



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

SEP 24 2021

Ms. Joanna Seto, P.E., Acting Chief
Safe Drinking Water Branch
Environmental Management Division
Hawaii State Department of Health
2385 Waimano Home Rd.
Uluakupu Building 4
Pearl City, Hawaii 96782

Dear Ms. Seto:

This letter in concurrence with the enclosed report is in response to the State of Hawaii, Department of Health, Safe Drinking Water Branch Report of Sanitary Survey dated August 17, 2021, for the survey of the Aliamanu water system (PWS 337) conducted on May 26, 2021.

At the time of the August 17th Sanitary Survey report there was one (1) remaining significant deficiency that required the Middle Tank hatch cover hinges to be replaced and for a new padlock to be installed. U.S. Army Garrison Hawaii (USAG-HI) has resolved this remaining significant deficiency. Recommendations have either been resolved or are in progress for completion. U.S. Army Garrison, Hawaii (USAG-HI) will continue to work towards completion of each of the open recommendations as timely as possible, to the extent in which our resources and operations will allow.

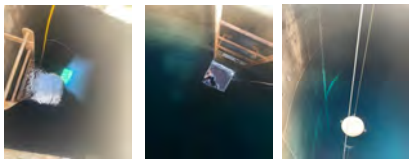





In conformance with the State of Hawaii Department of Health's photo documentation policy, enclosed is USAG-HI's response to significant deficiencies and recommendations.


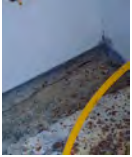





If you have any questions, please contact Kim DeCaprio, Directorate of Public Works, Environmental Division, Safe Drinking Water Program, (808) 656-3107 or kimberly.c.decaprio.civ@mail.mil.

Sincerely,


Nisit A. Gainey
Director of Public Works

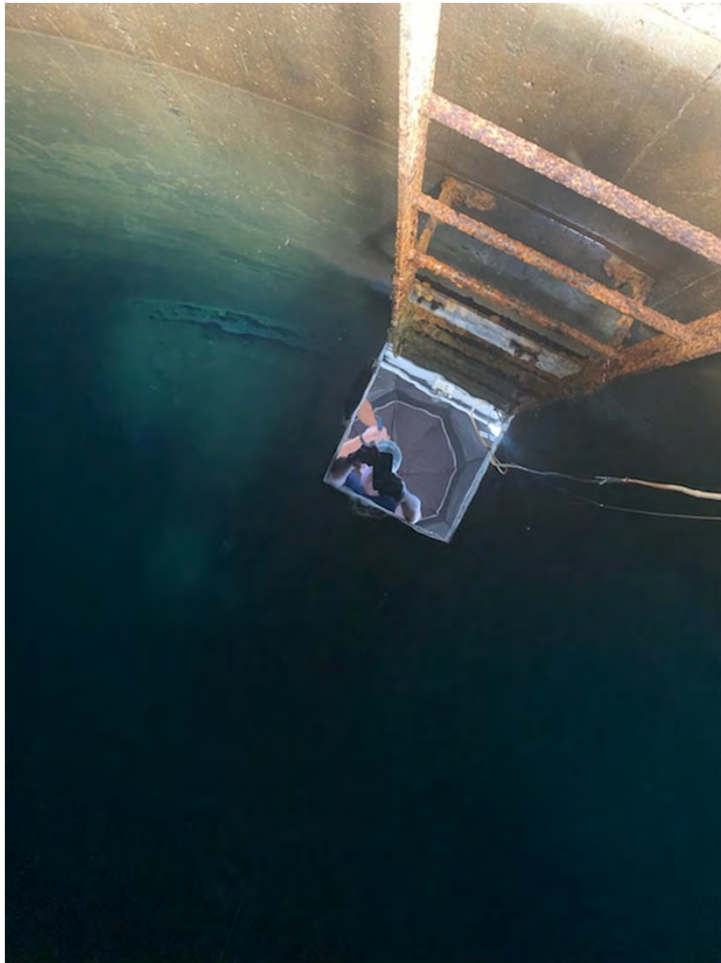
Enclosure

No	Global comments	DPW Responses	Photos
1	SD Cross-Connection Control Plan (CCCP), inventory of devices, and test results were not complete and current.	Inventory of devices has been completed and sent to DOH for approval	
2	SD Particulates on water in north, middle and south tanks. Overflow/drain water in each tank until particulates are removed. If particulates return, look for source(s). Photographs 1, 2, and 3	6/19/2021 Wayde overflowed each area and then removed particulates with different sized mesh skimmers in north and south tanks.	
3	REC Overgrown vegetation and roots around tanks and buildings. Regularly maintain vegetation and remove roots near walls.	6/17/2021 Wayde removed plant growth from the fence and will have monthly maintaince involving pruning branches growing through fence to provide a clearance of one (1) foot from fence and prune tree branches 2-inches in diameter or less overhanging the fence to provide a clearance of 10 feet above the fence.	
S1/S2 Pump Station			
4	REC Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.	Assessing if this can be added proposed FY22 project RP003031J for repairs at pump station	
North Tank (Underground tank #181)			
5	REC Verify NSF certified or oil free cylinders on hatch cover.	6/19/2021 Wayde removed South Tank Hydraulic Cylinder	
6	REC Old generator could roll through fence and damage tank roof below. Remove fluids and relocate away from tank.	As of 6/15/21 Fritz Miller/DPW ENV has contacted the tenant who left the old generator at AMR to remove it	
7	REC Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.	A FEWR has been submitted to prep, seal & paint water tank FEWR #RP001359J all south water tanks will be covered under this FEWR	
Middle Tank (Above ground tank #2070)			
8	SD Hatch gasket detached and gaps at corners. Reattach and seal gaps.	A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226 This work will be done by our Electrical/Mechanical Contractors. 6/22/2021 It has been sealed temporarily until the work order is complete	
9	SD Hatch cover hinge broken and needed to be chained down. Replace hinges and install new padlock.	A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226 This work will be done by our Electrical/Mechanical Contractors. 6/22/2021 It has been sealed temporarily until the work order is complete	
10	REC Outside of hatch frame was severely spalled. Replace hatch frame.	A work order has been submitted to replace the tank hatch. Contract number W912CN-18-D-0019	
11	REC Soil, rock, and debris trapped behind the overflow/drain pipe screen. Loose soil on embankment around the pipe. Stabilize loose embankment and maintain drainage ditch.	This will be completed as a part of regular maintaince of the drain pipe screen	
12	REC Prior theft of generator outside the fencing was noted. Install locks on control panels.	Locks will be installed by high voltage electrician	
13	REC Ladder access panel is broken. Repair and provide padlock.	DMO has been submitted #9845968	
14	REC Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.	FEWR RP003101J has been submitted 7/23/21	
South Tank (Underground #182)			

15	SD	Gap between butted ends of gasket. Caulk the gap.	5/26/2021 Wayde added silicon to the entire outside of the hatch to fix any gaps in the gasket	 
16	REC	Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.	A FEWR has been submitted 7/23/21	
17	REC	Wasp nests under UV controls, fill/drain pipes, and valve assembly. Remove wasp nests and inspect rusting pipe and valve assembly.	5/26/2021 Wasp nest first sprayed then removed behind solar panel	  
18	REC	Unused control panels on roof and enclosed area of drain pipe. Remove unused equipment.	Unused control panels on roof and enclosed area of drain pipe will be removed as time permits.	
19	REC	Unlocked gate to the drain pipe and valve assembly area. Lock gate.	5/26/2021 Gate was unlocked to drain the pipe and then a padlock was added to lock the gate	 

SD #2 Particulates on water in north, middle and south tanks. Overflow/drain water in each tank until particulates are removed. If particulates return, look for source(s). Photographs 1, 2, and 3

6/19/2021 Wayde overflowed each area and then removed particulates with different sized mesh skimmers in north and south tanks.



South Tank



Middle Tank

SD #2 Particulates on water in north, middle and south tanks, cont'd

6/19/2021 Wayde overflowed each area and then removed particulates with different sized mesh skimmers in north and south tanks.



North Tank

Rec # 3 Overgrown vegetation and roots around tanks and buildings. Regularly maintain vegetation and remove roots near walls.

6/17/2021 Trees and soil are maintained in area to stabilize the embankment. Monthly maintenance will be done for trees and soil



Rec# 5 North Tank Verify NSF certified or oil free cylinders on hatch cover.

Tank hydraulic cylinder removed 6/19/2021



SD #8 Middle Tank hatch gasket detached and gaps at corners. Reattach and seal gaps

A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226 This work will be done by our Electrical/Mechanical Contractors. It has been sealed temporarily until the work order is complete



SD #9 Middle Tank repair hatch cover hinge

A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226 This work will be done by our Electrical/Mechanical Contractors. It has been sealed temporarily until the work order is complete



SD# 15 South Tank gap between butted ends of gasket and caulk the gap

5/26/2021 Wayde added silicon to the entire outside of the hatch to fix any gaps in the gasket



SD# 15 South Tank gap between butted ends of gasket and caulk the gap, cont'd

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Rec # 17 South Tank wasp nests under UV controls, fill/drain pipes, and valve assembly. Remove wasp nests and inspect rusting pipe and valve assembly.

5/26/2021 Wasp nest first sprayed then removed behind solar panel



Rec # 19 South Tank unlocked gate to the drain pipe and valve assembly area. Lock gate.

5/26/2021 Gate was unlocked to drain the pipe and then a padlock was added to lock the gate



From: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#)
To: [Miyahira, Michael M](#); [Weaver, Stefanie](#)
Cc: [Martin, Monte L CIV \(USA\)](#); [Nakai, Wayde T CIV CPMS \(USA\)](#); [Whaley, William P Jr CIV USARMY \(USA\)](#); [Gerardy, Hannah R CTR \(USA\)](#)
Subject: RE: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU (UNCLASSIFIED)
Date: Friday, September 17, 2021 2:20:15 PM
Attachments: [DOH Draft SD REC Aliamanu SS to DOH \(updated 9-17-21\).xlsx](#)
[AMR \(PWS 337\) Water System Sanitary Powerpoint \(9-17-21\).pptx](#)

CLASSIFICATION: UNCLASSIFIED

Hi Mike,

I forgot to add a correction to Recommendation #6 for the AMR North Tank. The old generator by the tank fence line has been removed from site. Please see attachments for photo documentation of the correction.

Thanks,
Kim

From: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>
Sent: Monday, September 13, 2021 11:07 AM
To: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>; Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>
Cc: Martin, Monte L CIV (USA) <monte.l.martin.civ@mail.mil>; Nakai, Wayde T CIV CPMS (USA) <wayde.t.nakai.civ@mail.mil>; Brixius, David K CIV USARMY USAG (USA) <david.k.brixius.civ@mail.mil>; Whaley, William P Jr CIV USARMY (USA) <william.p.whaley.civ@mail.mil>
Subject: RE: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU (UNCLASSIFIED)

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Wow, solid job there Kim. Thanks to you and every one of your crew that assisted. This closes out Aliamanu SS's outstanding items.

Mike

From: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Sent: Monday, September 13, 2021 10:28 AM
To: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>; Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>

From: [Miyahira, Michael M](#)
To: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#); [Weaver, Stefanie](#)
Cc: [Martin, Monte L CIV \(USA\)](#); [Nakai, Wayde T CIV CPMS \(USA\)](#); [Brixius, David K CIV USARMY USAG \(USA\)](#); [Whaley, William P Jr CIV USARMY \(USA\)](#)
Subject: RE: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU (UNCLASSIFIED)
Date: Monday, September 13, 2021 11:06:00 AM

Wow, solid job there Kim. Thanks to you and every one of your crew that assisted. This closes out Aliamanu SS's outstanding items.

Mike

From: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Sent: Monday, September 13, 2021 10:28 AM
To: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>; Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>
Cc: Martin, Monte L CIV (USA) <monte.l.martin.civ@mail.mil>; Nakai, Wayde T CIV CPMS (USA) <wayde.t.nakai.civ@mail.mil>; Brixius, David K CIV USARMY USAG (USA) <david.k.brixius.civ@mail.mil>; Whaley, William P Jr CIV USARMY (USA) <william.p.whaley.civ@mail.mil>
Subject: RE: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Mike,

The Significant Deficiency #9 for the AMR 2070 Middle Tank hatch has been corrected. Work for the hatch cover replacement was completed on 9/10/2021. Please see attached updated with photo documentation of the correction.

Please confirm this closes out the findings for the 2021 Sanitary Survey for PWS 337 Aliamanu.

Thanks,
Kim

From: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>
Sent: Friday, September 10, 2021 10:33 AM
To: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Subject: RE: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU (UNCLASSIFIED)

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Mahalo Kim

From: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Sent: Friday, September 10, 2021 10:27 AM
To: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>
Subject: RE: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Mike,

We just got another update from the contractor. They are expecting to complete the work by Monday. I'll provide you with an update next week.

Thanks,
Kim

From: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov < Caution-mailto:michael.miyahira@doh.hawaii.gov > >
Sent: Wednesday, September 8, 2021 4:07 PM
To: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil < Caution-mailto:kimberly.c.decaprio.civ@mail.mil > >
Subject: [Non-DoD Source] FW: REPORT OF SANITARY SURVEY PUBLIC WATER SYSTEM NO. 337 ALIAMANU

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Aloha Kim,

Just checking on the status of the single remaining significant deficiency for this one.

Mike

From: Westbrook, Chantyll
Sent: Tuesday, August 17, 2021 12:02 PM
To: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil < Caution-Caution-mailto:kimberly.c.decaprio.civ@mail.mil < Caution-

[%3c Caution-Caution-mailto:kimberly.c.decaprio.civ@mail.mil](mailto:kimberly.c.decaprio.civ@mail.mil) > > >

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Aloha Ms. DeCaprio,

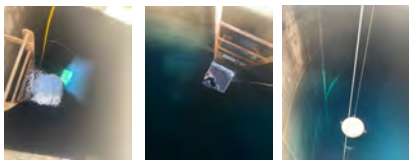





Please see attached letter for your records.








Thank you,
Chantyll Westbrook

Department of Health
Safe Drinking Water Branch
(808)586-4258

CLASSIFICATION: UNCLASSIFIED

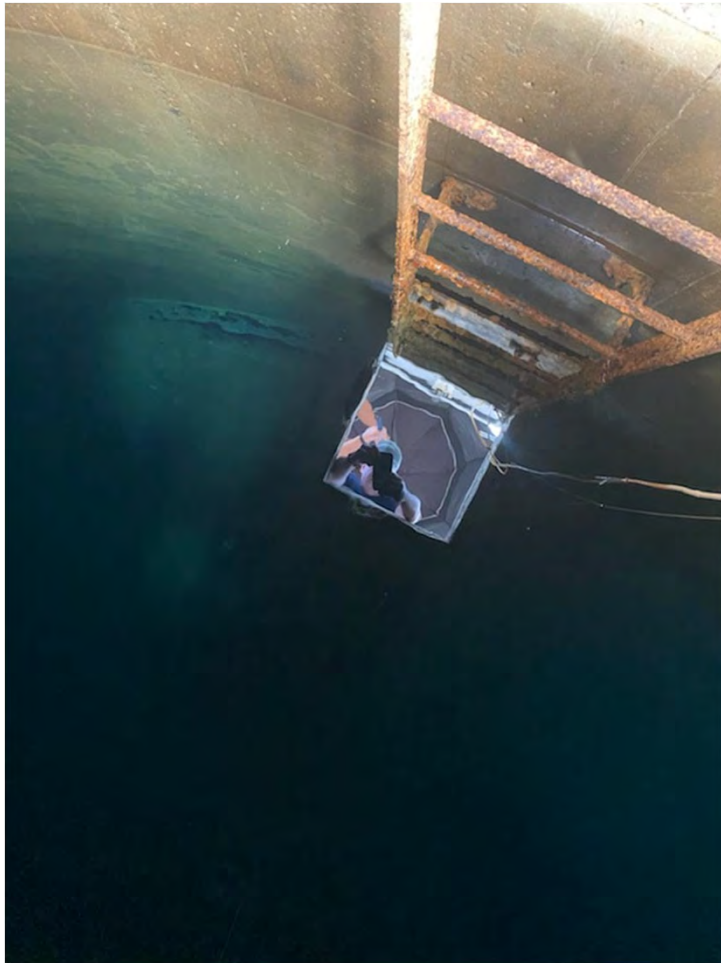
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South Tank



Middle Tank

SD #2 Particulates on water in north, middle and south tanks, cont'd

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North Tank

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6/17/2021 Trees and soil are maintained in area to stabilize the embankment. Monthly maintenance will be done for trees and soil



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Tank hydraulic cylinder removed 6/19/2021



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A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226 This work will be done by our Electrical/Mechanical Contractors. It has been sealed temporarily until the work order is complete



SD #9 Middle Tank repair hatch cover hinge

UPDATE: Tank hatch cover replacement completed under Work Order #WTP 226 on 9/10/2021.

A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226 This work will be done by our Electrical/Mechanical Contractors. It has been sealed temporarily until the work order is complete



New hatch cover installed



SD #9 Middle Tank repair hatch cover hinge, cont'd

UPDATE: Tank hatch cover replacement completed under Work Order #WTP 226 on 9/10/2021.

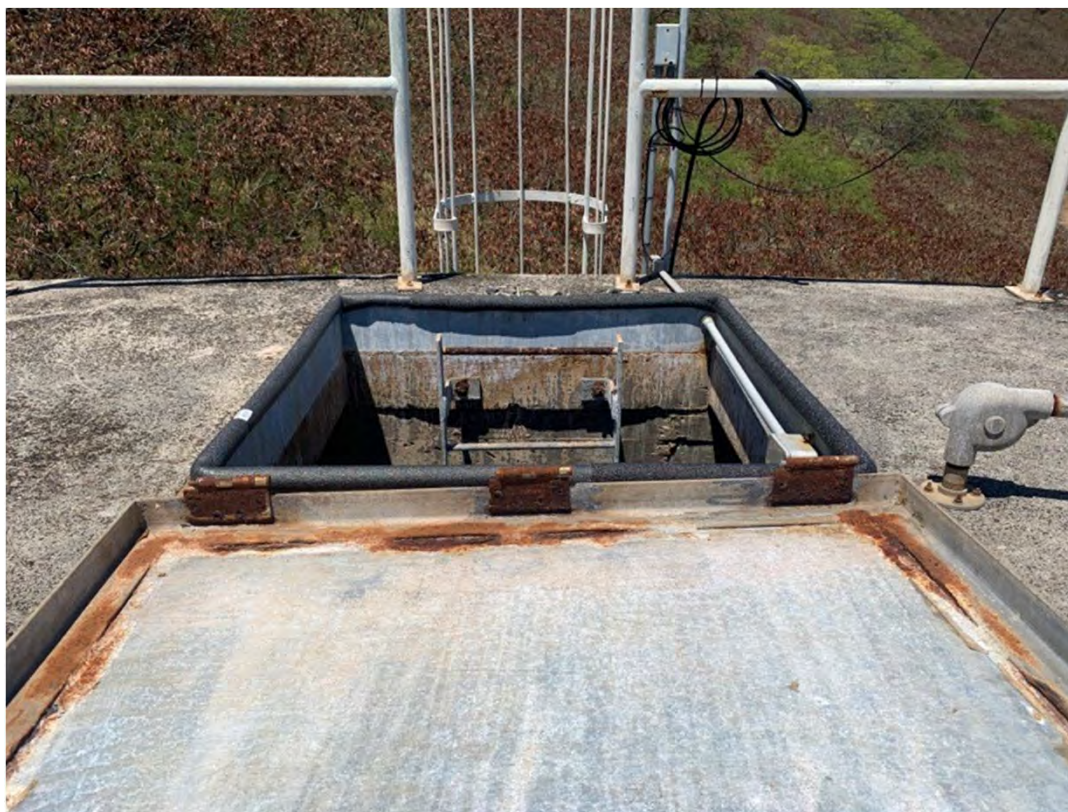


New tank hatch with gasket

SD #9 Middle Tank repair hatch cover hinge, cont'd

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Temporary sealed hatch 6/21/2021

SD# 15 South Tank gap between butted ends of gasket and caulk the gap

5/26/2021 Wayde added silicon to the entire outside of the hatch to fix any gaps in the gasket



SD# 15 South Tank gap between butted ends of gasket and caulk the gap, cont'd

5/26/2021 Wayde added silicon to the entire outside of the hatch to fix any gaps in the gasket



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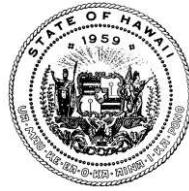
5/26/2021 Wasp nest first sprayed then removed behind solar panel



Rec # 19 South Tank unlocked gate to the drain pipe and valve assembly area. Lock gate.

5/26/2021 Gate was unlocked to drain the pipe and then a padlock was added to lock the gate





STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
ULUAKUPU BUILDING 4
2385 WAIMANO HOME ROAD, SUITE 110
PEARL CITY, HI 96782-1400

In reply, please refer to:
File: SDWB
337D0821.docx

August 17, 2021

Director, Directorate of Public Works
United States Army
Attn: Kimberly DeCaprio, Environmental
947 Wright Avenue
Wheeler Army Airfield
Schofield Barracks, Hawaii 96857-5013
[via Kimberly.c.decaprio.civ@mail.mil only]

Dear Ms. DeCaprio:

SUBJECT: REPORT OF SANITARY SURVEY
PUBLIC WATER SYSTEM NO. 337 ALIAMANU

Thank you for the assistance and information provided during the sanitary survey inspection of the Aliamanu water system conducted on May 26, 2021.

My staff appreciated the assistance provided by you, Mr. Wayde Nakai and Ms. Hannah Gerardy.

A sanitary survey of a public water system is a periodic review of the system's facilities, operation and maintenance practices, and records to assure that proper conditions, policies, and practices are in effect for that water system. Maintaining of minimum standards of operation and maintenance is the responsibility of the operator.

As of December 1, 2009, systems must comply with the sanitary survey requirements of the Ground Water Rule (GWR). The Rule requires ground water systems with an identified "**significant deficiency**" to consult with the State on a corrective action plan and schedule of completion within 30 days of receiving written notice of the deficiency. The system must complete the corrective actions or be in compliance with the agreed upon Corrective Action Plan (CAP) and completion schedule, within 120 days of receiving written notice of the deficiency. The following is a list of significant deficiencies found:

- Middle Tank hatch cover hinge broken and needed to be chained down. Replace hinges and install new padlock. **Army response: A Work Order has been submitted to replace the water tank hatch and estimated time of completion is 8/31/2021. Work Order # WTP 226, this work will be done by our**

Ms. Kimberly DeCaprio
August 17, 2021
Page 2

Electrical/Mechanical Contractors. 6/22/2021, It has been sealed temporarily until the work order is complete.

As of January 1, 2014, photo documentation of all corrected significant deficiencies is required. The Safe Drinking Water Branch (SDWB) reserves the right to conduct follow up inspections as necessary.

The Department of Health (DOH) also requests that the system review the list of outstanding "recommendations" (non-significant deficiencies), previously submitted via June 15, 2021 email, and address them to the extent that resources and operations will allow. We strongly encourage the system to address "recommendations" as you would significant deficiencies to avoid related problems in the future. The DOH will be using the list of significant deficiencies and recommendations as a reference and benchmark for measuring system progress in future sanitary surveys.

If there are any questions, please call Mr. Michael Miyahira, Safe Drinking Water Branch Engineering Section Supervisor, at 586-4258.

Sincerely,



JOANNA L. SETO, P.E., ACTING CHIEF
Safe Drinking Water Branch

MM:cw

From: [Miyahira, Michael M](#)
To: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#); [Weaver, Stefanie](#)
Cc: [Martin, Monte L CIV \(USA\)](#); [Brixius, David K CIV USARMY USAG \(USA\)](#); [Nakai, Wayde T CIV CPMS \(USA\)](#); [Phommanivong, Dustin C CIV USARMY IMCOM PACIFIC \(USA\)](#); [Gerardy, Hannah R CTR \(USA\)](#)
Subject: RE: PWS 337 Aliamanu DRAFT Sanitary Survey Report Responses (UNCLASSIFIED)
Date: Friday, August 13, 2021 3:09:00 PM

Aloha Kim,

The submitted responses are acceptable, including SD #1 Cross Connection Control Plan (CCCCP). Your and your team's work on this particular item is much appreciated. Please consider keeping the different components of this CCCC all in one place or under one office so that it can be updated thoroughly and correctly on an annual basis.

We will generate a final sanitary survey report next week. The only item we intend to follow up with you on will be the Middle Tank hatch repair slated to be completed August 31, 2021.

Mahalo for your cooperation,

Mike

-----Original Message-----

From: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Sent: Friday, July 30, 2021 12:32 PM
To: Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>; Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>
Cc: Martin, Monte L CIV (USA) <monte.l.martin.civ@mail.mil>; Brixius, David K CIV USARMY USAG (USA) <david.k.brixius.civ@mail.mil>; Nakai, Wayde T CIV CPMS (USA) <wayde.t.nakai.civ@mail.mil>; Phommanivong, Dustin C CIV USARMY IMCOM PACIFIC (USA) <dustin.c.phommanivong.civ@mail.mil>; Gerardy, Hannah R CTR (USA) <hannah.r.gerardy.ctr@mail.mil>
Subject: PWS 337 Aliamanu DRAFT Sanitary Survey Report Responses (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Stephanie and Mike,

Attached are the responses to the DRAFT Sanitary Survey findings for Aliamanu.

- 1) DRAFT findings with DPW responses
- 2) Photo documentation of completed responses
- 3) XCCC documents

We are doing final reviews of the Schofield documents and will email later this afternoon.

Please contact me if you have any questions.

Thanks,
Kim

Kim DeCaprio
Clean Air and Safe Drinking Water Program Manager USAG-HI, DPW Environmental
Office: 808.656.3107
Cell: 808.824.1365
Kimberly.c.decaprio.civ@mail.mil

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https://urldefense.com/v3/_https://home.army.mil/hawaii/index.php_!!LIYSdFfckKA!L_L3RzZ1-PBjomAO-

[skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTiDSmy5Ws\\$](https://urldefense.com/v3/http://www.imcom.army.mil/!!LIYSdFfckKA!L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTi79bUO3s$)
or visit: [https://urldefense.com/v3/http://www.imcom.army.mil/!!LIYSdFfckKA!L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTi79bUO3s\\$](https://urldefense.com/v3/http://www.imcom.army.mil/!!LIYSdFfckKA!L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTi79bUO3s$)

CLASSIFICATION: UNCLASSIFIED

From: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#)
To: [Miyahira, Michael M](#); [Weaver, Stefanie](#)
Cc: [Martin, Monte L CIV \(USA\)](#); [Brixius, David K CIV USARMY USAG \(USA\)](#); [Nakai, Wayde T CIV CPMS \(USA\)](#); [Phommanivong, Dustin C CIV USARMY IMCOM PACIFIC \(USA\)](#); [Gerardy, Hannah R CTR \(USA\)](#)
Subject: PWS 337 Aliamanu DRAFT Sanitary Survey Report Responses (UNCLASSIFIED)
Date: Friday, July 30, 2021 12:33:15 PM
Attachments: [DOH Draft SD REC Aliamanu SS to DOH 7-30-21.pdf](#)
[AMR \(PWS 337\) Water System Sanitary Powerpoint to DOH 7-30-21.pdf](#)
[SD#1 XCCP Docs.zip](#)

CLASSIFICATION: UNCLASSIFIED

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- 1) DRAFT findings with DPW responses
- 2) Photo documentation of completed responses
- 3) XCCP documents

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Thanks,
Kim

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[https://urldefense.com/v3/_https://home.army.mil/hawaii/index.php_!!LIYSdFfckKA!L_L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTiDSmy5Ws\\$](https://urldefense.com/v3/_https://home.army.mil/hawaii/index.php_!!LIYSdFfckKA!L_L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTiDSmy5Ws$)
or visit: [https://urldefense.com/v3/_http://www.imcom.army.mil_!!LIYSdFfckKA!L_L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTi79bUO3s\\$](https://urldefense.com/v3/_http://www.imcom.army.mil_!!LIYSdFfckKA!L_L3RzZ1-PBjomAO-skMxcSzGoptULkgqPK34ZXmiy4m5dV85_GvpIpsyUH_fkAWBkTi79bUO3s$)

CLASSIFICATION: UNCLASSIFIED

From: [Miyahira, Michael M](#)
To: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#); [Weaver, Stefanie](#)
Cc: [Nakai, Wayde T CIV CPMS \(USA\)](#); [Corrigan, Joan](#); [Gerardy, Hannah](#); [Phommanivong, Dustin C CIV USARMY IMCOM PACIFIC \(USA\)](#)
Subject: RE: [Non-DoD Source] Please review: Draft SD and REC Aliamanu Military Reservation (AMR) 2021 (UNCLASSIFIED)
Date: Thursday, June 24, 2021 7:37:00 AM
Attachments: [image001.png](#)

Aloha Kim,

Thank you for addressing our comments to date. **Photo-documented responses to SD No. 15 and REC Nos. 3, 17 and 19 are satisfactory and will not be included in the final SS report.**

Our responses to your questions are provided below.

Mike

From: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Sent: Thursday, June 17, 2021 10:57 AM
To: Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>
Cc: Nakai, Wayde T CIV CPMS (USA) <wayde.t.nakai.civ@mail.mil>; Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>; Corrigan, Joan <joan.corrigan@doh.hawaii.gov>; Gerardy, Hannah <Hannah.Gerardy@colostate.edu>; Phommanivong, Dustin C CIV USARMY IMCOM PACIFIC (USA) <dustin.c.phommanivong.civ@mail.mil>
Subject: RE: [Non-DoD Source] Please review: Draft SD and REC Aliamanu Military Reservation (AMR) 2021 (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Stefanie,

Please see attachments for corrections made so far.

For SD#5 Tank 2070, can you please verify this is a SD. We were tracking as a REC. **OK, we concur this is a REC**

Thanks,
Kim

From: Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>
Sent: Tuesday, June 15, 2021 9:52 AM
To: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Cc: Nakai, Wayde T CIV CPMS (USA) <wayde.t.nakai.civ@mail.mil>; Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>; Corrigan, Joan <joan.corrigan@doh.hawaii.gov>

From: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#)
To: [Weaver, Stefanie](#)
Cc: [Nakai, Wayde T CIV CPMS \(USA\)](#); [Miyahira, Michael M](#); [Corrigan, Joan](#); [Gerardy, Hannah](#); [Phommanivong, Dustin C CIV USARMY IMCOM PACIFIC \(USA\)](#)
Subject: RE: [Non-DoD Source] Please review: Draft SD and REC Aliamanu Military Reservation (AMR) 2021 (UNCLASSIFIED)
Date: Thursday, June 17, 2021 11:00:01 AM
Attachments: [image001.png](#)
[DOH Draft SD REC Aliamanu SS to DOH \(updated 6-17-21\).xlsx](#)
[AMR \(PWS 337\) Water System Sanitary Powerpoint.pptx](#)

CLASSIFICATION: UNCLASSIFIED

Hi Stefanie,

Please see attachments for corrections made so far.

For SD#5 Tank 2070, can you please verify this is a SD. We were tracking as a REC.

Thanks,
Kim

From: Weaver, Stefanie <stefanie.weaver@doh.hawaii.gov>
Sent: Tuesday, June 15, 2021 9:52 AM
To: DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC (USA) <kimberly.c.decaprio.civ@mail.mil>
Cc: Nakai, Wayde T CIV CPMS (USA) <wayde.t.nakai.civ@mail.mil>; Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>; Corrigan, Joan <joan.corrigan@doh.hawaii.gov>
Subject: [Non-DoD Source] Please review: Draft SD and REC Aliamanu Military Reservation (AMR) 2021

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

From: [Weaver, Stefanie](#)
To: [DeCaprio, Kimberly C CIV USARMY IMCOM PACIFIC \(USA\)](#)
Cc: [Nakai, Wayde T CIV CPMS \(USA\)](#); [Miyahira, Michael M](#); [Corrigan, Joan](#)
Subject: Please review: Draft SD and REC Aliamanu Military Reservation (AMR) 2021
Date: Tuesday, June 15, 2021 9:45:00 AM
Attachments: [image001.png](#)
[Draft SD & REC Aliamanu SS.xlsx](#)
[Aliamanu SS photos with SD and REC list.pdf](#)

Aloha Kim,

Our DRAFT findings for your action. Please provide detailed responses to the findings in the attached table, and clear photo documentation of any fixes from this list for our review. We expect to complete the final survey report for the Aliamanu Military Reservation water system by July 2, 2021. Any unaddressed findings will be included in the final report.

If you have any questions please contact me or Michael Miyahira michael.miyahira@doh.hawaii.gov.

Mahalo,

Stefanie Weaver

Environmental Engineer

SRF Program

Safe Drinking Water Branch -Environmental Management Division-Hawaii State Department of Health

2385 Waimano Home Road, Suite 110 -Uluakupu Building 4

Pearl City, Hawaii 96782-1400 P: 808-586-4258 | e: stefanie.weaver@doh.hawaii.gov

<https://health.hawaii.gov/sdwb/drinking-water-state-revolving-fund/>



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Aliamanu Military Reservation PWS #337 Sanitary Survey May 26, 2021

(SD)=Significant Deficiency (REC)=Recommendation

Global comments	
1	SD Cross-Connection Control Plan (CCCP), inventory of devices, and test results were not complete and current.
2	SD Particulates on water in north, middle and south tanks. Overflow/drain water in each tank until particulates are removed. If particulates return, look for source(s). Photographs 1, 2, and 3
3	REC Overgrown vegetation and roots around tanks and buildings. Regularly maintain vegetation and remove roots near walls.

S1/S2 Pump Station	
4	REC Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.

North Tank (Underground tank #181)	
5	SD Verify NSF certified or oil free cylinders on hatch cover.
6	REC Old generator could roll through fence and damage tank roof below. Remove fluids and relocate away from tank.
7	REC Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.

Middle Tank (Above ground tank #2070)	
8	SD Hatch gasket detached and gaps at corners. Reattach and seal gaps.
9	SD Hatch cover hinge broken and needed to be chained down. Replace hinges and install new padlock.
10	REC Outside of hatch frame was severely spalled. Replace hatch frame.
11	REC Soil, rock, and debris trapped behind the overflow/drain pipe screen. Loose soil on embankment around the pipe. Stabilize loose embankment and maintain drainage ditch.
12	REC Prior theft of generator outside the fencing was noted. Install locks on control panels.
13	REC Ladder access panel is broken. Repair and provide padlock.
14	REC Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.

South Tank (Underground #182)	
15	SD Gap between butted ends of gasket. Caulk the gap.
16	REC Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.
17	REC Wasp nests under UV controls, fill/drain pipes, and valve assembly. Remove wasp nests and inspect rusting pipe and valve assembly.
18	REC Unused control panels on roof and enclosed area of drain pipe. Remove unused equipment.
19	REC Unlocked gate to the drain pipe and valve assembly area. Lock gate.



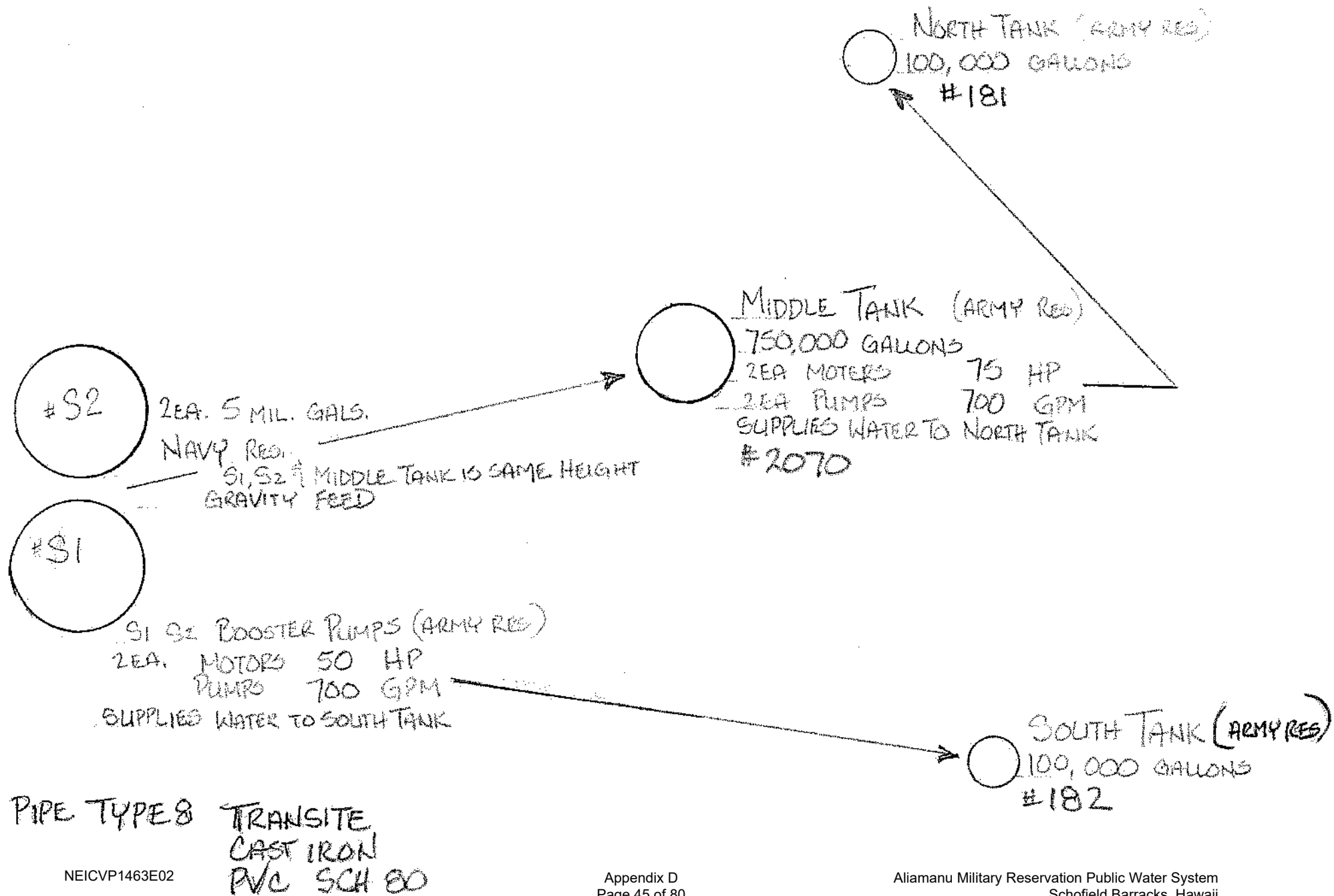




Post Facility EID Make Model Type
Size
(")
Serial
Number
GFEBS Location Comments Y1
AMR 00014 BF01 Watts 909 RP 4 218956 200035942 Main Dec
AMR 00888 BF01 Watts 709 DC 4 180456 200035950 Fire Dec
AMR 00888 BF02 Watts 909M1QT RP 1.5 354704 200035960 Irrigation Dec
AMR 01781 BF01 DC 6 200036013 Fire Dec
AMR 01782 BF01 DC 6 200036016 Fire Dec
AMR 01783 BF01 Watts 709 DCDA 6 36709 200036033 Fire, DCDA Dec
AMR 01783 BF02 Watts 007 DCDA 0.5 34901 200036046 Fire, DCDA Dec
AMR 01783 BF03 Watts 909M1QT RP 2 355893 200036154 Irrigation Dec
AMR 01785 BF01 Febco 825Y RP 2 A7668 200036279 Main Dec
AMR 01788 BF01 Watts 909 RP 2.5 125035 200036281 Main Dec
AMR 01788 BF02 Wilkins 1.5 2662381 200036603 Irrigation Dec
AMR 01788 BF03 Febco 825Y RP 2 J008474 200036669 Irrigation Dec
AMR 01790 BF01 Febco 825Y RP 1.5 H15560 200036694 Irrigation Dec
AMR 84210 BF01 Febco 6 B31752 200036858 Irrigation, Athletic Field Dec
AMR 84210 BF02 Watts 009M2QT RP 1.25 200036869 Main, Lift Station Dec

Post	Facility	EID	Make	Model	Type	Size (")	Serial Number	GFEBS	Location	Comments	Y1
AMR	00014	BF01	Watts	909	RP	4	218956	200035942		Main	Dec
AMR	00888	BF01	Watts	709	DC	4	180456	200035950		Fire	Dec
AMR	00888	BF02	Watts	909M1QT	RP	1.5	354704	200035960		Irrigation	Dec
AMR	01781	BF01			DC	6		200036013		Fire	Dec
AMR	01782	BF01			DC	6		200036016		Fire	Dec
AMR	01783	BF01	Watts	709	DCDA	6	36709	200036033		Fire, DCDA	Dec
AMR	01783	BF02	Watts	007	DCDA	0.5	34901	200036046		Fire, DCDA	Dec
AMR	01783	BF03	Watts	909M1QT	RP	2	355893	200036154		Irrigation	Dec
AMR	01785	BF01	Febco	825Y	RP	2	A7668	200036279		Main	Dec
AMR	01788	BF01	Watts	909	RP	2.5	125035	200036281		Main	Dec
AMR	01788	BF02	Wilkins			1.5	2662381	200036603		Irrigation	Dec
AMR	01788	BF03	Febco	825Y	RP	2	J008474	200036669		Irrigation	Dec
AMR	01790	BF01	Febco	825Y	RP	1.5	H15560	200036694		Irrigation	Dec
AMR	84210	BF01	Febco			6	B31752	200036858		Irrigation, Athletic Field	Dec
AMR	84210	BF02	Watts	009M2QT	RP	1.25		200036869		Main, Lift Station	Dec

AMR WATER PUMPING STATION & STORAGE TANKS



SDWB Sanitary Survey Form

Pre-Inspection

Date of Survey	5/26/2021	PWS Type	Community
PWS ID No.	337	Source	Groundwater purchased
Water System Name	Aliamanu	Consecutive From	360
Water System Owner	U.S. Army Directorate of Public Works	Population Served	6,406
PWS Contact Person	Kim DeCaprio	No. of Service Connections	1,090
Phone	656-3107	Average Daily Flow (MGD)	0.512 MGD
Email Address	kimberly.c.decaprio.civ@mail.mil		

Persons Present During Sanitary Survey (provide name and affiliation)

1. Stefanie Weave (SDWB)	6. Wayde Nakai (DPH, OMD, Utilities Branch, Water Plant)
2. Michael Miyahira (SDWB)	7. Hannah Gerardy (CEMML /USAG-HI DPW Environmental)
3. Adam "Whit" Somerall (SDWB)	8.
4. Joan Corrigan (SDWB)	9.
5. Kimberly Decaprio (USAG-HI, DPW Environmental)	10.

Compliance History

Violations Since Last Sanitary Survey			
Violation Type	Date	Description	Status
None per Wang 5/18/2021	Date		
	Date		
	Date		

System Management and Operation

Annual Report or Similar Document Provided	Not Applicable
CCR Database Storage and Compliance Status	Satisfactory
Is an Updated Emergency Response Plan Available per HAR 11-19-5 (County Only)	No (2008). Emergency plan but not up to date.

Pumps, Pump Facilities, and Controls				
Source Name	Pearl Harbor (PWS360) consecutive	Pearl Harbor (PWS 360) consecutive	Pearl Harbor (PWS 360) consecutive	Pearl Harbor (PWS 360) consecutive
Location	Aliamanu Military Reservation	Aliamanu Military Reservation	Aliamanu Military Reservation	Aliamanu Military Reservation
Source Infrastructure	Shaft	Shaft	Shaft	Shaft
USGS Number	NA	NA	NA	NA
Well Depth (ft)	NA	NA	NA	NA
Pump Type	Booster	Booster	Booster	Booster
Rated Flow (gpm)	700	700	700	700
TDH (ft)	180	180	280	280
Pump lubrication	Water Lubed	Water Lubed	Water Lubed	Water Lubed
Condition of oil lubricating equipment	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Pump in 100-Year Floodplain	No	No	No	No
Pump site protected from runoff	Yes	Yes	Yes	Yes
Well slab/floor material condition	Not applicable	Not applicable	Not applicable.	Not applicable.
Watertight seal for:				
Pump base plate/discharge head openings	N/A	N/A	N/A	N/A
Airline tubing for water level measurements?	N/A	N/A	N/A	N/A
Pump column vent hole/tubing?	N/A	N/A	N/A	N/A
Pump-to-Waste vent elevated and screened/flappered?	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Condition of Pump-to-Waste screen/flapper	N/A	N/A	N/A	N/A
All ARVs are screened	Yes	Yes	Yes	Yes
All ARVs are pointed downward	Yes	Yes	Yes	Yes
Emergency power exists?	Yes and Exercised Regularly	Yes and Exercised Regularly	Yes and Exercised Regularly	Yes and Exercised Regularly
Emergency power test frequency	Quarterly	Quarterly	Quarterly	Quarterly
Emergency power protected from vandalism or the elements?	Yes	Yes	Yes	Yes
Identify cross-connections (submerged outlets, standing water, hose bib connections, etc.)				
Recent daily maintenance log entries attached (photo ok)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remarks	S1/S2 AMR pump 1	S1/S2 AMR pump 2	AMR Middle Tank pump 1	AMR Middle Tank pump 2

➤ Questions for Booster Pumps only:				
Pumps From / To	S1/S2 BPS/to South Aliamanu Tank	S1/S2 BPS/to South Aliamanu Tank	Middle Tank to North Tank	Middle Tank to North Tank
# of Pumps	2		2	
Configuration (# online / # backup)	1/1		1/1	
Remarks	REC: Rusting and peeling on pump base plate cover.		Pressure transducer out of service	

Groundwater Source Protection-NA				
Source(s) Name				
Infrastructure immediately downstream	Infrastructure	Infrastructure	Infrastructure	Infrastructure
Emergency Spill Response Plan available?	Yes or No	Yes or No	Yes or No	Yes or No
Source Site:				
In a 100-Year Flood Plain?	Yes or No	Yes or No	Yes or No	Yes or No
Protected from runoff?	Yes or No	Yes or No	Yes or No	Yes or No
Enclosed?	Yes or No	Yes or No	Yes or No	Yes or No
Fenced and gated?	Yes or No	Yes or No	Yes or No	Yes or No
Warning signs posted?	Yes or No	Yes or No	Yes or No	Yes or No
Inappropriate chemicals stored?	Yes or No	Yes or No	Yes or No	Yes or No
Chemical additions?	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Safety Data Sheets (SDS) onsite	Yes or No	Yes or No	Yes or No	Yes or No
Potential Contaminating Activities	1. Choose an item. 2. Choose an item. 3. Choose an item.	1. Choose an item. 2. Choose an item. 3. Choose an item.	1. Choose an item. 2. Choose an item. 3. Choose an item.	1. Choose an item. 2. Choose an item. 3. Choose an item.
Remarks				

GAC Treatment-NA				
Facility Name				
Raw Water Source & Type				
Raw Water Source Flow				
Bypass Piping	Yes/No			
Downstream Infrastructure				
Target Contaminant Removal				
No. of Contactors	# (# on standby)			
Condition of tanks, piping, valves, general site, etc. (e.g. rust, holes, insects, etc.)	Satisfactory/Unsatisfactory			
All ARVs are screened	Yes, No, or N/A			
All ARVs are pointed downward	Yes, No, or N/A			
Overflow line screen/flapper	Satisfactory/Unsatisfactory			
Washout / drain line outlet location (e.g. settling basin, percolation pond, irrigation ditch, stream, drain manhole, inlet)				
Carbon Replacement Schedule				
Method of Spent Carbon Disposal (if known)				
Configuration	Single Pass/Series/Parallel			
Sampling Schedule (List frequency and location)				
O&M Manual On-site?	Yes/No			
Maintenance Log On-site?	Yes/No			

Corrosion Control Treatment-NA	
Facility Name	
Source being Treated	
Purpose for Corrosion Control Treatment	1) Lead Action Level Exceedance; 2) Copper Action Level Exceedance; 3) Preventive Measure
Unit Process	1) Chemical pH Adjustment; 2) Corrosion Inhibitor Addition; 3) Aeration pH Adjustment
Chemical/Manufacturer Name #1	
NSF 60 Certified?	Yes/No
Dosage	
How is chemical dosage determined?	
Unit Redundancy	
Chemical/Manufacturer Name #2	
NSF 60 Certified	Yes/No
Dosage	
How is chemical dosage determined?	
Unit Redundancy	
Proper Chemical Storage	Yes/No
Proper Chemical Labeling	Yes/No
Updated SDS On-Site	Yes/No
Aeration Towers: Vent Insect Screen	Satisfactory / Unsatisfactory / N/A
Updated O&M Manual On-Site	Yes/No
List Daily Log Entries	
List SDWB-Approved Optimal Water Quality Parameters and Testing Frequency & Location, including but not limited to pH, Alkalinity, Calcium, Conductivity, Temperature, Orthophosphate	
Complying with SDWB-Approved Optimal Water Quality Parameters?	Yes/No
Remarks	

Surface Water Treatment-NA	
Facility Name	
Raw Water Source Name & Type	
Raw Water Source Flow (min/max/avg)	
Bypass piping? Describe the bypassed treatment process and last bypass event.	
System infrastructure immediately downstream of WTP	
WTP Capacity	
Source Water Protection for Surface Water/GWUDI Sources	
<p>Under the Long Term 2 Enhanced Surface Water Treatment Rule, a “significant change in the watershed and source water” is defined as any change, which detrimentally affects the raw water delivered to the water treatment plant.</p> <p>Activities that could contribute to significant changes in the watershed and source water include:</p> <ul style="list-style-type: none"> • Changes in land use patterns. • Changes in ownership. • Changes in agricultural cropping, chemical application, or irrigation practices. • Changes in other non-point discharge source activities such as commercial, industrial or residential development. • Natural or man-made stream or reservoir modifications. • New NPDES permits or changes in existing NPDES permits that involve increased loading of contaminants. • NPDES permit violations at wastewater treatment plants and confined animal feedlot operations. • Accidental or illegal waste discharges and spills. • Dramatic natural events such as hurricanes, floods, forest fires, earthquakes, and landslides that may transport or expose contaminants. • Prolonged drought conditions that may warrant special preparatory measures to minimize impacts from waste accumulations that are washed into source waters when precipitation returns. • Status of the water system's emergency response plan to these significant changes. <p>The inspector shall answer the next three questions below using these criteria:</p>	
Identify any new significant actual or potential sources of <i>Cryptosporidium</i>	
Identify any significant hydrological changes in the watershed that could affect <i>Cryptosporidium</i> loading	
Inspect the intake structure and identify any modifications to its location or design	

Presedimentation / Raw Water Reservoir	
Capacity	
Pretreatment – Chemical Addition	
Purpose	
Chemical Name	
NSF 60 Certified?	
Dosage	
How is chemical dosage determined?	
Unit Redundancy	
Pretreatment – Prescreening	
Strainer/filter type & sieve/pore size	
Solids disposal?	
Unit Redundancy	
Pretreatment – Other	
Describe pre-treatment process (e.g. PAC, UV, microfiltration, MIEX)	
Coagulation/Flocculation	
Configuration (# online/ #backup/tank shape)	
Coagulant chemical	
How is chemical dosage determined? What is the protocol for flashy or prolonged higher turbidity events?	
Option to manually operate?	Yes/No
Sedimentation	
Configuration (# online/ #backup/tank shape)	
Sludge handling (dewatering & disposal)	

Filtration			
Configuration (# online/ #backup/filter media)			
Backwash frequency & basis?			
Frequency of filter replacement			
Recycling of supernatant or backwash water?			
Is Filter Backwash Recycling Rule requirements met? (i.e. recycled back to the head of the plant) – for conventional and direct filtration plants only			
Post-Treatment			
Purpose	Disinfection	Corrosion Control	Other
Chemical Name			
NSF 60 Certified?			
Dosage			
How is chemical dosage determined?			
Unit Redundancy			
Activated Carbon			
Configuration (# online/ #backup/series or parallel)			
Targeted contaminants			
Solids handling & disposal			
Operation & Maintenance			
Is an updated O&M Manual available on-site for operator consultation?	Yes/No		
Is an updated O&M Manual submitted to DOH every 2 years in July?	Yes/No		
Are daily operations scheduled and listed for plant operators to follow?	Yes/No		
Daily maintenance logs kept onsite?	Yes/No		
List Daily Log entries			

Are appropriate spare parts and tool kits maintained onsite?	Yes/No			
Is there a cross-connection program?	Yes/No			
Is there a worker safety or training program?	Yes/No			
Chemical handling & storage				
Proper chemical handling and safety equipment available?	Yes/No			
Were chemicals stored in a separate room?	Yes/No			
Was adequate separation of different chemicals provided?	Yes/No			
Were SDS sheets available on-site?	Yes/No			
Was adequate ventilation provided?	Yes/No			
Describe alarm system				
Describe emergency procedures				
Emergency power				
Is emergency power available?	Yes/No			
How often is it exercised?				
Is it exercised under full load?	Yes/No			
Monitoring – List parameters monitored, location & recorded with frequency and instrument name				
Parameter	Location	Frequency	Instrument	Calibration Frequency

Alarms – List plant alarms and location			
Alarm	Location	Setpoints	Steps Taken After Alarm
Reporting (CT compliance, etc.)			
Reporting violations received in the last 12 months:			
Verify disinfection points, CT monitoring points, calculated volumes, flows and unit processes			
Miscellaneous			
Are site boundaries appropriately fenced & gated?	Yes/No		
Does appropriate warning or “keep out” signage exist?	Yes/No		
Are all building doors appropriately signed (e.g. chlorine, etc.)?	Yes/No		
Does site maintenance control vegetation & vector habitats?	Yes/No		

Disinfection-NA				
Name of Source being disinfected	Enter Source Name	Enter Source Name	Enter Source Name	Enter Source Name
Disinfection method	Disinfection method	Disinfection method	Disinfection method	Disinfection method
Labeled chemical manufacturer's information				
Meets NSF 60	Yes or No	Yes or No	Yes or No	Yes or No
Equipment in enclosed structure	Yes or No	Yes or No	Yes or No	Yes or No
Material of enclosed structure	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Warning signs present	Yes or No	Yes or No	Yes or No	Yes or No
Feed equipment type	Type	Type	Type	Type
Number of back-up units	Quantity	Quantity	Quantity	Quantity
Target residual at far ends of distribution system (ppm)				
Target residual at EPD point (ppm)				
How are feed adjustments made?	Adjustment type	Adjustment type	Adjustment type	Adjustment type
No. of days chemicals are stored (60-90 days max, 30 days preferred)				
Disinfectant feed point location				
Copy of daily log attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preventative maintenance program	Yes or No	Yes or No	Yes or No	Yes or No
Critical spare parts and repair kit on hand	Yes or No	Yes or No	Yes or No	Yes or No
Backup power available?	Yes or No	Yes or No	Yes or No	Yes or No
Emergency response plan procedures onsite	Yes or No	Yes or No	Yes or No	Yes or No

	Source Name	Source Name	Source Name	Source Name
For Gas Chlorination				
Chlorinators in a separate room?	Yes or No	Yes or No	Yes or No	Yes or No
Automatic switch-over equipment	Yes or No	Yes or No	Yes or No	Yes or No
Cylinders labeled and chained	Yes or No	Yes or No	Yes or No	Yes or No
Protective cap on stored cylinders	Yes or No	Yes or No	Yes or No	Yes or No
Working scale	Yes or No	Yes or No	Yes or No	Yes or No
Chlorine leak detectors/kits in room	Yes or No	Yes or No	Yes or No	Yes or No
Leak detection/low residual alarms	Yes or No	Yes or No	Yes or No	Yes or No
Positive pressure SCBA availability and training	Yes or No	Yes or No	Yes or No	Yes or No
Chemical handling clothes, safety equipment and tools	Yes or No	Yes or No	Yes or No	Yes or No
Light and exhaust fan switches outside of the room	Yes or No	Yes or No	Yes or No	Yes or No
Panic bars on outward-swinging door to outside	Yes or No	Yes or No	Yes or No	Yes or No
Adequate floor ventilation	Yes or No	Yes or No	Yes or No	Yes or No
Viewing window into room	Yes or No	Yes or No	Yes or No	Yes or No
For Chloramination				
In what order and ratio is ammonia combined with chlorine?				

Finished Water Storage				
Tank Name	Middle (#2070)	South (underground) #182	North (underground) #181	
Spillway elevation (ft)	130	380	450	
Capacity (MG)	0.75	0.1	0.1	
Material of construction	Concrete	Concrete	Concrete	
Exposure to unauthorized persons	Low Probability	Low Probability	Low Probability	
Surrounding landscape	Residential, industrial	Residential, industrial	Residential, industrial	
Site fenced	Yes	Yes	Yes	
Warning signs	Yes	Yes	Yes	
Gates locked	Yes	Yes	Yes	
Cross-connection potential with onsite irrigation	No	No	No	
Site drainage	Satisfactory	Satisfactory	Satisfactory	
Condition of tank exterior	Satisfactory	Satisfactory	Satisfactory	
Condition of access ladder	Satisfactory	Not Applicable	Not Applicable	
Vent insect screen	Satisfactory	Satisfactory	Satisfactory	
Tank access hatch	Unsatisfactory	Unsatisfactory	Unsatisfactory	
Visual water quality	Unsatisfactory	Unsatisfactory	Unsatisfactory	
Overflow hatch	Not Applicable	Not Applicable	Not Applicable	
Level indicator cable opening	Satisfactory	Not Applicable	Not Applicable	
Overflow line screen/flapper	Satisfactory	Satisfactory	Satisfactory	
Washout drain line	Combined with overflow, dirt behind screen, but screen intact	Combined with overflow	Combined with overflow	
O & M program	No	No	No	
Frequency of inspection of tank roof and interior and exterior surfaces	At least annually	At least annually	At least annually	
Frequency of tank interior cleaning	Never	Never	Never	
Tank isolation by valving	Yes	Yes	Yes	
Disinfection onsite	No	No	No	

Remarks	Global 2SD: Particulates on water	Global 2SD: Particulates on water	Global 2SD: Particulates on water	
	<p>8SD Hatch gasket detached and gaps at corners. Reattach and seal gaps.</p> <p>9SD Hatch cover hinge broken and needed to be chained down. Replace hinges and install new padlock.</p> <p>10REC Outside of hatch frame was severely spalled. Replace hatch frame.</p> <p>11REC Soil, rock, and debris trapped behind the overflow/drain pipe screen. Loose soil on embankment around the pipe. Stabilize loose embankment and maintain drainage ditch.</p> <p>12REC Prior theft of generator outside the fencing was noted. Install locks on control panels.</p> <p>13REC Ladder access panel is broken. Repair and provide padlock.</p> <p>14REC Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.</p>	<p>15SD Gap between butted ends of gasket. Caulk the gap.</p> <p>16REC Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.</p> <p>17REC Wasp nests under UV controls, fill/drain pipes, and valve assembly. Remove wasp nests and inspect rusting pipe and valve assembly.</p> <p>18REC Unused control panels on roof and enclosed area of drain pipe. Remove unused equipment.</p> <p>19REC Unlocked gate to the drain pipe and valve assembly area. Lock gate.</p>	<p>5SD Verify NSF certified or oil free cylinders on hatch cover.</p> <p>6REC Old generator could roll through fence and damage tank roof below. Remove fluids and relocate away from tank.</p> <p>7REC Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.</p>	

Distribution and Transmission	
System pipe materials	1. AC, asbestos cement (transite) 2. Cast iron 3. PVC SCH 80
System pressure range (psi)	40-120
Method of isolation	valving
Security measures	Schofield security
Installation and repair procedures for water mains	Plumbing shop maintains
Flushing schedule and procedure	Flush the system whenever fire hydrants are checked.
Leak detection control program	Satisfactory/Unsatisfactory
Corrosion control program	New lines have cathodic protection installed
For all surface water, GWUDI, and non-county groundwater systems: Has there been any substantial modifications to the water system, as per HAR 11-20-30, since the last sanitary survey?	No.
Remarks	

Capacity Assessment

Technical	
<p>OPERATOR CERTIFICATION</p> <p>Each public water system (except transient, non-community) shall be under the responsible charge of an operator(s) holding a valid certification equal to or greater than the classification of the WTP or DS. Check whether the water system operators are certified. A backup certified operator is recommended.</p>	<p>✓ Operator Certification Form is attached</p> <p>✓ System has a backup certified operator (verify)</p> <p><input type="checkbox"/> The system does not have the required certified operators</p>
<p>ADEQUATE WATER SOURCES</p> <p>Discuss with manager whether the present water sources are adequate for the future (next 5 years).</p>	<p>Does the system have an emergency connections with other systems?</p> <p>No</p> <p>Are the existing sources of sufficient quantity and quality to meet future demand?</p> <p>✓ Yes <input type="checkbox"/> No</p>
<p>POTENTIAL FOR CONTAMINATION OF THE WATER</p> <p>Inspect for pathways that could contaminate the finished water at the well site, storage tanks, or distribution system.</p>	<p>✓ Significant deficiencies were found during this sanitary survey</p> <p><input type="checkbox"/> No significant deficiencies were found during this sanitary survey</p>

<p>MONITORINIG PROGRAMS</p> <p>Check water quality monitoring performance.</p>	<p><u>Coliform Monitoring Program</u></p> <p>✓ Satisfactory <input type="checkbox"/> Unsatisfactory, explain:</p> <p><u>Lead and Copper Monitoring Program</u></p> <p>✓ Satisfactory <input type="checkbox"/> Unsatisfactory, explain:</p> <p><u>Phase II and Phase V Monitoring Program</u></p> <p>✓ Satisfactory <input type="checkbox"/> Unsatisfactory, explain:</p> <p><u>Chemical Monitoring</u></p> <p>✓ Satisfactory <input type="checkbox"/> Unsatisfactory, explain: ✓ SDWIS Water Quality Data from past 5 years is attached</p>
<p>BACKFLOW AND CROSS-CONNECTIONS</p> <p>Check whether backflow prevention devices are used if the water system serves hospitals, farms, golf courses, sewage treatment plants, or other activities that could cause a backflow of contamination into the drinking water.</p>	<p>Does the system have a cross connection control program or policy? ✓ Yes <input type="checkbox"/> No, explain:</p> <p>Does the system have the appropriate cross-connection control devices installed? <input type="checkbox"/> Yes ✓ No, explain: Unknown. SD#1- CCCP includes devices on system.</p> <p>Are backflow preventers inspected annually? Unknown. Unknown. SD#1- CCCP includes devices on system. Backflow preventers were not tested within the last year</p> <p>Air gaps at least 2 pipe diameters (1" min) above the overflow rim? <input type="checkbox"/> Yes ✓ No, explain: No overflow pipes observed in tanks.</p>

Managerial	
<p>ORGANIZATION AND MANAGEMENT CAPABILITY</p>	<p>Is there a clear plan of organization and control among the people responsible for the management and operation of the system? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, explain:</p> <p>Is the system receiving the technical assistance and other support that is needed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, explain:</p>
<p>SYSTEM MAINTENANCE</p> <p>The overall condition of the water system infrastructure should be assessed.</p>	<p>Is the present maintenance level adequate for the water system? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, explain:</p>
<p>EMERGENCY PLANS</p> <p>Check whether the water system has an emergency plan. The plan should include obtaining backup sources of water in drought situations, loss of a well pump or extended loss of electrical power.</p>	<p>Does the water system have an emergency plan? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No but not revised since 2008</p>
<p>CORRECTION OF PROBLEMS</p> <p>The water system should have plans to correct obvious significant problems noted during the survey. The water system should also have corrected earlier identified significant problem(s) in a timely fashion.</p>	<p>List the significant deficiencies from the last sanitary survey and check the box if corrected.</p> <p><input checked="" type="checkbox"/> 1. Overflow line not sealed south tank. Duckbill valve installed (1/17/2017). <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4.</p>

Financial	
<p>ADEQUATE FINANCIAL BUDGETS</p> <p>The annual budget should have sufficient income and cash reserves to pay annual operating expenses, unexpected significant repairs, and planned major work. A dedicated source of income should be identified.</p>	<p>Is there an annual budget? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, explain:</p> <p>Are there sufficient funds to cover the necessary expenses for the water system to operate? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, explain:</p>
<p>NORMAL OPERATION AND MAINTENANCE</p> <p>Discuss whether funding levels for operation and maintenance are sufficient.</p>	<p>Are there adequate funds for operation and maintenance? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>CAPITAL IMPROVEMENT PROJECTS</p> <p>A five (5) year capital improvement plan enables the water system to plan for future needs.</p> <p>Facility improvements indicate management support of the water system's needs.</p>	<p>Is there a five year capital improvement budget? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Identify improvements to the water system and include the month and year the improvement was installed since the last sanitary survey:</p> <p>If there were no capital improvements since the last sanitary survey, is the existing infrastructure adequate? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

Significant Deficiencies and Recommendations

Significant Deficiencies

1	SD	Global-Cross-Connection Control Plan (CCCP), inventory of devices, and test results were not complete and current.
2	SD	Global-Particulates on water in north, middle and south tanks. Overflow/drain water in each tank until particulates are removed. If particulates return, look for source(s). Photographs 1, 2, and 3
5	SD	North- (added south (email), middle if no install)-Verify NSF certified or oil free cylinders on hatch cover.
8	SD	Middle tank-Hatch gasket detached and gaps at corners. Reattach and seal gaps.
9	SD	Middle tank-Hatch cover hinge broken and needed to be chained down. Replace hinges and install new padlock.
15	SD	South Tank-Gap between butted ends of gasket. Caulk the gap.

Recommendations

3	REC	Global-Overgrown vegetation and roots around tanks and buildings. Regularly maintain vegetation and remove roots near walls.
4	REC	S1/S2 Pump Station-Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.
6	REC	North Tank (Underground tank #181)-Old generator could roll through fence and damage tank roof below. Remove fluids and relocate away from tank.
7	REC	North Tank (Underground tank #181)-Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.
10	REC	Middle Tank (Above ground tank #2070)-Outside of hatch frame was severely spalled. Replace hatch frame.
11	REC	Middle Tank (Above ground tank #2070)-Soil, rock, and debris trapped behind the overflow/drain pipe screen. Loose soil on embankment around the pipe. Stabilize loose embankment and maintain drainage ditch.
12	REC	Middle Tank (Above ground tank #2070)-Prior theft of generator outside the fencing was noted. Install locks on control panels.
13	REC	Middle Tank (Above ground tank #2070)-Ladder access panel is broken. Repair and provide padlock.

14	REC	Middle Tank (Above ground tank #2070)-Pipes and booster pump base plate covers were severely corroded. Refurbish and repaint rusted equipment.	
16	REC	South Tank (Underground #182)-Spalled concrete and rusted rebar on the tank roof. Repair spalled areas over exposed rebar.	
17	REC	South Tank (Underground #182)-Wasp nests under UV controls, fill/drain pipes, and valve assembly. Remove wasp nests and inspect rusting pipe and valve assembly.	
18	REC	South Tank (Underground #182)-Unused control panels on roof and enclosed area of drain pipe. Remove unused equipment.	
19	REC	South Tank (Underground #182)-Unlocked gate to the drain pipe and valve assembly area. Lock gate.	

PWS	WATER SYSTEM NAME	FACILITY_NAME	FACILITY	FACILITY_ TYPE	SAMPLING_POINT_NAME	SAMPLING_ POINT_ID	ANALYTE_CLASS	ANALYTE_NAME	COLLECTED	UNIT	MEASURED_ VALUE	MCL	UNIT
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	R-127 OLIVE PL	TC081R	Total Coliform	COLIFORM -TCR-	5/17/2016		1		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	R-154 KAUHINI ROAD 1782 COMMUNITY CTR	TC048R	Total Coliform	COLIFORM -TCR-	6/1/2017		1		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	R-144 OCTOPUS LN	TC084R	Total Coliform	COLIFORM -TCR-	6/24/2019		1		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	165 KAUHINI RD. GYM (BLDG 1781)	LC007	Lead and Copper	COPPER- FREE	7/11/2017	UG/L	161		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	114 KAUHINI RD.	LC006	Lead and Copper	COPPER- FREE	7/11/2017	UG/L	88		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	154 KAUHINI RD. CYSS (BLDG 1782)	LC001	Lead and Copper	COPPER- FREE	7/11/2017	UG/L	64		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	1704 BLACKHAW PL.	LC024	Lead and Copper	COPPER- FREE	7/11/2017	UG/L	64		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	143 OCTOPUS LANE	LC042	Lead and Copper	COPPER- FREE	7/11/2017	UG/L	54		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	141 OCTOPUS LANE	LC040	Lead and Copper	COPPER- FREE	7/11/2017	UG/L	52		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	1705 BLACKHAW PL.	LC025	Lead and Copper	COPPER- FREE	8/25/2020	UG/L	72		
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TOTAL HALOACETIC ACIDS -HAA5-	5/14/2018	UG/L	1.3	60	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TOTAL HALOACETIC ACIDS -HAA5-	5/8/2019	UG/L	1.3	60	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TOTAL HALOACETIC ACIDS -HAA5-	5/11/2020	UG/L	1.3	60	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TTHM	5/11/2016	UG/L	4	80	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TTHM	5/1/2017	UG/L	4.8	80	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TTHM	5/14/2018	UG/L	3.9	80	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TTHM	5/8/2019	UG/L	4.9	80	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TTHM	5/11/2020	UG/L	8.2	80	UG/L
HI0000337	ALIAMANU	ALIAMANU DISTRIBUTION SYSTEM	DS337	DS	6544 CROSSANDRA ST	903	Disinfectant By Product	TTHM	5/4/2021	UG/L	6.8	80	UG/L

HAWAII PUBLIC WATER SYSTEM INFORMATION

PWS ID: 337

SYSNAME: Aliamanu

ISLAND: Oahu

7/10/2020

OWNER: US Army Dir of Public Wks

ACTIVE: A (A = Active, I = Inactive)

PWS TYPE: C (C=Community; NT=Nontransient, Noncommunity; NC=Noncommunity) **SYSTOWN:** Honolulu, Hawaii 9681

POPULATION: 6,406

SERVICE CNCT: 1,090

MIN # COLI. SAMPLES: 7

FLOW: 512,779 gallons per day

ACTIVE DATE: 6/1/1977

STOPDATE:

CONSECUTIVE: Y **WHOLESALE:** 360

SOURCE: Ground-Pur

% SURFACE: 0 **%PURCH SRF:** 0 **% GROUND:** 0 **%PURCH GRND:** 100 **% CATCHMENT:** 0

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Schofield Barracks, HI 96857-5013

SHIPPING

ADDR:

PHONE:

CC_EMAIL: 100

Water Treatment Plant Classification

- ☐ Class 1 - Slow sand filtration; chemical addition, such as for chlorination, fluoridation, pH control, or corrosion control; granular activated carbon filtration; or packed aeration towers or air stripping towers
- ☐ Class 2 - Membrane filtration; cartridge filtration; or desalting (including distillation, electrodialysis, and reverse osmosis)
- ☐ Class 3 - Diatomaceous earth filtration, or package plants with diatomaceous earth filtration
- ☐ Class 4 - Conventional treatment; direct filtration; or package treatment plants with conventional treatment or direct filtration

Note: Chlorination and/or fluoridation facilities only can be operated by either certified WTPOs or DSOs.

Distribution System Classification

- ☐ Class 1 - Serves water systems with a population of 1,500 or less persons
- ☒ Class 2 - Serves water systems with a population of 1,501 to 15,000 persons
- ☐ Class 3 - Serves water systems with a population of 15,001 to 50,000 persons
- ☐ Class 4 - Serves water systems with a population of over 50,000 persons

Name	Cert #	Exp	Name	Cert #	Exp
WTPO(s) in Responsible Charge			DSO(s) in Responsible Charge		
Nakai	Wayde T.	T2-125 11/30/2022	Martin	Monte L.	D4-205 11/30/2022

Other WTPO(s) operating the system

Cadiz	Richard M.	T1-123	11/30/2021
Fukumoto	Kaipo E.S.	T2-190	11/30/2021
Hamlin	Matthew W.	T1-210	11/30/2021
Ramos	Norberto P.	T1-213	11/30/2022

Other DSO(s) operating the system

Fukumoto	Kaipo E.S.	D3-109	11/30/2021
Ramos	Norberto P.	D1-362	11/30/2022
Whaley	William P.	D3-111	11/30/2022

2020 Annual Water Quality Report (for water quality in 2019)



U.S. ARMY GARRISON—HAWAII

Aliamanu Military Reservation



The Safe Drinking Water Act requires all community water systems to provide an annual Consumer Confidence Report (CCR) to their customers. CCRs provide drinking water quality information, including information on the origin of the drinking water and any detected contaminants.

U.S. Army Garrison-Hawaii is providing this report as a service to the community in conjunction with this requirement.

How does the CCR work?

An essential part of the CCR is the water quality table on page 3 showing the level of each substance detected during 2019. There are three columns on the table which should be given special attention: the maximum contaminant level (MCL), the level detected, and whether a violation occurred. The Environmental Protection Agency (EPA) set MCLs for a number of substances which may be found in drinking water. All of the substances listed in the table are below

the MCLs set by the EPA. U.S. Army Garrison-Hawaii continues to provide some of the cleanest and safest drinking water available in Hawaii.

What is the source of the water?

Drinking water for Aliamanu Military Reservation (AMR) is supplied by the Joint Base Pearl Harbor Hickam Water System. The drinking water is obtained from three ground water sources: Waiawa Shaft, Red Hill Tunnel, and Halawa Shaft.

The ground water filters naturally as it travels from the surface to an aquifer located below the ground. Once the water is pumped back up from the aquifer, it is chlorinated and fluoridated. Both additives are required under Army standards. Chlorine is used as a disinfectant and fluoride is used to promote strong teeth in children. The water is then piped into the distribution system.

The susceptibility of the AMR water system to contamination has been evaluated under the Hawaii Source Water Assessment Program. The results of the Assessment, dated March 2004, are available for review by contacting the Directorate of

Public Works, Environmental Division at (808) 656-3107.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for the contaminants in bottled water, which must provide the same protection for public health.

Red Hill Information:

In January 2014, a fuel release from Tank #5 at the Red Hill Bulk Fuel Storage Facility was reported. As a proactive measure, the Navy has been conducting testing at the Red Hill Shaft above what is required by regulation for several years. The table on page 4 shows the levels of concentrations of detected contaminants at Red Hill Shaft for 2019. All concentrations are below applicable EPA and State regulatory and action levels and the drinking water is safe. The Navy will continue to conduct this voluntary testing and data will be included in future Water Quality Reports.

THE FOLLOWING
PAGES WILL DESCRIBE
THE CONTAMINANTS
AND THE RESULTS OF
THE DRINKING WATER
SAMPLING THAT
OCCURRED IN 2019.

Inside this Report:

SOURCE OF CONTAMINANTS	2
CONTAMINANT CATEGORIES	2
LEAD FACTS	2
HEALTH INFORMATION	2
WATER QUALITY TABLE	3-4
SUMMARY OF RESULTS	4

2020 Annual Water Quality Report (for water quality in 2019)

Where Do Potential Ground Water Quality Problems Come From?



<http://www.boardofwatersupply.com/water-resources/the-water-cycle>

As water percolates through the ground, it dissolves naturally-occurring minerals. Substances resulting from the presence of animal or human activity can also be introduced to the ground water or the distribution system. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity as indicated in the contaminant summary below.

Contaminant Categories

Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Lead Facts

Note: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Aliamanu water system is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791). Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

Water Quality Table for Aliamanu Military Reservation

The tables below list all of the drinking water contaminants detected during calendar year 2019 unless otherwise indicated. The EPA allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or our system is not considered vulnerable to this type of contamination. Some of our data, though representative, are more than one year old. Results of samples in the tables below identify low levels of contaminants detected below EPA limits. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

Contaminants in the Distribution System (units of measurement)	MCL	MCLG	Average Level Detected	Range of Detection (multiple samples)	Likely Source of Contaminant	Violation
Inorganic						
Copper (ppm)	AL=1.3	1.3	0.064 ¹ (2017) ³	0 ²	Corrosion of household plumbing systems; erosion of natural deposits	NO
Lead (ppb)	AL= 15	0	ND ¹ (2017) ³	0 ²	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Fluoride ⁴ (ppm)	4	4	0.54	0.12– 1.16	Erosion of natural deposits; water additive to promote strong teeth	NO
Disinfectant & Disinfection Byproducts						
Residual Chlorine (ppm)	MRDL=4	MRDLG=4	0.54	0.21 - 0.83	Water additive used to control microbes	NO
Total Trihalomethanes (ppb)	80	N/A	4.9	0 ²	By-product of drinking water chlorination	NO
Total Haloacetic Acids (ppb)	60	N/A	1.3	0 ²	By-Product of Disinfection	NO
Contaminants in the Plant Water (units of measurement)	MCL	MCLG	Highest Level Detected	Range of Detection (multiple samples)	Likely Source of Contaminant	Violation
Inorganic						
Barium (ppm)	2	2	0.02 (2017) ³	ND - 0.02	Erosion of natural deposits	NO
Chromium (Total) (ppb)	100	100	2.1 (2017) ³	ND - 2.1	Naturally-occurring	NO
Lead (ppb)	15	0	10.1	ND - 10.1	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Fluoride (ppm)	4	4	2.0	ND - 2.0	Erosion of natural deposits; water additive to promote strong teeth	NO
Nitrate (ppm)	10	10	1.80	0.54 - 1.80	Runoff from fertilizer use; erosion of natural deposits	NO
Organic						
Chlordane (ppb)	2	0	0.36 (2017) ³	ND - 0.36	Residue of banned insecticide	N/A
Heptachlor epoxide (ppt)	200	0	20 (2017) ³	ND - 20	Naturally-occurring	N/A
Unregulated⁵						
Bromide (ppb)	N/A	N/A	765 (2018)	124 - 765	Naturally-occurring	N/A
Chloride (ppm)	250	N/A	240	35 - 240	Naturally-occurring	N/A
Dieldrin (ppb)	N/A	N/A	0.05 (2017)	ND - 0.05	Residue of banned insecticide	N/A
Manganese (ppb)	N/A	N/A	1.20 (2018)	ND - 1.20	Naturally-occurring	N/A
Sodium (ppm)	N/A	N/A	124 (2017)	26 - 124	Naturally-occurring	N/A
Sulfate (ppm)	250	N/A	47	ND - 47	Naturally-occurring	N/A

Red Hill Shaft - 2019 Voluntary Testing

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	DOH EAL	Highest Level Detected	Range of Detection	Violation
Lead (ppb)	AL=15	0	15	18*	ND - 18	NO

*The voluntary testing on lead resulted in levels higher than the Action Level. The Navy consulted with the Safe Drinking Water Branch and upon their recommendation conducted a confirmation test which gave below Action Level results. The regular Lead/copper test in the distribution system showed that the water meets consumption guidelines.

Table Definitions, Abbreviations, and Notes

Table Definitions:

AL - Action Level - The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.

DOH EAL-Department of Health Environmental Action Level. Risk-based levels published by DOH for compounds that do not have promulgated MCL values.

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL - Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG - Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Table Abbreviations:

ppb -parts per billion or micrograms per liter (µg/L)

ppm - parts per million or milligrams per liter (mg/L)

ppt - parts per trillion or nanograms per liter (ng/L)

ND - not detected at testing limits.

N/A - not applicable.

Table Notes:

1. In accordance with EPA and State regulations, this number represents the 90th percentile value of the samples collected.
2. The number of samples above the action level.
3. The state and EPA require water systems to monitor certain contaminants less than once per year because the concentration is not expected to vary significantly from year to year. The date of the last sample collected is as indicated.
4. Fluoride is added to the water system to help promote healthy teeth in children. The target level is 0.7 ppm.
5. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

**United States Army
Garrison – Hawaii**
DPW Environmental
Division (IMHW-PWE)
947 Wright Avenue,
Wheeler Army Airfield
Schofield Barracks, HI
96857
(808) 656-3107

**Tripler Army
Medical Center**
Preventive Medicine
1 Jarrett White Road
Honolulu, Hawaii
96859-5000
(808) 433-9938

Summary of Results

A number of different water samples are collected and analyzed for various contaminants throughout the year. The number and frequency of sampling events depends upon federal and state requirements. The water quality table on page 3 and 4 lists all of the drinking water contaminants detected during calendar year 2019. All of the substances listed in the table are below the MCLs set by the EPA. Contaminants not present in the drinking water or analyzed below detection limits are not included in the table. Remember, the presence of contaminants does not necessarily indicate that the water poses a health risk.

This CCR is posted on the web at:

<https://home.army.mil/hawaii/index.php/water-quality-report-amr>

THE DIRECTORATE OF PUBLIC WORKS DOES NOT HAVE ROUTINE PUBLIC MEETINGS ABOUT THE WATER SYSTEM. IF YOU HAVE QUESTIONS REGARDING THE WATER SYSTEM OR WATER QUALITY PLEASE CONTACT THE DPW ENVIRONMENTAL DIVISION, SAFE DRINKING WATER PROGRAM AT (808) 656-3107.

CCR Certification Form

(updated with electronic delivery methods)

CWS Name: _____

PWSID No: _____

The community water system named above hereby confirms that its consumer confidence report has been distributed to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the state/primacy agency.

Certified by:

Signature: _____

Name: _____

Title: _____ Date: _____

Please check all items that apply.

____ CCR was distributed by mail.

____ CCR was distributed by other direct delivery method. Specify direct delivery methods:

____ Mail – notification that CCR is available on Web site via a direct uniform resource locator (URL)

____ E-mail – direct URL to CCR (Enclosure 6)

____ E-mail – CCR sent as an attachment to the e-mail

____ E-mail – CCR sent embedded in the e-mail

____ Other: _____

If the CCR was provided by a direct URL, please provide the direct URL Internet address:

www. _____

If the CCR was provided electronically, please describe how a customer requests paper CCR delivery:

_____ "Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods as recommended by the state/primacy agency:

_____ posting the CCR on the Internet at www._____ (Enclosure 7)

_____ mailing the CCR to postal patrons within the service area (attach a list of zip codes used)

_____ advertising availability of the CCR in news media (attach copy of announcement) (Enclosure 8)

_____ publication of CCR in local newspaper (attach copy of newspaper announcement)

_____ posting the CCR in public places (attach a list of locations) (Enclosure 9)

_____ delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers

_____ delivery to community organizations (attach a list)

_____ electronic city newsletter or electronic community newsletter or listserv (attach a copy of the article or notice) (Enclosure 6)

_____ electronic announcement of CCR availability via social media outlets (attach list of social media outlets utilized) (Enclosures 10 & 11)

_____ (for systems serving at least 100,000 persons) Posted CCR on a publicly-accessible Internet site at the address: www._____

_____ Delivered CCR to other agencies as required by the state/primacy agency (attach a list)



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

Ms. Joanna Seto, P.E.
Chief, Safe Drinking Water Branch
Environmental Management Division
Hawaii State Department of Health
2385 Waimano Home Road Suite 110
Uluakupu Building 4
Pearl City, Hawaii 96782-1400

Dear Ms. Seto:

This letter is to certify that the 2020 Consumer Confidence Reports (CCR) have been distributed to the customers of the U.S. Army Garrison, Hawaii (USAG-HI) Public Water Systems (PWS) listed below. Further, the systems certify that the information contained in the reports is correct and consistent with the compliance monitoring data. Enclosures 1 through 4 are the Certification Forms for the following PWS:

<u>PWS Number</u>	<u>Installation</u>
337	Aliamanu Military Reservation
341	Fort Shafter Military Reservation
345	Schofield Barracks Military Reservation
346	Tripler Medical Center

The following methods have been utilized to distribute the CCRs to customers:

- a. On June 8, 2020, the CCRs were posted on the publicly-available USAG-HI Environmental Safe Drinking Water Act Program website (Enclosure 7):
<http://home.army.mil/hawaii/index.php/garrison/dpw/drinking-water>
- b. On June 12, 2020, an article with information on the CCRs and a link to the CCRs was published online on the USAG-HI News Website (Enclosure 8).
- c. On June 12, 2020, links to the CCRs were posted on the Island Palms Community (IPC) Facebook Page that provided links directly to the reports (Enclosure 10).
- d. On June 12, 2020, links to the CCRs were posted on the USAG-HI Facebook Page that provided links directly to the reports (Enclosure 11).

e. On June 12, 2020, links to the CCRs were included in the IPC email news bulletin to Army residents (Enclosure 6). The email news bulletin reaches residents who provide their email address to IPC (approximately 99% of all residents).

f. On June 11, 2020, hard copies of the CCRs were mailed to residents who had not provided IPC with an email address, and therefore will not receive email news bulletins (Enclosure 5).

g. On June 11, 2020, the CCRs were routed to each tenant organization on USAG-HI, along with a memo asking that the information be disseminated to each unit in the command, organization, or activity (Enclosure 9).

h. On June 12, 2020, hard copies of the Schofield Barracks PWS CCR was mailed to the Kunia Water Association (Enclosure 12), Kunia Village Title Holding Corporation (Enclosure 13), and Second City Property Management, Inc. (Enclosure 14). Due to an emergency pump malfunction, Kunia Village was provided drinking water from PWS 345.

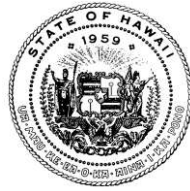
i. On June 12, 2020, the Schofield Barracks CCR was mailed to the Naval Facilities Engineering Command (NAVFAC), because water from the Schofield Barracks PWS is co-mingled with Navy water to supply the Naval Computer Telecommunications Area Master Station (Enclosure 15). Schofield Barracks water quality data is also emailed to NAVFAC prior to May, so the NAVFAC environmental office can use this data to prepare their CCR.

If you have any questions, please contact the Safe Drinking Water Program, Environmental Division, Directorate of Public Works, (808) 656-3107.

Sincerely,

Kent K. Watase, PE
Director of Public Works

Enclosures



STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
ULUAKUPU BLDG. 4
2385 WAIMANO HOME ROAD, SUITE 110
PEARL CITY, HI 96782-1400

In reply, please refer to:
File: SDWB
337C&345D.docx

May 17, 2021

Director, Directorate of Public Works
United States Army
Attn: Kimberly DeCaprio, Environmental
947 Wright Avenue
Wheeler Army Airfield
Schofield Barracks, Hawaii 96857-5013
[via Kimberly.c.decaprio.civ@mail.mil only]

Dear Ms. DeCaprio:

**SUBJECT: CONFIRMATION OF SANITARY SURVEYS
PUBLIC WATER SYSTEMS NO. 345, SCHOFIELD BARRACKS MILITARY
RESERVATION AND NO. 337, ALIAMANU MILITARY RESERVATION**

This letter is to confirm the scheduling of sanitary surveys at the Schofield Barracks Military Reservation (SBMR) and Aliamanu Military Reservation (AMR) Public Water Systems (PWS), (#345 and #337), requested by the Department of Health, Safe Drinking Water Branch (SDWB). Inspectors Ms. Stefanie Weaver, Mr. Adam "Whit" Sommerall, Ms. Joan Corrigan and I will meet you and your staff based on the following schedule:

- Schofield Barracks Military Reservation (SBMR): The sanitary survey is scheduled to begin at the Schofield Water Treatment Plant at 8:30 a.m. on Thursday, May 20, 2021 and continuing the following day at 8:30 a.m. on Friday, May 21, 2021. The survey is anticipated to last two full days, 5 to 6 hours each day.
- Aliamanu Military Reservation (AMR): The sanitary survey is scheduled to begin at 9:00 a.m. on Wednesday, May 26, 2021 at the AMR S1/S2 tank pump station. The survey is anticipated to last approximately 4 hours.

The sanitary surveys are conducted to evaluate the adequacy of the source, facilities, equipment, operation, and maintenance of each water system. The survey is an essential part of the rules administered by the SDWB. The survey is beneficial to both the SDWB and the purveyor because it allows our staff to become familiar with your water system and provides your staff with information on how to maintain and operate your system. If violations or problems should occur, this knowledge facilitates analysis of the situation.

In order to conduct the survey, we would appreciate your assistance in providing access to the facilities, including storage tank roofs and water sources. Please advise us if fall protection

equipment (harness, lanyard, rope grab, etc.) is required at least one day prior to arriving at the facilities. We also request that one of your staff members knowledgeable about the water system be present during the survey. Please have the following information available the day of the survey:

No later than the date of the sanitary survey, please provide the following information via email to the SDWB inspector:

1. **SYSTEM FLOW** - Description of the overall system flow (i.e., from source to disinfection to reservoir, etc.), amount of water used by the system, the population served, and a map or schematic of the system flow. We would appreciate having a copy of the water system map or schematic for our files.
2. **FACILITIES** - Information on the facilities and their operation. For example:
 - a. Well source: The design pumping capacity(gpm) and TDH (ft) of the pump(s).
 - b. Reservoirs: storage capacity, tank material and date of construction.
 - c. Distribution system: The pipe material used and location of the sample points.
 - d. Chemical additions: Chemicals used, method of dosing, and monitoring equipment calibration.
3. **RECORDS** –
 - a. Daily log of chemical additions, including date, time, dosage (PPM), residual (PPM), flow rate, etc.
 - b. Records of modifications to the system and active/inactive facilities.
 - c. Cross-connection control plan and associated records (i.e. backflow testing records, etc.).
 - d. O & M manuals and inspection records, and
 - e. Emergency response plan (ERP).

Within 48 hours prior to the survey, please complete the enclosed SDWB Health Questionnaire for each person who will be present during the inspection and submit it via email to the SDWB inspector at stefanie.weaver@doh.hawaii.gov.

During the survey, for the health and safety of those involved, the SDWB requests the following, to the best extent possible:

- Maintain social distancing and avoid physical contact (e.g. handshakes, elbow bumps, hugs).

Ms. Kimberly DeCaprio
May 17, 2021
Page 3

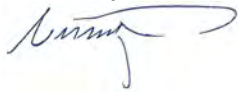
- Allow one person in an enclosed space at a time (e.g. control or pump rooms).
- Wear a face mask at all times.
- Wash your hands with soap and water for 20 seconds often, but especially before and after eating, touching your face, sneezing, or coughing. If soap and water is unavailable, use hand sanitizer.
- Avoid the exchange of materials by providing documents requested by the inspector prior to the inspection or after the inspection to avoid exchanging materials onsite.

On the 10th day after each survey, please complete the enclosed SDWB Health Questionnaire for each person that was present during the inspection and submit it to the SDWB inspector at stefanie.weaver@doh.hawaii.gov.

If anyone who will be present during the inspection is exhibiting any signs of illness, inform the SDWB inspector immediately to reschedule the sanitary survey.

If, for any reason, you are unable to accommodate our request for this survey, or if you have any questions regarding the survey, please call Ms. Stefanie Weaver of the SDWB Engineering Section, at (808) 586-4258. Thank you for your attention to this matter.

Sincerely,



MICHAEL M. MIYAHIRA, P.E., ACTING CHIEF
Safe Drinking Water Branch

SW:cw

Enclosure: SDWB Health Questionnaire

c: Mr. Monte Martin, ARMY DPW [via monte.martin@us.army.mil only]
Ms. Rhonda Suzuki, ARMY DPW [via Rhonda.I.suzuki.civ@mail.mil only]