



**Republic of the Philippines
SOCIAL SECURITY SYSTEM
East Avenue, Diliman, Quezon City**

REQUEST FOR QUOTATION

2020-0148

SEALED QUOTATION FORM

October 1, 2020 PHILGEPs REF. NO.: 7224762
Date DATE POSTED : 10-02-20
POSTED BY : ERIKA

Sir / Madam:

Please furnish us with your quotation on or before **October 6, 2020 @ 5:00PM** for the following items:

No.	Quantity	PARTICULARS	Unit Cost	Total Cost
1	1 Year (1 lot)	Supply of Labor and Materials for the Water Treatment of the Centralized Air-Conditioning System located in Basement (Chillers) & Roofdeck of the Powerhouse, Station (Cooling Towers) of the SSS Main Building, East Avenue, Diliman, Quezon City <i>(Please see attached Bill Of Quantities & Scope Of Works)</i> GRAND TOTAL ABC = P 175,000.00 / Lot EFMD – Memo dated 9-28-2020 & PR # 1141-20 dated 8-7-2020 received by PPMD on 9-30-2020 with Request # 2020-0251 [APP FY 2020, Original - #354 M/R Building – Repairs & Others – Centralized Air-Con System, (Pool)]		P _____/Year

DELIVERY TERMS: One (1) year upon receipt of approved Job Order.

Payment Terms: Government Terms (Payment is upon delivery of items / services & submission of billing documents.

Price validity : Three (3) Months

- NOTE/S:**
- 1.) **For canvass with an ABC of P 100,000.00 and above**, the winning bidder is required to post a Performance Bond from receipt of Notice of Award equivalent to 5% Cash (Goods & Consulting Services) & 10% Cash (Infrastructure), Cashier's / Manager's Check, Bank Guarantee / Draft or 30% Surety Bond callable upon demand, of the contract price.
 - 2.) **Supplier is required to indicate his PhilGeps Registration Number on the Request For Quotation Form.**
 - 3.) SSS shall withhold the applicable taxes from the amount payable in accordance with the BIR regulations.
 - 4.) **Alternative offer is not allowed.**
 - 5.) **Quantity is subject to change but not to exceed of the approved PO.**
 - 6.) **For clarification of details, please reach Mr. Gilbert Cacafranca / EFMD @ 920-6401 loc 5527. or via e-mail - cacafrancaga@sss.gov.ph.**

This is to certify that my Company is updated in the payment of contributions and loans to SSS, and conformed with the above terms & conditions, and the data / quotation indicated are valid.

Owner/Company Representative
(Sign over Printed Name)

Reminder : Price quotation should be made with extra care taking into account the specification and unit of quantity to avoid errors. The offeror binds himself to this quotation.

Please indicate below your Business Name, Address and Telephone Number and Date Received.

Your Business SSS No. _____
PhilGeps Registration No. _____
T I N no. _____
Date Received : _____

(Business Name)

(Address & Telephone No.)

Very Truly Yours,

HYDEE R. RAQUID

Department Manager III

Procurement, Planning & Management Department

Tel No. 920-6401 loc 5504-5507

Fax No. 435-9861

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**SOCIAL SECURITY SYSTEM
ENGINEERING & FACILITIES MANAGEMENT DEPARTMENT**

Date : _____

PROJECT : Supply of Labor & Materials for the Water Treatment of the Centralized A/C system of the SSS Main Building

LOCATION : Basement (Chillers) and Roofdeckk of the Powerhouse Station (Cooling Towers) SSS Main Building

BILL OF QUANTITIES

ITEM NO.	DESCRIPTION	QTY	UNIT	MATERIALS COST		LABOR COST		DIRECT COST	MARK-UP (% D.C.)	VAT (12% (DC +MU))	TOTAL COST
				UNIT	TOTAL	UNIT	TOTAL				
A	B	C	D	E	F	30% (E)	H	I	J	K	L
					C x E		C x G	F + H	% (I)	(I + J) X 12%	I + J + K
1	Water Treatment of A/C System										
1.1	Supply & delivery of Chemicals for Water Treatment process										
	a. Anti-scale Corrosion Inhibitor for Chilled Water 120 ltr/yr. @ 10 ltr/month	1	lot								
	b. Anti- scale and corrosion inhibitor for Cooling Towers (Chemical Feed Pump)	1	lot								
	c. Biocides I for Open loop System at (34 li./mo.) @ 408	1	lot								
	d. Biocides II for Open loop System at (32 li./mo.)	1	lot								
	SUB TOTAL 1.0										

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				UNIT	TOTAL	UNIT	TOTAL				
A	B	C	D	E	F	30% (E)	H	I	J	K	L
2	Chemical Dosage & Labor Works										
2.1	Initial Shock Treatment, Close system	1	lot								
2.2	Initial Shock Treatment, Open system	1	lot								
2.3	De-scaling/swabbing of condenser tubes & Cleaning of Cooling Towers	1	lot								
	SUB TOTAL 2.0										
3	Repainting of Cooling Tower Pipes w/ epoxy primer & enamel paint										
	(Equalizing pipes, 4 " & 10 " diameter pipes and supply & drainage pipes)										
	a. Epoxy primer	6	gal.								
	b. Epoxy enamel	6	gal.								
	c. Surface preparation of pipes	1	lot								
	SUB TOTAL 3.0										
	TOTAL ESTIMATED PROJECT COST										

Submitted by: _____ Date Submitted : _____

Company Authorized Representative
(printed name over signature)

ENGINEERING FACILITIES AND MANAGEMENT DEPARTMENT

PROJECT : *SUPPLY OF LABOR AND MATERIALS FOR THE WATER TREATMENT OF THE CENTRALIZED A/C SYSTEM OF THE SSS MAIN BUILDING*

LOCATION : *SSS MAIN BUILDING, EAST AVENUE, DILIMAN, Q.C.*

DATE : *August 07, 2020*

SCOPE OF WORKS

*** All water treatment methodology shall be conducted “hands on” by the Service Provider and with the presence of EFMD personnel assigned to monitor, record & validate the proper execution of the water treatment procedures that also conforms with the following scope of works and treatment schedule:**

1. Preventive measure against scale formation/development Bio-film, corrosion and suspended solids and to optimize the life span of evaporator and condenser shell tubes and of the chillers.
 - 1.1 Conduct chemical water analysis using the water samples from the close system, open system and make-up line to determine/establish the reference for chemical treatment program necessary to be applied to effectively control the development of scales, algae and other contaminants that may cause to reduce heat transfer of the evaporator and condenser recirculating water system. It shall be based on the acquired water samples at site condition as derived from the result of chemical analysis to ensure successful program and results.
 - 1.2 Perform **weekly** on site water chemical analysis of the recirculating and make up water for open system. Apply appropriate water treatment to control the engineering parameters based on manufacturer’s recommendation and standard industrial practices.
 - 1.3 Perform the same procedure **quarterly** for the close system and keep the parameters at standard level to avoid corrosion to the system.
2. Conduct cleaning of the **evaporators & condenser** tubes at **least twice a year** or **as needed** to address excessive fouling, scales of shell and tube, poor water, ph level quality, and minimize approach temperature to improve efficient heat transfer or condition of the Chiller.

- 2.1 Perform descaling procedure using descalant chemicals, soak the tubes to soften the hard scale, introduced heater if necessary and conduct mechanical brushing/cleaning of the evaporator & **condenser** tubes, & enclosure/box and schedule the treatment program. Use motorized mechanical equipment to efficiently remove the scale inside the copper tubes. Use appropriate nylon brass for swabbing and removing scales and other unnecessary dirt, and other foreign materials from the tubes.
- 2.2 Perform chemical analysis of the **close system** and determine the water condition and the possible contamination of foreign materials, corrosion contaminants. Introduce appropriate treatment to control fouling ,corrosion with inhibitor to protect damaging of copper tube.
- 2.3 Perform water analysis of the **open system** and determine the necessary treatment requirement to control the growth of algae and fouling, corrosion, scale formation. Implement mechanical and chemical treatment to optimize heat transfer and restore chiller efficiency.

2.3.1 TUBE CLEANING PROCEDURES:

2.3.1.1 If the tubes consist of dirt & sludge, it can usually be removed by means of the brushing process. Drain water sides of the circuit to be cleaned (cooling tower or chilled water). Remove the heads & thoroughly clean each tube with a soft bristle bronze or nylon brush. Do Not USE A STEEL BRUSH. It may damage the tubes. Improve results can be obtained by admitting water in the tube during cleaning process. This can be done by mounting an appropriate size of a brush to efficiently clean the inner surface of the tubes & shell.

2.3.1.2 If the condenser tubes are fouled with hard scale deposit, they may require descaling process. It is important that before descaling, the tube should be cleaned by the brushing process to determine the extent of scale formation inside the tubes which shall be used as among the basis of determining the exact proportion of chemicals to be applied. Use motorized mechanical brushing equipment.

2.3.1.3 Apply approved/appropriate descaling chemicals inside the tube and soaked for 16 hours(max.), if necessary. Provide chemical inhibitor to protect the copper from melting while soaking with appropriate composition de-scalant during the process. Provide heater to the recirculating soaking tank to help effectively loosen the scales inside the tube.

Recirculate the system with descallant to efficiently dissolve scale prior to another mechanical brushing with motorized equipment.

2.3.1.4 Rinse the condenser tubes with fresh water to completely remove the presence of acids and to prevent development of corrosion inside the system.

2.3.1.5 Restore the condenser tube & shell into its original form or state.

2.3.1.6 After the cleaning, fill-up the system with raw water and apply initial shock treatment in the system using the established data obtained from the water analysis.

NOTE: Water Sources are NAWASA and Deep Well Waters(Stand by)

3. Remove and conduct cleaning of all the system's strainers using mechanical brushing process and descaling methods as applicable, at **least quarterly** or **as needed** to ensure efficient flow of water. Restore the original size of each hole of the strainers including its insulation, wrappings, etc. Rinse the strainers with fresh water, thoroughly cleaned.
4. Conduct cleaning of cooling towers, critical components, assemblies using mechanical brushing & descaling methods at least **quarterly** or **as needed** to loosen and remove all foreign deposits attached to the corrugated fillers, louvers, strainer, & cooling tower basin. Use high pressure washer in removing these foreign deposits but with extra care. Rinse these components with fresh water, thoroughly cleaned.
5. Application of different chemicals for the initial shock treatment (open & close system). The established data in the water analysis shall be used to determine the appropriate amount of chemicals to be applied in order to prevent scale formation, biological, fouling and corrosion.
6. Conduct daily monitoring in order to determine the condition of the cooling water system for the first week and weekly on - site analysis thereafter. Regular on-site analysis must be performed by experienced and licensed chemist to ensure effective treatment and successful results.

The winning bidder prior to the start of contract/ services shall submit program of work for one (1) year requirement showing daily/monthly/quarterly/yearly activities with corresponding labor & materials cost, which shall be the basis for monitoring and reference of billings for payment.

7. Use of feed pump/chemical injector device for the dosage/application of chemicals for the maintenance treatment and adopt the intermittent treatment of two different biocides to effectively prevent biological

growth and avoid immunity among micro-organism. Timing of application must be in accordance to the behavior of biological growth.

8. The supplier must be available anytime when needed for the services and consultation on the water treatment procedures and other related matters pertaining thereto. The scope of work of the contract.
9. The supplier must conduct seminars and issue Certification duly signed by authorized company officials in order to update the SSS technical personnel and / or its machine's operators pertaining to the new development and other technologies which may help in the effective water treatment procedures.
10. Sufficient amount of chemicals for the monthly consumption shall be delivered on a monthly basis within the duration of the contract.
11. Analyze the existing re-circulating water content in the close system and replace and/or add sufficient volume of chemicals to keep the water property from oxidation and/or rusting of the piping system. Make sure that the AHU is properly filled-up. Perform bleed off in the AHU line to remove trapped air in the system.
12. Submission of accomplishment reports for every services/activities rendered; quarterly evaluation report of actual condition & recommendation; and **final/summary of report at the end of the contract prior to final payment.** Submitted documents must be in book **bound form containing all the activities done throughout the year.**

13. Maintenance Schedule for Cooling Towers

Description	Requirement (Labor for Cleaning/Inspection/Evaluation/ Recommendation/Report)	Maintenance (Frequency)
Clean suction screen	Physically clean screen of all debris	Weekly
Check tower structure	Check for loose fill, connections, leaks, etc.	Weekly
Test water samples	Test for proper concentrations of dissolved solids, and chemistry. Adjust blow down and chemicals as necessary. Perform weekly for open towers and monthly closed systems.	Weekly (Open) Quarterly (Closed)
Inspect hot tower basin for clogging	Make sure water is flowing through nozzles in the hot tower basin	Weekly
Clean tower	Remove all scale, and algae from hot tower basin	Weekly

14. Percentage of Chemical concentration recommended for the water treatment should be indicated in the proposal.
- a.) Corrosion inhibitor for Chilled Water (Close Loop)
 - b.) Corrosion Inhibitor for Condenser Water (Open loop)
 - c.) Biocides

15. KEY PERFORMANCE INDICATOR (KPI)

A. Accepted/ Desired Parameters

Parameters	Desired Parameters		
	Cooling Tower Water, ppm (Open Loop) 8.3- 8.6	Chilled Water, ppm (Close Loop) 9.0 – 10.0	Make-up Water
pH	8.3-8.6	9.0-9.5	
Total Hardness (CaCO3)	400 max.		
P-Alkalinity	50 maximum		
M-Alkalinity	400 maximum		
Total Dissolved Solids	1,500 maximum		
Sulfite	600-1,000 maximum		
Cycles of Concentration			3 to 4
Nitrite		600-800 maximum	

Note : Random testing on chemicals supplied during the water treatment process will be conducted by an authorized government agency to verify if the delivered chemicals complies with the previously offered chemical concentration to be used in the initial and succeeding dosage during the water treatment process.. Any violation on such practice will be grounds for the cancellation of the contract.

- B.) Prevent scale formation at the cooling towers, PVC fillers condenser & evaporator tubes must be achieved.
- C.) Prevent algae formation at the cooling tower basins and scale formation at the hot basin of the cooling towers.

16. Work shall only be done in the presence of EMD representative.

17. Repainting of Cooling Tower Pipes.

- a) Equalizing pipes.
- b) Supply and drain pipes.
- c) Condenser pipe (10 inch. diameter)
- d) Make-up water supply pipe.
- e) Hot and cold water header of the cooling towers.

TERMS

Contract Duration : One (1) year
Effectivity : Upon receipt of Approved P.O
Payment : Monthly
Frequency of PM Services: Conduct weekly water chemical analysis

PREPARATION

All surfaces should be clean, free of oil, grease and other foreign substance prior to application of epoxy primer and enamel paint.

CLEAN-UP

At completion of work, the contractor shall remove from the premises surplus of all painting materials and debris. The contractor should clean the working area and restore any affected area to its original and aesthetic appearance.

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Company Authorized representative
(signature over printed name)