



ROY COOPER
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WILLIAM G. ROSS, JR.
Acting Secretary

S. JAY ZIMMERMAN
Director

January 17, 2017

Ms. Jane D. Wastewater, PE
Director of Public Utilities
Town of Typicalville
PO Box 1234
Typicalville, NC 21234

Subject: Pretreatment Review of Headworks Analysis (HWA)
Program: Town of Typicalville
WWTP: Typicalville WWTP - NC0012345
Typical County

Dear Ms. Wastewater:

The Pretreatment, Emergency Response, and Collection Systems Unit (PERCS) of the Division of Water Resources has reviewed the Headworks Analysis (HWA) for the Town of Typicalville WWTP - NC0012345. This HWA was received by the Division on January 3, 2017.

The Division **concurs** with the HWA calculations for all pollutants of concern, **with the observations** discussed below. These approved Maximum Allowable Headworks Loadings (MAHL), Maximum Allowable Industrial Loadings (MAIL), and the basis for these values are found on the last page of the enclosed HWA spreadsheet. The results of the HWA are also listed in the bottom section of the enclosed Allocation Table.

Next HWA Due Date: The HWA was based primarily on 2015 - 2016 data. Unless conditions at the POTW change significantly and thus warrant an earlier submittal (see *Comprehensive Guide, Section B*), the POTW must submit an updated HWA on or before **February 1, 2022**.

Thank you for your continued cooperation with the Pretreatment Program. If you have any questions or comments, please contact Deborah Gore at (919) 807-6383, or via email (deborah.gore@ncdenr.gov).

Sincerely,
Deborah Gore
PERCS Unit Supervisor

Typicalville_hwa_010
Enclosures: HWA and AT spreadsheets
Cc with enclosures:
PERCS Unit File
Winston-Salem Regional Office Pretreatment File
Central Files

1A

TOWN OF TYPICALVILLE, NC
“WE’RE ANYTHING BUT TYPICAL”

January 5, 2017

SEND CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Deborah Gore, Supervisor
NC DWR – PERCS – Pretreatment
1617 Mail Service Center
Raleigh, NC 27699-1617

Subject: Town of Typicalville NC 0012345 Headworks Analysis

Dear Ms. Gore:

As required by the above NPDES permit, enclosed is the Town of Typicalville’s Wastewater Treatment Plant Headworks Analysis (HWA).

Our four industrial user permits (IUPs) have been renewed effective January 31, 2017. The permit limits were based on this new HWA and have been submitted to your office under separate cover.

If you have any questions regarding this information, please contact me at 555-123-4567 or jane.wastewater@typicalville.com. Or you may contact John Basin, Pretreatment Coordinator at 123-4576.

Sincerely,

Jane D. Wastewater, PE

Director of Public Utilities

Cc: Mayor
ORC

Enclosure: HWA Narrative, spreadsheets and other supporting information

2017 HWA Narrative:

HWA Data Time Period:

Monthly sampling for all long term monitoring plan pollutants of concern was performed December 2015 through November 2016 at the WWTP influent and effluent. SIUs monitor quarterly and the Town once per year. Three years of monitoring data was used for the mass balance giving 15 data points for permit limited parameters and 6 data points for all other POCs.

WWTP Design Criteria:

We have elected to use Option 2 of PERCS February 2007 letter, the 1.5 multiplier. Our WWTP meets all the conditions specified in PERCS December 2007, letter. We have not had any violations in the previous 2 years and the design calculations are older than 8 years.

Removal Rate Calculations:

All available DMR & LTMP data was used. We recalculated any DMR monthly averages using $\frac{1}{2}$ DL for all BDLs. The resultant site-specific removal rates were used in the HWA except for several of the metals where the data was greater than 50 % below detection in which case we used the EPA literature.

Water Quality Standards:

The recent NPDES permit renewal used the Freshwater RPA Using Metal Translators to evaluate the data to determine if permit limits were required. The Total Metal Allocated to the Permittee were used in the HWA spreadsheet as the water quality standards. The more stringent human health criteria was used for arsenic; chromium was evaluated using the more stringent Cr VI criteria; the water supply criteria for molybdenum was included; the more stringent water supply criteria was used for nickel; and the more stringent acute total metal allocated was used for zinc. It is understood that only the shaded parameters on the calculator spreadsheet are hardness dependent and make use of EPA translators to calculate the total metal allocated.

Inhibition Calculations:

We do have an NH₃ limit and the data indicates that the treatment plant nitrifies. The literature criteria for activated sludge and nitrification was used.

Our LTMP aeration basin data did show values greater than literature for copper, cyanide, and zinc. Review of our DMRs for all basin sampling time periods show these concentrations did not inhibit our activated sludge or our nitrifiers. We decided to use the average of all the aeration basin data at both basins for copper and zinc to be a little conservative. For cyanide, we used the average of the highest values at each basin. These values are representative of both basins.

Sludge Calculations:

There were several parameters for which the sludge ceiling was the most limiting factor: arsenic, copper, lead, molybdenum, selenium and zinc. All have over 70% of the MAHL remaining.

Uncontrollable Mass Balance:

We used the calculated mass balance concentrations. Note that the detection level for silver was improved in November 2016 from 5 ug/l to 0.5 ug/l. All effluent data was BDL. There was a detection at the influent in November of 0.63 ug/l. Therefore, we did not use zero for the uncontrollable. This created an over allocation for silver. Only one SIU has a silver limit. The SIU data was reviewed and the silver limit reduced to 0.05 mg/l. This leaves 14% of the MAHL. We intend to continue monthly sampling for silver at the influent and effluent to determine if a lower uncontrollable value can be used to increase the industrial allowable load.

A	B	C	D	E	F	G	H	I	J	K
1	Headworks Analysis Spreadsheet									
2	POTW Name:	Typicalville								
3	Date:	1/4/2017								
4	POTW NPDES # =>	NC0012345								
5	POTW Sludge Permit # =>	WQ0001234								
6	POTW NPDES Permitted Flow(MGD)=	6								
7	POTW Average Flow(MGD)=	2.809								
8	Uncontrollable Flow(MGD)=	2.535								
9	7Q10 Stream Flow(MGD)=	38.76								
10	Stream Classification =	WS-V								
11										
12										
13	Class of Sludge generated (A, or B)	B								
14	Sludge to Digester Flow(MGD)=									
15	Sludge to Disposal Flow(MGD)=	0.0119								
16	%Solids to Disposal=	4.4								
17	Sludge Site Area(acres)=	1164.9								
18	Sludge Site Life(yrs)=	75								
19	Age of Sludge Site(yrs)=	5								
20										
21	Pass-Through Loading Calculations									
22										
23	Pollutant	NPDES LIMIT (mg/l)	Plant Removal Rate (%)	Removal rate Source	NPDES Loading (lbs/day)	Stream Standard (mg/l)	Stream Standard Source	Standard Loading (lbs/day)	Design Criteria Loading (lbs/day)	Minimum Pass-Thru Loading (lbs/day) Basis
24	BOD	30	97.37	DMR	26.723				19,891	Design
25	TSS	30	97.71	DMR	30.690				24,019	Design
26	Ammonia	6	96.8	DRM & LTMP	4.393				2,627	Design
27	Arsenic		45	literature		0.01	Water supply	6.3034		Stream Std
28	Cadmium		67	literature		0.0006	Aquatic Life	0.6303		Stream Std
29	Chromium		82	literature		0.011	Aquatic Life	21.1863		Stream Std
30	Copper		92.87	LTMP data		0.0079	Aquatic Life	38.4126		Stream Std
31	Cyanide		58.03	LTMP data		0.005	Aquatic Life	4.1302		Stream Std
32	Lead		92.37	LTMP data		0.0029	Aquatic Life	13.1768		Stream Std
33	Mercury		86.75	LTMP data		0.000012	Aquatic Life	0.03140		Stream Std
34	Molybdenum		33	literature		0.16	Water supply	82.7906		Stream Std
35	Nickel		42	literature		0.025	Water supply	14.9433		Stream Std
36	Selenium		50	literature		0.005	Aquatic Life	3.4669		Stream Std
37	Silver		75	literature		0.00006	Aquatic Life	0.0832		Stream Std
38	Zinc		77.35	LTMP data		0.1257	Aquatic Life	192.3990		Stream Std
39	Total Nitrogen		86.18	LTMP data						
40	Total Phos.		82.83	LTMP data						
41	c									
42	d									
43	e									
44	f									
45	g									
46	h									
47	i									

Spreadsheet Instructions:
 1) Applicable Values should be entered in the Heavy Bordered Blue cells. The rest of worksheet is protected, password is "z".
 2) Additional pollutants can be added in cells A34 to A42. Note all Pollutant names are linked from here to other pages in HWA worksheet and also to AT worksheet (i.e., automatically entered into other pages in HWA worksheet and also AT worksheet from HWA worksheet).
 3) Formulas are discussed in the Comprehensive Guidance HWA Chapter.
 4) HWA, AT and HASL worksheets are linked. MAHLS, Basis, and Uncontrollable load are automatically entered into AT from this worksheet.
 5) If red tab notes are not visible, they can be turned on in the "Tools" menu under "options", in the "view" tab click the "comment indicator only" button.

Through calc. for different POTW flows

1.5 x Design Values	Average Flow	Permitted Flow	Input "x" to use Design Criteria Loading
397.5	1140.7	534.0	x
480	1310.0	613.3	x
52.5	187.5	87.8	x

WWTF Influent BOD (mg/l)

WWTF Influent TSS (mg/l)

WWTF Influent NH₃ (mg/l)

WWTF Influent Total N(mg/l)

WWTF Influent Total P (mg/l)

2

	A	B	C	D	E	F	G	H	I	J	K
49	Average Influent NH ₃ (mg/l)										
50	Average Anaerobic Digester NH ₃ (mg/l)										
51	only enter when have ANAEROBIC digester										
	Inhibition Loading Calculations										
52	Pollutant	Primary Removal Rate (%)	Primary Removal Rate Source	A.S./Nit./T.F. Inhibition Concentration (mg/l)	A.S./Nit./T.F. Inhibition Concentration Source	A.S./Nit./T.F. Inhibition Loading (lbs/day)	Digester Inhibition Concentration (mg/l)	Digester Inhibition Conc. Source	Digester Inhibition Loading (lbs/day)	Minimum Inhibition Loading (lbs/day)	Minimum Inhibition Loading Source
53	BOD										
54	TSS										
55	Ammonia			480	Act Sludge	11244.9888				11244.99	AS/Nit/TF ir
56	Arsenic			0.1	Act Sludge	2.3427				2.3427	AS/Nit/TF ir
57	Cadmium			1	Act Sludge	23.4271				23.4271	AS/Nit/TF ir
58	Chromium			0.394	Nitrification	9.2303				9.2303	AS/Nit/TF ir
59	Copper			7	Data	163.9894				163.9894	AS/Nit/TF ir
60	Cyanide			0.139	Data	3.2564				3.2564	AS/Nit/TF ir
61	Lead			0.5	Nitrification	11.7135				11.7135	AS/Nit/TF ir
62	Mercury			0.1	Act Sludge	2.3427				2.3427	AS/Nit/TF ir
63	Molybdenum			0.25	Nitrification	5.8568				5.8568	AS/Nit/TF ir
64	Nickel										
65	Selenium										
66	Silver			0.25	Act Sludge	5.8568				5.8568	AS/Nit/TF ir
67	Zinc			2.34	Data	54.8193				54.8193	AS/Nit/TF ir
68	Total Nitrogen										
69	Total Phos.										
70	c										
71	d										
72	e										
73	f										
74	g										
75	h										
76	i									3	

	A	B	C	D	E	F	G	H	I	J	K
77											
78	Sludge Loading Calculations										
		Sludge Ceiling Concentration Limit (mg/kg)	Sludge Ceiling Load (lbs/day)	Sludge Ceiling Load - HASL Calc. - (lbs/day)	Cumulative Sludge Rate Limit (lbs/(acre*life))	Cumulative Sludge Loading (lbs/day)	Class A Limits Monthly Average Rate Limit (mg/kg)	Class A Limits Monthly Loading (lbs/day)	Class A Limits Mon. Avg. Load. - HASL Calc. - (lbs/day)	Minimum Sludge Loading (lbs/day)	Minimum Sludge Loading Source
79	Pollutant										
80	BOD										
81	TSS										
82	Ammonia										
83	Arsenic	75	0.7278		36	3.4021	41			0.7278	Sludge Ceiling
84	Cadmium	85	0.5540		34	2.1581	39			0.5540	Sludge Ceiling
85	Chromium										
86	Copper	4300	20.2190		1338	61.2691	1500			20.2190	Sludge Ceiling
87	Cyanide										
88	Lead	840	3.9711		267	12.2925	300			3.9711	Sludge Ceiling
89	Mercury	57	0.2869		15	0.7353	17			0.2869	Sludge Ceiling
90	Molybdenum	75	0.9925							0.9925	Sludge Ceiling
91	Nickel	420	4.3668		374	37.8689	420			4.3668	Sludge Ceiling
92	Selenium	100	0.8734		89	7.5697	100			0.8734	Sludge Ceiling
93	Silver										
94	Zinc	7500	42.3415		2498	137.3387	2800			42.3415	Sludge Ceiling
95	Total Nitrogen										
96	Total Phos.										
97	c										
98	d										
99	e										
100	f										
101	g										
102	h										
103	i										
104										4	

	A	B	C	D	E	F	G	H	I	J	K
105	Maximum Allowable Headworks Loading Calculations										
		Minimum Pass Through Loading (lbs/day)	Pass Through Source	Minimum Inhibition Loading (lbs/day)	Minimum Inhibition Loading Source	Minimum Sludge Loading (lbs/day)	Minimum Sludge Loading Source		Maximum Allowable Headworks Loading (lbs/day)	Maximum Allowable Headworks Loading Source	
106											
107	BOD	19890.9	Design						19890.9	Design	
108	ISS	24019.2	Design						24019.2	Design	
109	Ammonia	2627.1	Design	11244.9888	AS/Nit/TF inhibition				2627.1	Design	
110	Arsenic	6.3034	Stream Std	2.3427	AS/Nit/TF inhibition	0.7278	Sludge Ceiling		0.7278	Sludge Ceiling	
111	Cadmium	0.6303	Stream Std	23.4271	AS/Nit/TF inhibition	0.5540	Sludge Ceiling		0.5540	Sludge Ceiling	
112	Chromium	21.1863	Stream Std	9.2303	AS/Nit/TF inhibition				9.2303	AS/Nit/TF inhibition	
113	Copper	38.4126	Stream Std	163.9894	AS/Nit/TF inhibition	20.2190	Sludge Ceiling		20.2190	Sludge Ceiling	
114	Cyanide	4.1302	Stream Std	3.2564	AS/Nit/TF inhibition				3.2564	AS/Nit/TF inhibition	
115	Lead	13.1768	Stream Std	11.7135	AS/Nit/TF inhibition	3.9711	Sludge Ceiling		3.9711	Sludge Ceiling	
116	Mercury	0.03140	Stream Std	2.3427	AS/Nit/TF inhibition	0.2869	Sludge Ceiling		0.03140	Stream Std	
117	Molybdenum	82.7906	Stream Std			0.9925	Sludge Ceiling		0.9925	Sludge Ceiling	
118	Nickel	14.9433	Stream Std	5.8568	AS/Nit/TF inhibition	4.3668	Sludge Ceiling		4.3668	Sludge Ceiling	
119	Selenium	3.4669	Stream Std			0.8734	Sludge Ceiling		0.8734	Sludge Ceiling	
120	Silver	0.0832	Stream Std	5.8568	AS/Nit/TF inhibition				0.0832	Stream Std	
121	Zinc	192.3990	Stream Std	54.8193	AS/Nit/TF inhibition	42.3415	Sludge Ceiling		42.3415	Sludge Ceiling	
122	Total Nitrogen										
123	Total Phos.										
124	c										
125	d										
126	e										
127	f										
128	g										
129	h										
130	i										
131											5

A	B	C	D	E	F	G	H	I	J	K
132										
133	Maximum Allowable Industrial Loadings Calculations									
	Pollutant	Maximum Allowable Headworks Loading (lbs/day)	MAHL Basis	Check to Use HASL Calc (x)	Uncontrollable Concentration (mg/l)	Uncontrollable Source	Uncontrollable Load (lbs/day)	Maximum Allowable Industrial Load (lbs/day)	Design vs. Pass-Thru Warning	
134	BOD	19890.9000	Design		2.48	Mass Balance	5243.1912	14647.7088		
135	TSS	24019.2000	Design		273	Mass Balance	5771.7387	18247.4613		
136	Ammonia	2627.1000	Design		28.8	Mass Balance	608.8867	2018.2133		
137	Arsenic	0.7278	Sludge Ceiling		0.0052	Mass Balance	0.1099	0.6179		
138	Cadmium	0.5540	Sludge Ceiling		0.0005	Mass Balance	0.0106	0.5434		
139	Chromium	9.2303	AS/Nit/TF inhibiti	N/A	0.0008	Mass Balance	0.0169	9.2133		
140	Chromium	20.2190	Sludge Ceiling		0.0425	Mass Balance	0.8985	19.3204		
141	Copper	3.2564	AS/Nit/TF inhibiti	N/A	0.0106	Mass Balance	0.2241	3.0323		
142	Cyanide	3.9711	Sludge Ceiling		0.003	Mass Balance	0.0634	3.9077		
143	Lead	0.03140	Stream Std		0.00018	Mass Balance	0.00381	0.02759		
144	Mercury	0.9925	Sludge Ceiling		0.0027	Mass Balance	0.0571	0.9354		
145	Molybdenum	4.3668	Sludge Ceiling		0.0022	Mass Balance	0.0465	4.3203		
146	Nickel	0.8734	Sludge Ceiling		0.0052	Mass Balance	0.1099	0.7634		
147	Selenium	0.0832	Stream Std	N/A	0.0024	Mass Balance	0.0507	0.0325		
148	Silver	42.3415	Sludge Ceiling		0.4251	Mass Balance	8.9874	33.3541		
149	Zinc									
150	Total Nitrogen									
151	Total Phos.									
152	c									
153	d									
154	e									
155	f									
156	g									
157	h									
158	i									6

Allocation Table

Headworks last approved: 01/05/17
 Allocation Table updated: 01/31/17
 Permits last modified: 01/31/17

Spreadsheet Instructions:

- 1) Applicable Values should be entered in the Heavy Bordered cells. Rest of worksheet is protected, password is "2"
- 2) Formulas are discussed in the Comprehensive Guidance, Chapter 6, Section C.
- 3) HWA and AT worksheets in this workbook are linked. Pollutant Names, MAHLs, Basis, and Uncontrollable load in this AT worksheet are automatically entered from the HWA spreadsheet. This includes pollutant names in columns AT through BK.

7

POTW=> **Typicalville**
 NPDES=> NC0012345

IUP Count	INDUSTRY NAMES <small>(please list alphabetically)</small>	Industry Permit number	Pipe number	Type of Industry	Renewal Effective Date	Modification Effective Date	Date Permit Expires	FLOW		BOD		TSS	
								Permit Limits MGD	gal/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day
1	Carolina Dye House	1008	0001	textile	01/31/17		01/31/22	0.1000	100,000	300.00	250.20	225.00	187.65
2	Flying Carpet Co	1005	0001	textile	01/31/17		01/31/22	0.0500	50,000	300.00	125.10	225.00	93.83
3	Big Time Textiles	1006	0001	textile	01/31/17		01/31/22	0.3000	300,000	300.00	750.60	225.00	562.95
4	Metals Extraordinaire	1012	0001	433	01/31/17		01/31/22	0.0500	50,000				
5													
6													
7													
8													
9													
Column Totals =>								0.5000	500,000		1126		844

Basis=>
 MAHL from HWA (lbs/day) =>
 Uncontrollable Loading (lbs/day) =>
 Total Allowable for Industry (MAIL) (lbs/day) =>
 Total Permitted to Industry (lbs/day) =>
 MAIL left (lbs/day) =>
 Percent Allow. Ind. (MAIL) still available (%) =>
 Percent MAHL still available (%) =>
 5 Percent MAHL (lbs/day) =>

NPDES	NPDES Permitted Flow=>	Design
6.0000	19891	24019
2.5350	5243	5772
3.4650	14648	18247
0.5000	1126	844
2.9650	13522	17403
85.6 %	92.3 %	95.4 %
49.4 %	68.0 %	72.5 %
0.3000	995	1201

8

Allocation Table

Headworks last approved: 01/05/17
 Allocation Table updated: 01/31/17
 Permits last modified: 01/31/17

POTW=>
 NPDES#=>

Typicalville
 NC0012345

IUP Count	INDUSTRY NAMES (please list alphabetically)	Industry Permit number	Pipe number	Ammonia		Arsenic		Cadmium		Chromium		Copper		Cyanide	
				Permit Conc. mg/l	Load lbs/day	Permit Conc. mg/l	Load lbs/day	Permit Conc. mg/l	Load lbs/day	Permit Conc. mg/l	Load lbs/day	Permit Conc. mg/l	Load lbs/day	Permit Conc. mg/l	Load lbs/day
1	Carolina Dye House	1008	0001	0.0750	0.0626										
2	Flying Carpet Co	1005	0001	0.0750	0.0313										
3	Big Time Textiles	1006	0001	0.0750	0.1877										
4	Metals Extraordinaire	1012	0001			0.0700	0.0292	1.7100	0.7131	2.0700	0.8632	0.5000	0.4170	0.1200	0.1001
5															
6															
7															
8															
9															
Column Totals =>					0		0.2815		0.0292		0.7131		2.7397		0.7214

Basis=>	Design		Sludge Ceiling		AS/Nit/TF inhibition		Sludge Ceiling		AS/Nit/TF inhibition	
	Design	MAHL	Sludge Ceiling	AS/Nit/TF inhibition	Sludge Ceiling	AS/Nit/TF inhibition	Sludge Ceiling	AS/Nit/TF inhibition	Sludge Ceiling	AS/Nit/TF inhibition
MAHL from HWA (lbs/day) =>	2627.10		0.7278	9.2303	0.5540	9.2303	20.2190	9.2303	20.2190	3.2564
Uncontrollable Loading (lbs/day) =>	608.89		0.1099	0.0169	0.0106	0.0169	0.8985	0.0169	0.8985	0.2241
Total Allowable for Industry (MAIL) (lbs/day) =>	2018.21		0.6179	9.2133	0.5434	9.2133	19.3204	9.2133	19.3204	3.0323
Total Permitted to Industry (lbs/day) =>	0.00		0.2815	0.7131	0.0292	0.7131	2.7397	0.7131	2.7397	0.7214
MAIL left (lbs/day) =>	2018.21		0.3364	8.5003	0.5142	8.5003	16.5807	8.5003	16.5807	2.3108
Percent Allow. Ind. (MAIL) still available (%) =>	100.0 %		54.4 %	92.3 %	94.6 %	92.3 %	85.8 %	92.3 %	85.8 %	76.2 %
Percent MAHL still available (%) =>	76.8 %		46.2 %	92.1 %	92.8 %	92.1 %	82.0 %	92.1 %	82.0 %	71.0 %
5 Percent MAHL (lbs/day) =>	131.36		0.0364	0.4615	0.0277	0.4615	1.0109	0.4615	1.0109	0.1628

Allocation Table

Headworks last approved:

Allocation Table updated: 01/05/17

Permits last modified: 01/31/17

9

POTW=>

Typicalville

NPDES#=>

NC00012345

IUP Count	INDUSTRY NAMES <small>(please list alphabetically)</small>	Industry Permit number	Pipe number	Lead		Mercury		Molybdenum		Nickel		Selenium		Silver	
				Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day
1	Carolina Dye House	1008	0001												
2	Flying Carpet Co	1005	0001												
3	Big Time Textiles	1006	0001												
4	Metals Extraordinaire	1012	0001	0.6900	0.2877					2.3800	0.9925			0.0500	0.0209
5															
6															
7															
8															
9															
				Column Totals =>											
				0.2877	0.000000	0.000000	0.000000	0.000000	0.000000	0.9925	0.0000	0.0000	0.0000	0.0000	0.0209

Sludge Ceiling

3.9711
0.0634
3.9077
0.2877
3.6200
92.6 %
91.2 %
0.1986

Stream Std

0.031398
0.003806
0.027592
0.000000
0.027592
100.0 %
87.9 %
0.001570

Sludge Ceiling

0.9925
0.0571
0.9354
0.0000
0.9354
100.0 %
94.2 %
0.0496

Sludge Ceiling

4.3668
0.0465
4.3203
0.9925
3.3279
77.0 %
76.2 %
0.2183

Sludge Ceiling

0.8734
0.1099
0.7634
0.0000
0.7634
100.0 %
87.4 %
0.0437

Stream Std

0.0832
0.0507
0.0325
0.0209
0.0116
36 %
14 %
0.0042

Basis=>
 MAHL from HWA (lbs/day) =>
 Uncontrollable Loading (lbs/day) =>
 Total Allowable for Industry (MAIL) (lbs/day) =>
 Total Permitted to Industry (lbs/day) =>
 MAIL left (lbs/day) =>
 Percent Allow. Ind. (MAIL) still available (%) =>
 Percent MAHL still available (%) =>
 5 Percent MAHL (lbs/day) =>

Allocation Table

Headworks last approved: 01/05/17
 Allocation Table updated: 01/31/17
 Permits last modified: 01/31/17

10

POTW=> **Typicalville**
 NPDES#=> NC0012345

IUP Count	INDUSTRY NAMES <small>(please list alphabetically)</small>	Industry Permit number	Pipe number	Zinc		Total Nitrogen		Total Phos.		c		d	
				Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day	Permit Limits Conc. mg/l	Load lbs/day
1	Carolina Dye House	1008	0001										
2	Flying Carpet Co	1005	0001										
3	Big Time Textiles	1006	0001										
4	Metals Extraordinaire	1012	0001	1.4800	0.6172								
5													
6													
7													
8													
9													
Column Totals =>					0.6172		0.00		0.00		0.0000		0.0000

Sludge Ceiling

42.3415
8.9874
33.3541
0.6172
32.7370
98.1 %
77.3 %
2.1171

Basis=>
 MAHL from HWA (lbs/day) =>
 Uncontrollable Loading (lbs/day) =>
 Total Allowable for Industry (MAIL) (lbs/day) =>
 Total Permitted to Industry (lbs/day) =>
 MAIL left (lbs/day) =>
 Percent Allow. Ind. (MAIL) still available (%) =>
 Percent MAHL still available (%) =>
 5 Percent MAHL (lbs/day) =>

Allocation Table

Headworks last approved: 01/05/17
 Allocation Table updated: 01/31/17
 Permits last modified: 01/31/17

11

POTW=>		Typicalville		Mercury		Molybdenum		Nickel		Selenium		Silver	
NPDES#=>		NC0012345		Permit Limits		Permit Limits		Permit Limits		Permit Limits		Permit Limits	
IUP	Count	Industry Permit number	Pipe number	Conc. mg/l	Load lbs/day	Conc. mg/l	Load lbs/day	Conc. mg/l	Load lbs/day	Conc. mg/l	Load lbs/day	Conc. mg/l	Load lbs/day
1		Carolina Dye House	1008										
2		Flying Carpet Co	1005										
3		Big Time Textiles	1006										
4		Metals Extraordinaire	1012	0.6900	0.2877			2.3800	0.9925			0.2400	0.1001
5													
6													
7													
8													
9													
Column Totals =>					0.2877		0.0000		0.9925		0.0000		0.1001
				Sludge Ceiling	3.9711	Stream Std	0.031398	Sludge Ceiling	4.3668	Sludge Ceiling	0.8734	Stream Std	0.0832
					0.0634		0.003806		0.0465		0.1099		0.0507
					3.9077		0.027592		4.3203		0.7634		0.0325
					0.2877		0.000000		0.9925		0.0000		0.1001
					3.6200		0.9354		3.3279		0.7634		-0.0676
					92.6 %		100.0 %		77.0 %		100.0 %		-208 %
					91.2 %		87.9 %		76.2 %		87.4 %		-81 %
					0.1986		0.001570		0.2183		0.0437		0.0042
				Basis=>									
				MAHL from HWA (lbs/day) =>									
				Uncontrollable Loading (lbs/day) =>									
				Total Allowable for Industry (MAIL) (lbs/day) =>									
				Total Permitted to Industry (lbs/day) =>									
				MAIL left (lbs/day) =>									
				Percent Allow. Ind. (MAIL) still available (%) =>									
				Percent MAHL still available (%) =>									
				5 Percent MAHL (lbs/day) =>									