

INVITATION FOR BIDS (IFB) NO. 24-639  
TO  
PROVIDE CHILLER PLANT PREVENTATIVE MAINTENANCE SERVICES  
FOR  
UNIVERSITY OF HAWAII - WEST OAHU  
KAPOLEI, HAWAII

MARCH, 2024

BOARD OF REGENTS  
UNIVERSITY OF HAWAII  
HONOLULU, HAWAII

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**IT IS THE RESPONSIBILITY OF ALL BIDDERS TO CHECK THE TABLE OF CONTENTS TO CONFIRM THAT ALL PAGES LISTED THEREIN ARE REVIEWED AND THAT THE MANDATORY BID FORM IS SUBMITTED AS PART OF THEIR BID PACKAGE.**

## NOTICE TO BIDDERS

The University of Hawaii IFB No. 24-639, to Provide Chiller Plant Preventative Maintenance Services for University of Hawaii – West Oahu, Kapolei, Hawaii is issued and will be awarded through the State of Hawaii's electronic procurement system (HlePRO). **All bid responses must be submitted electronically through HlePRO no later than 2:30 p.m., April 10, 2024.** Bids received after the due date and time or received in a form other than electronically through HlePRO will not be considered.

Bidders are advised that they should not wait until the last minute to submit their bid through HlePRO. Bidders are solely responsible for ensuring that their electronic submission through HlePRO is complete and all necessary files (Mandatory Bid Form) are attached to their bid prior to the IFB due date and time. The University shall not be responsible for any delay or failure of any Bidder to submit any materials updated through the IFB process on a timely basis.

### Electronic Procurement

Bidders interested in responding to this electronic solicitation must be registered on HlePRO. To register, visit the following link: [https://hiepro.ehawaii.gov/videos/video/vendor\\_registration.html](https://hiepro.ehawaii.gov/videos/video/vendor_registration.html). Reference the Vendor Quick Reference Guide for additional information at <https://hiepro.ehawaii.gov/static-resources/VendorQuickReferenceGuide.pdf>.

HlePRO will be the system of record for the issuance of the IFB, to receive the Mandatory Bid Form and other Bid requirements, issue Amendments, and make award for the IFB. Amendments and other information and materials provided through HlePRO, may include additions or changes with respect to the due date and time.

Special instructions in HlePRO related to this solicitation are incorporated herein and made a part of this IFB through reference. Bidders shall review all special instructions located in HlePRO.

### Questions and Clarifications

All questions and requests for clarifications must be submitted electronically through HlePRO. Questions must be submitted by **March 27, 2024** at 4:00 p.m., Hawaii Standard Time. Responses will be posted on **April 3, 2024**. The University may refuse to answer any questions received outside of HlePRO or after the Questions/Answers deadline.

David Lassner  
President, University of Hawaii

Posting Date: March 15, 2024

***Vendors are responsible for notifying the Procurement Specialist Trisha Shibuya (e-mail: [tnishino@hawaii.edu](mailto:tnishino@hawaii.edu)) for accessibility concerns related to this IFB***

## BID REQUIREMENTS

### CHILLER PLANT PREVENTATIVE MAINTENANCE SERVICES FOR UNIVERSITY OF HAWAII – WEST OAHU

By attaching The Mandatory Bid Form to HlePRO, the bidder has carefully examined the INVITATION FOR BIDS (IFB) NO. 24-639, TO PROVIDE CHILLER PLANT PREVENTATIVE MAINTENANCE SERVICES FOR UNIVERSITY OF HAWAII – WEST OAHU, KAPOLEI, HAWAII, and offers to provide the Chiller Plant Preventative Maintenance Services, as required by the University for an initial period commencing on the Notice to Proceed date, estimated from May 1, 2024 through April 30, 2025, and may be renewable thereafter on an annual basis for up to TWO (2) additional years, in strict accordance with the true intent and meaning of the Invitation for Bids (IFB), as follows:

#### TAX LIABILITY

Both out-of-state and Hawaii bidders are advised that the amount bid on this solicitation is subject to the general excise tax imposed by Chapter 237, Hawaii Revised Statutes (HRS) and, if tangible property is being imported into the State of Hawaii for resale, the use tax (currently 1/2%) imposed by Chapter 238, HRS. (Refer to Taxes in the General Provisions.) Bidders are therefore cautioned to consider such taxes in formulating their bids since no adjustments to the prices bid shall be allowed.

#### BASIS FOR AWARD

The award of contract, if awarded, shall be made to the lowest responsive and responsible bidder on the **TOTAL AGGREGATE AMOUNT (PARTS 1 AND 2)**. **Bidders must bid on all items in Parts 1 and 2 in order to be considered for award.**

#### NOTE TO BIDDERS

An acceptable bid must conform in all material respects to this Invitation for Bids. Any of the following may be grounds for disqualification:

1. Taking exception to any of the specifications, terms or conditions contained in the IFB.
2. Placing conditions on the furnishing of solicited goods or services.
3. Inclusion of a quotation or order form containing additional specifications, terms or conditions.

4. Referencing external documents containing additional specifications, terms or conditions.

Bidders are advised that bids are evaluated as submitted and requests by bidders to delete conditions contained in their bids after bid opening cannot be considered.

#### WAGE CERTIFICATE OF COMPLIANCE

The Wage Certificate included in the Mandatory Bid Form is a requirement of Section 103-55, Hawaii Revised Statutes, as specified in Special Provision 6, ELIGIBILITY TO BID. The Wage Certificate must be completed and included in the bid submittal.

## TECHNICAL SPECIFICATIONS

This section indicates the Technical Specifications for the Chiller Plant Preventative Maintenance Services required. The Technical Specifications listed herein are the minimum requirements and are mandatory for an accepted bid.

### 1. SCOPE OF SERVICE

- a. Contractor shall furnish all labor, materials, tools, parts, equipment, lubricants, refrigerants, chemicals, transportation, and supervision necessary to perform inspection and preventive maintenance services to the chilled water plant system, including chillers, chilled water and condenser water pumps, cooling towers, and associated equipment listed in Appendix A, located in the Maintenance and Mechanical Building (Building F) indicated in Appendix B, at the University of Hawaii - West Oahu (University), 91-1001 Farrington Highway, Kapolei, Hawaii 96707.
- b. The inspection and preventative maintenance services shall be performed in accordance with Appendix C and manufacturer specifications and instructions.
- c. All parts, supplies, components, and materials used for replacement shall be of the same manufacturer as the existing part being replaced or have the same specifications as the original equipment manufacturer part and be completely compatible and equal or better in grade with that which is being replaced. Contractor shall guarantee materials and workmanship for a minimum of ONE (1) year from acceptance of the service provided. Any defects caused by the materials or workmanship shall be corrected by the Contractor at no additional cost to the University.
- d. Contractor shall abide by all existing laws, codes, ordinances, rules and regulations set forth by all appropriate authorities having jurisdiction in the location where the work is to be performed, specifically including, compliance with the Federal Clean Air Act, Federal Clean Water Act, Federal Resource Conservation and Recovery Act and Hawaii Environmental Response Law.
- e. All handling of contaminated and new refrigerant and oils by the Contractor shall comply with the latest U.S. Environmental Protection Agency and local authority rules and regulations. Contractor shall be responsible for the proper disposal of all contaminated refrigerant and used oils and shall dispose of used refrigerant and oil daily. Contractor shall provide all necessary documentation to the University regarding the handling, disposal and charging of all refrigerants and oils.
- f. Contractor shall dispose of all used materials off-campus. Contractor shall not store materials needed for services in the mechanical rooms or any rooms on the University campus without prior University approval.

## 2. SCHEDULE OF WORK

- a. The University requires air conditioning TWENTY-FOUR (24) hours a day, THREE HUNDRED SIXTY-FIVE (365) days a year. The Contractor will be required to provide a detailed schedule of work, which must be approved by the University prior to the commencement of services. The schedule of work shall be for the entire term of the contract and shall demonstrate the Contractor's compliance with the inspection and preventative maintenance services described in Appendix C. The schedule of work shall indicate any required outages or disruption to the Building F occupants. The University reserves the right to modify the schedule of work, if necessary, at no additional cost.
- b. Work shall be scheduled during normal University business hours from 7:30 a.m. to 4:30 p.m., Monday through Friday, excluding State of Hawaii holidays, unless as otherwise instructed.

## 3. PERFORMANCE OF SERVICES

- a. The Contractor will be responsible for protecting the existing contents of Building F during performance of services and replace/repair any item damaged during the performance of services at no cost to the University.
- b. The lead personnel conducting the inspection and preventive maintenance services must be a journeyman air conditioning mechanic. The University reserves the right to stop all work not being performed by or under the supervision of a journeyman air conditioning mechanic, at no additional cost to the University.
- c. At any time during the term of the contract, failure by the Contractor to meet the requirements of the inspection and preventative maintenance services described in Appendix C may result in the University's written declaration to the Contractor that the work is considered incomplete, and the work must be duplicated and completed in its entirety at the required periodic intervals to the University's satisfaction and acceptance, at no additional cost to the University.

## 4. SERVICE REPORTS

- a. For every service visit, the Contractor shall complete a service report. The format of the report form shall be approved by the University prior to the commencement of services.
- b. The service report shall document all work performed and be signed by the serviceman who performed the work and countersigned by an authorized University representative. The service report shall describe in detail any recommendations (including estimated cost) for repairs or improvements.

- c. Contractor shall furnish the monthly service report no later than THREE (3) working days after the date of the respective service work. The service will not be considered complete until the report is received.
- d. A monthly meeting, to review the monthly service reports and Contractor performance, will be conducted at the University Facilities Management Office, under the direction of the Technical Representative or his designee. At every meeting, the Contractor shall provide a summary of all discrepancies found during the service month.

## 5. QUALIFICATIONS OF CONTRACTOR

- a. Contractor shall possess a current, valid and in good standing "C-52" Ventilating and Air Conditioning Contractor license in the State of Hawaii.
- b. Contractor shall have on staff a minimum of TWO (2) journeyman air conditioning mechanics who have successfully completed a manufacturer's course in the maintenance and repair of centrifugal/screw type of chillers.
- c. Contractor personnel handling chlorofluorocarbons (CFC) refrigerant shall have a valid universal CFC certification by the State of Hawaii.
- d. Contractor shall submit with its bid the qualifications of its personnel for the respective work being performed.
- e. Contractor shall have a local office on the island of Oahu.

## 6. QUALIFICATIONS OF WATER TREATMENT PERSONNEL

- a. Shall be a biologist, chemist, or chemical engineer with experience in using the chemical products required for the water treatment for the chilled water system and condenser water system.
- b. Shall have a local office on the island of Oahu whose core business is water treatment.



All questions pertaining to the Technical Specifications must be submitted electronically through HlePRO. Questions must be submitted by **March 27, 2024**. Responses will be posted on **April 3, 2024**.

The University may refuse to answer any questions received outside of HlePRO or after the Questions/Answers deadline.

**Bidders are cautioned to review the Technical Specifications carefully and thoroughly. Objections to or requests for clarification of the specifications shall be made through HlePRO as a Question or in writing in accordance with the General Provisions to the Office of Procurement Management prior to the submittal of a bid. The submittal of a bid shall be considered as acceptance of the specifications as published.**

## SPECIAL PROVISIONS

1. SCOPE

The providing of Chiller Plant Preventative Maintenance Services for the University of Hawaii - West Oahu shall be in accordance with the terms and conditions of IFB No. 24-639 and the General Provisions dated September 2013 included by reference. Copies of the General Provisions are available at the Office of Procurement Management, University of Hawaii, 1400 Lower Campus Road, Room 15, Honolulu, Hawaii 96822 or the General Provisions may be viewed at: <https://www.hawaii.edu/procurement/vendor-info/terms-and-conditions/general-provisions-for-goods-and-services/>

2. AUTHORITY

IFB No. 24-639 is issued under the provisions of Hawaii Revised Statutes, Chapters 103 and 103D. All prospective bidders are charged with presumptive knowledge of all requirements of the cited legal authorities. Submission of a valid executed bid by any prospective bidder shall constitute an affirmation of such knowledge on the part of such prospective bidder.

3. TECHNICAL REPRESENTATIVE OF THE PROCUREMENT OFFICER (TRPO)

The Technical Representative of the Procurement Officer is Joseph Long, Facilities Service Manager, Facilities Department, University of Hawaii – West Oahu, phone: (808) 689-2534, email: [jlong3@hawaii.edu](mailto:jlong3@hawaii.edu).

4. PROJECT LOCATION VISIT

Bidders are strongly encouraged to visit the project location to verify the extent of work, part numbers for replacement components, and be familiarized with all existing conditions and restrictions of the project site. Project location visit is not mandatory; however, submission of a bid shall be evidence that the bidder understands the scope of the project and shall comply with the specifications herein, if awarded. No additional allowance will be granted because of lack of knowledge of such conditions, or failure to perform site inspections prior to submitting a bid. No additional allowance or price adjustment, subsequent to award, shall be allowed by reason of any misunderstanding or error regarding the site conditions or work to be performed. Contact the Technical Representative, Joseph Long, Facilities Service Manager, at (808) 689-2534 or email at [jlong3@hawaii.edu](mailto:jlong3@hawaii.edu) to arrange a project location visit.

5. BIDDER'S QUALIFICATIONS

To qualify to bid on the specified goods and/or services, the bidder must be engaged in a business whose primary and customary interest is to provide the specified goods and/or services. The bidder must also have the requisite experience, appropriate forms

of insurance, and proper licenses. The University reserves the right to disqualify any potential bidder if, in its discretion, the University determines that the bidder does not have the requisite experience or expertise to provide the goods and/or services.

#### 6. ELIGIBILITY TO BID

Each prospective bidder, as a prerequisite to bid on any contract to supply services in excess of \$25,000 shall, at the time of bid submission, assure the University by certification in writing, of compliance with the requirements of Section 103-55, Hawaii Revised Statutes, that:

- a. The services to be rendered shall be performed by employees paid at not less than the wages or salaries paid to public officers and employees for similar work. If, after the initial period, during the life of the contract, the State of Hawaii Salary Schedule is revised, the Contractor shall pay its employees at not less than the revised wages and salaries paid public officers and employees for similar work.
- b. All applicable Federal and State laws relating to workers' compensation, unemployment compensation, payment of wages, and safety will be fully complied with.

#### 7. NOTIFICATION TO CONTRACTOR'S EMPLOYEES OF CURRENT WAGE RATES

Contractor shall be obliged to notify its employees performing work under this contract of the provisions of 103-55, HRS, and the current wage rate for public employees performing similar work. The Contractor may meet this obligation by posting a notice to this effect in the Contractor's place of business accessible to all employees, or the Contractor may include such notice with each paycheck or pay envelope furnished to the employee.

#### 8. STATUTORY REQUIREMENTS OF SECTION 103-55, HRS

To assist the bidder in determining whether the work the employees are to perform under this contract is similar to that performed by public employees, the following are the position, classification, and hourly rate for the positions that perform refuse collection services:

<b>Title</b>	<b>Class</b>	<b>Hourly Rate effective 07/01/2023</b>	<b>Hourly Rate effective 07/01/2024</b>
Air Conditioning Mechanic I	BC10	\$32.27	\$33.88

#### 9. PROTECTION OF PROPERTY AND BUILDINGS

The Contractor shall take all necessary precautions during the progress of the work to protect the buildings as well as adjoining property, roadways, walkways, trees, lawns,

landscape, and buildings from damage and injury and shall promptly repair any such damage to the satisfaction of the University, at no cost to the University. If the repair cannot be done immediately, the Contractor shall contact the Technical Representative to work out a time schedule acceptable to the University.

#### 10. REFERENCES

Each bidder shall provide the names, addresses, and phone numbers of THREE (3) agencies, for which chiller plant preventative maintenance services is currently provided who can attest to the reliability of the bidder's service and personnel. The University reserves the right to reject the bid submitted by any bidder whose performance on other jobs has been unsatisfactory.

#### 11. INDEPENDENT CONTRACTOR

It is understood and agreed that the Contractor shall provide said services as an independent contractor and shall not be under the direction or control of the University. The University shall not be responsible for any claims and demands of any kind or nature that may be brought against it on any matter or thing arising out of or in connection with the services provided by the Contractor.

#### 12. INSURANCE

Contractor shall, and shall ensure that all Contractor Agents shall, during the entire term of this Agreement, at no cost to the University, procure and maintain, or cause to be procured and maintained, the following insurance described below, issued by an insurance company or companies authorized to do business in the State of Hawai'i with at least an A – VII Financial Rating according to the current edition of Best's Key Rating Guide:

##### a. Required Insurance Coverage.

- (1) Commercial General Liability Insurance. Commercial general liability insurance written on occurrence basis covering claims with respect to injuries or damages to persons or property sustained as a result of the activities of the Contractor and/or the Contractor Agents, within, on, or about the Premises and/or the University Campus, with limits not less than the following:

Bodily Injury and Property Damage Combined Single Limit	
\$1,000,000.00 Each occurrence	
\$2,000,000.00 General Aggregate per policy year	
\$2,000,000.00 Products and Completed Operations Aggregate per policy year	
Medical Expenses -- Any one person	\$5,000.00
Personal/Advertising Injury (Included)	
Damage to Rented Premises (Included)	

Personal/Advertising Injury coverage shall include coverage for mental injury, sexual harassment, sexual molestation or misconduct, invasion of privacy, and wrongful detention.

Such limits may be achieved through the use of umbrella/excess liability insurance sufficient to meet the requirements of this Special Provision 12, Insurance, covering the Contractor's conduct of the services on or within the Premises and/or the University Campus and all of the activities and operations of the Contractor and the Contractor Agents in connection therewith.

- (2) Automobile Insurance. Automobile Liability Insurance to include coverage for any owned, non-owned, leased, or hired automobiles with limits of not less than the following:

Bodily Injury – Per Person	\$1,000,000.00
Bodily Injury – Per Accident	\$1,000,000.00
Property Damage – Each Accident	\$1,000,000.00
Basic No-Fault Insurance	As required by Hawai'i law

In the event there is a change in Hawai'i law regarding financial responsibility and insurance requirements of automobile owners or users which make this requirement obsolete, the University shall have the right to impose a new requirement consistent with the then Applicable Laws.

- (3) Workers' Compensation Insurance. Workers' Compensation insurance with respect to work by employees of the Contractor and the Contractor Agents on or about the Premises and/or the University Campus, with coverage, amounts, and limits as required by law.
- (4) Employers Liability Insurance: Employers Liability Insurance with limits not less than:

Bodily Injury – Each Accident	\$1,000,000.00
Bodily Injury by Disease – Policy Limit	\$1,000,000.00
Bodily Injury by Disease – Each Employee	\$1,000,000.00

The Contractor shall ensure that the Contractor Agents (if any) obtain workers compensation and employer's liability insurance with the limits described herein to cover the work performed.

- (5) Pollution Liability Insurance. If required by the University in the event Hazardous Materials (as defined herein) are or may be involved or used, Pollution Liability insurance coverage with a combined single limit coverage of at least \$1,000,000 per occurrence which shall cover environmental liabilities, including, without limitation, claims for bodily injury, property damage, environmental damage, and remediation costs resulting from pollution conditions caused by the Contractor or the Contractor Agents and/or the conduct of the Services.

- b. Common provisions. Each insurance policy that Contractor and/or any of the Contractor Agents are obligated to obtain under this Agreement shall be subject to the following:
- (1) Notice of changes. Contractor will be required to notify the University of any cancellation, limitation in scope, material change, or non-renewal of any insurance coverage right away (but no later than five (5) business days of receiving notice from the insurer).
  - (2) University insurance not primary. Insurance obtained by Contractor and/or any Contractor Agents pursuant to this Agreement will be primary and any the University insurance will apply only in excess of and not contribute with such insurance obtained by Contractor and/or any Contractor Agents.
  - (3) Name the University as an additional insured. The University shall be named as an additional insured on all insurance coverage that Contractor and/or any Contractor Agent is required to obtain under this Agreement except for workers compensation and employers liability insurance.
  - (4) Waiver of subrogation. All insurance obtained by Contractor will contain a waiver of subrogation endorsement in favor of the University.
  - (5) University not required to pay premiums. Contractor and Contractor Agents will be responsible for paying all costs associated with obtaining the required insurance coverage described in this Agreement, including all premiums. The University will not be responsible for paying any such costs.
  - (6) Acceptable deductibles. The terms and amounts of any deductibles for the required insurance coverage under this Agreement must be reasonable and acceptable to the University based upon the type of insurance involved and the conduct of the Services.
- c. Deposit insurance certificates. Contractor will timely deposit and keep on deposit with the University, certificates of insurance necessary to satisfy the University that the insurance requirements of this Agreement have been and continue to be satisfied during the term of the Agreement.
- d. University may cure failure to obtain/maintain insurance. If Contractor fails to provide and maintain the insurance required by this Agreement after written notice to comply from the University, the University may, but shall not be required to, procure such insurance at the sole cost and expense of Contractor, who shall be obligated to immediately reimburse the University for the cost thereof plus ten percent (10%) to cover the University's administrative overhead.
- e. Lapse in insurance constitutes a breach. Any lapse in, or failure by Contractor or any Contractor Agents to procure and maintain the insurance coverage required under this Agreement, at any time during and throughout the term of this Agreement, shall be a breach of this Agreement and the University may terminate the rights of Contractor and all Contractor Agents to conduct the Services.

- f. Insurance shall not limit Contractor liability. Obtaining the required insurance coverage will not be construed to limit Contractor's liability hereunder or to fulfill Contractor's indemnification, defense, and hold harmless obligations under this Agreement. Notwithstanding the required insurance coverage, Contractor shall be obligated for the full and total amount of any damage, injury, or loss arising from acts or omissions of Contractor and/or the Contractor Agents.
- g. University may adjust insurance requirements. The University may, upon reasonable notice and reasonable grounds, increase or change the form, type, coverage, or coverage limits of the insurance required hereunder, in which event Contractor shall, and shall cause the Contractor Agents to, obtain insurance, as modified. The University's requirements shall be reasonable and shall be designed to provide protection against the kind and extent of risks that exist at the time a change in insurance is required. Contractor shall satisfy all University risk management requirements that are in effect as of the Effective Date and as may be amended from time to time.

### 13. REJECTION OF CONTRACTOR'S EMPLOYEES

The University reserves the right to reject any of the Contractor's employees that the University deems incompetent, uncooperative, negligent, insubordinate, or otherwise objectionable.

### 14. SUBCONTRACTING

General Provision 5.3, Subcontracting and Assigning, shall be deleted in its entirety and replaced with the following:

The Contractor may subcontract or assign **only the water treatment for the chilled water system and condenser water system** to be performed under its contract with the University. Otherwise, the Contractor shall not subcontract, convey, transfer or assign any of the work to be performed under its contract with the University, nor shall the Contractor assign the contract to any other person or firm without written permission from the Procurement Officer, and no subcontract or assignment made without such permission will be recognized. No subcontract shall, under any circumstances, relieve the Contractor of its obligation and liability under its contract with the University, and all persons engaged in performing the work covered by the contract shall be considered employees of the Contractor.

### 15. LAWS, ORDINANCES, STATUTES, AND REGULATIONS

The Contractor shall comply with all laws, ordinances, statutes, and regulations pertaining to the handling, transportation, and disposal of refrigerant and oils and shall obtain such permits, licenses or other authorization as may be required.

16. COORDINATION OF WORK

Upon award of the contract, Contractor shall contact the Technical Representative to establish operational and administrative procedures including coordination and scheduling of work. The Contractor shall not be permitted to interfere with University operations, and work schedules shall be coordinated with the Technical Representative prior to commencing work.

17. PRICE ADJUSTMENTS BASED ON THE INCREASE TO WAGE RATES FOR PUBLIC EMPLOYEES PERFORMING SIMILAR WORK

Bidders shall indicate on the Mandatory Bid Form – Price, the percentage of the monthly price that represents labor costs. If the prevailing wage rates for State Civil Service workers performing similar work are increased beyond the July 1, 2024 rate, the University shall allow the Contractor to adjust the percentage of the contract prices that represents labor costs not more than the percentage increase granted to State Civil Service workers performing similar work. Price adjustment shall be made through modifications to the contract for the difference upon request of the Contractor who shall be responsible for providing documentation (to the satisfaction of the University), that the Contractor had paid employee wages not less than that paid to public employees doing similar work during the period of the contract. This clause, however, shall be voided in the event Section 103-55, Hawai'i Revised Statutes is repealed or modified so that the section of the statutes is no longer applicable to this contract.

18. ESCALATION CLAUSE

The Contractor shall be allowed to request adjustments to the contracted bid price per item, provided the request is made in writing to the University. The University will consider requests for price adjustments based on the following:

a. Wage Increases

If after July 1, 2024, the prevailing wage rates for State Civil Service workers performing similar work is increased, the University shall allow the Contractor to adjust the percentage of the contract prices that represents labor costs, not more than the percentage increase granted to State Civil Service workers performing similar work. Price adjustments shall be made through modifications to the contract for the increase upon request of the Contractor, provided that, prior to or concurrent with such request the Contractor documents to the satisfaction of the University that he/she has paid his/her employees' wages not less than that paid to public employees doing similar work during the period of the contract. However, in the event Section 103-55, Hawai'i Revised Statutes, is repealed or modified so that this section of the statute is no longer applicable to this contract, this clause will be voided.



b. Non-Wage Increases

The Contractor shall be allowed to request adjustments to the percentage of the contract prices that do not represent labor costs, for each contract renewal period, NINETY (90) days prior to contract renewal date, provided that the non-labor portion cost portion of the contract prices for each renewal period shall not increase more than FIVE (5)% (or) more than the Consumer Price Index for Pacific Cities and U. S. City Average based on All Urban Consumers, U. S. City Average, in effect ONE HUNDRED TWENTY (120) days prior to the renewal date, whichever is less, and provided, further, that the request is made in writing to the University.

19. TERM OF CONTRACT

The estimated start date is May 1, 2024. The Contractor shall enter into a contract with the University for the period of ONE (1) year commencing on the date designated in the Notice to Proceed. Thereafter, the contract shall be renewable from year to year, for a total of THREE (3) years, without the necessity of bidding, upon mutual agreement in writing, NINETY (90) days prior to the annual renewal date. The contract price for each renewal period shall remain the same or lower than the initial bid price or may be adjusted in accordance with SPECIAL PROVISION 18, ESCALATION CLAUSE, of the contract, upon written request NINETY (90) days prior to the annual renewal date. Further, the University may terminate the contract at any time, after the first year, upon NINETY (90) days prior written notice

20. PAYMENT

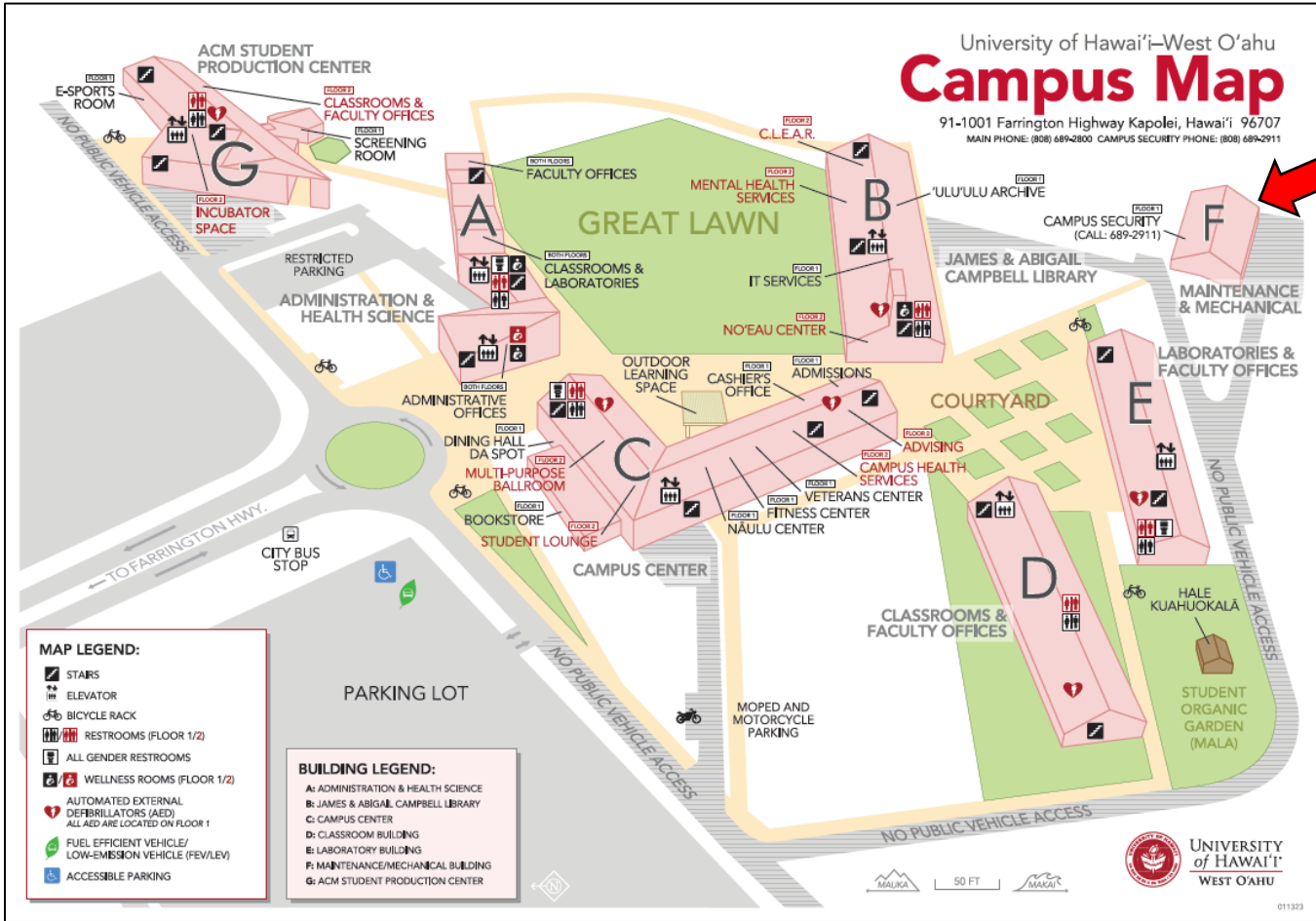
The Contractor shall be remunerated upon submission of a properly executed original invoice indicating the contract number, to University of Hawaii - West Oahu, Business Office, 91-1001 Farrington Highway, Kapolei, Hawaii 96707, no later than THIRTY (30) calendar days following submission of invoice and acceptance of services

## APPENDIX A

Item No.	Quantity	Equipment	Model	Serial Number/Specifications
1.	1	Carrier Chiller	19XRV3737327KBH64S	2911Q21002
2.	1	Carrier Chiller	19XRV3737327KBH64S	2911Q21003
3.	1	Carrier Chiller	19XRV464735HUCR64	3919Q27762
4.	1	Baltimore Aircoil Cooling Tower / VFD-ABB	3412C-LM/Q	U1101899Q1-01
5.	1	Baltimore Aircoil Cooling Tower / VFD-ABB	3412C-LM/Q	U1101899Q1-02
6.	1	Baltimore Aircoil Cooling Tower / VFD-ABB	S3E-1020-07N	U191477802-01-01
7.	1	Aurora Primary Chill Water Pump / VFD-ABB	11-2091929-1	Size – 4x5x10B; Type – 411 BF; HP – 10; GPM – 480; HD FT – 50; RPM – 1750
8.	1	Aurora Primary Chill Water Pump / VFD-ABB	11-2091929-2	Size – 4x5x10B; Type – 411 BF; HP – 10; GPM – 480; HD FT – 50; RPM – 1750
9.	1	Pentair Primary Chill Water Pump / VFD-ABB	19-2567525	Size – 5x6x11C; Type – 411BF; HP – 15; GPM – 640; HD FT – 50; RPM – 1775
10.	1	Aurora Condenser Water Pump	11-2094261-1	Size – 5x6x11C; Type – 411BF; HP – 25; GPM – 900; HD FT – 85; RPM – 1750
11.	1	Aurora Condenser Water Pump	11-2094261-2	Size – 5x6x11C; Type – 411BF; HP – 25; GPM – 900; HD FT – 85; RPM – 1750
12.	1	Pentair Condenser Water Pump	19-256518	Size – 5x6x11A; Type – 411BF; HP – 40; GPM – 1200; HD FT – 85; RPM – 1775
13.	1	Aurora Secondary Chill Water Pump / VFD - ABB	11-2094445-1	Size – 4 X 5 X 10B; Type – 411BF; HP – 15; GPM – 480; HD FT – 60; RPM – 1750
14.	1	Aurora Secondary Chill Water Pump / VFD - ABB	11-2094445-2	Size – 4 X 5 X 10B; Type – 411BF; HP – 15; GPM – 480; HD FT – 60; RPM – 1750
15.	1	Pentair Secondary Chill Water Pump / VFD - ABB	19-256520	Size – 5x6x11C; Type – 411BF; HP – 15; GPM – 640; HD FT – 60; RPM – 1775
16.	1	Refrigerant Monitor - Chill Gard RT	A-RT-D-4-1-1S-F-2-0-D-0-0-0-0-0-0-0	H11-3822605-10

<b>Item No.</b>	<b>Quantity</b>	<b>Equipment</b>	<b>Model</b>	<b>Serial Number/Specifications</b>
17.	1	Backflow Preventer		1" Watts Regulator Co. 909 QT S/N – 631374 Chill Water (Chill Water Make Up)
18.	1	Backflow Preventer		3" Watts Regulator Co. 909 QT S/N – 192378 Condenser Water (Cooling Tower)
19.	1	Solid Separator/Filtration System Lakos	HTX-0810-V	54509-002
20.	1	Solid Separator/Filtration System Lakos	HTX-0810-V	54509-001
21.	1	Solid Separator/Filtration System Lakos	HTX-0810-V	Puroflux PF61-080-AP
22.	1	Exhaust Fan Chiller Rm EF 6-1	BSQ-240-7	
23.	1	Roy E. Hanson Jr. MFG Expansion Tank 400 Gal.		443172
24.	1	Walchem Webaster	WMT8100-1P1AG2	1612214477
25.	1	Walchem Web Alert	WA500-PGN	1612214476

APPENDIX B



## APPENDIX C

### 1. CENTRIFUGAL CHILLERS

#### a. Monthly Service

- i. Check operation of chillers and report any signs of oil, water or refrigerant leaks.
- ii. Inspect control and Variable Frequency Drives (VFD)/starter panels, vacuum and wipe down as necessary. Also inspect for excessive moisture.
- iii. Read and record refrigeration pressures, oil pressures and temperatures. Record operating pressures and temperatures on service log to be maintained at chiller. Record position of chiller's "on-off" switches (local, remote, esp., etc.). Rotate chiller and log. Leave chiller running after rotation.
- iv. Read and record entering and leaving chilled, condenser water pressures and temperatures.
- v. Check calibrations of transducers and temperature sensors.
- vi. Read and record compressor motor voltages and amperages, record actual load of chiller (percentage).
- vii. Check and log compressor oil pressure and oil level. Charge in oil (Contractor shall supply oil) and adjust pressures as required per manufacturer's recommendations.
- viii. Check refrigerant charge. Add refrigerant (University shall furnish refrigerant) as required per manufacturer's recommendations. If refrigerant needs to be added, perform leak test of chiller using a leak detector.
- ix. Check the starter panel/VFD cooling fan operation.
- x. Check VFD refrigerant cooling lines for condensation. Make adjustments to stop condensation of VFD inlet and outlet refrigerant cooling lines.
- xi. Check operation of chill water and condenser water automatic control valves for proper positioning and sequencing.
- xii. Clean and flush all pressure gauges and differential switches hoses, tubing or pipes.
- xiii. Check chiller for any unusual noise and vibrations.
- xiv. Log chillers using Carrier 19XR hermetic centrifugal refrigeration machine log sheet or University approved log. Review operating logs for abnormal conditions, including operating hours, cycles, alarms, etc. Report any discrepancies.
- xv. Keep chiller clean/dust free. Wipe down chillers as necessary.
- xvi. Review alarm history monthly with an authorized University representative.
- xvii. Check operation of all gauges, thermometers and indicating lamps, including chiller plant control panel and Motor Control Center (MCC)

- xviii. panel. Record all abnormal conditions and date of service in the University furnished composition book and report to the Campus Operations Office.
  - xix. Certify that the equipment has received monthly service and report all discrepancies immediately to an authorized University representative. ONE (1) copy of log sheet shall be given to the University Facilities Management Office.
- b. Quarterly Service
- i. Perform the monthly service tasks.
  - ii. Replace VFD cabinet air filters.
  - iii. Vacuum interior of chiller control panel, VFD cabinet, cooling fan, discharge vent and grill.
  - iv. Provide thermal pictures of VFD cabinet and power panel, looking for hot spots due to loose connection, component failure, etc. Record temperatures of various areas within cabinet/panel with the highest temperatures after at least ONE (1) hour of operation. Label all pictures corresponding equipment. Include pictures with quarterly service report.
- c. Annual Service
- Only ONE (1) chiller may be shut down for service. Annual service of the first chiller must be completed and operating properly before the second chiller may be shut down for servicing. Contractor shall only have a maximum of TWO (2) days shut down for each chillers set (pump, cooling tower and chiller) to perform its annual service.
- i. Perform the monthly service tasks.
  - ii. Take oil sample and perform oil analysis for contaminants, including acid, moisture, foreign materials, etc. Provide test results to the University. Replace oil for both chillers with factory recommended oil. ONE (1) month after oil replacement resample oil and perform oil analysis for contaminants, including acid, moisture, foreign materials, etc. Provide test results to the University. Contractor is responsible for disposal of all used oil. Contractor must properly remove all oil from the University daily. Contractor must complete a University furnished refrigerant and oil status report.
  - iii. Replace oil filters and strainers. Contractor is responsible for disposal of all used oil. Contractor must properly remove all oil from the University daily.
  - iv. Replace all filters, driers and strainers.
  - v. Test and calibrate all chiller safeties and controls to manufacturer's recommended settings. Test and adjust/calibrate transducers and sensors.
  - vi. Pressure test chillers with electronic leak detector. Report major leaks immediately to an authorized University representative. Record all leaks on the service report.

- vii. Isolate the water-cooled condensers and drain the water. Contractor is responsible for blanking off the leaking isolation valves. Remove condenser and water box covers and notify the University and water treatment representative for inspection. Clean condenser water box covers and tube sheets. Brush the condenser water tubes with factory recommended brushes and flush tubes with water. Chillers have high-efficiency super enhanced tubes. Do not cover water boxes until approved by the University. Contractor must replace the end cover gaskets. Use a pan or plastic sheets to prevent water from dripping on the floor when brushing the condenser tubes. Drain the water to the nearest floor drain. Purge all the air from the condensers and piping.
- viii. Contractor shall clean the condenser water tube sheets and water box covers and apply "no-ox-id" rust preventative. "no-ox-id" can be purchased from ChemSystems.
- ix. Perform "megger" testing of motor insulation. Submit TWO (2) copies of megohm readings (leg to leg and leg to ground) and recommendations. Tighten all electrical connections in starter/VFD panels and disconnects. Tighten all electrical connection in chiller control panel, oil heater VFD panel and oil pump connections.
- x. Tighten all electrical connections including compressor VFD cabinet, control panel, power panel, oil pump, and actuator. Check for any terminal corrosion and wire discoloring.
- xi. Check the operation of the chilled water differential pressure/flow switch and condenser differential pressure/flow switch. Adjust if necessary.
- xii. Clean all pipe nipples and hose (tubing) and flex for all differential/flow switch and gauges. Also check for any corrosion.
- xiii. Check the operation of the chiller isolation valves and actuators, making sure it is working properly and holding tight when closed.
- xiv. Check guide vane linkage tension, adjust if necessary. Lubricate chain. Calibrate guide vane positioning.
- xv. Start-up the chillers and adjust all controls for proper operation.
- xvi. Certify that the equipment has received annual service and report all discrepancies immediately to an authorized University representative. Provide detailed report of all services performed.

## **2. CHILLED WATER AND CONDENSER WATER PUMPS**

### **a. Monthly Service**

- i. Check pump and motor bearing for abnormal temperatures.
- ii. Provide thermal pictures of pump motors from both sides of motor to record stator and wire connection box temperatures. Also provide thermal pictures of motor and pump at both ends to record bearing temperatures after at least ONE (1) hour of operation. Label all pictures to corresponding equipment. Include pictures with monthly service report.

- iii. Record suction and discharge pressures and confirm all passages to the pressure gauges are clear. Report any non-working gauges and thermometers. Run the standby pumps ensuring the pump can run properly.
  - iv. Check shaft seals for leaks. Check motor-pump coupling alignment, adjust as necessary. Check coupling insert. Report if worn.
  - v. Check pump for unusual noise and vibrations.
  - vi. Certify that the equipment has received monthly service and report all discrepancies immediately to an authorized University representative.
- b. Quarterly Service
- i. Perform the monthly service tasks.
  - ii. Grease all motor and pump bearing per manufacturer's recommendations.
  - iii. Check operation of the bridge valves and actuators making sure it is working properly.
  - iv. Log and record voltage and amps.
  - v. Certify that the equipment has received quarterly service and report all discrepancies immediately to an authorized University representative.
- c. Semi-Annual Service
- i. Remove and clean the strainers for all condenser pumps after tower cleaning. Contractor shall note position of valves before closing and return valves to their original position after strainer cleaning. Replace gasket as needed. Open discharge check valve cover, clean any build-up that could affect check operation. Verify free movement of hinge and disc assembly. Replace gasket as needed.
  - ii. Contractor is to verify that all the automatic valves are working properly with the Digital Diagnostic Control (DDC) signal.
  - iii. Check all pipe nipples and tubing for leaks or corrosion.
  - iv. Check/tighten all electrical connections. (MCC to motor terminal box).

### **3. REFRIGERANT MONITORS**

- a. Monthly Service
- i. Check monitor for alarms and error codes.
  - ii. Check if monitor is operating properly. Reset if needed.
  - iii. Certify that the equipment has received monthly service and report all discrepancies immediately to an authorized University representative.
- b. First Month and Annual Service
- i. Test and calibrate refrigerant monitor.
  - ii. Log and record readings of test.
  - iii. Replace all filters.
  - iv. Make sure exhaust fans turn on properly with refrigerant monitor. Monitor may be wired to turn off the chillers if it goes into alarm.



#### **4. CHILLED, CONDENSER AND REHEAT WATER BACKFLOW PREVENTERS**

- a. Monthly Service
  - i. Check if the backflow is leaking water.
  - ii. Certify that the equipment has received monthly service and report all discrepancies immediately to an authorized University representative.
- b. Annual Service
  - i. Perform the monthly service tasks.
  - ii. Test backflow prevention assembly by a certified tester.
  - iii. Fill out City and County of Honolulu, Board of Water Supply test form and submit to an authorized University representative.
  - iv. Certify that the equipment has received annual service and report all discrepancies immediately to an authorized University representative.

#### **5. COOLING TOWER**

- a. Monthly Service
  - i. Check make-up water valves for proper operation. Check tower for proper water level and make adjustments. Confirm strainers are clear. Adjust water sump level to prevent overflow. Water must not be overflowing in over flow drain pipe.
  - ii. Check and record the condition of fans, blades, bearings, belt, and shaft. Keep spare belts on site at all times.
  - iii. Take thermal pictures of cooling tower fan motors from both sides of motor to record stator and wire connection box temperatures. Also take thermal pictures of each motor and fan bearing to record bearing temperatures after running at least ONE (1) hour. Include pictures with monthly service report.
  - iv. Run fan in low and high speed to check and record the unusual noise and vibrations. Also check belt in different speeds to make sure belt is at the right tension, adjust as needed.
  - v. Check and remove all debris from basin to prevent nozzles from being clogged. Remove all debris from the sump suction screen.
  - vi. Certify that the equipment has received monthly service and report all discrepancies immediately to an authorized University representative.
- b. Quarterly Service
  - i. Grease all fans and motor bearings. Clean off excess grease.
  - ii. Siphon all sediment from cooling tower sump, remove and clean strainer.
  - iii. Certify that the equipment has received quarterly service and report all discrepancies immediately to an authorized University representative.
- c. Semi-Annual Service

Only ONE (1) cooling tower may be shut down for cleaning for building at any given time. The clean tower shall be running properly before other tower may be shut down for cleaning. Must control draining of tower, make sure the end of the drain run does not overflow and flood surrounding area.

- i. Drain each tower and remove all dirt, debris and growth from all eliminators and interior of tower.
  - ii. Remove and clean all spray nozzles. Turn pump on to make sure all nozzles are spraying evenly.
  - iii. Inspect and tighten all set screws and fasteners on fan blades, couplings, pulleys and bushings.
  - iv. Check and adjust vibration isolators to maintain level and clearance.
  - v. Check and tighten all electrical connections in the VFD panels, disconnects, and vibration switch. Check motor electrical box making sure wires are secured and box is sealed properly from moisture.
  - vi. Wire brush and coat the entire fan shaft, fan/pulley bushing (if applicable) with marine grease.
  - vii. Check condenser water manifold caps, connections and clamps. Report clamps if rusted and breaking apart.
  - viii. Clean spring isolators and coat with LPS #3 to help prevent rust.
  - ix. Certify that the equipment has received semi-annual service and report all discrepancies immediately to an authorized University representative.
- d. Annual Service
- i. Perform the monthly, quarterly and semi-annual service tasks.
  - ii. Replace all fan belts, adjust tension, and check fan pulley alignment.
  - iii. Check and tighten all electrical connections. (MCC/VFD to motor terminal box).
  - iv. Certify that the equipment has received annual service and report all discrepancies immediately to an authorized University representative.

## **6. MECHANICAL ROOM**

- a. Monthly Service
  - i. Sweep and clean chiller room and cooling tower enclosure.
  - ii. Remove all used materials such as used oil, empty refrigerant containers, and used parts.
- b. Semi-Annual Service
  - i. Hose down and sweep water into floor sinks in the chiller room. Clean and sweep the cooling tower enclosure. Do not spray water on floor where the water may splash on electrical equipment and/or materials.
  - ii. Wipe down all chiller plant equipment listed in Appendix A.
  - iii. Chip and paint all rust from chiller plant equipment frames listed in Appendix A and related piping.

## **7. VARIABLE FREQUENCY DRIVES/MOTOR CONTROL CENTER**

- a. Monthly Service
  - i. Check operation of all drives.
  - ii. Check operation of cooling fan.

- iii. Report any discrepancies immediately to an authorized University representative.
- b. Semi-Annual Service
  - i. Vacuum and wipe down all MCC and VFD's (external and internal of cabinets and cooling fan).
  - ii. Tighten all connections.
  - iii. Check operation.
  - iv. Report any discrepancies immediately to an authorized University representative.

## **8. EXHAUST/SUPPLY FANS**

- a. Monthly Service
  - i. Check operation to make sure fan can run when it is called upon.
  - ii. Check the fan belt, tighten as necessary. Keep spare belts on site at all times.
  - iii. Check for any vibration.
- b. Semi-Annual Service
  - i. Perform the monthly service tasks.
  - ii. Replace filter if applicable.
  - iii. Oil/grease fan and motor bearing.
  - iv. Check the bird screen for any deterioration.
- c. Annual Service
  - i. Perform the monthly and semi-annual service tasks.
  - ii. Replace all fan belts and check motor sheave.

## **9. SOLID SEPARATOR/FILTER FOR CONDENSER WATER**

- a. Monthly Service
  - i. Check operation.
  - ii. Blow down filter until water is clear. Make sure water does not overflow on surrounding area.
- b. Annual Service
  - i. Perform the monthly service tasks.
  - ii. Valve off tank and open separator inspection cover. Clean inside of tank and check condition of tank.

## **10. EXPANSION TANK**

- a. Quarterly Service
  - i. Check tank operating pressure. Verify inlet/outlet of tank is clear to chill water and make up lines. Check and adjust tank water level as needed.
  - ii. Verify water regulator is set to the correct pressure.

- b. Annual Service
  - i. Drain and flush tank. Verify correct Airtrol valve operation. Refill per manufacturer's recommendations.
  - ii. Fill tank to manufacturer's recommended level and system conditions.
  - iii. Remove and clean sight glass if needed.

## **11. WATER TREATMENT FOR CHILLED WATER SYSTEM AND CONDENSER WATER SYSTEM**

- a. Provide water treatment for the chilled water system and condenser water system to inhibit scale deposits, corrosion and microbial growths.
- b. Containers and containment: Provide THIRTY (30) gallon translucent polyethylene liquid chemical drums. Provide containment with the Porta-Flex Spill Traps.
- c. Monitor and maintain corrosion coupon rack.
- d. Chemical Treatment: Provide ONE (1) year supply of chill and condenser water chemical treatment nitrite-based inhibitor.
- e. Provide for the control of scale/corrosion and microbial fouling, ChemSystems 7618 or approved equal, an all-in-one formulation of scale/corrosion inhibitor and microbicide. Product contains FIVE PERCENT (5%) active polyquat, amber liquid, specific gravity of .1048 and pH of 9.39.
- f. The chemicals provided must meet Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) requirements for safety to personnel and the environment. Microbicides must also be registered with the State of Hawaii, Department of Agriculture, Pesticide Branch.
- g. On-site chemical inventory shall not exceed the current drum capacity on containment. All empty containers shall also be disposed of by the Contractor.
- h. Monthly Service
  - i. Perform a minimum of a monthly water analysis of the make-up, condenser and closed loop/chill water systems. Chemical system shall be adjusted to maintain proper levels of key indicators. A complete report of all tests performed, repair accomplished, and any recommendations for further actions that are not covered under the terms of this contract shall be provided at the time of the service performed.
  - ii. Check and log condenser water chemical readings. Certify proper reading/levels. Provide monthly service report.