BAGUIO WATER DISTRICT **BWD Compound, Utility Road, Baguio City 2600**		Document No.	ADM-PUR-F003
REQUEST FOR BIDS/QUOTATION (RQ)		Revision Date	October 29, 2019
		Revision No.	02

To: _____
(Name of Supplier)
Contact Person: _____
Address: _____
_____
Contact no.: _____

RQ No.: **03 – JO – 056**
PR / JO No.: **JO – 056**
Date of RQ: **March 4, 2024**
Purpose of RQ:
Treatment of oil & grease, and enhancement of Disinfection System at Camp Allen

NOTE: DATA REQUIRED MUST BE FILLED UP COMPLETELY. FAILURE TO INDICATE THE PRICE VALIDITY, TERMS, WARANTY PERIOD AND DELIVERY PERIOD SHALL MEAN OUTRIGHT DISQUALIFICATION OF BIDS

	Qty.	Description	U-Price	Total
VALIDITY DATE: _____ day **(30 days minimum)** **DELIVERY:** _____ working days _____ calendar days _____ FOB warehouse **WARRANTY** _____ calendar days upon acceptance. **TERMS:**	**1 lot**	**Supply, Delivery, Installation and Commissioning of one (1) unit 20-Ft Containerized Ultra-Filtration System Permeate Capacity 70 m3 / hr**		

DESIGN BASIS

Equipment	% Recovery	Flow Rate	Unit
Total Feed to Ultra-Filtration System	-	72.50	M^3/hr.
No. of Ultra-Filtration Skid	-	1	No.
Ultra-Filtration System Feed	95%	72.50	M^3/hr.
Ultra-Filtration Permeate		70.00	M^3/hr.
Ultra-Filtration Reject		2.50	M^3/hr.

UF FEED CUM CIP PUMP:

Component	**Specification**
Quantity	1 Nos. (W)
Material of Construction	Casing & Impeller: SS 316
Capacity (Each)	70.00 m^3/hr. @ 3.0 Bar
Type	Horizontal Centrifugal Pump
Voltage / Phase	60 Hz / 440VAC / 3 phases
VFD	NA
Accessories	**Location**
Manual Valves	Suction & Discharge of Pump
Non-Return Valve	Discharge of Pump
Sampling Valve	Discharge of Pump
Pressure Gauge	Discharge of Pump
Skid Piping	uPVC Sch 40

PRE-FILTRATION:

Component	**Specification**
Quantity	1 No. (Working)
Material of Construction	UPVC Housing – 2 Nos. Cartilages
Capacity (Each)	70.00 m^3/hr. @ 3.0 Bar
Type	Autoback wash Vertical cartridge

Voltage / Phase	60 Hz / 440VAC / 3 phases
VFD	NA
Accessories	**Location**
Manual Valves	Suction & Discharge of Pump
Non-Return Valve	Discharge of Pump
Sampling Valve	Discharge of Pump
Pressure Gauge	Discharge of Pump
Skid Piping	uPVC Sch 40

ULTRA-FILTRATION MEMBRANE SKID:

Component	Specification
Quantity	1 Set (W)
Net Permeate	70 M^3/Hr.
Type	Hollow Fiber
No of Modules	30 Nos.
MOC	PAN (Poly Alco Nitrile)
Accessories	**Location**
Skid Valves	Pneumatically Actuated Valves
Sampling valve	At Outlet
Pressure Switch	At Inlet & Backwash Header
Flow Indicator	At Inlet
Flow Transmitter	At Outlet
Skid Piping	uPVC Sch 40
Skid Frame	Containerized MS Painted

UF CIP TANK:

Component	Specification
Tank	
Quantity	1 No.
MF Feed Tank Capacity	10,000 L
Material of Construction	HDPE
Accessories	
Level Switch	1 No. Provided
Drain Valve	Provided
Skid Piping	uPVC Sch 40

UF BACKWASH CUM CIP PUMP:

Component	Specification
Quantity	1 Nos. (Working)
Material of construction	Casing & Impeller: SS 316
Capacity	105.0 m^3/Hr. @ 2.0 Bar
Type	Horizontal Centrifugal Pump
Voltage / Phase	60 Hz/440VAC / 3 phases
Manual valves	Suction & Discharge of Pump
Non-Return Valve	Discharge of Pump

Sampling valve	Discharge of Pump

AIR COMPRESSOR:

Component	Specification
Quantity	1 No. (1 Working)
Material of construction	CI
Capacity	220 m^3/hr. @ 12 Bar
Voltage / Phase	60 Hz/440VAC / 3 phases
Accessories	**Location**
Pressure Reducing Valve	At MF Air Line
Air Flow Regulator Unit	At Instrument Air Line
Skid Piping	GI C Class

CONTROL PANEL & INSTRUMENTATION:

Component	Specification
Panel	PLC Based
Panel Box	MS Powder Coated
Electrical cable (Within Skid)	Flexible / Armored
HMI	7", Touch Screen Color
Rotameter	UF Inlet
Electromagnetic Flowmeter 4-20 mA	UF Permeate
Electromagnetic Flowmeter 4-20 mA	UF Backwash

Supply, Delivery and Installation of two (2) 6" In-Line Ultra Violet Hydro Optic Disinfection System

General Specification of UV-HOD System
Discharge Pipe Size: 6" diameter
Max. Flow Capacity: 150 m^3 / hr
Type of Lamp: 1.7Kw UV HOD medium Pressure High Intensity
No. of Lamps: 1 x 1.7Kw MPHI Lamp
Max. Operating Pressure: 10 bar
Water Operating Temperature: Up to 60°C
Electric Requirements: 3 Phase x 400 / 480VAC for the Ballast Module
(Lamp) and 1-Phase x 120 / 240VAC for the Controller
Construction Materials:
Housing: Stainless Steel 316
Internals: High grade fused silica quartz

Disinfection Performance Criteria
The system should guarantee the following microbial load complying with the required minimum microbial parameters in the Philippine National Standard for Drinking Water:

Parameters	Values
1. Total Coliform	< 1.1 MPN / 100 mL
2. Fecal Coliform	< 1.1 MPN / 100 mL

3. Heterotrophic Plate Count (HPC)	< 500 CFU / mL
4. E. Coli	< 1 CFU / mL

REAL TIME MONITORING

- Automatically adjusts UV dose to changing conditions in real time.
- Displays real time status, and actual UV dose being delivered now.
- Tracks dose and validation parameters for EPA 4 log, PMO pasteurized equivalent water and FDA FSMA.
- Continuous documentation for QA and regulators.

The manufacturer will provide the following information as part of its proposal:

1. Calculations of UV Dose used for system sizing and guarantees, System sizing to be solely based on EPA UVDGM validation protocol Nov. 2006 and validated RED values.
2. The UV system shall provide the minimum Validated dose needed for 4 log inactivation of Cryptosporidium (or UVDGM table 1.4 of specific micro-organism inactivation of Cryptosporidium (or UVDGM table 1.4 of specific micro-organism log removal required for inactivation) according to LT2ESWTR under peak flow conditions with one reactor lamp output at end lamp life and under fouled conditions
3. Sleeve manufacturer certification approving that the absorption of the protecting quartz sleeve at 253.7 nanometers shall not exceed 2% per 1 mm. Thickness.
4. Minimum of Five (5) years' experience in the manufacture of closed piped ultraviolet Disinfection systems of similar design to that proposed for this project.
5. Manufacturer to provide Certificate on Exclusivity Distributorship Agreement

SCOPE OF WORKS

1) Supply, Delivery, and Installation and Commissioning of 6" UV HOD
2) Clean-in-Place unit
3) Provision of drawing for the suggested UV Installation
4) 1 unit 6" Digital Electromagnetic Flow Meter

Approved Budget Cost: ₱42,000,000.00 / lot

Please see attached Terms of Reference (TOR)

x x x x x

This is a two (2) envelope system:

Envelope "A" to contain the following; among others:

a) A refundable bid bond in the form of cash, Manager's, or Cashier's check equivalent to 2% or surety bond callable on demand issued by a surety or insurance company duly certified by the Insurance Commission equivalent to 5% of the total approved budget cost is required for a total purchase bid amount of ₱ 50,000.00 and above. Validity of the surety bond is 120 days from the date of opening of bids **OR** Bid Securing Declaration regardless of amount of bid;

b) Terms of payment, delivery, warranty, bid validity and complete specifications;

c) Brochure/s (Original);

d) Proof of payment of a non-refundable fee of **₱25,000.00**; otherwise, bids shall not be opened

e) Certificate of Authorized Distributorship / Dealership issued by the Principal Supplier to the participating bidder (with red ribbon) if none has been submitted to the BAC in its Accreditation;

-For bidders who have foreign principal suppliers, the BWD-BAC shall accept an Apostilled Certificate of Authorized Distributorship / Dealership issued by a competent authority of the host government in lieu of the Certificate of Authorized Distributorship / Dealership (with red ribbon), except for non-contracting countries to the Apostille Convention, which still require the red ribbon requirement.

-For locally produced / manufactured products, only a certificate of Authorized Distributorship / Dealership w/o red ribbon is required if applicable;

f) ISO Certificate issued to the principal supplier/participating bidder for the offered material or equipment brand name (if none has been submitted to the BAC in its Accreditation);

g) International Certificate of Warranty.

Envelope "B" to contain the bid cost per unit.

Pre-bid conference: March 21, 2024
9:30am via Zoom Application
Meeting ID: 452 718 8447
Password: 9Buvqr

By: Supplier or Authorized Representative:_____(sign over printed name)

Deadline of submission of bids: **April 2, 2024** Opening of bids: **1:30 pm**

Prepared by: For: **MGLAMANGAN** PURCHASING **Noted by:** **ATTY. MA. LUISA C. TENEDERO** BAC IN-HOUSE **ENGR. REYNALDO C. JAYCO** BAC-TECHNICAL

BWD RESERVES THE RIGHT TO REJECT BIDS &/OR DECLARE A FAILURE OF BIDDING PURSUANT TO THE PERTINENT PROVISIONS OF RA 9184
BWD DOES NOT ENGAGE IN SOLICITATION OF FUNDS FROM ANY INDIVIDUALS OR ENTITIES, AND WE STRONGLY ADVISE AGAINST RESPONDING TO ANY UNAUTHORIZED REQUESTS CLAIMING ASSOCIATION WITH OUR ORGANIZATION.

TERMS OF REFERENCE

I. SCOPE OF WORK

A. PREPARATION OF BIDS

1. The supply, delivery, installation, and commissioning of;
   a. 20-Ft Containerized Ultra-Filtration System with a permeate capacity of 70 m^3/hr is intended for treating Oil and Grease at Camp Allen Deep Well and
   b. Ultra-Violet Hydro Optic Water Treatment for maximum flowrate 150 m^3/hr
2. Works provided must be within the Approved Budget Cost for the Contract.
3. All work items shall be thoroughly accomplished by the bidder in accordance to the attached specifications.
4. Design, and specifications must conform with the Baguio Water District requirements and other accepted standard specifications, (Philippine National Standards for Drinking Water 2017).
5. Water treatment devices and equipment shall have a Valid Certificate of Product Registration (CPR) issued by the Bureau of Health Devices and Technology of the Department of Health as mandated by AO No. 2005-0003 s. 2005; or any equivalent recognized international certifying body (EPA, NSF, etc.)
6. Any revision in any of the part of the approved work shall be properly coordinated with BWD or its authorized representative before implementation.
7. Safety practice should be incorporated on the contract.
8. Documents to be submitted must be accompanied by a detailed cost estimate of each item as categorized below (fig. A-1).

ITEM NO.	PARTICULARS	QTY	UNIT	UNIT COST/QTY	TOTAL COST
1	MOBILIZATION		LOT		
2	FEED WATER SAMPLING TESTING AND ANALYSIS		LOT		
3	SET UP LAYOUT OF SKID		LOT		
5	INSTALLATION AND ASSEMBLY OF PIPINGS		LOT		
6	INSTALLATION/ASSEMBLY OF FILTERS (*PRE-FILTERS; ULTRA-FILTER MEMBRANES AND ITS ACCESSORIES*)		SET		
7	INSTALLATION OF UF BACKWASH SYSTEM & ACCESSORIES		PCS		

8	INSTALLATION OF CONTROL/INSTRUMENTATION PANELS		LOT		
9	INSTALLATION OF UF CIP TANK & ACCESSORIES		PC		
10	AIR COMPRESSORS & ACCESSORIES		LOT		
11	ELECTRICAL WORKS Complete (transformers, Data/signal/power cables, control panels, surge protectors, etc.).		LOT		
12	INSTALLATION of UV HYDRO OPTIC disinfection, micro filter, and with complete Housing/shed Enclosure		Lot		
13	PRODUCT WATER TESTING AND ANALYSIS		LOT		
14	COMMISSIONING & TEST PERIOD & TRAINING OF WATER QUALITY CREW ON THE OPERATION & MAINTENANCE OF THE EQUIPMENT		YR		
15	DEMOBILIZATION		LOT		

Fig.A-1

9. Provide a set of approved plans needed for the implementation.

B. IMPLEMENTATION

1. Items for use must be the same specifications indicated in the bid and approved by BWD before installation.
2. Proper utilization of appropriate PPEs shall be strictly observed for the whole duration of the contract.
3. Shop drawings must be provided by the contractor and must be duly approved by BWD prior to implementation.
4. The contractor shall furnish all as-built plans, operational manuals and submit to BWD.
5. All works, parts of the equipment shall be guaranteed by the contractor.

II. REQUIREMENTS AND SPECIFICATIONS

The project for which this specification for implementation hereto applies, is the supply, delivery, installation, and commissioning of:

1. A 20-Ft Containerized Ultra-Filtration System with a permeate capacity of 70 m^3/hr. This system is intended for treating Oil and Grease at Camp Allen Deep Well. PRODUCT WATER SHALL PASS THE STANDARDS SETFORTH BY THE 2017 PNSDW *(*Benzene and other petroleum-based hydrocarbons/polyaromatic hydrocarbons and other compounds*)*.
2. An Ultra-Violet Hydro Optic Disinfection Treatment for flowrate of 150 m^3/hr. Fully furnished with complete parts and accessories to attain efficiency to comply with PNSDW 2017 for microbiological parameters. Further, complete housing/shed of the UV-HO shall be provided.

Parameters	Values
1. Total Coliform	<1.1 MPN/100ml
2. Fecal Coliform	<1.1 MPN/100ml
3. Heterotrophic Plate Count	<500CFU/ml

Microbial Parameters per PNSDW 2017

The bidder shall provide all necessary materials, labor, equipment, supplies, and tools to complete the project in accordance with the approved contract duration, design and specifications of the procuring entity.

III. CONTRACT DURATION

The contract duration shall be sixty (60) calendar days and divided into two (2) phases:

A. First Phase – Submission of shop drawings and all other preparatory works: eighteen (18) calendar days
B. Second Phase – Installation and testing works: forty-two (42) calendar days

The first phase shall be commenced within five (5) calendar days from receipt of the Notice to Proceed. Immediately after the first phase and approval of the same by BWD, the second phase shall ensue.

Warranty on spare parts and workmanship shall be one (1) calendar year after turn-over. During the period the contractor shall do regular preventive maintenance works (at Contractors cost) and submit to BWD quarterly laboratory test result for the Ultra-Filtration System and monthly for the UV-Hydro Optic to assure efficiency of the treatment process.

Training on operation and maintenance of the equipment shall also be conducted to Water Quality Personnel in preparation for future turnover of the operation and maintenance of the equipment.

IV. TERMS OF PAYMENT

In consideration to the works and services required by this Terms of Reference, payment shall be made as follows:

a. BWD shall, upon a written request of the contractor which shall be submitted as a contract document, make an advance payment to the contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum or, at the most, two installments.

   The advance payment shall be repaid by the contractor by deducting fifteen percent (15%) from his periodic progress payments a percentage equal to the percentage of the total contract price used for the advance payment.

b. Progress payments shall be made upon submission of all necessary documents, which shall be evaluated and certified by the Water Quality Section and approved by the General Manager of BWD.

   Moreover, progress payments are subject to retention of ten percent (10%). Such retention shall be based on the total amount due to the contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of the works, as determined by BWD, are completed. If, after fifty percent (50%) completion, the work is satisfactorily done and on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall be imposed.

c. Where the contractor refuses or fails to satisfactorily complete the work within the specified contract time, plus any time extension duly granted and is hereby in default under the contract, the contractor shall pay the procuring entity for liquidated damages, and not by way of penalty, an amount, as provided in the conditions of contract, equal to at least one tenth (1/10) of one (1) percent of the cost of the unperformed portion of the works for every day of delay.

   In case that the delay in the completion of the work exceeds a time duration equivalent to ten percent (10%) of the specified contract time plus any time extension duly granted to the contractor, BWD may rescind the contract, forfeit the contractor's performance security and takeover the prosecution of the project or award the same to a qualified contractor through negotiated contract.

V. APPROVED BUDGET FOR THE CONTRACT

The approved budget for the contract is Forty-two million five hundred twenty thousand and four hundred pesos (Php. 42,520,400.00).

Prepared By:

Engr. Basilio C. Munar, Jr.
Quality Control/Assurance Chief

Checked By:

Engr. Fernando A. Peria
Division Chief, NRWM

Recommending Approval:

Engr. Reynaldo C. Jayco
OIC, Assistant General Manager – Technical Operations

Approved By:

Engr. Salvador M. Royeca
General Manager