्रकार Brand Type : Unregistered Brand कैटलॉग की स्थिति Catalogue Status: OEM verified catalogue कैसे बेचा जा रहा है Selling As : OEM श्रेणी का नाम और चतुर्थांश Category Name & Quadrant : Continuous Ambient Air Quality Monitoring System (CAAQMS) (Q3) मॉडल Model: SWAN _WCL_CAAQMS_ANALYZER एचएसएन कोड HSN Code: HSN not specified by seller	6	pieces	6,691,742.24	NA	40,150,453.44
कुल ऑर्डर मूल्य Total Order Value (in INR)						40,150,453.44

परोक्षी विवरण Consignee Detail						
क्र.सं. S.No	परोक्षी Consignee	वस्तु Item	लॉट नंबर Lot No.	मात्रा Quantity	दिनांक के बाद डिलीवरी शुरू करना है Delivery Start After	वितरण पूरा कब तक करना है Delivery To Be Completed By

1	<p>पद Designation :- ईमेल आईडी Email ID : m.khobragade@coalindia.in संपर्क Contact : 07173-230421- जीएसटीआईएन GSTIN : 27AAACW1578L1ZW पता Address : Regional Stores, WCL Ballarpur Area PO Sasti Distt Chandrapur (M.S) Pin 442 706, Chandrapur, MAHARASHTRA-442706, India</p>	<p>SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED Continuous Ambient Air Quality Monitoring System (CAAQMS) NA (IF Rack Server Not Supplied)</p>	-	2	30-Jan-2024	29-May-2024
2	<p>पद Designation :- ईमेल आईडी Email ID : kskattimani@westerncoal.gov.in संपर्क Contact : 7172-265351- जीएसटीआईएन GSTIN : 27AAACW1578L1ZW पता Address : Regional Stores, WCL, Durgapur Opencast, P.O. DURGAPUR Distt Chandrapur, (M.S)Pin 442 403, CHANDRAPUR, MAHARASHTRA-442403, India</p>	<p>SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED Continuous Ambient Air Quality Monitoring System (CAAQMS) NA (IF Rack Server Not Supplied)</p>	-	2	30-Jan-2024	29-May-2024
3	<p>पद Designation :- ईमेल आईडी Email ID : mrbanchod@westerncoal.gov.in संपर्क Contact : 07172-237513- जीएसटीआईएन GSTIN : 27AAACW1578L1ZW पता Address : Regional Stores, WCL P.O. GHUGUS COLLIERY Distt Chandrapur, M.S ; Pin 442 505, CHANDRAPUR, MAHARASHTRA-442505, India</p>	<p>SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED Continuous Ambient Air Quality Monitoring System (CAAQMS) NA (IF Rack Server Not Supplied)</p>	-	2	30-Jan-2024	29-May-2024

Product Specification for SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED Continuous Ambient Air Quality Monitoring System (CAAQMS) NA (IF Rack Server Not Supplied)

विनिर्देश Specification	उप-विनिर्देश Sub-Spec	मूल्य Value
Housing/Container	4 feet x 4 feet wooden / Paneled security cabin with chair and small folding table for security guard supplied	Not Required
	Numbers of 3 phase Energy Meter	1
	floor will be laid in frame of 600 x 600 mm centre to centre with 50 x50 x 6 mm MS angle	Yes
	Foundation Length	6000mm
	Furniture (Cupboard, Working Table, Revolving Tilting Chair)	As per Buyer requirement
	Numbers of Free Socket	6
	Wiring Material	Copper
	Exposed face of the sheet, shall be permanently colour coated with silicon modified polyester coating of dry film thickness (DFT) 20 micron (min.)	Yes
	Supply of Housing/Container, Monitoring Station Foundation at Buyer/User Site	Yes
	No. of concrete pillars	9
	Foundation Height	300mm
	Numbers of 2Kg Fire extinguishers to be supplied	2
	Numbers of fluorescent lamps for lighting	3
	numbers of Emergency cut off switch for power disconnection	2
	Frame Material	Metal
	Temperature and Humidity sensors installed	Yes
	Inside Height	2500mm
	The station shall be properly grounded with chemical earthing or as per BIS Standards with proper plate and only copper strip	Yes
	The housing will be partitioned as per drawing to create space for storing of gas cylinders, Meteorological mast & UPS	Yes
	door of size 2000 x 900 mm need to be provided at the front side of the station with isolated 3 point locking & door handle flush fitted	Yes
Type of Energy Meter	Digital	
floor surface will be of 19 mm marine plywood covered with robust quality Vinyl flooring	Yes	

	Beam Size (in mm)	200 x 200
	Piller Height including above and below the Ground level	300mm
	Foundation Width	6000mm
	Supply of 19"inch Rack	3
	numbers of Thermostat switch (max 350C) for power disconnection	1
	Exterior panel Material	Pre-coated MS Sheet 1.2 mm
	Inside Length	4200mm
	RCC Steps to approach the main door of the container and the UPS / Gas room door in the side to be provided and each step should not be more than 150 mm	Yes
	RCC 150 mm with concrete ratio of 1:1:2	Yes
	Over voltage protection for each phase	Yes
	Inside width	3500mm
	Outer wall of the foundation to be plastered with 1:4, Cement: Sand ratio	Yes
	Additional Equipment & Accssories supplied	Vaccum Cleaner,Hand tool kit,Emergency led light,CPCB Sign Board
	floor should be of acid and alkaline resistant, waterproof, easily cleanable / washable	Yes
	Three - phase electrical wiring to be laid in ducts	Yes
	Inner panel Material	PVC coated aluminum sheet 2mm
Air conditioner	Power supply (Air conditioner)	230 volts +/- 10volts AC and 50 Hz +/- 3%
	Indoor Noise Level	40-50 dbA (cooling)
	Type of Air conditioner	Split
	No. of qty 2 ton AC supplied	2
	BEE Star Rating	5
	Warranty of split unit (Years)	3
	Technology of Air conditioner	Inverter
	Coil Material	Copper
	No. of qty 1 ton AC supplied	1
	Warranty of compressor (Years)	5
	Control Type	Remote
	Supply of Air Conditioner, Split Type, Wall mounted along with voltage stabilizer (2pcs X 2 ton, 1 pcs X 1 Ton). at the CAAQM Station	Yes
Online Uninterrupted Power Supply (UPS)	Overload Protections	Fuse & current limited
	LED Indicator	Battery Charge,Load level,on Line,over load,on battery,replace battery
	Input Frequency	50 hertz
	Audible Noise	Less than 45 db (at 1 meter)
	Operating humidity	10% to 95% (Non condensing)
	Battery low cut-off Protections	No battery drain after cut - off
	Battery type	Sealed maintenance free
	Output Frequency	50 Hz
	Overload Capacity	110% for continuous load
	Power factor	0.9 - 1
	Input Voltage Regulation	+/- 25%
	Technology	PWM using IGBT / MOSFETS
	Supply of On line UPS (1X10KVA, 1 hr. back up and 1X5 KVA, 2 hr. back up) at the CAAQM Station	Yes
	Operating Temperature	0-50 deg C
	Output Waveform	Pure sine wave
	Output Frequency Regulation	+/- 0.01%
	1 Hour at full load -10kVA USED for Airconditioner & 2 Hour at	

	Battery Back up time	full load 5kva (01 for Analysers & 01 for Server at Central Station)
	Audible Alarm	battery backup,battery low,fault
	Output Voltage Regulation	NA (IF Online Uninterrupted Power Supply (UPS) Not Supplied)
	Input Voltage (AC)	415 volt
	Efficiency	More than 90%
	Short circuit Protections	Fuse & current limited & cut - off
	Output Voltage (AC)	230 volt
	No. of qty. 5kVA UPS Supplied	1
	Surge Protections	Surge suppression meets BIS or International standard
	Distortion	Less than 1% on linear load
	Input Frequency Regulation	+/- 3%
	Crest Factor	More than 3: 1
	No. of qty. 10kVA UPS Supplied	1
Ambient SO2 Analyser	Digital Output Options of Ambient SO2 Analyser	Multiple Drop RS 232,USB port /TCP/IP,Ethernet
	Calibration procedures are to be integrated into the software system for automatic calibration & remote calibration (Ambient SO2 Analyser)	Yes
	Lower detectable limit of Ambient SO2 Analyser	1 ppb
	Principle of Ambient SO2 Analyser	UV fluorescence (UVF)
	Display of Ambient SO2 Analyser	Digital
	Analog Output Voltage of Ambient SO2 Analyser(volt)	0- 1,0- 10
	Span Drift of Ambient SO2 Analyser	<1 ppb in 24 hrs.
	Zero Drift of Ambient SO2 Analyser	< 1 ppb/24 Hrs. with automatic zero compensation
	Analog Output Current of Ambient SO2 Analyser (mA)	2 - 20,4 - 20
	Auto Range of Ambient SO2 Analyser	Yes
	Range of Ambient SO2 Analyser (ppb)	0 - 200
	Response time (T95) of Ambient SO2 Analyser	120 sec or less
	Supply of One quantity of Continuous Ambient Sulphur Dioxide (SO2) Analyzer	Yes
	Noise level of Ambient SO2 Analyser	0.5 ppb
	Linearity of Ambient SO2 Analyser	+/- 1.0% of full scale
Ambient NO2, NO and NOx Analyser	Linearity of Ambient NO2, NO and NOx Analyser	+/- 1% of full scale
	Supply of One quantity of Continuous Ambient Oxides of Nitrogen (NO/NO2 / NOx) Analyzer	Yes
	Digital Output Options of Ambient NO2, NO and NOx Analyser	Multi drop RS 232 port,USB port /TCP/IP,Ethernet
	Calibration procedures are to be integrated into the software system for automatic calibration & remote calibration (Ambient NO2, NO and NOx Analyser)	Yes
	Zero Drift of Ambient NO2, NO and NOx Analyser	< 1 ppb/24 Hrs.
	Auto Range of Ambient NO2, NO and NOx Analyser	Yes
	Display of Ambient NO2, NO and NOx Analyser(ppb)	Digital
	Measurement (Ambient NO2, NO and NOx Analyser)	NO-NO2- NOx in Ambient Air
	Noise Level of Ambient NO2, NO and NOx Analyser	0.5 ppb
	Lower Detectable Limit of Ambient NO2, NO and NOx Analyser	1 ppb
	Analog Output Voltage of Ambient NO2, NO and NOx Analyser, volt	0 - 1,0 - 10
	Range of Ambient NO2, NO and NOx Analyser	0-2000
	Principle of Ambient NO2, NO and NOx Analyser	Chemiluminescence
	Response Time of Ambient NO2, NO and NOx Analyser	120 sec or less
	Analog Output Current of Ambient NO2, NO and NOx Analyser, mA	2 - 20,4 - 20
Span Drift of Ambient NO2, NO and NOx Analyser	< 2% in 15 days of full scale	
	Linearity of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)

Ambient NH3 Analyser	Zero Drift of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)
	Analog Output Voltage of Ambient NH3 Analyser (volt)	NA (IF Ambient NH3 Analyser Not Supplied)
	Digital Output of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)
	Noise Level of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)
	Analog Output Current of Ambient NH3 Analyser(mA)	NA (IF Ambient NH3 Analyser Not Supplied)
	Response time of Ambient NH3 Analyser	<300 second
	Span Drift of Ambient NH3 Analyser	< 2% in 15 days of full scale
	Display of Ambient NH3 Analyser	Digital
	Auto Calibration of Ambient NH3 Analyser	Yes
	Supply of One Quantity of Continuous Ambient Ammonia (NH3) Analyzer	No
	Calibration procedures are to be integrated into the software system for automatic calibration & remote calibration (Ambient NH3 Analyser)	Yes
	Rise / fall Time 95% of the final value of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)
	Range of Ambient NH3 Analyser (ppb)	NA (IF Ambient NH3 Analyser Not Supplied)
	Principle of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)
	Lower Detectable Limit of Ambient NH3 Analyser(ppb)	NA (IF Ambient NH3 Analyser Not Supplied)
	Measurement (Ambient NH3 Analyser)	NH3in Ambient Air
NH3/NO converter of Ambient NH3 Analyser	NA (IF Ambient NH3 Analyser Not Supplied)	
Ambient CO Analyser	Analog Output Current of Ambient CO Analyser, mA	2 - 20,4 - 20
	Analog Output Voltage of Ambient CO Analyser, volt	0 - 1,0 - 10
	Digital Output of Ambient CO Analyser	Multiple drop RS 232port, USB port /TCP/IP ,Ethernet
	Zero Drift of Ambient CO Analyser	< 0.2 ppm/7 days
	Noise Level of Ambient CO Analyser	0.05 ppm with time constant +/-30 seconds
	Span Drift of Ambient CO Analyser	< 1% full scale in 24 hrs.
	Response Time of Ambient CO Analyser	60 seconds or less
	Measurement	CO in Ambient Air
	Display of Ambient CO Analyser	Digital
	Linearity of Ambient CO Analyser	Continuous + 1%
	Ranges of Ambient CO Analyser (ppm)	0 - 100
	Lower Detectable Limit of Ambient CO Analyser (ppm)	0.1
	Principle of Ambient CO Analyser	Non Dispersive Infra-Red (NDIR) with Gas Filter Correlation,Cross Flow Modulation Method
	Calibration procedures are to be integrated into the software system for automatic calibration & remote calibration (Ambient CO Analyser)	NA (IF Ambient CO Analyser Not Supplied)
Supply of One Quantity of Continuous Ambient Carbon Monoxide (CO) Analyzer	Yes	
Ambient O3 Analyser	Digital Output of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
	Display of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
	Range of Ambient O3 Analyser (ppb)	NA (IF Ambient O3 Analyser Not Supplied)
	Analog Output Voltage of Ambient O3 Analyser (volt)	NA (IF Ambient O3 Analyser Not Supplied)
	Lower Detectable Limit of Ambient O3 Analyser (ppb)	NA (IF Ambient O3 Analyser Not Supplied)
	Linearity of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
	Principle of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
	Calibration procedures are to be integrated into the software system for automatic calibration & remote calibration (Ambient O3 Analyser)	NA (IF Ambient O3 Analyser Not Supplied)
	Auto Ranging of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
	Measurements (Ambient O3 Analyser)	NA (IF Ambient O3 Analyser Not Supplied)
	Noise level of Ambient O3 Analyser (ppb)	NA (IF Ambient O3 Analyser Not Supplied)
	Span Drift of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
	Supply of One Qty of Continuous Ambient Ozone (O3) Analyzer	No

	Analog Output Current of Ambient O3 Analyser (mA) Zero Drift of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied) NA (IF Ambient O3 Analyser Not Supplied)
	Response Time of Ambient O3 Analyser	NA (IF Ambient O3 Analyser Not Supplied)
Ambient BTEX Analyser	Analog Output Voltage (volt)	NA (IF Ambient BTEX Analyser Not Supplied)
	Typical Cycle Time	NA (IF Ambient BTEX Analyser Not Supplied)
	Measurements	NA (IF Ambient BTEX Analyser Not Supplied)
	Analog Output Current (mA)	NA (IF Ambient BTEX Analyser Not Supplied)
	Calibration procedures are to be integrated into the software system for automatic calibration & remote calibration	NA (IF Ambient BTEX Analyser Not Supplied)
	Pre concentration	NA (IF Ambient BTEX Analyser Not Supplied)
	Range (ppb)	NA (IF Ambient BTEX Analyser Not Supplied)
	Digital Output	NA (IF Ambient BTEX Analyser Not Supplied)
	Sample Volume	NA (IF Ambient BTEX Analyser Not Supplied)
	Display	NA (IF Ambient BTEX Analyser Not Supplied)
	Principal	NA (IF Ambient BTEX Analyser Not Supplied)
	Repeatability	NA (IF Ambient BTEX Analyser Not Supplied)
	Approval	NA (IF Ambient BTEX Analyser Not Supplied)
	Temperature Range (degree celsius)	NA (IF Ambient BTEX Analyser Not Supplied)
	Lower detectable limit	NA (IF Ambient BTEX Analyser Not Supplied)
	Desorption tube	NA (IF Ambient BTEX Analyser Not Supplied)
	Supply of One qty of Continuous BTEX Monitor / Analyzer	No
	Continuous PM10 Monitoring Analyser	Display of Continuous PM10 Monitoring Analyser
Air Flow Rate of Continuous PM10 Monitoring Analyser		16.7 Liters / minute
Particle Size Cut Off of Continuous PM10 Monitoring Analyser (microns)		0 - 10
Analog Output of Continuous PM10 Monitoring Analyser(mA)		2 - 20,4 - 20
Detector of Continuous PM10 Monitoring Analyser		Plastic Scintillator,GM Counter,Silicon- Semiconductor base
Resolution of Continuous PM10 Monitoring Analyser, Max		1% of the measurement range
Supply of One qty of Automatic PM10 Particulate Matter Monitor		Yes
Roll Length of Continuous PM10 Monitoring Analyser		Minimum 20 meters
Measuring Range of Continuous PM10 Monitoring Analyser(micro gram/m3)		0 - 1000
Approval of Continuous PM10 Monitoring Analyser		USEPA,TUV
Digital Output of Continuous PM10 Monitoring Analyser		Multi drop RS 232 port,USB port,TCP/IP Ethernet
Analog Output of Continuous PM10 Monitoring Analyser (volt)		0 - 1,0 - 10
Calibration of Continuous PM10 Monitoring Analyser		Reference membrane facility should be provided for calibration of analyzer.
Measurement cycle time of Continuous PM10 Monitoring Analyser, Max		1 hour
Sampling Head of Continuous PM10 Monitoring Analyser		Dynamic heated sampling line with proper outer insulation for measurement of PM10, with adjustable temperature 20 - 70 degree celcius
Filter Material of Continuous PM10 Monitoring Analyser		Glass Fiber Filter
Lower Detection Limit of Continuous PM10 Monitoring Analyser, Max		< 4.8mg/m3(1 hour)
Compatibility of Continuous PM10 Monitoring Analyser		Analyzer should be compatible with protocols of DAS system to be used in station.
Principle of Continuous PM10 Monitoring Analyser	Beta-ray attenuation	
	Measuring Range of Continuous PM2.5 Monitoring Analyser	0 - 1000 mg/m3
	Supply of One qty of Automatic PM2.5 Particulate Matter Monitor	Yes
	Sampling Head of Continuous PM2.5 Monitoring Analyser	Dynamic heated sampling line with proper outer insulation for measurement of PM2.5 with adjustable temperature 20 - 70 degree celcius
	Digital Output of Continuous PM2.5 Monitoring Analyser	Multi drop RS 232 port,USB port,TCP/IP Ethernet
	Air Flow Rate of Continuous PM2.5 Monitoring Analyser	16.7 Liters / minute

Continuous PM2.5 Monitoring Analyser	Display of Continuous PM2.5 Monitoring Analyser	LCD
	Filter Material of Continuous PM2.5 Monitoring Analyser	Glass Fiber Filter
	Particle Size Cut Off of Continuous PM2.5 Monitoring Analyser (microns)	0 - 2.5
	Measurement Cycle Time of Continuous PM2.5 Monitoring Analyser	1 hour
	Analog Output Current of Continuous PM2.5 Monitoring Analyser (mA)	2 - 20,4 - 20
	Compatibility of Continuous PM2.5 Monitoring Analyser	Analyser should be compatible with protocols of DAS system to be used in station.
	Analog Output Voltage of Continuous PM2.5 Monitoring Analyser(volt)	0 - 1,0 - 10
	Calibration of Continuous PM2.5 Monitoring Analyser	Reference membrane facility should be provided for multipoint calibration of analyzer.
	Approval of Continuous PM2.5 Monitoring Analyser	USEPA,TUV
	Roll Length of Continuous PM2.5 Monitoring Analyser	Minimum 20 meters
	Lower Detection Limit of Continuous PM2.5 Monitoring Analyser	< 4.8 mg/m3 (1 hour)
	Principle of Continuous PM2.5 Monitoring Analyser	Beta-ray attenuation
	Detector of Continuous PM2.5 Monitoring Analyser	Plastic Scintillator,GM Counter,Silicon- Semiconductor base
	Resolution of Continuous PM2.5 Monitoring Analyser	1% of the measurement range
Sampling System	Roof entry cut out material	Stainless Steel
	Fitted as per USEPA with a suction pump	Yes
	Supply of One qty of Sampling System having 10 port manifold	Yes
	Height (Sampling System)	Approx. 1.0 meter above the roof
	Manifold	10 port for tubes 6 x 1 mm, self-tightening
	Sampling head material	Stainless Steel
	Conduit Material	Stainless Steel
	Inner sampling system material	Borosilicate glass
Ambient Weather Station	Ambient Temperature Resolution ,Max, deg C	0.1
	Solar Radiation Sensor type	Silicon Photo diode
	Solar Radiation Range	0 to 1500 W/m2 or better
	Construction material of Telescopic Crank	Galvanised steel or aluminium
	Retracted Height of Telescopic Crank	2 meter
	Relative Humidity Response Time	10 sec or better
	Ambient Temperature Range, deg C	-10 to - 60
	Rainfall Resolution, Max	0.2mm
	Relative Humidity Sensor type	Capacitive
	Relative Humidity Range	0 to 100% RH
	Wind Direction Sensor type	Ultrasonic
	Number of Sections of Telescopic Crank	4
	Rainfall Response Time	10 sec or better
	Wind Direction Resolution (degree)	1
	Wind Speed Measurement Accuracy	+/- 0.5 m/sec or better
	Wind Speed Measurement Sustainability	Upto 75 m/sec
	Wind load Limit of Telescopic Crank	0.7896 sq. m. (8.5 sq. ft) at 50 mph
	Ambient Temperature Sensor type	Resistance type
	Ambient Temperature Response	10 seconds in still air
	Solar Radiation Accuracy	+/- 5.0 % or better
	Wind Direction Range (degree)	0 - 359
	Rainfall Range	0.2 mm to 100 mm /hr
	Relative Humidity Resolution	0.01
	Ambient Temperature Accuracy	+/- 0.2 degree celcius or better (with radiation shield)
Wind Direction Accuracy	+/- 3 degree or better	
Wind Speed Measurement Range (Operation)	0 - 60 m/s or better	

	Solar Radiation Resolution	5W/m2
	Wind Speed Measurement Resolution	0.1 m/sec
	Rainfall Sensor type	Tipping bucket rain gauge or any other suitable sensor
	Wind Direction Threshold	0.5 m/sec or less
	Wind Speed Measurement Response time	10 sec or better
	Wind Speed Measurement Sensor Type	Ultrasonic
	Supply of Ambient air Weather Station	Yes
	Rainfall Accuracy	+/- 5% or better
	Relative Humidity Accuracy	+/- 3.0 % or better
	Ambient Temperature Response time	10 sec or better
	Extended Height of Telescopic Crank	10 meter
	Wind Direction Response time	10 sec or better
	Wind Speed Measurement Threshold	0.5 m/sec or less
Multipoint Gas Calibration System	Having facility for O3 Generator for stable and repeatability calibration	Yes
	The Permeation System should be capable to accept permeation tubes up to 6 cm in length and 2cm in diameter with user selectable temperature setting of 40 OC and 50 OC	Yes
	Generate zero air purity, %	99.9
	Auto calibration option if user selectable	Yes
	Ozone analyzer	Yes
	Gas Phase Titration (GPT) with O3 generator having 100% converter efficiency for conversion of NO to NO2	Yes
	Calibration using permeation tubes for which at least two chambers based Permeation system has to be provided	Yes
	Automatic dilution system for the calibration	SO2, NO, CO, NH3 and BTEX analyser
	System should be DAS compatible for remote calibration from Central Server	Yes
	System should be 19" rack mountable	Yes
Supply of One set of Calibration System	Yes	
Work Station Computer	Supply of Data Acquisition System (DAS), One for each CAAQM Station	Yes
	Supply of Computer System for DAS: One for each CAAQM Station	Yes
	Mouse	Standard Optical Mouse same as OEM
	CPU	Intel Core i7 8th generation or higher
	Warranty on site OEM warranty - comprehensive	Yes
	Monitor (Work Station Computer)	22" Wide or higher LED FHD Color Monitor
	OS support (Work Station Computer)	Open source Linux
	Key board	Optical Keyboard same as OEM
	Power Supply (Work Station Computer)	Standard suitable power supply
	HDD's	3.5" 1TB, SATA drives
	Supply of One set of Computer System for each CAAQM Station	Yes
	Wireless adapter (Work Station Computer)	USB Wireless adapter x 1 no.
	Ethernet ports	Integrated intel Ethernet LAN 10/100/1000
	Memory (Work Station Computer)	8 GB DDR-IV, or better
	I/O ports	Minimum 6 USB (at least 4 ports of 3.0)
	Optical Drive	DVD R/W Internal
PCI Slots	Two PCIe x16 half height	
	Fan 230V, 90 CFM to be mounted on Rear Door, 4PCS	Yes
	Height	42U
	Caster Wheels with breaks	Yes
	Supply of Black Industrial Rack	Yes
	Copper Based Electrical Grounding / Earthing Strip	Yes

Industrial Rack	Rack material	Steel
	Depth	1000 mm
	Vertical & Horizontal cables manager supplied	Yes
	Light provision activation in the rack up on opening of the front/rear door	Yes
	Adjustable screw legs	Yes
	Width	800 mm
	Base frame	Yes
	Load Bearing Capacity	1000 Kg
	Color	Black
Rack Server	Mouse (Rack Server)	NA (IF Rack Server Not Supplied)
	Mother Board	NA (IF Rack Server Not Supplied)
	RAID Controller	NA (IF Rack Server Not Supplied)
	Key board (Rack Server)	NA (IF Rack Server Not Supplied)
	Form Factor	NA (IF Rack Server Not Supplied)
	Memory (Rack Server)	NA (IF Rack Server Not Supplied)
	Redundant Power Supply & Fans	NA (IF Rack Server Not Supplied)
	Antivirus (Rack Server)	NA (IF Rack Server Not Supplied)
	Monitor	NA (IF Rack Server Not Supplied)
	HDD	NA (IF Rack Server Not Supplied)
	Optical Drive (Rack Server)	NA (IF Rack Server Not Supplied)
	CPU (Rack Server)	NA (IF Rack Server Not Supplied)
	OS	NA (IF Rack Server Not Supplied)
	Wireless adapter	NA (IF Rack Server Not Supplied)
	I/O ports (Rack Server)	NA (IF Rack Server Not Supplied)
	PCI Slots (Rack Server)	NA (IF Rack Server Not Supplied)
	Ethernet Port	NA (IF Rack Server Not Supplied)
Supply of Server Rack	No	
Warranty	NA (IF Rack Server Not Supplied)	
	Dimension (mm x mm x mm)	NA (IF Wireless Access Point Not Supplied)
	Support for Configurable Carrier Threshold	NA (IF Wireless Access Point Not Supplied)
	Support for Load Balancing Available between 2-4 Ghz and 5 Ghz	NA (IF Wireless Access Point Not Supplied)
	Mounting	NA (IF Wireless Access Point Not Supplied)
	Support for Beam forming	NA (IF Wireless Access Point Not Supplied)
	Maximum clients Nos	NA (IF Wireless Access Point Not Supplied)
	Support for QoS for Voice over Wireless	NA (IF Wireless Access Point Not Supplied)
	Frequency Band	NA (IF Wireless Access Point Not Supplied)
	Deployment	NA (IF Wireless Access Point Not Supplied)
	Device Management	NA (IF Wireless Access Point Not Supplied)
	Radio Resource Management such for power channel, coverage hole detection and performance optimization	NA (IF Wireless Access Point Not Supplied)
	Number of WLAN (SSID) perAP	NA (IF Wireless Access Point Not Supplied)
	On Site OEM Warranty	NA (IF Wireless Access Point Not Supplied)
	Environmental Standard: plenum- Yes rated (UL2043) for Indoor and IP67 for Outdoor	NA (IF Wireless Access Point Not Supplied)
	Powering options (Such as AC/DC, 802/3af PoE, 802/3at PoE+), specify	NA (IF Wireless Access Point Not Supplied)
	Wi-Fi CERTIFIED	NA (IF Wireless Access Point Not Supplied)
	Type of Access Point	NA (IF Wireless Access Point Not Supplied)
Support for Autonomous access- point option	NA (IF Wireless Access Point Not Supplied)	
Transmit power (tx),dBm	NA (IF Wireless Access Point Not Supplied)	

Wireless Access Point	Supported Encryption	NA (IF Wireless Access Point Not Supplied)
	Wireless Speed Up to (Mbps)	NA (IF Wireless Access Point Not Supplied)
	Operating Temperature Range (Degree C)	NA (IF Wireless Access Point Not Supplied)
	Support for Mesh Networking	NA (IF Wireless Access Point Not Supplied)
	Max Wireless Signal Range in Mts	NA (IF Wireless Access Point Not Supplied)
	WPC certified	NA (IF Wireless Access Point Not Supplied)
	Number of 10/100/1000 port	NA (IF Wireless Access Point Not Supplied)
	Maximum Data Rate MBps	NA (IF Wireless Access Point Not Supplied)
	Channel Width (MHz)	NA (IF Wireless Access Point Not Supplied)
	Operating Humidity (%RH)	NA (IF Wireless Access Point Not Supplied)
	Power POE (Watt)	NA (IF Wireless Access Point Not Supplied)
	Support for Rogue access point detection	NA (IF Wireless Access Point Not Supplied)
	Support for QoS and Video Call Admission Control capabilities	NA (IF Wireless Access Point Not Supplied)
	Supported Wi-fi Standards	NA (IF Wireless Access Point Not Supplied)
	Number Of Radios	NA (IF Wireless Access Point Not Supplied)
	Weight (grams)	NA (IF Wireless Access Point Not Supplied)
	Number of MIMO supported & Spatial Streams	NA (IF Wireless Access Point Not Supplied)
	mGig support	NA (IF Wireless Access Point Not Supplied)
	Support for MU-MIMO	NA (IF Wireless Access Point Not Supplied)
	Receiver Sensitivity in db	NA (IF Wireless Access Point Not Supplied)
Supply of Wireless Accesspoint	No	
Printer	Ethernet , usb and wireless connectivity	Yes
	Duty Cycle page per toner cartridge , Min	1500
	Processor speed , MHz	1200 MHz Print or better
	Print Speed min (Black, ppm)	25
	Type (Printer)	Color Laser Jet Multi Function Printer
	Print Resolution (dpi)	1200 x 1200
	Functions	Print
	Supply of Laser Printer Colour MFP : One for each CAAQM Station	Yes
	Paper Type supported	A4 & A5 both
	2- side printing	Yes
	Print Speed min (Colour, ppm)	5
Unified Threat Management (UTM) Device	New Sessions/second, Min	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	Minimum of 1000 IPsec tunnel support and 50 SSL VPN user support	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	License Duration, Min	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	Inbuilt-on Appliance Reporting	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	IPsec VPN throughput , Min	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	Antivirus Throughput, Min	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	Firewall throughput of more than 5 Gbps	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	810/100/1000 interfaces supporting Hardware Bypass	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	IPS throughput , Min	NA (IF Unified Threat Management (UTM) Device Not Supplied)
	Minimum 1 million Concurrent sessions	NA (IF Unified Threat Management (UTM) Device Not Supplied)

	Supply of One for each SPCB	No
Additional IT Peripherals	Supply of Remote Connectivity Tool/Software: One for each SPCB*	Yes
	Supply of One set of Central Management Software with License w.r.t. Data Acquisition: One for each SPCB	No
	Supply of Remote Calibration & Validation Software: One for each SPCB*	Yes
	Supply of One set of 24Ports CISCO Switch: One for each SPCB*	No
Connectivity for data transfer	Providing Lease Line for Internet AND Broadband (for Station) AND Data Card as mode Communication system (for display Board)	Yes
	Type	NA (IF Connectivity for data transfer Not Supplied)
Display Board Data Transmission Device	Last data saved will show on Display Board	Yes
	Software	Available
	Power Supply	5 to 12 V DC through 220 V 50Hz AC Supply adapter or USB driven
	Wifi Communication - Wifi Hotspot enabled/ GPRS Comm. Enabled	Yes
	Last updated time should be displayed on Display board	Yes
	Can work Humidity up to	90 percent
	One HDMI Port	Yes
	Processor	Intel@ Corei5 equivalent Or Better
	Antivirus	Yes
	Supply of Data display Board Transmission Device (two nos)	Yes
	Device Support	5 Year
	Size	Mechanical Chassis Size not to exceed 10" x 6"x 6"with stand alone tower/box.
	Minimum of 3 USB Port with support for USB 2.0 or USB 3.0.	Yes
	Memory	6 GB Memory slots for Micro SD
	1 Meter HDMI Cable	Yes
	LAN Communication	Yes
	OS Support	Linux,Windows OS
	Internet	To be provided by the vendor either through GSM SIMor through Wifi Enabled Dongles.
	Operating Environment deg Celsius	0 to 50
	LAN Port for Ethernet Network Connection	Yes
Day Light and Night Visible True Color Data Display System	Color Temperature - Adjustable	4500 - 9000 K
	IP Rating	Display Module IP67, Cabinet IP 65
	Operating and non-operating Temperature	-15 to 55 deg C
	Minimum Life span of LED	100000 Hours
	Refresh frequency	1920 Hz
	Trillion Colors	281
	Certification	BIS
	Brightness level dimming capability	256
	Have the facility to display the environmental picture through video carnera/vcr/cd player	Yes
	Display of Colour Elements	SMD 3535 or better
	Visibility Range	10 Meters (Day time)
	Supply of One set of Day & Night Visible Data Display Board (Near to the station)	Yes
	Input Power Requirement	220 V, 50/60Hz
	Data processing	16 bit
	Brightness	7000 NIT or higher
	Height of display system	4 feet
	Scan rate	Scan Ratio 1:1

	Power consumption	200 W
	Viewing angle	140 deg Horizontal and 140 deg Vertical
	Width of display system	8 feet
	Supply of One Set of Day & Night Visible Data Display Board at the respective SPCB-H.O	No
	LED Display should be serviceable from front and back	Yes
	External cabinet should be factory made without pin holes	Yes
	Internal LED frame Material	Aluminium
Miscellaneous Works	RCC foundation, pillars misc works including Caging, civil & electrical work (for CAAQM stations as well as Data Display Boards) provided by seller if supplying the related Material	Yes
Data acquisition SOFTWARE FOR station	Data Collection, Average data over user selectable time	1,5,30,60 seconds time interval
	Data acquisition SOFTWARE FOR station (CAAQM) all parameters must be according to CPCB Board guidelines	Yes
	Analyzer data channel should comprise of	Name, Units, Communication Address, Validity Range, Operation and Error Status
	Data input, Analog	0-1 volt/0-10 volt/2-20mA/4-20mA
	Expandable to 64 channels, if required in future	Yes
	Channel size, Min	32
	Frequency of data acquisition, User selectable averaging duration online digitally	1,5,30,60,120 second
	The software captures data from all channels in the system and stores in the station Computer	Yes
Data acquisition SOFTWARE AT the CENTRAL station AT EACH SPCB & cpcb	Data acquisition SOFTWARE AT the CENTRAL station AT EACH SPCB & cpcb all parameter must be according to CPCB Board Guidelines	Yes
Warranty	All supplied items warranty which not mentioned item wise	3 year onsite warranty

खरीदार परिभाषित अतिरिक्त विशेषता के लिए | Buyer Defined Additional Specification for SWAN TECHNICAL SERVICES PRIVATE LIMITED--SWAN TECHNICAL SERVICES PRIVATE LIMITED Continuous Ambient Air Quality Monitoring System (CAAQMS) NA (IF Rack Server Not Supplied)

विनिर्देश Specification	मूल्य Value
Air conditioner	Supply of 2 numbers Air Conditioner, Split Type [(2pcs X 1.5 rnton), 5 - star rating] Wall mounted along withnprovisions for protection against voltage fluctuation at rnthe CAAQM Station with automatic timer.rnu2022 Automatic timer shall be provided: The indoor rnunits shall be running alternately at suitableinterval with timer control.rnu2022 Proper caging / grilling shall also be provided rfor the safety of ACs (outdoor units).
Online Uninterrupted Power Supply (UPS)	Supply of 1 number On-line UPS (minimum 2 hr. back up in full rncapacity) shall be provided for smooth operation of thernanalyzers and peripherals (excluding AC) at the rnCAAQM Station.
Remote calibration and validation software	Remote calibration and validation software for each CAAQMS
Data display Board Transmission Device for Data Display Board	Supply of 1 number Data Display Board Transmission Device: For displaying data in the location specified by WCL.
Work Station Computer	The supplier is supposed to install Computer System along with DAS of suitable high-end specification as per the design & specifications of item no. 13: Data Acquisition and Handling Station (DAHS) of technical specifications given in Buyer added Bid Specific ATC

शुद्धिपत्र | Corrigendum

1. GeM-Bidding-Corr-5235619-1.pdf [यहां क्लिक करें | click here](#)
2. तक बढ़ाया गया | Extended Upto : 2023-10-06 14:00:00
3. तक बढ़ाया गया | Extended Upto : 2023-10-20 12:00:00
4. तक बढ़ाया गया | Extended Upto : 2023-10-30 12:00:00

मूल्य द्विभाजन एक्सेल फ़ाइल विवरण | Price Bifurcation Excel File details: [PRICE BREAKUP SHEET](#)

ईपीबीजी विवरण | ePBG Detail

सलाहकार बैंक Advisory Bank :	ICICI
ईपीबीजी प्रतिशत (%) ePBG Percentage(%):	10.00
बोली लगाने वाले को बोली के नियमों और शर्तों के अनुसार लागू ईपीबीजी प्रस्तुत करना होगा The bidder shall furnish ePBG as applicable as per bid's terms and conditions	

नियम और शर्तें | Terms and Conditions

1. General Terms and Conditions-

- 1.1 This contract is governed by the [General Terms and Conditions](#), conditions stipulated to this Product/Service as provided in the Marketplace.
- 1.2 This Contract between the Seller and the Buyer, is for the supply of the Goods and/ or Services, detailed in the schedule above, in accordance with the General Terms and Conditions (GTC) unless otherwise superseded by Goods / Services specific Special Terms and Conditions (STC) and/ or BID/Reverse Auction Additional Terms and Conditions (ATC), as applicable

2. Buyer Added Bid Specific Terms and Conditions-

2.1 Scope of Supply:

Scope of supply (Bid price to include all cost components) : Supply Installation Testing and Commissioning of Goods

2.2 Generic

Buyer Organization specific Integrity Pact shall have to be complied by all bidders. Bidders shall have to upload scanned copy of signed integrity pact as per Buyer organizations policy along with bid. [Click here to view the file](#)

2.3 Forms of EMD and PBG:

Bidders can also submit the EMD with Account Payee Demand Draft in favour of

WESTERN COALFIELDS LIMITED

payable at

NAGPUR

. Bidder has to upload scanned copy / proof of the DD along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.

2.4 Forms of EMD and PBG:

Bidders can also submit the EMD with Payment online through RTGS / internet banking in Beneficiary name

WESTERN COALFIELDS LIMITED

Account No.

10205966091

IFSC Code

SBIN0009060

Bank Name

STATE BANK OF INDIA

Branch address

COAL ESTATE BRANCH CIVIL LINES, NAGPUR 440001

. Bidder to indicate bid number and name of bidding entity in the transaction details field at the time of on-line transfer. Bidder has to upload scanned copy / proof of the Online Payment Transfer along with bid.

2.5 Forms of EMD and PBG:

Successful Bidder can submit the Performance Security in the form of Account Payee Demand Draft also (besides PBG which is allowed as per GeM GTC). DD should be made in favour of

WESTERN COALFIELDS LIMITED

payable at

NAGPUR

. After award of contract, Successful Bidder can upload scanned copy of the DD in place of PBG and has to ensure delivery of hard copy to the original DD to the Buyer within 15 days of award of contract.

2.6 Buyer Added Bid Specific ATC:

Buyer uploaded ATC document [Click here to view the file](#).

2.7 Buyer Added Bid Specific ATC:

Buyer Added text based ATC clauses

1) Bidders are advised to read all the Terms and Conditions of the bid including ATC document before submitting the bid. The technical specification and terms and conditions of NIT present in the ATC document shall supersede the specification parameters in the catalogue.

2) The PRICE_BREAKUP_SHEET is for evaluation of prices and arriving at L1 quoted price at the time of Price Bid Opening.

नोट: यह सिस्टम जनरेटेड फाइल है। कोई हस्ताक्षर की आवश्यकता नहीं है। इस दस्तावेज़ का प्रिंट आउट भुगतान/लेनदेन उद्देश्य के लिए मान्य नहीं है।

Note: This is system generated file. No signature is required. Print out of this document is not valid for payment/ transaction purpose.