

DOCKETED

Docket Number:	97-AFC-01C
Project Title:	High Desert Power Plant
TN #:	220839
Document Title:	Report of Conversation Minimum Delivery Rate of Chlorinated Recycled Water to HOPP
Description:	Steve Ashton, City of Victorville
Filer:	Raquel Rodriguez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
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*Siting and Environmental Protection
 Division*

FILE: (97-AFC-1C)

PROJECT TITLE: High Desert Power Project

<input type="checkbox"/>	Telephone	<input checked="" type="checkbox"/> Meeting Location: E-mail communication	
NAME:	Abdel-Karim Abulaban	DATE:	7/13/2017
TIME:	11:40 a.m.		
WITH:	Steve Ashton, City of Victorville		
SUBJECT:	Minimum delivery rate of chlorinated recycled water to HDPP		

High Desert Power Project owner stated on several occasions that one of the reasons the power project cannot rely on recycled water for project operation is that the supplier of the recycled water has a limitation on the lowest delivery rate to supply recycled water to the project, which is higher than what the project needs when it is operating in low-load modes. Energy Commission staff contacted the Victor Valley Wastewater Reclamation Authority Shay Road treatment plant and the city of Victorville (CVV) via e-mail to inquire why it cannot deliver the recycled water at rates below the stated minimum of 300 gallons per minute. Steve Ashton, CVV Water Supply Manager, replied via e-mail with answers to the Energy Commission staff's inquiries. The email exchange between Energy Commission staff and Steve Ashton is attached below.

CC:	Signed:
	Name: Abdel-Karim Abulaban



Attachment: Email from Steve Ashton, water supply manager at city of Victorville

From: Steve Ashton [mailto:SAshton@victorvilleca.gov]
Sent: Thursday, July 13, 2017 11:40 AM
To: Abulaban, Abdel-Karim@Energy
Cc: Marshall, Paul@Energy; Layton, Matthew@Energy; Payne, Leonidas@Energy; Doug Mathews
Subject: RE: Minimum GPM recycled water delivery to High Desert

Karim,

Answers below in red.



From: Abulaban, Abdel-Karim@Energy [mailto:Abdel-Karim.Abulaban@energy.ca.gov]
Sent: Thursday, July 13, 2017 10:04 AM
To: Steve Ashton <SAshton@victorvilleca.gov>
Cc: Marshall, Paul@Energy <Paul.Marshall@energy.ca.gov>; Layton, Matthew@Energy <Matthew.Layton@energy.ca.gov>; Payne, Leonidas@Energy <leonidas.payne@energy.ca.gov>; Doug Mathews <DMathews@victorvilleca.gov>
Subject: RE: Minimum GPM recycled water delivery to High Desert

Steve,

Thank you so much for the details you provided in the voicemail and email. We have a couple questions for you:

- 1) Is there a legal or technical requirement that a chlorine level has to be maintained in the water? **No. I believe HDPP asks for a chlorine residual for their own added comfort that the water is free of microorganisms and possibly to prevent bio growth in the tower, although the water is already disinfected with UV at the treatment and meets all Title 22 requirements.**
- 2) What would it take, and how much would it cost (roughly), to fix the problem and make your chlorine pump respond faster so that the HDPP operators don't panic? **We could look into installing a low-flow diaphragm pump. Those are relatively inexpensive at a cost of around \$1,000. The majority of the cost would be in the labor for our SCADA Coordinator to program the pumps where the low-flow would operate at the low gpm's and then shut off while the existing higher flow pump would take over when flow demands increase.**
- 3) Lastly, assuming that the chlorine is needed to prohibit growth of biological matter in the cooling tower, why can't HDPP monitor the chlorine levels at the cooling tower rather than in the incoming water, because that way the chlorine will have had ample time to mix in so that changes are not so sudden. **I would refer that question to HDPP.**

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Thanks again and have a pleasant day.

Karim

From: Steve Ashton [<mailto:SAshton@victorvilleca.gov>]
Sent: Thursday, July 13, 2017 8:11 AM
To: 'Logan Olds'; Abulaban, Abdel-Karim@Energy
Cc: Marshall, Paul@Energy; Layton, Matthew@Energy; Payne, Leonidas@Energy; Doug Mathews
Subject: RE: Minimum GPM recycled water delivery to High Desert

Good morning Karim,

As a follow up to the voicemail I left you this morning; we do have the ability to serve HDPP recycled water flows under 300 gpm. The issue is that their flows can vary drastically – for example – their flow demand can go from 200 gpm to 1000 gpm in a matter of minutes. When this happens, our sodium hypochlorite pump (which flow paces with their demand) would need time to catch up to their sudden increase in flow. HDPP operators would see a decrease in chlorine residual while our pump was trying to catch up to their sudden increase in flow and they would shut the recycled system down, thinking that our chlorine pump was malfunctioning, when in reality it was just taking time to catch back up. In order to avoid their operators panicking and shutting down the recycled water system, we suggested that they just keep the flow at a minimum of 300 gpm to avoid the decrease in chlorine residual when they would ramp their flow up suddenly.

So, in short, the answer is we can serve them flows under 300 gpm.

Hope this clears up the issue.



From: Logan Olds [<mailto:lolds@vwwra.com>]
Sent: Thursday, July 13, 2017 7:27 AM
To: Abulaban, Abdel-Karim@Energy <Abdel-Karim.Abulaban@energy.ca.gov>
Cc: Marshall, Paul@Energy <Paul.Marshall@energy.ca.gov>; Steve Ashton <SAshton@victorvilleca.gov>; Layton, Matthew@Energy <Matthew.Layton@energy.ca.gov>; Payne, Leonidas@Energy <leonidas.payne@energy.ca.gov>
Subject: RE: Minimum GPM recycled water delivery to High Desert

Good Morning Karim,

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I am glad to see that you included Steve Ashton in your email. I believe that the questions you are asking below are related to the City of Victorville's facilities and not to VVWRA's. VVWRA conveys the water to a storage pond and then the City moves it to its storage tank and distribution system. Therefore I will defer to Steve for a response.

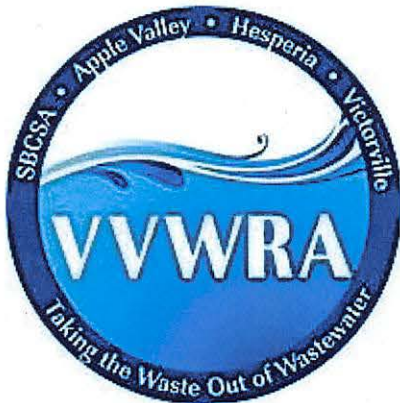
Thank You

Logan Olds
General Manager

(760) 246-8638
Victor Valley Wastewater Reclamation Authority
20111 Shay Road
Victorville CA 92394

"We can't solve problems by using the same kind of thinking we used when we created them" Albert Einstein

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From: Abulaban, Abdel-Karim@Energy [<mailto:Abdel-Karim.Abulaban@energy.ca.gov>]
Sent: Wednesday, July 12, 2017 2:16 PM
To: Logan Olds
Cc: Marshall, Paul@Energy; Steve Ashton; Layton, Matthew@Energy; Payne, Leonidas@Energy
Subject: Minimum GPM recycled water delivery to High Desert

Hello Logan,

The High Desert owner stated on more than one occasion that there is a minimum of 300 gpm of recycled water that can be delivered to the project and that if they operate in a mode that requires less than 300 gpm they won't be able to get that rate. My recollection from our last site visit over a year ago is that the city uses a pump to deliver the water to the project and that the pump cannot be operated at less than 300 gpm. We are not very

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clear on the purpose of that pump and why it cannot deliver anything below 300 gpm. The project owner claims that because of that limitation they won't be able to meet a minimum usage amount that the Energy Commission is trying to get them to commit to. Could you please shed some light on this issue and if there is a possibility to modify the pumping configuration, for example, by replacing the pump or adding another pump that can handle lower flow rates in parallel so that they can receive less than 300 gpm rates? If you have any information about the (approximate) costs to do such modifications that would also be appreciated.

Thank you.
Karim

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