



Alabama Department of Environmental Management
adem.alabama.gov

JUNE 2, 2020

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

HONORABLE DANIEL SIMS
MAYOR
TOWN OF WEST BLOCTON
POST OFFICE BOX 197
WEST BLOCTON AL 35184

Re: DRAFT LOCAL LIMITS
TOWN OF WEST BLOCTON
WEST BLOCTON WWTP
NPDES PERMIT NO. AL0074195

Dear Mayor Sims:

The Alabama Department of Environmental Management (ADEM) is required by Administrative Rule 335-6-5-.03 to develop local limits for Publicly Owned Treatment Works (POTWs) receiving wastewater from significant industrial users which could adversely impact the operation or performance of the treatment works. These limits should prevent pass through of pollutants that could cause violations of water quality standards in the POTW's receiving stream, interfere with the POTW collection/treatment system or cause sludge disposal concerns. Because many POTWs have modernized or expanded their treatment plants since the last issuance of local limits, ADEM is currently in the process of updating these requirements.

In this regard, ADEM has developed an updated draft local limits document for the West Blocton WWTP. A copy of this draft along with supporting information is attached for your review and comment. ADEM is requesting that your comments be received no later than 30 days from the date of this letter.

It should be noted that this draft is based on assumed levels of treatment, assumed levels of pollutants in domestic wastewater and stream conditions that may not reflect actual conditions at your facility. For this reason the Department encourages you to become involved with the local limits development process. Specifically, we are encouraging you to establish a sampling program to collect data that may be used to determine more site specific requirements. Requirements based on site specific information should ensure the protection of your plant's operation and could prevent the unnecessary reduction in permit limits for industrial sources and/or limit capacity for future growth.

If you are interested in establishing a program to collect this data prior to the final development of local limits, you should contact Wayne Holt at (334) 271-7847 within 30 days of the date of this letter to indicate your interest and to obtain specific guidance on proper sampling protocol. In addition a general guidance document for developing a sampling program is attached for your consideration. Should you choose to collect this data no further action will be taken on the attached draft until adequate time has been allowed for the submittal of sampling results.

ADEM rules also provide the opportunity for POTWs to reserve a portion of their hydraulic or treatment capacity for any pollutant. This initial draft assumed a reserved capacity of 10%. Please inform the Department if this assumption is consistent with current plans for future development. In addition we would appreciate your input on local issues such as other pollutants of concern that may be impacting your operation and that need to be addressed in the local limits program.



Following evaluation of any additional information provided, revised draft local limits will be developed. If your facility has no comments and does not wish to establish a sampling program, ADEM will proceed with the development of final local limits based on the attached draft. After consideration of any comments received during the public notice period, a final determination on the local limits will be made. All permits issued to industrial users must comply with adopted local limits.

Should you have any questions about this process, please contact Wayne Holt by email at WHolt@adem.alabama.gov or by phone at (334) 271-7847.

Sincerely,



Scott Ramsey, Chief
Industrial Section
Industrial/Municipal Branch
Water Division

Attachments: Draft Local Limits
 Rationale for Local Limits
 Local Limits/Pass Through Calculations
 List of Significant Industrial Users
 Sampling for Local Limit Development

CC: Mercedes-Benz
 Sandra Lee
 Wayne Holt

LOCAL LIMITS

PUBLICLY OWNED TREATMENT WORKS: WEST BLOCTON WWTP

LOCATION: WEST BLOCTON, ALABAMA
BIBB COUNTY

PERMIT NUMBER: AL0074195

GENERAL PRETREATMENT PROHIBITIONS

No discharge to the Publicly Owned Treatment Works (POTW) shall exceed or otherwise violate the General Pretreatment Standards described in ADEM Administrative Code 335-6-5. Specifically the POTW shall ensure that discharges to their system comply with the following prohibitions to ensure protection of the treatment and collections systems and to ensure worker safety:

Pollutants which create a fire or explosion hazard including but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit;

Pollutants which will cause corrosive structural damage to the treatment works but in no case discharges with a pH lower than 5.0 S.U. unless the treatment works are specifically designed to accommodate such discharges;

Solid or viscous pollutants in amounts which will cause obstruction to the flow in sewers or other interference with the operation of the treatment works;

Any pollutant, including oxygen demanding pollutants released in a discharge of such volume or strength as to cause interference in the treatment works;

Heat in amounts which will inhibit biological activity in the treatment plant resulting in interference, but in no case in such quantities that the temperature of the effluent at the treatment plant exceeds 104 degrees Fahrenheit unless the treatment plant is designed to accommodate such heat;

Pollutants which will result in the presence of toxic gases, vapors or fumes within the treatment works in a quantity that may cause acute worker health and safety problems;

Any trucked or hauled pollutants except at discharge points designated by the treatment works; and

Petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in such amounts that will cause interference or pass through.

GENERAL PRETREATMENT STANDARDS AND LOCAL LIMITS

POLLUTANTS:

The total average daily loading of the substances from all sources shall not exceed the indicated mass listed below.

<u>Parameter</u>	<u>Allowable Average Daily Pollutant Load at Headworks of POTW</u> (lbs/day)
Arsenic, Trivalent	0.1948
Cadmium, Total Recoverable	0.0186
Chromium, Total Recoverable	10.59
Copper, Total Recoverable	0.8688
Cyanide, Free	0.1598
Lead, Total Recoverable	0.1393
Mercury, Total Recoverable	0.0009
Nickel, Total Recoverable	0.9412
Silver, Total Recoverable	0.0319
Zinc, Total Recoverable	4.087

No future loading above the domestic wastewater concentration of Cyanide, Lead or Silver will be allowed. All new or expanding industrial dischargers containing these pollutants shall be limited as indicated below:

<u>Parameter</u>	<u>Allowable Average Concentration</u> (mg/l)
Cyanide, Free	0.04
Lead, Total Recoverable	0.05
Silver, Total Recoverable	0.01

HYDRAULIC LOADING:

The hydraulic loading on an average basis is the design capacity of the treatment plant which is 0.49 million gallons per day.

ORGANIC LOADING:

The organic loading (CBOD₅) is the design capacity of the treatment plant which is 682 pounds per day.

SOLIDS LOADING

The Total Suspended Solids loading (TSS) is the design capacity of the treatment plant which is 817 pounds per day.

EFFECTIVE DATE:

ISSUANCE DATE:

DRAFT

Rationale for Local Limits

West Blocton WWTP (AL0074195)
0.49 MGD Activated sludge
West Blocton/Bibb County

Reissuance
Prepared Date: 5/26/2020
Prepared By: Ed Hughes

Nonconventional Pollutants:

Pass Through:

Allowable pollutant loadings were based on state water quality standards applicable to streams with a use designation of Fish & Wildlife. Local limits calculations were performed using a receiving stream 7Q10 of 1.01 cfs, 1Q10 of 0.76 cfs, an annual average flow of 64.85 cfs and a stream hardness of 50 mg/l as CaCO₃. The treatment plant removal rates and untreated domestic sewage pollutant concentrations were based on Best Professional Judgment using literature values and EPA recommended levels as the basis unless site specific data was available. Calculations estimate the allowable quantity of heavy metals (measured as Total Recoverable) and Free Cyanide that can be discharged into the POTW to ensure that state water quality standards for aquatic toxicity and human health criteria are met in the receiving stream during critical flow conditions. Because only the portion of heavy metals present in dissolved form is "bioavailable" to aquatic life, the calculations which evaluate aquatic toxicity take into account the relationship between "dissolved" metals and metals measured using the Total Recoverable test procedure. The allowable pollutant loadings based on pass through concerns are located in column 11 of the Local Limits-Pass Through (LL-PT) spreadsheet.

Interference:

The Department evaluated the potential for processes at the POTW to be inhibited as result of the pollutant loading entering the treatment works. Inhibition values were based on Best Professional Judgment using literature values and EPA recommended levels as the basis unless site specific information was provided by the POTW. The allowable pollutant loadings based on inhibition concerns are located in column 13 of the LL-PT spreadsheet.

Sludge Disposal:

The POTW disposes of sludge in a landfill. For POTWs that use land application as a means of disposal the LL-PT spreadsheet calculates the allowable pollutant loading to ensure that metal concentrations in the sludge comply with EPA 503 regulations for land application of biosolids. The results of these calculations are located in column 14 of the spreadsheet.

Column 15 of the LL-PT spreadsheet indicates the most stringent of the above three criteria. These loadings are considered the POTW's total headworks capacity for the pollutants of concern.

The LL-PT spreadsheet also lists the current loading of the pollutants of concern from domestic/commercial and industrial sources and determines the remaining capacity currently available. Domestic/commercial loadings are indicated in Columns 16 and current industrial loadings are shown in column 17 (a listing of each significant industrial user and their permit limits and average reported

discharge level for pollutants without permit limits is shown on the attached Significant Industrial Users sheet). Column 18 of that spreadsheet shows the remaining capacity after subtracting the current loadings. Negative values indicate that no additional capacity is available for these pollutants. Specifically, these calculations estimate that no additional loading of Cyanide, Lead or Silver above the domestic sewage concentration can be allowed; therefore, new and expanded discharges shall be limited to domestic sewage concentrations. The limiting factor for each of these pollutants is shown below:

Parameter	Limiting Factor
Cyanide, Free	Water Quality
Lead, Total Recoverable	Water Quality
Silver, Total Recoverable	Water Quality

It should be noted that the available pollutant loadings shown in column 18 have been reduced by 10%, which is the percent of total capacity reserved for future growth.

Conventional Pollutants

Temperature:

The Department is not aware of any specific circumstances related to this POTW which require a temperature limitation more stringent than general standards and prohibitions contained in ADEM Administrative code 335-6-5-.03(2)(e).

pH:

The Department is not aware of any specific circumstances related to this POTW which require a minimum pH limitation more stringent than general standards and prohibitions contained in ADEM Administrative code 335-6-5-.03(2)(b).

Hydraulic loading:

The hydraulic loading is the design capacity of the treatment plant as indicated by the POTW, 0.49 MGD.

Organic loading:

The organic loading (CBOD₅) is the design capacity of the treatment plant. This loading was calculated using the design flow of the POTW and an influent CBOD₅ concentration of 167 mg/l.

Total Suspended Solids loading

The Total Suspended Solids (TSS) loading was calculated using the design flow of the POTW and an influent TSS concentration of 200 mg/l.

While ADEM develops local limits and reviews compliance, POTWs are responsible for ensuring proper management of Significant Industrial Users and other sources to meet their NPDES limits and to prevent pass through and interference problems and to ensure compliance with the prohibitions contained in ADEM Administrative Code 335-6-5-.03 for protection of the treatment works, collection system and

worker safety. The POTWs' responsibilities include establishing any additional limitations via local ordinances, etc. to protect the POTW and comply with their permit.

LOCAL LIMIT/ PASS THROUGH CALCULATIONS

POTW NAME: West Blocton WWTP
 NPDES PERMIT NUMBER: AL0074195

DATE PREPARED: 4/10/2019
 PREPARED BY: Ed Hughes

STREAM DATA AND POTW FLOW DATA					
RECEIVING STREAM CLASSIFICATION	=	F & W	0	RECEIVING STREAM TIDALLY INFLUENCED =	No
POTW DESIGN FLDW	=		0.49 MGD		
FLOW FROM OTHER CONTRIBUTORS	=		MGD		
DOMESTIC FLOW	=		0.488 MGD		
7Q10	=		1.01 CFS	OR	0.85 MGD
1Q10	=		0.76 CFS	OR	0.49 MGD
7Q2	=		CFS	OR	0.00 MGD
ANNUAL AVG FLOW	=		64.85 CFS	OR	41.89 MGD
STREAM HARDNESS (DEFAULT VALUE 100)	=		50 MGL AS CaCO3		

ALLOWABLE LOADING TO STREAM BASED ON WATER QUALITY AND HH STANDARDS										
PARAMETER	1) CHRONIC	SW CHRONIC	2) MAX W Q	3) ACUTE	SW ACUTE	4) MAX W Q	5) HUMAN	6) MAX W Q	7) WQ / HH	PARAMETER
	TOXICITY	TOXICITY	INSTREAM	TOXICITY	TOXICITY	INSTREAM	HEALTH	INSTREAM	BASED DISC	
	(MG/L)	(MG/L)	(LBS/D)	(MG/L)	(MG/L)	(LBS/D)	(MG/L)	(LBS/D)	LEVEL (LBS/D)	
ANTIMONY, TOTAL RECOVERABLE	----	----	----	----	----	----	0.3733333	131.984	131.984	ANTIMONY, TR
ARSENIC, TRIVALENT	0.1500	----	1.429	0.3400	----	2.778	0.00030	0.107	0.107	ARSENIC, TRI
CADMIUM, TOT RECOVERABLE	0.0002	----	0.006	0.0010	----	0.036	----	----	0.006	CADMIUM, TR
CHROMIUM, TOT RECOVERABLE	0.0420	----	1.906	0.3230	----	12.565	----	----	1.906	CHROMIUM, TR
CHROMIUM, HEXAVALENT	0.0110	----	0.105	0.0160	----	0.131	----	----	0.105	CHROMIUM, HEX
COPPER, TOTAL RECOVERABLE	0.0050	----	0.122	0.0070	----	0.147	----	----	0.122	COPPER, TR
CYANIDE, FREE	0.0052	----	0.050	0.0220	----	0.180	9.3333	88.93	0.050	CYANIDE, FREE
LEAD, TOT RECOVERABLE	0.0012	----	0.054	0.0301	----	1.195	----	----	0.054	LEAD, TR
MERCURY, TOT RECOVERABLE	0.000012	----	0.000	0.0024	----	0.065	0.0000424	0.000	0.00038	MERCURY, TR
MOLYBDENUM	----	----	----	----	----	----	----	----	----	MOLYBDENUM
NICKEL, TOT RECOVERABLE	0.0289	----	0.546	0.2605	----	4.215	0.9929078	9.461	0.546	NICKEL, TR
SELENIUM, TOTAL RECOVERABLE	0.0005	----	0.005	0.0020	----	0.016	2.4305566	23.159	0.005	SELENIUM, TR
SILVER, TOT RECOVERABLE	----	----	----	0.0010	----	0.008	----	----	0.008	SILVER, TR
ZINC, TOT RECOVERABLE	0.0657	----	1.896	0.0651	----	1.613	14.8936170	141.91	1.613	ZINC, TR

		Antimony	Arsenic	Cadmium	Chromium, Tc	Chromium, VI	Copper	Cyanide	Lead	Mercury	Molybdenum	Nickel	
DOMESTIC	DATA VALUE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	LIT VALUE	0.0010	0.0010	0.0030	0.0500	0.0000	0.0600	0.0400	0.0500	0.0000	0.0000	0.0200	
		Selenium	Silver	Zinc									
	DATA VALUE	0.0000	0.0000	0.0000									
	LIT VALUE	0.0000	0.0100	0.1800									

TYPE OF TREATMENT =	2	Act Sludge	SLUDGE DISPOSAL	
TREATMENT INCLUDE NITIFICATION?	No		DOES THE POTW HAVE SECONDARY CLARIFICATION?	Yes
			AVERAGE TONS OF SLUDGE PER DAY (DRY WEIGHT)	N/A
			IS SLUDGE LAND APPLIED?	No
GROWTH ALLOCATION				
			% ALLOCATION RESERVED FOR FUTURE GROWTH =	10

PARAMETER	7) MAX WQ INSTREAM (LBS/D)	8) ALLOCATION FROM BACKGROUND (LBS/D)	9) ALLOWABLE DISC FROM POTW (LBS/D)	10) REMOVAL RATE (%)	11) ALLOWABLE DISCHARGE (WQ / HH) (LBS/D)	12) INHIBITION TRESHOLD CONC (MG/L)	13) ALLOWABLE DISCHARGE (INHIBITION) (LBS/D)	14) ALLOWABLE DISCHARGE (SLUDGE) (LBS/D)	15) ALLOWABLE DISCHARGE LOCAL LIMIT (LBS/D)	16) DOMESTIC INFLUENT LOADING (LBS/D)	17) INDUSTRIAL INFLUENT LOADING (LBS/D)	18) AVAILABLE CAPACITY FOR GROWTH (LBS/D)	LIMITING FACTOR
ANTIMONY, TOTAL RECOVERABLE	131.9640	0	131.9640	0	131.9640				131.9640	0.0041	0.0000	118.7640	WATER QUALITY
ARSENIC, TRIVALENT	0.1071	0	0.1071	45	0.1948	0.100	0.4087	-----	0.1948	0.0041	0.0000	0.1716	WATER QUALITY
CADMIUM, TOT RECOVERABLE	0.0061	0	0.0061	67	0.0186	1.000	4.0866	-----	0.0186	0.0122	0.0012	0.0047	WATER QUALITY
CHROMIUM, TOT RECOVERABLE	1.9061	0	1.9061	82	10.5895	5.000	20.4330	-----	10.5895	0.2035	0.0285	9.3217	WATER QUALITY
CHROMIUM, HEXAVALENT	0.1048	0	0.1048	83	0.6165	1.000	4.0866	-----	0.6165	0.0000	0.0000	0.5549	WATER QUALITY
COPPER, TOTAL RECOVERABLE	0.1216	0	0.1216	86	0.8688	1.000	4.0866	-----	0.8688	0.2442	0.0345	0.5311	WATER QUALITY
CYANIDE, FREE	0.0495	0	0.0495	69	0.1598	0.100	0.4087	-----	0.1598	0.1628	0.0007	-0.0033	WATER QUALITY
LEAD, TOT RECOVERABLE	0.0543	0	0.0543	61	0.1393	1.000	4.0866	-----	0.1393	0.2035	0.0008	-0.0585	WATER QUALITY
MERCURY, TOT RECOVERABLE	0.0004	0	0.0004	60	0.0009	0.100	0.4087	-----	0.0009	0.0000	0.0000	0.0009	WATER QUALITY
MOLYBDENUM		0						-----	0.0000	0.0000	0.0000	-----	-----
NICKEL, TOT RECOVERABLE	0.5459	0	0.5459	42	0.9412	1.000	4.0866	-----	0.9412	0.0814	0.0397	0.7381	WATER QUALITY
SELENIUM	0.0048	0	0.0048	50	0.0095			-----	0.0095	0.0000	0.0000	0.0086	WATER QUALITY
SILVER, TOT RECOVERABLE	0.0080	0	0.0080	75	0.0319	0.250	1.0217	-----	0.0319	0.0407	0.0002	-0.0081	WATER QUALITY
ZINC, TOT RECOVERABLE	1.6126	0	1.6126	79	7.6790	1.000	4.0866	-----	4.0866	0.7326	0.0247	2.9964	INHIBITION

Comments

Item 1: Allowable concentration instream based on above noted stream conditions and state standard to protect aquatic life from chronic toxicity.

Item 2: Mass of pollutant allowed instream based on above noted stream conditions and chronic criteria calculated as shown below:

Item 2 = stream 7Q10 x 8.34 x Item 1. If stream segment is tidally influenced, the more stringent of freshwater and saltwater criteria is used.

Item 3: Allowable concentration instream based above noted stream conditions and state standard to protect aquatic life from acute toxicity.

Item 4: Mass of pollutant allowed instream based on above noted stream conditions and acute criteria and calculated as shown below:

Item 4 = stream 1Q10 x 8.34 x Item 3. For LWF streams, Item 4 = stream 7Q2 x 8.34 x Item 3.

If stream segment is tidally influenced, the more stringent of freshwater and saltwater criteria is used.

Item 5: Allowable concentration instream based on above noted stream conditions and state human health standard for a stream with this use classification.

Item 6: Mass of pollutant allowed instream based on above noted stream condition, the human health standard and calculated as shown below:

Item 6 = Annual average stream flow x 8.34 x Item 5 (for carcinogens) and 7Q10 x 8.34 x Item 5 (for non-carcinogens).

Item 7: The most stringent of the requirements calculated in Items 2,4 and 6.

Item 8: Amount allocated to other facilities discharging to this stream segment.

Item 9: Remaining allocation available.

Item 10: Pollutant removal rates based on the treatment process.

Item 11: The calculated allowable discharge into the POTW based on water quality and human health concerns.

Item 12: Concentration of pollutant that could cause inhibition of biological processes utilized at the treatment plant.

Item 13: Allowable discharge into the POTW based on levels to prevent inhibition of biological treatment processes.

Item 14: Allowable discharge into the POTW based on levels to meet EPA 503 standards for land application of sludge, if sludge is land applied.

Item 15: Allowable discharge into the POTW based on the more stringent of Items 11, Item 13 and item 14 requirements. This column contains the Local Limits for this POTW.

Item 16: Domestic influent (lbs/d) based on domestic flow and sampled domestic influent data if available or literature values if not.

Item 17: Industrial influent (lbs/d) based on monthly average permit limits and actual average values for the past 2 to 5 years (depending on availability) for "monitor only" pollutants as shown on SIUs sheet. Values reported as less than detect are not included in average calculation.

Item 18: Available capacity remaining for new sources after subtracting capacity being utilized by industrial sources, domestic sources (including commercial sources and septage disposal) and capacity reserved for future growth.

SIGNIFICANT INDUSTRIAL USERS

PERMITTEE	AVG FLOW (MGD)	DAILY AVG ANTIMONY (MG/L)	DAILY AVG ARSENIC (MG/L)	DAILY AVG CADMIUM (MG/L)	DAILY AVG CHROMIUM (MG/L)	DAILY AVG HEX CHROM (MG/L)	DAILY AVG COPPER (MG/L)	DAILY AVG CYANIDE (MG/L)	DAILY AVG LEAD (MG/L)	DAILY AVG MERCURY (MG/L)	DAILY AVG Molybdenum (mg/l)	DAILY AVG NICKEL (MG/L)	DAILY AVG SELENIUM (MG/L)	DAILY AVG SILVER (MG/L)	DAILY AVG ZINC (MG/L)
Mercedes Benz (IU360401156)	0.0020	0.0000	0.0000	0.0700	1.7100	0.0000	2.0700	0.0400	0.0500	0.0000	0.0000	2.3800	0.0000	0.0100	1.4800
Total Industrial flow	0.0020														

Monthly average permit limits are listed in bold print.

Other values are based on a minimum of 24 months of data if available as reported on DMRs (for parameters with testing requirements in permits).

PERMITTEE	AVG FLOW (MGD)	DAILY AVG ANTIMONY (LBS/D)	DAILY AVG ARSENIC (LBS/D)	DAILY AVG CADMIUM (LBS/D)	DAILY AVG CHROMIUM (LBS/D)	DAILY AVG HEX CHROM (LBS/D)	DAILY AVG COPPER (LBS/D)	DAILY AVG CYANIDE (LBS/D)	DAILY AVG LEAD (LBS/D)	DAILY AVG MERCURY (LBS/D)	DAILY AVG Molybdenum (LBS/D)	DAILY AVG NICKEL (LBS/D)	DAILY AVG SELENIUM (LBS/D)	DAILY AVG SILVER (LBS/D)	DAILY AVG ZINC (LBS/D)
Mercedes Benz (IU360401156)	0.002	0.0000	0.0000	0.0012	0.0285	0.0000	0.0345	0.0007	0.0008	0.0000	0.0000	0.0397	0.0000	0.0002	0.0247
	0.0020	0.0000	0.0000	0.0012	0.0285	0.0000	0.0345	0.0007	0.0008	0.0000	0.0000	0.0397	0.0000	0.0002	0.0247

CURRENT PERMITTED INDUSTRIAL LOADING TO POTW (LBS/DAY)

PARAMETER	
ANTIMONY	0.0000
ARSENIC	0.0000
CADMIUM	0.0012
CHROMIUM	0.0285
HEX CHROM	0.0000
COPPER	0.0345
CYANIDE	0.0007
LEAD	0.0008
MERCURY	0.0000
Molybdenum	0.0000
NICKEL	0.0397
SELENIUM	0.0000
SILVER	0.0002
ZINC	0.0247