UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

12/2/2021

Bill Boswell
Director, Civil Operations
Kohanaiki Community Association
Alahou Kohanaiki
Kailua Kona, Hi 96745

Subject: NPDES Inspection Report; Kohanaiki Community Association

Dear Director Boswell:

Please find enclosed EPA's inspection report of November 21, 2021.

The inspection was conducted in response to a complaint received by EPA of potential non-compliance and alleged health hazards with regard to the operation of the private wastewater treatment system.

EPA did not identify any areas of concern associated with operation of the wastewater treatment plant during the inspection.

Please note that the inspection focused solely on assessing the validity of the complaint. While inspectors did not observe treated wastewater being directly discharged to surface waters, the inspection attempts no evaluation, and makes no conclusions, regarding any potential subsurface pathways of treated wastewater to surface waters. An evaluation of subsurface pathways would be well beyond the scope of this site inspection.

EPA's inspection made no attempt to evaluate potential subsurface connections of treated wastewater to the Pacific Ocean, and makes no conclusion regarding subsurface connections or NPDES permit applicability.

No additional response to this Inspection Report is required at this time. If there are any issues you would like to further address, please feel free to provide a response either electronically to Tinger.John@EPA.gov or via mail at:

John Tinger
US EPA (ENF3-1)
75 Hawthorne Street
San Francisco, CA 94105

Please feel free to contact me at (415) 972-3518 or Tinger.John@epa.gov if you have any questions or require any clarifications.

Sincerely,

John Tinger
Clean Water Act Enforcement Section

Enclosure: Inspection Report
Cc: Alec Wong, P.E., Program Manager, DOH Clean Water Branch

Region 9 Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105

Inspection Date(s):	November 21, 2021		
Time:	**Entry:** 1:30	**Exit:** 2:30	
Media:	Water		
Regulatory Program(s)	Clean Water Act NPDES		
Company Name:	Kohanaiki Community Association		
Facility or Site Name:	Kohanaiki Community Association		
Site Physical Location:	Alahou Kohanaiki Kailua Kona, Hi 96745.		
Geographic Coordinates:			
Mailing address:	Alahou Kohanaiki Kailua Kona, Hi 96745.		
Facility/Site Contact:	Bill Boswell	**Title**: Director, civil operations	
	Phone: 808-896-6301	**Email**: bboswell@kohanaiki.com	
Facility/Site Identifier:	Unpermitted private wastewater treatment plant		
NAICS:			
SIC:	4952		
Facility/Site Personnel Participating in Inspection:			
Name	**Affiliation**	**Title**	**Email**
Damein Souza	KCA	Director Engineering	dsouza@kohanaiki.com
Jayson Pearson	Aqua Engineers	Lead Operator	jpearson@aquaengineers.com
Steve Aslenai	Aqua Engineers	Operator	
Nancy Burns, PE	Consultant		Nebpellc1@gmail.com
US EPA:			
John Tinger	US EPA	Inspector	Tinger.John@EPA.gov
Federal/State/Tribal/Local Representatives:			
Amy Miller	EPA	Enforcement Division	
Roberto Rodriquez	EPA	Safe Drinking Water	
Lily Lee	EPA	Office of Water	
Inspection Report Author:	John Tinger		415-972-3518
			Date: 11/30/21
Manager:	Eric Magnan ERIC MAGNAN Digitally signed by ERIC MAGNAN Date: 2021.12.01 17:36:11 -08'00'		415-974-7149
			Date:

SECTION I – INTRODUCTION

I.1 Purpose of the Inspection

The purpose of the inspection was to evaluate a complaint received by EPA of potential non-compliance with regard to the operation of the private wastewater treatment system.

SECTION II – FACILITY / SITE DESCRIPTION

II.1 Facility Description

Kohanaiki Community is a private community and golf course with 146 homes already built and plans for 500 homes.

Sewer system is gravity line from individual homes to a pressurized system with E/one grinders and force mains to the wastewater treatment plant (WWTP). The sewer system capacity has been built in anticipation of full build out.

The WWTP also serves the public restroom facility located at the beach park.

WWTP is designed for up to 70,000 gpd. Operators stated facility typically treats about 15,000 gpd but may treat up to 35,000 gpd on weekends when beach and public restroom is being utilized (e.g., during a surf competition).

Facility treats to R-1 reuse standards (Operators stated this is only facility on island currently treating to R-1). Treated wastewater is discharged to a surface pond located within the community and then to landscape irrigation and to infiltration/dispersion areas along roadways. The R-1 effluent is not utilized for the golf course due to public perception. (The golf course is irrigated via 8 wells in brackish water with Reverse Osmosis treatment system).

Facility is staffed 7 days/week. Facility has SCADA remote operations with multiple call out alarms for high flow, pump malfunction, blower malfunction.

II.2 Wastewater Sources

Wastewater originates from homes and restroom facilities. There are no industrial discharges to the facility.

Due to pressurized collection system, there is no inflow and infiltration to the sewer system.

II.3 Wastewater Treatment

Treatment consists of bar screens, fine bubble aeration, moving bed biofilm reactor (MBBR), aeration, fine bubble dissolved air flotation (DAF), fine filtration and Ultra Violet (UV) disinfection. No chlorine is added.

Facility tests for BOD and TSS. Laboratory results for October 2021 indicated:

- BOD influent of 114 mg/L reduced to 4.2 mg/L effluent.
- TSS influent of 225 mg/L reduced to 2.0 mg/L effluent.

Operators stated DAF system typically achieves 4 NTU turbidity which is reduced to 1 NTU after filtration prior to the UV.

SECTION III – OBSERVATIONS / Operational Status

1. Facility appeared to be in compliance with Clean Water Act permitting. Facility was not observed to be discharging treated wastewater to surface waters (which would then require a NPDES - National Pollutant Discharge Elimination System permit) nor observed to be discharging any treated wastewater via underground injection (which would require a UIC-Underground Injection Control Permit).

2. Facility appears to be achieving high level of treatment, with BOD and TSS effluent below 5 mg/L and turbidity below 2 NTU.

3. Facility had odors typical of wastewater treatment system. Facility operated a blower and carbon scrubber unit designed to control odors but which did not appear to be effective.

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

1. None.

APPENDICES

Appendix 1 – Inspection checklist
Appendix 2 – Photograph Log

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Appendix 1- INSPECTION CHECKLIST

I. GENERAL

Facility Type	☒Municipal ☐Industrial ☐Agricultural ☐Federal ☐Oil & Gas
Inspection Type	☒ Compliance Evaluation (non-sampling) ☐ Compliance Sampling ☐ _____
Weather ☒ Dry ☐ Rain ☐ Clear ☐ Recent Rains ☐ Overcast ☐ _____	
Was facility notified in advance?	Yes ☒ No ☐
Presented credentials?	Yes ☒ No ☐
Notes:	

II. RECORDS AND REPORTS REVIEW

RECORDS	Available onsite?			
	Yes	No	N/A	Not Inspected
NPDES permit	☐	☐	☒	☐
Monitoring and reporting records for past 5 years	☐	☐	☒	☐
Maintenance records	☐	☐	☒	☐
Operational records/ log books	☒	☐	☐	☐
Auxiliary power check logs	☐	☐	☒	☐
Employee Training	☐	☐	☒	☐
Have any spills been reported since last inspection?	☐	☐	☒	☐
Spill records	☐	☐	☒	☐
Have any bypasses been reported since last inspection?	☐	☐	☒	☐
Bypass records	☐	☐	☒	☐
Notes: *Facility does not have, and does not require, CWA permit*				
REPORTS				

	Completed in time frame and frequency as required by permit?			
	Yes	No	N/A	Not Inspected
Notification of Non-compliance	☐	☐	☒	☐
Notification of spills	☐	☐	☒	☐
Notification of bypass	☐	☐	☒	☐
Pollution Prevention Plan	☐	☐	☒	☐
Spill prevention control and countermeasure (SPCC) plan	☐	☐	☒	☐
POTW: Biosolids Monitoring/Management Reports	☐	☐	☒	☐
POTW: CSO/ I & I Reports	☐	☐	☒	☐
POTW: Pretreatment Reports	☐	☐	☒	☐
Other:	☐	☐	☒	☐
Other:	☐	☐	☒	☐
Notes: *Facility does not have, and does not require, CWA permit*				

III. SELF MONITORING PROGRAM

SAMPLING RECORDS & DMRS	Yes	No	N/A	Not Inspected
Are DMRs submitted in timeframe and frequency required by permit?	☐	☐	☒	☐
Sampling Records have: Dates, times, location, & name of individual performing sampling:	☐	☐	☒	☐
Lab Reports have: Analytical methods, results, dates and time of analyses:	☐	☐	☒	☐
Are samples collected and preserved using methods approved in 40 CFR Part 136?	☐	☐	☒	☐
Lab Report results are correctly transcribed to DMR:	☐	☐	☒	☐
Detection limits are reported for "less than" results:	☐	☐	☒	☐
Does discharger monitor effluent more frequently than required by Permit?	☐	☐	☒	☐
If Yes, is all data collected reported on DMRs?	☐	☐	☒	☐
Notes: . *Facility does not have, and does not require, CWA permit*				

SAMPLE MONITORING	Yes	No	N/A	Not Inspected
Are sample locations and methods representative of Effluent?	☒	☐	☐	☐
Representative of Influent?	☒	☐	☐	☐
Representative of Receiving Waters?	☐	☐	☒	☐
What Flow Measurement Device is utilized?				
☐ Flume ☐ Weir ☒ Meter: Type_____ ☐ Calculation ☐ Other_____				
Device appears to be functioning properly without obstructions:	☒	☐	☐	☐
Is flow meter calibration available onsite?	☐	☐	☐	☒
Date of last calibration				
Calibration performed by				
Notes:				

ANALYTICAL MONITORING	Yes	No	N/A	Not Inspected
Does discharger perform on-site analysis for compliance monitoring?	☐	☐	☐	☒
List parameters analyzed on-site:				
Are records of equipment calibration available?	☐	☐	☐	☒
Is the on-site laboratory certified?	☐	☐	☐	☒
Certification Number				
Expiration Date				

COMPLIANCE MONITORING RATING CODE	Satisfactory	Marginal	Unsatisfactory	Not Rated
	☒	☐	☐	☐
Notes:				

IV. SITE REVIEW OPERATIONS AND MAINTENANCE

General	Yes	No	N/A	Not Inspected
Is the facility as described in the permit/fact sheet for the following?				
Processes	☐	☐	☒	☐
Treatment Units	☐	☐	☒	☐
Flow and/or Production Rates	☐	☐	☒	☐
Outfalls & Monitoring Locations	☐	☐	☒	☐
Receiving Waters	☐	☐	☒	☐

Have there been significant changes in operation since last inspection or permit reissuance?	☐	☐	☒	☐
Plant schematic is up to date	☐	☐	☒	☐
Notes:				

Treatment Units & Supporting Equipment	Yes	No	N/A	Not Inspected
Hydraulic and loadings rates appear consistent with the permit and plant design	☒	☐	☐	☐
Tanks, floats, pipes, valves, etc. appear in good working condition	☒	☐	☐	☐
Equipment appears adequately maintained and functioning correctly	☒	☐	☐	☐
There is no visible evidence of hydraulic short-circuiting	☒	☐	☐	☐
Process controls appear adequate	☒	☐	☐	☐
No safety concerns observed that may interfere with operation, maintenance, monitoring	☒	☐	☐	☐
Notes:				

Operation & Maintenance	Yes	No	N/A	Not Inspected
O &M Manuals are organized and maintained for use:	☒	☐	☐	☐
The maintenance activities, spare parts on-hand, and equipment available appear adequate to ensure continuous operation of treatment system:	☒	☐	☐	☐
Is a maintenance management program in place?	☒	☐	☐	☐
Number of open work orders:				
Oldest date of open work order:				
Notes:				

Emergencies / Power Outage	Yes	No	N/A	Not Inspected
Alarm systems for power and equipment failure:	☒	☐	☐	☐
Auxiliary power available and maintained:	☒	☐	☐	☐
Notes:				

Stormwater	Yes	No	N/A	Not Inspected
Does facility have exposure and potential to discharge Stormwater ?	☒	☐	☐	☐
Is discharger subject to Multi Sector General Permit (MSGP) ?	☐	☒	☐	☐
If Yes→ Filed Notice of Intent?	☐	☐	☒	☐
If Yes → Stormwater Pollution Prevention Plan (SWPPP) available	☐	☐	☒	☐

Is there evidence of unauthorized (non-stormwater) discharges?	☐	☒	☐	☐
Are there signs of spills to soil, groundwater, or surface water ?	☐	☒	☐	☐
Is adequate equipment available for spill cleanup and containment?	☐	☐	☒	☐
Are the following areas observed to be free of materials to prevent stormwater pollution?	Yes	No	N/A	Not Inspected
Storage areas	☒	☐	☐	☐
Fueling areas	☒	☐	☐	☐
Maintenance areas	☒	☐	☐	☐
Loading and unloading areas	☒	☐	☐	☐
Waste disposal areas	☒	☐	☐	☐
Chemicals are stored in secondary containment:	☒	☐	☐	☐
Notes:				

V. FINAL EFFLUENT AND RECEIVING WATER MONITORING

EFFLUENT APPEARANCE	Yes	No	N/A	Not Inspected
Clear	☒	☐	☐	☐
Colorless	☒	☐	☐	☐
Free of oil sheen	☒	☐	☐	☐
Free of floatables	☒	☐	☐	☐
Free of objectionable odor	☒	☐	☐	☐
Notes:				
RECEIVING WATER APPEARANCE				
Free of visible plume	☐	☐	☒	☐
Free of foam and sheen	☐	☐	☒	☐
Free of erosion at the discharge point	☐	☐	☒	☐
Free of bottom deposits, algae growth	☐	☐	☒	☐
Notes:				

Appendix 2 – Photograph Log: The photographs were taken during the inspection by John Tinger. Original copies of the photos are maintained by EPA Region 9.

1: Facility location of wastewater treatment plant

Photo 2: SCADA system overview

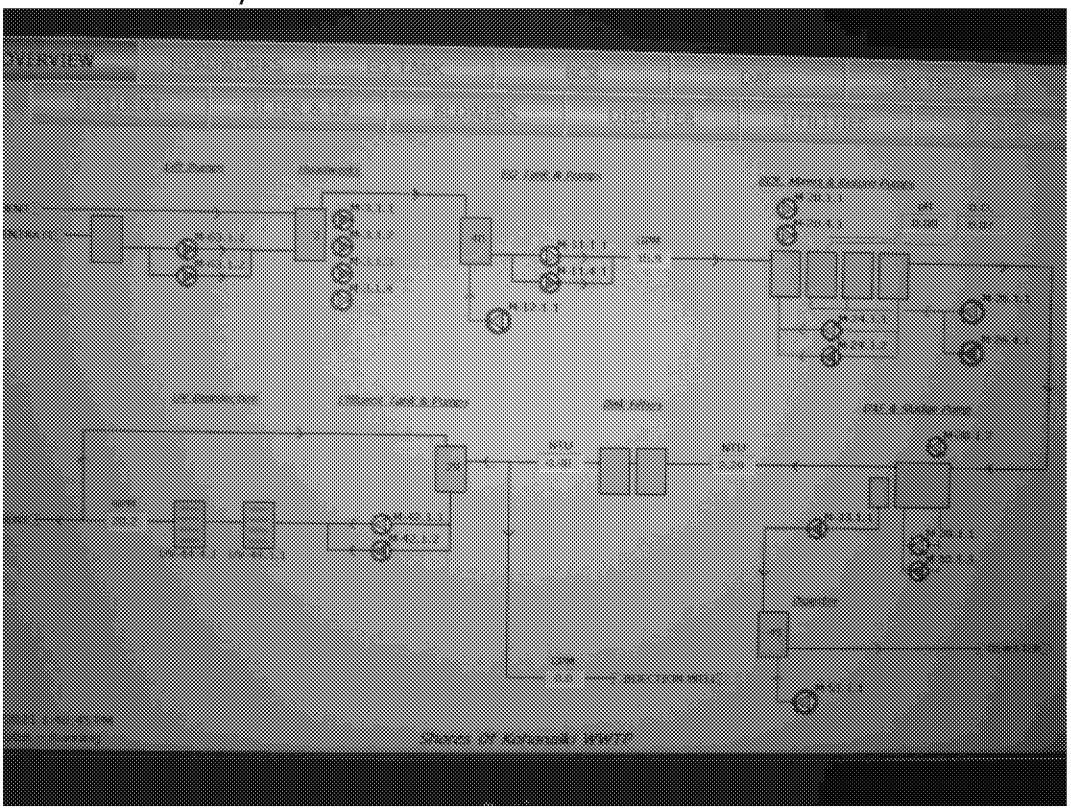

Photo 3: Top of unit

Photo 4: moving bed biofilm reactor

Photo 5: DAF unit

Photo 6: DAF Unit detail

Photo 7: Fine Screen

Photo 8: Fine screen detail

Photo 9: UV disinfection and outflow monitoring

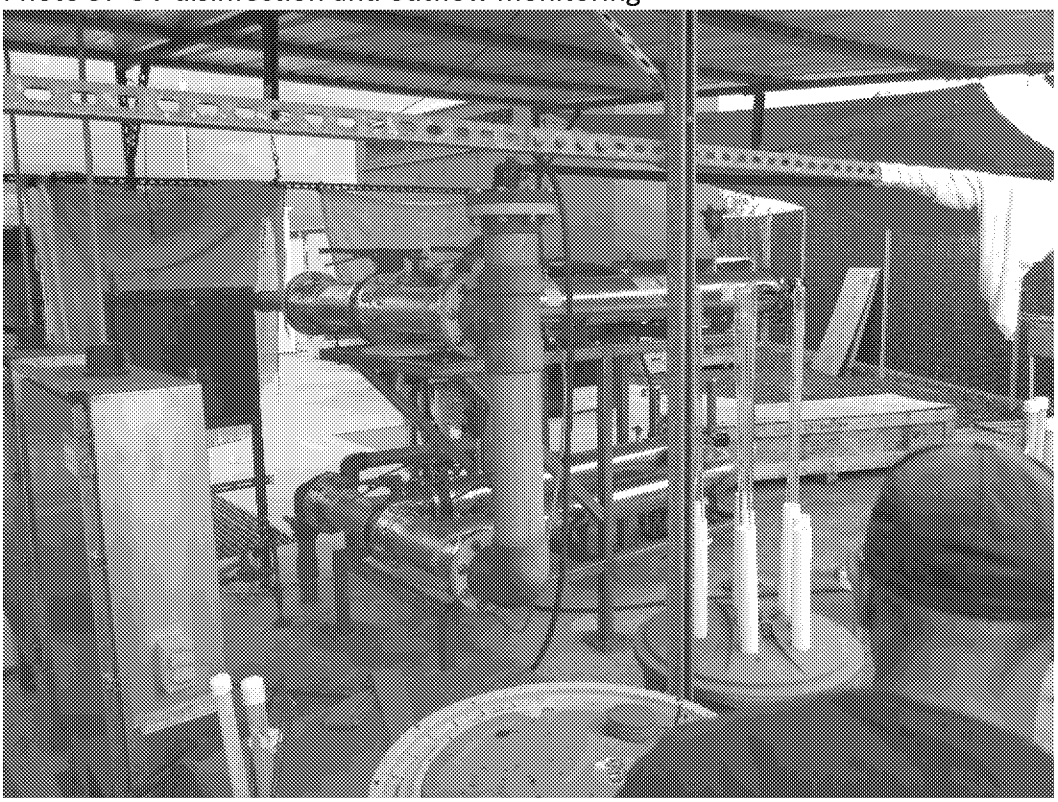

Photo 10: Reuse and infiltration area for treated wastewater along roadway.