

From: Mark Southard
Sent: Wed, 5 Nov 2014 11:12:12 -0600
To: David Sloan
Subject: Re: Cypress WTP Capacity Summary.xlsx
Attachments: Cypress WTP Capacity Summary.xlsx

David,

I've added a few things that I have tracked down. There are still several more that are listed in some of my TCEQ correspondence, I just haven't found them yet.

I did change the SF for the microfiltration cells, as the TCEQ reduced that value based on revised area figures from Siemens. It dropped to 300 SF per module, with 504 modules per cell.

Also, the figure listed in the 1961 flocculator basin CF is the value listed in our CT for BOTH the flocculator and the sedimentation basin. It is not broken apart. I can do some figuring and get that broken up if you would like.

Thanks,

On Wed, Nov 5, 2014 at 10:47 AM, David Sloan <DWS@freese.com> wrote:

Mark: I found some of the information I was looking for in the CT spreadsheet, so I have updated my table as attached. If you find any of the still-highlighted information, I'd like to populate this as completely as I can. Thanks.

DAVID SLOAN / FREESE AND NICHOLS, INC.

From: David Sloan
Sent: Thursday, October 30, 2014 3:37 PM
To: Mark Southard
Subject: Cypress WTP Capacity Summary.xlsx

Mark: I am trying to put together a simple table to help me keep track of the different treatment units at Cypress and where critical limitations may exist. I am realizing there are several pieces I am still missing, and I wanted to see if you might have some of the information readily available.

I have attached my table in progress, with several items highlighted yellow that I have not yet found. In particular, I am interested in the allowable membrane flux for the MF/RO plant and the surface area of the 2010 media filters. I'd appreciate any of this information that you can provide.

Thanks,

DAVID W. SLOAN, P.E., BCEE

SENIOR PROCESS ENGINEER

BOARD CERTIFIED ENVIRONMENTAL ENGINEER



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Mark Southard
City of Wichita Falls
Water Source/Purification Superintendent

940-691-1153

940-691-4121 Fax



Process	No. Units	Provided per		units	Allowable	Cap. Basis	Unit Capacity MGD
		Unit					
2008 Membrane Plant							
Pretreatment Clarifier	1	18,869	SF		0.6 gpm/SF		16.30
Microfiltration Cells	5	151,200	SF		19.6 gfd		2.964
Reverse Osmosis Racks	6		SF			gfd	2
UV Reactors	2						10
2010 Conventional Plant							
Rapid Mix	1	648	CF		30 secs (DT)		13.96
Solids Contact Clarifier	1	120,237	CF		2.0 hours (DT)		10.79
Granular Media Filters	5	360	SF		5 gpm/SF		2.59
1961 Conventional Plant							
Rapid Mix (static mixer)	1						16
Flocculator Basins	2	313502	CF		30 mins (DT)	These two basins flocculator AND s	
Sedimentation Basins	2		SF				gpm/SF
Granular Media Filters	8	278	SF		5 gpm/SF		
1987 Conventional Plant							
Rapid Mix	1		CF		30 secs (DT)		
Solids Contact Clarifier	2		SF			gpm/SF	
Granular Media Filters		556	SF		5 gpm/SF		

Total Capacity MGD	Firm Capacity MGD	
16.30	N/A	design info from CT spreadsheet
14.82	11.85	flux and area from CT spreadsheet
12	10	
20	10	

13.96	N/A	design info from CT spreadsheet
10.79	N/A	design info from CT spreadsheet
12.96	10.368	design info from CT spreadsheet

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are listed together as 1 in the CT, so the CF I listed is for the
ed basin.

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Redaction Log

Redaction Reasons by Exemption

Reason	Description	Pages (Count)
		1(1)