From: Vince Centioni
To: jschroer1@sc.rr.com
Subject: RE: A few follow-up questions
Attachments: image003.png
all units all cmpds.xls
Summary II.xls
WATER 9 INPUT.xls
MON NOCS April 2011 amendment.doc

John,

Did you use this equation/ attached EXCEL docu's to determine the destruction of sHAP at the WWTP ? I also attached the NOCS revision EPA received….

"(1) Wastewater must be hard-piped between the equalization unit, clarifier, and activated sludge unit. This requirement does not apply to the transfer between any of these types of units that are part of the same structure and one unit overflows into the next.

(2) Calculate the destruction efficiency of the biological treatment unit using Equation 1 of this section in accordance with the procedures described in paragraphs (n)(2)(i) through (vi) of this section. You have demonstrated initial compliance if E is greater than or equal to 90 percent.

Where:

E = destruction efficiency of total PSHAP and SHAP for the biological treatment unit including the equalization unit, neutralization unit, and/or clarifier, percent;

QMWa = mass flow rate of total PSHAP and SHAP compounds entering the equalization unit (or whichever of the three types of units is first), kilograms per hour (kg/hr);

QMGe = mass flow rate of total PSHAP and SHAP compounds emitted from the equalization unit, kg/hr;

QMGn = mass flow rate of total PSHAP and SHAP compounds emitted from the neutralization unit, kg/hr;

QMGc = mass flow rate of total PSHAP and SHAP compounds emitted from the clarifier, kg/hr

Fbio = site-specific fraction of PSHAP and SHAP compounds biodegraded in the biological treatment unit.

(i) Include all PSHAP and SHAP compounds in both Group 1 and Group 2 wastewater streams from all MCPU, except you may exclude any compounds that meet the criteria specified in § 63.145(a)(6)(ii) or (iii).

(ii) Conduct the demonstration under representative process unit and treatment unit operating conditions in accordance with § 63.145(a)(3) and (4).

(iii) Determine PSHAP and SHAP concentrations and the total wastewater flow rate at the inlet to the equalization unit in accordance with § 63.145(f)(1) and (2). References in § 63.145(f)(1) and (2) to required mass removal and actual mass removal do not apply for the purposes of this section.

(iv) Determine Fbio for the activated sludge unit as specified in § 63.145(h), except as specified in paragraph (n)(2)

(iv)(A) or paragraph (n)(2)(iv)(B) of this section.

(A) If the biological treatment process meets both of the requirements specified in § 63.145(h)(1)(i) and (ii), you may elect to replace the Fbio term in Equation 1 of this section with the numeral "1."

(B) You may elect to assume fbio is zero for any compounds on List 2 of table 36 in subpart G.

(v) Determine QMGe, QMGn, and QMGc using EPA's WATER9 model or the most recent update to this model, and conduct testing or use other procedures to validate the modeling results.

(vi) Submit the data and results of your demonstration, including both a description of and the results of your WATER9 modeling validation procedures, in your notification of compliance status report as specified in § 63.2520(d)(2)(ii). "

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Tuesday, August 15, 2017 11:17 AM
To: Vince Centioni
Subject: RE: A few follow-up questions

Thank you Vince,

Just one thing I noticed missing, if you have a copy of it, it would be useful for us to put into the report.

In the April 2011 revised Notification of Compliance Status Report for the MON, there is an appendix H that was submitted regarding the use of your biological treatment for methanol. In appendix H, there is a reference to Addendum 3, Equation 1 of 63.2485. This is not included in NEIC's copy. It only contains a cover sheet for the addendum, but no attachment.

Thank you,
Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]
Sent: Tuesday, August 15, 2017 7:51 AM
To: Au, Doreen <Au.Doreen@epa.gov>
Cc: Scott McNair <S.McNair@3vsigmausa.com>; Ryan Dorsey <R.Dorsey@3vsigmausa.com>
Subject: RE: A few follow-up questions
Importance: High

- V321: 4"x4" PVCV Open @ 18"WC vac opens @: 6"WC
- TK510: 3" PVCV Opens @: 12"WC vac opens @: 1.3"WC
- TK510: 8" PSV Opens @: 12"WC full open @: 24"WC
- V405: 4"x4" PVCV Opens @: 1psi vac opens @: 1"WC

'Let me know if you need anything else
Thanks

Vince Centioni

Environmental Manager

cid:image001.png@01D15E93.E9A80080

888 Woodstock St.
Georgetown, SC 29440
Office: 843-520-5128
Mobile: 843-240-0577
Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Tuesday, July 25, 2017 4:22 PM
To: Vince Centioni
Subject: RE: A few follow-up questions

Thank you for the heads up. -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]
Sent: Monday, July 24, 2017 5:28 PM
To: Au, Doreen <Au.Doreen@epa.gov>
Subject: Re: A few follow-up questions

I mistakenly repeated the flow out to the POTW & river in 2015 for 2016. I'll amend that tomorrow.

Fraction WW discharges to POTW 2016

Total annual 2016 to POTW	14600385	14.600	mgy	47.1	%
Total annual 2016 to Sampit	16366111	16.366	mgy	52.9	%
Total discharge 2016	30966496	30.966	mgy		

Sent from my iPhone

On Jul 24, 2017, at 5:30 PM, Vince Centioni <V.Centioni@3vsigmausa.com> wrote:

So based on the modeling from Water 9 see below:

2016 TRANSFERS TO WWTP TOTALS				Qty Discharge	Qty Air	Qty Bio
	MeCl	212	lbs	0	157	55
	MEOH	104392	lbs	47	1323	102970
	Xylene	2150	lbs	0	1459	690

2015 TRANSFERS

TO WWTP TOTALS				Qty Discharge	Qty Air	Qty Bio
	MeCl	468	lbs	0	346	122
	MEOH	93869	lbs	42	1189	92590
	Xylene	2026	lbs	0	1375	651

2014 TRANSFERS TO WWTP TOTALS				Qty Discharge	Qty Air	Qty Bio
	MeCl	319	lbs	0	236	83
	MEOH	74375	lbs	34	942	73362
	Xylene	1078	lbs	0	732	346

2013 TRANSFERS TO WWTP TOTALS			Qty Discharge	Qty Air	Qty Bio
MeCl	273	lbs	0	202	71
MEOH	33532	lbs	15	425	33075
Xylene	751	lbs	0	510	241

2012 TRANSFERS TO WWTP TOTALS			Qty Discharge	Qty Air	Qty Bio
MeCl	465	lbs	0	344	121
MEOH	65076	lbs	29	825	64189
Xylene	1290	lbs	0	876	414

'Thanks Vince

Vince Centioni
Environmental Manager

<image001.png>
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Georgetown, SC 29440
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Mobile: 843-240-0577
Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Monday, July 24, 2017 4:25 PM
To: Vince Centioni
Subject: RE: A few follow-up questions

Thank you! -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]
Sent: Monday, July 24, 2017 2:22 PM
To: Au, Doreen <Au.Doreen@epa.gov>

Cc: Scott McNair <S.McNair@3vsigmausa.com>; Ryan Dorsey <R.Dorsey@3vsigmausa.com>; Schneider, Matthew <Schneider.Matthew@epa.gov>; Alex Llyod <a.lloyd@3vsigmausa.com>; Paul Hancock <P.Hancock@3vsigmausa.com>
Subject: RE: A few follow-up questions
Importance: High

Ignore the V-586 batches on these sheets. Some of the batches were re-stripped. You need to reference my WW Transfer Logs for V-586. I also attached the Water 9 data submitted annually in my TRI reports. The models are conducted every 3 years in correlation to our National Emissions Inventory Report submitted to SC DHEC. The last model was conducted in 2014.

Fraction WW discharges to POTW 2012

Total annual 2012 to POTW	12852696	12.853	mgy	34.7	%
Total annual 2012 to Sampit	24239525	24.240	mgy	65.3	%
Total discharge 2012		37.092	mgy		

Water 9 Data 2012

	Inlet rate lb/hr	Outlet rate lb/hr	Qty to air lb/hr	Qty to bio lb/hr	Outlet rate % of inlet	Qty to air % of inlet	Qty to bio % of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Fraction WW discharges to POTW 2013

Total annual 2013 to POTW	12327871	12.328	mgy	34.2	%
Total annual 2013 to Sampit	23720000	23.720	mgy	65.8	%
Total discharge 2013		36.048	mgy		

Water 9 Data 2013

	Inlet rate lb/hr	Outlet rate lb/hr	Qty to air lb/hr	Qty to bio lb/hr	Outlet rate % of inlet	Qty to air % of inlet	Qty to bio % of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Fraction WW discharges to POTW 2014

Total annual 2014 to POTW	12936430	12.936	mgy	39.1	%
Total annual 2014 to Sampit	20168905	20.169	mgy	60.9	%
Total discharge 2014		33.105	mgy		

Water 9 Data 2014

	Inlet rate lb/hr	Outlet rate lb/hr	Qty to air lb/hr	Qty to bio lb/hr	Outlet rate % of inlet	Qty to air % of inlet	Qty to bio % of inlet

MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Fraction WW discharges to POTW 2015

Total annual 2015 to POTW	14600385	14.600	mgy	47.1	%
Total annual 2015 to Sampit	16366111	16.366	mgy	52.9	%
Total discharge 2015	30966496	30.966	mgy		

Water 9 Data 2015

	Inlet rate	Outlet rate	Qty to air	Qty to bio	Outlet rate	Qty to air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/hr	% of inlet	% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Fraction WW discharges to POTW 2016

Total annual 2016 to POTW	14600385	14.600	mgy	47.1	%
Total annual 2016 to Sampit	16366111	16.366	mgy	52.9	%
Total discharge 2016	30966496	30.966	mgy		

Water 9 Data 2016

	Inlet rate	Outlet rate	Qty to air	Qty to bio	Outlet rate	Qty to air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/hr	% of inlet	% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Hope this helps w/ your investigation ….

'Vince

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Monday, July 24, 2017 3:33 PM
To: Vince Centioni
Cc: Scott McNair; Ryan Dorsey; Schneider, Matthew; Alex Llyod; Paul Hancock
Subject: RE: A few follow-up questions

Hey Vince,

Would it also be possible to get the V584 analysis spread sheets for 2012-2016 in excel format as well?

Thank you. -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]
Sent: Monday, July 24, 2017 10:54 AM
To: Au, Doreen <Au.Doreen@epa.gov>
Cc: Scott McNair <S.McNair@3vsigmausa.com>; Ryan Dorsey <R.Dorsey@3vsigmausa.com>;

Schneider, Matthew <Schneider.Matthew@epa.gov>; Alex Llyod <a.lloyd@3vsigmausa.com>; Paul Hancock <P.Hancock@3vsigmausa.com>
Subject: RE: A few follow-up questions
Importance: High

Doreen,

Scott gave me verbal permission to send you the excel files you requested.

'Thanks Vince

Vince Centioni
Environmental Manager

<image001.png>
888 Woodstock St.
Georgetown, SC 29440
Office: 843-520-5128
Mobile: 843-240-0577
Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Monday, July 24, 2017 12:42 PM
To: Vince Centioni
Cc: Scott McNair; Ryan Dorsey; Schneider, Matthew; Alex Llyod; Paul Hancock
Subject: RE: A few follow-up questions

Thank you Vince,

For the wastewater tanks and for the accumulator that was receiving the overheads from the wastewater stripper, we wanted to know what the conservation vent pressure set points were. There were a few tanks that use a conservation vent instead of a gooseneck. These were the tanks Ryan and I went to visit in the field to see how they were vented.

I would like to compare the sample results, however I would have to get permission from Region 4 (I can talk with them), in addition, our samples results are going through our rigorous accreditation reviews and are not available (even to me) yet.

Thanks Vince.

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]
Sent: Monday, July 24, 2017 10:35 AM
To: Au, Doreen <Au.Doreen@epa.gov>
Cc: Scott McNair <S.McNair@3vsigmausa.com>; Ryan Dorsey <R.Dorsey@3vsigmausa.com>; Schneider, Matthew <Schneider.Matthew@epa.gov>; Alex Llyod <a.lloyd@3vsigmausa.com>; Paul Hancock <P.Hancock@3vsigmausa.com>
Subject: RE: A few follow-up questions
Importance: High

Au Doreen,

1.) Once I get permission from Scott McNair I will send the excel files you are requesting.

2.) What data are you looking for? Specifically. I was under the impression 3V explained the logic behind how the tanks are currently vented (see John Schroer email, who last wrote 3V MON NOCS revision). Since you and Ryan Dorsey communicated verbally over the phone (see email) he may be better prepared to provide a time frame. He probably needs to know exactly what data you are requesting….

3.) Do you want to compare the sample results from the external lab, alongside our internal QC lab reports? I would like to see the EPA's analytical report and compare.

'Thanks Vince

Vince Centioni
Environmental Manager

<image001.png>
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Office: 843-520-5128
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Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Monday, July 24, 2017 11:48 AM
To: Vince Centioni
Cc: Scott McNair; Ryan Dorsey; Schneider, Matthew
Subject: A few follow-up questions

Good Morning Vince,

I hope you had a good weekend. I was going through and reviewing the documents that were provided, and the copy of the analysis provided for water to WWTP (including all tanks sorted by tank numbers) for 2015, appears to only have the first page from 2015, and the remaining pages have data from 2013.

Can we please have the data from 2015? If it is possible could we also please have the data in excel for the other years? (2013-2016)

In addition, for any outstanding questions, including pressure set points for the conservation vents on wastewater tanks, and looking for written maintenance wastewater plans, etc. do you have an estimated timeframe for sending that data?

I would also again, welcome any additional information you would like to provide for NEIC to incorporate into their reports to Region 4 at this time.

Thank you,

Doreen

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