From: Wendy Wiltse
To: Pruder, Sina L
Subject: RE: Lahaina question
Date: 06/17/2011 09:44 AM

SIna
Great answer. This is the info I needed. I appreciate your help.
Wendy

Wendy Wiltse, Ph.D.
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300 Ala Moana Blvd. Box 50003
Room 5-152
Honolulu, HI 96850
Phone: (808) 541-2752
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-----"Pruder, Sina L" <sina.pruder@doh.hawaii.gov> wrote: -----

==========
To: Wendy Wiltse/R9/USEPA/US@EPA
From: "Pruder, Sina L" <sina.pruder@doh.hawaii.gov>
Date: 06/16/2011 06:44PM
Subject: RE: Lahaina question
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All the injected effluent goes thru the sand filters. The filter is not used for removing nitrogen.

The Wahiawa WWTP produces secondary treated effluent, typically a process that is not specifically configured to remove nitrogen, although some reduction occurs. The typical nitrogen concentration is 15-30 mg/L.

The Lahaina WRF is a secondary treatment plant that incorporates biological nutrient removal (BNR). It has anoxic (low dissolved oxygen) zones and recycle streams established within the biological process tanks to promote nitrogen removal. The typical nitrogen concentration is 7-10 mg/L.

So, to answer your question, Lahaina WRF should be producing an effluent that has a lower nitrogen concentration than Wahiawa because it incorporates BNR in its' process.

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Sina Pruder
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Honolulu, Hi 96814
Phone: (808) 586-4294
Fax: (808) 586-4300

-----Original Message-----
From: Wiltse.Wendy@epamail.epa.gov [mailto:Wiltse.Wendy@epamail.epa.gov]
Sent: Thu 6/16/2011 3:54 PM
To: Pruder, Sina L
Subject: RE: Lahaina question

Mahalo sina. Now more questions.
Does all the injected effluent at lahaina go thru sand filter? Does the filter remove nitrogen?

How does the treatment level at wahiawa compare with lahaina? I am curious because some of the calibration for lahaina tracer study was done on effluent from wahiawa.

Wendy
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-----"Pruder, Sina L" <sina.pruder@doh.hawaii.gov> wrote: -----

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To: "Hew, Chauncey L" <chauncey.hew@doh.hawaii.gov>
From: "Pruder, Sina L" <sina.pruder@doh.hawaii.gov>
Date: 06/16/2011 06:25PM
Cc: Wendy Wiltse/R9/USEPA/US@EPA, Nancy Rumrill/R9/USEPA/US@EPA, "Rimando, Jaime G" <jaime.rimando@doh.hawaii.gov>, "Uehara, Norris N" <norris.uehara@doh.hawaii.gov>
Subject: RE: Lahaina question
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CH:

Secondary treatment is the second step in most waste treatment systems during which bacteria consume the organic parts of the wastes. This is accomplished by bringing the sewage, bacteria and oxygen together in trickling filters or within an activated sludge process. Secondary treatment removes all floating and settleable solids and about 90 per cent of the oxygen-demanding substances and suspended solids.

The Lahiana WWTP is designed for 6.0 MGD (secondary treatment utilizing an activated sludge process) but current flows are around 4.0 MGD. The facility is only capable of producing 1.9 MGD of R-1 water because of the UV system. For R-1 water, 1.9 MGD secondary treated wastewater goes through a tertiary system that includes the sand filters and the UV system.
The secondary treated water that is not treated to R-1 standards is

discharged into the injection wells.

Hope this helps.

Thanks,
Sina

From: Hew, Chauncey L
Sent: Thursday, June 16, 2011 1:43 PM
To: Pruder, Sina L
Cc: Wiltse.Wendy@epamail.epa.gov; Rumrill.Nancy@epamail.epa.gov; Rimando, Jaime G; Uehara, Norris N
Subject: FW: Lahaina question

SP: In Wendy's message, could you clarify the terminologies for all of us? Thank you.

6/16/11 CH

From: Wiltse.Wendy@epamail.epa.gov [mailto:Wiltse.Wendy@epamail.epa.gov]

Sent: Thursday, June 16, 2011 12:43 PM
To: Hew, Chauncey L; Rumrill.Nancy@epamail.epa.gov
Subject: Lahaina question

I am reviewing the tracer study workplan. In the description of the wastewater plant, it says that the portion of the effluent that is R1 is tertiary treated. Is that true? I thought it was all secondary but the R1 gets UV disinfection.

Thanks,
Wendy

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