

Alabama Department of Environmental Management  
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Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

MR JAMES D MILLER  
MANAGER  
THE WATER WORKS & SEWER BOARD OF THE CITY OF ANNISTON  
POST OFFICE BOX 2268  
ANNISTON AL 36202

Re: REVISED DRAFT LOCAL LIMITS  
THE WATER WORKS & SEWER BOARD OF THE CITY OF ANNISTON  
ANNISTON CHOCOLOCCKO CREEK WWTP  
NPDES PERMIT NO. AL0022195

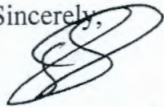
Dear Mr. Miller:

In response to comments received from the Water Works & Sewer Board of the City of Anniston, ADEM has developed a revised draft local limits document for the Anniston Choccolocco Creek 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.

Following evaluation of any additional information provided, revised draft local limits will be developed. If your facility has no further 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 Rachel Stanaland by email at [restanaland@adem.alabama.gov](mailto:restanaland@adem.alabama.gov) or by phone at (334) 279-3065.

Sincerely,



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

Attachments: Draft Local Limits  
Rationale for Local Limits  
Local Limits/Pass Through Calculations

CC: Food Ingredients Technology Company  
General Dynamics  
Huron Valley Steel  
Lee Brass Foundry  
Solutia Inc  
Dustin Stokes  
Rachel Stanaland.

# LOCAL LIMITS

**PUBLICLY OWNED TREATMENT WORKS:** ANNISTON CHOCCOLOCCO CREEK WWTP

**LOCATION:** ANNISTON, ALABAMA  
CALHOUN COUNTY

**PERMIT NUMBER:** AL0022195

## 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, Total Recoverable	0.7264
Cadmium, Total Recoverable	0.6143
Chromium, Total Recoverable	2.257
Copper, Total Recoverable	25.70
Cyanide, Free	4.440
Lead, Total Recoverable	4.995
Mercury, Total Recoverable	0.0243
Nickel, Total Recoverable	5.140
PCBs	0.0063
Silver, Total Recoverable	1.463
Zinc, Total Recoverable	48.80

**HYDRAULIC LOADING:**

The hydraulic loading limit on an average basis is the design capacity of the treatment plant which is 10.5 million gallons per day.

**ORGANIC LOADING:**

The organic loading limit (CBOD<sub>5</sub>) is the design capacity of the treatment plant which is 14,624 pounds per day.

**SOLIDS LOADING**

The Total Suspended Solids loading limit (TSS) is the design capacity of the treatment plant which is 17,514 pounds per day.

**EFFECTIVE DATE:**

**ISSUANCE DATE:**

**DRAFT**

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**Alabama Department of Environmental Management**

## Rationale for Local Limits

Anniston Choccolocco Creek WWTP  
10.5 MGD activated sludge facility  
Anniston/ Calhoun County

(AL0022195)

Reissuance

Prepared Date: 10/11/2018

Prepared By: Ed Hughes

Revised Date: 1/4/2019

### Nonconventional Pollutants:

#### Pass Through:

Allowable pollutant loadings were based on state water quality standards applicable to streams with a use designated of Fish & Wildlife. Local limits calculations were performed using a receiving stream 7Q10 of 45.04 cfs, 1Q10 of 43.19 cfs, an annual average flow of 322.07 cfs and a stream hardness of 60.8 mg/l as CaCO<sub>3</sub>. 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.

Pollutant loadings from other municipal and industrial dischargers in this stream segment were taken into consideration in developing these limits. Specifically, flow and pollutant loadings from Oxford Tull C Allen WWTP, Talladega Industrial Park and Anniston U S Army Depot were evaluated. Available metal allocations based on water quality concerns were shared between the dischargers. The majority of the pollutant loading was split between the two largest dischargers based on the ratio of their design flows (Anniston and Oxford). Local Limit calculations did not consider NGC Industries because their discharge does not contain the pollutants of concern.

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 by land application. The POTW’s permit application states that they generate 2.35 tons per day of dry sludge and their average influent volume is approximately 9 MGD. Therefore, the facility generates 0.2611 tons per day per million gallons of wastewater treated. This value

was used in the LL-PT spreadsheet. 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 SIU 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.

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 limit is the design capacity of the treatment plant as indicated by the POTW, 10.5 MGD.

#### Organic loading:

The organic loading limit (CBOD<sub>5</sub>) is the design capacity of the treatment plant. This loading was calculated using the design flow of the POTW and an influent CBOD<sub>5</sub> 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.

Revision (1/4/2019):

In this revision Chromium was removed from the list of pollutants limited to domestic levels. Previously this parameter was listed due to sludge disposal concerns. Chromium was eliminated as result of an update to the local limit spreadsheet which removed CFR 503 limits that were not applicable to this pollutant. At the POTW's request a local limit was developed for PCBs in this revision.



TYPE OF TREATMENT =		2
TREATMENT INCLUDE NITIFICATION?		No

SLUDGE DISPOSAL	
DOES THE POTW HAVE SECONDARY CLARIFICATION?	Yes
AVERAGE TONS OF SLUDGE PER DAY (DRY WEIGHT)	2.57
IS SLUDGE LAND APPLIED?	Yes
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/HR) (LBS/D)	12) INHIBITION THRESHOLD 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, TOT RECOVERABLE	697.3132	208.83	488.4832	0	488.4832				488.4832	0.0816	0.0000	439.5615	WATER QUALITY
ARSENIC, TRIVALENT	0.5660	0.1665	0.3995	45	0.7264	0.100	8.7570	0.8567	0.7264	0.0816	0.0000	0.5803	WATER QUALITY
CADMIUM, TOT RECOVERABLE	0.2767	0.07404	0.2027	67	0.6143	1.000	87.5700	0.6521	0.6143	0.2447	0.0058	0.3274	WATER QUALITY
CHROMIUM, TOT RECOVERABLE	88.1129	26.0307	62.0822	82	344.9011	5.000	437.8500	-----	344.9011	4.0783	0.1856	306.5735	WATER QUALITY
CHROMIUM, HEXVALENT	4.1279	1.2273	2.9006	83	17.0625	1.000	87.5700	-----	17.0625	0.0000	0.0000	15.3562	WATER QUALITY
COPPER, TOTAL RECOVERABLE	5.6618	1.52352	4.1383	86	29.5591	1.000	87.5700	25.7000	25.7000	4.8939	0.2244	18.5235	SLUDGE
CYANIDE, FREE	1.9514	0.57492	1.3765	69	4.4402	0.100	8.7570	-----	4.4402	3.2626	0.0688	0.9979	WATER QUALITY
LEAD, TOT RECOVERABLE	2.6564	0.70848	1.9479	61	4.9946	1.000	87.5700	7.0780	4.9946	4.0783	0.0821	0.7509	WATER QUALITY
MERCURY, TOT RECOVERABLE	0.0149	0.0052	0.0097	60	0.0243	0.100	8.7570	0.4883	0.0243	0.0000	0.0000	0.0219	WATER QUALITY
MOLYBDENUM		0						0.3855	0.3855	0.0000	0.0000	-----	SLUDGE
NICKEL, TOT RECOVERABLE	25.3681	6.7953	18.5728	42	32.0220	1.000	87.5700	5.14	5.1400	1.6313	0.3269	2.8636	SLUDGE
PCBs	0.0007	0	0.0007	89	0.0063			0.288764045	0.0063	0.0000	0.0000	0.0057	WATER QUALITY
SILVER, TOT RECOVERABLE	0.4993	0.13359	0.3657	75	1.4629	0.250	21.8925	-----	1.4629	0.8157	0.0245	0.5605	WATER QUALITY
ZINC, TOT RECOVERABLE	85.0923	23.98	61.1123	79	291.0109	1.000	87.5700	48.7975	48.7975	14.8817	0.3023	30.4320	SLUDGE

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 / Q10 x 8.34 x Item 1.
- 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.
- 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. In this case metal loadings from Anniston Army Depot and Talladega Ind Park were considered then the remaining wq based loading was allocated between Anniston and Oxford based on the ratio of their design flows.
- 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.

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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.



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ANTIMONY, TOT RECOVERABLE	140.0990	208.83	-68.7310	0	-68.7310				-68.7310	0.0816	0.0000	-61.9313	WATER QUALITY
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