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**County of Hawai'i**  
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
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October 3, 2018

Ms. Sina Pruder, Acting Chief  
State of Hawai'i Department of Health  
Environmental Management Division  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

**Subject: Kaloko Housing Wastewater Treatment Plant  
2018 Operation and Maintenance Inspection**

Dear Ms. Pruder:

The County of Hawai'i Department of Environmental Management, Wastewater Division (DEM-WWD) has received the Operation and Maintenance (O&M) Inspection Report covering the time period from June 2017 through March 2018 for the Kaloko Housing Wastewater Treatment Plant (WWTP), which was dated August 30, 2018, and provides the following responses:

Below are responses to the items listed in the report.

- 1. The treatment plant is operating at 131% of its design flow. No additional wastewater flows will be allowed to tie into the facility until treatment train no. 2 is placed online or a connection is placed online or a connection is provided to the Kealakehe WWTP. A corrective action plan should be submitted to address this problem.*

DEM-WWD recognizes that the inoperability of Treatment Train No. 2 results in flows through Treatment Train No. 1 exceeding the original design capacity of 16,000 gallons per day (GPD). However, the facility has consistently met the discharge requirements for BOD<sub>5</sub> and TSS specified under HAR §11-62-26(b)(1)(E) and HAR §11-62-26(b)(2)(E), as well as the discharge limitations specified in the Underground Injection Well Permit (UH-2857). The capacity of the biochemical reactor (BCR) system in Treatment Train No. 1 is 200 pounds BOD<sub>5</sub>/1000 ft<sup>3</sup>. The average BOD<sub>5</sub> loading during the time frame covered by the inspection report was approximately 146 pounds BOD<sub>5</sub>/1000ft<sup>3</sup>, which is 73% of the BCR system capacity.

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Kaloko WWTP exists to serve the existing Kaloko Housing development. DEM-WWD has no intention of allowing additional connections to the collection system feeding into this facility.

In addition, DEM-WWD still plans to connect the development currently served by the subject facility to the Kealakehe WWTP once infrastructure between Kealakehe Parkway and the Kealakehe WWTP is completed. The current schedule for the necessary infrastructure, including a new Sewage Pump Station (SPS), is in approximately four (4) years.

2. *For treatment train no. 1, the automatic controls (PLC and HMI) are still inoperable and have been replaced with manual timers. At the time of inspection, there was a 3" to 4" sludge layer in the chlorine contact channel. The automatic controls should be repaired and the sludge layer should be pumped out as part of plant maintenance. The chlorine contact channel should be checked regularly and pumped out as necessary to prevent another spill event.*

DEM-WWD acknowledges that timers are used to control pumps in lieu of the automatic controls (PLC and HMI), which are inoperable, and blowers are run continuously at this WWTP. Because flow from the existing Kaloko Housing development exceeds the original design capacity of Treatment Train No. 1 and Treatment Train No. 2 is inoperable, the chlorine contact channel is scoop cleaned at least every other day, depending on build-up, and vacuumed or pumped at least monthly, with the digester, intermediate and anoxic basins. This helps prevent sludge build-up and ensures regulatory compliance until the development can be connected to the Kealakehe WWTP as outlined above.

3. *The County's user charge revenue is insufficient for wastewater treatment plant operation, maintenance, and replacement expenses.*

The facility is not a part of the County Wastewater System. It is owned by the County OHCD, and DEM-WWD is responsible for its operation and maintenance. As such, the sewer user charge under Chapter 21 of the Hawai'i County Code is not applicable to this facility. WWD is reimbursed for operating and maintaining the facility from the County General Fund.

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4. *The facility's one-year project performance certification has not been submitted in accordance with Section 11-62-23.1(f), Hawaii Administrative Rules.*

The County was unable to obtain the one-year project certification from the Engineer of Record. As such, certification was provided as ATTACHMENT (1).

Ms. Sina Pruder, Acting Chief

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Should you have any questions, please contact Dora Beck, P.E., Wastewater Division Chief at 808-961-8513 ([dora.beck@hawaiicounty.gov](mailto:dora.beck@hawaiicounty.gov)) or Sandra E. Mendonca P.E., at 808-961-8279 ([sandra.mendonca@hawaiicounty.gov](mailto:sandra.mendonca@hawaiicounty.gov)).

Sincerely,



William A. Kucharski  
Director

WK:mef

Attachment

cc: Dora Beck, P.E., Wastewater Division Chief  
Neil Gyotoku, Housing Administrator, OHCE

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**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WASTEWATER DIVISION**

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April 9, 2018

Ms. Sina Pruder, Chief  
Wastewater Branch  
Department of Health  
919 Ala Moana Blvd. #309  
Honolulu, HI 96814

Attn: April Matsumura

**Subject: One Year Certification  
Kaloko Housing Wastewater Treatment Plant**

This letter is in response to the Operation and Maintenance Inspection Report dated July 3, 2017 (File: 587-ID#315KalokoHousing, O&MLtrSFY17), stating the facility's one-year project performance certification has not been submitted to the DOH.

As the facility has been in operation since October 2011 and was initially operated by a private contractor under contract with the Office of Housing and Community Development (OHCD); records for the one year period following original operation of the facility are not readily available. As such, current data is being provided to confirm satisfactory operation of the facility.

Please be advised, however, that while the initial design included a reuse component; the reuse component has never been utilized due to the inability to consistently achieve disinfection requirements of HAR §11-62-26(c)(2) for R-2 water.

The County does not intend to operate the reuse component for the following reasons:

1. While the County is in agreement that the reuse system is desirable; the inability to consistently achieve disinfection requirements poses a public health risk to residents and visitors in the area.
2. The facility was designed to utilize approximately 3,000 gpd of reuse water for irrigation and the cost to upgrade the treatment system to provide consistent effluent quality to achieve disinfection requirements is prohibitive.

Effluent limits for both BOD5 and TSS are 60 mg/L in accordance with HAR §11-62-26(b)(1)(E); HAR §11-62-26(b)(2)(E); and UIC Permit No. UH-2857.

A summary table of data for the period of January 2017 thru February 2018 is provided below and confirms that the facility is operating well within specified effluent limits and that performance of the facility has improved significantly since March 2017.

Date	Effluent Flow (gpd)	Effluent BOD <sub>5</sub> (mg/L)	Effluent TSS (mg/L)	Monthly Average Flow (gpd)
1/17/2017	19,154		8.0	
1/31/2017	17,719	4.5	8.4	18,045
2/15/2017	17,314			
2/28/2017	21,172		9.0	17,381
3/6/2017	17,010	34.4	41.0	
3/12/2017	20,539	35.0	36.0	
3/15/2017	18,333			
3/31/2017	17,922	8.9	5.6	17,092
4/6/2017	19,840			
4/20/2017	18,929	2.5	9.6	
4/21/2017	20,654			
4/30/2017	23,619	4.8	7.4	16,575
5/4/2017	23,366			
5/31/2017	19,116	2.6	12.0	18,600
6/1/2017	22,240			
6/30/2017	21,382	5.8	11.2	19,020
7/11/2017	28,438			
7/31/2017	27,037	4.6	12.0	18,999
8/15/2017	26,457	4.0	12.0	
8/31/2017	19,626			20,541
9/12/2017	24,683	6.0	9.0	
9/30/2017	24,111			20,415
10/3/2017	25,287	8.0	7.0	
10/24/2017	20,079			
10/31/2017	19,154	2.1	12.8	20,114
11/14/2017	17,719			
11/30/2017	17,314	2.8	10.8	26,019
12/5/2017	21,172	9.3	15.8	
12/31/2017	17,010		8.0	23,815
1/23/2018	20,539	4.5	8.4	
1/31/2018	18,333			21,959
2/1/2018	17,922		9.0	

While the County acknowledges that the facility is operating above its design flow capacity and that the BOD<sub>5</sub> loading of 480 mg/L exceeds the facility's design parameter of 400 mg/L; as indicated in the County's response to Item No. 2 of the SFY17 Operation and Maintenance Inspection Report (587-ID#315KalokoHousing O&MLtrSFY17 dated July 3, 2017); the facility has consistently met its discharge requirements for BOD<sub>5</sub> as well as TSS specified under HAR §11-62-26(b)(1)(E) and HAR §11-62-26(b)(2)(E) as well as discharge limitations specified in the Underground Injection Well permit (UH-2857).

Based on the above, below please find the Engineer's Certification for the facility.

Engineer's Certification:

I certify that the Kaloko Housing Wastewater Treatment Plant, based on sampling results and my professional judgement as an engineer, is meeting, and at the design flow will meet applicable effluent requirements of the Hawaii Administrative Rules, sections 11-62-26 and 11-62-27

Signature: Dora Beck

Date: 4/9/18

Engineer's Name (print): Dora Beck, P.E.

Company: County of Hawai'i, Department of Environmental Management,  
Wastewater Division