

BIL	Quotation Reference	Description	Advertisement Date	Closing Date (Not Later Than 02.00PM)	Quotation Fee	Requesting Department	Focal Person
5	BME/A2K / (1377)/2025/HTD (A21)	<p>THE PROVISION OF MAINTENANCE SERVICES FOR DWA WATER TREATMENT PLANT AT KIARONG DIALYSIS CENTER FOR A PERIOD ONE (1) YEAR</p> <p><u>PLACE OF SUBMISSION:</u> QUOTATION BOX (GROUND FLOOR) MINISTRY OF HEALTH COMMONWEALTH DRIVE BANDAR SERI BEGAWAN, BB 3910 NEGARA BRUNEI DARUSSALAM</p>	05/02/2025	22/02/2025	\$5.00	JABATAN TEKNOLOGI PENJAGAAN KESIHATAN, KEMENTERIAN KESIHATAN.	MOHD FA'IZUN BIN HAJI HAJI HASNAN JURUTERA PERUBATAN HAYAT TEL: 2457694 (RENAL)

LAMPIRAN - A1

RUJ: BME/A2K/(1377)/2025/HTD (A21)

1/23/2

THE PROVISION OF MAINTENANCE SERVICES FOR DWA WATER TREATMENT PLANT AT KIARONG DIALY CENTRE FOR A PERIOD OF ONE (1) YEAR

SCOPE OF WORK

Scope of work for PPM (2 times a year):

1. Check the performance of the permeate conductivity monitoring system calibrate if necessary.
2. Check the permeate temperature monitoring system.
3. Check the raw water pre-treatment system.
4. Check and test the backwash function of the multimedia filtration system.
5. Check and test the backwash function of the activated carbon filter.
6. Check the softener system.
7. Check and test the regeneration function of the softener.
8. Check the raw water pressure booster system.
9. Check the raw water pressure regulation system, adjust if necessary.
10. Check R.O. pressure pump performance.
11. Perform R.O. membrane cleaning if necessary.
12. Check and test R.O. system control.
13. Check the electrical connection of the system.
14. Check the permeate line disinfection system.
15. Check the permeate line re-circulation pump.
16. Check the in-line heaters of the permeate line.
17. Check the electrical connections of the system.
18. Check the possible water leakage in the line.
19. Clean the stainless steel panels of the system.

Additional scope:

20. Permeate sample has to be taken and send to the laboratory for analysis by vendor as set out in Lampiran B.
21. Unlimited breakdown calls for all corrective maintenance, including necessary spare parts.

LAMPIRAN B.

Purpose: To test the reverse osmosis water quality at Kiarong Dialysis Centre used for hemodialysis treatment by collecting water samples at specific points at specified intervals.

What is collected: Water samples for microbiology analysis and chemical analysis.

No.	Scope of work	Comply? (Y/N)	Remarks
1	The Tenderer shall provide water sampling services at Kiarong Dialysis Centre.		
2	Water sampling services include: i. Routine sampling (according to set intervals) ii. Urgent / emergency sampling		
3	Water sampling for microbiology and endotoxin analysis: i. Frequency: Every 4 weeks ii. Number of samples: 6 samples for every R.O. system (Microbiology) 6 samples for every R.O. system (Endotoxin) iii. Sampling points: (Sampling points code and location as attached) S2-1, S2-2, S3, S4, S5, S6 (Microbiology) S2-1, S2-2, S3, S4, S5, S6 (Endotoxin) iv. Scheme of charges from Department of Scientific Services is as in Annex A (Testing for ticked ones only)		
4	Water sampling for chemical analysis: i. Frequency: Every 3 months ii. Number of samples: 3 iii. Each sampling point will require 3 bottles to be collected for pH testing, chlorine testing and all parameters test. iv. Sampling points: S1, S2-1 and S2-2 for every R.O. system v. Scheme of charges from Department of Scientific Services is as in Annex A		
5	Department of Renal Services will provide water sampling bottles for microbiology and endotoxin analysis, while bottles for chemical analysis can be obtained from Department of Scientific Services.		
6	The Tenderer shall send the water samples for analyses as below: i. Samples for microbiology and endotoxin analysis to be sent to Microbiology Lab, Department of Scientific Services, Serasa branch. ii. Samples for chemical analysis to be sent to Environmental Lab, Department of Scientific Services. Sample receiving times are as follow: Routine analysis: Microbiology – Monday and Tuesday Chemical – Monday – Thursday, Saturday		

	Time: 8.30 – 11.45 am, 1.45 – 3.45 pm		
7	The Tenderer shall response within 24 hours of receiving notification from the Biomedical Engineering Section to conduct a repeat / urgent water sampling.		
8	Tenderer must ensure water samples are stored and transported at the appropriate temperature at all times. Tenderer shall provide their own cooler box and ice packs for this purpose.		
9	Tenderer must provide a minimum of two (2) trained staff to collect the water sample.		
10	Tenderer must equip staff with proper personal protective equipment (PPE) when taking and handling water samples, e.g. alcohol swab, face masks, etc.		
11	A record of work done on each water sampling visit shall be noted in a logbook by the tenderer for each dialysis centre.		
12	The Log book must be available for inspection by the Government at any time.		
13	The tenderer shall collect the water samples results once it is ready for collection as below: <ul style="list-style-type: none"> i. Results for microbiology and endotoxin analysis to be collected from Microbiology Lab, Department of Scientific Services, Serasa branch. ii. Results for chemical analysis to be collected from Environmental Lab, Department of Scientific Services. 		
14	Tenderer to e-mail the collected sampling results to the relevant respective Dialysis Centre's BME officer and nursing officer in-charge.		

Microbiology testing

WATER MICROBIOLOGY	Cost per test per sample	
Total Count (no dilutions)	\$ 10	
Total Plate Count (with dilutions)	\$ 20	/
Total Coliform & E.coli Count	\$ 20	/
Pseudomonas count	\$ 15	
Salmonella species	\$ 50	
Staphylococcus aureus count	\$ 25	
Vibrio species	\$ 50	
Others	\$ 50	/

Chemical testing

No	Parameter	Charges per sample	Remarks	
1	pH	\$10.00	-	/
2	Chlorine (Total)	\$10.00	-	/
3	Chloramines	\$10.00	-	/
4	Fluoride	\$10.00	Additional sample preparation charges for anions analysis at \$20 per sample.	/
5	Nitrate	\$10.00		/
6	Sulphate	\$10.00		/
7	Calcium	\$10.00	Additional sample preparation charges for trace element analysis at \$20 per sample.	/
8	Magnesium	\$10.00		/
9	Potassium	\$10.00		/
10	Sodium	\$10.00		/
11	Antimony	\$10.00		/
12	Arsenic	\$10.00		/
13	Barium	\$10.00		/
14	Beryllium	\$10.00		/
15	Cadmium	\$10.00		/
16	Chromium	\$10.00		/
17	Lead	\$10.00		/
18	Selenium	\$10.00		/
19	Silver	\$10.00		/
20	Aluminium	\$10.00		/
21	Copper	\$10.00		/
22	Thallium	\$10.00	/	
23	Zinc	\$10.00	/	

24	Mercury	\$30.00	Cannot test, laboratory currently review procedure to improve detection of mercury at 0.2ppb	/
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Charges summary:

Analysis charge per samples	\$260.00
Sample preparation charge per sample	\$40.00
Total price per sample	\$300.00

updated as at 18 Dec 2021