

From: Mark Southard
Sent: Tue, 13 Jan 2015 16:04:23 -0600
To: David Sloan
Subject: Re: Draft Materials for TCEQ Meeting
Attachments: DPR Plant Summary.xlsx

David,

I gave you the wrong response on the IR for Giardia and Virus. What I have provided in the spreadsheet is the minimum Log removal for Giardia and Virus, NOT the IR.

I've added some more data, so take a look at the updated info and message it as you would like.

Let me know if you want anything else.

Thanks,

On Mon, Jan 12, 2015 at 3:15 PM, Mark Southard <mark.southard@wichitafallstx.gov> wrote:
David,

See my responses below.

On Mon, Jan 12, 2015 at 2:17 PM, David Sloan <DWS@freese.com> wrote:

Mark, this is capturing most of the info I was after. A couple of questions and suggestions:

1. If my math is right, the facility has produced 5 MGD every day since July 9, even through the period of membrane replacements. Is this correct? **You are correct. We only changed out 1 RO train at a time, so that we could continue with our current treatment throughout the process.**
2. I want to make sure I understand the IR numbers. Are these IR for the DPR facility only, based on 4 log virus, 3 log Giardia, or are these the log removal values? **These are the IR for the DPR facility only, based on 5 log virus and 2 log Giardia.**
3. Might be good to show the IR or log removal for the conventional treatment as well. **I can certainly add that.**
4. If you can make a comprehensive statement about measured water quality parameters (All except x, y, z below detection levels for sampling events on date1 and date2) or something along those lines, that might be a nice add. **I will see what I can add here also.**
5. May want to add maximum percentage of DPR. **Our reporting only requires the maximum 15-minute DPR percentage, but we do not have any daily averaging (This is so we don't exceed a 55% blend on any 15-minute reading). I could go back through my forms and get that based on the maximum daily average DPR percentage, but I wouldn't be able to complete it before Wednesday.**

Thanks!

DAVID SLOAN / FREESE AND NICHOLS, INC.

From: Mark Southard [mailto:mark.southard@wichitafallstx.gov]
Sent: Monday, January 12, 2015 11:04 AM
To: David Sloan
Subject: Re: Draft Materials for TCEQ Meeting

David,

Take a look at what I've added for the summary. There isn't a lot in it so far, so let me know if there is anything else specific you would like me to add, or if any of the information currently in the form is not needed. I will dress it up a little more after you look over it.

Thanks,

On Fri, Jan 9, 2015 at 3:47 PM, David Sloan <DWS@freese.com> wrote:

Russell: I think I've got everything rounded up for next Wednesday. Attached please find the following:

1. Meeting Agenda
2. Concept Summary (updated to include discussion of updated drought modeling results per our conversation)
3. Historical and projected Lake Levels (Scenarios 1 and 2 only, for simplicity)
4. Recent dissolved solids summary graphs
5. Projected Blended Water Quality tables
6. Updated CT Study schematic, showing introduction of Kemp water, UV disinfection and supplemental pumping from lagoon
7. Disinfection Inactivation Summary for full membrane capacity

8. Proposed Blend Ratio Accounting
9. Proposed Step-wise Implementation
10. Proposed modifications to TCEQ conditions

This, along with the DPR operational summary to date being prepared by the city, is what I propose we show and discuss with TCEQ. Still open to your thoughts. I'll be out of pocket quite a bit on Tuesday with a trip to Houston, but I'm sure we can work out any changes needed.

Have a great weekend,

DAVID W. SLOAN, P.E., BCEE

SENIOR PROCESS ENGINEER

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	TCEQ-20J RO Plant						
	Monthly Average Salt Rejection at RO						Max Nitrate-N
Date	Train 1	Train 2	Train 3	Train 4	Train 5	Train 6	(ppm)
July	73.5	85.4	84.7	96.5	86.6	83.3	2.78
Aug	X	83.6	88.2	96.7	82.8	79.6	2.46
Sept	X	76.6	85.7	96.2	77.9	76.3	3.26
Oct	97.1	97.7	93.0	95.6	95.0	89.6	1.93
Nov	98.3	98.2	98.4	97.4	98.3	98.1	0.23
Dec	98.5	98.6	98.7	97.6	98.6	98.5	0.26

*All RO elements replaced by 10/15/14

Date	RO Production MG	Min Log Removal Through DPR Plant		Min Log Removal Through 2010 Plant	
		Giardia	Virus	Giardia	Virus
July	105	6.65	13.87	4.38	15.01
Aug	155	5.48	13.89	4.51	15.07
Sept	150	6.6	14.4	5.35	17.67
Oct	155	4.36	8.78	5.04	16.86
Nov	150	4.52	8.3	2.01	4.3
Dec	155	3.97	7.19	2.7	7

UCMR3 Maximum concentrations in samples collected 8/14/14 and 11/17/14 at the C

Hormones (ppb)		Metals (ppb)		Disinfection By-products (ppb)	
androstene	ND	chromium (total)	0.6	1,1-dichloroethane	ND
equilin	ND	cobalt	ND	1,2,3-trichloropropane	ND
estradiol	ND	molybdenum	1.0	1,3-butadiene	ND
estriol	ND	strontium	170.0	bromochloromethane	ND
estrone	ND	vanadium	0.7	bromomethane	ND
ethynylestradiol	ND	chromium-6	0.51	chlorodifluoromethane	ND
testosterone	ND			chloromethane	ND
				chlorate	170

Over 150 compounds tested since the start of the DPR. All have been below detection level with the exception of:

Hardness	Potassium	Nitrate
Alkalinity	Sodium	Nitrite
Barium	Trihalomethanes	Sulfate
Calcium	Haloacetic Acids	Cyanide
Iron	Chloride	Total dissolved solids
Magnesium	Fluoride	Gross Beta emitters

TCEQ-42J Finished Water		
Max Nitrite-N	<i>E. coli</i>	Min Total Chlorine
(ppm)	MPN	(ppm)
0.09	<0.02	1.3
0.03	<0.02	1.3
0.02	<0.02	2.5
0.02	<0.02	2.4
0.02	<0.02	3
0.02	<0.02	2.9

ypress DPR finished water			
Fluoridated Alkyl Acids (ppb)		Solvents (ppb)	
PFBS	ND	1,4 dioxane	0.13
PFHpA	ND		
PFHxS	ND		
PFNA	ND		
PFOA	ND		
PFOS	ND		

Redaction Log

Redaction Reasons by Exemption

Reason	Description	Pages (Count)
		1(1)