Pearce, Jennifer

From: Davis, Molly
Sent: Tuesday, November 18, 2014 3:01 PM
To: Hesterlee, Craig
Subject: FW: Atlanta NPDES/MS4 Permits

Citizen is happy with your response – thanks for the help!

From: Robert Schreiber [mailto:robertschreiber2011@msn.com]
Sent: Tuesday, November 18, 2014 3:00 PM
To: Davis, Molly
Subject: Re: Atlanta NPDES/MS4 Permits

Molly,

Thanks for all your answers!

I'll have to keep track of Atlanta's soon-to-be reissued CSO NPDES permits.

I might be back in touch with you at that time.

Bob

From: Davis, Molly
Sent: Tuesday, November 18, 2014 2:50 PM
To: robertschreiber2011@msn.com
Subject: Re: Atlanta NPDES/MS4 Permits

Robert,
Answers to your questions about the City of Atlanta CSO permit are embedded in your email below. The answers are in red font. Let us know if you need clarification on any of the responses. Molly

Molly Davis
Chief, NPDES Permitting Section
US EPA Region 4
61 Forsyth St SW
Atlanta, GA 30303
404-562-9236 (wk)
404-562-9772 (fax)

From: Robert Schreiber [mailto:robertschreiber2011@msn.com]
Sent: Monday, November 17, 2014 2:28 PM
To: Davis, Molly
Subject: Atlanta NPDES/MS4 Permits

Molly Davis – NPDES Permitting

404-562-9236
davis.molly@epa.gov

Dear Ms. Davis,

This is a follow-up to the message that I just left on your voice mail.

My understanding is that you have recently replaced Mr. Maurice Horsey at EPA-R4 as the Section Chief for NPDES permitting.

Generally, I have two question which I would like to discuss with you before you leave on vacation.

1) I have reason to believe that both of the City of Atlanta's CSO NPDES permits which were issued by Ga. EPD do not comply with Federal Regulations.

Both of those permits are due to be re-issued and a draft-permit should be publicized soon.

Around December 4

Rather than address possible deficiencies with an expiring permit, I would like to wait until the new-draft permit is publicized.

a) has EPA reviewed the new-draft?

NO

b) will I be able to get a copy of the new-draft from your office?

YES

2) As one part of complying with its CSO-Consent Decree, Atlanta chose to separate some of the sewer basins that had been combined.

a) Now that the basins are separated, is the separated-stormwater-flow still regulated under what will become the new NPDES permit, or

No, Atlanta's Phase 1 MS4 permit regulates stormwater conveyance

c) is that flow regulated under the city's MS4 permit?

Yes

d) Does the new NPDES permit stipulate which permit regulates the newly-separated flows (either the NPDES or MS4 permits)?

We don't know what will be stipulated in the new permit until it is noticed – separated stormwater flows are regulated by MS4

If you are not able to return my call today, would you please let me know some convenient times during the next couple of days when we can talk.

Thanks in advance for your assistance,

Bob Schreiber

770-847-0127

Pearce, Jennifer

From: Hesterlee, Craig
Sent: Monday, December 29, 2014 3:15 PM
To: Pearce, Jennifer
Subject: FW: 2
Attachments: Atlanta CSO Permits and Example Typical Domestic Wastewater; FW: Atlanta CSO permits; RE: Making Contact; FW: Atlanta NPDES/MS4 Permits; Fw: Atlanta NPDES/MS4 Permits; RE: CSO guidance for NPDES permit writers; RE: CSO guidance for NPDES permit writers; RE: Atlanta CSO update; RE: Atlanta CSO Ambient Metals Data; Atlanta CSOs and metals?; RE: CSO Permit Language; Atlanta CSO meeting; FW: Atlanta CSO Permits

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From: Hesterlee, Craig
Sent: Monday, December 29, 2014 3:09 PM
To: Hesterlee, Craig
Subject: 2

Craig Hesterlee
EPA Region 4
NPDES Permitting and Enforcement Branch
404-562-9749

Pearce, Jennifer

From: Hesterlee, Craig
Sent: Monday, November 24, 2014 3:37 PM
To: Platukyte, Simona
Subject: Atlanta CSO Permits and Example Typical Domestic Wastewater
Attachments: Atlanta_CSO_EAST_001.pdf; Atlanta_CSO_WEST_001.pdf; TN0020982 Draft Permit 2014 Signed.pdf

Attached.

Craig Hesterlee
EPA Region 4
NPDES Permitting and Enforcement Branch
404-562-9749

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000
Noel Holcomb, Commissioner
Carol A. Couch, Ph.D., Director
Environmental Protection Division
404/656-4713

January 31, 2005

Honorable Shirley Franklin, Mayor
City of Atlanta
Suite 5800, City Hall South
55 Trinity Avenue SW
Atlanta, GA 30335-3029

RE: City of Atlanta
East Area and West Area Combined Sewer Overflows (CSOs)
NPDES Permit Nos. GA0037168 and GA0038644

Dear Mayor Franklin:

Pursuant to the Georgia Water Quality Control Act, as amended; the Federal Water Pollution Control Act, as amended; and the Rules and Regulations promulgated thereunder, we have today issued the attached National Pollutant Discharge Elimination System (NPDES) permits for the City of Atlanta's Combined Sewer Overflows.

The Environmental Protection Division held a public meeting and hearing on the draft permits on December 16, 2004. We have included an attachment which addresses the comments received on the draft permits. EPD has made some changes to the draft permits. These changes are specified on the fact sheet addendums which are also enclosed.

Please be advised that on and after the effective date indicated in the attached NPDES permits, the permittee must comply with all the terms, conditions and limitations of these permits.

Sincerely,

Carol A. Couch, Ph.D.
Director

CAC/sbs
Attachments

cc: Environmental Protection Agency
Mr. Rob Hunter - Commissioner of Watershed Management

PERMIT NO. GA0037168

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

City of Atlanta
55 Trinity Avenue, S.W.
Atlanta, Georgia 30335

is authorized to discharge from its East Area CSO treatment facilities located in Atlanta Georgia

1) Intrenchment Creek CSO WQCF - 1510 Key Road, SE 2) Custer Avenue CSO Control Facility – Custer and Woodland Avenue, SE 3) McDaniel Street CSO Control Facility – McDaniel Street and University Avenue, SE

to receiving waters

1) Intrenchment Creek tributary to the South River 2) Intrenchment Creek tributary to the South River 3) Unnamed tributary to the South River in the Ocmulgee River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on January 31, 2005.

This permit and the authorization to discharge shall expire at midnight, January 30, 2010.

Signed this 31st day of January 2005.

Director,
Environmental Protection Division

PART I

A. Conditions

1. Definitions

a. The Federal Act: the Clean Water Act.

b. The State Act: the Water Quality Control Act (O.C.G.A. Chapter 12-5-20, et seq.).

c. The State Rules: the Rules and Regulations for Water Quality Control (Chapter 391-3-6).

d. Code: the Official Code of Georgia Annotated.

e. Federal Consent Decree – CSO Consent Decree Civil Action File No. 1:95-CV-2550-TWT effective September 28, 1998.

f. Combined sewer system (CSS): a sewer system that was designed or constructed for the purpose of allowing surface water run-off to enter the conduit carrying sewage, industrial waste, or other waste. When the conduit exceeds its maximum capacity, it allows a discharge which bypasses the normal treatment works integral to the sewage system and allows a mixture of storm water and untreated or partially treated sewage, industrial waste, or other waste to flow, directly or indirectly, into the waters of the State.

g. Combined sewer overflow (CSO) control facility: a facility designed and constructed to control, treat and release a CSO discharge. Treatment includes screening and disinfection. The facilities will have dechlorination in the future.

h. CSO Water Quality Control Facility (WQCF): a treatment facility providing enhanced primary treatment and disinfection for CSO discharges. The facility will have dechlorination in the future.

i. CSO discharge: that flow which is discharged from the outfall conveyance structure of a CSO Control Facility or CSO WQCF into waters of the State.

j. CSO discharge event: that period of time from the beginning of a CSO discharge from a CSO Control Facility or a CSO WQCF until it ends, which lasts at least fifty (50) minutes, and which occurs not less than forty-eight hours since the end of the last such discharge.

k. Composite sample: a sample consisting of a combination of subsamples collected during the duration of a CSO discharge event. The first subsample shall be collected 50 minutes after the discharge begins and subsequent subsamples are to be collected every 60 minutes thereafter.

l. Design storm event: the level of rainfall used to determine the design and size of the current CSO conveyance structure, the CSO control facilities and the Intrenchment Creek CSO WQCF.

CSO control facilities and CSO WQCF (prior to tunnel and WQCF upgrade)

1) Floatables: as determined by the permittee and approved by the Division, the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 240 MGD for the McDaniel Street CSO control facility and is defined as a rainfall event of 0.8 inches for the Custer Avenue CSO control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B. of this permit is defined as an overflow event with a flow rate less than or equal to the maximum daily flow of the existing CSO control facilities.

CSO control facilities (after tunnel and WQCF upgrade)

1) Floatables: the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 240 MGD for the McDaniel Street CSO control facility and 1000 MGD for the Custer Avenue control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B, of this permit is defined as an overflow event with a flow rate less than or equal to the maximum daily flow of the existing CSO control facilities.

m. Division: the Environmental Protection Division of the Department of Natural Resources.

n. Dry weather flow conditions: hydraulic flow conditions within the CSS resulting from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, or a combination thereof, with no contribution from stormwater.

o. Dry weather overflow: a CSO discharge that occurs during dry weather flow conditions provided that groundwater that infiltrates down gradient of the point at which sewage is diverted to a wastewater treatment facility shall not constitute dry weather overflow for compliance purposes.

p. First flush: the first sixty minutes of a CSO discharge.

q. POTW: publicly owned treatment works.

r. Sampling plan: a plan required to be submitted by the permittee for approval by the Division that, at a minimum, describes the strategies, sampling and monitoring methods, equipment, protocols, record keeping, design, and operational aspects of the CSO control facilities and CSO WQCF that relate to facility compliance and monitoring requirements.

s. Sampling point: the point at which the CSO discharge from the CSO control facilities and the CSO WQCF must meet the terms and conditions in Part II B. of this permit. For purposes of this permit, the approved sampling points are defined in Part II.B.1 and Part II.B.2 unless a different location is identified in the sampling plan approved by the Division.

t. Water quality standards: water quality criteria established to protect designated uses of waters of the State in accordance with the State Rules.

2. Best Management Practices. The permittee shall immediately comply with the following technology-based requirements:

a. The permittee shall implement proper operation and maintenance programs for the combined sewer system and all CSO control facilities and the CSO WQCF to reduce the magnitude, frequency, and duration of CSO discharges. The program shall consider regular combined sewer inspections; sewer, catch basin, and regulator cleaning; equipment and combined sewer system repair or replacement, where necessary, and disconnection of illegal connections.

b. The permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSO discharges.

c. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from non-domestic users.

d. The permittee shall operate the POTW at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSO discharges. The permittee shall deliver all flows to the treatment plant within the constraints of the conveyance capacity of the system and the treatment capacity of the POTW. In addition, the permittee shall operate the CSO WQCF at maximum treatable flow once capacity at the POTW is reached and storage in the collection system is maximized in order to reduce the magnitude, frequency and duration of CSO discharges from the CSO control facilities.

e. Dry weather overflows are prohibited. Each dry weather overflow must be reported to the permitting authority as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

f. The permittee shall implement measures to control and prevent solid and floatable materials in CSO discharges.

g. The permittee shall implement a pollution prevention program focused on reducing the impact of CSO discharges on the receiving waters.

h. The permittee shall implement a public notification process to inform citizens of when and where CSO discharges occur. The process shall include the following:

(1) A public information program to inform the public of the occurrence of CSO discharges into the receiving stream; and

(2) Signs posted in clear view at the CSO control facilities' outfalls, the CSO WQCF outfall, and at all public points of access to the receiving stream for at least the first half mile downstream of the CSO control facilities' and the CSO WQCF outfalls.

i. The permittee shall monitor the outfalls of the CSO control facilities and CSO WQCF in order to evaluate the efficacy of the CSO controls.

PART II

A. Monitoring and Reporting

1. Effluent Toxicity and Biomonitoring Requirements

The permittee shall comply with effluent standards or prohibitions established by Section 307(a) of the Federal Act and with Chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in "concentrations or combinations that are harmful to humans, animals, or aquatic life." If toxicity is suspected in the effluent, the Division may require the permittee to perform any of the following actions:

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

The Division will specify the requirements and methodologies for performing any of these tests or studies, or consider for approval, the methodologies submitted by the permittee. Sample collection shall be representative of the CSO control facility and CSO WQCF hydrograph and shall at a minimum include a sample within the first thirty minutes of discharge and during the declining limb of the hydrograph.

Acute toxicity testing shall be conducted in accordance with "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms", EPA 821-R-02-012, or the most current edition. Unless other concentrations are specified by the

Division, the critical concentration used to determine toxicity in the biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the flow of the CSO discharge during the first flush and the design storm event flow. Samples for toxicity testing are to be taken after the final treatment process. The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the Division with data and evidence to confirm toxicity elimination. When approved by the Division, all study plans and TRE plans will become part of the requirements of this permit.

2. Flow Monitoring

a. The permittee shall have a primary flow measuring device that is correctly installed and operable. Secondary flow measurements must be made using a continuous totalizer and an indicating recorder. Calibration of secondary instruments will be maintained to within 10% of the actual flow. Calibration shall be performed in accordance with accepted engineering practice on a quarterly basis. Records of the calibration checks shall be maintained.

b. If primary and secondary flow instruments malfunction or fail to maintain calibration as required in Part II.A.2.a., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples or as described in the Sampling Plan approved by the Division.

3. Monitoring Procedures

Analytical procedures, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and procedures listed in 40 CFR Part 136 or as approved by the Division in the approved sampling plan. The methods used must be applicable to the concentration ranges of the CSO samples.

4. Detection Limit Requirements

All parameters will be analyzed using the appropriate detection limits as specified by the Division. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "not detected" will be reported for that sample and the detection limit will also be reported.

5. Representative Sampling

Samples and measurements of the monitored waste shall be representative of the volume and nature of the waste stream. The permittee shall maintain a written sampling and monitoring schedule.

6. Reporting

All reports or information submitted in compliance with this permit or requested by the Division must be signed by a principal executive officer, elected official, or other authorized representative. Required analytical results obtained by the permittee shall be summarized on a Combined Sewer Overflow Monitoring Report form and any additional Division specified forms. Monitoring results shall be submitted to the Division postmarked no later than the 15th day of the month following the end of the reporting period. The Division may require in writing that additional monitoring results be reported. Signed copies of these and all other required reports shall be submitted to:

Georgia Environmental Protection Division
Permitting, Compliance and Enforcement Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

7. Record Retention

The permittee shall retain the following records:

a. All laboratory analyses performed including sample data, quality control data, standard curves, etc;

b. Calibration and maintenance records of laboratory instruments;

c. CSO monitoring records;

d. Sewer system operation and maintenance records;

e. Copies of all reports required by this permit; and

f. All data and information used to complete the application for this permit.

These records shall be maintained for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by Division written notification.

B.1. Monitoring Requirements – CSO Control Facilities and CSO WQCF

a) Intrenchment Creek CSO WQCF (001) - Beginning on the effective date of this permit and continuing until the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine [2]	0.1 [3]	See Part II.B.1.d.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[4] 2,000 (daily max) 1,000 (monthly avg)[4] 4,000 (daily max)	See Part II.B.1.d.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken during each CSO discharge event[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] See Part II.D.1 of the permit.

[3] This is a daily maximum limitation.

[4] The permittee shall report the monthly average value in accordance with Part II.B.1.d.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00217[2]	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0104[2]	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Zinc [1]	0.0622[2]	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Lead [1]	Report mg/l for each composite sample	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Nickel [1]	Report mg/l for each composite sample	1/Discharge Event[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports.

B.1. Monitoring Requirements – CSO Control Facilities and CSO WQCF (Continued)

b) Custer Avenue CSO Control Facility (002) - Beginning on the effective date of this permit and continuing until the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility diversion dam on Intrenchment Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.1.d.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.d.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2. of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.d.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Copper[1]	0.0171[2]	12/Year[3]	Composite	Effluent
Total Recoverable Cadmium[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable copper, cadmium, lead, nickel and zinc to the detection limit specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with this limit in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities and CSO WQCF (Continued)

c) McDaniel Street CSO Control Facility (003) - Beginning on the effective date of this permit and continuing until the sewer separation project in this subbasin is complete and approved by EPD, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipes above the juncture with the open channel at the tributary to the South River unless a different location is identified in the sampling plan approved by the Division. Once the sewer separation project in this basin is complete and approved by EPD, this outfall will no longer be covered under this permit and any discharge of sanitary sewage from this outfall will be prohibited.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[3]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	Report mg/l for each grab sample	See Part II.B.1.d.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[2] 2,000 (daily max) 1,000 (monthly avg)[2] 4,000 (daily max)	See Part II.B.1.d.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] The permittee shall report the monthly average value in accordance with Part II.B.1.d.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[3] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00233[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0139[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.104[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

d) Additional Monitoring Requirements and Effluent Limitations for all CSO control facilities and the CSO WQCF (001-003)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from each overflow sampling event from the CSO WQCF and from a minimum of four overflow sampling events per calendar month from each CSO control facility at the Sampling Point during first flush. If fewer than four overflow sampling events occur, then the permittee shall collect a grab sample from each that does occur. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

5) Within 30 days of permit issuance, the permittee shall submit an update of its approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) to the Division for approval. The update is to reflect the new sampling requirements in this permit including the requirement to monitor all discharge events from the Intrenchment Creek CSO WQCF and to sample influent biochemical oxygen demand (5-day) and total suspended solids.

6) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards pursuant to the State Rules and

Chapters 12-5-29.1 and 12-5-30.2 of the Code. See Compliance Schedule for meeting specific water quality standards in Part II.D.2.

e) The CSO discharge(s) from the CSO control facilities and the CSO WQCF must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1. Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2. Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3. Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.I of the permit;

4. Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5. Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

B.2. Monitoring Requirements – CSO WQCF and CSO Control Facilities

a) Intrenchment Creek CSO WQCF (001) - Beginning on the date that the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine[2]	0.1 [3]	See Part II.B.2.c.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[4] 2,000 (daily max) 1,000 (monthly avg)[4] 4,000 (daily max)	See Part II.B.2.c.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples during each CSO discharge event[1].

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] See Part II.D.1. of the permit.

[3] This is a daily maximum limitation.

[4] The permittee shall report the monthly average value in accordance with Part II.B.2.c.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO WQCF and CSO Control Facilities

b) Custer Avenue CSO Control Facility (002) - Beginning on the date that the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility diversion dam on Intrenchment Creek unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event [1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.2.c.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.c.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.
[2] This is a daily maximum limitation. See Part II.D.1. of the permit.
[3] The permittee shall report the monthly average value in accordance with Part II.B.2.c.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

c) Additional Monitoring Requirements and Effluent Limitations for the CSO WQCF and the CSO control facility (001 and 002)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from each CSO overflow sampling event from the CSO WQCF and the CSO control facility. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall perform a scan of the priority pollutants on the CSO WQCF and CSO control facility's effluent once during the term of this permit after the permittee has received written permission to operate the upgraded WQCF. The permittee should attempt to take these samples within 90 days of being given permission to operate the WQCF (if rainfall is adequate to result in overflows from the CSO WQCF and/or the CSO control facility). The permittee shall take the sample as a grab sample. If substances are measured at levels which may be of concern, the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to address the specific pollutants of concern.

5) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

6) The permittee shall update their approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) and receive Division

approval of the updated plan, prior to operation of the upgraded CSO WQCF and the CSO control facilities at their Part II.B.2. limits. The plan is to be updated to reflect the sampling requirements under Part II.B.2 of the permit.

7) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards pursuant to the State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code.

d) The CSO discharge(s) from the CSO WQCF and the CSO control facility must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1) Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2) Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3) Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to 1000 MGD for the Custer Avenue CSO control facility;

4) Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5) Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

e) Upstream and Downstream Monitoring

The permittee shall sample the waters of the State upstream and downstream from the CSO WQCF while it is discharging a minimum of 12 times per year with best efforts to collect samples at least twice during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan. Upstream and downstream samples are to be taken at the representative sampling locations defined in the permittee's sampling plan. The downstream sample is to be collected at a point after adequate mixing of the CSO discharge with the receiving stream. The samples shall be analyzed for the same parameters found in Part II.B.2.a. of the permit (except for flow).

C. Long-Term Control Plan and Metal Limits

The limits for metals found in Part II.B.1.(a-c) were developed using the State's dissolved instream criteria and translation factors that were calculated using data gathered by the permittee during characterization of the CSO discharge. The permittee has also performed some preliminary water-effect ratio (WER) work on copper and zinc for the CSO control facility discharges and is also pursuing a recalculation of the zinc standard for the area of

the CSO discharges. Whole effluent toxicity data indicates that the CSO effluent from the CSO control facilities is not acutely toxic. The WER data indicates that the copper limits could be higher than those in the permit and still be protective of aquatic life. However, there was insufficient data at the time of permit issuance to make any changes to the metal limits based on the WER.

The permittee has developed a long-term control plan to enable it to attain compliance with the requirements of the Clean Water Act including metal limitations. The long-term control plan involves a combination of sewer separation and the construction of additional storage and treatment capacity (i.e. CSO WQCFs) in accordance with the Authorized Revised CSO Remedial Measures Plan. The Intrenchment Creek CSO WQCF provides primary treatment and disinfection and it will be able to store more flow once the upgrade is complete. The storage and treatment of the WQCF and tunnel were designed to provide for the capture and treatment of all but an average of four storm events per year over a five year period. The portion of the CSOs in excess of the capacity of the proposed storage system will be screened, disinfected and discharged from the Custer Avenue CSO control facility (the McDaniel Street CSO control facility is to be separated). The Custer Avenue CSO control facility should only discharge during very large rain events, approximately four times a year.

Once the upgrade to the Intrenchment Creek WQCF is completed and operational, the effluent from the remaining Custer Avenue CSO control facility is predicted to be different than that which was discharged prior to operation of the upgraded CSO. Since discharges will only occur in heavy rain events, the discharge should be more dilute. The permittee will be required to sample for metals during each CSO discharge event from the CSO control facility and the CSO WQCF once the upgraded WQCF is operational. Since the effluent from the CSO control facility is predicted to be different, the site-specific translators used in the calculation of B.1.(a-c) limits and the permittee's preliminary WERs are predicted to change. The permittee is encouraged to collect data for developing site-specific translators and/or water-effect ratios (or other analyses as provided using current EPA Site Specific Criteria Guidance in accordance with Chapter 391-3-6-.06(4)(d)5(ii) of the State Rules) at the same time it collects the metal data required by the permit. Once at least 10 data points are gathered for each metal for the CSO control facility and the CSO WQCF, EPD will use its Reasonable Potential Procedures to determine if effluent limitations for metals are required or whether the monitoring requirements may be reduced or terminated. EPD will use the permittee's translator and/or WER data (if it is found to be acceptable) in the Reasonable Potential analysis and in the development of permit limits if necessary.

D. Compliance Schedules

1. The permittee shall attain compliance with the total residual chlorine limit at the Custer Avenue control facility and the CSO WQCF effective sixty (60) days after the scheduled completion dates of the dechlorination facilities as provided through the Federal Consent Decree or sixty (60) days after EPD's written approval to operate the facilities, whichever is earlier. The total residual chlorine limit may be modified in the future based on monitoring data. This modification would be made through a formal permit modification which would be open to public comment.

2. The permittee intends to attain compliance with the water quality criteria through implementation of the long-term control plan which includes construction of the Custer Avenue CSO Storage and Dechlorination Facility and an upgrade to the

Intrenchment Creek CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. Once the permittee completes construction of the upgrade to the WQCF and receives written permission from EPD to begin to utilize the facility, the permittee will be required to meet the effluent limitations in Part II.B.2. The permittee is not required to meet the monthly average fecal coliform bacteria limits, the pH limits, and the metal limits in Part II.B.1(a-c) of the permit until November 7, 2007. If the permittee has not received EPD written permission to begin discharging from the upgraded WQCF by November 7, 2007, then the permittee will be required to meet the monthly average fecal coliform bacteria limits, the pH, and metal limits in Parts II.B.1. beginning on November 7, 2007. In the event this occurs, once the permittee receives EPD written permission to begin discharging from the upgraded WQCF, the permittee will no longer be subject to the limits under Part II.B.1. (including those for metals), but will become subject to the limits and monitoring requirements under Part II.B.2. The permittee is to meet the following schedule for implementing the long-term control plan:

a) The permittee shall issue notice to begin construction of the upgrade to the Intrenchement Creek WQCF by February 1, 2005.

b) The permittee shall substantially complete construction of the upgrade to the Intrenchment Creek WQCF by February 1, 2007.

c) The permittee shall submit a report of its progress in implementing its long-term control plan and meeting water quality standards each January, April, July and October. The permittee shall send these reports until such time that the CSO WQCF upgrade is operational and water quality criteria are being met.

E. FREQUENCY OF OVERFLOWS AT THE CUSTER AVENUE CSO CONTROL FACILITY AFTER CSO WQCF UPGRADE

The permittee intends to attain compliance with the water quality criteria through implementation of the long-term control plan which includes construction of the Custer Avenue CSO Storage and Dechlorination Facility and an upgrade to the Intrenchment Creek CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. These improvements are predicted to limit the overflows from the Custer Avenue CSO control facility to an average of four times a year over a long-term period. Therefore, from the date that the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF until the expiration of this permit, the Custer Avenue CSO control facility is predicted to have an average of four overflows annually if this period is meteorologically similar to the long term average. If an annual average of four overflows is exceeded in this period, the permittee shall prepare a report explaining the exceedence. This report shall be submitted to the Division within three months following the overflow which causes the annual average to be exceeded for this period. If the exceedence is caused by operation deficiencies, such exceedence shall be a permit violation.

F. PERFORMANCE STANDARDS

The permittee shall update and maintain its existing Management Operations and Maintenance (MOM) plans for the CSO control facilities and the CSO WQCF. These updated plans shall address activities to maintain and operate efficiently all treatment or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Performance standards for Biochemical Oxygen Demand (5-day) and Total Suspended Solids are established below for the CSO WQCF. These standards are to be used as an indication of whether the permittee is operating and maintaining its combined sewer system properly in accordance with the requirements of this permit.

a. Annual removal of Biochemical Oxygen Demand (5-day) of 25%.

b. Annual removal of Total Suspended Solids of 60%.

The permittee will include documentation of performance of the CSO WQCF as part of an annual MOM plan update. If the annual removal of Biochemical Oxygen Demand (5-day) and/or Total Suspended Solids is less than the operational standards specified above, then the permittee is to include an explanation in the annual MOM plan update that explains why this was the case. Should EPD conclude that the failure to meet the operational standards was due to failure by the permittee to operate and maintain its CSO system properly, then this would be considered to be a permit violation.

PART III

A. General Requirements

1. Facilities Operations

The permittee shall maintain and operate efficiently all treatment, or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

2. Power Failures

If the primary source of power is reduced or lost, the permittee shall use an alternative source of power when available, to reduce or control all discharges to maintain permit compliance.

3. Laboratory Analyst and Operator Certification Requirements

a. The person responsible for the daily operation of the CSO WQCF and the CSO control facilities must be a Class I Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and as specified by Subparagraph 391-3-6-.12 of the Rules and Regulations for Water Quality Control. All other operators must have the minimum certification required by this Act.

b. Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended.

4. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;

b. Review and copy any records required by this permit;

c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and

d. Sample any substance or parameter at any location.

5. Availability of Reports

Except for data determined to be confidential by the Director of the Division under Section 12-5-26 of the Code or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at a Division office. Effluent data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

6. Submittal of Information

The permittee shall furnish any information required by the Division to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the Division with requested copies of records required by this permit. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the Division, the permittee shall promptly submit the additional or corrected information.

7. Permit Modification

This permit may be modified, terminated, or revoked and reissued in whole or in part during its term to allow for new or more stringent conditions based on new information for the following reasons;

a. Permit violations;

b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;

c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge

d. Changes in effluent characteristics;

e. Demonstrated performance as determined by the Division;

f. Violations of water quality standards;

g. New information based on stream survey results; or

h. Changes in the water quality standards.

The filing of a request by the permittee for permit modification, termination, revocation and reissuance, or notification of planned changes or anticipated noncompliance does not negate any permit condition.

8. Civil and Criminal Liability

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws including promulgated water quality standards. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

9. Expiration of Permit

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date without written authorization from the Division. To receive this authorization, the permittee shall submit the information, forms, and fees required by the Division no later than 180 days before the expiration date.

10. Severability

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

11. Penalties

Both the Federal and State Acts provide that any person who falsifies or tampers with any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit shall, if convicted, be punished by a fine or by imprisonment or by both. The Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director of the Division.

12. Compliance

a. The permittee must comply with this permit. Any permit noncompliance is a violation of the Federal Act, State Act, and the State Rules, and is grounds for:

1) Enforcement action;

2) Permit termination, revocation and reissuance, or modification; or

3) Denial of a permit renewal application.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

b. If any provision in this permit is found to conflict with the Federal Consent Decree or any of it amendments, then the permittee is required to comply with the Consent Decree instead of the conflicting permit provision.

13. Contested Hearing

Any person aggrieved or adversely affected by any action of the Director of the Division shall petition the Director for a hearing within 30 days of notice of the action.

14. Property Rights

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, or any infringement of Federal, State or local laws or regulations.

PERMIT NO. GA0038644

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

City of Atlanta
55 Trinity Avenue
Atlanta, Georgia 30335

is authorized to discharge from its West Area CSO treatment facilities located in Atlanta Georgia

1) West Area CSO WQCF – 2440 Bolton Road, NW 2) Clear Creek CSO Control Facility – 10th Street and Monroe Drive, NE 3) Proctor Creek – North Avenue CSO Control Facility – North and Finley Avenue, SE 4) Tanyard Creek CSO Control Facility – Deering Road, NW 5) Proctor Creek – Greensferry CSO Control Facility – Troy Street, SW

to receiving waters

1) Chattahoochee River 2) Clear Creek 3) unnamed creek tributary to Proctor Creek 4) Tanyard Creek 5) Proctor Creek all of which are in the Chattahoochee River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on January 31, 2005.

This permit and the authorization to discharge shall expire at midnight, January 30, 2010.

Signed this 31st day of January 2005.

Director,
Environmental Protection Division

PART I

A. Conditions

1. Definitions

a. The Federal Act: the Clean Water Act.

b. The State Act: the Water Quality Control Act (O.C.G.A. Chapter 12-5-20, et seq.).

c. The State Rules: the Rules and Regulations for Water Quality Control (Chapter 391-3-6).

d. Code: the Official Code of Georgia Annotated.

e. Federal Consent Decree – CSO Consent Decree Civil Action File No. 1:95-CV-2550-TWT effective September 28, 1998.

f. Combined sewer system (CSS): a sewer system that was designed or constructed for the purpose of allowing surface water run-off to enter the conduit carrying sewage, industrial waste, or other waste. When the conduit exceeds its maximum capacity, it allows a discharge which bypasses the normal treatment works integral to the sewage system and allows a mixture of storm water and untreated or partially treated sewage, industrial waste, or other waste to flow, directly or indirectly, into the waters of the State.

g. Combined sewer overflow (CSO) control facility: a facility designed and constructed to control, treat and release a CSO discharge. Treatment includes screening and disinfection. The facilities will have dechlorination in the future.

h. CSO Water Quality Control Facility (WQCF): a treatment facility providing enhanced primary treatment, disinfection, and dechlorination for CSO discharges.

i. CSO discharge: that flow which is discharged from the outfall conveyance structure of a CSO Control Facility or CSO WQCF into waters of the State.

j. CSO discharge event: that period of time from the beginning of a CSO discharge from a CSO Control Facility or a CSO WQCF until it ends, which lasts at least fifty (50) minutes, and which occurs not less than forty-eight hours since the end of the last such discharge.

k. Composite sample: a sample consisting of a combination of subsamples collected during the duration of a CSO discharge event. The first subsample shall be collected 50 minutes after the discharge begins and subsequent subsamples are to be collected every 60 minutes thereafter.

l. Design storm event: the level of rainfall used to determine the design and size of the current CSO conveyance structure and the current CSO control

facilities. The design storm event for the CSO control facilities will remain the same after the West Area CSO WQCF is constructed and in operation.

1) Floatables: as determined by the permittee and approved by the Division, the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 2640 MGD for the Clear Creek CSO control facility, 580 MGD for the Proctor Creek - Greensferry CSO control facility, 386 MGD for the Tanyard Creek CSO control facility and 650 MGD for the Proctor Creek – North Avenue CSO control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B. of this permit is defined as an overflow event with a flow rate less than or equal to 7700 MGD for the Clear Creek CSO control facility, 1337 MGD for the Proctor Creek – Greensferry CSO control facility, 3600 MGD for the Tanyard Creek CSO control facility, and 2600 for the Proctor Creek – North Avenue CSO control facility.

m. Division: the Environmental Protection Division of the Department of Natural Resources.

n. Dry weather flow conditions: hydraulic flow conditions within the CSS resulting from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, or a combination thereof, with no contribution from stormwater.

o. Dry weather overflow: a CSO discharge that occurs during dry weather flow conditions provided that groundwater that infiltrates down gradient of the point at which sewage is diverted to a wastewater treatment facility shall not constitute dry weather overflow for compliance purposes.

p. First flush: the first sixty minutes of a CSO discharge.

q. POTW: publicly owned treatment works.

r. Sampling plan: a plan required to be submitted by the permittee for approval by the Division that, at a minimum, describes the strategies, sampling and monitoring methods, equipment, protocols, record keeping, design, and operational aspects of the CSO control facilities and CSO WQCF that relate to facility compliance and monitoring requirements.

s. Sampling point: the point at which the CSO discharge from the CSO control facilities and the CSO WQCF must meet the terms and conditions in Part II B. of this permit. For purposes of this permit, the approved sampling points are defined in Part II.B.1 and Part II.B.2 unless a different location is identified in the sampling plan approved by the Division.

t. Water quality standards: water quality criteria established to protect designated uses of waters of the State in accordance with the State Rules.

2. Best Management Practices. The permittee shall immediately comply with the following technology-based requirements:

   a. The permittee shall implement proper operation and maintenance programs for the combined sewer system and all CSO control facilities and the CSO WQCF to reduce the magnitude, frequency, and duration of CSO discharges. The program shall consider regular combined sewer inspections; sewer, catch basin, and regulator cleaning; equipment and combined sewer system repair or replacement, where necessary, and disconnection of illegal connections.

   b. The permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSO discharges.

   c. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from non-domestic users.

   d. The permittee shall operate the POTW at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSO discharges. The permittee shall deliver all flows to the treatment plant within the constraints of the conveyance capacity of the system and the treatment capacity of the POTW. After construction of the CSO WQCF is complete and EPD has given written permission to discharge, the permittee shall continue to maximize use of the POTW and collection system as described above. In addition, the permittee shall operate the CSO WQCF at maximum treatable flow once capacity at the POTW is reached and storage in the collection system is maximized in order to reduce the magnitude, frequency and duration of CSO discharges from the CSO control facilities.

   e. Dry weather overflows are prohibited. Each dry weather overflow must be reported to the permitting authority as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

   f. The permittee shall implement measures to control and prevent solid and floatable materials in CSO discharges.

   g. The permittee shall implement a pollution prevention program focused on reducing the impact of CSO discharges on the receiving waters.

   h. The permittee shall implement a public notification process to inform citizens of when and where CSO discharges occur. The process shall include the following:

(1) A public information program to inform the public of the occurrence of CSO discharges into the receiving stream; and

(2) Signs posted in clear view at the CSO control facilities' outfalls, the CSO WQCF outfall, and at all public points of access to the receiving stream for at least the first half mile downstream of the CSO control facilities' and the CSO WQCF outfalls.

i. The permittee shall monitor the outfalls of the CSO control facilities and CSO WQCF in order to evaluate the efficacy of the CSO controls.

PART II

A. Monitoring and Reporting

1. Effluent Toxicity and Biomonitoring Requirements

The permittee shall comply with effluent standards or prohibitions established by Section 307(a) of the Federal Act and with Chapter 391- 3-6-.03(5) of the State Rules and may not discharge toxic pollutants in "concentrations or combinations that are harmful to humans, animals, or aquatic life." If toxicity is suspected in the effluent, the Division may require the permittee to perform any of the following actions:

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

The Division will specify the requirements and methodologies for performing any of these tests or studies, or consider for approval, the methodologies submitted by the permittee. Sample collection shall be representative of the CSO control facility and CSO WQCF hydrograph and shall at a minimum include a sample within the first thirty minutes of discharge and during the declining limb of the hydrograph.

Acute toxicity testing shall be conducted in accordance with "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms", EPA 821-R-02-012, or the most current edition. Unless other concentrations are specified by the Division, the critical concentration used to determine toxicity in the biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the flow of the CSO discharge during the first flush and the design storm event flow. Samples for toxicity testing are to be taken after the final treatment process. The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test

organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the Division with data and evidence to confirm toxicity elimination. When approved by the Division, all study plans and TRE plans will become part of the requirements of this permit.

2. Flow Monitoring

a. The permittee shall have a primary flow measuring device that is correctly installed and operable. Secondary flow measurements must be made using a continuous totalizer and an indicating recorder. Calibration of secondary instruments will be maintained to within 10% of the actual flow. Calibration shall be performed in accordance with accepted engineering practice on a quarterly basis. Records of the calibration checks shall be maintained.

b. If primary and secondary flow instruments malfunction or fail to maintain calibration as required in Part II.A.2.a., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples or as described in the approved sampling plan.

3. Monitoring Procedures

Analytical procedures, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and procedures listed in 40 CFR Part 136 or as approved by the Division in the approved sampling plan. The methods used must be applicable to the concentration ranges of the CSO samples.

4. Detection Limit Requirements

All parameters will be analyzed using the appropriate detection limits as specified by the Division. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "not detected" will be reported for that sample and the detection limit will also be reported.

5. Representative Sampling

Samples and measurements of the monitored waste shall be representative of the volume and nature of the waste stream. The permittee shall maintain a written sampling and monitoring schedule.

6. Reporting

All reports or information submitted in compliance with this permit or requested by the Division must be signed by a principal executive officer, elected official, or other authorized representative. Required analytical results obtained by the permittee shall be summarized on a Combined Sewer Overflow Monitoring Report form and any additional Division specified forms. Monitoring results shall be submitted to the Division postmarked no later than the 15th day of the month following the end of the reporting period. The Division may require in writing that additional monitoring results

be reported. Signed copies of these and all other required reports shall be submitted to:

Georgia Environmental Protection Division
Permitting, Compliance and Enforcement Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

7. Record Retention

The permittee shall retain the following records:

a. All laboratory analyses performed including sample data, quality control data, standard curves, etc;

b. Calibration and maintenance records of laboratory instruments;

c. CSO monitoring records;

d. Sewer system operation and maintenance records;

e. Copies of all reports required by this permit; and

f. All data and information used to complete the application for this permit.

These records shall be maintained for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by Division written notification.

B.1. Monitoring Requirements – CSO Control Facilities

a) Clear Creek CSO Control Facility (002) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge box culvert above the juncture with Clear Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00817[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0195[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.194[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

b) Proctor Creek – North Avenue CSO Control Facility (003) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipe above the juncture of the discharge into the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00882[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0247[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, lead, nickel and zinc to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

c) Tanyard Creek CSO Control Facility (004) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each measured CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00356[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0173[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.172[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

d) Proctor Creek – Greensferry CSO Control Facility (005) - Beginning on the effective date of this permit and continuing until the sewer separation project in this subbasin is complete and approved by EPD, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility at the foot bridge over the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division. Once the sewer separation project in this basin is complete and approved by EPD, this outfall will no longer be covered under this permit and any discharge of sanitary sewage from this outfall will be prohibited.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each measured CSO discharge event and total hours of discharge	Each Discharge Event[3]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	Report mg/l for each grab sample	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[2] 2,000 (daily max) 1,000 (monthly avg)[2] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[3] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00458[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0111[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, lead, nickel and zinc to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

e) Additional Monitoring Requirements and Effluent Limitations for all CSO control facilities (002-005)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from a minimum of four overflow sampling events per calendar month from each CSO control facility at the Sampling Point during first flush. If fewer than four overflow sampling events occur, then the permittee shall collect a grab sample from each that does occur. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

5) Within 30 days of permit issuance, the permittee shall submit an update of its approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) to the Division for approval. The update is to reflect any new sampling requirements under Part II.B.1 of this permit.

6) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards, at flow rates less than or equal to 7700 MGD for the Clear Creek CSO Control Facility, 2600 MGD for the Proctor Creek – North Avenue CSO Control Facility, 3600 MGD for the Tanyard Creek CSO Control Facility, and 1337 MGD for the Proctor Creek – Greensferry CSO Control Facility pursuant to the

State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code. See the Compliance Schedule for meeting specific water quality standards in Part II.D.2.

f) The CSO discharge(s) from the CSO control facilities must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1. Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2. Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3. Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.l of the permit;

4. Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5. Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

B.2. Monitoring Requirements – CSO WQCF

a) West Area CSO WQCF (001) - Beginning on the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is after the final treatment process and prior to discharge to the Chattahoochee River unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken during each CSO discharge event[1].

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

b) Clear Creek CSO Control Facility (002) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge box culvert above the juncture with Clear Creek unless a different location is identified in a sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/ Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

c) Proctor Creek – North Avenue CSO Control Facility (003) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipe above the juncture of the discharge into the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

d) Tanyard Creek CSO Control Facility (004) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

e) Additional Monitoring Requirements and Effluent Limitations for the CSO WQCF and the CSO control facilities (001-004)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling:

The permittee shall collect a grab sample from each CSO overflow sampling event from the CSO WQCF and the CSO control facilities. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall perform a scan of the priority pollutants on the CSO WQCF and CSO control facilities' effluent once during the term of this permit after the permittee has received written permission to operate the WQCF. The permittee should attempt to take these samples within 90 days of being given permission to operate the WQCF (if rainfall is adequate to result in overflows from the CSO WQCF and/or the CSO control facilities). The permittee shall take the sample as a grab sample. If substances are measured at levels which may be of concern, the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to address the specific pollutants of concern.

5) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

6) The permittee shall update their approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) and receive Division approval of the updated plan, prior to operation of the CSO WQCF and the CSO control facilities at their Part II.B.2. limits. The plan is to be updated to reflect the sampling requirements under Part II.B.2 of the permit.

7) The CSO discharge(s) must not cause or contribute to violation of the Georgia water quality standards, at flow rates less than or equal to 7700 MGD for the Clear Creek CSO Control Facility, 2600 MGD for the Proctor Creek – North Avenue CSO Control Facility, and 3600 MGD for the Tanyard Creek CSO Control Facility, pursuant to the State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code.

f) The CSO discharge(s) from the CSO WQCF and the CSO control facilities must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1) Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2) Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3) Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.l of the permit;

4) Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5) Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

g) Upstream and Downstream Monitoring

The permittee shall sample the waters of the State upstream and downstream from the CSO WQCF while it is discharging a minimum of 12 times per year with best efforts to collect samples at least twice during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan. Upstream and downstream samples are to be taken at the representative sampling locations defined in the permittee's sampling plan. The downstream sample is to be collected at a point after adequate mixing of the CSO discharge with the receiving stream. The samples shall be analyzed for the same parameters found in Part II.B.2.a. of the permit (except for flow).

C. Long-Term Control Plan and Metal Limits

The limits for metals found in Part II.B.1.(a-d) were developed using the State's dissolved instream criteria and translation factors that were calculated using data gathered by the permittee during characterization of the CSO discharge. The permittee has also performed some preliminary water-effect ratio (WER) work on copper and zinc for the CSO control facility discharges and is also pursuing a recalculation of the zinc standard for the area of the CSO discharges. Whole effluent toxicity data indicates that the CSO effluent from the CSO control facilities is not acutely toxic. The WER data indicates that the copper limits could be higher than those in the permit and still be protective of aquatic life. However, there was insufficient data at the time of permit issuance to make any changes to the metal limits based on the WER.

The permittee has developed a long-term control plan to enable it to attain compliance with the requirements of the Clean Water Act including metal limitations. The long-term control plan involves a combination of sewer separation and the construction of additional storage and treatment capacity (i.e. West Area CSO WQCF) in accordance with the Authorized Revised CSO Remedial Measures Plan. The CSO WQCF will provide enhanced primary treatment and disinfection. The storage and treatment component of the WQCF and tunnel were designed to provide for the capture and treatment of all but an average of four storm events per year over a five year period. The portion of the CSOs in excess of the capacity of the proposed storage system will be screened, disinfected and discharged to the local streams through the remaining CSO control facilities (except for any that are separated as part of the plan). The CSO control facilities should only discharge during very large rain events, approximately four times a year as described above.

Once the WQCF is constructed and operational, the effluent from the remaining CSO control facilities is predicted to be different than that which was discharged prior to CSO WQCF operation. Since discharges will only occur in heavy rain events, the discharge should be more dilute. The permittee will be required to sample for metals during each CSO discharge event from the CSO control facilities and the CSO WQCF once the WQCF is operational. Since the effluent from the CSO control facilities is predicted to be different, the site-specific translators used in the calculation of B.1.(a-d) limits and the permittee's preliminary WERs are predicted to change. The permittee is encouraged to collect data for developing site-specific translators and/or water-effect ratios (or other analyses as provided using current EPA Site Specific Criteria Guidance in accordance with Chapter 391-3-6-.06(4)(d)5(ii) of the State Rules) at the same time it collects the metal data required by the permit. Once at least 10 data points are gathered for each metal for the CSO control facilities and the CSO WQCF, EPD will use its Reasonable Potential Procedures to determine if effluent limitations for metals are required or whether the monitoring requirements may be reduced or terminated. EPD will use the permittee's translator and/or WER data (if it is found to be acceptable) in the Reasonable Potential analysis and in the development of permit limits if necessary.

D. Compliance Schedules

1. The permittee shall attain compliance with the total residual chlorine limit at the CSO control facilities (other than Proctor Creek – Greensferry control facility) and the CSO WQCF effective sixty (60) days after the scheduled completion dates of the dechlorination facilities as provided through the Federal Consent Decree or sixty (60)

days after EPD's written approval to operate the facilities, whichever is earlier. The total residual chlorine limit may be modified in the future based on monitoring data. This modification would be made through a formal permit modification which would be open to public comment.

2. The permittee intends to attain compliance with the water quality criteria through implementation of the long-term control plan which includes construction of the West Area CSO Storage Tunnel and Pumping Station and CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. Once the permittee completes construction of the WQCF and receives written permission from EPD to begin to utilize the facility, the permittee will be required to meet the effluent limitations in Part II.B.2. The permittee is not required to meet the monthly average fecal coliform bacteria limits, the pH limits and the metal limits in Part II.B.1(a-d) of the permit until November 7, 2007. If the permittee has not received EPD written permission to begin discharging from the WQCF by November 7, 2007, then the permittee will be required to meet the monthly average fecal coliform bacteria limits, the pH and metal limits in Parts II.B.1. beginning on November 7, 2007. In the event this occurs, once the permittee receives EPD written permission to begin discharging from the WQCF, the permittee will no longer be subject to the limits under Part II.B.1. (including those for metals), but will become subject to the limits and monitoring requirements under Part II.B.2. The permittee is to meet the following schedule for implementing the long-term control plan:

   a) The permittee is to submit plans and specifications for the WQCF by March 5, 2005.

   b) The permittee shall issue the notice to begin construction of the WQCF by September 1, 2005.

   c) The permittee shall substantially complete construction of the WQCF by October 15, 2007.

   d) The permittee shall submit a report of its progress in implementing its long-term control plan and meeting water quality standards each January, April, July and October. The permittee shall send these reports until such time that the CSO WQCF is operational and water quality criteria are being met.

E. FREQUENCY OF OVERFLOWS AT THE CSO CONTROL FACILITIES AFTER CSO WQCF CONSTRUCTION

The permittee intends to attain compliance with the water quality criteria though implemenation of the long-term control plan which includes construction of the West Area CSO Storage Tunnel and Pumping Station and the West Area CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. These improvements are predicted to limit the overflows from the remaining CSO Control Facilities (Clear Creek, Proctor Creek – North Avenue, Tanyard Creek) to an average of four times a year over a long-term period. Therefore, from the date that the construction of the West Area CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF until the expiration of this permit, the remaining control facilities are predicted to each have an average of four overflows annually if this period is

meteorologically similar to the long term average. If an annual average of four overflows is exceeded at any location in this period, the permittee shall prepare a report explaining the exceedence. This report shall be submitted to the Division within three months following the overflow which causes the annual average to be exceeded for this period. If the exceedence is caused by operation deficiencies, such exceedence shall be a permit violation.

F. PERFORMANCE STANDARDS

The permittee shall update and maintain its existing Management Operations and Maintenance (MOM) plans for the CSO control facilities and the CSO WQCF. These updated plans shall address activities to maintain and operate efficiently all treatment or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Performance standards for Biochemical Oxygen Demand (5-day) and Total Suspended Solids are established below for the CSO WQCF. These standards are to be used as an indication of whether the permittee is operating and maintaining its combined sewer system properly in accordance with the requirements of this permit.

a. Annual removal of Biochemical Oxygen Demand (5-day) of 25%.

b. Annual removal of Total Suspended Solids of 60%.

The permittee will include documentation of performance of the CSO WQCF as part of an annual MOM plan update. If the annual removal of Biochemical Oxygen Demand (5-day) and/or Total Suspended Solids is less than the operational standards specified above, then the permittee is to include an explanation in the annual MOM plan update that explains why this was the case. Should EPD conclude that the failure to meet the operational standards was due to failure by the permittee to operate and maintain its CSO system properly, then this would be considered to be a permit violation.

PART III

A. General Requirements

1. Facilities Operations

The permittee shall maintain and operate efficiently all treatment, or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

2. Power Failures

If the primary source of power is reduced or lost, the permittee shall use an alternative source of power when available, to reduce or control all discharges to maintain permit compliance.

3. Laboratory Analyst and Operator Certification Requirements

a. The person responsible for the daily operation of the CSO WQCF (once operational) and the CSO control facilities must be a Class I Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and as specified by Subparagraph 391-3-6-.12 of the Rules and Regulations for Water Quality Control. All other operators must have the minimum certification required by this Act.

b. Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended.

4. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;

b. Review and copy any records required by this permit;

c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and

d. Sample any substance or parameter at any location.

5. Availability of Reports

Except for data determined to be confidential by the Director of the Division under Section 12-5-26 of the Code or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at a Division office. Effluent data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

6. Submittal of Information

The permittee shall furnish any information required by the Division to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the Division with requested copies of records required by this permit. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the Division, the permittee shall promptly submit the additional or corrected information.

7. Permit Modification

This permit may be modified, terminated, or revoked and reissued in whole or in part during its term to allow for new or more stringent conditions based on new information for the following reasons;

a. Permit violations;

b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;

c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge

d. Changes in effluent characteristics;

e. Demonstrated performance as determined by the Division;

f. Violations of water quality standards;

g. New information based on stream survey results; or

h. Changes in the water quality standards.

The filing of a request by the permittee for permit modification, termination, revocation and reissuance, or notification of planned changes or anticipated noncompliance does not negate any permit condition.

8. Civil and Criminal Liability

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws including promulgated water quality standards. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

9. Expiration of Permit

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date without written authorization from the Division. To receive this authorization, the permittee shall submit the information, forms, and fees required by the Division no later than 180 days before the expiration date.

10. Severability

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

11. Penalties

Both the Federal and State Acts provide that any person who falsifies or tampers with any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit shall, if convicted, be punished by a fine or by imprisonment or by both. The Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director of the Division.

12. Compliance

a. The permittee must comply with this permit. Any permit noncompliance is a violation of the Federal Act, State Act, and the State Rules, and is grounds for:

1) Enforcement action;

2) Permit termination, revocation and reissuance, or modification; or

3) Denial of a permit renewal application.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

b. If any provision in this permit is found to conflict with the Federal Consent Decree or any of it amendments, then the permittee is required to comply with the Consent Decree instead of the conflicting permit provision.

13. Contested Hearing

Any person aggrieved or adversely affected by any action of the Director of the Division shall petition the Director for a hearing within 30 days of notice of the action.

14. Property Rights

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, or any infringement of Federal, State or local laws or regulations.

PERMIT NO. GA0038644

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

City of Atlanta
55 Trinity Avenue
Atlanta, Georgia 30335

is authorized to discharge from its West Area CSO treatment facilities located in Atlanta Georgia

1) West Area CSO WQCF – 2440 Bolton Road, NW 2) Clear Creek CSO Control Facility – 10th Street and Monroe Drive, NE 3) Proctor Creek – North Avenue CSO Control Facility – North and Finley Avenue, SE 4) Tanyard Creek CSO Control Facility – Deering Road, NW 5) Proctor Creek – Greensferry CSO Control Facility – Troy Street, SW

to receiving waters

1) Chattahoochee River 2) Clear Creek 3) unnamed creek tributary to Proctor Creek 4) Tanyard Creek 5) Proctor Creek all of which are in the Chattahoochee River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on January 31, 2005.

This permit and the authorization to discharge shall expire at midnight, January 30, 2010.

Signed this 31st day of January 2005.

Director,
Environmental Protection Division

PART I

A. Conditions

1. Definitions

a. The Federal Act: the Clean Water Act.

b. The State Act: the Water Quality Control Act (O.C.G.A. Chapter 12-5-20, et seq.).

c. The State Rules: the Rules and Regulations for Water Quality Control (Chapter 391-3-6).

d. Code: the Official Code of Georgia Annotated.

e. Federal Consent Decree – CSO Consent Decree Civil Action File No. 1:95-CV-2550-TWT effective September 28, 1998.

f. Combined sewer system (CSS): a sewer system that was designed or constructed for the purpose of allowing surface water run-off to enter the conduit carrying sewage, industrial waste, or other waste. When the conduit exceeds its maximum capacity, it allows a discharge which bypasses the normal treatment works integral to the sewage system and allows a mixture of storm water and untreated or partially treated sewage, industrial waste, or other waste to flow, directly or indirectly, into the waters of the State.

g. Combined sewer overflow (CSO) control facility: a facility designed and constructed to control, treat and release a CSO discharge. Treatment includes screening and disinfection. The facilities will have dechlorination in the future.

h. CSO Water Quality Control Facility (WQCF): a treatment facility providing enhanced primary treatment, disinfection, and dechlorination for CSO discharges.

i. CSO discharge: that flow which is discharged from the outfall conveyance structure of a CSO Control Facility or CSO WQCF into waters of the State.

j. CSO discharge event: that period of time from the beginning of a CSO discharge from a CSO Control Facility or a CSO WQCF until it ends, which lasts at least fifty (50) minutes, and which occurs not less than forty-eight hours since the end of the last such discharge.

k. Composite sample: a sample consisting of a combination of subsamples collected during the duration of a CSO discharge event. The first subsample shall be collected 50 minutes after the discharge begins and subsequent subsamples are to be collected every 60 minutes thereafter.

l. Design storm event: the level of rainfall used to determine the design and size of the current CSO conveyance structure and the current CSO control

facilities. The design storm event for the CSO control facilities will remain the same after the West Area CSO WQCF is constructed and in operation.

1) Floatables: as determined by the permittee and approved by the Division, the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 2640 MGD for the Clear Creek CSO control facility, 580 MGD for the Proctor Creek - Greensferry CSO control facility, 386 MGD for the Tanyard Creek CSO control facility and 650 MGD for the Proctor Creek – North Avenue CSO control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B. of this permit is defined as an overflow event with a flow rate less than or equal to 7700 MGD for the Clear Creek CSO control facility, 1337 MGD for the Proctor Creek – Greensferry CSO control facility, 3600 MGD for the Tanyard Creek CSO control facility, and 2600 for the Proctor Creek – North Avenue CSO control facility.

m. Division: the Environmental Protection Division of the Department of Natural Resources.

n. Dry weather flow conditions: hydraulic flow conditions within the CSS resulting from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, or a combination thereof, with no contribution from stormwater.

o. Dry weather overflow: a CSO discharge that occurs during dry weather flow conditions provided that groundwater that infiltrates down gradient of the point at which sewage is diverted to a wastewater treatment facility shall not constitute dry weather overflow for compliance purposes.

p. First flush: the first sixty minutes of a CSO discharge.

q. POTW: publicly owned treatment works.

r. Sampling plan: a plan required to be submitted by the permittee for approval by the Division that, at a minimum, describes the strategies, sampling and monitoring methods, equipment, protocols, record keeping, design, and operational aspects of the CSO control facilities and CSO WQCF that relate to facility compliance and monitoring requirements.

s. Sampling point: the point at which the CSO discharge from the CSO control facilities and the CSO WQCF must meet the terms and conditions in Part II B. of this permit. For purposes of this permit, the approved sampling points are defined in Part II.B.1 and Part II.B.2 unless a different location is identified in the sampling plan approved by the Division.

t. Water quality standards: water quality criteria established to protect designated uses of waters of the State in accordance with the State Rules.

2. Best Management Practices. The permittee shall immediately comply with the following technology-based requirements:

   a. The permittee shall implement proper operation and maintenance programs for the combined sewer system and all CSO control facilities and the CSO WQCF to reduce the magnitude, frequency, and duration of CSO discharges. The program shall consider regular combined sewer inspections; sewer, catch basin, and regulator cleaning; equipment and combined sewer system repair or replacement, where necessary, and disconnection of illegal connections.

   b. The permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSO discharges.

   c. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from non-domestic users.

   d. The permittee shall operate the POTW at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSO discharges. The permittee shall deliver all flows to the treatment plant within the constraints of the conveyance capacity of the system and the treatment capacity of the POTW. After construction of the CSO WQCF is complete and EPD has given written permission to discharge, the permittee shall continue to maximize use of the POTW and collection system as described above. In addition, the permittee shall operate the CSO WQCF at maximum treatable flow once capacity at the POTW is reached and storage in the collection system is maximized in order to reduce the magnitude, frequency and duration of CSO discharges from the CSO control facilities.

   e. Dry weather overflows are prohibited. Each dry weather overflow must be reported to the permitting authority as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

   f. The permittee shall implement measures to control and prevent solid and floatable materials in CSO discharges.

   g. The permittee shall implement a pollution prevention program focused on reducing the impact of CSO discharges on the receiving waters.

   h. The permittee shall implement a public notification process to inform citizens of when and where CSO discharges occur. The process shall include the following:

(1) A public information program to inform the public of the occurrence of CSO discharges into the receiving stream; and

(2) Signs posted in clear view at the CSO control facilities' outfalls, the CSO WQCF outfall, and at all public points of access to the receiving stream for at least the first half mile downstream of the CSO control facilities' and the CSO WQCF outfalls.

i. The permittee shall monitor the outfalls of the CSO control facilities and CSO WQCF in order to evaluate the efficacy of the CSO controls.

PART II

A. Monitoring and Reporting

1. Effluent Toxicity and Biomonitoring Requirements

The permittee shall comply with effluent standards or prohibitions established by Section 307(a) of the Federal Act and with Chapter 391- 3-6-.03(5) of the State Rules and may not discharge toxic pollutants in "concentrations or combinations that are harmful to humans, animals, or aquatic life." If toxicity is suspected in the effluent, the Division may require the permittee to perform any of the following actions:

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

The Division will specify the requirements and methodologies for performing any of these tests or studies, or consider for approval, the methodologies submitted by the permittee. Sample collection shall be representative of the CSO control facility and CSO WQCF hydrograph and shall at a minimum include a sample within the first thirty minutes of discharge and during the declining limb of the hydrograph.

Acute toxicity testing shall be conducted in accordance with "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms", EPA 821-R-02-012, or the most current edition. Unless other concentrations are specified by the Division, the critical concentration used to determine toxicity in the biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the flow of the CSO discharge during the first flush and the design storm event flow. Samples for toxicity testing are to be taken after the final treatment process. The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test

organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the Division with data and evidence to confirm toxicity elimination. When approved by the Division, all study plans and TRE plans will become part of the requirements of this permit.

2. Flow Monitoring

a. The permittee shall have a primary flow measuring device that is correctly installed and operable. Secondary flow measurements must be made using a continuous totalizer and an indicating recorder. Calibration of secondary instruments will be maintained to within 10% of the actual flow. Calibration shall be performed in accordance with accepted engineering practice on a quarterly basis. Records of the calibration checks shall be maintained.

b. If primary and secondary flow instruments malfunction or fail to maintain calibration as required in Part II.A.2.a., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples or as described in the approved sampling plan.

3. Monitoring Procedures

Analytical procedures, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and procedures listed in 40 CFR Part 136 or as approved by the Division in the approved sampling plan. The methods used must be applicable to the concentration ranges of the CSO samples.

4. Detection Limit Requirements

All parameters will be analyzed using the appropriate detection limits as specified by the Division. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "not detected" will be reported for that sample and the detection limit will also be reported.

5. Representative Sampling

Samples and measurements of the monitored waste shall be representative of the volume and nature of the waste stream. The permittee shall maintain a written sampling and monitoring schedule.

6. Reporting

All reports or information submitted in compliance with this permit or requested by the Division must be signed by a principal executive officer, elected official, or other authorized representative. Required analytical results obtained by the permittee shall be summarized on a Combined Sewer Overflow Monitoring Report form and any additional Division specified forms. Monitoring results shall be submitted to the Division postmarked no later than the 15th day of the month following the end of the reporting period. The Division may require in writing that additional monitoring results

be reported. Signed copies of these and all other required reports shall be submitted to:

Georgia Environmental Protection Division
Permitting, Compliance and Enforcement Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

7. Record Retention

The permittee shall retain the following records:

a. All laboratory analyses performed including sample data, quality control data, standard curves, etc;

b. Calibration and maintenance records of laboratory instruments;

c. CSO monitoring records;

d. Sewer system operation and maintenance records;

e. Copies of all reports required by this permit; and

f. All data and information used to complete the application for this permit.

These records shall be maintained for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by Division written notification.

B.1. Monitoring Requirements – CSO Control Facilities

a) Clear Creek CSO Control Facility (002) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge box culvert above the juncture with Clear Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00817[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0195[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.194[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

b) Proctor Creek – North Avenue CSO Control Facility (003) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipe above the juncture of the discharge into the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00882[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0247[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, lead, nickel and zinc to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

c) Tanyard Creek CSO Control Facility (004) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each measured CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00356[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0173[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.172[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

d) Proctor Creek – Greensferry CSO Control Facility (005) - Beginning on the effective date of this permit and continuing until the sewer separation project in this subbasin is complete and approved by EPD, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility at the foot bridge over the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division. Once the sewer separation project in this basin is complete and approved by EPD, this outfall will no longer be covered under this permit and any discharge of sanitary sewage from this outfall will be prohibited.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each measured CSO discharge event and total hours of discharge	Each Discharge Event[3]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	Report mg/l for each grab sample	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[2] 2,000 (daily max) 1,000 (monthly avg)[2] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[3] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00458[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0111[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, lead, nickel and zinc to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

e) Additional Monitoring Requirements and Effluent Limitations for all CSO control facilities (002-005)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from a minimum of four overflow sampling events per calendar month from each CSO control facility at the Sampling Point during first flush. If fewer than four overflow sampling events occur, then the permittee shall collect a grab sample from each that does occur. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

5) Within 30 days of permit issuance, the permittee shall submit an update of its approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) to the Division for approval. The update is to reflect any new sampling requirements under Part II.B.1 of this permit.

6) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards, at flow rates less than or equal to 7700 MGD for the Clear Creek CSO Control Facility, 2600 MGD for the Proctor Creek – North Avenue CSO Control Facility, 3600 MGD for the Tanyard Creek CSO Control Facility, and 1337 MGD for the Proctor Creek – Greensferry CSO Control Facility pursuant to the

State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code. See the Compliance Schedule for meeting specific water quality standards in Part II.D.2.

f) The CSO discharge(s) from the CSO control facilities must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1. Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2. Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3. Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.l of the permit;

4. Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5. Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

B.2. Monitoring Requirements – CSO WQCF

a) West Area CSO WQCF (001) - Beginning on the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is after the final treatment process and prior to discharge to the Chattahoochee River unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken during each CSO discharge event[1].

(1) The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

(2) This is a daily maximum limitation. See Part II.D.1. of the permit.

(3) The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

b) Clear Creek CSO Control Facility (002) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge box culvert above the juncture with Clear Creek unless a different location is identified in a sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/ Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

c) Proctor Creek – North Avenue CSO Control Facility (003) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipe above the juncture of the discharge into the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

d) Tanyard Creek CSO Control Facility (004) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

e) Additional Monitoring Requirements and Effluent Limitations for the CSO WQCF and the CSO control facilities (001-004)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling:

The permittee shall collect a grab sample from each CSO overflow sampling event from the CSO WQCF and the CSO control facilities. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall perform a scan of the priority pollutants on the CSO WQCF and CSO control facilities' effluent once during the term of this permit after the permittee has received written permission to operate the WQCF. The permittee should attempt to take these samples within 90 days of being given permission to operate the WQCF (if rainfall is adequate to result in overflows from the CSO WQCF and/or the CSO control facilities). The permittee shall take the sample as a grab sample. If substances are measured at levels which may be of concern, the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to address the specific pollutants of concern.

5) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

6) The permittee shall update their approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) and receive Division approval of the updated plan, prior to operation of the CSO WQCF and the CSO control facilities at their Part II.B.2. limits. The plan is to be updated to reflect the sampling requirements under Part II.B.2 of the permit.

7) The CSO discharge(s) must not cause or contribute to violation of the Georgia water quality standards, at flow rates less than or equal to 7700 MGD for the Clear Creek CSO Control Facility, 2600 MGD for the Proctor Creek – North Avenue CSO Control Facility, and 3600 MGD for the Tanyard Creek CSO Control Facility, pursuant to the State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code.

f) The CSO discharge(s) from the CSO WQCF and the CSO control facilities must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1) Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2) Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3) Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.l of the permit;

4) Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5) Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

g) Upstream and Downstream Monitoring

The permittee shall sample the waters of the State upstream and downstream from the CSO WQCF while it is discharging a minimum of 12 times per year with best efforts to collect samples at least twice during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan. Upstream and downstream samples are to be taken at the representative sampling locations defined in the permittee's sampling plan. The downstream sample is to be collected at a point after adequate mixing of the CSO discharge with the receiving stream. The samples shall be analyzed for the same parameters found in Part II.B.2.a. of the permit (except for flow).

C. Long-Term Control Plan and Metal Limits

The limits for metals found in Part II.B.1.(a-d) were developed using the State's dissolved instream criteria and translation factors that were calculated using data gathered by the permittee during characterization of the CSO discharge. The permittee has also performed some preliminary water-effect ratio (WER) work on copper and zinc for the CSO control facility discharges and is also pursuing a recalculation of the zinc standard for the area of the CSO discharges. Whole effluent toxicity data indicates that the CSO effluent from the CSO control facilities is not acutely toxic. The WER data indicates that the copper limits could be higher than those in the permit and still be protective of aquatic life. However, there was insufficient data at the time of permit issuance to make any changes to the metal limits based on the WER.

The permittee has developed a long-term control plan to enable it to attain compliance with the requirements of the Clean Water Act including metal limitations. The long-term control plan involves a combination of sewer separation and the construction of additional storage and treatment capacity (i.e. West Area CSO WQCF) in accordance with the Authorized Revised CSO Remedial Measures Plan. The CSO WQCF will provide enhanced primary treatment and disinfection. The storage and treatment component of the WQCF and tunnel were designed to provide for the capture and treatment of all but an average of four storm events per year over a five year period. The portion of the CSOs in excess of the capacity of the proposed storage system will be screened, disinfected and discharged to the local streams through the remaining CSO control facilities (except for any that are separated as part of the plan). The CSO control facilities should only discharge during very large rain events, approximately four times a year as described above.

Once the WQCF is constructed and operational, the effluent from the remaining CSO control facilities is predicted to be different than that which was discharged prior to CSO WQCF operation. Since discharges will only occur in heavy rain events, the discharge should be more dilute. The permittee will be required to sample for metals during each CSO discharge event from the CSO control facilities and the CSO WQCF once the WQCF is operational. Since the effluent from the CSO control facilities is predicted to be different, the site-specific translators used in the calculation of B.1.(a-d) limits and the permittee's preliminary WERs are predicted to change. The permittee is encouraged to collect data for developing site-specific translators and/or water-effect ratios (or other analyses as provided using current EPA Site Specific Criteria Guidance in accordance with Chapter 391-3-6-.06(4)(d)5(ii) of the State Rules) at the same time it collects the metal data required by the permit. Once at least 10 data points are gathered for each metal for the CSO control facilities and the CSO WQCF, EPD will use its Reasonable Potential Procedures to determine if effluent limitations for metals are required or whether the monitoring requirements may be reduced or terminated. EPD will use the permittee's translator and/or WER data (if it is found to be acceptable) in the Reasonable Potential analysis and in the development of permit limits if necessary.

D. Compliance Schedules

1. The permittee shall attain compliance with the total residual chlorine limit at the CSO control facilities (other than Proctor Creek – Greensferry control facility) and the CSO WQCF effective sixty (60) days after the scheduled completion dates of the dechlorination facilities as provided through the Federal Consent Decree or sixty (60)

days after EPD's written approval to operate the facilities, whichever is earlier. The total residual chlorine limit may be modified in the future based on monitoring data. This modification would be made through a formal permit modification which would be open to public comment.

2. The permittee intends to attain compliance with the water quality criteria through implementation of the long-term control plan which includes construction of the West Area CSO Storage Tunnel and Pumping Station and CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. Once the permittee completes construction of the WQCF and receives written permission from EPD to begin to utilize the facility, the permittee will be required to meet the effluent limitations in Part II.B.2. The permittee is not required to meet the monthly average fecal coliform bacteria limits, the pH limits and the metal limits in Part II.B.1(a-d) of the permit until November 7, 2007. If the permittee has not received EPD written permission to begin discharging from the WQCF by November 7, 2007, then the permittee will be required to meet the monthly average fecal coliform bacteria limits, the pH and metal limits in Parts II.B.1. beginning on November 7, 2007. In the event this occurs, once the permittee receives EPD written permission to begin discharging from the WQCF, the permittee will no longer be subject to the limits under Part II.B.1. (including those for metals), but will become subject to the limits and monitoring requirements under Part II.B.2. The permittee is to meet the following schedule for implementing the long-term control plan:

   a) The permittee is to submit plans and specifications for the WQCF by March 5, 2005.

   b) The permittee shall issue the notice to begin construction of the WQCF by September 1, 2005.

   c) The permittee shall substantially complete construction of the WQCF by October 15, 2007.

   d) The permittee shall submit a report of its progress in implementing its long-term control plan and meeting water quality standards each January, April, July and October. The permittee shall send these reports until such time that the CSO WQCF is operational and water quality criteria are being met.

E. FREQUENCY OF OVERFLOWS AT THE CSO CONTROL FACILITIES AFTER CSO WQCF CONSTRUCTION

The permittee intends to attain compliance with the water quality criteria though implemenation of the long-term control plan which includes construction of the West Area CSO Storage Tunnel and Pumping Station and the West Area CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. These improvements are predicted to limit the overflows from the remaining CSO Control Facilities (Clear Creek, Proctor Creek – North Avenue, Tanyard Creek) to an average of four times a year over a long-term period. Therefore, from the date that the construction of the West Area CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF until the expiration of this permit, the remaining control facilities are predicted to each have an average of four overflows annually if this period is

meteorologically similar to the long term average. If an annual average of four overflows is exceeded at any location in this period, the permittee shall prepare a report explaining the exceedence. This report shall be submitted to the Division within three months following the overflow which causes the annual average to be exceeded for this period. If the exceedence is caused by operation deficiencies, such exceedence shall be a permit violation.

F. PERFORMANCE STANDARDS

The permittee shall update and maintain its existing Management Operations and Maintenance (MOM) plans for the CSO control facilities and the CSO WQCF. These updated plans shall address activities to maintain and operate efficiently all treatment or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Performance standards for Biochemical Oxygen Demand (5-day) and Total Suspended Solids are established below for the CSO WQCF. These standards are to be used as an indication of whether the permittee is operating and maintaining its combined sewer system properly in accordance with the requirements of this permit.

a. Annual removal of Biochemical Oxygen Demand (5-day) of 25%.

b. Annual removal of Total Suspended Solids of 60%.

The permittee will include documentation of performance of the CSO WQCF as part of an annual MOM plan update. If the annual removal of Biochemical Oxygen Demand (5-day) and/or Total Suspended Solids is less than the operational standards specified above, then the permittee is to include an explanation in the annual MOM plan update that explains why this was the case. Should EPD conclude that the failure to meet the operational standards was due to failure by the permittee to operate and maintain its CSO system properly, then this would be considered to be a permit violation.

PART III

A. General Requirements

1. Facilities Operations

The permittee shall maintain and operate efficiently all treatment, or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

2. Power Failures

If the primary source of power is reduced or lost, the permittee shall use an alternative source of power when available, to reduce or control all discharges to maintain permit compliance.

3. Laboratory Analyst and Operator Certification Requirements

a. The person responsible for the daily operation of the CSO WQCF (once operational) and the CSO control facilities must be a Class I Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and as specified by Subparagraph 391-3-6-.12 of the Rules and Regulations for Water Quality Control. All other operators must have the minimum certification required by this Act.

b. Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended.

4. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;

b. Review and copy any records required by this permit;

c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and

d. Sample any substance or parameter at any location.

5. Availability of Reports

Except for data determined to be confidential by the Director of the Division under Section 12-5-26 of the Code or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at a Division office. Effluent data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

6. Submittal of Information

The permittee shall furnish any information required by the Division to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the Division with requested copies of records required by this permit. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the Division, the permittee shall promptly submit the additional or corrected information.

7. Permit Modification

This permit may be modified, terminated, or revoked and reissued in whole or in part during its term to allow for new or more stringent conditions based on new information for the following reasons;

a. Permit violations;

b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;

c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge

d. Changes in effluent characteristics;

e. Demonstrated performance as determined by the Division;

f. Violations of water quality standards;

g. New information based on stream survey results; or

h. Changes in the water quality standards.

The filing of a request by the permittee for permit modification, termination, revocation and reissuance, or notification of planned changes or anticipated noncompliance does not negate any permit condition.

8. Civil and Criminal Liability

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws including promulgated water quality standards. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

9. Expiration of Permit

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date without written authorization from the Division. To receive this authorization, the permittee shall submit the information, forms, and fees required by the Division no later than 180 days before the expiration date.

10. Severability

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

11. Penalties

Both the Federal and State Acts provide that any person who falsifies or tampers with any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit shall, if convicted, be punished by a fine or by imprisonment or by both. The Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director of the Division.

12. Compliance

a. The permittee must comply with this permit. Any permit noncompliance is a violation of the Federal Act, State Act, and the State Rules, and is grounds for:

1) Enforcement action;

2) Permit termination, revocation and reissuance, or modification; or

3) Denial of a permit renewal application.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

b. If any provision in this permit is found to conflict with the Federal Consent Decree or any of it amendments, then the permittee is required to comply with the Consent Decree instead of the conflicting permit provision.

13. Contested Hearing

Any person aggrieved or adversely affected by any action of the Director of the Division shall petition the Director for a hearing within 30 days of notice of the action.

14. Property Rights

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, or any infringement of Federal, State or local laws or regulations.

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

August 18, 2014

Mr. Harvey Wilson
Water Quality Manager
e-copy: Hwilson@covingtontn.com
Covington STP
PO Box 768
Covington, TN 38019

Subject: **Draft of NPDES Permit No. TN0020982**
Covington STP
Covington, Tipton County, Tennessee

Dear Mr. Wilson:

Enclosed please find a draft copy of the NPDES permit which the Division of Water Resources (the division) proposes to issue. This draft copy is furnished to you solely for your review of its provisions. This permit authorizes no wastewater discharges. The issuance of an official permit is contingent upon your meeting all of the requirements of the Tennessee Water Quality Control Act and the Rules and Regulations of the Water Quality, Oil and Gas Board.

Also enclosed is a copy of the public notice that announces our intent to issue this permit. The notice affords the public an opportunity to review the draft permit and, if necessary, request a public hearing on this issuance process. If you disagree with the provisions and requirements contained in the draft permit, you have thirty-five days from the date of this correspondence to notify the division of your objections. If your objections cannot be resolved, you may appeal this permit upon issuance. This appeal should be filed in accordance with Section 69-3-110 of the Tennessee Code Annotated.

If you have questions, please contact the Memphis Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Gary Davis at (615) 532-0649 or by E-mail at *Gary.Davis@tn.gov*.

Sincerely,

Vojin Janjić
Manager, Water-Based Systems

Enclosure

cc: Permit File
Memphis Environmental Field Office
NPDES Section, NPDES Permit Section, EPA Region IV, r4npdespermits@epa.gov

STATE OF TENNESSEE

NPDES PERMIT

No. TN0020982

Authorization to discharge under the
National Pollutant Discharge Elimination System (NPDES)

Issued By

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger:	**Covington STP**
is authorized to discharge:	**treated municipal wastewater from Outfall 001**
from a facility located:	**in Covington, Tipton County, Tennessee**
to receiving waters named:	**unnamed tributary RM = 0.02 to Hatchie River at RM = 35.2**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on:

This permit shall expire on: **2019**

Issuance date:

for Tisha Calabrese Benton
Director

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1.0. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. NUMERIC AND NARRATIVE EFFLUENT LIMITATIONS

The permittee is authorized to discharge treated municipal wastewater from Outfall 001 to the unnamed tributary RM = 0.02 which flows to Hatchie River at RM = 35.2. Discharge 001 consists of municipal wastewater from a treatment facility with a design capacity of 3.62 MGD. Discharge 001 shall be limited and monitored by the permittee as specified below:

Description : External Outfall, Number : 001, Monitoring : All Weather, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Bypass of Treatment	Report	-	occur/mo	Occurrences	Continuous	Monthly Total

Description : External Outfall, Number : 001, Monitoring : Dry Weather, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Overflow use, occurrences	Report	-	occur/mo	Occurrences	Continuous	Monthly Total

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C	<=	40	mg/L	Composite	Three Per Week	Weekly Average
BOD, 5-day, 20 C	<=	1,208	lb/d	Composite	Three Per Week	Weekly Average
BOD, 5-day, 20 C	<=	906	lb/d	Composite	Three Per Week	Monthly Average
BOD, 5-day, 20 C	<=	30	mg/L	Composite	Three Per Week	Monthly Average
BOD, 5-day, 20 C	<=	45	mg/L	Composite	Three Per Week	Daily Maximum
Chlorine, total residual (TRC)	<=	0.97	mg/L	Grab	Five Per Week	Instantaneous Maximum
E. coli	<=	126	#/100mL	Grab	Three Per Week	Monthly Geometric Mean
E. coli	<=	487	#/100mL	Grab	Three Per Week	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
IC25 Static Renewal 7 Day Chronic *Ceriodaphnia*	>	1.7	%	Composite	Annual	Minimum
IC25 Static Renewal 7 Day Chronic *Pimephales*	>	1.7	%	Composite	Annual	Minimum
Nitrogen, total (as N)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Nitrogen, total (as N)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Oxygen, dissolved (DO)	>=	1.0	mg/L	Grab	Five Per Week	Instantaneous Minimum
Phosphorus, total (as P)	Report	-	mg/L	Composite	Quarterly	Quarterly Average

Phosphorus, total (as P)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Settleable Solids	<=	1.0	mL/L	Grab	Five Per Week	Daily Maximum
Temperature rate of change deg. C/hr	Report	-	deg C	Continuous	Daily	Monthly Average
Temperature rate of change deg. C/hr	Report	-	deg C	Continuous	Daily	Daily Maximum
Temperature, water deg. C	Report	-	deg C	Continuous	Daily	Monthly Average
Temperature, water deg. C	Report	-	deg C	Continuous	Daily	Daily Maximum
Total Suspended Solids (TSS)	<=	1,208	lb/d	Composite	Three Per Week	Weekly Average
Total Suspended Solids (TSS)	<=	40	mg/L	Composite	Three Per Week	Weekly Average
Total Suspended Solids (TSS)	<=	906	lb/d	Composite	Three Per Week	Monthly Average
Total Suspended Solids (TSS)	<=	45	mg/L	Composite	Three Per Week	Daily Maximum
Total Suspended Solids (TSS)	<=	30	mg/L	Composite	Three Per Week	Monthly Average
pH	>=	6.0	SU	Grab	Five Per Week	Minimum
pH	<=	9.0	SU	Grab	Five Per Week	Maximum

Description : External Outfall, Number : 001, Monitoring : Percent Removal, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C, % removal	>=	85	%	Calculated	Three Per Week	Monthly Average Minimum
BOD, 5-day, 20 C, % removal	>=	40	%	Calculated	Three Per Week	Daily Minimum
TSS, % removal	>=	85	%	Calculated	Three Per Week	Monthly Average Minimum
TSS, % removal	>=	40	%	Calculated	Three Per Week	Daily Minimum

Description : External Outfall, Number : 001, Monitoring : Raw Sewage Influent, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C	Report	-	mg/L	Composite	Three Per Week	Daily Maximum
BOD, 5-day, 20 C	Report	-	mg/L	Composite	Three Per Week	Monthly Average
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Nitrogen, total (as N)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Nitrogen, total (as N)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Phosphorus, total (as P)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Phosphorus, total (as P)	Report	-	lb/d	Composite	Quarterly	Quarterly Average

Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Three Per Week	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Three Per Week	Monthly Average

Description : External Outfall, Number : 001, Monitoring : Wet Weather, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Overflow use, occurrences	Report	-	occur/mo	Occurrences	Continuous	Monthly Total

Total residual chlorine (TRC) monitoring shall be applicable when chlorine, bromine, or any other oxidants are added. The acceptable methods for analysis of TRC are any methods specified in Title 40 CFR, Part 136 as amended. The method detection level (MDL) for TRC shall not exceed 0.05 mg/l unless the permittee demonstrates that its MDL is higher. The permittee shall retain the documentation that justifies the higher MDL and have it available for review upon request. In cases where the permit limit is less that the MDL, the reporting of TRC at less than the MDL shall be interpreted to constitute compliance with the permit.

The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The concentration of the *E. coli* group after disinfection shall not exceed 126 cfu per 100 ml as the geometric mean calculated on the actual number of samples collected and tested for *E. coli* within the required reporting period. The permittee may collect more samples than specified as the monitoring frequency. Samples may not be collected at intervals of less than 12 hours. For the purpose of determining the geometric mean, individual samples having an *E. coli* group concentration of less than one (1) per 100 ml shall be considered as having a concentration of one (1) per 100 ml. In addition, the concentration of the *E. coli* group in any individual sample shall not exceed a specified maximum amount. A maximum daily limit of 487 colonies per 100 ml applies to lakes and exceptional Tennessee waters. A maximum daily limit of 941 colonies per 100 ml applies to all other recreational waters.

There shall be no distinctly visible floating scum, oil or other matter contained in the wastewater discharge. The wastewater discharge must not cause an objectionable color contrast in the receiving stream.

The wastewater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner that prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 *et seq.* and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 *et seq.*

For the purpose of evaluating compliance with the permit limits established herein, where certain limits are below the State of Tennessee published required detection

levels (RDLs) for any given effluent characteristics, the results of analyses below the RDL shall be reported as Below Detection Level (BDL), unless in specific cases other detection limits are demonstrated to be the best achievable because of the particular nature of the wastewater being analyzed.

For BOD_5 and TSS, the treatment facility shall demonstrate a minimum of 85% removal efficiency on a monthly average basis. This is calculated by determining an average of all daily influent concentrations and comparing this to an average of all daily effluent concentrations. The formula for this calculation is as follows:

$$\left[1 - \frac{\text{average of daily effluent concentration}}{\text{average of daily influent concentration}}\right] \times 100\% \quad = \%\ \text{removal}$$

The treatment facility will also demonstrate 40% minimum removal of the BOD_5 and TSS based upon each daily composite sample. The formula for this calculation is as follows:

$$\left[1 - \frac{\text{daily effluent concentration}}{\text{daily influent concentration}}\right] \times 100\% \quad = \%\ \text{removal}$$

1.2. MONITORING PROCEDURES

1.2.1. Representative Sampling

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than plus or minus 10% from the true discharge rates throughout the range of expected discharge volumes.

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Influent samples must be collected and monitored prior to mixing with any recycle streams using appropriate compositing and grab sampling techniques. For those systems with more than one influent line the permittee must collect flow-weighted samples from each line and composite the samples into a single influent sample based on respective flows. The permittee must use appropriate grab sampling as required for some parameters.

Effluent samples must be representative of the wastewater being discharged and collected prior to mixing with any other discharge or the receiving stream. This can be a different point for different parameters, but must be after all treatment for that parameter or all expected change:

a. The chlorine residual must be measured after the chlorine contact chamber and any dechlorination. It may be to the advantage of the permittee to measure at the end of any long outfall lines.

b. Samples for *E. coli* can be collected at any point between disinfection and the actual discharge.

c. The dissolved oxygen can drop in the outfall line; therefore, D.O. measurements are required at the discharge end of outfall lines greater than one mile long. Systems with outfall lines less than one mile may measure dissolved oxygen as the wastewater leaves the treatment facility. For systems with dechlorination, dissolved oxygen must be measured after this step and as close to the end of the outfall line as possible.

d. Total suspended solids and settleable solids can be collected at any point after the final clarifier.

e. Biomonitoring tests (if required) shall be conducted on final effluent.

1.2.2. Sampling Frequency

Where the permit requires sampling and monitoring of a particular effluent characteristic(s) at a frequency of less than once per day or daily, the permittee is precluded from marking the "No Discharge" block on the Discharge Monitoring Report if there has been any discharge from that particular outfall during the period which coincides with the required monitoring frequency; i.e. if the required monitoring frequency is once per month or 1/month, the monitoring period is one month, and if the discharge occurs during only one day in that period then the permittee must sample on that day and report the results of analyses accordingly.

1.2.3. Test Procedures

a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.

b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

c. Composite samples must be proportioned by flow at time of sampling. Aliquots may be collected manually or automatically. The sample aliquots must be maintained at ≤ 6 degrees Celsius during the compositing period.

d. In instances where permit limits established through implementation of applicable water criteria are below analytical capabilities, compliance with those limits will be determined using the detection limits described in the TN Rules, Chapter 1200-4-3-.05(8).

1.2.4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The exact place, date and time of sampling;

b. The exact person(s) collecting samples;

c. The dates and times the analyses were performed;

d. The person(s) or laboratory who performed the analyses;

e. The analytical techniques or methods used, and;

f. The results of all required analyses.

1.2.5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Resources.

1.3. REPORTING

1.3.1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using Discharge Monitoring Report (DMR) forms supplied by the Division of Water Resources. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A completed DMR with an original signature shall be submitted to the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
COMPLIANCE & ENFORCEMENT SECTION
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

A copy of the completed and signed DMR shall be mailed to the Memphis Environmental Field Office (EFO) at the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, Tennessee 38133

A copy should be retained for the permittee's files. In addition, any communication regarding compliance with the conditions of this permit must be sent to the two offices listed above.

The first DMR is due on the 15th of the month following permit effectiveness.

DMRs and any other information or report must be signed and certified by a responsible corporate officer as defined in 40 CFR 122.22, a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

The electronic submission of DMR data will be accepted only if formally approved beforehand by the division. For purposes of determining compliance with this permit, data approved by the division to be submitted electronically is legally equivalent to data submitted on signed and certified DMR forms.

1.3.2. Additional Monitoring by Permittee

If the permittee monitors any pollutant specifically limited by this permit more frequently than required at the location(s) designated, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form. Such increased frequency shall also be indicated on the form.

1.3.3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

1.3.4. Monthly Report of Operation

Monthly operational reports shall be submitted on standard forms to the appropriate Division of Water Resources Environmental Field Office in Jackson, Nashville, Chattanooga, Columbia, Cookeville, Memphis, Johnson City, or Knoxville. Reports shall be submitted by the 15th day of the month following data collection.

1.3.5. Bypass and Overflow Reporting

1.3.5.1. Report Requirements

A summary report of known or suspected instances of overflows in the collection system or bypass of wastewater treatment facilities shall accompany the Discharge Monitoring Report. The report must contain the date and duration of the instances of overflow and/or bypassing and the estimated quantity of wastewater released and/or bypassed.

The report must also detail activities undertaken during the reporting period to (1) determine if overflow is occurring in the collection system, (2) correct those known or suspected overflow points and (3) prevent future or possible overflows and any resulting bypassing at the treatment facility.

On the DMR, the permittee must report the number of sanitary sewer overflows, dry-weather overflows and in-plant bypasses separately. Three lines must be used on the DMR form, one for sanitary sewer overflows, one for dry-weather overflows and one for in-plant bypasses.

1.3.5.2. Anticipated Bypass Notification

If, because of unavoidable maintenance or construction, the permittee has need to create an in-plant bypass which would cause an effluent violation, the permittee must notify the division as soon as possible, but in any case, no later than 10 days prior to the date of the bypass.

1.3.6. Reporting Less Than Detection

A permit limit may be less than the accepted detection level. If the samples are below the detection level, then report "BDL" or "NODI =B" on the DMRs. The permittee must use the correct detection levels in all analytical testing required in the permit. The required detection levels are listed in the Rules of the Department of Environment and Conservation, Division of Water Resources, Chapter 1200-4-3-.05(8).

For example, if the limit is 0.02 mg/l with a detection level of 0.05 mg/l and detection is shown; 0.05 mg/l must be reported. In contrast, if nothing is detected reporting "BDL" or "NODI =B" is acceptable.

1.4. COMPLIANCE WITH SECTION 208

The limits and conditions in this permit shall require compliance with an area-wide waste treatment plan (208 Water Quality Management Plan) where such approved plan is applicable.

1.5. REOPENER CLAUSE

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections

301(b)(2)(C) and (D), 307(a)(2) and 405(d)(2)(D) of the Clean Water Act, as amended, if the effluent standard, limitation or sludge disposal requirement so issued or approved:

a. Contains different conditions or is otherwise more stringent than any condition in the permit; or

b. Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

The division may reopen the permit to make modifications if warranted due to the gasification facility's operation/performance based on the permittee's DMR results. Permit modifications are subject to the division's applicable public participation procedures.

2.0. GENERAL PERMIT REQUIREMENTS

2.1. GENERAL PROVISIONS

2.1.1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of the Division of Water Resources (the "director") no later than 180 days prior to the expiration date. Such forms shall be properly signed and certified.

2.1.2. Right of Entry

The permittee shall allow the director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

2.1.3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources. As required by the Federal Act, effluent data shall not be considered confidential.

2.1.4. Proper Operation and Maintenance

a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is

necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and or other technology based effluent limitations such as those in State of Tennessee Rule 1200-4-5-.09.

2.1.5. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

2.1.6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

2.1.7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

2.1.8. Other Information

If the permittee becomes aware of failure to submit any relevant facts in a permit application, or of submission of incorrect information in a permit application or in any report to the director, then the permittee shall promptly submit such facts or information.

2.2. CHANGES AFFECTING THE PERMIT

2.2.1. Planned Changes

The permittee shall give notice to the director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are

subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2.2.2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.

b. The permittee shall furnish to the director, within a reasonable time, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the director, upon request, copies of records required to be kept by this permit.

c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

d. The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

2.2.3. Change of Ownership

This permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect the permit limits and conditions contained in the permit) by the permittee if:

a. The permittee notifies the director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

Pursuant to the requirements of 40 CFR 122.61, concerning transfer of ownership, the permittee must provide the following information to the division in their formal notice of intent to transfer ownership: 1) the NPDES permit number of the subject permit; 2) the effective date of the proposed transfer; 3) the name and address of the transferor; 4) the name and address of the transferee; 5) the names of the responsible parties for both the transferor and transferee; 6) a statement that the transferee assumes responsibility for the subject NPDES permit; 7) a statement that the transferor relinquishes responsibility for the subject NPDES permit; 8) the signatures of the responsible parties for both the transferor and transferee pursuant to the requirements of 40 CFR 122.22(a), "Signatories to permit applications"; and, 9) a statement regarding any proposed modifications to the facility, its operations, or any other changes which might affect the permit limits and conditions contained in the permit.

2.2.4. Change of Mailing Address

The permittee shall promptly provide to the director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

2.3. NONCOMPLIANCE

2.3.1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable state and federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2.3.2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Resources in the appropriate Environmental Field Office within 24-hours from the time the permittee becomes aware of the circumstances. (The Environmental Field Office should be contacted for names and phone numbers of environmental response team).

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless the director on a case-by-case basis waives this requirement. The permittee shall provide the director with the following information:

i. A description of the discharge and cause of noncompliance;

ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.3.2.a above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

2.3.3. Overflow

a. "**Overflow**" means any release of sewage from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

2.3.4. Upset

a. "***Upset***" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   i. An upset occurred and that the permittee can identify the cause(s) of the upset;

   ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

   iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and

   iv. The permittee complied with any remedial measures required under "Adverse Impact."

2.3.5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.3.6. Bypass

a. "***Bypass***" is the intentional diversion of waste streams from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless all of the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 2.3.6.b.iii, above.

2.3.7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

2.4. LIABILITIES

2.4.1. Civil and Criminal Liability

Except as provided in permit conditions for "***Bypassing,***" "***Overflow,***" and "***Upset,***" nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2.4.2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act, as amended.

3.0. PERMIT SPECIFIC REQUIREMENTS

3.1. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a certified wastewater treatment operator and the collection system shall be operated under the supervision of a certified collection system operator in accordance with the Water Environmental Health Act of 1984.

3.2. POTW PRETREATMENT PROGRAM GENERAL PROVISIONS

As an update of information previously submitted to the division, the permittee will undertake the following activity.

a. The permittee has been delegated the primary responsibility and therefore becomes the "control authority" for enforcing the 40 CFR 403 General Pretreatment Regulations. Where multiple plants are concerned the permittee is responsible for the Pretreatment Program for all plants within its jurisdiction. The permittee shall implement and enforce the Industrial Pretreatment Program in accordance with Section 403(b)(8) of the Clean Water Act, the Federal Pretreatment Regulations 40 CFR 403, Tennessee Water Quality Control Act Part 63-3-123 through 63-3-128, and the legal authorities, policies, procedures, and financial provisions contained in its approved Pretreatment Program, except to the extent this permit imposed stricter requirements. Such implementation shall require but not limit the permittee to do the following:

   i. Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user (IU), whether the IU is in compliance with the pretreatment standards;

   ii. Require development, as necessary, of compliance schedules for each IU for the installation of control technologies to meet applicable pretreatment standards;

   iii. Require all industrial users to comply with all applicable monitoring and reporting requirements outlined in the approved pretreatment program and IU permit;

   iv. Maintain and update, as necessary, records identifying the nature and character of industrial user discharges, and retain such records for a minimum of three (3) years;

   v. Obtain appropriate remedies for noncompliance by an IU with any pretreatment standard and/or requirement;

   vi. Publish annually, pursuant to 40 CFR 403.8 (f)(2)(viii), a list of industrial users that have significantly violated pretreatment requirements and standards during the previous twelve-month period.

vii. Maintain an adequate revenue structure for continued operation of the pretreatment program.

viii. Update its Industrial Waste Survey at least once every five years. Results of this update shall be submitted to the Division of Water Resources, Pretreatment Section within 120 days of the effective date of this permit, unless such a survey has been submitted within 3 years of the permit's effective date.

ix. Submit a written technical evaluation of the need to revise local limits within 120 days of the effective date of this permit to the state pretreatment program coordinator. The evaluation shall include the most recent pass-through limits proposed by the division. The technical evaluation shall be based on practical and specialized knowledge of the local program and not be limited by a specified written format.

b. The permittee shall enforce 40 CFR 403.5, "prohibited discharges". Pollutants introduced into the POTW by a non-domestic source shall not cause pass through or interference as defined in 40 CFR Part 403.3. These general prohibitions and the specific prohibitions in this section apply to all non-domestic sources introducing pollutants into the POTW whether the source is subject to other National Pretreatment Standards or any state or local pretreatment requirements.

Specific prohibitions. Under no circumstances shall the permittee allow introduction of the following wastes in the waste treatment system:

i. Pollutants which create a fire or explosion hazard in the POTW;

ii. Pollutants which will cause corrosive structural damage to the treatment works, but in no case discharges with pH less than 5.0 unless the system is specifically designed to accept such discharges.

iii. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the treatment system resulting in interference.

iv. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment works.

v. Heat in amounts which will inhibit biological activity in the treatment works resulting in interference, but in no case heat in such quantities that the temperature at the treatment works exceeds 40°C (104°F) unless the works are designed to accommodate such heat.

vi. Any priority pollutant in amounts that will contaminate the treatment works sludge.

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

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

ix. Any trucked or hauled pollutants except at discharge points designated by the POTW.

c. The permittee shall notify the Tennessee Division of Water Resources of any of the following changes in user discharge to the system no later than 30 days prior to change of discharge:

i. New introductions into such works of pollutants from any source which would be a new source as defined in Section 306 of the Act if such source were discharging pollutants.

ii. New introductions of pollutants into such works from a source which would be subject to Section 301 of the "Federal Water Quality Act as Amended" if it were discharging such pollutants.

iii. A substantial change in volume or character of pollutants being introduced into such works by a source already discharging pollutants into such works at the time the permit is issued.

This notice will include information on the quantity and quality of the wastewater introduced by the new source into the publicly owned treatment works, and on any anticipated impact on the effluent discharged from such works. If this discharge necessitates a revision of the current NPDES permit or pass-through guidelines, discharge by this source is prohibited until the Tennessee Division of Water Resources gives final authorization.

d. Reporting Requirements

The permittee shall provide a semiannual report briefly describing the permittee's pretreatment program activities over the previous six-month period. Reporting periods shall end on the last day of the months of March and September. The report shall be submitted to the Division of Water Resources, Central Office and a copy to the appropriate Environmental Field Office no later than the 28th day of the month following each reporting period. For control authorities with multiple STPs, one report should be submitted with a separate Form 1 for each STP. Each report shall conform to the format set forth in the State POTW Pretreatment Semiannual Report Package which contains information regarding:

i. An updated listing of the permittee's industrial users.

ii. Results of sampling of the influent and effluent of the wastewater treatment plant. At least once each reporting period, the permittee shall analyze the

wastewater treatment plant influent and effluent for the following pollutants, using the prescribed sampling procedures:

Pollutant	**Sample Type**
chromium, trivalent	24-hour composite
chromium, hexavalent	24-hour composite
total chromium	24-hour composite
copper	24-hour composite
lead	24-hour composite
nickel	24-hour composite
zinc	24-hour composite
cadmium	24-hour composite
mercury	24-hour composite
silver	24-hour composite
total phenols	grab
cyanide	grab

If any particular pollutant is analyzed more frequently than is required, the permittee shall report the maximum and average values on the semiannual report. All upsets, interferences, and pass-through violations must also be reported on the semiannual report, the actions that were taken to determine the causes of the incidents and the steps that have been taken to prevent the incidents from recurring.

At least once during the term of this permit, the permittee shall analyze the effluent from the STP (and report the results in the next regularly scheduled report) for the following pollutants:

chromium III	cyanide	phthalates, sum of the following:
chromium VI	silver	bis (2-ethylhexyl) phthalate
copper	benzene	butyl benzylphthalate
lead	carbon tetrachloride	di-n-butylphthalate
nickel	chloroform	diethyl phthalate
zinc	ethylbenzene	1,2 trans-dichloroethylene
cadmium	methylene chloride	tetrachloroethylene
mercury	naphthalene	toluene
phenols, total	1,1,1 trichloroethane	trichloroethylene
chromium, total		

iii. Compliance with categorical and local standards, and review of industrial compliance, which includes a summary of the compliance status for all permitted industries. Also included is information on the number and type of major violations of pretreatment regulations, and the actions taken by the

POTW to obtain compliance. The effluent from all significant industrial users must be analyzed for the appropriate pollutants at least once per reporting period.

iv. A list of industries in significant non-compliance as published in local newspapers in accordance with the requirements set forth in 40 CFR 403.8(f)(2)(viii).

v. A description of all substantive changes made to the permittee's pretreatment program. Any such changes shall receive prior approval. Substantive changes include, but are not limited to, any change in any ordinance, major modification in the program's administrative structure, local limits, or a change in the method of funding the program.

vi. Summary of permittee's industrial user inspections, which includes information on the number and type of industry inspected. All significant industrial users must be inspected at least once per year.

3.3. BIOSOLIDS MANAGEMENT PRACTICES

All sludge and/or biosolids use or disposal must comply with 40 CFR 503 et seq. Biosolids shall be sampled and analyzed at a frequency dependent on the amount used annually.

Any facility that land applies non-exceptional quality biosolids must obtain an appropriate permit from the division in accordance with Chapter 0400-40-15.

a. Reopener: If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated under Section 405(d)(2) of the Clean Water Act, as amended by the Water Quality Act of 1987, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not limited in this permit, this permit shall be promptly modified or revoked and reissued to conform to the requirements promulgated under Section 405(d)(2). The permittee shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2) of the Clean Water Act.

b. Notice of change in sludge disposal practice: The permittee shall give prior notice to the director of any change planned in the permittee's sludge disposal practice.

The current method of sludge disposal is to a municipal solid waste landfill (or co - composting facility). This method of disposal is controlled by the rules of the Tennessee Division of Solid Waste Management (DSWM) and Federal Regulations at 40 CFR 258. If the permittee anticipates changing its disposal practices to either land application or surface disposal, the Division of Water Resources shall be notified prior to the change. A copy of the results of pollutant analyses required by the Tennessee Division of Solid Waste Management

(DSWM) and/or 40 CFR 258 shall be submitted to the Division of Water Resources.

3.4. BIOMONITORING REQUIREMENTS, CHRONIC

The permittee shall conduct a 3-Brood *Ceriodaphnia dubia* Survival and Reproduction Test and a 7-Day Fathead Minnow *(Pimephales promelas)* Larval Survival and Growth Test on samples of final effluent from Outfall 001.

The measured endpoint for toxicity will be the inhibition concentration causing 25% reduction in survival, reproduction and growth (IC_{25}) of the test organisms. The IC_{25} shall be determined based on a 25% reduction as compared to the controls, and as derived from linear interpolation. The average reproduction and growth responses will be determined based on the number of *Ceriodaphnia dubia* or *Pimephales promelas* larvae used to initiate the test.

Test shall be conducted and its results reported based on appropriate replicates of a total of five serial dilutions and a control, using the percent effluent dilutions as presented in the following table:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	**2 X PL**	**Permit Limit (PL)**	**0.50 X PL**	**0.25 X PL**	**Control**
% effluent					
6.8	**3.4**	**1.7**	**0.85**	**0.42**	**0**

Note: IC25 Permit Limit >1.7% treated effluent

The dilution/control water used will be moderately hard water as described in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, EPA-821-R-02-013 (or the most current edition). A chronic standard reference toxicant quality assurance test shall be conducted with each species used in the toxicity tests and the results submitted with the discharge monitoring report. Additionally, the analysis of this multi-concentration test shall include review of the concentration-response relationship to ensure that calculated test results are interpreted appropriately.

Toxicity will be demonstrated if the IC_{25} is less than or equal to the permit limit indicated for each outfall in the above table(s). Toxicity demonstrated by the tests specified herein constitutes a violation of this permit.

All tests will be conducted using a minimum of three 24-hour flow-proportionate composite samples of final effluent collected on days 1, 3 and 5. If, in any control more than 20% of the test organisms die in 7 days, the test (control and effluent) is considered invalid and the test shall be repeated within two (2) weeks. Furthermore, if the results do not meet the acceptability criteria in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, EPA-821-R-02-013 (or the most current edition), or if the required concentration-response review fails to yield a valid relationship per guidance contained in Method Guidance and Recommendations for Whole Effluent Toxicity

(WET) Testing, EPA-821-B-00-004 (or the most current edition), that test shall be repeated. Any test initiated but terminated before completion must also be reported along with a complete explanation for the termination.

The toxicity tests specified herein shall be conducted annually for Outfall 001 and begin no later than 90 days from the permit's effective date.

In the event of a test failure, the permittee must start a follow-up test within 2 weeks and submit results from a follow-up test within 30 days from obtaining initial WET testing results. The follow-up test must be conducted using the same serial dilutions as presented in the corresponding table(s) above. **The follow-up test will not negate an initial failed test. In addition, the failure of a follow-up test will constitute a separate permit violation.**

In the event of 2 consecutive test failures or 3 test failures within a 12-month period for the same outfall, the permittee must initiate a Toxicity Identification Evaluation/Toxicity Reduction Evaluation (TIE/TRE) study within 30 days and so notify the division by letter. This notification shall include a schedule of activities for the initial investigation of that outfall. **During the term of the TIE/TRE study, the frequency of biomonitoring shall be once every three months.** Additionally, the permittee shall submit progress reports once every three months throughout the term of the TIE/TRE study. The toxicity must be reduced to allowable limits for that outfall within 2 years of initiation of the TIE/TRE study. Subsequent to the results obtained from the TIE/TRE studies, the permittee may request an extension of the TIE/TRE study period if necessary to conduct further analyses. The final determination of any extension period will be made at the discretion of the division.

The TIE/TRE study may be terminated at any time upon the completion and submission of 2 consecutive tests (for the same outfall) demonstrating compliance. Following the completion of TIE/TRE study, the frequency of monitoring will return to a regular schedule, as defined previously in this section as well in Part I of the permit. **During the course of the TIE/TRE study, the permittee will continue to conduct toxicity testing of the outfall being investigated at the frequency of once every three months but will not be required to perform follow-up tests for that outfall during the period of TIE/TRE study.**

Test procedures, quality assurance practices, determinations of effluent survival/reproduction and survival/growth values, and report formats will be made in accordance with Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, EPA-821-R-02-013, or the most current edition.

Results of all tests, reference toxicant information, copies of raw data sheets, statistical analysis and chemical analyses shall be compiled in a report. The report will be written in accordance with Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, EPA-821-R-02-013, or the most current edition.

Two copies of biomonitoring reports (including follow-up reports) shall be submitted to the division. One copy of the report shall be submitted along with the discharge monitoring report (DMR). The second copy shall be submitted to the local Division of Water Resources office address (see table below):

Division of Water Resources			
Office	**Location**	**Zip Code**	**Phone No.**
Chattanooga	540 McCallie Avenue, Suite 550	37402-2013	(423) 634-5745
Jackson	1625 Hollywood Drive	38305	(731) 512-1300
Cookeville	1221 South Willow Avenue	38506	(931) 432-4015
Columbia	2484 Park Plus Drive	38401	(931) 380-3371
Johnson City	2305 Silverdale Road	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	37921	(865) 594-6035
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	(901) 371-3000
Nashville	711 R.S. Gass Boulevard	37243-1550	(615) 687-7000

3.5. GASIFICATION FACILITY PERMIT AUTHORIZATION REQUIREMENTS

This permit authorizes the gasification facility's operation and resulting Outfall 001 discharge temperature increase as explained below. The permittee must monitor/report temperature results to insure that the State's temperature water quality criteria are not violated pursuant to such operation. This permit does not authorize a discharge that results in exceeding the State's instream water quality temperature standards. As such, pursuant to the permit's effective date, the permittee must complete necessary temperature monitoring/evaluations to insure proper gasification facility operation/performance, such that the discharge allows the instream temperature water quality criteria to be retained. This permit does not necessarily authorize gasification facility's intermittent/continuous operation at various production levels, including its rated maximum capacity. Based on the permittee's DMR results the division may reopen the permit (per Part 1.5) to include more specific gasification facility operational/performance requirements or investigational programs.

The permittee must operate its gasification facility using proper discharge temperature water quality considerations for Outfall 001. The Outfall 001 discharge must not cause the temperature change in receiving stream(s) to exceed 3°C relative to an upstream control point. Also, the Outfall 001 discharge must not cause the receiving stream's temperature to exceed 30.5°C (except as a result of natural causes), and this discharge must not cause the maximum rate of temperature change in receiving streams to exceed 2°C per hour (except as a result of natural causes). The permit includes continuous Outfall 001 discharge temperature monitoring requirements with the temperature water quality criteria being applicable instream.

The permittee must report its discharge temperature results in terms of monthly average and daily maximum values on its submitted Discharge Monitoring Report (DMRs). It is important to note that a reported Outfall 001 discharge temperature that exceeds the receiving stream water quality temperature criteria does not translate directly to a permit violation. This is because the temperature standard is applicable to the instream temperature, not the discharge temperature. If the Outfall

001 temperature exceeds the water quality standards, then the permittee is required to make/report instream temperature evaluations, e.g., measurements if appropriate, to determine any exceedance. As appropriate, the instream evaluations must address both the unnamed tributary (just upstream of the Outfall 001 discharge and just before its confluence with Hatchie River), and the Hatchie River (just upstream of its confluence with the unnamed tributary and downstream). The permittee must use its instream evaluation program when the permit becomes effective, and within 60 days from the permit's effective date provide the division with its instream temperature program. Subsequently, the permittee must use the division-approved instream temperature evaluation program, which may be updated as additional information becomes available. The division's approval(s) must be written. The permittee must notify the MEFO if its Outfall 001 discharge temperature has resulted in an instream water quality temperature criteria exceedance.

Annually, the permittee must submit a Gasification Facility summary report to the division (Memphis Environmental Field Office and central office at the addresses shown in Part 1.31.). The report is due by February 15 each year. The report must address the gasification facility's operation/performance, results regarding Outfall 001 temperature and corresponding instream temperature impacts.

3.6. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign(s) at each outfall and any bypass/overflow point in the collection system. For the purposes of this requirement, any bypass/overflow point that has discharged five (5) or more times in the last year must be so posted. The sign(s) should be clearly visible to the public from the bank and the receiving stream. The minimum sign size should be two feet by two feet (2' x 2') with one-inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Resources. The following is given as an example of the minimal amount of information that must be included on the sign:

Permitted CSO or unpermitted bypass/overflow point:

UNTREATED WASTEWATER DISCHARGE POINT
Covington STP
(901) 475-4965
NPDES Permit NO. TN0020982
TENNESSEE DIVISION OF WATER RESOURCES
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Memphis

NPDES Permitted Municipal/Sanitary Outfall:

TREATED MUNICIPAL/SANITARY WASTEWATER – OUTFALL 001
Covington STP
(901) 475-4965
NPDES Permit NO. TN0020982
TENNESSEE DIVISION OF WATER RESOURCES
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Memphis

No later than sixty (60) days from the effective date of this permit, the permittee shall have the above sign(s) on display in the location specified.

3.7. ANTIDEGRADATION

Pursuant to the Rules of the Tennessee Department of Environment and Conservation, Chapter 1200-4-3-.06, titled "Tennessee Antidegradation Statement," which prohibits the degradation of high quality surface waters and the increased discharges of substances that cause or contribute to impairment, the permittee shall further be required, pursuant to the terms and conditions of this permit, to comply with the effluent limitations and schedules of compliance required to implement applicable water quality standards, to comply with a State Water Quality Plan or other state or federal laws or regulations, or where practicable, to comply with a standard permitting no discharge of pollutants.

4.0. DEFINITIONS AND ACRONYMS

4.1. DEFINITIONS

"***Biosolids***" are treated sewage sludge that have contaminant concentrations less than or equal to the contaminant concentrations listed in Table 1 of subparagraph (3)(b) of Rule 0400-40-15-.02, meet any one of the ten vector attraction reduction options listed in part (4)(b)1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 of Rule 0400-40-15-.04, and meet either one of the six pathogen reduction alternatives for Class A listed in part (3)(a)3, 4, 5, 6, 7, or 8, or one of the three pathogen reduction alternatives for Class B listed in part (3)(b)2, 3, or 4 of Rule 0400- 40-15-.04.

A "***bypass***" is defined as the intentional diversion of waste streams from any portion of a treatment facility.

A "***calendar day***" is defined as the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

A "***composite sample***" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case, less than 8 hours.

The "***daily maximum concentration***" is a limitation on the average concentration in units of mass per volume (e.g. milligrams per liter), of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

"***Discharge***" or "discharge of a pollutant" refers to the addition of pollutants to waters from a source.

A "***dry weather overflow***" is a type of sanitary sewer overflow and is defined as one day or any portion of a day in which unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall occurs and is not directly related to a rainfall event. Discharges from more than one point within a 24-hour period shall be counted as separate overflows.

"Degradation" means the alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.

"***De Minimis***" - Degradation of a small magnitude, as provided in this paragraph.

(a) Discharges and withdrawals

1. Subject to the limitation in part 3 of this subparagraph, a single discharge other than those from new domestic wastewater sources will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged.
2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream.
3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized in a segment and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, they are presumed to be de minimis. Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.

(b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively are offset by impact minimization and/or in-system mitigation, provided however, in ONRWs the mitigation must occur within the ONRW.

An "***ecoregion***" is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

The "***geometric mean***" of any set of values is the nth root of the product of the individual values where "n" is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

A "***grab sample***" is a single influent or effluent sample collected at a particular time.

The "***instantaneous maximum concentration***" is a limitation on the concentration, in milligrams per liter, of any pollutant contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

The "***instantaneous minimum concentration***" is the minimum allowable concentration, in milligrams per liter, of a pollutant parameter contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

The "***monthly average amount***", shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

The "***monthly average concentration***", other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "***one week period***" (or "***calendar-week***") is defined as the period from Sunday through Saturday. For reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

"***Pollutant***" means sewage, industrial wastes, or other wastes.

A "***quarter***" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

A "***rainfall event***" is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

A "***rationale***" (or "fact sheet") is a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

A "***reference site***" means least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

A "***reference condition***" is a parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

A "***sanitary sewer overflow (SSO)***" is defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall.

"***Sewage***" means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present.

"***Severe property damage***" when used to consider the allowance of a bypass or SSO means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence

of a bypass or SSO. Severe property damage does not mean economic loss caused by delays in production.

"***Sewerage system***" means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed.

"***Sludge***" or "***sewage sludge***" is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

A "***subecoregion***" is a smaller, more homogenous area that has been delineated within an ecoregion.

"***Upset***" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

The term, "***washout***" is applicable to activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

"***Waters***" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

The "***weekly average amount***", shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar week when the measurements were made.

The "***weekly average concentration***", is the arithmetic mean of all the composite samples collected in a one-week period. The permittee must report the highest weekly average in the one-month period.

4.2. ACRONYMNS AND ABBREVIATIONS

1Q10 – 1-day minimum, 10-year recurrence interval

30Q5 – 30-day minimum, 5-year recurrence interval

7Q10 – 7-day minimum, 10-year recurrence interval

BAT – best available technology economically achievable

BCT – best conventional pollutant control technology

BDL – below detection level

BOD_5 – five day biochemical oxygen demand

BPT – best practicable control technology currently available

$CBOD_5$ – five day carbonaceous biochemical oxygen demand

CEI – compliance evaluation inspection

CFR – code of federal regulations

CFS – cubic feet per second

CFU – colony forming units

CIU – categorical industrial user

CSO – combined sewer overflow

DMR – discharge monitoring report

D.O. – dissolved oxygen

E. coli – *Escherichia coli*

EFO – environmental field office

LB (lb) - pound

IC_{25} – inhibition concentration causing 25% reduction in survival, reproduction and growth of the test organisms

IU – industrial user

IWS – industrial waste survey

LC_{50} – acute test causing 50% lethality

MDL – method detection level

MGD – million gallons per day

MG/L (mg/l) – milligrams per liter

ML – minimum level of quantification

ml – milliliter

MLSS – mixed liquor suspended solids

MOR – monthly operating report

NODI – no discharge

NOEC – no observed effect concentration

NPDES – national pollutant discharge elimination system

PL – permit limit

POTW – publicly owned treatment works

RDL – required detection limit

SAR – semi-annual [pretreatment program] report

SIU – significant industrial user

SSO – sanitary sewer overflow

STP – sewage treatment plant

TCA – Tennessee code annotated

TDEC – Tennessee Department of Environment and Conservation

TIE/TRE – toxicity identification evaluation/toxicity reduction evaluation

TMDL – total maximum daily load

TRC – total residual chlorine

TSS – total suspended solids

WQBEL – water quality based effluent limit

RATIONALE

Covington STP
NPDES Permit No. TN0020982
Permit Writer: Gary Davis

R1. FACILITY INFORMATION

Covington STP
Mr. Harvey Wilson - Water Quality Manager
Covington, Tipton County, Tennessee
(901) 475-4965
Treatment Plant Average Design Flow: 3.62 MGD
Percentage Industrial Flow: 11.5% (based on design flow)
Treatment Description: Activated sludge plant with chlorination and dechlorination
Certified Operator Grades: STP: 3; CS: 1; Date Rated: 7/11/2014

R2. RECEIVING STREAM INFORMATION

unnamed tributary RM = 0.02 to Hatchie River RM = 35.2
Watershed Group: Hatchie-Lower
Hydrocode: 8010208
Low Flow: 7Q10 = 204 MGD (Hatchie River)
Low Flow Reference:
USGS – Scientific Investigations Report 2009-5159
Station #07030050
Tier Designation: Exceptional Tennessee Waters
Stream Classification Categories for Hatchie River:

Domestic Wtr Supply	Industrial	Fish & Aquatic	Recreation
X	X	X	X
Livestock Wtr & Wlife	**Irrigation**	**Navigation**	
X	X		

Water Quality Assessment: Fully Supporting Designated Usages

R3. CURRENT PERMIT STATUS

Permit Type:	**Municipal**
Classification:	**Major**
Issuance Date:	**31-MAR-09**
Expiration Date:	**31-MAR-14**
Effective Date:	**01-MAY-09**

R4. NEW PERMIT RENEWAL CONSIDERATIONS AND COMPLIANCE SCHEDULE SUMMARY

a. The permittee now operates a recently installed on-site gasification facility. The gasification facility uses water from the WWTP's chlorine contact chamber for cooling and therefore increases the permittee's Outfall 001 discharge temperature, pursuant to its gasification facility's operation. The web includes extensive background information regarding Covington's newly installed gasification facility. Appendix R-1 presents a layout diagram for the permittee's WWTP and shows the gasification facility location.

The division recognizes that the permittee and gasification facility's manufacturer/consultants are developing comprehensive operational procedures for the recently installed system. The division has noted considerations in section R6.7 for the new gasification facility's operation, which may prove useful in tracking the chlorine contact chamber disinfection performance and retaining receiving stream temperature water quality compliance. The division expects that it will take some time to fully evaluate the new gasification facility's usage/performance, and to identify effective operational parameters to provide for its optimization. The new permit requires the permittee to submit an annual Gasification Facility report which addresses its operation/performance, temperature results, and as warranted corresponding instream temperature values. The division has developed the new permit to provide authorization for using the new gasification facility. However, the new permit's reopener clause (Part 1.5) has been supplemented to allow the division to make permitting adjustments/requirements based on the permittee's DMR results.

b. The new permit (Part 1.2.1) includes clarifications regarding influent sampling and flow monitoring requirements. See section R6.1 for more information.

c. Compliance Schedule Summary

Description of Report to be Submitted	Reference Section in Permit
Monthly Discharge Monitoring Reports	1.3.1
Monthly Operational Reports	1.3.4
Monthly Bypass and Overflow Summary Report	1.3.5.1
Industrial Waste Survey Report within 120 days of the effective permit date	3.2.a
Biomonitoring Report beginning within 90 days of the effective permit date	3.4
Annual Gasification Facility Report	3.5

d For comparison, this rationale contains a table depicting the current permit's limits and effluent monitoring requirements in Appendix R-2.

R5. CURRENT PERMIT DISCHARGE MONITORING REPORT (DMR) AND INSPECTION RESULTS

Appendix R-3 presents the permittee's DMR results for the period May 2009 through June 2014. Mostly the permittee did not have problems achieving its current discharge permit requirements. However, some permit exceedances were noted for the Outfall 001 *E. coli* and total residual chlorine maximum results.

During the current permit's term, personnel from the division's Memphis Environmental Field Office conducted Compliance Evaluation Inspections (CEIs) on July 16, 2013, February 8, 2011, and May 14, 2009. Based on the CEI results an "In Compliance" division determination was noted for each evaluation. A Pretreatment Compliance Inspection (PCI) was completed on July 24, 2012, and the division personnel noted that the permittee had five active Significant Industrial Users (SIUs), which included two Categorical Industrial Users (CIUs).

During the current permit's term the permittee received division authorization for its gasification facility's trials and testing on August 15, 2013. Appendix R-3 also includes the results from the gasification facility's trials and testing results. As demonstrated by the data presented in Appendix R-3, the permittee has had operational/equipment problems and was not able to achieve its continuous on-line/full capacity goal. The permittee has continued to operate its gasification facility on an intermittent basis and on November 19, 2014 requested that the division suspend the temperature monitoring until such time that the gasification facility is fully operational. As shown in Part 1.A, this new permit requires Outfall 001 temperature monitoring/reporting pursuant to its DMR submittals. This Rationale addresses temperature monitoring/reporting requirements in section R6.7.

R6. NEW PERMIT RATIONALE (SEE APPENDIX R-5 FOR NEW PERMIT REQUIREMENTS)

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (LB/DAY)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM CONCENTRATION (MG/L)	DAILY MINIMUM PERCENT REMOVAL	RATIONALE
BOD_5	30	906	40	1,208	45	40	Refer to R6.1
Total Suspended Solids	30	906	40	1,208	45	40	Refer to R6.1
Dissolved Oxygen (mg/l)	1.0 (daily minimum) instantaneous	—	—	—	—	—	Refer to R6.1
Total Chlorine Residual (mg/l)	—	—	—	—	0.97 (daily maximum)	—	Refer to R6.3
Total Nitrogen	—	—	—	—	Report (qtr avg)	Report (qtr load)	Refer to R6.4
Total Phosphorus	—	—	—	—	Report (qtr avg)	Report (qtr load)	Refer to R6.4
E. coli (colonies/100ml)	126	—	—	—	487	—	Refer to R6.5
Settleable Solids (ml/l)	—	—	—	—	1.0 (daily maximum)	—	Refer to R6.3
pH (standard units)	6.0-9.0	—	—	—	—	—	Refer to R6.3
Flow (MGD):							
Influent	Report	—	—	—	Report	—	Refer to R6.1
Effluent	Report	—	—	—	Report	—	Refer to R6.1
Temperature (deg C)	Report (a)				Report (a)		Refer to R6.7
IC25	—	—	—	—	>1.7 % effluent	—	Refer to R6.6
Sanitary Sewer Overflows, Total Occurrences			Report				Refer to R6.10
Dry Weather Overflows, Total Occurrences			Report				Refer to R6.10
Bypass of Treatment, Total Occurrences			Report				Refer to R6.10

(a) See Rationale R6.7 to determine temperature monitoring, reporting and control requirements.

Note: Weekly limitations on BOD_5 and TSS concentrations are given as required per 40 CFR 133.102(a)(2) or 133.102(a)(4)(2) & 133.102 (b)(2) respectively; daily BOD_5 and TSS limitations are authorized by T.C.A. 1200-4-5-.09; monthly and weekly mass loads are limited per 40 CFR 122.45(f) and based on the design flow as per 40 CFR 122.45(b); monthly average percent removal rates for BOD_5 and TSS are required per 40 CFR 133.102(a)(3) or 133.102(a)(4)(iii) and 133.102 (b)(3) respectively. A minimum 40% daily removal rate is required as equivalent to a daily mass load limitation.

R6.1. FLOW, BOD_5, DISSOLVED OXYGEN, TSS, AND PERCENT REMOVAL REQUIREMENTS

a. Influent and effluent flow monitoring is required to allow mass loadings to be calculated. In Part 1.2.1, the new permit includes clarifications regarding influent sampling and flow monitoring. As such, the permittee's WWTP recycle streams must be not be included in the permittee's influent (raw wastewater) samples or flow monitoring. The division requires that representative influent samples be collected. Therefore for the influent, flow-weighted composite sampling is required, with appropriate grab sampling as required for some parameters. If the permittee has specific questions, e.g., for multiple influent lines the permittee should contact the division for more information regarding appropriate sampling/monitoring.

b. Biochemical oxygen demand, or BOD, is a measure of the oxygen used when biological processes break down organic pollutants in wastewater. The amount of oxygen used is more specifically referred to as the five-day biochemical oxygen demand, or BOD_5. This parameter is used in the wastewater industry to measure both the strength of wastewater and the performance of wastewater treatment processes. Limits on the oxygen demand remaining in the treated wastewater is often necessary to prevent pollutants in the wastewater from driving oxygen in the receiving stream down below the levels necessary to support fish and aquatic life. Additionally, the breakdown of ammonia into other forms of nitrogen also requires oxygen and therefore exerts an oxygen demand on receiving wastewaters. The approach used for the current permit is being retained for the new permit.

   The monthly average BOD_5 and TSS limit of 30 mg/l (technology-based effluent limits for conventional secondary treatment plants (per Rule 1200-4-5-.09)) is being retained from the current permit.

   The dissolved oxygen effluent limitation of 1.0 mg/l is a practical limit achievable by the facility rather than a water-quality based limit necessary to protect fish and aquatic life. Given the large dilution afforded by the Hatchie River receiving stream, the division considers this discharge limit to be protective for its fish and aquatic life usage.

c. The treatment facility is required to remove 85% of the BOD_5 and TSS that enter the facility on a monthly basis. This is part of the minimum requirement for all municipal treatment facilities contained in Code of Federal Regulations 40 Part 133.102. The reasons stated by the U.S.E.P.A. for these requirements are to achieve these two basic objectives:

   (1) To encourage municipalities to correct excessive inflow and infiltration (I/I) problems in their sanitary sewer systems, and
   (2) To help prevent intentional dilution of the influent wastewater as a means of meeting permit limits.

   The treatment facility is required to remove 40% of the BOD_5 and TSS that enter the facility on a daily basis. This percent removal will be calculated three times per week and recorded on the Monthly Operation Report. The number of excursions (days

when BOD_5 and/or TSS removal is less than 40%) will be reported on the Discharge Monitoring Report.

R6.2. NH_3-N TOXICITY CONSIDERATIONS

To access potential NH3-N toxicity impacts, the state utilizes the EPA document, 1999 Update to Ambient Water Quality Criteria for Ammonia, pursuant to 1200-4-3-.0-3(3)(j), and assumed stream temperatures of 30°C and 20°C and pH of 7.5 s.u. to derive an allowable instream protection value protective of chronic exposure to a continuous discharge. A mass balance equation with sewage treatment facility and stream flows and this allowable value determines the monthly average permit limit. The criteria document states that a 30Q5 flow value is protective in deriving allowable values. Where the division has 30Q5 flow values, the division may use them. Otherwise, the division utilizes the available 7Q10 or 1Q10 values that are generally more conservative. The ammonia nitrogen aquatic toxicity calculations presented in Appendix R-4 demonstrate that a specific discharge limit for NH3-N is not needed.

R6.3. TOTAL RESIDUAL CHLORINE, pH, AND SETTLEABLE SOLIDS

Chlorination is used to disinfect the wastewater in order to protect the receiving stream from pathogens. Because chlorine can be toxic to aquatic life, the division limits residual chlorine. The residual chlorine discharge limit is derived using the mass balance formula and the EPA instream protection value of 0.019 mg/l for fish and aquatic life. Applying this formula yields the following calculation:

$$\frac{0.019\,(Qd + Qs)}{Qd} = \text{Limit (mg/l)} = \frac{0.019(3.62 + 204)}{3.62} = 1.09 \text{ mg/l}$$

where:

0.019	=	instream protection value (acute)
3.62	=	Qd, design flow of STP (MGD)
204	=	Qs, 7Q10 flow of receiving stream (MGD)

The total residual chlorine limit (0.97 mg/L) is being retained from the current permit due to the anti-backsliding provision of 40 CFR 122.44(l) that requires a reissued permit to be as stringent as the prior permit.

The Outfall 001 must remain within the range 6.0 to 9.0 s.u. based on secondary treatment standards for municipal wastewater. This pH limitation is being retained from the current permit.

The settleable solids requirement and limit (1.0 ml/l) was retained from the current permit. Settleable solids results are useful to determine the aeration basin mixed liquor suspended solids settling/thickening characteristics and clarifier performance.

R6.4. TOTAL NITROGEN AND TOTAL PHOSPHORUS LIMITATIONS

For major NPDES permits (design flows $\geq$ 1.0 MGD) EPA recommends continued monitoring for total nitrogen (TN) and total phosphorus (TP) in order to have current nutrient data maintained in its Integrated Compliance Information System (ICIS) database to accurately forecast nutrient loading to the Mississippi River. This ICIS data is being used by the Mississippi Hypoxia Task Force which consists of the EPA and States along the Mississippi River. Tennessee is one of three states in Region 4 which has rivers that ultimately drain to the Mississippi River. As such, the TN and TP monitoring requirements from the current permit are being retained for the new permit.

R6.5. *E. COLI* REQUIREMENTS

To protect the receiving stream from pathogenic microorganisms, the division requires the permittee to continue disinfecting its treated wastewater. Fecal coliform and *E. coli* are indicator organisms used as a measure the receiving stream's bacteriological health and disinfection system's performance.

The *E. coli* limits from the current permit are being retained for the new permit (126 cfu/100 mL as a geometric mean for the monthly average, with a daily maximum limit of 487 cfu/100 mL (since the receiving stream is an exceptional Tennessee waters).

The gasification facility's intake and return cooling water flow from/to the chlorine contact chamber may warrant additional permittee focus for consistent disinfection system control and performance.

R6.6. CHRONIC BIOMONITORING

The division evaluates all dischargers for reasonable potential to exceed the narrative water quality criterion, "no toxics in toxic amounts". The division has determined that for municipal facilities with stream dilutions of less than 500 to 1, any of the following conditions may demonstrate reasonable potential to exceed this criterion.

a. Toxicity is suspected or demonstrated.

b. A pretreatment program is required.
c. The design capacity of the facility is greater than 1.0 MGD.

Because the design capacity of the facility exceeds 1.0 MGD and a pretreatment program is required, the facility is considered to have the reasonable potential to violate the narrative water quality criterion, "no toxics in toxic amounts". The following calculation is the required dilution at which chronic toxicity testing must meet permit requirements.

$$IC_{25}\,\% = \frac{\text{Design Flow}}{\text{Low Flow+ Design Flow}} * 100 \geq \frac{3.62}{204+3.62} * 100 > 1.7\%$$

where:

204	=	Low Flow - 7Q10 (MGD)
3.62	=	Design Flow Capacity (MGD)
IC_{25}	=	Concentration causing 25% reduction in survival, reproduction and growth of test organisms

R6.7. TEMPERATURE CONSIDERATIONS

Since elevated and/or rapid changes in ambient receiving stream temperature may adversely impact its Fish & Aquatic Life designated usage [per Rule 0400-40-03-03(3)(e)], the permittee must operate its newly installed gasification facility using proper discharge temperature water quality considerations. As such, the permittee's discharge must not cause the temperature change in receiving stream(s) to exceed 3°C relative to an upstream control point. Also, this discharge must not cause receiving stream's temperature to exceed 30.5°C (except as a result of natural causes), and this discharge must not cause the maximum rate of temperature change in receiving streams to exceed 2°C per hour (except as a result of natural causes). The new permit includes continuous Outfall 001 discharge temperature monitoring requirements, with the temperature water quality criteria being applicable instream.

The permittee must report its discharge temperature results in terms of monthly average and daily maximum values on its submitted Discharge Monitoring Report (DMRs). It is important to note that a reported Outfall 001 discharge temperature that exceeds the receiving stream water quality temperature criteria does not translate directly to a permit violation. This is because the temperature standard is applicable to the instream temperature, not the discharge temperature. The permittee is required to make instream temperature evaluations, including monitoring if the above temperature water quality criteria appear to be exceeded due to the Outfall 001 discharge temperature results. At this time, the division does not know under what conditions the permittee would be required to reduce or stop operating its gasification facility due to instream temperature water quality standards compliance. As noted in the new permit (Part 3.5), annually the permittee must submit a Gasification Report to the division, which provides the operational/performance results, Outfall 001 temperature values, and resulting instream temperature impacts with respect to the division's water quality standards.

Therefore, the new permit includes reopener clause (Part I.5) provisions for making permit modifications, if warranted based on the permittee's DMR results.

R6.8. METALS AND TOXICS

Pass-through limitations for heavy metals and other toxic substances have been recalculated as part of the permit reissuance process and/or due to changes in industrial waste contribution to the POTW. The permittee is required to implement/maintain its pretreatment program. More frequent monitoring will be required in the permit if (a) the reported concentrations approach or exceed calculated allowable values, (b) significant amounts of particular pollutants are present which may impact the treatment process sludge character or the receiving stream, or (c) minimum information is lacking to accurately calculate water quality protection values, in which case additional stream monitoring may also be required.

The permittee's semiannual report data does not indicate that the potential exists for the water quality criteria for any parameter to be exceeded. Appendix R-4 lists the metal and toxic parameters calculations and the procedure used to derive the results.

R6.9. VOLATILE ORGANIC, ACID-EXTRACTABLE, AND BASE-NEUTRAL COMPOUNDS

The division evaluated effluent concentrations of volatile organic, acid-extractable, and base-neutral compounds and antimony, arsenic, beryllium, selenium and thallium for potential to violate water quality criteria using the following mass balance equation:

$$Cm = \frac{QsCs + QwCw}{Qs + Qw}$$

where:

Cm = resulting in-stream concentration after mixing
Cw = concentration of pollutant in wastewater
Cs = stream background concentration
Qw = wastewater flow, (STP design flow)
Qs = stream low flow

to protect water quality:

$$Cw \leq Ca$$

where:

Ca = STP effluent concentration allowable

$$= \frac{(S_A)\,[Cm\,(Qs + Qw) - QsCs]}{Qw}$$

and (S_A) = the percent "Stream Allocation".

The reasonable potential evaluation uses the following assumptions and procedures:

a. Stream background concentrations, Cs, for all volatile organic, acid-extractable, and base-neutral compounds equal zero unless actual stream data exists to show otherwise. Use of the effluent concentrations of such pollutants contributed by upstream dischargers as background is not justifiable due to the volatility and reactivity of these pollutants.

b. The stream allocation, S_A, is 50% and is used as a factor of safety.

c. A mass balance uses the STP design flow, the receiving stream critical low flow (7Q10), the state water quality numeric criteria, and the stream allocation safety factor to derive the allowable effluent concentrations.

d. When pollutants have potential to violate standards because the concentrations are below the scan detection levels but could be above the allowable water quality based effluent concentrations, the pollutants are handled one of three (3) ways:

   i. Additional testing of detected and non-detected pollutants is required if contributing industrial processes are likely to contain them and the effluent scans have not met the minimum required detection levels (RDL) in the state water quality standards or approximated the method detection limits (MDL) of the approved test methods for the pollutants in 40 CFR Part 136.
   ii. If the required RDL has been used and resulted in non-detection, or if an MDL has been used with non-detection and the contributing industrial processes do not reasonably contain that pollutant, the division drops the pollutant from further consideration.
   iii. Pollutants detected at levels high enough to violate standards are limited in the permit to the allowable concentration, Cw, based on STP design flow.

Reasonable potential calculations shown in Appendix R-4 were completed using a standardized spreadsheet, titled "WQ Based Effluent Calculations - Other Compounds". From this evaluation the division does not consider that discharge limitations are warranted in the new permit for volatile organic, acid extractable, base neutral compounds, and antimony, arsenic, beryllium, selenium, and thallium do not exhibit the potential to violate water quality criteria.

R6.10. OVERFLOW AND BYPASS REPORTING

For the purposes of demonstrating proper operation of the collection, transmission, and treatment system, the permit defines overflow as any release of sewage other than through permitted outfalls. This definition includes, but is not necessarily limited to, sanitary sewer overflows and dry weather overflows as defined. For example, a collection system blockage or hydraulic overload that causes backup and release of sewage into a building during a wet weather event may not clearly fit either the definition of a sanitary sewer overflow or a dry weather overflow. Still, any unpermitted release potentially warrants permittee mitigation of human health and/or

water quality impacts via direct or indirect contact and demonstrates a hydraulic problem in the system that warrants permittee consideration as part of proper operation and maintenance of the system.

However, for the more typical, unpermitted, releases into the environment, this permit intends interchangeable use of the terms, "overflow" and "sanitary sewer overflow" for compliance reporting purposes.

R7.0 OTHER PERMIT REQUIREMENTS AND CONDITIONS

R7.1. CERTIFIED WASTEWATER TREATMENT OPERATOR

The waste treatment facilities shall be operated under the supervision of a Grade 3 certified wastewater treatment operator in accordance with the Water Environmental Health Act of 1984. Operator grades are under jurisdiction of the Water and Wastewater Operators Certification Board. This NPDES permit is under jurisdiction of the Tennessee Board of Water Quality, Oil and Gas. Operator grades are rated and recommended by the Division of Water Resources pursuant to Rule 0400-49-01 (formerly 1200-05-03) and are included in this fact sheet for reference. The grades are intentionally not specified in the permit so that the operation certification board can authorize changes in grade without conflicting with this permit.

R7.2. COLLECTION SYSTEM CERTIFIED OPERATOR

The collection system shall be operated under the supervision of a Grade 1 certified collection system operator in accordance with the Water Environmental Health Act of 1984.

R7.3. PRETREATMENT PROGRAM

The Covington STP has an approved pretreatment program. An updated Industrial Waste Survey must be completed within 120 days of the effective date of the permit, unless such a survey has been submitted within 3 years of the effective date.

At least once each reporting period, all permittees with approved pretreatment programs are required to analyze the STP influent and effluent for the following pollutant parameters: chromium (trivalent and hexavalent and total if drinking water use applies), copper, lead, nickel, zinc, silver, cadmium, mercury, total phenols, and cyanide. These pollutants were selected because, historically, they are the ones that tend to be predominant in industrial wastewaters. Other pollutants may be added to the list, as required.

During preparation of this permit, data from ten previous semiannual reports were analyzed. If any particular value of a pollutant equals or exceeds 85% of the pass-through limit the pollutant was added to the list of those that are required to be sampled. Based on our review of the semiannual reports and other documents no additional monitoring is warranted.

R7.4. BIOSOLIDS/SLUDGE MANAGEMENT

The Clean Water Act (CWA) requires that any NPDES permit issued to a publicly owned treatment works or any other treatment works treating domestic sewage shall comply with 40 CFR Part 503, the federal regulation governing the use and disposal of sewage sludge. It is important to note that "biosolids" are sewage sludge that has been treated to a level so that they can be land applied.

The language in subpart 3.3 of the permit, relative to biosolids management, a CWA requirement, allows the "permitting authority" under 40 CFR Part 503.9(p) to be able to enforce the provisions of Part 503. The "permitting authority" relative to Part 503 is either a state that has been delegated biosolids management authority or the applicable EPA Region; in the case of Tennessee it is EPA-Region 4.

Tennessee regulates the land application of biosolids under state rules, Chapter 0400-40-15. The state rules became effective on June 30, 2013. Under these state rules, all facilities that land-apply biosolids must obtain a biosolids permit from the division. The land application of biosolids under state rules will be regulated through either a general permit or by an individual permit. It is anticipated that the permitting of biosolids land application will begin near the beginning of calendar year 2014. Questions about the division's biosolids regulations and permitting program should be directed to the division's Biosolids Coordinator at:

State of Tennessee
Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102
(615) 532-0625

R7.5. PERMIT TERM

This permit is being reissued to expire in 2019 in order to coordinate its reissuance with other permits located within the Hatchie-Lower Watershed.

R8.0 ANTIDEGRADATION STATEMENT/WATER QUALITY STATUS

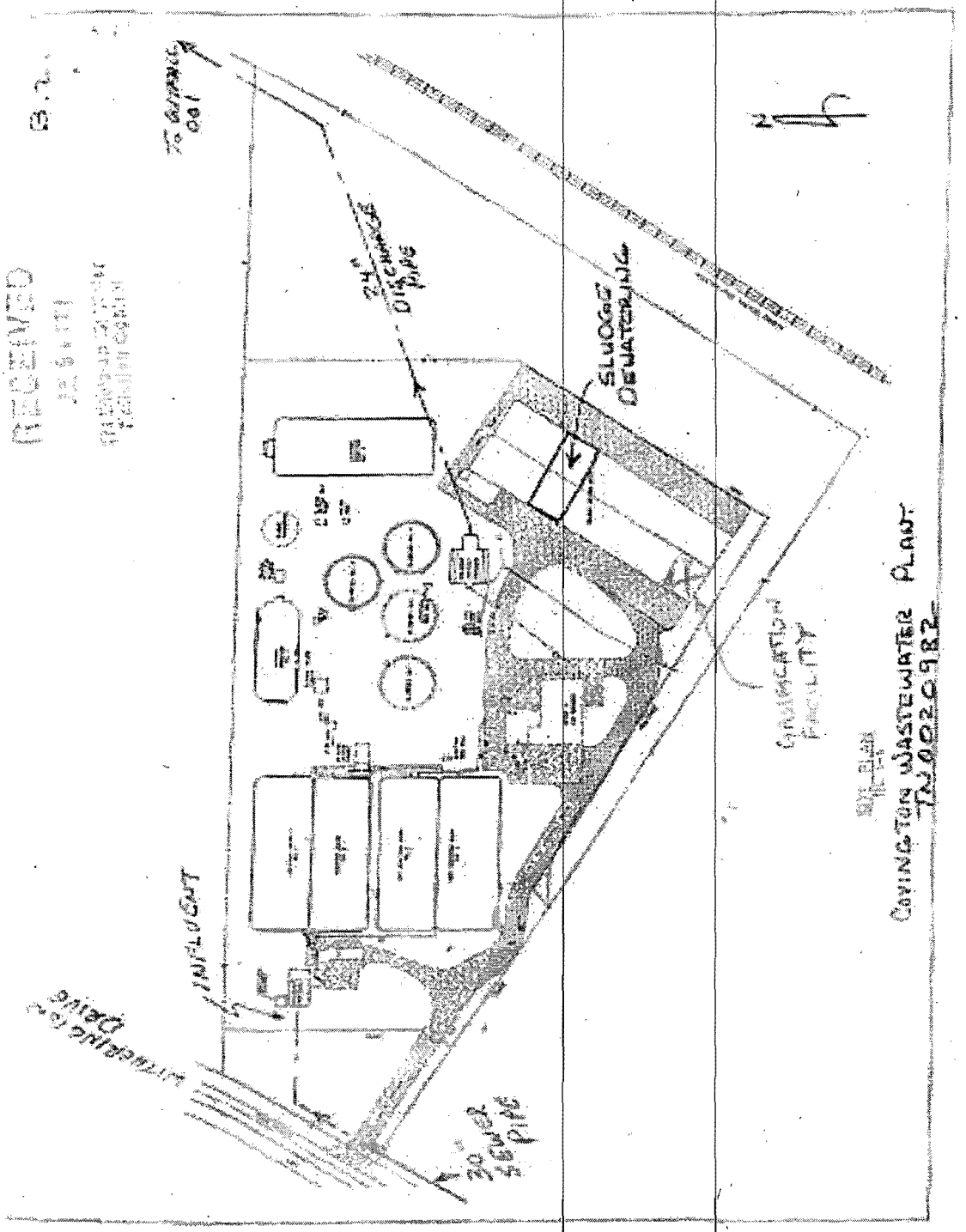
Tennessee's Antidegradation Statement is found in the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06. It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act.

Receiving streams determinations for this permit action are associated with the waterbody segment identified by the division as segment ID#s TN08010208001_0999 (for the unnamed tributary to Hatchie River) and TN08010208001_2000 (Hatchie River). The division has made a determination that

the receiving waters associated with the Outfall 001 discharge are Exceptional Tennessee Waters, and no permanent water quality degradation will be allowed unless the applicant demonstrates to the division that the degradation is necessary for economic or social development, and will not interfere with or become injurious to any existing uses. The specific requirements for this demonstration are described in the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06(4). The permittee provided its antidegradation statement information pursuant to completing the permit renewal application, which is available in the division's permit file and website. The receiving streams have been classified as Exceptional Tennessee Waters due to being deemed a State Scenic River and the presence of the state threatened Blue Sucker, and the federally endangered Hatchie Burrowing Crayfish.

The unnamed tributary has not been assessed by the division whereas the Hatchie River (as noted in the section R1), is fully supporting its designated usages. The division has maintained, and shall continue to assess, the receiving streams water quality to assure that the water quality is adequate to protect the existing uses of the stream fully, and to assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. No EPA-approved TMDLs have been developed for the receiving streams.

APPENDIX R-1
PERMITTEE'S WWTP (WITH NEW GASIFICATION FACILITY NOTED)



APPENDIX R-2
CURRENT PERMIT LIMITS

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (LB/DAY)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM CONCENTRATION (MG/L)	DAILY MINIMUM PERCENT REMOVAL	MEASUREMENT FREQUENCY
BOD_5 (Influent & Effluent)	30	906	40	1,208	45	40	3/week
Total Suspended Solids (Influent & Effluent)	30	906	40	1,208	45	40	3/week
Dissolved Oxygen (mg/l)	1.0 (daily minimum instantaneous)	—	—	—	—	—	5/week
Total Chlorine Residual (mg/l)	—	—	—	—	0.97 (instantaneous maximum)	—	5/week
Total Nitrogen (Influent & Effluent)	—	—	—	—	Report (qtr avg)	Report (qtr load)	1/quarter
Total Phosphorus (Influent & Effluent)	—	—	—	—	Report (qtr avg)	Report (qtr load)	1/quarter
E. coli (colonies/100ml)	126	—	—	—	487	—	3/week
Settleable Solids (ml/l)	—	—	—	—	1.0 (daily maximum)	—	5/week
pH (standard units)	6.0-9.0	—	—	—	—	—	5/week
Silver, Total	—		—	—	0.00424	—	1/month
Flow (MGD):							
Influent	Report	—	—	—	Report	—	7/week
Effluent	Report	—	—	—	Report	—	7/week
IC_{25}		—		—	>1.8 % effluent	—	1/year
Sanitary Sewer Overflows, Total Occurrences			Report				continuous
Dry Weather Overflows, Total Occurrences			Report				continuous
Bypass of Treatment, Total Occurrences			Report				continuous

APPENDIX R-3
DISCHARGE MONITORING REPORT SUMMARY

Covington STP DMR Results TN0020982 (page 1/2)

Month	Influent Flow		Effluent Flow		Inf. BOD5		Eff. BOD5					BOD5 Removal		Inf. TSS		Eff. TSS					TSS Removal		D.O.	pH		Settleable	E. coli		Ag	TRC	Overflow		Bypass
Ending Date	M. Avg (mgd)	D. Max (mgd)	M. Avg. (mgd)	D. Max. (mgd)	M. Avg (mg/L)	D. Max (mg/L)	M. Avg (mg/L)	W. Avg (mg/L)	D. Max (mg/L)	M. Avg (lb/day)	W. Avg (lb/day)	M. Avg (%)	D. Max (%)	M. Avg. (mg/L)	D. Max (mg/L)	M. Avg. (mg/L)	W. Avg. (mg/L)	D. Max (mg/L)	M. Avg (lb/day)	W. Avg (lb/day)	M. Avg. (%)	D. Max (%)	D. Min. (mg/L)	D. Min (s.u.)	D. Max (s.u.)	Solids (mL/L)	M. Avg. (cfu/100 mL)	D. Max. (cfu/100 mL)	D. Max. (mg/L)	D. Max (mg/L)	(count)	(count)	(count)
05/31/2009	2.563	5.416	2.472	5.295	164	240	2.92	3.08	3.53	60	68	98	97	152	219	4.31	7.11	8	83	111	97	95	6.1	7	7.6	0.1	2	2	0.0001	2.5	0	0	0
06/30/2009	2.255	4.522	2.159	4.213	182	294	2.67	2.89	2.95	52	81	98	97	183	296	4.24	6.55	8.33	82	176	98	94	5.7	7.1	7.5	0.2	3	14	0.0001	0.3	0	0	0
07/31/2009	1.996	4.634	1.904	4.564	191	279	3.1	3.59	4.36	61	91.3	98	94	206	308	6.28	8.3	11.3	128	206	97	95	5.9	6.6	7.4	0.2	7	70	0.000109	0.2	0	0	0
08/31/2009	1.649	3.709	1.757	3.857	210	339	2.88	2.86	2.96	44	50	99	96	224	331	3.82	5.33	7	55	73	98	97	5.1	6.7	6.9	0.1	3	24	0.001	0.2	0	0	0
09/30/2009	1.706	3.677	1.621	3.657	232	337	3.29	4.06	5.8	44	63	98	95	283	843	6.61	7.11	10.03	89	163	97	92	6	6.5	6.9	0.1	5	148	0.000109	0.2	0	0	0
10/31/2009	2.499	5.799	2.411	5.629	187	383	3.22	3.67	4.3	69	119	98	95	214	555	8.93	10.12	10.7	181	325	96	92	6.4	6.5	7.1	0.1	3	32	0.0001	0.4	0	0	0
11/30/2009	1.648	2.738	1.699	2.868	191	284	3.32	4.67	7.9	58	97	98	97	205	295	4.25	7.33	9	74	145	97	93	7.3	6.3	7.3	0.1	2	4	0.0001	0.5	0	0	0
12/31/2009	2.446	4.968	2.358	4.828	207	494	3.74	4.46	5.66	74	126	98	95	223	745	8.67	7.78	9	128	193	96	94	7.5	6.8	7.3	0.1	3	34	0.0001	0.9	0	0	0
01/31/2010	2.494	4.766	2.414	4.842	257	529	3.86	4.77	7.38	73	84	98	97	216	669	5.53	6.45	7	105	139	97	96	8.2	6.9	7.3	0.1	3	22	0.000146	0.2	0	0	0
02/28/2010	3.41	5.765	3.331	5.887	159	285	12.91	22.65	53.5	432	865	69	43	169	289	16.06	28.3	36.5	466	867	89	72	7.3	6.8	7.5	0.6	10	3,040	0.000132	4.2	0	0	0
03/31/2010	2.796	4.247	2.712	4.277	223	527	3.67	4.25	5.1	85	113	98	97	274	556	6.07	8.01	13.7	137	183	97	94	7.3	6.2	7.3	0.1	2	6	0.0001	0.2	0	0	0
04/30/2010	2.395	3.54	2.291	3.5	217	281	3.35	3.71	4.12	63	81	98	96	170	218	5.45	6.9	9	101	130	97	94	7.1	5.9	7.3	0.1	2	2	0.0001	0.2	0	0	0
05/31/2010	2.605	4.91	2.709	9	251	417	3.32	4.19	6.85	70	168	99	97	203	502	4.77	6.33	9.33	106	171	97	93	5.1	6.3	7.3	0.1	3	8	0.0001	0.5	0	0	0
06/30/2010	1.939	3.503	1.866	3.633	255	372	2.83	2.96	3.17	48	56	99	98	364	590	5.03	5.56	10.33	85	117	98	96	5	6.7	7.2	0.1	4	26	0.0001	0.2	0	0	0
07/31/2010	1.585	3.624	1.51	3.554	242	524	2.86	2.66	2.85	44	70	99	97	332	1043	3.43	4	7.33	45	60	99	97	4.6	6.3	7.2	0.1	5	145	0.0001	0.5	0	0	0
08/31/2010	1.423	1.693	1.372	1.935	220	431	3.28	3.92	6.05	39	46	99	96	291	450	12.5	6.55	13.7	78	150	98	93	4.7	6.1	7.1	0.1	4	14.6	0.0001	0.11	0	0	0
09/30/2010	1.266	1.594	1.193	1.519	303	445	2.86	2.66	2.66	29	32	99	95	257	384	3.94	5	8	40	51	98	97	5.7	6.3	6.9	0.1	5	312	0.0001	0.9	0	0	0
10/31/2010	1.278	1.74	1.19	1.67	319	390	3.18	4.14	5.32	33	43	99	98	241	375	5.58	7.89	10	57	82	97	94	6.2	6.2	6.9	0.1	5	1,050	0.0001	0.13	0	0	0
11/30/2010	1.485	3.215	1.409	3.145	288	468	4.68	6.55	8.22	69	114	98	96	309	540	7.53	10.5	17	115	189	97	95	7.1	6.1	6.9	0.1	3	25	0.000104	0.16	0	0	0
12/31/2010	1.352	2.31	1.264	2.23	287	563	3.58	4.33	5.16	38	81	99	97	191	459	4.82	7.43	13.3	50	157	97	95	8	6.3	7	0.1	2	6	0.0001	0.17	0	0	0
01/31/2011	1.471	2.521	1.39	2.491	265	415	3.88	4.27	5.51	47	56	98	96	210	543	5.87	8.44	11.7	71	78	97	93	9.2	6.4	6.9	0.5	2	10	0.0001	0.09	0	0	0
02/28/2011	1.731	3.304	1.637	3.224	271	348	3.86	4.65	5.2	61	78	99	96	196	346	5.5	7.46	7.67	89	117	97	94	8.7	6.5	7.2	0.5	2	2	0.00012	0.03	0	0	0
03/31/2011	2.152	4.572	2.055	4.492	202	274	3.55	3.9	4.36	60	69	98	97	182	265	5.87	8.34	10.67	100	149	97	93	7.1	6.5	7.3	NODI=B	2	4	0.0001	0.23	0	0	0
04/30/2011	2.654	6.992	2.559	6.905	167	277	3.12	3.25	4.94	82	125	98	97	179	326	3.56	5.33	6	101	222	98	96	5.1	6.5	7.5	0.5	2	2	0.0001	0.59	0	0	0
05/31/2011	2.652	7.28	2.767	7.2	149	235	4.87	5.93	9.44	99	141	96	88	159	233	11.3	21.1	32.8	273	383	92	81	6.1	6.5	7.4	0.5	3	43	0.000191	0.12	0	0	0
06/30/2011	1.464	2.754	1.383	2.584	275	414	3.38	4.3	7.18	44	62	99	96	341	636	4.36	8.68	8.33	55	117	99	97	5.5	6.5	7.2	0.5	3	36	0.0001	0.2	0	0	0
07/31/2011	1.132	1.505	1.056	1.425	263	397	3.08	3.73	5.06	28	36	99	98	331	459	3.17	6.78	10	29	63	99	97	5.5	6.6	7.1	0.5	9	173	0.0001	0.1	0	0	0
08/31/2011	1.075	1.64	0.999	1.57	251	356	2.87	2.9	2.93	28	28	99	93	259	382	3.74	4.55	6.67	32	32	99	97	5.1	6.4	7	NODI=B	3	43	NODI=B	0.05	0	0	0
09/30/2011	1.174	2.678	1.073	2.708	275	368	4.19	4.74	6.89	41	57.7	98	97	272	443	9.47	11	14.7	90	133	96	94	5.9	6.3	7.7	0.5	19	364	0.000153	0.11	0	0	0
10/31/2011	0.975	1.124	0.894	1.052	266	339	2.94	3.22	3.94	23	24.7	99	98	251	432	3.33	3.89	7	28	31	99	97	8.9	6	6.7	NODI=B	3	22	NODI=B	2.48	0	0	0
11/30/2011	1.635	3.667	1.559	3.577	214	324	3.12	3.33	4.26	43	64	98	95	243	405	3.44	5	7	58	104	98	94	7.5	6.1	6.7	NODI=B	3	34	0.0001	5.71	0	0	0
12/31/2011	2.275	8.498	2.171	8.366	178	371	3.7	4.29	5.79	84	113	98	95	148	264	5.21	8.34	10.67	121	187	96	88	8.6	6.2	7.2	0.5	2	4	0.0001	0.61	0	0	0

Covington STP DMR Results TN0020982 (page 2/2)

Month	Influent Flow		Effluent Flow		Inf. BOD5		Eff. BOD5					BOD5 Removal		Inf. TSS		Eff. TSS					TSS Removal		D.O.	pH		Settleable	E. coli		Ag	TRC	Overflow		Bypass
Ending Date	M. Avg. (mgd)	D. Max (mgd)	M. Avg (mgd)	D. Max. (mgd)	M. Avg. (mg/L)	D. Max. (mg/L)	M. Avg. (mg/L)	W. Avg. (mg/L)	D. Max. (mg/L)	M. Avg (lb/day)	W. Avg (lb/day)	M. Avg. (%)	D. Max. (%)	M. Avg. (mg/L)	D. Max. (mg/L)	M. Avg. (mg/L)	W. Avg. (mg/L)	D. Max (mg/L)	M. Avg. (lb/day)	W. Avg (lb/day)	M. Avg. (%)	D. Max. (%)	D. Min. (mg/L)	D. Min. (s.u.)	D. Max. (s.u.)	Solids (mL/L)	M. Avg. (cfu/100 mL)	D. Max. (cfu/100 mL)	D. Max. (mg/L)	D. Max. (mg/L)	(count)	(count)	(count)
01/31/2012	1.935	4.229	1.863	4.159	236	350	4.41	5.64	7.56	69	86	98	96	207	333	6.03	9	10.67	92	142	97	95	8.8	6.3	7.5	NODI=B	3	54	NODI=B	0.17	0	0	0
02/29/2012	2.158	3.394	2.078	3.224	196	326	4.01	5.11	7.24	71	50	98	97	177	373	4.59	4.33	7.57	81	86	97	95	8.7	6.8	7.4	0.5	2	4	0.0001	0.33	0	0	0
03/31/2012	2.206	4.601	2.125	4.531	147	368	5.68	13.65	34.6	138	384	96	75	230	573	9.39	26.78	70	235	753	95	82	7.2	6.5	7.2	NODI=B	2	12	0.0001	0.2	0	0	0
04/30/2012	1.409	1.688	1.334	1.618	211	310	3.45	4.2	6.19	41	48	98	97	222	355	6.49	7	9.7	78	92	97	95	5.9	6.7	8.9	0.5	3	20	0.0001	0.2	0	0	0
05/31/2012	1.295	1.322	1.221	1.852	255	330	4.7	8.26	11.93	47	70.3	98	96	236	456	7.24	12.39	16.67	74	123	97	95	4.5	6.7	7.3	0.5	6	60	0.0001	0.06	0	0	0
06/30/2012	1.258	2.301	1.176	2.241	278	564	3.21	4.26	5.28	35	39	99	98	322	399	4.14	5.39	7	45	54	99	97	5.7	6.6	7.5	0.5	3	58	0.0001	0.13	0	0	0
07/31/2012	1.152	1.563	1.077	1.492	243	392	3.63	5.53	9.71	32	48	98	96	292	573	4.17	5.33	8.67	36	48	98	96	5	6.8	7.4	NODI=B	4	60	NODI=B	0.29	0	0	0
08/31/2012	1.131	1.456	1.049	1.367	291	531	6.61	13.9	25.5	61	126	98	91	325	440	9.53	15.8	27.7	90	142	97	88	4.8	6.6	6.9	0.7	5	144	0.0001	0.24	0	0	0
09/30/2012	1.324	2.963	1.218	2.883	226	266	3.01	3.41	4.5	28	33.3	99	97	254	396	5.61	12	29	54	113	98	86	6.3	6.3	7.1	0.5	8	46	0.0001	0.78	0	0	0
10/31/2012	1.2098	1.728	1.116	1.648	226	285	3.14	3.68	3.94	30	34	99	98	249	369	5.19	7.96	9.33	50	88.7	98	95	6.5	6.6	7	0.5	3	106	0.0001	0.11	0	0	0
11/30/2012	1.165	2.099	1.075	2.019	217	308	2.92	3.15	3.29	28	35	99	98	214	381	3.95	5.78	8.67	37	49	98	97	7.6	6.5	7.2	0.5	2	8	0.0001	0.32	0	0	0
12/31/2012	1.282	2.813	1.194	2.663	230	559	3.46	4.12	6.23	36	46.7	98	96	251	402	4.36	4.89	5.67	45	59.7	98	96	7.4	6.8	7.2	0.5	3	12	0.0001	0.06	0	0	0
01/31/2013	1.987	6.23	1.882	6.11	221	518	3.63	4.06	6.63	55	57	99	96	211	321	5.55	6.22	7.33	80	99	98	93	7.5	6.6	7.3	NODI=B	2	4	NODI=B	1.36	0	0	0
02/28/2013	2.078	4.497	2.002	4.315	224	305	4.09	5.98	7.93	82	155	98	97	233	403	5.02	7	12	106	193	97	93	8.9	7	7.4	0.5	2	2	0.0001	0.11	0	0	0
03/31/2013	1.852	2.423	1.752	2.353	241	389	5.63	7.19	17.63	87	106	97	95	230	556	8.47	10.8	12.67	131	155	95	90	8.9	7	7.1	0.5	6	1,000	0.0001	0.06	0	0	0
04/30/2013	2.51	5.773	2.433	5.703	177	272	5.07	5.98	7.35	105	169	97	92	197	274	8.33	12.1	13.3	170	309	96	93	6.5	6.4	7	0.5	2	8	0.0001	1.58	0	0	0
05/31/2013	2.651	5.198	2.577	5.138	186	320	3.62	6.04	8.84	68	114	98	96	239	447	7.41	9.22	13.33	139	196	96	93	6.2	6.5	7	NODI=B	2	8	NODI=B	0.18	0	0	0
06/30/2013	1.92	3.51	1.837	3.431	175	286	2.94	3.18	3.81	45	50.3	98	97	168	364	5.53	8.22	12	85	130	96	91	4.9	6.5	6.9	0.5	3	36	0.0001	0.06	0	0	0
07/31/2013	1.525	3.523	1.452	3.753	244	366	3.13	3.64	4.86	45	61.3	98	94	225	391	6.16	7.86	10.5	87	152	97	92	5.3	6.3	7.2	0.5	2	12	0.0001	0.03	0	0	0
08/31/2013	1.441	2.301	1.353	2.232	284	400	3.27	4.64	6	37	42	99	98	227	375	4.41	8.33	10	47	74	98	96	5.7	6.6	7.2	0.5	5	58	0.0001	0.03	0	0	0
09/30/2013	1.37	4.295	1.286	4.205	256	340	2.86	2.86	2.86	30	32	99	98	214	299	3.18	3.34	6.33	33	37	98	96	6.1	6.5	7.3	0.5	3	32	0.0001	0.05	0	0	0
10/31/2013	1.296	1.511	1.214	1.731	257	357	3.7	4.98	6.55	39	54	99	98	219	335	7.31	11.3	17	77	122	97	92	5.9	6.1	7	0.5	4	1,040	0.0001	0.04	0	0	0
11/30/2013	1.329	3.564	1.243	3.784	295	428	5.08	7.3	10.1	53	77.7	98	96	203	267	8.02	12.1	16.6	83	125	96	68	7.2	6.4	7.1	0.5	3	34	0.000131	0.05	0	0	0
12/31/2013	1.81	4.277	1.732	4.237	292	427	6.88	7.57	9.4	93	135	97	98	187	302	11.6	14.9	23.3	174	351	93	83	8.1	6.4	7.1	0.5	2	20	0.0001	6.45	0	0	0
01/31/2014	1.875	1.81	1.81	3.291	347	819	24.6	67.9	99.3	460	1,397	93	72	144	284	26.7	83.3	206	560	1,691	84	0	6.5	6.6	7.2	4.5	2	10	NODI=B	0.07	0	0	0
02/28/2014	2.505	5.933	2.466	5.833	288	468	11.4	13.8	14.5	233	295	96	90	162	212	10.2	12.8	16.7	222	337	93	87	8.4	6.4	7.1	0.5	2	2	0.0001	0.04	0	0	0
03/31/2014	3.09	5.266	3.019	5.266	154	252	5.59	7.96	19	141	231	96	90	153	266	6.64	10.3	12.3	186	299	95	92	6.3	6.3	7.3	0.5	2	2	0.0001	0.1	0	0	0
04/30/2014	2.178	5.216	2.136	5.716	167	340	3.77	4.22	5.52	69	98	97	96	167	395	6.59	6.78	17.7	121	113	96	89	6.3	6.2	6.6	0.5	0.5	1,466	0.0001	3.75	0	0	0
05/31/2014	1.847	3.346	1.767	3.286	210	303	3.49	3.96	4.56	57	62	98	97	209	259	6.72	8.38	13.33	103	134	97	94	5.1	6	6.8	0.5	1	8	0.0001	0.06	0	0	0
06/30/2014	2.178	5.216	2.136	5.716	167	340	3.77	4.22	5.52	69	98	NODI=X	NODI=X	167	395	6.59	6.78	17.7	121	113	NODI=X	NODI=X	6.3	6.2	6.6	NODI=B	0.5	1,466	NODI=B	3.75	0	0	NODI=X
Average	1.858	3.728	1.774	3.691	224	375	4	6	9	73	121	98	94	225	410	7	10	16	108	187	97	91	6.6	6.5	7.2	0.4	4	287	0.0001	0.7	0	0	0
Minimum	0.975	1.124	0.895	1.052	3	235	3	3	3	23	25	89	43	144	284	3	3	6	26	31	84	0	4.5	6	6.6	0.1	1	2	0.0001	0.03	0	0	0
Maximum	3.410	9.100	3.331	9.000	347	819	25	68	98	460	1,397	99	98	341	1043	27	83	205	560	1,601	99	97	9.2	7.1	7.5	4.5	19	6,640	0.0019	6.45	0	0	0
Permit Limit	Report	Report	Report	Report	Report	Report	30	40	45	905	1,205	85	40	Report	Report	30	40	45	906	1,205	85	40	1.0	6.0	9.0	1.0	126	487	0.00424	0.57	0	0	0
Exceedances	NA	NA	NA	NA	NA	NA	0	1	2	0	1	0	0	NA	NA	0	1	2	0	1	1	1	0	0	0	1	0	7	0	3	0	0	0

Covington STP DMR Results TN0020982

Month Ending Date	Total Nitrogen				Total Phosphorus			
	Influent		Effluent		Influent		Effluent	
	(mg/L)	(lb/day)	(mg/L)	(lb/day)	(mg/L)	(lb/day)	(mg/L)	(lb/day)
06/30/2009	NODI=9	NODI=9	NODI=9	NODI=9	NODI=9	NODI=9	NODI=9	NODI=9
09/30/2009	20.9	322	3.57	52.4	6.59	710	3.13	46
12/31/2009	19.2	410	18.2	337	6.59	141	3.81	71
03/31/2010	23.1	539	13.1	296	5.46	127	2.71	61
06/30/2010	26.5	526	9.49	181	6.52	129	3.18	61
09/30/2010	28.5	339	21.5	244	9.96	118	6.07	68.7
12/31/2010	21.9	251	38.5	414	5.82	67	3.13	34
03/31/2011	18.6	277	10.6	150	3.65	54	1.42	20
06/30/2011	28.9	560	18.1	338	4.91	95	2.33	43
09/30/2011	50.7	445	37	303	4.64	40.7	3.25	26.6
12/31/2011	16.6	238	7.31	98.6	5.17	74.1	1.4	18.9
03/31/2012	14.1	325	6.28	141	1.98	46	0.929	21
06/30/2012	33.2	403	16.3	190	0.625	8	2.3	27
09/30/2012	31.8	362	21.2	205	4.07	46	1.48	14
12/31/2012	44.3	436	12.8	117	3.32	32.7	1.28	11.7
03/31/2013	30.5	507	16.8	273	2.15	35.8	0.792	12.9
06/30/2013	7.54	107	12.1	165	1.81	25.7	0.904	12.3
09/30/2013	24.2	270	14.2	149	2.69	30	1.56	16.4
12/31/2013	55.7	675	3.8	42.9	2.97	36	0.311	3.51
03/31/2014	15.6	576	9.62	355	1.34	49.4	0.247	9.11
Average	27	398	15	213	4	98	2	30
Minimum	7.54	107	3.57	42.9	0.625	8	0.247	3.51
Maximum	55.7	675	38.5	414	9.96	710	6.07	71
Permit Limit	Report	Report	Report	Report	Report	Report	Report	Report
Exceedances	0	0	0	0	0	0	0	0

Note: NODI=9 (Conditional Monitoring - Not Required)

Covington STP DMR Results TN0020982

Month Ending Date	IC25			
	CD (%)		FM (%)	
12/31/2009	NODI=9		NODI=9	
12/31/2010	>	7.2	>	7.2
12/31/2011	>	7.2	>	7.2
12/31/2012	>	7.2	>	7.2
12/31/2013	>	7.2	>	7.2
Average	--		--	
Minimum	>	7.2	>	7.2
Maximum	>	7.2	>	7.2
Permit Limit	>	1.8	>	1.8
Exceedances	0		0	

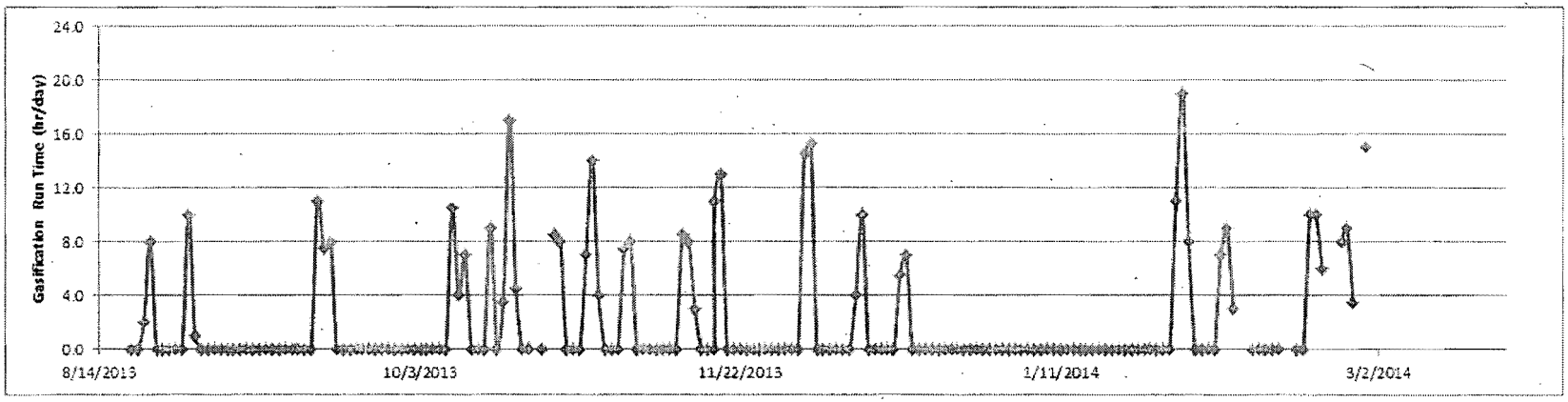
Note: NODI=9 (Conditional Monitoring - Not Required)

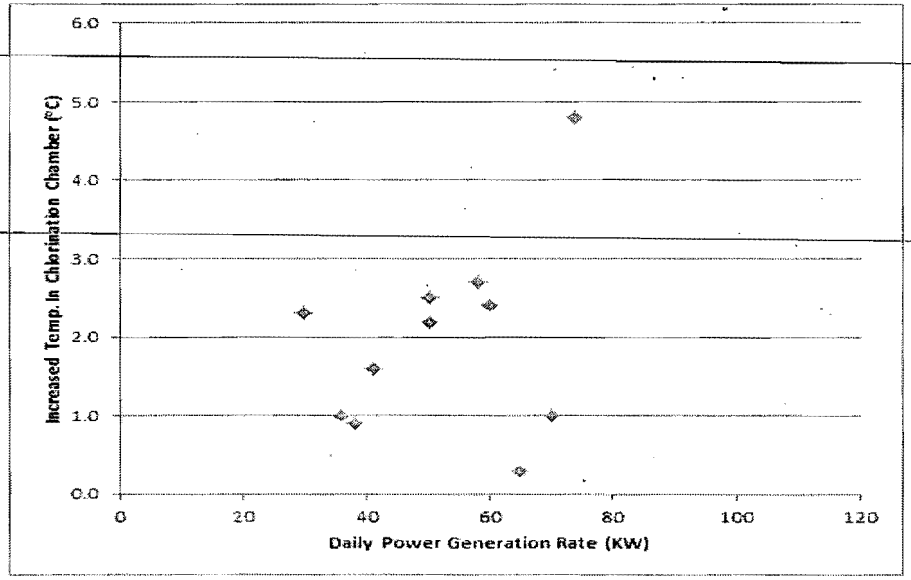
Covington STP TN0020982 - Gasification Facility Results for Operating Days

Date	WWTP						Hatchie River						Gasification Facility		
	Outfall 001 Flow		Chlorine Contact Chamber		Reaeration Ladder Effluent (c)	Discharge Pipe Effluent (d)	Upstream (e)		Downstream (f)		Depth (g)	Flow	Operating Time	Duration	Output
	When Monitoring Temperature (mgd)	Daily (mgd)	Influent (a) (°C)	Effluent (b) (°C)	(°C)	(°C)	Surface (°C)	Mid-Depth (°C)	Surface (°C)	Mid-Depth (°C)	(ft)	(mgd)		(hr)	(KW)
8/21/2013	0.999	1.333	25.0	24.7	24.7	24.6	25.7	25.8	26.0	26.1	5.10		1400-1600	2.0	
8/22/2013	1.530	1.193	30.3	30.7	30.4	29.4	27.8	27.5	27.8	27.7	4.90		0900-1700	8.0	
8/28/2013	1.940	1.294	26.5	29.9	29.6	29.5	28.5	28.5	28.7	28.7	4.70		0700-1700	10.0	
8/29/2013	1.533	1.097	27.7	27.9	27.6	27.1	29.0	28.8	29.3	29.1	4.60		1100-1200	1.0	
9/17/2013	1.365	1.128	24.7	28.3	26.8	26.8	25.3	25.2	25.3	25.3	<4.0		0800-1900	11.0	
9/18/2013	1.392	1.206	24.8	28.2	28.3	27.8	26.9	25.6	25.6	25.9	<4.0		0700-1430	7.5	
9/19/2013	1.270	1.088	25.6	28.0	28.0	27.5	26.0	25.9	26.2	26.0	<4.0		0800-1600	8.0	
10/8/2013	1.650	1.338	20.7	24.6	23.5	23.5	20.5	20.7	20.7	20.8	5.80		0830-1900	10.5	
10/9/2013													0700-1100	4.0	
10/10/2013	1.470	1.363	22.1	23.7	23.4	23.1	20.5	20.4	20.5	20.4	5.80		1030-1730	7.0	
10/14/2013	1.354	1.212	22.8	25.6	25.1	24.8	20.7	20.6	20.8	20.7	5.30		0800-1700	9.0	
10/16/2013	2.330	1.780	21.8	21.8									0800-1130	3.5	
10/17/2013	1.591	1.405	21.5	21.5	25.0	23.3	23.1	19.4	19.4	19.4	5.10		0700-2400	17.0	
10/18/2013	1.447	1.195	20.6	22.7	22.3	22.1	18.7	18.7	19.0	18.8	4.90		1300-1730	4.5	
10/24/2013	1.248	1.390	18.4	22.0	20.5	20.5	15.8	15.8	15.8	16.0	5.5		0830-1700	8.5	
10/25/2013		1.034	17.2	18.7	18.6	18.3	13.7		14.0	14.5	5.4		0900-1700	8.0	
10/29/2013	1.512	1.181	18.8	20.4	20.3	20.2	15.8	15.2	15.7	15.3	4.9		1300-2000	7.0	
10/30/2013	1.920	1.283	20.2	22.2	22.2	22.1	16.6	16.2	17.5	16.4	4.9		0400-1800	14.0	
10/31/2013		1.811											0800-1200	4.0	
11/4/2013		1.198											1500-2230	7.5	
11/5/2013	1.430	1.223	17.1	19.1	18.9	18.7	14.7	14.6	15.1	14.7	7.1		0800-1600	8.0	
11/13/2013	1.945	1.131	13.4	15.2	14.9	14.8	10.2	10.2	10.8	10.5	5.8		0900-1730	8.5	
11/14/2013	1.916	1.312	12.8	12.8	13.0								0900-1700	8.0	
11/15/2013	1.240	1.318											0800-1100	3.0	
11/18/2013	1.546	1.303	18.0	20.7	18.8	--							1300-2400	11.0	58
11/19/2013	0.880	1.255	16.0	20.8	19.2	18.7	11.4	11.3	11.6	11.4	5.7		0000-1300	13.0	74
12/2/2013	1.389		14.2	15.9	15.8								0930-2400	14.5	
12/3/2013			15.3	17.0	16.8	16.8	7.6	7.5	7.8	7.8	7.4	43	0000-1520	15.3	
12/10/2013													1700-2100	4	101
12/11/2013	1.703		10.4	11.4	11.1								0700-1700	10	70
12/17/2013	1.463		12.2	13.8	13.6								1200-1730	5.5	41
12/18/2013	1.711		12.0	14.3	13.5								900-1500	7	30
1/29/2014													1300-2400	11	
1/30/2014	1.319		6.8	9.0	8.9								0000-1900	19	50
1/31/2014	1.825		8.2	9.2	9.4								0700-1500	8	36
2/5/2014	4.0	3.707	8.7	9.6	9.5								1200-1900	7	38
2/6/2014	3.070	2.988	8.0	8.3	8.3	9.1					16.4		1000-1900	9	65
2/7/2014													0800-1100	3	
2/19/2014	2.267	2.126	14.2		16.6								0900-1900	10	86
2/20/2014	1.843		14.9		17.2								0700-1700	10	81
2/21/2014	2.049	2.864	13.8		15.4								0730-1330	6	73
2/24/2014		2.118	11.8		14.2								0930-1730	8	95
2/25/2014	1.292	2.036	11.1	13.5	12.9	12.0					14.0		0930-1830	9	60
2/26/2014	1.454	1.939	9.4		10.6								0730-1100	3.5	56
2/28/2014	1.452	1.828	9.1	11.6	10.5								0000-1500	15	50

(a) Flash-mix chamber
(b) At effluent weir
(c) Just before discharge pipe
(d) Discharge pipe effluent
(e) Hatchie River approximately 500 ft upstream of confluence with the Outfall 001 discharge. Measured on the River's south side.
(f) Hatchie River approximately 900 ft downstream of confluence with the Outfall 001 discharge. Measured on the River's south side upstream of RR bridge.
Note: Until September 2, 2013 the downstream measurements were taken approximately from the U.S. Hwy 51 bridge, which is about 1 mile from Outall 001 discharge's confluence with the Hatchie River.
(g) USGS gage approximately 200 ft downstream of confluence with the Outfall 001 discharge.

Chronological Plot – Demonstrates Intermittent Gasification Facility Operations





Gasification Facility – Nominal Full Operation Power Generation Capacity = 125 KW

APPENDIX R-4
METAL AND TOXIC PARAMETER CALCULATIONS

The following procedure is used to calculate the allowable instream concentrations for pass-through guidelines and permit limitations.

a. The most recent background conditions of the receiving stream segment are compiled. This information includes:

   * 7Q10 of receiving stream (204 MGD, USGS)
   * Calcium hardness (148 mg/l)
   * Total suspended solids (30 mg/l, default)
   * Background metals concentrations (½ water quality criteria)
   * Other dischargers impacting this segment (none)
   * Downstream water supplies, if applicable

b. The chronic water quality criteria are converted from total recoverable metal at lab conditions to dissolved lab conditions for the following metals: cadmium, copper, trivalent chromium, lead, nickel and zinc. Then translators are used to convert the dissolved lab conditions to total recoverable metal at ambient conditions.

c. The acute water quality criteria are converted from total recoverable metal at lab conditions to dissolved lab conditions for the following metals: cadmium, copper, trivalent chromium, lead, nickel, zinc and silver. Then translators are used to convert the dissolved lab conditions to total recoverable metal at ambient conditions for the following metals: cadmium, copper, lead, nickel and silver.

d. The resulting allowable trivalent and hexavalent chromium concentrations are compared with the effluent values characterized as total chromium on permit applications. If reported total chromium exceeds an allowable trivalent or hexavalent chromium value, then the calculated value will be applied in the permit for that form of chromium unless additional effluent characterization is received to demonstrate reasonable potential does not exist to violate the applicable state water quality criteria for chromium.

e. A standard mass balance equation determines the total allowable concentration (permit limit) for each pollutant. This equation also includes a percent stream allocation of no more than 90%.

The following formulas are used to evaluate water quality protection:

$$Cm = \frac{QsCs + QwCw}{Qs + Qw}$$

where:

Cm = resulting in-stream concentration after mixing
Cw = concentration of pollutant in wastewater
Cs = stream background concentration
Qw = wastewater flow
Qs = stream low flow

to protect water quality:

$$Cw \leq \frac{(S_A)\,[Cm\,(Qs + Qw) - QsCs]}{Qw}$$

where (S_A) is the percent "Stream Allocation".

Calculations for this permit have been done using a standardized spreadsheet, titled "Water Quality Based Effluent Calculations." Division policy dictates the following procedures in establishing these permit limits:

1. The critical low flow values are determined using USGS data:

   Fish and Aquatic Life Protection
   7Q10 - Low flow under natural conditions
   1Q10 - Regulated low flow conditions

   Other than Fish and Aquatic Life Protection
   30Q5 - Low flow under natural conditions

2. Fish & Aquatic Life water quality criteria for certain Metals are developed through application of hardness dependent equations. These criteria are combined with dissolved fraction methodologies in order to formulate the final effluent concentrations.

3. For criteria that are hardness dependent, chronic and acute concentrations are based on a Hardness of 25 mg/L and Total Suspended Solids (TSS) of 10 mg/L unless STORET or Water Supply intake data substantiate a different value. Minimum and maximum limits on the hardness value used for water quality calculations are 25 mg/L and 400 mg/L respectively. The minimum limit on the TSS value used for water quality calculations is 10 mg/L.

4. Background concentrations are determined from the division database, results of sampling obtained from the permittee, and/or obtained from nearby stream sampling data. If this background data is not sufficient, one-half of the chronic "In-stream Allowable" water quality criteria for fish and aquatic life is used. If the measured background concentration is greater than the chronic "In-stream Allowable" water quality criteria, then the measured background concentration is used in lieu of the chronic "In-stream Allowable" water quality criteria for the purpose of calculating the appropriate effluent limitation (Cw). Under these circumstances, and in the event the "stream allocation" is <u>less</u> than 100%, the calculated chronic effluent limitation for fish and aquatic life should be equal to the chronic "In-stream Allowable" water quality criteria. These guidelines should be strictly followed where the industrial source water is not the receiving stream.

Where the industrial source water is the receiving stream, and the measured background concentration is greater than the chronic "In-stream Allowable" water quality criteria, consideration may be given as to the degree to which the permittee should be required to meet the requirements of the water quality criteria in view of the nature and characteristics of the receiving stream.

The spreadsheet has fifteen (15) data columns, all of which may not be applicable to any particular characteristic constituent of the discharge. A description of each column is as follows:

Column 1: The "Stream Background" concentrations of the effluent characteristics.

Column 2: The "Chronic" Fish and Aquatic Life Water Quality criteria. For cadmium, copper, trivalent chromium, lead, nickel, and zinc, this value represents the criteria for the dissolved form at laboratory conditions. The Criteria Continuous Concentration (CCC) is calculated using the equation:

$$CCC = (\exp \{ m_C [\ln (\text{stream hardness})] + b_C \}) (CCF)$$

CCF = Chronic Conversion Factor

This equation and the appropriate coefficients for each metal are from Tennessee Rule 1200-4-3-.03 and the EPA guidance contained *in The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007, June 1996). Values for other metals are in the total form and are not hardness dependent; no chronic criterion exists for silver. Published criteria are used for non-metal parameters.

Column 3: The "Acute" Fish and Aquatic Life Water Quality criteria. For cadmium, copper, trivalent chromium, lead, nickel, silver, and zinc, this value represents the criteria for the dissolved form at laboratory conditions. The Criteria Maximum Concentration (CMC) is calculated using the equation:

$$CMC = (\exp \{ m_A [\ln (\text{stream hardness})] + b_A \}) (ACF)$$

ACF = Acute Conversion Factor

This equation and the appropriate coefficients for each metal are from Tennessee Rule 1200-4-3-.03 and the EPA guidance contained in *The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007, June 1996). Values for other metals are in the total form and are not hardness dependent. Published criteria are used for non-metal parameters.

Column 4: The "Fraction Dissolved" converts the value for dissolved metal at laboratory conditions (columns 2 & 3) to total recoverable metal at in-stream ambient conditions (columns 5 & 6). This factor is calculated

using the linear partition coefficients found in *The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007, June 1996) and the equation:

$$\frac{C_{diss}}{C_{total}} = \frac{1}{1 + \{ [K_{po}] [ss^{(1+a)}] [10^{-6}] \}}$$

ss = in-stream suspended solids concentration [mg/l]

Linear partition coefficients for streams are used for unregulated (7Q10) receiving waters, and linear partition coefficients for lakes are used for regulated (1Q10) receiving waters. For those parameters not in the dissolved form in columns 2 & 3 (and all non-metal parameters), a Translator of 1 is used.

Column 5: The "Chronic" Fish and Aquatic Life Water Quality criteria at in-stream ambient conditions. This criteria is calculated by dividing the value in column 2 by the value in column 4.

Column 6: The "Acute" Fish and Aquatic Life Water Quality criteria at in-stream ambient conditions. This criteria is calculated by dividing the value in column 3 by the value in column 4.

Column 7: The "Chronic" Calculated Effluent Concentration for the protection of fish and aquatic life. This is the chronic limit.

Column 8: The "Acute" Calculated Effluent Concentration for the protection of fish and aquatic life. This is the acute limit.

Column 9: The In-Stream Water Quality criteria for the protection of Human Health associated with the stream use classification of Organism Consumption (Recreation).

Column 10: The In-Stream Water Quality criteria for the protection of Human Health associated with the stream use classification of Water and Organism Consumption. These criteria are only to be applied when the stream use classification for the receiving stream includes both "Recreation" and "Domestic Water Supply."

Column 11: The In-Stream Water Quality criteria for the protection of Human Health associated with the stream use classification of Domestic Water Supply.

Column 12: The Calculated Effluent Concentration associated with Organism Consumption.

Column 13: The Calculated Effluent Concentration associated with Water and Organism Consumption.

Column 14: The Calculated Effluent Concentration associated with Domestic Water Supply.

Column 15: The Effluent Limited criteria. This upper level of allowable pollutant loading is established if (a) the calculated water quality value is greater than accepted removal efficiency values, (b) the treatment facility is properly operated, and (c) full compliance with the pretreatment program is demonstrated. This upper level limit is based upon EPA's 40 POTW Survey on levels of metals that should be discharged from a POTW with a properly enforced pretreatment program and considering normal coincidental removals.

The most stringent water quality effluent concentration from Columns 7, 8, 12, 13, 14, and 15 is applied if the receiving stream is designated for domestic water supply. Otherwise, the most stringent effluent concentration is chosen from columns 7, 8, 12, and 15 only.

WQ Based Effluent Calculations

Ammonia Nitrogen Aquatic Toxicity Calculations

The State utilizes the EPA document, 1999 Update to Ambient Water Quality Criteria for Ammonia and assumed temperatures of 25°C and 15°C and stream pH of 8 to derive an allowable instream protection value. A mass balance with plant and stream flows and this allowable value determines the monthly average permit limit. Seasonal limits may also be allowed due to ambient temperature variations between the summer and winter seasons.

Due to the large dilution afforded by the receiving stream a pH value of 7.5 a.u. was used for the evaluation

East TN- 25°C, 15°C
Middle TN- 27°C, 17°C
West TN- 30°C, 20°C

	Winter				Summer			
Temp (°C)=	20				30			
pH=	7.5				7.5			
Min (2.85, 1.45*10^ 0.028*(25-T))	2.00	2.85	2.00		Min (2.85, 1.45*10^ 0.028*(25-T))	1.05	2.85	1.05

$$CCC = \left(\frac{0.0577}{1+10^{(7.688-pH)}} + \frac{2.487}{1+10^{(pH-7.688)}} \right) * \text{Min}(2.85,\ 1.45*10^{0.028*(25-T)})$$

CCC= **3.06** CCC= **1.61**

CCC - Continuous Chronic Criterion Allowable instream NH3-N concentration [mg/l]

$$CCC = \frac{(\text{Critical Low Flow [MGD]} * \text{Background Ammonia Nitrogen [mg/L]}) + (\text{Discharge Flow [MGD]} * \textbf{Effluent Concentration [mg/L]})}{(\text{Critical Low Flow [MGD]} + (\text{Discharge Flow [MGD]})}$$

where:	256	Critical Low Flow [MGD] (7Q10 value)
	0.2	Background Ammonia Nitrogen Concentration [mg/L]
	3.62	Outfall 001 Flow [MGD]

Treated effluent NH3-N discharge concentrations and loadings for summer winter and summer conditions follow:

Winter		Summer	
206	Concentration [mg/L]	**101**	Concentration [mg/L]
6,209	Amount [lb/day]	**3,056**	Amount [lb/day]

The permit renewal application included an average NH3-N = 0.1 mg/L and maximum daily NH3-N value = 0.1 mg/L. Therefore, discharge NH3-N limits are not warranted for the new permit.

2013 WQC

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Covington STP
PERMIT #: TN0020982

non-regulated stream worksheet (7Q10)

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Tot. Susp. Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
204	256	3.62	30	148	50

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
	Stream Bckgrnd. Conc.	Fish/Aqua. Life (F & AL) lab conditions		Fraction Dissolved	F & AL- instream allowable ambient conditions (Tot)		Calc. Effluent Concentration based on F & AL		Human Health Water Quality Criteria *						Permit Renewal Application Avg/Max (3 Values)
									In-Stream Criteria			Calc. Effluent Concentration **			
PARAMETER	[ug/l]	Chronic [ug/l]	Acute [ug/l]	[Fraction]	Chronic [ug/l]	Acute [ug/l]	Chronic [ug/l]	Acute [ug/l]	Organisms [ug/l]	Water/Organisms [ug/l]	DWS [ug/l]	Organisms [ug/l]	Water/Organisms [ug/l]	DWS [ug/l]	[ug/l]	PARAMETER
Copper (a,b)	4.600	12.520	19.444	0.287	43.662	67.812	**1122.49**	**1815.03**	N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**3.66/3.89**	Copper (a,b)
Chromium III	3.300	102.176	785.487	0.190	537.181	4129.638	**15311.65**	**118331.80**	N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**1.07/1.20**	Chromium III
Chromium VI	0.000	11.000	16.000	1.000	11.000	16.000	**315.44**	**458.83**	N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**-/-**	Chromium VI
Chromium, Total	3.300	N/A	N/A	N/A	N/A	N/A	**N/A**	**N/A**	N/A	N/A	100.0	**N/A**	**N/A**	**3469.23**	**1.07/1.20**	Chromium, Total
Nickel (a,b)	10.000	72.460	652.388	0.322	224.743	2023.452	**6163.14**	**57744.35**	4,600	610	100	**164,598**	**21520.47**	**3232.32**	**2.23/2.82**	Nickel (a,b)
Cadmium (a,b)	0.161	0.323	2.948	0.281	1.151	10.507	**28.48**	**296.77**	N/A	N/A	5.0	**N/A**	**N/A**	**173.60**	**<0.1/<0.1**	Cadmium (a,b)
Lead (a,b)	2.000	3.846	98.695	0.153	25.107	644.300	**663.65**	**18420.11**	N/A	N/A	5.0	**N/A**	**N/A**	**108.58**	**<0.5/<0.5**	Lead (a,b)
Mercury (T) (c,e)	0.006	0.770	1.400	1.000	0.770	1.400	**21.91**	**39.98**	0.051	0.05	2.0	**1.62**	**1.58**	**71.51**	**<0.2/<0.2**	Mercury (T) (c,e)
Silver (a,b,f)	3.157	N/A	6.313	1.000	N/A	6.313	**N/A**	**92.10**	N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**<0.100/<0.100**	Silver (a,b,f)
Zinc (a,b)	6.300	164.686	163.350	0.226	726.439	722.529	**20711.79**	**20542.30**	26,000	7,400	N/A	**932,114**	**265134.70**	**N/A**	**17.518.5**	Zinc (a,b)
Cyanide (d)	2.600	5.200	22.000	1.000	5.200	22.000	**75.86**	**557.63**	140	140	200	**4,928**	**4928.34**	**7079.89**	**<10/<10**	Cyanide (d)
Toluene	0.000								15,000	1,300	1,000	**537,887**	**46616.85**	**35859.12**	**<5.0/<5.0**	Toluene
Benzene	0.000								510	22	5	**18,288**	**788.90**	**179.30**	**<1.0/<1.0**	Benzene
1,1,1 Trichloroethane	0.000								N/A	N/A	200.0	**N/A**	**N/A**	**7171.82**	**<1.0/<1.0**	1,1,1 Trichloroethane
Ethylbenzene	0.000								2,100	530	700	**75,304**	**19005.33**	**25101.38**	**<1.0/<1.0**	Ethylbenzene
Carbon Tetrachloride	0.000								16	2.3	5.0	**574**	**82.48**	**179.30**	**<1.0/<1.0**	Carbon Tetrachloride
Chloroform	0.000								4,700	57	N/A	**168,538**	**2043.97**	**N/A**	**10.88/20.1**	Chloroform
Tetrachloroethylene	0.000								33	7	5	**1183**	**247.43**	**179.30**	**<1.0/<1.0**	Tetrachloroethylene
Trichloroethylene	0.000								300	25	5	**10758**	**896.48**	**179.30**	**<1.0/<1.0**	Trichloroethylene
1,2 trans Dichloroethylene	0.000								10,000	140	100	**358,591**	**5020.28**	**3585.91**	**<1.0/<1.0**	1,2 trans Dichloroethylene
Methylene Chloride	0.000								5,900	46	N/A	**211,569**	**1649.52**	**N/A**	**<1.0/<1.0**	Methylene Chloride
Total Phenols	0.000								860,000	10,000	N/A	**30,838,840**	**358591.16**	**N/A**	**<10/<10**	Total Phenols
Naphthalene	0.000								N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**<5.0/<5.0**	Naphthalene
Total Phthalates	0.000								N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**-**	Total Phthalates
Chlorine (T. Res.)	0.000	11.000	19.000	1.000	11.000	19.000	**630.89**	**1089.72**	N/A	N/A	N/A	**N/A**	**N/A**	**N/A**	**<0.05/780**	Chlorine (T. Res.)

a. Denotes metals for which Fish & Aquatic Life Criteria are expressed as a function of total hardness.
b. The criteria for this metal is in the dissolved form at lab conditions. The calculated effluent concentration is in the total recoverable form.
c. The chronic criteria for mercury is not converted to dissolved, since it is based on fish tissue data rather than toxicity.
d. The criteria for this parameter is in the total form.
e. Previously, the Division established that 0.006 ug/L would be maximum background default if no sample data available or if all samples were <RDL (<0.2 ug/L), based on reference stream monitoring by DOE.
f. One analysis unless otherwise designated per "( )". Note: Total residual chlorine shown above based on 260 values.
** Water Quality criteria for stream use classifications other than Fish & Aquatic Life are based on the 30Q5 flow.

Pass-Through Evaluation Results

2013 WQC

PASS-THROUGH LIMITATIONS FOR METALS AND OTHER TOXIC SUBSTANCES
WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY:	PERMIT #:	DATE:	CALC BY:
Covington STP	TN0020982	7/31/2014	GMDa

non-regulated stream worksheet (7Q10)

Stream (7Q10)	Stream (30Q5)	Waste Flow	Ttl. Susp. Solids	Hardness	Margin of Safety
[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]
204	256	3.62	30	148	50

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	Stream Bckgrnd. Conc.	Fish/Aquat. Life (F & AL) WQC lab conditions		Fraction Dissolved	F & AL- instream allowable ambient conditions (Tot)		Calc. Effluent Concentration based on F & AL		Human Health Water Quality Criteria *						effluent limited case	
									In-Stream Criteria			Calc. Effluent Concentration **				
PARAMETER		Chronic	Acute		Chronic	Acute	Chronic	Acute	Organisms	Water/Organisms	DWS	Organisms	Water/Organisms	DWS		PARAMETER
	[ug/l]	[ug/l]	[ug/l]	[Fraction]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	ug/l	
Copper (a,b)	4.600	12.520	19.444	0.287	43.662	67.812	1122.49	1815.03	N/A	N/A	N/A	N/A	N/A	N/A	80.0	Copper (a,b)
Chromium III	3.300	102.176	785.487	0.190	537.181	4129.638	15311.65	118331.80	N/A	N/A	N/A	N/A	N/A	N/A		Chromium III
Chromium VI	3.300	11.000	16.000	1.000	11.000	16.000	222.46	365.85	N/A	N/A	N/A	N/A	N/A	N/A		Chromium VI
Chromium, Total	3.300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100.0	N/A	N/A	3469.23	60.0	Chromium, Total
Nickel (a,b)	10.000	72.460	652.386	0.322	224.743	2023.452	6163.14	57744.35	4600.0	610.0	100.0	164598.34	21520.47	3232.32	180.0	Nickel (a,b)
Cadmium (a,b)	0.161	0.323	2.948	0.281	1.151	10.507	28.48	296.77	N/A	N/A	5.0	N/A	N/A	173.66	5.0	Cadmium (a,b)
Lead (a,b)	2.000	3.846	96.695	0.153	25.107	644.300	863.65	19420.11	N/A	N/A	5.0	N/A	N/A	108.58	45.0	Lead (a,b)
Mercury (T) (c,e)	0.006	0.770	1.400	1.000	0.770	1.400	21.91	39.98	0.051	0.05	2.0	1.62	1.28	71.51	0.4	Mercury (T) (c,e)
Silver (a,b,f)	3.157	N/A	6.313	1.000	N/A	6.313	N/A	92.10	N/A	N/A	N/A	N/A	N/A	N/A	5.0	Silver (a,b,f)
Zinc (a,b)	6.300	164.586	183.350	0.226	728.439	722.529	20711.79	20542.30	26000.0	7400.0	N/A	932114.25	266134.70	N/A	200.0	Zinc (a,b)
Cyanide (d)	2.600	5.200	22.000	1.000	5.200	22.000	76.86	557.63	140.0	140.0	200.0	4928.34	4928.34	7079.89	230.0	Cyanide (d)
Toluene	0.000								15000.0	1300.0	1000.0	537886.74	46616.85	35859.12	15.0	Toluene
Benzene	0.000								510.0	22.0	5.0	18288.15	788.99	179.30	3.0	Benzene
1,1,1 Trichloroethane	0.000								N/A	N/A	200.0	N/A	N/A	7171.82	30.0	1,1,1 Trichloroethane
Ethylbenzene	0.000								2100.0	530.0	700.0	75304.14	19005.23	25101.38	4.0	Ethylbenzene
Carbon Tetrachloride	0.000								16.0	2.3	5.0	573.76	82.48	179.30	16.0	Carbon Tetrachloride
Chloroform	0.000								4700.0	57.0	N/A	168537.85	2043.97	N/A	85.0	Chloroform
Tetrachloroethylene	0.000								33.0	6.9	5.0	1183.35	247.43	179.30	25.0	Tetrachloroethylene
Trichloroethylene	0.000								300.0	25.0	5.0	10757.73	896.48	179.30	10.0	Trichloroethylene
1,2 trans Dichloroethylene	0.000								10000.0	140.0	100.0	N/A	5020.20	3585.91	1.5	1,2 trans Dichloroethylene
Methylene Chloride	0.000								5900.0	46.0	N/A	211568.78	1649.52	N/A	50.0	Methylene Chloride
Total Phenols	0.000								860000.0	10000.0	N/A	30838839.78	358501.16	N/A	60.0	Total Phenols
Naphthalene	0.000								N/A	N/A	N/A	N/A	N/A	N/A	1.0	Naphthalene
Total Phthalates	0.000								N/A	N/A	N/A	N/A	N/A	N/A	64.5	Total Phthalates
Chlorine (T. Res.)	5.500	11.000	19.000	1.000	11.000	19.000	320.94	779.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chlorine (T. Res.)

a Denotes metals for which Fish & Aquatic Life Criteria are expressed as a function of total hardness.
b The criteria for this metal is in the dissolved form at lab conditions. The calculated effluent concentration is in the total recoverable form.
c The chronic criteria for mercury is not converted to dissolved, since it is based on fish tissue data rather than toxicity.
d The criteria for this parameter is in the total form.
e Previously, the Division established that 0.006 ug/L would be maximum background default if no sample data available or if all samples were <RDL (<0.2 ug/L), based on reference stream monitoring by DOE.
f Silver limit is daily max if column 8 is most stringent.
g When columns 7 or 8 result in a negative number, use results from columns 5 or 6, respectively.
h When columns 12, 13 or 14 result in a negative number, use results from columns 9, 10 or 11, respectively, as applicable.
* Domestic supply included in river use so pick from columns 7,8,12,13,14,15 or Domestic supply not included in river use so pick from columns 7, 8, 12 or 15.
** Water Quality criteria for stream use classifications other than Fish & Aquatic Life are based on the 30Q5 flow.

SAR Summary

TN 0020982	PTL 1/30/2009	85% PTL	PTL 8/13/2014	Apr-14	Oct-13	Arpil 2013	Oct-12	Apr-12	Oct-11	Apr-11	Oct-10	Apr-10	Oct-09
COPPER	**0.08000**	**0.06800**	**0.08000**	0.00721	0.00300	0.00300	0.00400	0.00400	0.00500	0.00320	0.00700	0.00500	0.00400
CHROMIUM, III	**report**	**n/a**	**report**	0.00100	0.01000	0.00100	0.01000	0.01000	0.01000	0.01000	0.01000		
CHROMIUM, VI	**report**	**n/a**	**report**	0.00001	0.01000	0.00100	0.01000	0.01000	0.01000	0.01000	0.01000		
CHROMIUM, TOTAL	**0.06000**	**0.05100**	**0.06000**	0.00100	0.00100	0.00100	0.00100	0.00100	0.00500	0.00500	0.00500	0.00500	0.00500
NICKEL	**0.18000**	**0.15300**	**0.18000**	0.00183	0.00200	0.00100	0.00300	0.00300	0.00300	0.00500	0.00500	0.00500	0.00500
CADMIUM	**0.00478**	**0.00406**	**0.00478**	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00200	0.00200	0.00200	0.00200
LEAD	**0.04500**	**0.03825**	**0.04500**	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00600	0.00600	0.00600	0.00600
MERCURY	**0.00040**	**0.00034**	**0.00040**	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020
SILVER	**0.00424**	**0.00360**	**0.00500**	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00500	0.00500	0.00500	0.00500
ZINC	**0.20000**	**0.17000**	**0.20000**	0.02260	0.01400	0.01600	0.01820	0.01860	0.03050	0.02640	0.02500	0.01900	0.02500
CYANIDE	**0.07442**	**0.06326**	**0.07586**	0.01000	0.01000	0.01000	0.01000	0.01000	0.01000	0.01000	0.01000	0.01000	0.01000
TOLUENE	**0.01500**	**0.01275**	**0.01500**										
BENZENE	**0.00300**	**0.00255**	**0.00300**										
1,1,1 TRICHLOROETHANE	**0.03000**	**0.02550**	**0.03000**										
ETHYLBENZENE	**0.00400**	**0.00340**	**0.00400**										
CARBON TETRACHLORIDE	**0.01500**	**0.01275**	**0.01500**										
CHLOROFORM	**0.08500**	**0.07225**	**0.08500**										
TETRACHLOROETHYLENE	**0.02500**	**0.02125**	**0.02500**										
TRICHLOROETHYLENE	**0.01000**	**0.00850**	**0.01000**										
1,2 TRANSDICHLOROETHYL	**0.00150**	**0.00128**	**0.00150**										
METHYLENE CHLORIDE	**0.05000**	**0.04250**	**0.05000**										
TOTAL PHENOLS	**0.05000**	**0.04250**	**0.05000**	0.00500	0.00500	0.00640	0.00670	0.00500	0.04200	0.04200	0.00500	0.00500	0.00500
NAPHTHALENE	**0.00100**	**0.00085**	**0.00100**										
TOTAL PHTHALATES	**0.06450**	**0.05483**	**0.06450**										

Bolded in effluent data exceeds 85% of proposed PTLs
Shaded means detection level

Summary (Part 1 of 4)

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Covington STP
PERMIT: TN0020982

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Ttl. Susp. Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
204	256	3.62	30	148	50

	1	2	3	5	6	7	8	9	10	11	12	13	14	15
	Stream	Detection Levels		Fish/Aqua. Life		Calculated Effluent		Human Health Water Quality Criteria (30Q5)						Permit Renewal
	Bckgrnd.	Scan	WQC RDL	Water Quality Criteria		Concentration		In-Stream Criteria			Calculated Effluent Concentration			Application
	Conc.	MDL	*EPA MDL	Chronic	Acute	Chronic	Acute	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	(3 values) Avg/Max
PARAMETER	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]
ANTIMONY		5.0	3.0					640.0	5.6	6.0	22949.8	200.8	215.2	<10/<10
ARSENIC	7.3	1.0	1.0	150.0	340.0	4095.8	9544.4	10.0	10.0	10.0	100.5	100.5	100.5	<10/<10
BERYLLIUM		1.0	1.0							4.0			143.4	<1.0/<1.0
SELENIUM		3.0	2.0	5.0	20.0	143.4	573.5			50.0			1793.0	<10/<10
THALLIUM		10.0	*					0.47	0.24	2.0	16.9	8.6	71.7	<20/<20
ACROLEIN	0.0	10.0	1.0					290.0	190.0		10399.1	6813.2		<20/<20
~~ACRYLONITRILE~~	~~0.0~~	~~10.0~~	~~1.0~~					~~2.5~~	~~0.51~~		~~89.6~~	~~18.3~~		~~<20/<20~~
BENZENE	0.0	5.0	1.0					510.0	22.0	5.0	18288.1	788.9	179.3	<1.0/<1.0
BROMOFORM	0.0	5.0	1.0					1400.0	43.0		50202.8	1541.9		<1.0/<1.0
CARBON TETRACHLORIDE	0.0	5.0	1.0					16.0	2.3	5.0	573.7	82.5	179.3	<1.0/<1.0
CHLOROBENZENE	0.0	5.0	*					1600.0	130.0	100	57374.6	4661.7	3585.9	<1.0/<1.0
CHLORODIBROMO-METHANE	0.0	10.0	*					130.0	4.0		4661.7	143.4		2.50/4.26
CHLOROETHANE	0.0	10.0	*											<1.0/<1.0
2-CHLORO-ETHYLVINYL ETHER	0.0	10.0	*											<5/<5
CHLOROFORM	0.0	5.0	0.5					4700.0	57.0		168537.8	2044.0		10.88/20.1
DICHLOROBROMO-METHANE	0.0	5.0	1.0					170.0	5.5		6096.0	197.2		6.87/10.10
1,1-DICHLOROETHANE	0.0	5.0	1.0					NA	NA	NA	NA	NA	NA	<1.0/<1.0
1,2-DICHLOROETHANE	0.0	5.0	1.0					370.0	3.8	5.0	13267.9	136.3	179.3	<1.0/<1.0
TRANS 1,2-DICHLORO-ETHYLENE	0.0	5.0	*					10000	140.0	100.0	358591.2	5020.3	3585.9	<1.0/<1.0
1,1-DICHLOROETHYLENE	0.0	5.0	1.0					7,100	330	7.0	254599.7	11833.5	251.0	<1.0/<1.0
1,2-DICHLOROPROPANE	0.0	5.0	*					150.0	5.0	5.0	5378.9	179.3	179.3	<1.0/<1.0
1,3-DICHLORO-PROPYLENE	0.0	5.0	1.0					210.0	3.4		7530.4	121.9		<1.0/<1.0

Summary (Part 2 of 4)

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Covington STP
PERMIT: TN0020982

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Ttl. Susp. Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
204	256	3.62	30	148	50

	1	2	3	5	6	7	8	9	10	11	12	13	14	15
	Stream	Detection Levels		Fish/Aqua. Life		Calculated Effluent		Human Health Water Quality Criteria (30Q5)						Permit Renewal
	Bckgrnd.	Scan	WQC RDL	Water Quality Criteria		Concentration		In-Stream Criteria			Calculated Effluent Concentration			Application
	Conc.	MDL	*EPA MDL	Chronic	Acute	Chronic	Acute	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	(3 values) Avg/Max
PARAMETER	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]
ETHYLBENZENE	0.0	5.0	1.0					2100	530.0	700.0	75304.1	19005.3	25101.4	<1.0/<1.0
METHYL BROMIDE	0.0	10.0	*					1500.0	47.0		53788.7	1685.4		1.65/2.94
METHYL CHLORIDE	0.0	1.0	1.0											<1.0/<1.0
METHYLENE CHLORIDE	0.0	10.0	1.0					5900.0	46.0		211568.8	1649.5		<10.0/<10.0
1,1,2,2-TETRACHLORO-ETHANE	0.0	5.0	0.5					40.0	1.7		1434.4	61.0		<1.0/<1.0
TETRACHLORO-ETHYLENE	0.0	5.0	0.5					33.0	6.9	5.0	1183.4	247.4	179.3	<1.0/<1.0
TOLUENE	0.0	5.0	1.0					15000	1300.0	1000.0	537886.7	46616.9	35859.1	<5.0/<5.0
1,1,1-TRICHLOROETHANE	0.0	5.0	1.0							200.0			7171.8	<1.0/<1.0
1,1,2-TRICHLOROETHANE	0.0	5.0	0.2					160.0	5.9	5.0	5737.5	211.6	179.3	<1.0/<1.0
TRICHLORETHYLENE	0.0	5.0	1.0					300.0	25.0	5.0	10757.7	896.5	179.3	<1.0/<1.0
VINYL CHLORIDE	0.0	10.0	2.0					24.0	0.25	2.0	860.6	9.0	71.7	<1.0/<1.0
P-CHLORO-M-CRESOL	0.0	10.0	*											<5/<5
2-CHLOROPHENOL	0.0	10.0	*					150.0	81.0		5378.9	2904.6		<5/<5
2,4-DICHLOROPHENOL	0.0	10.0	*					290.0	77.0		10399.1	2761.2		<5/<5
2,4-DIMETHYLPHENOL	0.0	10.0	*					850.0	380.0		30480.2	13626.5		<5/<5
4,6-DINITRO-O-CRESOL	0.0	20.0	24.0					280.0	13.0		10040.6	466.2		<10/<10
2,4-DINITROPHENOL	0.0	10.0	42.0					5300.0	69.0		190053.3	2474.3		<5/<5
2-NITROPHENOL	0.0	10.0	*											<5/<5
4-NITROPHENOL	0.0	10.0	*											<20/<20
PENTACHLOROPHENOL	0.0	20.0	5.0	15	19	430.2	544.9	30.0	2.7	1.0	1075.8	96.8	35.9	<5/<5
PHENOL	0.0	10.0	*					1700000	21000.0		60960497.2	753041.4		<5/<5

Summary (Part 3 of 4)

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Covington STP
PERMIT: TN0020982

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Ttl. Susp. Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
204	256	3.62	30	148	50

	1	2	3	5	6	7	8	9	10	11	12	13	14	15
	Stream	Detection Levels		Fish/Aqua. Life		Calculated Effluent		Human Health Water Quality Criteria (30Q5)						Permit Renewal
	Bckgmd.	Scan	WQC RDL	Water Quality Criteria		Concentration		In-Stream Criteria			Calculated Effluent Concentration			Application
	Conc.	MDL	*EPA MDL	Chronic	Acute	Chronic	Acute	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	(3 values) Avg/Max
PARAMETER	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]
2,4,6-TRICHLOROPHENOL	0.0	10.0	2.7					24.0	14.0		860.6	502.0		<5/<5
ACENAPHTHENE	0.0	10.0	*					990.0	670.0		35500.5	24025.6		<2.0/<2.0
ACENAPHTHYLENE	0.0	10.0	2.3											<2.0/<2.0
ANTHRACENE	0.0	10.0	0.7					40000	8300.0		1434364.6	297630.7		<2.0/<2.0
BENZIDINE	0.0	10.0	*					0.0020	0.00086		0.072	0.0		<20/<20
BENZO(A)ANTHRACENE	0.0	10.0	0.3					0.18	0.038		6.5	1.4		<2/<2
BENZO(A)PYRENE	0.0	10.0	0.3					0.18	0.038	0.2	6.5	1.4	7.2	<2.0/<2.0
3,4 BENZO-FLUORANTHENE	0.0	10.0	0.3					0.18	0.038		6.5	1.4		<2.0<2.0
BENZO(GHI)PERYLENE	0.0	10.0	*											<2.0/<2.0
BENZO(K)FLUORANTHENE	0.0	10.0	0.3					0.18	0.038		6.5	1.4		<2.0/<2.0
BIS (2-CHLOROETHOXY)	0.0	10.0	*											<5/<5
BIS (2-CHLOROETHYL)-ETHER	0.0	10.0	1.0					5.3	0.30		190.1	10.8		<5/<5
BIS (2-CHLOROISO-PROPYL)	0.0	10.0	*					65000	1400.0		2330842.5	50202.8		<5/<5
BIS (2-ETHYLHEXYL) PHTHALATE	0.0	10.0	2.5					22.0	12.0	6.0	788.9	430.3	215.2	<10/<10
4-BROMOPHENYL PHENYL ETHER	0.0	10.0	*											<5/<5
BUTYL BENZYL PHTHALATE	0.0	10.0	*					1900.0	1500.0		68132.3	53788.7		<5.0/<5.0
2-CHLORONAPHTHALENE	0.0	10.0	*					1600.0	1000.0		57374.6	35859.1		<5.0/<5.0
4-CHLORPHENYL PHENYL ETHER	0.0	10.0	*											<5/<5
CHRYSENE	0.0	10.0	2.5					0.18	0.038		6.5	1.4		<2.0/<2.0
DI-N-BUTYL PHTHALATE	0.0	10.0	2.5					4500.0	2000.0		161366.0	71718.2		<5.0/<5.0
DI-N-OCTYL PHTHALATE	0.0	10.0	*											<5.0/<5.0
DIBENZO(A,H) ANTHRACENE	0.0	10.0	*					0.18	0.038		6.5	1.4		<2.0/<2.0
1,2-DICHLOROBENZENE	0.0	5.0	2.0					1300.0	420.0	600	46616.9	15060.8	21515.5	<5/<5
1,3-DICHLOROBENZENE	0.0	5.0	2.0					960.0	320.0		34424.8	11474.9		<5/<5

Summary (Part 4 of 4)

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Covington STP
PERMIT: TN0020982

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Ttl. Susp. Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
204	256	3.62	30	148	50

	1	2	3	5	6	7	8	9	10	11	12	13	14	15
	Stream	Detection Levels		Fish/Aqua. Life		Calculated Effluent		Human Health Water Quality Criteria (30Q5)						Permit Renewal
	Bckgrnd.	Scan	WQC RDL	Water Quality Criteria		Concentration		In-Stream Criteria			Calculated Effluent Concentration			Application
PARAMETER	Conc. [ug/l]	MDL [ug/l]	*EPA MDL [ug/l]	Chronic [ug/l]	Acute [ug/l]	Chronic [ug/l]	Acute [ug/l]	Organisms [ug/l]	Water/Org [ug/l]	DWS [ug/l]	Organisms [ug/l]	Water/Org [ug/l]	DWS [ug/l]	(3 values) Avg/Max [ug/l]
1,4-DICHLOROBENZENE	0.0	5.0	2.0					190.0	63.0	75	6813.2	2259.1	2689.4	<5/<5
3,3-DICHLOROBENZIDINE	0.0	10.0	*					0.28	0.21		10.0	7.5		<5/<5
DIETHYL PHTHALATE	0.0	10.0	1.9					44000	17000.0		1577801.1	609605.0		<5.0/<5.0
DIMETHYL PHTHALATE	0.0	10.0	1.6					1100000	270000.0		39445027.6	9681961.3		<5.0/<5.0
2,4-DINITROTOLUENE	0.0	10.0	1.0					34.0	1.1		1219.2	39.4		<5/<5
2,6-DINITROTOLUENE	0.0	10.0	*											<5/<5
1,2 DIPHENYLHYDRAZINE	0.0	10.0	*					2.0	0.36		71.7	12.9		<5/<5
FLUORANTHENE	0.0	10.0	2.2					140.0	130.0		5020.3	4661.7		<2.0/<2.0
FLUORENE	0.0	10.0	0.3					5300.0	1100.0		190053.3	39445.0		<2.0/<2.0
HEXACHLOROBENZENE	0.0	10.0	1.9					0.0029	0.0028	1.0	0.104	0.1	35.9	<5.0/<5.0
HEXACHLOROBUTADIENE	0.0	10.0	5.0					180.0	4.4		6454.6	157.8		<5/<5
HEXACHLOROCYCLO-	0.0	50.0	*					1100.0	40.0	50.0	39445.0	1434.4	1793.0	<5/<5
HEXACHLOROETHANE	0.0	10.0	0.5					33.0	14.0		1183.4	502.0		<5/<5
INDENO(1,2,3-CD)PYRENE	0.0	10.0	*					0.18	0.038		6.5	1.4		<2.0/<2.0
ISOPHORONE	0.0	10.0	*					9600	350.0		344247.5	12550.7		<5/<5
NAPHTHALENE	0.0	10.0	*											<5.0/<5.0
NITROBENZENE	0.0	10.0	10.0					690.0	17.0		24742.8	609.6		<5/<5
N-NITROSODI-N-PROPYLAMINE	0.0	10.0	*					5.1	0.050		182.9	1.8		<5/<5
N-NITROSODI- METHYLAMINE	0.0	10.0	*					30.0	0.0069		1075.8	0.2		<5/<5
N-NITROSODI-PHENYLAMINE	0.0	10.0	*					60.0	33.0		2151.5	1183.4		<10/<10
PHENANTHRENE	0.0	10.0	0.7											<2.0/<2.0
PYRENE	0.0	10.0	0.3					4000.0	830.0		143436.5	29763.1		<2.0/<2.0
1,2,4-TRICHLOROBENZENE	0.0	10.0	*					70.0	35.0	70.0	2510.1	1255.1	2510.1	<5/<5

a. Columns 7-8, and 12-14 are the effluent concentrations allowable to prevent exceedence of water quality criteria.
b. Potential to exceed criteria exists if the measured quantity in column 15 exceeds, or could exceed, the calculated allowable concentrations in columns 7-8, and 12-14.
c. Additional testing is required if the detection level used in the scan is higher than the state RDL and/or the MDL of the approved EPA scan method and industry is known to have that pollutant.
d. All background concentrations for these volatile organic, acid-extractable, and base-neutral compounds are assumed zero in the absence of supporting monitoring data.
e. Other metals for which data were provided on the application are evaluated on the Metals & Toxics spreadsheet.
f. Reasonable potential not demonstrated. In some cases, the MDLs are not sufficient to identify potential water quality problems.

APPENDIX R-5
NEW PERMIT REQUIREMENTS

Description : External Outfall, Number : 001, Monitoring : All Weather, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Bypass of Treatment	Report	-	occur/mo	Occurrences	Continuous	Monthly Total

Description : External Outfall, Number : 001, Monitoring : Dry Weather, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Overflow use, occurrences	Report	-	occur/mo	Occurrences	Continuous	Monthly Total

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C	<=	40	mg/L	Composite	Three Per Week	Weekly Average
BOD, 5-day, 20 C	<=	1,208	lb/d	Composite	Three Per Week	Weekly Average
BOD, 5-day, 20 C	<=	906	lb/d	Composite	Three Per Week	Monthly Average
BOD, 5-day, 20 C	<=	30	mg/L	Composite	Three Per Week	Monthly Average
BOD, 5-day, 20 C	<=	45	mg/L	Composite	Three Per Week	Daily Maximum
Chlorine, total residual (TRC)	<=	0.97	mg/L	Grab	Five Per Week	Instantaneous Maximum
E. coli	<=	126	#/100mL	Grab	Three Per Week	Monthly Geometric Mean
E. coli	<=	487	#/100mL	Grab	Three Per Week	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
IC25 Static Renewal 7 Day Chronic *Ceriodaphnia*	>	1.7	%	Composite	Annually	Minimum

IC25 Static Renewal 7 Day Chronic *Pimephales*	>	1.7	%	Composite	Annually	Minimum
Nitrogen, total (as N)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Nitrogen, total (as N)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Oxygen, dissolved (DO)	>=	1.0	mg/L	Grab	Five Per Week	Instantaneous Minimum
Phosphorus, total (as P)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Phosphorus, total (as P)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Settleable Solids	<=	1.0	mL/L	Grab	Five Per Week	Daily Maximum
Temperature rate of change deg. C/hr	Report	-	deg C	Continuous	Daily	Monthly Average
Temperature rate of change deg. C/hr	Report	-	deg C	Continuous	Daily	Daily Maximum
Temperature, water deg. C	Report	-	deg C	Continuous	Daily	Monthly Average
Temperature, water deg. C	Report	-	deg C	Continuous	Daily	Daily Maximum
Total Suspended Solids (TSS)	<=	1,208	lb/d	Composite	Three Per Week	Weekly Average
Total Suspended Solids (TSS)	<=	40	mg/L	Composite	Three Per Week	Weekly Average
Total Suspended Solids (TSS)	<=	906	lb/d	Composite	Three Per Week	Monthly Average
Total Suspended Solids (TSS)	<=	45	mg/L	Composite	Three Per Week	Daily Maximum
Total Suspended Solids (TSS)	<=	30	mg/L	Composite	Three Per Week	Monthly Average
pH	>=	6.0	SU	Grab	Five Per Week	Minimum
pH	<=	9.0	SU	Grab	Five Per Week	Maximum

Description : External Outfall, Number : 001, Monitoring : Percent Removal, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C, % removal	>=	85	%	Calculated	Three Per Week	Monthly Average Minimum
BOD, 5-day, 20 C, % removal	>=	40	%	Calculated	Three Per Week	Daily Minimum
TSS, % removal	>=	85	%	Calculated	Three Per Week	Monthly Average Minimum
TSS, % removal	>=	40	%	Calculated	Three Per Week	Daily Minimum

Description : External Outfall, Number : 001, Monitoring : Raw Sewage Influent, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C	Report	-	mg/L	Composite	Three Per Week	Daily Maximum
BOD, 5-day, 20 C	Report	-	mg/L	Composite	Three Per Week	Monthly Average
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Nitrogen, total (as N)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Nitrogen, total (as N)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Phosphorus, total (as P)	Report	-	mg/L	Composite	Quarterly	Quarterly Average
Phosphorus, total (as P)	Report	-	lb/d	Composite	Quarterly	Quarterly Average
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Three Per Week	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Three Per Week	Monthly Average

Description : External Outfall, Number : 001, Monitoring : Wet Weather, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Overflow use, occurrences	Report	-	occur/mo	Occurrences	Continuous	Monthly Total

Pearce, Jennifer

From: Hesterlee, Craig
Sent: Thursday, November 20, 2014 2:54 PM
To: Robert Schreiber
Subject: RE: Making Contact

Mr. Schreiber,

Thank you for taking the time to explain some of your experiences and concerns regarding the Atlanta CSO permit. We are anticipating a draft permit for public review from EPD in early December.

Craig Hesterlee
EPA Region 4
NPDES Permitting and Enforcement Branch
404-562-9749

From: Robert Schreiber [mailto:robertschreiber2011@msn.com]
Sent: Thursday, November 20, 2014 2:46 PM
To: Hesterlee, Craig
Subject: Making Contact

Howdy Craig,

Thanks for calling.

Here's my contact information

Bob Schreiber
robertschreiber2011@msn.com
770-847-0127

Pearce, Jennifer

From: Hesterlee, Craig
Sent: Monday, November 24, 2014 11:00 AM
To: Zimmer, Andrea
Subject: FW: Atlanta CSO permits

Link to citations:

O.C.G.A. § 12-5-29.1

O.C.G.A. § 12-5-30.2

From: Hesterlee, Craig
Sent: Thursday, November 20, 2014 11:16 AM
To: Phillips, David; Zimmer, Andrea
Cc: Hansel, Joel; Maurano, Stephen
Subject: RE: Atlanta CSO permits

I pulled this out of the permit- for the west side CSOs- who/how were these flow rates negotiated and does Ga EPA WQS accommodate these? Thanks.
Craig

7) The CSO discharge(s) must not cause or c
Georgia water quality standards, at flow r
7700 MGD for the Clear Creek CSO Cont
the Proctor Creek – North Avenue CSO
MGD for the Tanyard Creek CSO Contro
State Rules and Chapters 12-5-29.1 and 12

From: Phillips, David
Sent: Thursday, November 20, 2014 10:58 AM
To: Hesterlee, Craig; Zimmer, Andrea
Subject: Atlanta CSO permits

Attached

Pearce, Jennifer

From: Mundrick, Doug
Sent: Monday, October 27, 2014 9:32 AM
To: Nuhfer, Mark; Hesterlee, Craig; Horsey, Maurice; Seiwert, Carla; Bush, William
Cc: Zimmer, Andrea; Diaz, Denisse; Thomas, Chris
Subject: RE: Atlanta CSO update

Sounds like our meeting with them was productive!

From: Nuhfer, Mark
Sent: Monday, October 27, 2014 8:45 AM
To: Mundrick, Doug; Hesterlee, Craig; Horsey, Maurice; Seiwert, Carla; Bush, William
Cc: Zimmer, Andrea; Diaz, Denisse; Thomas, Chris
Subject: Atlanta CSO update

On Friday EPD told me they had just sent the final draft CSO permits to Atlanta. Atlanta is now ok with the narrative metals limits in their CSO permit (including the integrated planning piece). EPD thinks they will be ready to go to Public Notice very soon (I think they said near the end of November).

Also FYI- Atlanta MS4 stormwater management plan update is due to EPD by December 8. Gigi Steele at EPD agreed with me that the timing of the CSO draft presents an opportunity to make sure that there is some coordination between the MS4 and CSO permits re: metals and Stormwater.

Sincerely,

Mark Nuhfer, Chief
Municipal and Industrial NPDES Section
EPA Region 4
Nuhfer.mark@epa.gov
404.562.9390

Pearce, Jennifer

From: Hesterlee, Craig
Sent: Tuesday, December 09, 2014 12:57 PM
To: Steele, Gigi
Subject: RE: Atlanta CSO DRAFT permits

Yes, thank you!

From: Steele, Gigi [mailto:Gigi.Steele@dnr.state.ga.us]
Sent: Tuesday, December 09, 2014 12:50 PM
To: Hesterlee, Craig
Subject: RE: Atlanta CSO DRAFT permits

Hi Craig,
It may not be on the website as yet, I'll need to ask our secretary. Attached is a copy though.
Also, I have not forgotten that I owe you some docs. You wanted the sampling plans and the past overflow documentation that Atlanta did not violate fecal. I need to get this information from the compliance person.
Gigi

From: Hesterlee, Craig [mailto:Hesterlee.Craig@epa.gov]
Sent: Tuesday, December 09, 2014 12:32 PM
To: Steele, Gigi
Subject: Atlanta CSO DRAFT permits

Gigi,

Can you send me a link to the Atlanta CSO public notice- we are receiving citizen inquiry?

Craig Hesterlee
EPA Region 4
NPDES Permitting and Enforcement Branch
404-562-9749

Pearce, Jennifer

From: Steele, Gigi <Gigi.Steele@dnr.state.ga.us>
Sent: Tuesday, December 09, 2014 12:50 PM
To: Hesterlee, Craig
Subject: RE: Atlanta CSO DRAFT permits
Attachments: DEC 4.pdf

Hi Craig,
It may not be on the website as yet, I'll need to ask our secretary. Attached is a copy though.
Also, I have not forgotten that I owe you some docs. You wanted the sampling plans and the past overflow documentation that Atlanta did not violate fecal. I need to get this information from the compliance person.
Gigi

From: Hesterlee, Craig [mailto:Hesterlee.Craig@epa.gov]
Sent: Tuesday, December 09, 2014 12:32 PM
To: Steele, Gigi
Subject: Atlanta CSO DRAFT permits

Gigi,

Can you send me a link to the Atlanta CSO public notice- we are receiving citizen inquiry?

Craig Hesterlee
EPA Region 4
NPDES Permitting and Enforcement Branch
404-562-9749

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PUBLIC NOTICE NO. 2014–20ML **DECEMBER 4, 2014**

I. NOTICE OF APPLICATION FOR A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE STATE OF GEORGIA

NPDES permits are valid for a maximum of five years. Prior to expiration of an existing permit, a new application must be submitted and evaluated.

An antidegradation analysis is conducted as applicable for new or expanded point source discharges that are proposed. The analysis evaluates whether allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In all cases, existing instream water uses and the level of water quality necessary to protect the existing use is maintained and protected.

All municipalities must be in compliance with the Georgia Department of Community Affairs (DCA) Service Delivery Strategy in order to receive a permit.

Having reviewed the application which has been submitted, the Georgia Environmental Protection Division (EPD) is the issuance of NPDES permits to the following applicants, subject to specific pollutant limitations and special conditions.

NPDES PERMIT REISSUANCE

COLQUITT COUNTY

City of Doerun, Post Office Box 37, Doerun, Georgia 31744, NPDES Permit No. GA0021717 for its water pollution control plant located at 823 South Green Street, Doerun, Georgia 31744. 0.15 MGD of treated wastewater is discharged to Mill Creek in the Ochlockonee River Basin.

EMANUEL COUNTY

City of Swainsboro, Post Office Box 600, Swainsboro, Georgia 30401, for NPDES Permit No. GA0039225, for the City of Swainsboro – Yam Grandy Creek water pollution control plant located 574 Industrial Way in Swainsboro. 3.0 MGD of treated wastewater is discharged to Yam Grandy Creek in the Altamaha River Basin.

FORSYTH COUNTY

Martin Marietta Materials, Inc. – Forsyth Quarry, 3325 Paddocks Parkway, Suite 350, Suwanee, Georgia 30024, NPDES Permit No. GA0047562, for its granite mining facility located at 3561 Peachtree Parkway, Hwy 141, in Suwanee. Approximately 0.5 MGD of wastewater generated from the pit dewatering process is discharged to Dick Creek via an unnamed tributary in the Chattahoochee River Basin.

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PUBLIC NOTICE NO. 2014–20ML **DECEMBER 4, 2014**

HALL COUNTY

Americold Logistics, 1680 Candler Road, Gainesville, Georgia 30507, NPDES Permit No. GA0039217, for its refrigerated warehousing and storage facility located at 1680 Candler Road in Gainesville. Approximately 0.0070 MGD of non-contact cooling water generated from the operation is discharged to an unnamed tributary to Walnut Creek in the Oconee River Basin.

JACKSON COUNTY

Americold Logistics, 86 Jackson Concurse, Pendergrass, Georgia 30567, NPDES Permit No. GA0039195, for its refrigerated warehousing and storage facility located at 86 Jackson Concurse in Pendergrass. Approximately 0.0070 MGD of non-contact cooling water generated from the operation is discharged to an unnamed tributary to Walnut Creek in the Oconee River Basin.

NPDES PERMIT MODIFICATION

JACKSON COUNTY

City of Jefferson, 147 Athens Street, Jefferson, Georgia 30549, NPDES Permit No. GA0023132 for the water pollution control plant located at 775 Peachtree Road in Jefferson. The permit is being modified to include an effluent limitation for total recoverable copper.

MCDUFFIE COUNTY

City of Thomson, Post Office Box 1017, Thomson, Georgia 30824, NPDES Permit No. GA0020974 is being amended to add three sites: (about 235 acres) on Hudson Farms in McDuffie and Jefferson Counties. Stabilized sewage sludge from the City of Thomson's wastewater treatment plant is proposed to be land applied on these sites.

INDUSTRIAL PRETREATMENT MODIFICATION

GLYNN COUNTY

Brunswick-Glynn County Joint Water & Sewer Commission, 700 Gloucester St., Suite 300, Brunswick, Georgia 31520, for substantial modification to its industrial pretreatment program. This modification will serve to revise the local limits for the program.

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PUBLIC NOTICE NO. 2014–20ML **DECEMBER 4, 2014**

II. LAND APPLICATION SYSTEM PERMIT REISSUANCE

Land Application System (LAS) permits are valid for a maximum of five years. Prior to expiration of an existing permit, a new application must be submitted and evaluated.

All municipalities must be in compliance with the Georgia Department of Community Affairs (DCA) Service Delivery Strategy in order to receive a permit.

CARROLL COUNTY

Waste Water Group, LLC, 150 Howell Road, Tyrone, GA 30290, LAS Permit No. GAJ030722, for its LAS located at Indian Lake Trail, in Villa Rica. 0.0624 MGD of treated wastewater is being land applied to a site in the Tallapoosa River Basin.

JEFFERSON COUNTY

Town of Bartow, P.O. Box 248, Bartow, Georgia 30413, LAS Permit No. GAJ020215, for its Town of Bartow land application system located at 1401 Washington Street, Bartow, Georgia 30413. 0.05 MGD of treated wastewater is to be land applied to a site in Jefferson County in the Ogeechee River Basin.

NOTICE OF INTENT FOR COVERAGE UNDER THE GENERAL LAND APPLICATION SYSTEM (LAS) PERMIT FOR LARGE COMMUNITY SYSTEMS (GAG278000)

Having reviewed the application which has been submitted, EPD is considering covering the following applicant under LAS General Permit GAG278000, subject to specific pollutant limitations and special conditions:

Bell's Mill Landing LLC, 3323 Indian Trail, Gainesville, Georgia 30506 for its on-site subsurface system located at 3349 Indian Trail in Gainesville.

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address below or via e-mail at EPDcomments @dnr.state.ga.us, no later than **January 5, 2015.** Please use the words **"Public Notice No. 2014-20ML"** and the name of the subject facility that you are commenting on in the subject line to ensure that your comments will be forwarded to the correct staff. All comments received prior to or on that date will be considered in the formulation of final determinations regarding the application. In the case of the permits which are on this notice for proposed modification, only those conditions subject to modification are open to public comment. A public hearing may be requested or additional information regarding public hearing procedures is available by writing the EPD at the address noted below.

A fact sheet or copy of the draft permit is available by writing the Environmental Protection Division. The permit application, draft permit, comments received, and other information are available for review at 2 MLK, Jr. Dr. S.W., 1152 East Tower, Atlanta, Georgia 30334. For additional information contact: Jane Hendricks, Wastewater Regulatory Program, phone (404) 463-1511. Please bring this notice to the attention of interested persons.

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PUBLIC NOTICE NO. 2014–20ML **DECEMBER 4, 2014**

NOTICE OF PUBLIC HEARING AND PUBLIC COMMENT PERIOD FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS TO DISCHARGE TREATED WASTEWATER IN THE STATE OF GEORGIA

The Georgia Environmental Protection Division (EPD) has received new applications for the reissuance of two existing NPDES permits for the City of Atlanta's Combined Sewer Systems. Having reviewed such applications, EPD proposes to issue for a maximum term of five years the following permits subject to specific pollutant limitations and special conditions:

City of Atlanta Department of Watershed Management, 72 Marietta Street NW, Atlanta, Georgia 30335, for its East Area Combined Sewer System (CSS), Permit No. GA0037168, and its West Area CSS, Permit No. GA0038644.

The East Area CSS consists of the East (Intrenchment Creek) Water Quality Control Facility (WQCF), located at 1510 Key Road, SE and the Custer Avenue Combined Sewage Control Facility (CSCF) located at Custer and Woodland Avenue, SE. Up to 20 MGD can be discharged to Intrenchment Creek.

The West Area CSS consists of the West Area WQCF located at 2440 Bolton Road NW, the Clear Creek CSCF located at 605 Worchester Drive, the North Avenue/Proctor Creek CSCF located at 1150 North Avenue and the Tanyard Creek CSCF located at 155 Loring Drive. Up to 85 MGD can be discharged to the following receiving waters:

West Area WQCF – Peachtree Creek to the Chattahoochee River
Clear Creek CSCF – Clear Creek
North Ave/Proctor Creek CSCF – unnamed tributary to Proctor Creek
Tanyard Creek CSCF – Tanyard Creek

Comment Period Information:

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address listed below, or via email at EPDcomments@dnr.state.ga.us, by Thursday, January 16, 2015. If you choose to email your comments, please be sure to include the words "NPDES Permit Reissuance – City of Atlanta Combined Sewer System" in the subject line to ensure that your comments will be forwarded to the correct staff. All comments received prior to or on that date will be considered in the formulation of final determinations regarding the application.

A fact sheet and copies of the draft NPDES permits are available by writing EPD. A copying charge of 10 cents per page will be assessed. The permit applications, draft permits, comments received, and other information are available for review at 2 MLK, Jr. Dr., Suite 1152E, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information contact: Gigi Steele, Wastewater Regulatory Program, telephone 404.463.4949 or e-mail gigi.steele@dnr.state.ga.us.

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PUBLIC NOTICE NO. 2014–20ML **DECEMBER 4, 2014**

Public Hearing Information:

The Georgia EPD will hold a public hearing on the proposed permits on **Thursday, January 8, 2014** at **7:00 p.m.** in the Grady High School Auditorium located at 929 Charles Allen Dr. NE, Atlanta Georgia 30309.

The purpose of the public hearing is to receive comments on the draft NPDES permits for the City of Atlanta Combined Sewer System.

The public hearing will be confined to water quality issues as they relate to the draft permits.

The public hearing is a formal process to receive comments on the draft permit. Participants who wish to comment for the record are requested to sign in upon arrival. Hearing participants will not be subject to questions from the audience, but may be questioned by the Hearing Officer for clarification of technical points or to develop a better understanding of statements. Questions asked by participants making statements will be answered by EPD In writing at a later date. Lengthy statements or statements of a considerable technical or economic nature should be submitted in writing for the official record. During the hearing, oral statements shall be limited to five minutes to allow everyone an opportunity to be heard.

Written comments are welcomed. To ensure their consideration, written comments should be received by close of business on Thursday, January 16, 2015 and should be submitted as described above.

Pearce, Jennifer

From: Hesterlee, Craig
Sent: Monday, December 29, 2014 3:16 PM
To: Pearce, Jennifer
Subject: FW: 3
Attachments: FW: Atlanta CSO DRAFT permit; news for staff meeting; RE: Atlanta CSO DRAFT permit; RE: Atlanta CSO Permits and Example Typical Domestic Wastewater; RE: Atlanta CSO draft permits; Atlanta CSO draft permits

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From: Hesterlee, Craig
Sent: Monday, December 29, 2014 3:10 PM
To: Hesterlee, Craig
Subject: 3

Craig Hesterlee
EPA Region 4
NPDES Permitting and Enforcement Branch
404-562-9749

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000
Chris Clark, Commissioner
F. Allen Barnes, Director
Environmental Protection Division
404/656-4713

January 28, 2010

Honorable Robert J. Hunter, Commissioner
Bureau of Watershed Management
City of Atlanta
55 Trinity Avenue, Suite 5400
Atlanta, Georgia 30335-0312

RE: East Area CSO
Water Pollution Control Plant
NPDES Permit No. GA0037168

Dear Commissioner Hunter:

The Environmental Protection Division has received your application for reissuance of the above referenced permit. We are unable to issue a new permit before the expiration date of the existing permit. In accordance with the Rules and Regulations for Water Quality Control Chapter 391-3-6-.06(15)(c), your existing permit is hereby extended until a new permit is issued.

Sincerely,

F. Allen Barnes

F. Allen Barnes,
Director

FAB/jrb

East

PERMIT NO. GA0037168

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

City of Atlanta
55 Trinity Avenue, S.W.
Atlanta, Georgia 30335

is authorized to discharge from its East Area CSO treatment facilities located in Atlanta Georgia

1) Intrenchment Creek CSO WQCF - 1510 Key Road, SE 2) Custer Avenue CSO Control Facility – Custer and Woodland Avenue, SE 3) McDaniel Street CSO Control Facility – McDaniel Street and University Avenue, SE

to receiving waters

1) Intrenchment Creek tributary to the South River 2) Intrenchment Creek tributary to the South River 3) Unnamed tributary to the South River in the Ocmulgee River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on January 31, 2005.

This permit and the authorization to discharge shall expire at midnight, January 30, 2010.

Signed this 31st day of January 2005.

Director,
Environmental Protection Division

PART I

A. Conditions

1. Definitions

a. The Federal Act: the Clean Water Act.

b. The State Act: the Water Quality Control Act (O.C.G.A. Chapter 12-5-20, et seq.).

c. The State Rules: the Rules and Regulations for Water Quality Control (Chapter 391-3-6).

d. Code: the Official Code of Georgia Annotated.

e. Federal Consent Decree – CSO Consent Decree Civil Action File No. 1:95-CV-2550-TWT effective September 28, 1998.

f. Combined sewer system (CSS): a sewer system that was designed or constructed for the purpose of allowing surface water run-off to enter the conduit carrying sewage, industrial waste, or other waste. When the conduit exceeds its maximum capacity, it allows a discharge which bypasses the normal treatment works integral to the sewage system and allows a mixture of storm water and untreated or partially treated sewage, industrial waste, or other waste to flow, directly or indirectly, into the waters of the State.

g. Combined sewer overflow (CSO) control facility: a facility designed and constructed to control, treat and release a CSO discharge. Treatment includes screening and disinfection. The facilities will have dechlorination in the future.

h. CSO Water Quality Control Facility (WQCF): a treatment facility providing enhanced primary treatment and disinfection for CSO discharges. The facility will have dechlorination in the future.

i. CSO discharge: that flow which is discharged from the outfall conveyance structure of a CSO Control Facility or CSO WQCF into waters of the State.

j. CSO discharge event: that period of time from the beginning of a CSO discharge from a CSO Control Facility or a CSO WQCF until it ends, which lasts at least fifty (50) minutes, and which occurs not less than forty-eight hours since the end of the last such discharge.

k. Composite sample: a sample consisting of a combination of subsamples collected during the duration of a CSO discharge event. The first subsample shall be collected 50 minutes after the discharge begins and subsequent subsamples are to be collected every 60 minutes thereafter.

l. Design storm event: the level of rainfall used to determine the design and size of the current CSO conveyance structure, the CSO control facilities and the Intrenchment Creek CSO WQCF.

CSO control facilities and CSO WQCF (prior to tunnel and WQCF upgrade)

1) Floatables: as determined by the permittee and approved by the Division, the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 240 MGD for the McDaniel Street CSO control facility and is defined as a rainfall event of 0.8 inches for the Custer Avenue CSO control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B. of this permit is defined as an overflow event with a flow rate less than or equal to the maximum daily flow of the existing CSO control facilities.

CSO control facilities (after tunnel and WQCF upgrade)

1) Floatables: the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 240 MGD for the McDaniel Street CSO control facility and 1000 MGD for the Custer Avenue control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B. of this permit is defined as an overflow event with a flow rate less than or equal to the maximum daily flow of the existing CSO control facilities.

m. Division: the Environmental Protection Division of the Department of Natural Resources.

n. Dry weather flow conditions: hydraulic flow conditions within the CSS resulting from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, or a combination thereof, with no contribution from stormwater.

o. Dry weather overflow: a CSO discharge that occurs during dry weather flow conditions provided that groundwater that infiltrates down gradient of the point at which sewage is diverted to a wastewater treatment facility shall not constitute dry weather overflow for compliance purposes.

p. First flush: the first sixty minutes of a CSO discharge.

q. POTW: publicly owned treatment works.

r. Sampling plan: a plan required to be submitted by the permittee for approval by the Division that, at a minimum, describes the strategies, sampling and monitoring methods, equipment, protocols, record keeping, design, and operational aspects of the CSO control facilities and CSO WQCF that relate to facility compliance and monitoring requirements.

s. Sampling point: the point at which the CSO discharge from the CSO control facilities and the CSO WQCF must meet the terms and conditions in Part II B. of this permit. For purposes of this permit, the approved sampling points are defined in Part II.B.1 and Part II.B.2 unless a different location is identified in the sampling plan approved by the Division.

t. Water quality standards: water quality criteria established to protect designated uses of waters of the State in accordance with the State Rules.

2. Best Management Practices. The permittee shall immediately comply with the following technology-based requirements:

a. The permittee shall implement proper operation and maintenance programs for the combined sewer system and all CSO control facilities and the CSO WQCF to reduce the magnitude, frequency, and duration of CSO discharges. The program shall consider regular combined sewer inspections; sewer, catch basin, and regulator cleaning; equipment and combined sewer system repair or replacement, where necessary, and disconnection of illegal connections.

b. The permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSO discharges.

c. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from non-domestic users.

d. The permittee shall operate the POTW at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSO discharges. The permittee shall deliver all flows to the treatment plant within the constraints of the conveyance capacity of the system and the treatment capacity of the POTW. In addition, the permittee shall operate the CSO WQCF at maximum treatable flow once capacity at the POTW is reached and storage in the collection system is maximized in order to reduce the magnitude, frequency and duration of CSO discharges from the CSO control facilities.

e. Dry weather overflows are prohibited. Each dry weather overflow must be reported to the permitting authority as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

f. The permittee shall implement measures to control and prevent solid and floatable materials in CSO discharges.

g. The permittee shall implement a pollution prevention program focused on reducing the impact of CSO discharges on the receiving waters.

h. The permittee shall implement a public notification process to inform citizens of when and where CSO discharges occur. The process shall include the following:

(1) A public information program to inform the public of the occurrence of CSO discharges into the receiving stream; and

(2) Signs posted in clear view at the CSO control facilities' outfalls, the CSO WQCF outfall, and at all public points of access to the receiving stream for at least the first half mile downstream of the CSO control facilities' and the CSO WQCF outfalls.

i. The permittee shall monitor the outfalls of the CSO control facilities and CSO WQCF in order to evaluate the efficacy of the CSO controls.

PART II

A. Monitoring and Reporting

1. Effluent Toxicity and Biomonitoring Requirements

The permittee shall comply with effluent standards or prohibitions established by Section 307(a) of the Federal Act and with Chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in "concentrations or combinations that are harmful to humans, animals, or aquatic life." If toxicity is suspected in the effluent, the Division may require the permittee to perform any of the following actions:

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

The Division will specify the requirements and methodologies for performing any of these tests or studies, or consider for approval, the methodologies submitted by the permittee. Sample collection shall be representative of the CSO control facility and CSO WQCF hydrograph and shall at a minimum include a sample within the first thirty minutes of discharge and during the declining limb of the hydrograph.

Acute toxicity testing shall be conducted in accordance with "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms", EPA 821-R-02-012, or the most current edition. Unless other concentrations are specified by the

Division, the critical concentration used to determine toxicity in the biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the flow of the CSO discharge during the first flush and the design storm event flow. Samples for toxicity testing are to be taken after the final treatment process. The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the Division with data and evidence to confirm toxicity elimination. When approved by the Division, all study plans and TRE plans will become part of the requirements of this permit.

2. Flow Monitoring

a. The permittee shall have a primary flow measuring device that is correctly installed and operable. Secondary flow measurements must be made using a continuous totalizer and an indicating recorder. Calibration of secondary instruments will be maintained to within 10% of the actual flow. Calibration shall be performed in accordance with accepted engineering practice on a quarterly basis. Records of the calibration checks shall be maintained.

b. If primary and secondary flow instruments malfunction or fail to maintain calibration as required in Part II.A.2.a., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples or as described in the Sampling Plan approved by the Division.

3. Monitoring Procedures

Analytical procedures, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and procedures listed in 40 CFR Part 136 or as approved by the Division in the approved sampling plan. The methods used must be applicable to the concentration ranges of the CSO samples.

4. Detection Limit Requirements

All parameters will be analyzed using the appropriate detection limits as specified by the Division. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "not detected" will be reported for that sample and the detection limit will also be reported.

5. Representative Sampling

Samples and measurements of the monitored waste shall be representative of the volume and nature of the waste stream. The permittee shall maintain a written sampling and monitoring schedule.

6. Reporting

All reports or information submitted in compliance with this permit or requested by the Division must be signed by a principal executive officer, elected official, or other authorized representative. Required analytical results obtained by the permittee shall be summarized on a Combined Sewer Overflow Monitoring Report form and any additional Division specified forms. Monitoring results shall be submitted to the Division postmarked no later than the 15th day of the month following the end of the reporting period. The Division may require in writing that additional monitoring results be reported. Signed copies of these and all other required reports shall be submitted to:

Georgia Environmental Protection Division
Permitting, Compliance and Enforcement Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

7. Record Retention

The permittee shall retain the following records:

a. All laboratory analyses performed including sample data, quality control data, standard curves, etc;

b. Calibration and maintenance records of laboratory instruments;

c. CSO monitoring records;

d. Sewer system operation and maintenance records;

e. Copies of all reports required by this permit; and

f. All data and information used to complete the application for this permit.

These records shall be maintained for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by Division written notification.

B.1. Monitoring Requirements – CSO Control Facilities and CSO WQCF

a) Intrenchment Creek CSO WQCF (001) - Beginning on the effective date of this permit and continuing until the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine [2]	0.1 [3]	See Part II.B.1.d.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[4] 2,000 (daily max) 1,000 (monthly avg)[4] 4,000 (daily max)	See Part II.B.1.d.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken during each CSO discharge event[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] See Part II.D.1 of the permit.

[3] This is a daily maximum limitation.

[4] The permittee shall report the monthly average value in accordance with Part II.B.1.d.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00217[2]	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0104[2]	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Zinc [1]	0.0622[2]	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Lead [1]	Report mg/l for each composite sample	1/Discharge Event[3]	Composite	Effluent
Total Recoverable Nickel [1]	Report mg/l for each composite sample	1/Discharge Event[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports.

B.1. Monitoring Requirements – CSO Control Facilities and CSO WQCF (Continued)

b) Custer Avenue CSO Control Facility (002) - Beginning on the effective date of this permit and continuing until the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility diversion dam on Intrenchment Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.1.d.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.d.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2. of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.d.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Copper[1]	0.0171[2]	12/Year[3]	Composite	Effluent
Total Recoverable Cadmium[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable copper, cadmium, lead, nickel and zinc to the detection limit specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with this limit in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities and CSO WQCF (Continued)

c) McDaniel Street CSO Control Facility (003) - Beginning on the effective date of this permit and continuing until the sewer separation project in this subbasin is complete and approved by EPD, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipes above the juncture with the open channel at the tributary to the South River unless a different location is identified in the sampling plan approved by the Division. Once the sewer separation project in this basin is complete and approved by EPD, this outfall will no longer be covered under this permit and any discharge of sanitary sewage from this outfall will be prohibited.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[3]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	Report mg/l for each grab sample	See Part II.B.1.d.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[2] 2,000 (daily max) 1,000 (monthly avg)[2] 4,000 (daily max)	See Part II.B.1.d.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] The permittee shall report the monthly average value in accordance with Part II.B.1.d.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[3] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00233[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0139[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.104[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall ensure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

d) Additional Monitoring Requirements and Effluent Limitations for all CSO control facilities and the CSO WQCF (001-003)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from each overflow sampling event from the CSO WQCF and from a minimum of four overflow sampling events per calendar month from each CSO control facility at the Sampling Point during first flush. If fewer than four overflow sampling events occur, then the permittee shall collect a grab sample from each that does occur. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

5) Within 30 days of permit issuance, the permittee shall submit an update of its approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) to the Division for approval. The update is to reflect the new sampling requirements in this permit including the requirement to monitor all discharge events from the Intrenchment Creek CSO WQCF and to sample influent biochemical oxygen demand (5-day) and total suspended solids.

6) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards pursuant to the State Rules and

Chapters 12-5-29.1 and 12-5-30.2 of the Code. See Compliance Schedule for meeting specific water quality standards in Part II.D.2.

e) The CSO discharge(s) from the CSO control facilities and the CSO WQCF must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1. Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2. Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3. Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.l of the permit;

4. Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5. Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

B.2. Monitoring Requirements – CSO WQCF and CSO Control Facilities

a) Intrenchment Creek CSO WQCF (001) - Beginning on the date that the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine[2]	0.1 [3]	See Part II.B.2.c.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[4] 2,000 (daily max) 1,000 (monthly avg)[4] 4,000 (daily max)	See Part II.B.2.c.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples during each CSO discharge event[1].

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] See Part II.D.1. of the permit.

[3] This is a daily maximum limitation.

[4] The permittee shall report the monthly average value in accordance with Part II.B.2.c.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO WQCF and CSO Control Facilities

b) Custer Avenue CSO Control Facility (002) - Beginning on the date that the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility diversion dam on Intrenchment Creek unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event [1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.2.c.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.c.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.
[2] This is a daily maximum limitation. See Part II.D.1. of the permit.
[3] The permittee shall report the monthly average value in accordance with Part II.B.2.c.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

c) Additional Monitoring Requirements and Effluent Limitations for the CSO WQCF and the CSO control facility (001 and 002)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from each CSO overflow sampling event from the CSO WQCF and the CSO control facility. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall perform a scan of the priority pollutants on the CSO WQCF and CSO control facility's effluent once during the term of this permit after the permittee has received written permission to operate the upgraded WQCF. The permittee should attempt to take these samples within 90 days of being given permission to operate the WQCF (if rainfall is adequate to result in overflows from the CSO WQCF and/or the CSO control facility). The permittee shall take the sample as a grab sample. If substances are measured at levels which may be of concern, the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to address the specific pollutants of concern.

5) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

6) The permittee shall update their approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) and receive Division

approval of the updated plan, prior to operation of the upgraded CSO WQCF and the CSO control facilities at their Part II.B.2. limits. The plan is to be updated to reflect the sampling requirements under Part II.B.2 of the permit.

7) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards pursuant to the State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code.

d) The CSO discharge(s) from the CSO WQCF and the CSO control facility must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1) Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2) Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3) Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to 1000 MGD for the Custer Avenue CSO control facility;

4) Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5) Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

e) Upstream and Downstream Monitoring

The permittee shall sample the waters of the State upstream and downstream from the CSO WQCF while it is discharging a minimum of 12 times per year with best efforts to collect samples at least twice during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan. Upstream and downstream samples are to be taken at the representative sampling locations defined in the permittee's sampling plan. The downstream sample is to be collected at a point after adequate mixing of the CSO discharge with the receiving stream. The samples shall be analyzed for the same parameters found in Part II.B.2.a. of the permit (except for flow).

C. Long-Term Control Plan and Metal Limits

The limits for metals found in Part II.B.1.(a-c) were developed using the State's dissolved instream criteria and translation factors that were calculated using data gathered by the permittee during characterization of the CSO discharge. The permittee has also performed some preliminary water-effect ratio (WER) work on copper and zinc for the CSO control facility discharges and is also pursuing a recalculation of the zinc standard for the area of

the CSO discharges. Whole effluent toxicity data indicates that the CSO effluent from the CSO control facilities is not acutely toxic. The WER data indicates that the copper limits could be higher than those in the permit and still be protective of aquatic life. However, there was insufficient data at the time of permit issuance to make any changes to the metal limits based on the WER.

The permittee has developed a long-term control plan to enable it to attain compliance with the requirements of the Clean Water Act including metal limitations. The long-term control plan involves a combination of sewer separation and the construction of additional storage and treatment capacity (i.e. CSO WQCFs) in accordance with the Authorized Revised CSO Remedial Measures Plan. The Intrenchment Creek CSO WQCF provides primary treatment and disinfection and it will be able to store more flow once the upgrade is complete. The storage and treatment of the WQCF and tunnel were designed to provide for the capture and treatment of all but an average of four storm events per year over a five year period. The portion of the CSOs in excess of the capacity of the proposed storage system will be screened, disinfected and discharged from the Custer Avenue CSO control facility (the McDaniel Street CSO control facility is to be separated). The Custer Avenue CSO control facility should only discharge during very large rain events, approximately four times a year.

Once the upgrade to the Intrenchment Creek WQCF is completed and operational, the effluent from the remaining Custer Avenue CSO control facility is predicted to be different than that which was discharged prior to operation of the upgraded CSO. Since discharges will only occur in heavy rain events, the discharge should be more dilute. The permittee will be required to sample for metals during each CSO discharge event from the CSO control facility and the CSO WQCF once the upgraded WQCF is operational. Since the effluent from the CSO control facility is predicted to be different, the site-specific translators used in the calculation of B.1.(a-c) limits and the permittee's preliminary WERs are predicted to change. The permittee is encouraged to collect data for developing site-specific translators and/or water-effect ratios (or other analyses as provided using current EPA Site Specific Criteria Guidance in accordance with Chapter 391-3-6-.06(4)(d)5(ii) of the State Rules) at the same time it collects the metal data required by the permit. Once at least 10 data points are gathered for each metal for the CSO control facility and the CSO WQCF, EPD will use its Reasonable Potential Procedures to determine if effluent limitations for metals are required or whether the monitoring requirements may be reduced or terminated. EPD will use the permittee's translator and/or WER data (if it is found to be acceptable) in the Reasonable Potential analysis and in the development of permit limits if necessary.

D. Compliance Schedules

1. The permittee shall attain compliance with the total residual chlorine limit at the Custer Avenue control facility and the CSO WQCF effective sixty (60) days after the scheduled completion dates of the dechlorination facilities as provided through the Federal Consent Decree or sixty (60) days after EPD's written approval to operate the facilities, whichever is earlier. The total residual chlorine limit may be modified in the future based on monitoring data. This modification would be made through a formal permit modification which would be open to public comment.

2. The permittee intends to attain compliance with the water quality criteria through implementation of the long-term control plan which includes construction of the Custer Avenue CSO Storage and Dechlorination Facility and an upgrade to the

Intrenchment Creek CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. Once the permittee completes construction of the upgrade to the WQCF and receives written permission from EPD to begin to utilize the facility, the permittee will be required to meet the effluent limitations in Part II.B.2. The permittee is not required to meet the monthly average fecal coliform bacteria limits, the pH limits, and the metal limits in Part II.B.1(a-c) of the permit until November 7, 2007. If the permittee has not received EPD written permission to begin discharging from the upgraded WQCF by November 7, 2007, then the permittee will be required to meet the monthly average fecal coliform bacteria limits, the pH, and metal limits in Parts II.B.1. beginning on November 7, 2007. In the event this occurs, once the permittee receives EPD written permission to begin discharging from the upgraded WQCF, the permittee will no longer be subject to the limits under Part II.B.1. (including those for metals), but will become subject to the limits and monitoring requirements under Part II.B.2. The permittee is to meet the following schedule for implementing the long-term control plan:

a) The permittee shall issue notice to begin construction of the upgrade to the Intrenchement Creek WQCF by February 1, 2005.

b) The permittee shall substantially complete construction of the upgrade to the Intrenchment Creek WQCF by February 1, 2007.

c) The permittee shall submit a report of its progress in implementing its long-term control plan and meeting water quality standards each January, April, July and October. The permittee shall send these reports until such time that the CSO WQCF upgrade is operational and water quality criteria are being met.

E. FREQUENCY OF OVERFLOWS AT THE CUSTER AVENUE CSO CONTROL FACILITY AFTER CSO WQCF UPGRADE

The permittee intends to attain compliance with the water quality criteria through implementation of the long-term control plan which includes construction of the Custer Avenue CSO Storage and Dechlorination Facility and an upgrade to the Intrenchment Creek CSO WQCF in accordance with the Authorized Revised CSO Remedial Measures Plan. These improvements are predicted to limit the overflows from the Custer Avenue CSO control facility to an average of four times a year over a long-term period. Therefore, from the date that the construction of the upgrade to the Intrenchment Creek CSO WQCF is substantially complete and EPD has provided the permittee with written approval to operate the upgraded CSO WQCF until the expiration of this permit, the Custer Avenue CSO control facility is predicted to have an average of four overflows annually if this period is meteorologically similar to the long term average. If an annual average of four overflows is exceeded in this period, the permittee shall prepare a report explaining the exceedence. This report shall be submitted to the Division within three months following the overflow which causes the annual average to be exceeded for this period. If the exceedence is caused by operation deficiencies, such exceedence shall be a permit violation.

F. PERFORMANCE STANDARDS

The permittee shall update and maintain its existing Management Operations and Maintenance (MOM) plans for the CSO control facilities and the CSO WQCF. These updated plans shall address activities to maintain and operate efficiently all treatment or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Performance standards for Biochemical Oxygen Demand (5-day) and Total Suspended Solids are established below for the CSO WQCF. These standards are to be used as an indication of whether the permittee is operating and maintaining its combined sewer system properly in accordance with the requirements of this permit.

a. Annual removal of Biochemical Oxygen Demand (5-day) of 25%.

b. Annual removal of Total Suspended Solids of 60%.

The permittee will include documentation of performance of the CSO WQCF as part of an annual MOM plan update. If the annual removal of Biochemical Oxygen Demand (5-day) and/or Total Suspended Solids is less than the operational standards specified above, then the permittee is to include an explanation in the annual MOM plan update that explains why this was the case. Should EPD conclude that the failure to meet the operational standards was due to failure by the permittee to operate and maintain its CSO system properly, then this would be considered to be a permit violation.

PART III

A. General Requirements

1. Facilities Operations

The permittee shall maintain and operate efficiently all treatment, or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

2. Power Failures

If the primary source of power is reduced or lost, the permittee shall use an alternative source of power when available, to reduce or control all discharges to maintain permit compliance.

3. Laboratory Analyst and Operator Certification Requirements

a. The person responsible for the daily operation of the CSO WQCF and the CSO control facilities must be a Class I Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and as specified by Subparagraph 391-3-6-.12 of the Rules and Regulations for Water Quality Control. All other operators must have the minimum certification required by this Act.

b. Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended.

4. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;

b. Review and copy any records required by this permit;

c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and

d. Sample any substance or parameter at any location.

5. Availability of Reports

Except for data determined to be confidential by the Director of the Division under Section 12-5-26 of the Code or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at a Division office. Effluent data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

6. Submittal of Information

The permittee shall furnish any information required by the Division to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the Division with requested copies of records required by this permit. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the Division, the permittee shall promptly submit the additional or corrected information.

7. Permit Modification

This permit may be modified, terminated, or revoked and reissued in whole or in part during its term to allow for new or more stringent conditions based on new information for the following reasons;

a. Permit violations;

b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;

c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge

d. Changes in effluent characteristics;

e. Demonstrated performance as determined by the Division;

f. Violations of water quality standards;

g. New information based on stream survey results; or

h. Changes in the water quality standards.

The filing of a request by the permittee for permit modification, termination, revocation and reissuance, or notification of planned changes or anticipated noncompliance does not negate any permit condition.

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a. Within three (3) months of the issuance date of this Permit, the permittee shall submit to EPD a plan to conduct a WER. The plan will become a part of this permit upon written approval by EPD.

b. At eight (8) and twelve (12) months of EPD's approval of the plan the permittee shall submit a report of progress to EPD.

c. Within eighteen (18) months of the issuance date of this Permit, the permittee shall submit an approvable WER to EPD.

EPD may re-open the permit to include site-specific effluent limitations based on the results of an approved WER.

For Total Recoverable Copper, the permittee shall submit a sampling plan and schedule to EPD, not to exceed eighteen (18) months, to use the Biotic Ligand Model (BLM) (EPA, 2003) to derive site-specific water quality criteria. The permittee shall gather data for temperature, pH, dissolved organic carbon, major cations (calcium, magnesium, sodium and potassium), major anions (sulfate and chloride) and alkalinity to input into the model.

The BLM shall be completed in accordance with the following schedule:

a. Within three (3) months of the issuance date of this Permit, the permittee shall submit a sampling plan and schedule to conduct a BLM. The sampling plan shall include data that encompasses seasonal variations and weather conditions. The plan will become a part of this permit upon written approval by EPD.

b. Within one (1) month of EPD's approval of the sampling plan, the permittee shall begin sampling for the following: temperature, pH, dissolved organic carbon, calcium, magnesium, sodium, potassium, sulfate and chloride at each sampling location outlined in the approved sampling plan.

c. At eight (8) and twelve (12) months after EPD's approval of the sampling plan, the permittee shall submit a report of progress to EPD.

d. Within eighteen (18) months of EPD's approval of the sampling plan, the permittee shall submit the results of the BLM to EPD.

EPD may re-open the permit to include site-specific effluent limitations for total recoverable copper based on the results of the BLM.

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PART II GENERAL CONDITIONS

A. MANAGEMENT REQUIREMENTS

1. FACILITY OPERATION

The permittee shall maintain and operate efficiently the East Area (Intrenchment Creek) WQCF, the Custer Avenue Combine Sewer Control facility, and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

2. CHANGE IN DISCHARGE

Any anticipated facility expansions or process modifications which will result in new, different, or increased discharges of pollutants requires the submission of a new NPDES permit application. If the changes will not violate the permit effluent limitations, the permittee may notify EPD without submitting an application. The permit may then be modified to specify and limit any pollutants not previously limited.

3. NONCOMPLIANCE NOTIFICATION

If, for any reason the permittee does not comply with, or will be unable to comply with any effluent limitations specified in the permittee's NPDES permit, the permittee shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including the exact date and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

c. The steps taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

4. ANTICIPATED NONCOMPLIANCE NOTIFICATION

The permittee shall give written notice to the EPD at least 10 days before:

a. Any planned changes in the permitted facility; or

b. Any activity which may result in noncompliance with the permit.

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5. OTHER NONCOMPLIANCE

The permittee must report all instances of noncompliance not reported under other specific reporting requirements at the time monitoring reports are submitted. The reports shall contain the information required under conditions of twenty-four hour reporting.

6. OPERATOR CERTIFICATION REQUIREMENTS

The person responsible for the daily operation of the East Area (Intrenchment Creek) WQCF and the Custer Avenue Combine Sewer Control facility must be a Class I Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and as specified by Subparagraph 391-3-6-.12 of the Rules and Regulations for Water Quality Control. All other operators must have the minimum certification required by this Act.

7. LABORATORY ANALYST CERTIFICATION REQUIREMENTS

Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended.

8. BYPASSING

Any diversion of wastewater from or bypassing of wastewater around the permitted treatment works is prohibited, except if:

a. Bypassing is unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There are no feasible alternatives to bypassing; and

c. The permittee notifies the EPD at least 10 days before the date of the bypass.

Feasible alternatives to bypassing include use of auxiliary treatment facilities and retention of untreated waste. The permittee must take all possible measures to prevent bypassing during routine preventative maintenance by installing adequate back-up equipment.

The permittee shall operate the facility and the sewer system to minimize discharge of pollutants from combined sewer overflows or bypasses and may be required by EPD to submit a plan and schedule to reduce bypasses, overflows, and infiltration.

Any unplanned bypass must be reported following the requirements for noncompliance notification specified in Part II.A.3. The permittee may be liable for any water quality violations that occur as a result of bypassing the facility.

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9. POWER FAILURES

If the primary source of power to this water pollution control facility is reduced or lost, the permittee shall use an alternative source of power to reduce or control all discharges to maintain permit compliance.

10. ADVERSE IMPACT

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge disposal which might adversely affect human health or the environment.

11. NOTICE CONCERNING ENDANGERING WATERS OF THE STATE

Whenever, because of an accident or otherwise, any toxic or taste and color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into such waters, or is so placed that it might flow, be washed, or fall into them, it shall be the duty of the person in charge of such substances at the time to forthwith notify EPD in person or by telephone of the location and nature of the danger, and it shall be such person's further duty to immediately take all reasonable and necessary steps to prevent injury to property and downstream users of said water.

Spills and Major Spills:

A "spill" is any discharge of raw sewage by a Publicly Owned Treatment Works (POTW) to the waters of the State.

A "major spill" means:

1. The discharge of pollutants into waters of the State by a POTW that exceeds the weekly average permitted effluent limit for biochemical oxygen demand (5-day) or total suspended solids by 50 percent or greater in one day, provided that the effluent discharge concentration is equal to or greater than 25 mg/L for biochemical oxygen demand or total suspended solids.

2. Any discharge of raw sewage that 1) exceeds 10,000 gallons or 2) results in water quality violations in the waters of the State.

"Consistently exceeding effluent limitation" means a POTW exceeding the 30 day average limit for biochemical oxygen demand or total suspended solids for at least five days out of each seven day period during a total period of 180 consecutive days.

The following specific requirements shall apply to POTW's. If a spill or major spill occurs, the owner of a POTW shall immediately:

a. Notify EPD, in person or by telephone, when a spill or major spill occurs in the system.

b. Report the incident to the local health department(s) for the area affected by the incident.
The report at a minimum shall include the following:

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1. Date of the spill or major spill;
2. Location and cause of the spill or major spill;
3. Estimated volume discharged and name of receiving waters; and
4. Corrective action taken to mitigate or reduce the adverse effects of the spill or major spill.

c. Post a notice as close as possible to where the spill or major spill occurred and where the spill entered State waters and also post additional notices along portions of the waterway affected by the incident (i.e. bridge crossings, boat ramps, recreational areas, and other points of public access to the affected waterway). The notice at a minimum shall include the same information required in 11(b)(1-4) above. These notices shall remain in place for a minimum of seven days after the spill or major spill has ceased.

d. Within 24 hours of becoming aware of a spill or major spill, the owner of a POTW shall report the incident to the local media (television, radio, and print media). The report shall include the same information required in 11(b)(1-4) above.

e. Within five (5) days (of the date of the spill or major spill), the owner of a POTW shall submit to EPD a written report which includes the same information required in 11(b)(1-4) above.

f. Within 7 days (after the date of a major spill), the owner of a POTW responsible for the major spill, shall publish a notice in the largest legal organ of the County where the incident occurred. The notice shall include the same information required in 11(b)(1-4) above.

g. The owner of a POTW shall immediately establish a monitoring program of the receiving waters affected by a major spill or by consistently exceeding an effluent limit, with such monitoring being at the expense of the POTW for at least one year. The monitoring program shall include an upstream sampling point as well as sufficient downstream locations to accurately characterize the impact of the major spill or the consistent exceedence of effluent limitations described in the definition of "Consistently exceeding effluent limitation" above. As a minimum, the following parameters shall be monitored in the receiving stream:

1. Dissolved Oxygen;
2. Fecal Coliform Bacteria;
3. pH;
4. Temperature; and
5. Other parameters required by the EPD.

The monitoring and reporting frequency as well as the need to monitor additional parameters, will be determined by EPD. The results of the monitoring will be provided by the POTW owner to EPD and all downstream public agencies using the affected waters as a source of a public water supply.

h. Within 24 hours of becoming aware of a major spill, the owner of a POTW shall provide notice of a major spill to every county, municipality, or other

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public agency whose public water supply is within a distance of 20 miles downstream and to any others which could be potentially affected by the major spill.

12. **UPSET PROVISION**

Provision under 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

B. RESPONSIBILITIES

1. **COMPLIANCE**

The permittee must comply with this permit. Any permit noncompliance is a violation of the Federal Act, State Act, and the State Rules, and is grounds for:

a. Enforcement action;

b. Permit termination, revocation and reissuance, or modification; or

c. Denial of a permit renewal application.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

2. **RIGHT OF ENTRY**

The permittee shall allow the Director of the EPD, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;

b. Review and copy any records required by this permit;

c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and

d. Sample any substance or parameter at any location.

3. **SUBMITTAL OF INFORMATION**

The permittee shall furnish any information required by the EPD to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the EPD with requested copies of records required by this permit. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the EPD, the permittee shall promptly submit the additional or corrected information.

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4. TRANSFER OF OWNERSHIP OR CONTROL

A permit may be transferred to another person by a permittee if:

a. The permittee notifies the Director in writing at least 30 days in advance of the proposed transfer;

b. An agreement is written containing a specific date for transfer of permit responsibility including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on. This agreement must be submitted to the Director at least 30 days in advance of the proposed transfer; and

c. The Director does not notify the current permittee and the new permittee within 30 days of EPD intent to modify, revoke and reissue, or terminate the permit. The Director may require that a new application be filed instead of agreeing to the transfer of the permit.

5. AVAILABILITY OF REPORTS

Except for data determined to be confidential by the Director of EPD under O.C.G.A. 12-5-26 or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at an EPD office. Effluent data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

6. PERMIT MODIFICATION

This permit may be modified, terminated, or revoked and reissued in whole or in part during its term for causes including, but not limited to:

a. Permit violations;

b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;

c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

d. Changes in effluent characteristics; and

e. Violations of water quality standards.

The filing of a request by the permittee for permit modification, termination, revocation and reissuance, or notification of planned changes or anticipated noncompliance does not negate any permit condition.

7. CIVIL AND CRIMINAL LIABILITY

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws including

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promulgated water quality standards. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

8. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, or any infringement of Federal, State or local laws or regulations.

9. EXPIRATION OF PERMIT

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date without written authorization from the EPD. To receive this authorization, the permittee shall submit the information, forms, and fees required by the EPD no later than 180 days before the expiration date.

10. CONTESTED HEARINGS

Any person aggrieved or adversely affected by any action of the Director of the EPD shall petition the Director for a hearing within 30 days of notice of the action.

11. SEVERABILITY

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

12. PREVIOUS PERMITS

All previous State water quality permits issued to this facility for construction or operation are revoked by the issuance of this permit. The permit governs discharges from this facility under the National Pollutant Discharge Elimination System (NPDES).

GA EPD - Wastewater Regulatory Program

Municipal Permitting Unit

Date: 11/19/2014 **Facility:** City of Atlanta East CSS

Reviewer: GSteele **NPDES Permit:** GA0036178

Data from permit application

Stream Data:

Mean annual streamflow at discharge (ft^3/s) 0.00

(gal/day) 0

Effluent Data:

Flow (gal/day) 20

Dilution factor: 1.000

Water Quality Criteria (WQC)

Nonmetal		**Maximum** effluent C_T (µg/L)	Instream Concentration (µg/L)	WQC (µg/L)	WQC/2 (µg/L)	Action needed?
Bromodichloromethane		1.5	1.50	34.00	17	no
Chloroform		11.0	11.00	470.00	235	no
bis (2-ethylhexyl) phtalate		1.7	1.71	5.90	2.95	no

Notes

$$\text{Dilution Factor} = \frac{\text{Mean annual streamflowat discharge}\left(\text{gal}/\text{day}\right) + \text{Flow}\left(\text{gal}/\text{day}\right)}{\text{Flow}\left(\text{gal}/\text{day}\right)}$$

Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.

If the calculated instream concentraion is less than 50% of the instream water quality criteria, then the consisuent will be considered not to be present at levels of concern in the effluent and it will not be included in the permit.

If the calculated instream concentration is 50% or more of the instream water quality criteria, then a permit limit for that ocnsistuent will be placed in the permit.

BS / BSD Recoveries

Project Name: GA 129 PP West Side CSO Rain Event

Work Order #: 365406
Analyst: 4150
Lab Batch ID: 798842 **Sample:** 558283-1-BKS
Units: mg/L

Date Prepared: 03/17/2010
Batch #: 1

Project ID:
Date Analyzed: 03/18/2010
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

PP Metals by SW-846 6010B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Antimony	<0.002	1.00	0.917	92	1	0.925	93	1	75-125	20	
Arsenic	<0.003	1.00	0.908	91	1	0.912	91	0	75-125	20	
Beryllium	<0.001	1.00	0.963	96	1	0.966	97	0	75-125	20	
Cadmium	<0.001	1.00	0.924	92	1	0.928	93	0	75-125	20	
Chromium	<0.001	1.00	0.947	95	1	0.951	95	0	75-125	20	
Copper	<0.001	1.00	0.946	95	1	0.947	95	0	75-125	20	
Lead	<0.001	1.00	0.917	92	1	0.919	92	0	75-125	20	
Nickel	<0.001	1.00	0.921	92	1	0.925	93	0	75-125	20	
Selenium	<0.003	1.00	0.927	93	1	0.929	93	0	75-125	20	
Silver	<0.001	1.00	0.935	94	1	0.937	94	0	75-125	20	
Thallium	<0.002	1.00	0.916	92	1	0.924	92	1	75-125	20	
Zinc	<0.001	1.00	0.931	93	1	0.934	93	0	75-125	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP West Side CSO Rain Event

Work Order # : 365406

Project ID:

Lab Batch ID: 798808 | QC- Sample ID: 365426-002 S | Batch #: 1 | Matrix: Surface Water

Date Analyzed: 03/17/2010 | Date Prepared: 03/15/2010 | Analyst: VCH

Reporting Units: [illegible]

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

PP Herbicides by SW-846 8151A											
Col Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1 2,4,5-TP (Silvex)	<0.50	5.0	3.90	78	5.0	3.30	66	17	5-105	30	
1 2,4-D	<0.50	5.0	3.80	76	5.0	3.30	66	14	10-129	30	

Lab Batch ID: 797906 | QC- Sample ID: 365406-001 S | Batch #: 1 | Matrix: Water

Date Analyzed: 03/12/2010 | Date Prepared: 03/12/2010 | Analyst: MHR

Reporting Units: [illegible]

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A											
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium, Hexavalent	<0.010	0.500	0.501	100	0.500	0.502	100	0	80-120	20	

Lab Batch ID: 798346 | QC- Sample ID: 364972-001 S | Batch #: 1 | Matrix: Water

Date Analyzed: 03/15/2010 | Date Prepared: 03/15/2010 | Analyst: 4154

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Cyanide by SW-846 9010/9014A											
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Cyanide, Total	<0.010	0.050	0.046	92	0.050	0.046	92	0	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B | Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP West Side CSO Rain Event

Work Order # : 365406 **Project ID:**

Lab Batch ID: 798828 **QC- Sample ID:** 365199-012 S **Batch #:** 1 **Matrix:** Ground Water
Date Analyzed: 03/18/2010 **Date Prepared:** 03/17/2010 **Analyst:** 4150
Reporting Units: mg/L

Mercury by SW-846 7470A Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Mercury	0.0010	0.0030	0.0019	30	0.0030	0.0020	33	5	75-125	20	X

Lab Batch ID: 798749 **QC- Sample ID:** 365199-017 S **Batch #:** 1 **Matrix:** Ground Water
Date Analyzed: 03/18/2010 **Date Prepared:** 03/15/2010 **Analyst:** VCH
Reporting Units: ug/L

PP PCBs by SW846 8082 Col	Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1	PCB-1016	<0.50	5.0	3.60	72	5.0	4.20	84	15	30-170	30	
1	PCB-1260	<0.50	5.0	2.90	58	5.0	3.70	74	24	30-170	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E
Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP West Side CSO Rain Event

Work Order # : 365406

Project ID:

Lab Batch ID: 799175 **QC- Sample ID:** 365406-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/19/2010 **Date Prepared:** 03/15/2010 **Analyst:** BJM

Reporting Units: ug/L

PP SVOCs by SW-846 8270D Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,2,4-Trichlorobenzene	<10.0	50.0	33.9	68	50.0	32.5	65	4	10-96	30	
1,4-Dichlorobenzene	<10.0	50.0	28.2	56	50.0	27.3	55	3	10-87	30	
2,4-Dinitrotoluene	<10.0	50.0	38.7	77	50.0	35.6	71	8	23-124	30	
2-Chlorophenol	<10.0	100	59.7	60	100	56.2	56	6	25-80	30	
4-chloro-3-methylphenol	<10.0	100	78.4	78	100	69.9	70	11	15-98	30	
4-Nitrophenol	<20.0	100	72.9	73	100	58.7	59	22	11-129	30	
Acenaphthene	<10.0	50.0	37.5	75	50.0	33.8	68	10	16-112	30	
N-Nitrosodi-n-Propylamine	<10.0	50.0	42.4	85	50.0	45.8	92	8	15-118	30	
Pentachlorophenol	<20.0	100	59.9	60	100	69.4	69	15	22-120	30	
Phenol	<10.0	100	58.9	59	100	51.1	51	14	12-90	30	
Pyrene	<10.0	50.0	33.0	66	50.0	27.0	54	20	13-130	30	

Lab Batch ID: 798103 **QC- Sample ID:** 365269-001 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03/15/2010 **Date Prepared:** 03/15/2010 **Analyst:** NTR

Reporting Units: ug/L

PP VOCs by SW-846 8260B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1-Dichloroethene	<1.0	50	49	98	50	44	88	11	70-130	20	
Benzene	<1.0	50	49	98	50	47	94	4	80-120	20	
Chlorobenzene	<1.0	50	50	100	50	47	94	6	80-120	20	
Toluene	<1.0	50	49	98	50	47	94	4	75-120	20	
Trichloroethene	<1.0	50	49	98	50	46	92	6	70-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP West Side CSO Rain Event

Work Order # : 365406 **Project ID:**

Lab Batch ID: 798454 **QC- Sample ID:** 365199-021 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03/16/2010 **Date Prepared:** 03/15/2010 **Analyst:** VCH

Reporting Units: ug/L

PP Pesticides by SW-846 8081A		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Col	Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
2	4,4-DDD	<0.100	0.500	0.538	108	0.500	0.480	96	11	20-152	30	
2	4,4-DDE	<0.100	0.500	0.523	105	0.500	0.419	84	22	18-147	30	
2	4,4-DDT	<0.100	0.500	0.555	111	0.500	0.477	95	15	18-164	30	
1	Alpha-BHC	<0.050	0.500	0.483	97	0.500	0.289	58	50	24-141	30	F
2	Alpha-Chlordane	<0.050	0.500	0.555	111	0.500	0.439	88	23	37-135	30	
1	Beta-BHC	<0.050	0.500	0.491	98	0.500	0.370	74	28	12-162	30	
2	Delta-BHC	<0.050	0.500	0.549	110	0.500	0.435	87	23	19-147	30	
2	Dieldrin	<0.100	0.500	0.539	108	0.500	0.440	88	20	35-140	30	
1	Endosulfan I	<0.050	0.500	0.516	103	0.500	0.404	81	24	20-135	30	
2	Endosulfan II	<0.100	0.500	0.556	111	0.500	0.494	99	12	34-122	30	
2	Endosulfan Sulfate	<0.100	0.500	0.575	115	0.500	0.529	106	8	41-145	30	
2	Endrin	<0.100	0.500	0.568	114	0.500	0.479	96	17	36-158	30	
2	Endrin Aldehyde	<0.100	0.500	0.578	116	0.500	0.486	97	17	28-135	30	
2	Endrin Ketone	<0.100	0.500	0.526	105	0.500	0.496	99	6	42-134	30	
2	Gamma-BHC (Lindane)	<0.050	0.500	0.487	97	0.500	0.328	66	39	23-143	30	F
2	Gamma-Chlordane	<0.050	0.500	0.520	104	0.500	0.410	82	24	25-112	30	
2	Heptachlor Epoxide	<0.050	0.500	0.529	106	0.500	0.402	80	27	32-134	30	
2	Methoxychlor	<0.500	1.50	1.910	127	1.50	1.880	125	2	36-169	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E
Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP West Side CSO Rain Event

Work Order # : 365406

Project ID:

Lab Batch ID: 798842 **QC- Sample ID:** 365406-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/18/2010 **Date Prepared:** 03/17/2010 **Analyst:** 4150

Reporting Units: mg/L

PP Metals by SW-846 6010B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Antimony	<0.006	1.00	0.922	92	1.00	0.924	92	0	75-125	20	
Arsenic	<0.010	1.00	0.917	92	1.00	0.915	92	0	75-125	20	
Beryllium	<0.003	1.00	0.960	96	1.00	0.961	96	0	75-125	20	
Cadmium	<0.005	1.00	0.917	92	1.00	0.918	92	0	75-125	20	
Chromium	0.002	1.00	0.950	95	1.00	0.941	94	1	75-125	20	
Copper	0.014	1.00	0.957	94	1.00	0.954	94	0	75-125	20	
Lead	0.009	1.00	0.912	90	1.00	0.915	91	0	75-125	20	
Nickel	0.002	1.00	0.912	91	1.00	0.915	91	0	75-125	20	
Selenium	<0.050	1.00	0.926	93	1.00	0.929	93	0	75-125	20	
Silver	<0.050	1.00	0.940	94	1.00	0.940	94	0	75-125	20	
Thallium	<0.002	1.00	0.903	90	1.00	0.908	91	1	75-125	20	
Zinc	0.051	1.00	0.980	93	1.00	0.982	93	0	75-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final Ver. 1.000

Sample Duplicate Recovery

Project Name: GA 129 PP West Side CSO Rain Event

Work Order #: 365406

Lab Batch #: 797906 **Project ID:**
Date Analyzed: 03/12/2010 **Date Prepared:** 03/12/2010 **Analyst:** MHR
QC- Sample ID: 365406-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

Chromium, Hexavalent by SW 7196A	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chromium, Hexavalent	<0.010	<0.010	NC	20	

Lab Batch #: 798346
Date Analyzed: 03/15/2010 **Date Prepared:** 03/15/2010 **Analyst:** 4154
QC- Sample ID: 364972-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

Cyanide by SW-846 9010/9014A	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Cyanide, Total	<0.010	<0.010	NC	20	

Lab Batch #: 798828
Date Analyzed: 03/18/2010 **Date Prepared:** 03/17/2010 **Analyst:** 4150
QC- Sample ID: 365199-012 D **Batch #:** 1 **Matrix:** Ground Water
Reporting Units: ug/L

Mercury by SW-846 7470A	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Mercury	1.046	<2.000	NC	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: GA 129 PP West Side CSO Rain Event

Work Order #: 365406

Lab Batch #: 798842
Date Analyzed: 03/18/2010
QC- Sample ID: 365406-001 D
Reporting Units: mg/L

Date Prepared: 03/17/2010
Batch #: 1

Project ID:
Analyst: 4150
Matrix: Water

PP Metals by SW-846 6010B Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Antimony	<0.006	<0.006	NC	20	
Arsenic	<0.010	0.003	NC	20	
Beryllium	<0.003	<0.003	NC	20	
Cadmium	<0.005	<0.005	NC	20	
Chromium	0.002	0.002	0	20	
Copper	0.014	0.014	0	20	
Lead	0.009	0.008	12	20	
Nickel	0.002	0.002	0	20	
Selenium	<0.050	<0.050	NC	20	
Silver	<0.050	<0.050	NC	20	
Thallium	<0.002	<0.002	NC	20	
Zinc	0.051	0.051	0	20	

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

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Blank Summary 365406

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP West Side CSO Rain Event

Sample Id: **553000-1-BLK** Matrix: **WATER**
Lab Sample Id: **553000-1-BLK**

Analytical Method: PP VOCs by SW-846 8260B Prep Method: SW5030B

Date Analyzed: Mar-15-10 08:45 Analyst: NTR Date Prep: Mar-15-10 06:02 Tech:. 4124
Seq Number: 798103

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
1,1,1-Trichloroethane	71-55-6	U	1.0	0.16	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0	0.18	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	U	1.0	0.25	ug/L	U	1
1,1-Dichloroethane	75-34-3	U	1.0	0.11	ug/L	U	1
1,1-Dichloroethene	75-35-4	U	1.0	0.20	ug/L	U	1
1,2-Dichloroethane	107-06-2	U	1.0	0.18	ug/L	U	1
1,2-Dichloropropane	78-87-5	U	1.0	0.15	ug/L	U	1
2-Chloroethyl vinyl ether	110-75-8	U	1.0	0.29	ug/L	U	1
Acrolein	107-02-8	U	20	3.5	ug/L	U	1
Acrylonitrile	107-13-1	U	2.0	0.49	ug/L	U	1
Benzene	71-43-2	U	1.0	0.16	ug/L	U	1
Bromodichloromethane	75-27-4	U	1.0	0.25	ug/L	U	1
Bromoform	75-25-2	U	1.0	0.17	ug/L	U	1
Bromomethane	74-83-9	U	1.0	0.25	ug/L	U	1
Carbon tetrachloride	56-23-5	U	1.0	0.33	ug/L	U	1
Chlorobenzene	108-90-7	U	1.0	0.15	ug/L	U	1
Chloroethane	75-00-3	U	1.0	0.26	ug/L	U	1
Chloroform	67-66-3	U	1.0	0.16	ug/L	U	1
Chloromethane	74-87-3	U	1.0	0.25	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	U	1.0	0.10	ug/L	U	1
Dibromochloromethane	124-48-1	U	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	U	1.0	0.19	ug/L	U	1
Methylene chloride	75-09-2	U	1.0	0.42	ug/L	U	1
Tetrachloroethene	127-18-4	U	1.0	0.16	ug/L	U	1
Toluene	108-88-3	U	1.0	0.14	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	U	1.0	0.21	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	U	1.0	0.11	ug/L	U	1
Trichloroethene	79-01-6	U	1.0	0.19	ug/L	U	1
Vinyl chloride	75-01-4	U	1.0	0.19	ug/L	U	1

Project: City of Atlanta PP Projects

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Seq Number: 798808

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
2,4,5-T□ □Sil□e□□	93-72-1	U	0.50	0.15	ug/L	U	1
2,4-D	94-75-7	U	0.50	0.24	ug/L	U	1

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Date □naly□ed: □ ar-17-10 12:03 □nalyst: V□□ Date □rep: □ ar-15-10 15:00 Tech: 4118
Seq Number: 798808

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
2,4,5-T□ □Sil□e□□	93-72-1	U	0.50	0.15	ug/L	U	1
2,4-D	94-75-7	U	0.50	0.24	ug/L	U	1

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Date □naly□ed: □ ar-16-10 19:15 □nalyst: V□□ Date □rep: □ ar-15-10 07:45 Tech: 4118

Seq Number: 798454

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
4,4-DDD	72-54-8	U	0.100	0.004	ug/L	U	1
4,4-DD□	72-55-9	U	0.100	0.004	ug/L	U	1
4,4-DDT	50-29-3	U	0.100	0.005	ug/L	U	1
□ldrin	309-00-2	U	0.050	0.003	ug/L	U	1
□lpha-□□□	319-84-6	U	0.050	0.010	ug/L	U	1
□lpha-□hlordane	5103-71-9	U	0.050	0.002	ug/L	U	1
□eta-□□□	319-85-7	U	0.050	0.002	ug/L	U	1
□hlordane	57-74-9	U	0.500	0.096	ug/L	U	1
Delta-□□□	319-86-8	U	0.050	0.002	ug/L	U	1
Dieldrin	60-57-1	U	0.100	0.004	ug/L	U	1
□ndosul□an □	959-98-8	U	0.050	0.002	ug/L	U	1
□ndosul□an □□	33213-65-9	U	0.100	0.005	ug/L	U	1
□ndosul□an Sul□ate	1031-07-8	U	0.100	0.007	ug/L	U	1
□ndrin	72-20-8	U	0.100	0.005	ug/L	U	1
□ndrin □ldehyde	7421-93-4	U	0.100	0.009	ug/L	U	1
□ndrin □etone	53494-70-5	U	0.100	0.005	ug/L	U	1
□amma-□□□ Lindane□	58-89-9	U	0.050	0.002	ug/L	U	1
□amma-□hlordane	5103-74-2	U	0.050	0.002	ug/L	U	1
□eptachlor	76-44-8	U	0.050	0.003	ug/L	U	1
□eptachlor □po□ide	1024-57-3	U	0.050	0.003	ug/L	U	1
□ etho□ychlor	72-43-5	U	0.500	0.029	ug/L	U	1
To□aphene	8001-35-2	U	2.00	0.423	ug/L	U	1

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Seq Number: 798749

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
□□□-1016	12674-11-2	U	0.50	0.091	ug/L	U	1
□□□-1221	11104-28-2	U	0.50	0.10	ug/L	U	1
□□□-1232	11141-16-5	U	0.50	0.075	ug/L	U	1
□□□-1242	53469-21-9	U	0.50	0.055	ug/L	U	1
□□□-1248	12672-29-6	U	0.50	0.10	ug/L	U	1
□□□-1254	11097-69-1	U	0.50	0.084	ug/L	U	1
□□□-1260	11096-82-5	U	0.50	0.083	ug/L	U	1

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Seq Number: 798346

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
□yanide, Total	57-12-5	U	0.010	0.0021	mg/L	U	1

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Seq Number: 798828

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
□ ercury	7439-97-6	U	0.0020	0.0001	mg/L	U	1

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Date □naly□ed: □ ar-18-10 12:18 □nalyst: 4150 Date □rep: □ ar-17-10 11:34 Tech: □□□
Seq Number: 798842

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
□ntimony	7440-36-0	U	0.006	0.002	mg/L	U	1
□rsenic	7440-38-2	U	0.010	0.003	mg/L	U	1
□eryllium	7440-41-7	U	0.003	0.001	mg/L	U	1
□admium	7440-43-9	U	0.005	0.001	mg/L	U	1
□hromium	7440-47-3	U	0.050	0.001	mg/L	U	1
□opper	7440-50-8	U	0.050	0.001	mg/L	U	1
Lead	7439-92-1	U	0.010	0.001	mg/L	U	1
Nic□el	7440-02-0	U	0.010	0.001	mg/L	U	1
Selenium	7782-49-2	U	0.050	0.003	mg/L	U	1
Sil□er	7440-22-4	U	0.050	0.001	mg/L	U	1
Thallium	7440-28-0	U	0.002	0.002	mg/L	U	1
□inc	7440-66-6	U	0.100	0.001	mg/L	U	1

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Seq Number: 799175

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
1,2,4-Trichloroben□ene	120-82-1	U	10.0	1.43	ug/L	U	1
1,2-Dichloroben□ene	95-50-1	U	10.0	1.83	ug/L	U	1
1,3-Dichloroben□ene	541-73-1	U	10.0	2.11	ug/L	U	1
1,4-Dichloroben□ene	106-46-7	U	10.0	1.61	ug/L	U	1
2,4,6-Trichlorophenol	88-06-2	U	10.0	1.64	ug/L	U	1
2,4-Dichlorophenol	120-83-2	U	10.0	1.78	ug/L	U	1
2,4-Dimethylphenol	105-67-9	U	10.0	1.63	ug/L	U	1
2,4-Dinitrophenol	51-28-5	U	20.0	7.11	ug/L	U	1
2,4-Dinitrotoluene	121-14-2	U	10.0	2.14	ug/L	U	1
2,6-Dinitrotoluene	606-20-2	U	10.0	2.72	ug/L	U	1
2-□hloronaphthalene	91-58-7	U	10.0	1.29	ug/L	U	1
2-□hlorophenol	95-57-8	U	10.0	1.83	ug/L	U	1
2-Nitrophenol	88-75-5	U	10.0	1.95	ug/L	U	1
3,3-Dichloroben□idine	91-94-1	U	20.0	3.88	ug/L	U	1
4,6-dinitro-2-methyl phenol	534-52-1	U	20.0	1.40	ug/L	U	1
4-□romophenyl-phenylether	101-55-3	U	10.0	2.12	ug/L	U	1
4-chloro-3-methylphenol	59-50-7	U	10.0	2.18	ug/L	U	1
4-□hlorophenyl □henyl □ther	7005-72-3	U	10.0	1.35	ug/L	U	1
4-Nitrophenol	100-02-7	U	20.0	2.41	ug/L	U	1
□cenaphthene	83-32-9	U	10.0	1.43	ug/L	U	1
□cenaphthylene	208-96-8	U	10.0	1.48	ug/L	U	1
□nthracene	120-12-7	U	10.0	2.01	ug/L	U	1
1,2-Diphenylhydra□ine □as a□oben□ene□	103-33-3	U	10.0	1.91	ug/L	U	1
□en□idine	92-87-5	U	50.0	20.9	ug/L	U	1
□en□o□a□anthracene	56-55-3	U	10.0	1.90	ug/L	U	1
□en□o□a□pyrene	50-32-8	U	10.0	1.80	ug/L	U	1
□en□o□b□luoranthene	205-99-2	U	10.0	1.97	ug/L	U	1
□en□o□g,h,i□perylene	191-24-2	U	10.0	1.97	ug/L	U	1
□en□o□□□luoranthene	207-08-9	U	10.0	2.71	ug/L	U	1
bis□2-chloroetho□y□methane	111-91-1	U	10.0	1.25	ug/L	U	1
bis□2-chloroethyl□ether	111-44-4	U	10.0	1.78	ug/L	U	1
bis□2-chloroisopropyl□ether	108-60-1	U	10.0	1.24	ug/L	U	1
bis□2-ethylhe□yl□phthalate	117-81-7	U	10.0	1.20	ug/L	U	1
□en□yl □utyl □hthalate	85-68-7	U	10.0	1.82	ug/L	U	1
□hrysene	218-01-9	U	10.0	2.09	ug/L	U	1
Diben□a,h□anthracene	53-70-3	U	10.0	1.83	ug/L	U	1
Diethyl □hthalate	84-66-2	U	10.0	1.90	ug/L	U	1
Dimethyl □hthalate	131-11-3	U	10.0	1.97	ug/L	U	1
di-n-□utyl □hthalate	84-74-2	U	10.0	2.08	ug/L	U	1
di-n-□ctyl □hthalate	117-84-0	U	10.0	1.38	ug/L	U	1
□luoranthene	206-44-0	U	10.0	1.81	ug/L	U	1
□luorene	86-73-7	U	10.0	1.56	ug/L	U	1

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□ual□ti□al Met□□□□ PP □□□Cs b□□□ □□□□□□□□D □rep □ ethod: S□ 3520□

Date □naly□ed: □ ar-19-10 06:04 □nalyst: □□ Date □rep: □ ar-15-10 16:00 Tech: 5458
Seq Number: 799175

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
□e□achloroben□ene	118-74-1	U	10.0	2.21	ug/L	U	1
□e□achlorobutadiene	87-68-3	U	10.0	1.78	ug/L	U	1
□e□achlorocyclopentadiene	77-47-4	U	10.0	1.87	ug/L	U	1
□e□achloroethane	67-72-1	U	10.0	2.38	ug/L	U	1
□ndeno□1,2,3-c,d□yrene	193-39-5	U	10.0	1.87	ug/L	U	1
□sophorone	78-59-1	U	10.0	1.41	ug/L	U	1
Naphthalene	91-20-3	U	10.0	1.52	ug/L	U	1
Nitroben□ene	98-95-3	U	10.0	1.49	ug/L	U	1
N-Nitrosodimethylamine	62-75-9	U	10.0	6.24	ug/L	U	1
N-Nitrosodi-n-□ropylamine	621-64-7	U	10.0	1.36	ug/L	U	1
N-Nitrosodiphenylamine	86-30-6	U	10.0	2.50	ug/L	U	1
□entachlorophenol	87-86-5	U	20.0	2.26	ug/L	U	1
□henanthrene	85-01-8	U	10.0	2.04	ug/L	U	1
□henol	108-95-2	U	10.0	1.76	ug/L	U	1
□yrene	129-00-0	U	10.0	2.40	ug/L	U	1

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Version: 1.024

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Lab Sample □d: □□□□□□□□□L□	

□nal□ti□al Met□□□□ C□r□mium□□e□a□alent b□□□ □□□□

□rep □ ethod:

Date □naly□ed: □ ar-12-10 15:30 □nalyst: □ □□ Date □rep: Tech: □□□

Seq Number: 797906

Parameter	Cas Number	Result	PQL	MDL	Units	Flag	Dil
□hromium, □e□a□alent	18540-29-9	U	0.010	0.005	mg/L	U	1

□ro□ect: □ity o□□tlanta □□ □ro□ects

Version: 1.024

XENCO Laboratories

Environmental Analytical Services

CHAIN OF CUSTODY

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

Company Name: City of Atlanta

Billing address:

Address: 2640 Bolton Rd

Client P.O. #

Report Sent to: (Client Contact): Steve Geary

Contact Phone # 404-456-5192 Fax # sgeary@atlantga.gov

Project Name: GA 129 PP ~~Entrenchment Creek~~ West Side CSO rain event

Project Number: PO Number:

For Laboratory Use Only	XENCO LIMS SYS. ID:
Custody Seal(s): ___ Y N TAPE	Page 1 OF 1
QC Level: 1 2 3 4 CLP	Init/Temp: 2°C
Sample Condition:	AAL Work Order # B65406

Samplers: (signature)

Samplers: (printed) J Dean Hayes

Line No.	Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	GA PP VOC	GA PP SVOC	GA PP Herb.	GA PP Pest/PCB	GA PP Metals	Hex Cr.	Cyanide	Phenols		Remarks	XENCO SampleID:
1		3-12-10 0930		✓	W	✓	EFF	2	✓										
2		3-12-10 0932		✓	W		EFF	3		✓	✓								
3		3-12-10 0935		✓	W		EFF	2				✓							
4		3-12-10 0937		✓	W	✓	EFF	1					✓						
5		3-12-10 0940		✓	W	✓	EFF	2								✓			
6		3-12-10 0942		✓	W	✓	EFF	1							✓				
7		3-12-10 0944		✓	W		EFF	1						✓					
8																			
9																			
10																			

DT 3/12/10 12:55

1) Relinquished By:	Date / Time	2) Received By:	Date / Time	Delivered by: (Circle One)
	3-12-10 1:25		3/12/10 12:55	FedEX UPS Hand Other
3) Relinquished By:	Date / Time	4) Received By:	Date / Time	Turnaround Time Requested:

Matrix Guide: (W=Water) (DW=Drinking Water) (GW=Groundwater) (SW=Surface Water) (L=Liquid) (O=Oil) (S=Soil) (SD=Solid) (SL=Sludge) (A=Air Sample) (C=Cartridge)

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: City of Atlanta

Date/ Time Received: 03-12-10 12:55

WO ID #: 365406

Initials of Sample Receipt Person: Gm

Checklist completed by, date/time: DL 03-12-10 13:20

Acceptable Temperature Range: 2-6° C

Acceptable pH Range(s):

<2 for samples preserved with HNO3, HCL, H2SO4

>10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH

Sample Receipt Checklist

#1	*Temperature of cooler(s)?	# of Coolers 1		2 °C	
#2	*Shipping container in good condition?	YES	No	None	
#3	*Samples received on ice?	YES	No	N/A	Blue/Water
#4	*Custody Seals intact on shipping container/ cooler?	Yes	No	N/A	
#5	Custody Seals intact on sample bottles/ container?	Yes	No	N/A	
#6	Custody Seals Signed and dated for Containers/coolers/bottles	Yes	No	N/A	
#7	*Chain of Custody present?	YES	No		
#8	Sample instructions complete on Chain of Custody?	YES	No		
#9	Any missing/extra samples?	Yes	NO		
#10	Chain of Custody signed when relinquished/ received?	YES	No		
#11	Chain of Custody agrees with sample label(s)?	YES	No		
#12	Container label(s) legible and intact?	YES	No		
#13	Sample matrix/ properties agree with Chain of Custody?	YES	No		
#14	Samples in proper container/ bottle?	YES	No		
#15	Samples properly preserved?	YES	No	N/A	See Notes below
#16	Sample container(s) intact?	YES	No		
#17	Sufficient sample amount for indicated test(s)?	YES	No		
#18	All samples received within hold time?	YES	No		
#19	Subcontract of sample(s)?	Yes	NO		
#20	VOC samples have zero headspace (less than 1/4 inch bubble)?	YES	No	N/A	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Notes on pH check: One container NaAsO2+NaOH preserved checked. pH >10
Two containers H2SO4 preserved checked pH <2
One container HNO3 preserved checked pH <2

Nonconformance Documentation

Contact: Contacted by: Date/ Time:

Regarding:

Corrective Action Taken:

Part E. Not Applicable.

Part G. Not Applicable. There are no known uncontrolled combined sewage outfalls within the West Area. The only four active outfalls are those described for the Clear Creek, North Avenue and Tanyard Creek CSO Control facilities and the West Area WQCF in Section B.

FIGURE F
CUSTER AVENUE PROCESS SCHEMATIC

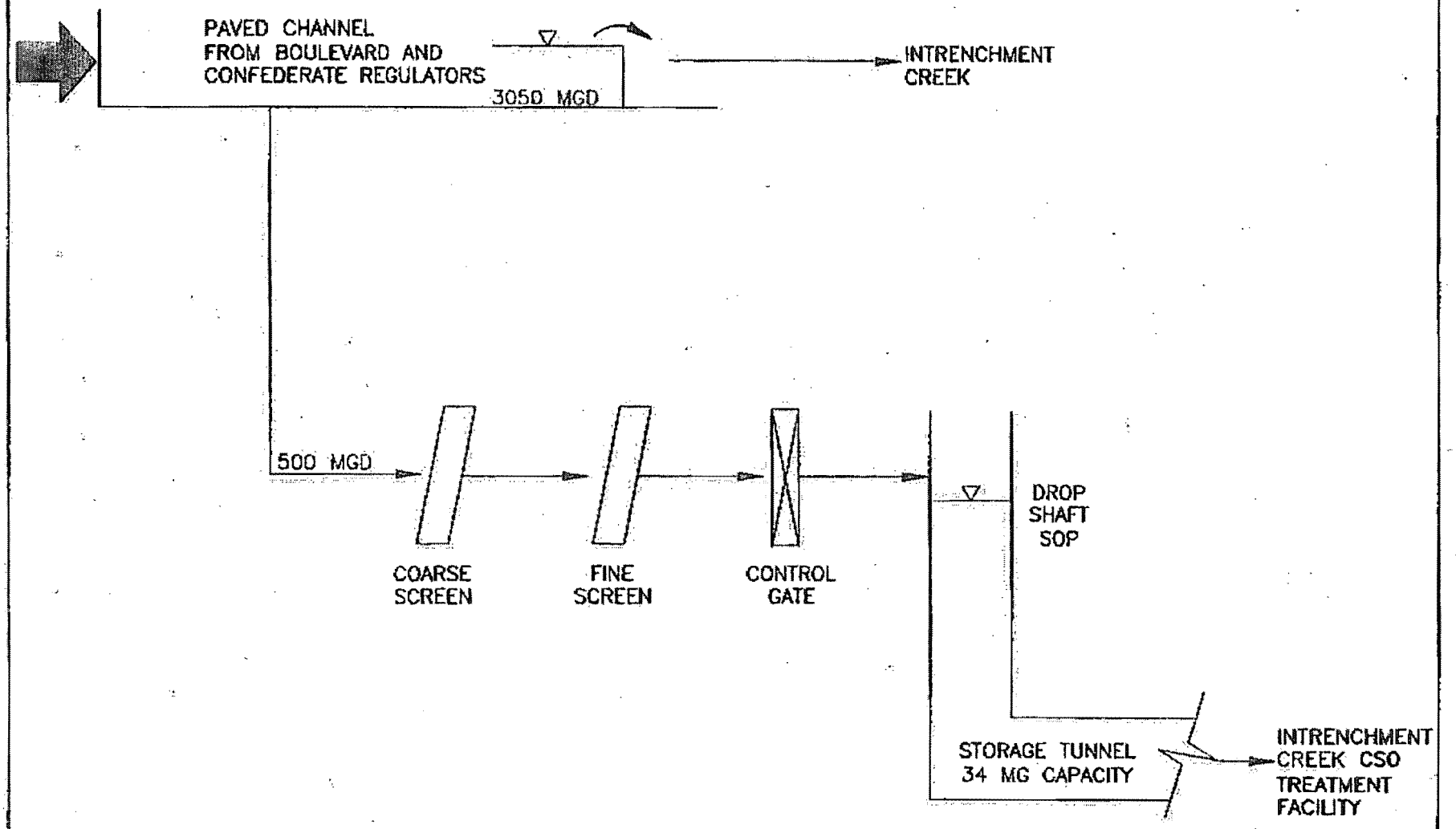
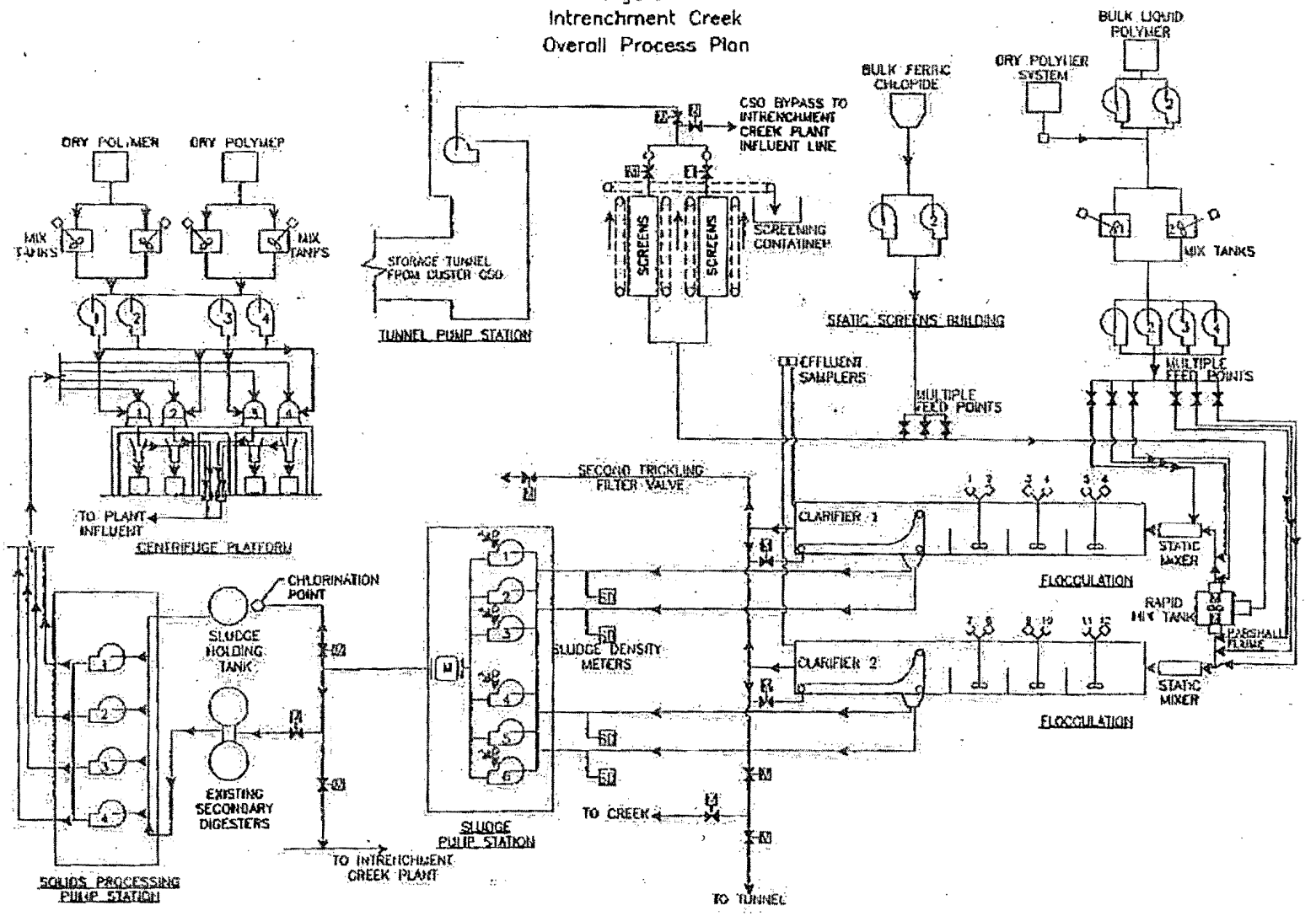


Figure F
Intrenchment Creek
Overall Process Plan



NPDES Permit Renewal Application Question B.6
East Area CSO Facilities Effluent Testing Results
July 1, 2011 to June 30, 2012
City of Atlanta, Georgia

Custer Avenue CSO Control Facility - Outfall 001

Year	Month	# Samples	Ammonia as Nitrogen (mg/L)	Total Residual Chlorine (mg/L)	Dissolved Oxygen (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Nitrate + Nitrite Nitrogen (mg/L)	Oil & Grease (mg/L)	Total Phosphorous (mg/L)	Total Dissolved Solids (mg/L)
2011	July	1	0.27	0	NA	NA	NA	NA	0.544	NA
	August	0	--	--	NA	NA	NA	NA	--	NA
	September	0	--	--	NA	NA	NA	NA	--	NA
	October	0	--	--	NA	NA	NA	NA	--	NA
	November	0	--	--	NA	NA	NA	NA	--	NA
	December	1	0.79	0	NA	NA	NA	NA	0.675	NA
2012	January	1	0.12	0	NA	NA	NA	NA	0.365	NA
	February	0	--	--	NA	NA	NA	NA	--	NA
	March	1	0.22	0.1	NA	NA	NA	NA	0.404	NA
	April	0	--	--	NA	NA	NA	NA	--	NA
	May	0	--	--	NA	NA	NA	NA	--	NA
	June	0	--	--	NA	NA	NA	NA	--	NA
		4	**0.79**	**0.10**					**0.675**	
		Total	**Max**	**Max**					**Max**	
			0.350	**0.025**					**0.497**	
			Average	Average					Average	

-- = No sampling event occurred

NA = Not applicable, this parameter is not monitored per the NPDES permit

Intrenchment Creek WQCF - Outfall 001

Year	Month	# Samples	Ammonia as Nitrogen (mg/L)	Total Residual Chlorine (mg/L)	Dissolved Oxygen (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Nitrate + Nitrite Nitrogen (mg/L)	Oil & Grease (mg/L)	Total Phosphorous (mg/L)	Total Dissolved Solids (mg/L)
2011	July	2	0.15	0	NA	NA	NA	NA	0.48	NA
			0.13	0	NA	NA	NA	NA	0.398	NA
	August	1	0.79	0	NA	NA	NA	NA	0.557	NA
	September	1	0.17	0	NA	NA	NA	NA	0.285	NA
	October	1	0.64	0	NA	NA	NA	NA	0.374	NA
	November	1	0.62	0	NA	NA	NA	NA	0.341	NA
	December	2	0.93	0	NA	NA	NA	NA	0.431	NA
			0.4	0.01	NA	NA	NA	NA	0.389	NA
2012	January	1	0.5	0	NA	NA	NA	NA	0.323	NA
	February	0	--	--	NA	NA	NA	NA		NA
	March	2	1.17	0.02	NA	NA	NA	NA	0.236	NA
			0.67	0.06	NA	NA	NA	NA	0.442	NA
	April	1	0.675	0	NA	NA	NA	NA	0.336	NA
	May	2	0.92	0.03	NA	NA	NA	NA	0.57	NA
			0.8	0	NA	NA	NA	NA	0.421	NA
	June	2	0.46	0	NA	NA	NA	NA	0.696	NA
			0.35	0	NA	NA	NA	NA	0.413	NA
		16	**1.17**	**0.06**					**0.70**	
		Total	**Max**	**Max**					**Max**	
			0.59	**0.01**					**0.418**	
			Average	Average					Average	

-- = No sampling event occurred

NA = Not applicable, this parameter is not monitored per the NPDES permit

Analytical Report 362359

for

City of Atlanta / Dept. of Watershed Mgmt

Project Manager: Steve Geary

GA 129 PP East Side CSO Rain Event

23-MAR-10

6017 Financial Dr., Norcross, GA 30071
Ph:(770) 449-8800 Fax:(770) 449-5477

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)

23-MAR-10

Project Manager: **Steve Geary**
City of Atlanta / Dept. of Watershed Mgmt
1510 Key Road
Atlanta, GA 30316

Reference: XENCO Report No: **362359**
GA 129 PP East Side CSO Rain Event
Project Address: Georgia

Steve Geary:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 362359. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 362359 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Dijana Piljak

Dijana Piljak
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Sample Cross Reference 362359

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East Side CSO Rain Event	W	Feb-15-10 14:18		362359-001

XENCO Laboratories
Florida Testing Services, LLC

Certificate of Analytical Results 362359

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id: **East Side CSO Rain Event** Matrix: **Water** % Moisture:
Lab Sample Id: **362359-001** Date Collected: **Feb-15-10 14:18**
Date Received: **Feb-15-10 14:42**

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: 4099 Date Prep: Tech: RPO
Seq Number: 794072

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
Chromium, Hexavalent	18540-29-9	U	0.010	0.005	mg/L	02/16/10 10:00	U	1

Analytical Method: Cyanide by SW-846 9010/9014A Prep Method: SW9010C
Analyst: 4154 Date Prep: Feb-18-10 14:00 Tech: 4154
Seq Number: 794447

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
Cyanide, Total	57-12-5	U	0.010	0.0021	mg/L	02/18/10 16:15	U	1

Analytical Method: GA PP Herbicides by SW-846 8151A Prep Method: SW8151A_EXT
Analyst: VCH Date Prep: Feb-15-10 09:00 Tech: 4118
Seq Number: 794537

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
2,4,5-TP (Silvex)	93-72-1	U	0.50	0.15	ug/L	02/19/10 01:55	U	1
2,4-D	94-75-7	U	0.50	0.24	ug/L	02/19/10 01:55	U	1

Analytical Method: Mercury by SW-846 7470A Prep Method: SW7470P
Analyst: 4150 Date Prep: Feb-17-10 09:25 Tech: ABA
Seq Number: 794413

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	U	0.0020	0.0001	mg/L	02/18/10 13:04	U	1

Analytical Method: PCBs by SW846 8082 Prep Method: SW3510C
Analyst: VCH Date Prep: Feb-15-10 10:30 Tech: 4118
Seq Number: 794535

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
PCB-1016	12674-11-2	U	0.50	0.091	ug/L	02/18/10 20:44	U	1
PCB-1221	11104-28-2	U	0.50	0.10	ug/L	02/18/10 20:44	U	1
PCB-1232	11141-16-5	U	0.50	0.075	ug/L	02/18/10 20:44	U	1
PCB-1242	53469-21-9	U	0.50	0.055	ug/L	02/18/10 20:44	U	1
PCB-1248	12672-29-6	U	0.50	0.10	ug/L	02/18/10 20:44	U	1
PCB-1254	11097-69-1	U	0.50	0.084	ug/L	02/18/10 20:44	U	1
PCB-1260	11096-82-5	U	0.50	0.083	ug/L	02/18/10 20:44	U	1

Project: City of Atlanta PP Projects

Version: 1.017

Final Ver. 1.000

XENCO Laboratories
Florida Testing Services, LLC

Certificate of Analytical Results 362359

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id: **East Side CSO Rain Event** Matrix: **Water** % Moisture:
Lab Sample Id: **362359-001** Date Collected: **Feb-15-10 14:18**
Date Received: **Feb-15-10 14:42**

Analytical Method: PP Metals by SW-846 6010B Prep Method: SW3010A_LL
Analyst: 4150 Date Prep: Feb-18-10 09:15 Tech: ABA
Seq Number: 794779

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
Antimony	7440-36-0	0.004	0.006	0.002	mg/L	02/19/10 13:58	J	1
Arsenic	7440-38-2	U	0.010	0.003	mg/L	02/19/10 13:58	U	1
Beryllium	7440-41-7	U	0.003	0.001	mg/L	02/19/10 13:58	U	1
Cadmium	7440-43-9	U	0.005	0.001	mg/L	02/19/10 13:58	U	1
Chromium	7440-47-3	0.001	0.050	0.001	mg/L	02/19/10 13:58	J	1
Copper	7440-50-8	0.006	0.050	0.001	mg/L	02/19/10 13:58	J	1
Lead	7439-92-1	0.002	0.010	0.001	mg/L	02/19/10 13:58	J	1
Nickel	7440-02-0	0.002	0.010	0.001	mg/L	02/19/10 13:58	J	1
Selenium	7782-49-2	0.005	0.050	0.003	mg/L	02/19/10 13:58	J	1
Silver	7440-22-4	U	0.050	0.001	mg/L	02/19/10 13:58	U	1
Thallium	7440-28-0	U	0.002	0.002	mg/L	02/19/10 13:58	U	1
Zinc	7440-66-6	0.022	0.100	0.001	mg/L	02/19/10 13:58	J	1

Project: City of Atlanta PP Projects

Version: 1.017

Final Ver. 1.000

XENCO Laboratories
Florida Testing Services, LLC

Certificate of Analytical Results 362359

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id: **East Side CSO Rain Event** Matrix: **Water** % Moisture:
Lab Sample Id: **362359-001** Date Collected: **Feb-15-10 14:18**
Date Received: **Feb-15-10 14:42**

Analytical Method: PP SVOCs by SW-846 8270D Prep Method: SW3520C

Analyst: BJM Date Prep: Feb-16-10 16:00 Tech: 5458
Seq Number: 798426

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
1,2,4-Trichlorobenzene	120-82-1	U	10.0	1.43	ug/L	03/11/10 02:40	U	1
1,2-Dichlorobenzene	95-50-1	U	10.0	1.83	ug/L	03/11/10 02:40	U	1
1,3-Dichlorobenzene	541-73-1	U	10.0	2.11	ug/L	03/11/10 02:40	U	1
1,4-Dichlorobenzene	106-46-7	U	10.0	1.61	ug/L	03/11/10 02:40	U	1
2,4,6-Trichlorophenol	88-06-2	U	10.0	1.64	ug/L	03/11/10 02:40	U	1
2,4-Dichlorophenol	120-83-2	U	10.0	1.78	ug/L	03/11/10 02:40	U	1
2,4-Dimethylphenol	105-67-9	U	10.0	1.63	ug/L	03/11/10 02:40	U	1
2,4-Dinitrophenol	51-28-5	U	20.0	7.11	ug/L	03/11/10 02:40	U	1
2,4-Dinitrotoluene	121-14-2	U	10.0	2.14	ug/L	03/11/10 02:40	U	1
2,6-Dinitrotoluene	606-20-2	U	10.0	2.72	ug/L	03/11/10 02:40	U	1
2-Chloronaphthalene	91-58-7	U	10.0	1.29	ug/L	03/11/10 02:40	U	1
2-Chlorophenol	95-57-8	U	10.0	1.83	ug/L	03/11/10 02:40	U	1
2-Nitrophenol	88-75-5	U	10.0	1.95	ug/L	03/11/10 02:40	U	1
3,3-Dichlorobenzidine	91-94-1	U	20.0	3.88	ug/L	03/11/10 02:40	U	1
4,6-dinitro-2-methyl phenol	534-52-1	U	20.0	1.40	ug/L	03/11/10 02:40	U	1
4-Bromophenyl-phenylether	101-55-3	U	10.0	2.12	ug/L	03/11/10 02:40	U	1
4-chloro-3-methylphenol	59-50-7	U	10.0	2.18	ug/L	03/11/10 02:40	U	1
4-Chlorophenyl Phenyl Ether	7005-72-3	U	10.0	1.35	ug/L	03/11/10 02:40	U	1
4-Nitrophenol	100-02-7	U	20.0	2.41	ug/L	03/11/10 02:40	U	1
Acenaphthene	83-32-9	U	10.0	1.43	ug/L	03/11/10 02:40	U	1
Acenaphthylene	208-96-8	U	10.0	1.48	ug/L	03/11/10 02:40	U	1
Anthracene	120-12-7	U	10.0	2.01	ug/L	03/11/10 02:40	U	1
1,2-Diphenylhydrazine (as azobenzene)	103-33-3	U	10.0	1.91	ug/L	03/11/10 02:40	U	1
Benzidine	92-87-5	U	50.0	20.9	ug/L	03/11/10 02:40	U	1
Benzo(a)anthracene	56-55-3	U	10.0	1.90	ug/L	03/11/10 02:40	U	1
Benzo(a)pyrene	50-32-8	U	10.0	1.80	ug/L	03/11/10 02:40	U	1
Benzo(b)fluoranthene	205-99-2	U	10.0	1.97	ug/L	03/11/10 02:40	U	1
Benzo(g,h,i)perylene	191-24-2	U	10.0	1.97	ug/L	03/11/10 02:40	U	1
Benzo(k)fluoranthene	207-08-9	U	10.0	2.71	ug/L	03/11/10 02:40	U	1
bis(2-chloroethoxy) methane	111-91-1	U	10.0	1.25	ug/L	03/11/10 02:40	U	1
bis(2-chloroethyl) ether	111-44-4	U	10.0	1.78	ug/L	03/11/10 02:40	U	1
bis(2-chloroisopropyl) ether	108-60-1	U	10.0	1.24	ug/L	03/11/10 02:40	U	1
bis(2-ethylhexyl) phthalate	117-81-7	1.71	10.0	1.20	ug/L	03/11/10 02:40	J	1
Benzyl Butyl Phthalate	85-68-7	U	10.0	1.82	ug/L	03/11/10 02:40	U	1
Chrysene	218-01-9	U	10.0	2.09	ug/L	03/11/10 02:40	U	1
Dibenz(a,h)anthracene	53-70-3	U	10.0	1.83	ug/L	03/11/10 02:40	U	1
Diethyl Phthalate	84-66-2	U	10.0	1.90	ug/L	03/11/10 02:40	U	1
Dimethyl Phthalate	131-11-3	U	10.0	1.97	ug/L	03/11/10 02:40	U	1
di-n-Butyl Phthalate	84-74-2	U	10.0	2.08	ug/L	03/11/10 02:40	U	1

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Certificate of Analytical Results 362359

XENCO Laboratories
Florida Testing Services, LLC

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id: **East Side CSO Rain Event** Matrix: **Water** % Moisture:
Lab Sample Id: **362359-001** Date Collected: **Feb-15-10 14:18**
Date Received: **Feb-15-10 14:42**

Analytical Method: PP SVOCs by SW-846 8270D Prep Method: SW3520C

Analyst: BJM Date Prep: Feb-16-10 16:00 Tech: 5458
Seq Number: 798426

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
di-n-Octyl Phthalate	117-84-0	U	10.0	1.38	ug/L	03/11/10 02:40	U	1
Fluoranthene	206-44-0	U	10.0	1.81	ug/L	03/11/10 02:40	U	1
Fluorene	86-73-7	U	10.0	1.56	ug/L	03/11/10 02:40	U	1
Hexachlorobenzene	118-74-1	U	10.0	2.21	ug/L	03/11/10 02:40	U	1
Hexachlorobutadiene	87-68-3	U	10.0	1.78	ug/L	03/11/10 02:40	U	1
Hexachlorocyclopentadiene	77-47-4	U	10.0	1.87	ug/L	03/11/10 02:40	U	1
Hexachloroethane	67-72-1	U	10.0	2.38	ug/L	03/11/10 02:40	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	U	10.0	1.87	ug/L	03/11/10 02:40	U	1
Isophorone	78-59-1	U	10.0	1.41	ug/L	03/11/10 02:40	U	1
Naphthalene	91-20-3	U	10.0	1.52	ug/L	03/11/10 02:40	U	1
Nitrobenzene	98-95-3	U	10.0	1.49	ug/L	03/11/10 02:40	U	1
N-Nitrosodimethylamine	62-75-9	U	10.0	6.24	ug/L	03/11/10 02:40	U	1
N-Nitrosodi-n-Propylamine	621-64-7	U	10.0	1.36	ug/L	03/11/10 02:40	U	1
N-Nitrosodiphenylamine	86-30-6	U	10.0	2.50	ug/L	03/11/10 02:40	U	1
Pentachlorophenol	87-86-5	U	20.0	2.26	ug/L	03/11/10 02:40	U	1
Phenanthrene	85-01-8	U	10.0	2.04	ug/L	03/11/10 02:40	U	1
Phenol	108-95-2	U	10.0	1.76	ug/L	03/11/10 02:40	U	1
Pyrene	129-00-0	U	10.0	2.40	ug/L	03/11/10 02:40	U	1

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XENCO Laboratories
Florida Testing Services, LLC

Certificate of Analytical Results 362359

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id: **East Side CSO Rain Event** Matrix: **Water** % Moisture:
Lab Sample Id: **362359-001** Date Collected: **Feb-15-10 14:18**
Date Received: **Feb-15-10 14:42**

Analytical Method: PP VOCs by SW-846 8260B Prep Method: SW5030B

Analyst: 4148 Date Prep: Feb-18-10 07:26 Tech: 4148
Seq Number: 794462

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
1,1,1-Trichloroethane	71-55-6	U	1.0	0.16	ug/L	02/18/10 14:23	U	1
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0	0.18	ug/L	02/18/10 14:23	U	1
1,1,2-Trichloroethane	79-00-5	U	1.0	0.25	ug/L	02/18/10 14:23	U	1
1,1-Dichloroethane	75-34-3	U	1.0	0.11	ug/L	02/18/10 14:23	U	1
1,1-Dichloroethene	75-35-4	U	1.0	0.20	ug/L	02/18/10 14:23	U	1
1,2-Dichloroethane	107-06-2	U	1.0	0.18	ug/L	02/18/10 14:23	U	1
1,2-Dichloropropane	78-87-5	U	1.0	0.15	ug/L	02/18/10 14:23	U	1
2-Chloroethyl vinyl ether	110-75-8	U	1.0	0.29	ug/L	02/18/10 14:23	U	1
Acrolein	107-02-8	U	20	3.5	ug/L	02/18/10 14:23	U	1
Acrylonitrile	107-13-1	U	2.0	0.49	ug/L	02/18/10 14:23	U	1
Benzene	71-43-2	U	1.0	0.16	ug/L	02/18/10 14:23	U	1
Bromodichloromethane	75-27-4	1.5	1.0	0.25	ug/L	02/18/10 14:23		1
Bromoform	75-25-2	U	1.0	0.17	ug/L	02/18/10 14:23	U	1
Bromomethane	74-83-9	U	1.0	0.25	ug/L	02/18/10 14:23	U	1
Carbon tetrachloride	56-23-5	U	1.0	0.33	ug/L	02/18/10 14:23	U	1
Chlorobenzene	108-90-7	U	1.0	0.15	ug/L	02/18/10 14:23	U	1
Chloroethane	75-00-3	U	1.0	0.26	ug/L	02/18/10 14:23	U	1
Chloroform	67-66-3	11	1.0	0.16	ug/L	02/18/10 14:23		1
Chloromethane	74-87-3	U	1.0	0.25	ug/L	02/18/10 14:23	U	1
cis-1,3-Dichloropropene	10061-01-5	U	1.0	0.10	ug/L	02/18/10 14:23	U	1
Dibromochloromethane	124-48-1	U	1.0	0.15	ug/L	02/18/10 14:23	U	1
Ethylbenzene	100-41-4	U	1.0	0.19	ug/L	02/18/10 14:23	U	1
Methylene chloride	75-09-2	U	1.0	0.42	ug/L	02/18/10 14:23	U	1
Tetrachloroethene	127-18-4	U	1.0	0.16	ug/L	02/18/10 14:23	U	1
Toluene	108-88-3	U	1.0	0.14	ug/L	02/18/10 14:23	U	1
trans-1,2-Dichloroethene	156-60-5	U	1.0	0.21	ug/L	02/18/10 14:23	U	1
trans-1,3-Dichloropropene	10061-02-6	U	1.0	0.11	ug/L	02/18/10 14:23	U	1
Trichloroethene	79-01-6	U	1.0	0.19	ug/L	02/18/10 14:23	U	1
Vinyl chloride	75-01-4	U	1.0	0.19	ug/L	02/18/10 14:23	U	1

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XENCO Laboratories
Florida Testing Services, LLC

Certificate of Analytical Results 362359

City of Atlanta / Dept. of Watershed Mgmt, Atlanta, GA

GA 129 PP East Side CSO Rain Event

Sample Id: **East Side CSO Rain Event** Matrix: **Water** % Moisture:
Lab Sample Id: **362359-001** Date Collected: **Feb-15-10 14:18**
Date Received: **Feb-15-10 14:42**

Analytical Method: Pesticides by SW-846 8081A Prep Method: SW3510C

Analyst: VCH Date Prep: Feb-18-10 12:13 Tech: 4118
Seq Number: 795000

Parameter	Cas Number	Result	PQL	MDL	Units	Analysis Date	Flag	Dil
4,4-DDD	72-54-8	U	0.100	0.004	ug/L	02/18/10 23:01	U	1
4,4-DDE	72-55-9	U	0.100	0.004	ug/L	02/18/10 23:01	U	1
4,4-DDT	50-29-3	U	0.100	0.005	ug/L	02/18/10 23:01	U	1
Aldrin	309-00-2	U	0.050	0.003	ug/L	02/18/10 23:01	U	1
Alpha-BHC	319-84-6	U	0.050	0.010	ug/L	02/18/10 23:01	U	1
Alpha-Chlordane	5103-71-9	U	0.050	0.002	ug/L	02/18/10 23:01	U	1
Beta-BHC	319-85-7	U	0.050	0.002	ug/L	02/18/10 23:01	U	1
Chlordane	57-74-9	U	0.500	0.096	ug/L	02/18/10 23:01	U	1
Delta-BHC	319-86-8	U	0.050	0.002	ug/L	02/18/10 23:01	U	1
Dieldrin	60-57-1	U	0.100	0.004	ug/L	02/18/10 23:01	U	1
Endosulfan I	959-98-8	U	0.050	0.002	ug/L	02/18/10 23:01	U	1
Endosulfan II	33213-65-9	U	0.100	0.005	ug/L	02/18/10 23:01	U	1
Endosulfan Sulfate	1031-07-8	U	0.100	0.007	ug/L	02/18/10 23:01	U	1
Endrin	72-20-8	U	0.100	0.005	ug/L	02/18/10 23:01	U	1
Endrin Aldehyde	7421-93-4	U	0.100	0.009	ug/L	02/18/10 23:01	U	1
Endrin Ketone	53494-70-5	U	0.100	0.005	ug/L	02/18/10 23:01	U	1
Gamma-BHC (Lindane)	58-89-9	U	0.050	0.002	ug/L	02/18/10 23:01	U	1
Gamma-Chlordane	5103-74-2	U	0.050	0.002	ug/L	02/18/10 23:01	U	1
Heptachlor	76-44-8	U	0.050	0.003	ug/L	02/18/10 23:01	U	1
Heptachlor Epoxide	1024-57-3	U	0.050	0.003	ug/L	02/18/10 23:01	U	1
Methoxychlor	72-43-5	U	0.500	0.029	ug/L	02/18/10 23:01	U	1
Toxaphene	8001-35-2	U	2.00	0.423	ug/L	02/18/10 23:01	U	1

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359,

Project ID:

Lab Batch #: 794537 **Sample:** 550676-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 23:08

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.260	5.000	65	33-127	

Lab Batch #: 794537 **Sample:** 550676-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 23:08

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.476	5.000	70	33-127	

Lab Batch #: 794537 **Sample:** 550676-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 23:32

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.968	5.000	79	33-127	

Lab Batch #: 794537 **Sample:** 550676-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 23:32

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.866	5.000	77	33-127	

Lab Batch #: 794537 **Sample:** 362142-002 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/19/10 00:19

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.269	5.000	65	33-127	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories
Florida Testing Services, LLC

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359,

Project ID:

Lab Batch #: 794537 **Sample:** 362142-002 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/19/10 00:19

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.816	5.000	76	33-127	

Lab Batch #: 794537 **Sample:** 362142-002 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/19/10 00:43

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.612	5.000	72	33-127	

Lab Batch #: 794537 **Sample:** 362142-002 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/19/10 00:43

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	3.236	5.000	65	33-127	

Lab Batch #: 794537 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/19/10 01:55

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	32.11	5.000	642	33-127	**

Lab Batch #: 794537 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/19/10 01:55

SURROGATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4-Dichlorophenylacetic Acid	32.32	5.000	646	33-127	**

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359, **Project ID:**

Lab Batch #: 794535 **Sample:** 550665-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 17:57

PCBs by SW846 8082 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.499	0.500	100	12-155	
Tetrachloro-m-xylene	0.460	0.500	92	22-146	

Lab Batch #: 794535 **Sample:** 550665-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 17:57

PCBs by SW846 8082 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.483	0.500	97	12-155	
Tetrachloro-m-xylene	0.442	0.500	88	22-146	

Lab Batch #: 794535 **Sample:** 550665-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 18:21

PCBs by SW846 8082 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.478	0.500	96	12-155	
Tetrachloro-m-xylene	0.441	0.500	88	22-146	

Lab Batch #: 794535 **Sample:** 550665-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 18:21

PCBs by SW846 8082 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.457	0.500	91	12-155	
Tetrachloro-m-xylene	0.414	0.500	83	22-146	

Lab Batch #: 794535 **Sample:** 362142-007 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 19:32

PCBs by SW846 8082 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.418	0.500	84	12-155	
Tetrachloro-m-xylene	0.350	0.500	70	22-146	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359, **Project ID:**

Lab Batch #: 794535 **Sample:** 362142-007 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 19:32

SURROGATE RECOVERY STUDY					
PCBs by SW846 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.395	0.500	79	12-155	
Tetrachloro-m-xylene	0.426	0.500	85	22-146	

Lab Batch #: 794535 **Sample:** 362142-007 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 19:56

SURROGATE RECOVERY STUDY					
PCBs by SW846 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.463	0.500	93	12-155	
Tetrachloro-m-xylene	0.446	0.500	89	22-146	

Lab Batch #: 794535 **Sample:** 362142-007 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 19:56

SURROGATE RECOVERY STUDY					
PCBs by SW846 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.441	0.500	88	12-155	
Tetrachloro-m-xylene	0.550	0.500	110	22-146	

Lab Batch #: 794535 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 20:44

SURROGATE RECOVERY STUDY					
PCBs by SW846 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.003	0.500	1	12-155	**
Tetrachloro-m-xylene	0.119	0.500	24	22-146	

Lab Batch #: 794535 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 20:44

SURROGATE RECOVERY STUDY					
PCBs by SW846 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.072	0.500	14	12-155	
Tetrachloro-m-xylene	0.059	0.500	12	22-146	**

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359,

Project ID:

Lab Batch #: 798426 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 03/11/10 02:40

PP SVOCs by SW-846 8270D Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	81.3	100	81	32-117	
2-Fluorobiphenyl	31.5	50.0	63	35-96	
2-Fluorophenol	59.9	100	60	29-87	
Nitrobenzene-d5	35.0	50.0	70	22-108	
Phenol-d5	76.7	100	77	28-88	
Terphenyl-D14	34.3	50.0	69	18-133	

Lab Batch #: 798426 **Sample:** 550612-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 03/15/10 19:39

PP SVOCs by SW-846 8270D Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	69.8	100	70	32-117	
2-Fluorobiphenyl	33.0	50.0	66	35-96	
2-Fluorophenol	60.0	100	60	29-87	
Nitrobenzene-d5	33.3	50.0	67	22-108	
Phenol-d5	64.5	100	65	28-88	
Terphenyl-D14	36.3	50.0	73	18-133	

Lab Batch #: 798426 **Sample:** 550612-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 03/15/10 20:06

PP SVOCs by SW-846 8270D Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	80.6	100	81	32-117	
2-Fluorobiphenyl	37.2	50.0	74	35-96	
2-Fluorophenol	71.2	100	71	29-87	
Nitrobenzene-d5	40.2	50.0	80	22-108	
Phenol-d5	76.9	100	77	28-88	
Terphenyl-D14	41.3	50.0	83	18-133	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis.

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories
Florida Testing Services, LLC

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359,

Project ID:

Lab Batch #: 798426 **Sample:** 362142-002 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 03/15/10 21:00

PP SVOCs by SW-846 8270D Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	97.2	100	97	32-117	
2-Fluorobiphenyl	44.6	50.0	89	35-96	
2-Fluorophenol	88.7	100	89	29-87	*
Nitrobenzene-d5	45.4	50.0	91	22-108	
Phenol-d5	69.9	100	70	28-88	
Terphenyl-D14	45.1	50.0	90	18-133	

Lab Batch #: 798426 **Sample:** 362142-002 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 03/15/10 21:27

PP SVOCs by SW-846 8270D Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	85.2	100	85	32-117	
2-Fluorobiphenyl	38.8	50.0	78	35-96	
2-Fluorophenol	77.4	100	77	29-87	
Nitrobenzene-d5	41.1	50.0	82	22-108	
Phenol-d5	71.3	100	71	28-88	
Terphenyl-D14	25.9	50.0	52	18-133	

Lab Batch #: 794462 **Sample:** 550727-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 08:38

PP VOCs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	48.45	50.00	97	53-159	
4-Bromofluorobenzene	50.14	50.00	100	30-186	
Toluene-D8	48.04	50.00	96	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359, **Project ID:**

Lab Batch #: 794462 **Sample:** 550727-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 09:02

SURROGATE RECOVERY STUDY					
PP VOCs by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	47.28	50.00	95	53-159	
4-Bromofluorobenzene	49.08	50.00	98	30-186	
Toluene-D8	47.98	50.00	96	70-130	

Lab Batch #: 794462 **Sample:** 550727-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 09:51

SURROGATE RECOVERY STUDY					
PP VOCs by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	50.80	50.00	102	53-159	
4-Bromofluorobenzene	50.66	50.00	101	30-186	
Toluene-D8	47.75	50.00	96	70-130	

Lab Batch #: 794462 **Sample:** 362435-004 D / MD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 11:55

SURROGATE RECOVERY STUDY					
PP VOCs by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	51.91	50.00	104	53-159	
4-Bromofluorobenzene	51.52	50.00	103	30-186	
Toluene-D8	49.41	50.00	99	70-130	

Lab Batch #: 794462 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 14:23

SURROGATE RECOVERY STUDY					
PP VOCs by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	52.79	50.00	106	53-159	
4-Bromofluorobenzene	49.91	50.00	100	30-186	
Toluene-D8	48.72	50.00	97	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359,

Project ID:

Lab Batch #: 794462 **Sample:** 362435-004 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 18:24

SURROGATE RECOVERY STUDY					
PP VOCs by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	52.20	50.00	104	53-159	
4-Bromofluorobenzene	49.74	50.00	99	30-186	
Toluene-D8	49.24	50.00	98	70-130	

Lab Batch #: 794462 **Sample:** 362435-004 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 18:48

SURROGATE RECOVERY STUDY					
PP VOCs by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-D4	51.80	50.00	104	53-159	
4-Bromofluorobenzene	48.75	50.00	98	30-186	
Toluene-D8	49.34	50.00	99	70-130	

Lab Batch #: 795000 **Sample:** 550663-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 19:52

SURROGATE RECOVERY STUDY					
Pesticides by SW-846 8081A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.5091	0.5000	102	26-154	
Tetrachloro-m-xylene	0.3865	0.5000	77	27-135	

Lab Batch #: 795000 **Sample:** 550663-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 19:52

SURROGATE RECOVERY STUDY					
Pesticides by SW-846 8081A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.4731	0.5000	95	26-154	
Tetrachloro-m-xylene	0.3644	0.5000	73	27-135	

* Surrogate outside of Laboratory QC limits.
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359, **Project ID:**

Lab Batch #: 795000 **Sample:** 550663-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 20:19

Pesticides by SW-846 8081A Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.5037	0.5000	101	26-154	
Tetrachloro-m-xylene	0.3796	0.5000	76	27-135	

Lab Batch #: 795000 **Sample:** 550663-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 20:19

Pesticides by SW-846 8081A Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.4781	0.5000	96	26-154	
Tetrachloro-m-xylene	0.3614	0.5000	72	27-135	

Lab Batch #: 795000 **Sample:** 362142-002 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 21:13

Pesticides by SW-846 8081A Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.4251	0.5000	85	26-154	
Tetrachloro-m-xylene	0.4755	0.5000	95	27-135	

Lab Batch #: 795000 **Sample:** 362142-002 S / MS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 21:13

Pesticides by SW-846 8081A Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.4738	0.5000	95	26-154	
Tetrachloro-m-xylene	0.2432	0.5000	49	27-135	

Lab Batch #: 795000 **Sample:** 362142-002 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 21:40

Pesticides by SW-846 8081A Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.3921	0.5000	78	26-154	
Tetrachloro-m-xylene	0.4160	0.5000	83	27-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories
Florida Testing Services, LLC

Form 2 - Surrogate Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Orders : 362359,

Project ID:

Lab Batch #: 795000 **Sample:** 362142-002 SD / MSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 21:40

SURROGATE RECOVERY STUDY					
Pesticides by SW-846 8081A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	0.4746	0.5000	95	26-154	
Tetrachloro-m-xylene	0.2665	0.5000	53	27-135	

Lab Batch #: 795000 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 23:01

SURROGATE RECOVERY STUDY					
Pesticides by SW-846 8081A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	<0.0000	0.5000	0	26-154	**
Tetrachloro-m-xylene	<0.0000	0.5000	0	27-135	**

Lab Batch #: 795000 **Sample:** 362359-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 02/18/10 23:01

SURROGATE RECOVERY STUDY					
Pesticides by SW-846 8081A Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	<0.0000	0.5000	0	26-154	**
Tetrachloro-m-xylene	<0.0000	0.5000	0	27-135	**

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Blank Spike Recovery

Project Name: GA 129 PP East Side CSO Rain Event

Work Order #: 362359 **Project ID:**

Lab Batch #: 794537 **Sample:** 550676-1-BKS **Matrix:** Water
Date Analyzed: 02/18/2010 **Date Prepared:** 02/15/2010 **Analyst:** VCH
Reporting Units: ug/L **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

GA PP Herbicides by SW-846 8151A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
2,4,5-TP (Silvex)	<0.15	5.0	4.1	82	5-105	
2,4-D	<0.24	5.0	4.2	84	10-129	

Lab Batch #: 794535 **Sample:** 550665-1-BKS **Matrix:** Water
Date Analyzed: 02/18/2010 **Date Prepared:** 02/15/2010 **Analyst:** VCH
Reporting Units: ug/L **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

PCBs by SW846 8082 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
PCB-1016	<0.091	5.0	4.0	80	30-170	
PCB-1260	<0.083	5.0	4.2	84	30-170	

Lab Batch #: 798426 **Sample:** 550612-1-BKS **Matrix:** Water
Date Analyzed: 03/15/2010 **Date Prepared:** 02/16/2010 **Analyst:** BJM
Reporting Units: ug/L **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

PP SVOCs by SW-846 8270D Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,2,4-Trichlorobenzene	<1.43	50.0	44.2	88	10-96	
1,4-Dichlorobenzene	<1.61	50.0	38.4	77	10-87	
2,4-Dinitrotoluene	<2.14	50.0	41.3	83	23-124	
2-Chlorophenol	<1.83	100	74.8	75	25-80	
4-chloro-3-methylphenol	<2.18	100	83.6	84	15-98	
4-Nitrophenol	<2.41	100	60.6	61	11-129	
Acenaphthene	<1.43	50.0	42.0	84	16-112	
N-Nitrosodi-n-Propylamine	<1.36	50.0	53.4	107	15-118	
Pentachlorophenol	<2.26	100	79.9	80	22-120	
Phenol	<1.76	100	75.2	75	12-90	
Pyrene	<2.40	50.0	40.4	81	13-130	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Blank Spike Recovery

Project Name: GA 129 PP East Side CSO Rain Event

Work Order #: 362359 **Project ID:**

Lab Batch #: 795000 **Sample:** 550663-1-BKS **Matrix:** Water
Date Analyzed: 02/18/2010 **Date Prepared:** 02/18/2010 **Analyst:** VCH
Reporting Units: ug/L **Batch #:** 1

BLANK /BLANK SPIKE RECOVERY STUDY

Pesticides by SW-846 8081A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
4,4-DDD	<0.004	0.500	0.440	88	20-152	
4,4-DDE	<0.004	0.500	0.441	88	18-147	
4,4-DDT	<0.005	0.500	0.451	90	18-164	
Aldrin	<0.003	0.500	0.457	91	11-131	
Alpha-BHC	<0.010	0.500	0.444	89	24-141	
Alpha-Chlordane	<0.002	0.500	0.466	93	37-135	
Beta-BHC	<0.002	0.500	0.437	87	12-162	
Delta-BHC	<0.002	0.500	0.430	86	19-147	
Dieldrin	<0.004	0.500	0.451	90	35-140	
Endosulfan I	<0.002	0.500	0.483	97	20-135	
Endosulfan II	<0.005	0.500	0.460	92	34-122	
Endosulfan Sulfate	<0.007	0.500	0.474	95	41-145	
Endrin	<0.005	0.500	0.474	95	36-158	
Endrin Aldehyde	<0.009	0.500	0.489	98	28-135	
Endrin Ketone	<0.005	0.500	0.461	92	42-134	
Gamma-BHC (Lindane)	<0.002	0.500	0.450	90	23-143	
Gamma-Chlordane	<0.002	0.500	0.426	85	25-112	
Heptachlor	<0.003	0.500	0.476	95	20-142	
Heptachlor Epoxide	<0.003	0.500	0.428	86	32-134	
Methoxychlor	<0.029	1.50	1.56	104	36-169	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Order #: 362359 **Project ID:**

Analyst: 4099 **Date Prepared:** 02/16/2010 **Date Analyzed:** 02/16/2010

Lab Batch ID: 794072 **Sample:** 794072-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium, Hexavalent	<0.005	0.500	0.490	98	0.5	0.490	98	0	80-120	20	

Analyst: 4154 **Date Prepared:** 02/18/2010 **Date Analyzed:** 02/18/2010

Lab Batch ID: 794447 **Sample:** 550717-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Cyanide by SW-846 9010/9014A Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Cyanide, Total	<0.0021	0.050	0.049	98	0.05	0.049	98	0	80-120	20	

Analyst: 4150 **Date Prepared:** 02/17/2010 **Date Analyzed:** 02/18/2010

Lab Batch ID: 794413 **Sample:** 550533-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Mercury by SW-846 7470A Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Mercury	<0.0001	0.0030	0.0030	100	0.003	0.0030	100	0	75-125	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Order #: 362359
Analyst: 4148
Lab Batch ID: 794462 **Sample:** 550727-1-BKS
Units: ug/L

Date Prepared: 02/18/2010
Batch #: 1

Project ID:
Date Analyzed: 02/18/2010
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

PP VOCs by SW-846 8260B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1-Dichloroethene	<0.20	50	50	100	50	50	100	0	70-130	20	
Benzene	<0.16	50	47	94	50	48	96	2	80-120	20	
Chlorobenzene	<0.15	50	46	92	50	48	96	4	80-120	20	
Toluene	<0.14	50	46	92	50	47	94	2	75-120	20	
Trichloroethene	<0.19	50	47	94	50	48	96	2	70-125	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Order #: 362359
Analyst: 4150
Lab Batch ID: 794779 **Sample:** 550642-1-BKS
Units: mg/L

Date Prepared: 02/18/2010
Batch #: 1

Project ID:
Date Analyzed: 02/19/2010
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

PP Metals by SW-846 6010B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Antimony	0.002	1.00	0.853	85	1	0.889	89	4	75-125	20	
Arsenic	<0.003	1.00	0.867	87	1	0.897	90	3	75-125	20	
Beryllium	<0.001	1.00	0.912	91	1	0.942	94	3	75-125	20	
Cadmium	<0.001	1.00	0.865	87	1	0.895	90	3	75-125	20	
Chromium	<0.001	1.00	0.885	89	1	0.910	91	3	75-125	20	
Copper	<0.001	1.00	0.885	89	1	0.910	91	3	75-125	20	
Lead	<0.001	1.00	0.865	87	1	0.895	90	3	75-125	20	
Nickel	<0.001	1.00	0.882	88	1	0.912	91	3	75-125	20	
Selenium	<0.003	1.00	0.870	87	1	0.901	90	4	75-125	20	
Silver	<0.001	1.00	0.881	88	1	0.911	91	3	75-125	20	
Thallium	<0.002	1.00	0.853	85	1	0.883	88	3	75-125	20	
Zinc	<0.001	1.00	0.872	87	1	0.903	90	3	75-125	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Order # : 362359 **Project ID:**

Lab Batch ID: 794537 **QC- Sample ID:** 362142-002 S **Batch #:** 1 **Matrix:** Water
Date Analyzed: 02/19/2010 **Date Prepared:** 02/15/2010 **Analyst:** VCH
Reporting Units: ug/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

GA PP Herbicides by SW-846 8151A Col Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1 2,4,5-TP (Silvex)	<0.50	5.0	4.30	86	5.0	4.20	84	2	5-105	30	
1 2,4-D	<0.50	5.0	3.50	70	5.0	3.90	78	11	10-129	30	

Lab Batch ID: 794072 **QC- Sample ID:** 362359-001 S **Batch #:** 1 **Matrix:** Water
Date Analyzed: 02/16/2010 **Date Prepared:** 02/16/2010 **Analyst:** 4099
Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium, Hexavalent	<0.010	0.500	0.493	99	0.500	0.476	95	4	80-120	20	

Lab Batch ID: 794447 **QC- Sample ID:** 362359-001 S **Batch #:** 1 **Matrix:** Water
Date Analyzed: 02/18/2010 **Date Prepared:** 02/18/2010 **Analyst:** 4154
Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Cyanide by SW-846 9010/9014A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Cyanide, Total	<0.010	0.050	0.046	92	0.050	0.045	90	2	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: GA 129 PP East Side CSO Rain Event

Work Order # : 362359

Project ID:

Lab Batch ID: 794413 **QC- Sample ID:** 362313-052 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 02/18/2010 **Date Prepared:** 02/17/2010 **Analyst:** 4150

Reporting Units: mg/L

Mercury by SW-846 7470A Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Mercury	<0.0020	0.0030	0.0026	87	0.0030	0.0026	87	0	75-125	20	

Lab Batch ID: 794535 **QC- Sample ID:** 362142-007 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 02/18/2010 **Date Prepared:** 02/15/2010 **Analyst:** VCH

Reporting Units: ug/L

PCBs by SW846 8082 Col	Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1	PCB-1016	<0.50	5.0	4.40	88	5.0	4.30	86	2	30-170	30	
1	PCB-1260	<0.50	5.0	4.00	80	5.0	4.50	90	12	30-170	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

8. Civil and Criminal Liability

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws including promulgated water quality standards. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

9. Expiration of Permit

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date without written authorization from the Division. To receive this authorization, the permittee shall submit the information, forms, and fees required by the Division no later than 180 days before the expiration date.

10. Severability

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

11. Penalties

Both the Federal and State Acts provide that any person who falsifies or tampers with any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit shall, if convicted, be punished by a fine or by imprisonment or by both. The Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director of the Division.

12. Compliance

a. The permittee must comply with this permit. Any permit noncompliance is a violation of the Federal Act, State Act, and the State Rules, and is grounds for:

1) Enforcement action;

2) Permit termination, revocation and reissuance, or modification; or

3) Denial of a permit renewal application.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

b. If any provision in this permit is found to conflict with the Federal Consent Decree or any of it amendments, then the permittee is required to comply with the Consent Decree instead of the conflicting permit provision.

13. Contested Hearing

Any person aggrieved or adversely affected by any action of the Director of the Division shall petition the Director for a hearing within 30 days of notice of the action.

14. Property Rights

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, or any infringement of Federal, State or local laws or regulations.

STATE OF GEORGIA
Priority Pollutants and Detection Limits

12/19/2012

Chemical Constituent	Detection Limit (ug/l)	Chemical Constituent	Detection Limit (ug/l)	Chemical Constituent	Detection Limit (ug/l)
1,1,1-Trichloroethane	2	Anthracene	10	Heptachlor	0.1
1,1,2,2-Tetrachloroethane	2	Antimony	5	Heptachlor Epoxide	0.1
1,1,2-Trichloroethane	2	Arsenic	5	Hexachlorobenzene	10
1,1-Dichloroethane	2	b-BHC-Beta	0.1	Hexachlorobutadiene	10
1,1-Dichloroethylene	2	b-Endosulfan	0.5	Hexachlorocyclopentadiene	10
1,2, 4,-Trichlorobenzene	10	Benzene	2	Hexachloroethane	10
1,2-Dichlorobenzene	10	Benzidine	80	Indeno (1,2,3-cd) Pyrene	10
1,2-Dichloroethane	2	Benzo (k) Fluoranthene	10	Isophorone	10
1,2-Dichloropropane	2	Benzo (ghi) Perylene	10	Lead	1
1,2-Diphenylhydrazine	10	Benzo (a) Anthracene	10	Lindane (Hexachlorocyclohexane, g-BHC-gamma)	0.1
1,2-Trans-Dichloroethylene	2	Benzo (a) Pyrene	10	Mercury	0.5
1,3-Dichlorobenzene	10	Beryllium	1	Methoxychlor	0.3
1,3-Dichloropropylene	2	Bis(2-Chloroethoxy) Methane	10	Methyl Bromide (Bromomethane)	10
1,4-Dichlorobenzene	10	Bis(2-Chloroethyl) Ether	10	Methyl Chloride (Chloromethane)	10
2,4,5-Trichlorophenoxy proponic acid (TP Silvex)	10	Bis(2-Chloroisopropyl) Ether	10	Methylene Chloride	10
2,4,6-Trichlorophenol	10	Bis(2-Ethylhexyl) Phthalate	10	Naphthalene	10
2,4-Dichlorophenol	10	Bromoform (Tribromomethane)	10	Nickel	5
2,4-Dichlorophenoxyacetic acid (2,4-D)	5	Butylbenzyl Phthalate	10	Nitrobenzene	10
2,4-Dimethylphenol	10	Cadmium	0.7	N-Nitrosodimethylamine	10
2,4-Dinitrophenol	50	Carbon Tetrachloride	2	N-Nitrosodi-n-Propylamine	10
2,4-Dinitrotoluene	20	Chlordane	0.5	N-Nitrosodiphenylamine	10
2,6-Dinitrotoluene	20	Chlorobenzene	10	PCB-1016	1
2-Chloroethylvinyl Ether	10	Chlorodibromomethane	10	PCB-1221	1
2-Chloronaphthalene	10	Chloroethane	5	PCB-1232	1
2-Chlorophenol	10	Chloroform (Trichloromethane)	2	PCB-1242	1
2-Methyl-4,6-Dinitrophenol	50	Chromium III	10	PCB-1248	1
2-Nitrophenol	50	Chromium (VI)	10	PCB-1254	1
3,3-Dichlorobenzidine	20	Chrysene	10	PCB-1260	1
3,4-Benzofluoranthene	10	Copper	5	Pentachlorophenol	20
3-Methyl-4-Chlorophenol	10	Cyanide	25	Phenanthrene	10
4,4-DDD	0.2	d-BHC-Delta	0.1	Phenol	10
4,4-DDE	0.2	Dibenzo (a,h) Anthracene	10	Pyrene	10
4,4-DDT	0.2	Dichlorobromomethane	10	Selenium	5
4-Bromophenyl Phenyl Ether	10	Dieldrin	0.1	Silver	5
4-Chlorophenyl Phenyl Ether	10	Diethyl Phathlate	10	Tetrachloroethylene	2
4-Nitrophenol	50	Dimethyl Phthalate	10	Thallium	1
a-BHC-Alpha	0.1	Di-n-Butyl Phthalate	10	Toluene	2
Acenaphthene	10	Di-n-Octyl Phathalate	10	Toxaphene	2
Acenaphthylene	10	Endosulfan sulfate	0.5	Trichloroethlylene	2
Acrolein	50	Endrin	0.2	Vinyl Chloride	10
Acrylonitrile	50	Endrin Aldehyde	0.2	Zinc	10
a-Endosulfan	0.5	Ethylbenzene	2		
Aldrin	0.1	Fluoranthene	10		
		Fluorene	10		

EPD/WPB/WRP

NOV 1 3 2012

RECEIVED

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/
GA0038644

Form Approved 1/14/99
OMB Number 2040-0086

FORM 2A NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

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BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information Packet.

A.1. Facility Information.

Facility Name: West Area CSO Facilities: 1) West Area CSO WQCF; 2) Clear Creek CSO Control Facility; 3) North Avenue/Proctor Creek CSO Control Facility; and 4) Tanyard Creek CSO Control Facility

Mailing Address: 1510 Key Road SE; Atlanta, Georgia 30316

Contact Person: Alan Stillwell

Title: Facilties Operations Manager

Telephone Number: (404) 635-2599

Facility Address (not P.O. Box): 1) West Area CSO WQCF, 2440 Bolton Road NW, 30318 2) Clear Creek CSO Control Facility, 605 Worchester Drive NE, 30306 3): North Avenue/Proctor Creek CSO Control Facility, 1150 North Avenue NW, 30318; and 4) Tanyard Creek CSO Control Facility, 155 Loring Drive NW, 30309

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant Name: City of Atlanta Department of Watershed Management

Mailing Address: 72 Marietta Street NW
Atlanta, Georgia

Contact Person: Margaret Tanner

Title: Deputy Commissioner

Telephone Number: (404) 546-1227

Is the applicant the owner or operator (or both) of the treatment works?

☒ owner ☒ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☐ facility ☒ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES	GA 0038644	PSD	NA
UIC	NA	Other	
RCRA	NA	Other	

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
City of Atlanta	65,808 (est.)	Combined	Municipal

Total population served: 65,808 (est.)

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

☐ Yes ☒ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

☐ Yes ☒ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 85 MGD mgd

	Two Years Ago	Last Year	This Year
b. Annual average daily flow rate	NA	NA	NA
c. Maximum daily flow rate	NA	NA	NA

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

☐ Separate sanitary sewer _____ %

☒ Combined storm and sanitary sewer 100 %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? ☒ Yes ☐ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1 (West Area WQCF)

ii. Discharges of untreated or partially treated effluent 0

iii. Combined sewer overflow points 1

iv. Constructed emergency overflows (prior to the headworks) 1

v. Other Clear Creek, North Avenue and Tanyard Creek 3

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? ☐ Yes ☒ No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharge to surface impoundment(s) NA mgd

Is discharge ☐ continuous or ☒ intermittent?

c. Does the treatment works land-apply treated wastewater? ☐ Yes ☒ No

If yes, provide the following for each land application site:

Location: NA

Number of acres: NA

Annual average daily volume applied to site: NA mgd

Is land application ☐ continuous or ☐ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? ☐ Yes ☒ No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

NA

If transport is by a party other than the applicant, provide:

Transporter Name NA

Mailing Address NA

Contact Person NA

Title NA

Telephone Number (NA)

For each treatment works that receives this discharge, provide the following:

Name NA

Mailing Address NA

Contact Person NA

Title NA

Telephone Number (NA)

If known, provide the NPDES permit number of the treatment works that receives this discharge NA

Provide the average daily flow rate from the treatment works into the receiving facility. NA mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8. through A.8.d above (e.g., underground percolation, well injection): ☐ Yes ☐ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

NA

Annual daily volume disposed by this method: NA

Is disposal through this method ☐ continuous or ☐ intermittent?

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WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number: See Attached Descriptions

b. Location

(City or town, if applicable) (Zip Code)

(County) (State)

(Lattitutde) (Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Average daily flow rate _____ mgd

f. Does this outfall have either an intermittent or a periodic discharge? ☐ Yes ☐ No (go to A.9.g.)

If yes, provide the following information:

Number f times per year discharge occurs: _____

Average duration of each discharge: _____

Average flow per discharge: _____ mgd

Months in which discharge occurs: _____

g. Is outfall equipped with a diffuser? ☐ Yes ☐ No

A.10. Description of Receiving Waters.

a. Name of receiving water: Chattahoochee River

b. Name of watershed (if known): Chattahoochee River

United States Soil Conservation Service 14-digit watershed code (if known): NA

c. Name of State Management/River Basin (if known): Chattahoochee River

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): NA

d. Critical low flow of receiving stream (if applicable)
acute NA cfs chronic NA cfs

e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of $CaCO_3$

FACILITY NAME AND PERMIT NUMBER:

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A.11. Description of Treatment

a. What levels of treatment are provided? Check all that apply.

☒ Primary ☐ Secondary

☐ Advanced ☐ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD5 removal or Design CBOD5 removal	25	%
Design SS removal	60	%
Design P removal	NA	%
Design N removal	NA	%
Other NA	NA	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe:

Coarse solids screening; chlorination/dechlorination

If disinfection is by chlorination is dechlorination used for this outfall? ☒ Yes ☐ No

d. Does the treatment plant have post aeration? ☐ Yes ☒ No

A.12 Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: See Attached Data

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)		s.u.			
pH (Maximum)		s.u.			
Flow Rate					
Temperature (Winter)					
Temperature (Summer)					

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS								
BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD5							
	CBOD5							
FECAL COLIFORM								
TOTAL SUSPENDED SOLIDS (TSS)								

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

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OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. **Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.**

NA gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

NA

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where the hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup\power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☐ Yes ☒ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: NA

Mailing Address: NA
NA

Telephone Number: (NA)

Responsibilities of Contractor: NA

B.5. Scheduled improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

NA

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

☐ Yes ☒ No

FACILITY NAME AND PERMIT NUMBER:

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c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

NA

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM/DD/YYYY	Actual Completion MM/DD/YYYY
- Begin Construction	NA/ /	NA/ /
- End Construction	NA/ /	NA/ /
- Begin Discharge	NA/ /	NA/ /
- Attain Operational Level	NA/ /	NA/ /

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: NA

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide effluent testing for the following listed parameters and those required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum effluent testing data must be based on at least three pollutant scans, preferably represent several seasons, and must be no more than four and on-half years old.

Outfall Number: **See Attached**

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/
GA0038644

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BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

☒ Basic Application Information packet

Supplemental Application Information packet:

☒ Part D (Expanded Effluent Testing Data)

☐ Part E (Toxicity Testing; Biomonitoring Data)

☒ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

☒ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: Margaret E. Fanner, PE - Deputy Commissioner

Signature:

Telephone number: (404) 546-1227

Date signed: 11/9/2010

Upon request of the permitting authority, you must submit any other information necessary to assure wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: SEE ATTACHED (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO3)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

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Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
COLORBENZENE											
CHLOROBIDBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHOLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROPROPANE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLOROETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTA CHLOROPHENOL											
PHENOL											
2,4,6-TRICHLORO PHENOL											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											
BASE-NEUTRAL COMPOUNDS											
ACENAPHTHENE											
ACENAPHTYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A) ANTHRACENE											
BENZO(A)PYRENE											

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3.4 BENZO-FLUORANTHENE											
BENZO(GHI)PERYLENE											
BENZO(K)FLUORANTHENE											
BIS (2-CHLORO ETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORO NAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLORO BENZENE											
1,3-DICHLORO BENZENE											
1,4-DICHLORO BENZENE											
3,3-DICHLORO BENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE											

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLORO BENZENE											
HEXACHLOROBUT ADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXA CHLOROETHANE											
INDENO(1,2,3-CD) PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI-METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

West Area Combined Sewer Discharge/ GA0038644

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

☐ chronic ☐ acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	Test number: ____	Test number: ____	Test number: ____
a. Test information.			
Test Species & test method number	NA		
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			
b. Give toxicity test methods followed.			
Manual title			
Edition number and year of publication			
Page number(s)			
c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.			
24-Hour composite			
Grab			
d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each.			
Before disinfection			
After disinfection			
After dechlorination			

A.9 Description of Outfall

Note: The West Area CSO management facilities include four facilities, as described below. Each facility has one outfall through which treated (screened, chlorinated & dechlorinated) effluent is discharged. Relevant information for each facility is included in this section

Clear Creek CSO Control Facility

A.9.a Outfall Number: Clear Creek 001

A.9.b Location: 605 Worcester Drive NE
Atlanta, Georgia 30306
Fulton County
Outfall Location: Latitude: 33° 47′ 26″ Longitude: 84° 24′ 03″

A.9.c Distance from Shore: NA

A.9.d Distance below Surface: NA

A.9.e Average Daily Flow Rate: NA

A.9.f This outfall has an intermittent discharge
Number of times per year: 2 (7/1/2011 to 6/30/2012)
Average Duration: 4.96 Hours
Average Flow per discharge: 13.02 Million Gallons
Months in which discharge occurs: September, March

North Avenue/Proctor Creek CSO Control Facility

A.9.a Outfall Number: North Avenue 001

A.9.b Location: 1150 North Avenue NW
Atlanta, Georgia 30318
Fulton County
Outfall Location: Latitude: 33° 46′ 07″ Longitude: 84° 25′ 30″

A.9.c Distance from Shore: NA

A.9.d Distance below Surface: NA

A.9.e Average Daily Flow Rate: NA

A.9.f This outfall has an intermittent discharge
Number of times per year: 2 (7/1/2011 to 6/30/2012)
Average Duration: 1.063 Hours
Average Flow per discharge: 3.51 Million Gallons
Months in which discharge occurs: September, March

Tanyard Creek CSO Control Facility

A.9.a Outfall Number: Tanyard 001

A.9.b Location: 155 Loring Drive NW
Atlanta, Georgia 30309
Fulton County
Outfall Location: Latitude: 33° 48′ 00″ Longitude: 84° 23′ 48″

A.9.c Distance from Shore: NA

A.9.d Distance below Surface: NA

A.9.e Average Daily Flow Rate: NA

A.9.f This outfall has an intermittent discharge
Number of times per year: 1 (7/1/2011 to 6/30/2012)
Average Duration: 3.42 Hours
Average Flow per discharge: 5.10 Million Gallons
Months in which discharge occurs: March

<u>West Area CSO Water Quality Control Facility</u>

A.9.a **Outfall Number:** West Area 001

A.9.b **Location:** 2440 Bolton Road NW
Atlanta, Georgia 30318
Fulton County
Outfall Location: Latitude: 33° 49' 35" Longitude: 84° 27' 12"

A.9.c **Distance from Shore:** NA

A.9.d **Distance below Surface:** NA

A.9.e **Average Daily Flow Rate:** NA

A.9.f This outfall has an intermittent discharge
Number of times per year: 18 (7/1/2011 to 6/30/2012)
Average Duration: 77.1 Hours
Average Flow per discharge: 44.93 Million Gallons
Months in which discharge occurs: All except October and March

NPDES Permit Renewal Application Question A.12
West Area CSO Facilities Effluent Testing Results
July 1, 2011 to June 30, 2012
City of Atlanta, Georgia

Clear Creek CSO Control Facility								
		A.12						
Year	Month	pH	Flow Rate MGPM	Winter Temp	Summer Temp	BOD	FC	TSS
2011	July							
	August							
	September	7.43	0.0079		24.6	12	10	59
	October							
	November							
	December							
2012	January							
	February							
	March	8.07	0.0056	15.5		5	10	27
	April							
	May							
	June							
		7.43	0.0079	15.50	24.60	12.00	10.00	59.00
		Min	million	Max	Max	Max	Max	Max
		8.07	gallons per	15.500	24.600	8.500	10.000	43.000
		Max	minute	Average	Average	Average	Average	Average

North Avenue CSO Control Facility								
		A.12						
Year	Month	pH	Maximum Flow Rate MGPM	Winter Temp	Summer Temp	BOD	FC	TSS
2011	July							
	August							
	September	6.89	0.0688		21	6	10	17
	October							
	November							
	December							
2012	January							
	February							
	March	7.23	0.0286	17.3		2	10	37
	April							
	May							
	June							
		6.89	0.0688	17.30	21.00	6.00	10.00	37.00
		Min	million	Max	Max	Max	Max	Max
		7.23	gallons per	17.300	21.000	4.000	10.000	27.000
		Max	minute	Average	Average	Average	Average	Average

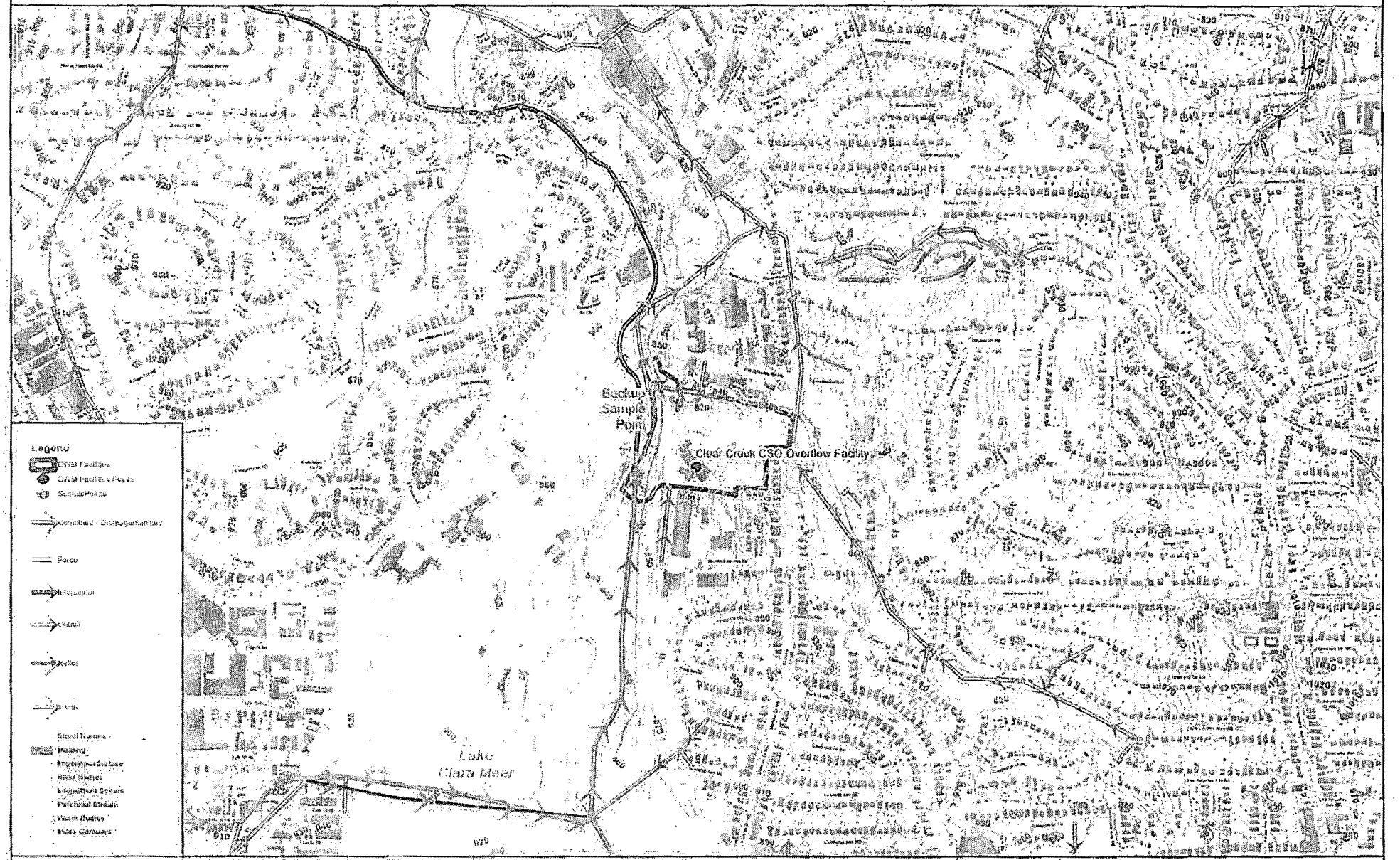
NPDES Permit Renewal Application Question A.12 (continued)
West Area CSO Facilities Effluent Testing Results
July 1, 2011 to June 30, 2012
City of Atlanta, Georgia

Tanyard Creek CSO Control Facility								
		A.12						
Year	Month	pH	Maximum Flow Rate MGPM	Winter Temp	Summer Temp	BOD	FC	TSS
2011	July							
	August							
	September							
	October							
	November							
	December							
2012	January							
	February							
	March	6.91	0.0112	16.7		3	10	21
	April							
	May							
	June							
		6.91	**0.0112**	**16.70**	**0.00**	**3.00**	**10.00**	**21.00**
		Min	**million**	**Max**	**Max**	**Max**	**Max**	**Max**
		6.91	**gallons per**	**16.700**	**#DIV/0!**	**3.000**	**10.000**	**21.000**
		Max	**minute**	**Average**	**Average**	**Average**	**Average**	**Average**

West Area CSO WQCF								
		A.12						
Year	Month	pH	Flow Rate MGPM	Winter Temp	Summer Temp	BOD	FC	TSS
2011	July	6.75	0.0175		24.5	8	280	57
	August	6.72	0.0188		24	9	140	59
	September	6.82	0.0481		23.5	11	10	23
		6.8	0.0230		22.3	6	10	38
	October							
	November	6.6	0.0420	18.5		10	10	7
	December	6.64	0.0498	14		15	10	14
		6.82	0.0467	18.1		2	10	80
2012	January	6.9	0.0350	14.5		18	10	33
		6.78	0.0210	16.3		14	10	12
	February	7.3	0.0141	14.6		5.3	10	24
		6.9	0.0352	19		6	10	20
	March							
	April	6.89	0.0241		19.2	21	10	36
		6.89	0.0196		20.6	10	10	26
	May	6.87	0.0405		21.8	19	10	44
		6.77	0.0385		21.3	12	10	24
	June	6.62	0.0308		22	9	10	15
		6.61			22.1	6	10	9
		6.60	**0.0498**	**19.00**	**24.50**	**21.00**	**280.00**	**80.00**
		Min	**million**	**Max**	**Max**	**Max**	**Max**	**Max**
		7.3	**gallons per**	**16.429**	**22.130**	**10.665**	**33.529**	**30.647**
		Max	**minute**	**Average**	**Average**	**Average**	**Average**	**Average**

B.2 Topographic Maps

Clear Creek CSO Control Facility



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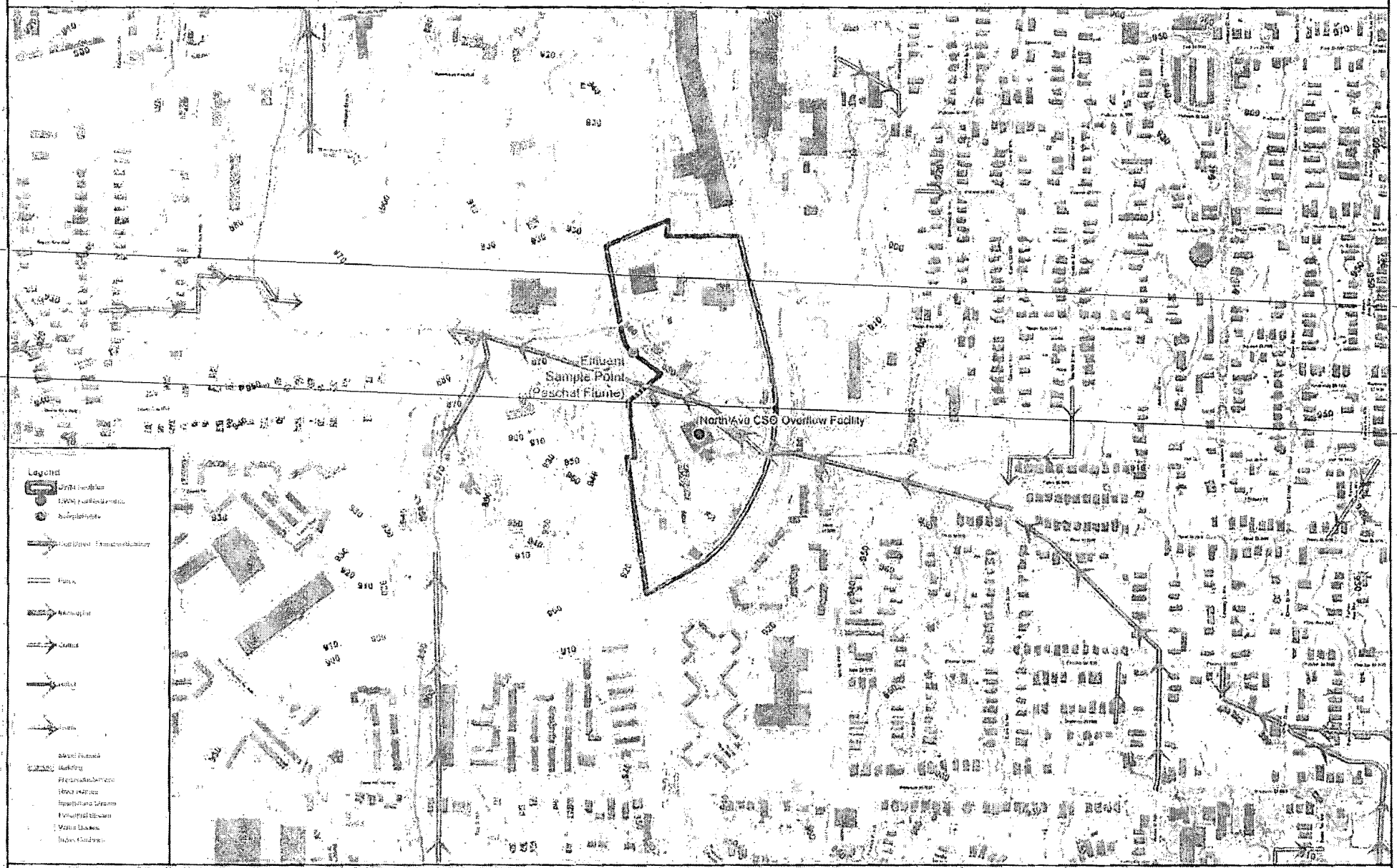
City of Atlanta

Department of Watershed Management

GIS

COORDINATE SYSTEM	NAD 1983 STATE PLANE GEORGIA WEST
MAP UNITS	U.S. SURVEY FEET
DATE	Date
AUTHOR	Author
REQUEST #	Request
MAP SCALE	1:12,000
	1 in = 1,000 ft
COMMENTS	

North Avenue CSO Control Facility



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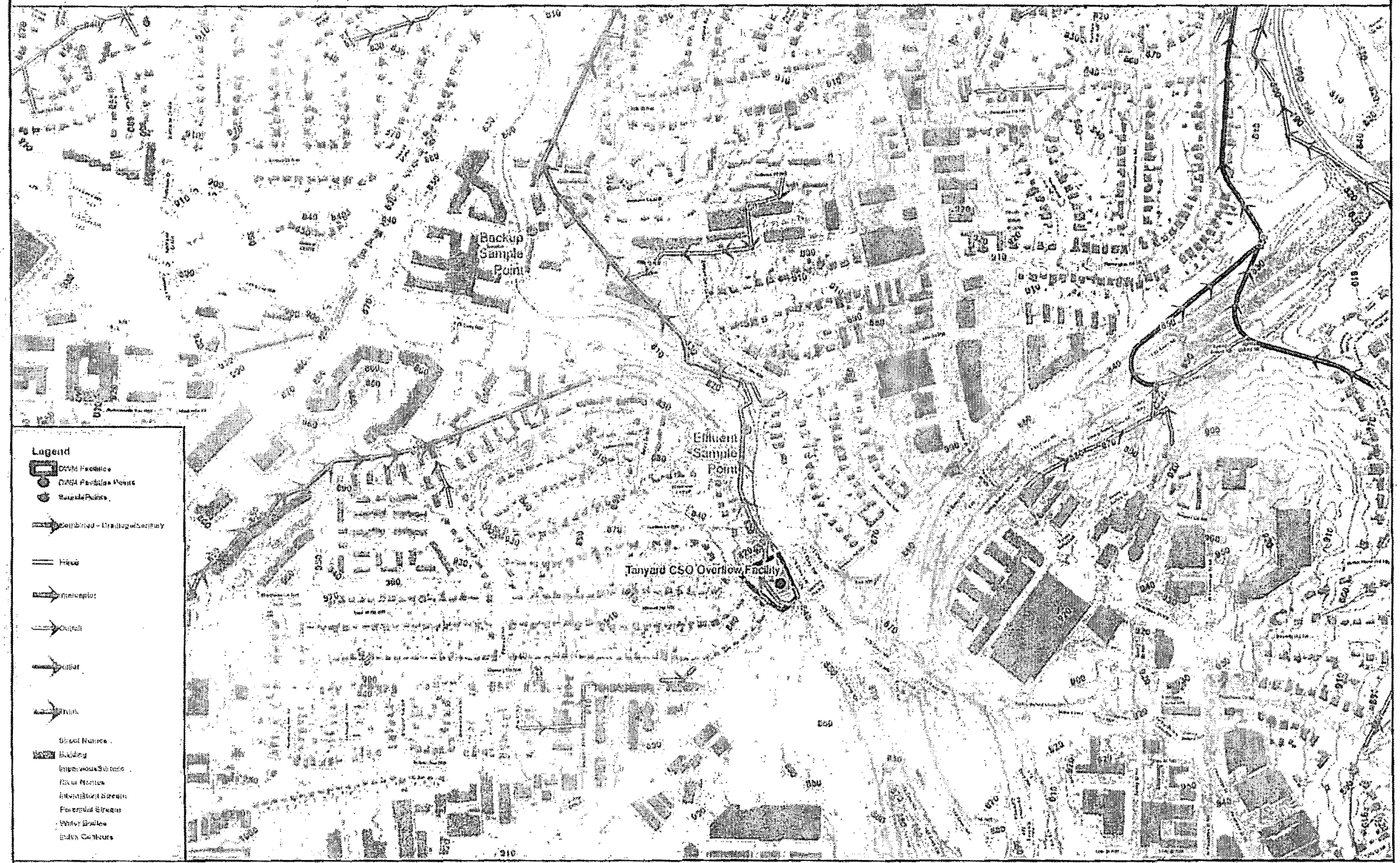
City of Atlanta

Department of Watershed Management

COORDINATE SYSTEM	NAD 1983 STATE PLANE GEORGIA WEST
MAP UNITS	U.S. SURVEY FEET
DATE	11.08.12
AUTHOR	GIS
REQUEST #	Request
MAP SCALE	1:7,200
	1 in = 600 ft

COMMENTS

Tanyard Creek CSO Control Facility



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City of Atlanta

Department of Watershed Management

GIS

COORDINATE SYSTEM	NAD 1983 STATE PLANE GEORGIA WEST
MAP UNITS	U.S. SURVEY FEET
DATE	Date
AUTHOR	Author
REQUEST #	Request
MAP SCALE	1:9,600 1 in = 800 ft
COMMENTS	

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000
Chris Clark, Commissioner
F. Allen Barnes, Director
Environmental Protection Division
404/656-4713

January 28, 2010

Honorable Robert J. Hunter, Commissioner
Bureau of Watershed Management
City of Atlanta
55 Trinity Avenue, Suite 5400
Atlanta, Georgia 30335-0312

RE: West Area CSO
Water Pollution Control Plant
NPDES Permit No. GA0038644

Dear Commissioner Hunter:

The Environmental Protection Division has received your application for reissuance of the above referenced permit. We are unable to issue a new permit before the expiration date of the existing permit. In accordance with the Rules and Regulations for Water Quality Control Chapter 391-3-6-.06(15)(c), your existing permit is hereby extended until a new permit is issued.

Sincerely,

F. Allen Barnes

F. Allen Barnes,
Director

FAB/jrb

PERMIT NO. GA0038644

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

City of Atlanta
55 Trinity Avenue
Atlanta, Georgia 30335

is authorized to discharge from its West Area CSO treatment facilities located in Atlanta Georgia

1) West Area CSO WQCF – 2440 Bolton Road, NW 2) Clear Creek CSO Control Facility – 10th Street and Monroe Drive, NE 3) Proctor Creek – North Avenue CSO Control Facility – North and Finley Avenue, SE 4) Tanyard Creek CSO Control Facility – Deering Road, NW 5) Proctor Creek – Greensferry CSO Control Facility – Troy Street, SW

to receiving waters

1) Chattahoochee River 2) Clear Creek 3) unnamed creek tributary to Proctor Creek 4) Tanyard Creek 5) Proctor Creek all of which are in the Chattahoochee River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on January 31, 2005.

This permit and the authorization to discharge shall expire at midnight, January 30, 2010.

Signed this 31st day of January 2005.

Director,
Environmental Protection Division

PART I

A. Conditions

1. Definitions

a. The Federal Act: the Clean Water Act.

b. The State Act: the Water Quality Control Act (O.C.G.A. Chapter 12-5-20, et seq.).

c. The State Rules: the Rules and Regulations for Water Quality Control (Chapter 391-3-6).

d. Code: the Official Code of Georgia Annotated.

e. Federal Consent Decree – CSO Consent Decree Civil Action File No. 1:95-CV-2550-TWT effective September 28, 1998.

f. Combined sewer system (CSS): a sewer system that was designed or constructed for the purpose of allowing surface water run-off to enter the conduit carrying sewage, industrial waste, or other waste. When the conduit exceeds its maximum capacity, it allows a discharge which bypasses the normal treatment works integral to the sewage system and allows a mixture of storm water and untreated or partially treated sewage, industrial waste, or other waste to flow, directly or indirectly, into the waters of the State.

g. Combined sewer overflow (CSO) control facility: a facility designed and constructed to control, treat and release a CSO discharge. Treatment includes screening and disinfection. The facilities will have dechlorination in the future.

h. CSO Water Quality Control Facility (WQCF): a treatment facility providing enhanced primary treatment, disinfection, and dechlorination for CSO discharges.

i. CSO discharge: that flow which is discharged from the outfall conveyance structure of a CSO Control Facility or CSO WQCF into waters of the State.

j. CSO discharge event: that period of time from the beginning of a CSO discharge from a CSO Control Facility or a CSO WQCF until it ends, which lasts at least fifty (50) minutes, and which occurs not less than forty-eight hours since the end of the last such discharge.

k. Composite sample: a sample consisting of a combination of subsamples collected during the duration of a CSO discharge event. The first subsample shall be collected 50 minutes after the discharge begins and subsequent subsamples are to be collected every 60 minutes thereafter.

l. Design storm event: the level of rainfall used to determine the design and size of the current CSO conveyance structure and the current CSO control

facilities. The design storm event for the CSO control facilities will remain the same after the West Area CSO WQCF is constructed and in operation.

1) Floatables: as determined by the permittee and approved by the Division, the design condition for floatables is defined as an overflow event with a flow rate less than or equal to 2640 MGD for the Clear Creek CSO control facility, 580 MGD for the Proctor Creek - Greensferry CSO control facility, 386 MGD for the Tanyard Creek CSO control facility and 650 MGD for the Proctor Creek – North Avenue CSO control facility.

2) All other parameters: the design condition for all other parameters listed in Part II B. of this permit is defined as an overflow event with a flow rate less than or equal to 7700 MGD for the Clear Creek CSO control facility, 1337 MGD for the Proctor Creek – Greensferry CSO control facility, 3600 MGD for the Tanyard Creek CSO control facility, and 2600 for the Proctor Creek – North Avenue CSO control facility.

m. Division: the Environmental Protection Division of the Department of Natural Resources.

n. Dry weather flow conditions: hydraulic flow conditions within the CSS resulting from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, or a combination thereof, with no contribution from stormwater.

o. Dry weather overflow: a CSO discharge that occurs during dry weather flow conditions provided that groundwater that infiltrates down gradient of the point at which sewage is diverted to a wastewater treatment facility shall not constitute dry weather overflow for compliance purposes.

p. First flush: the first sixty minutes of a CSO discharge.

q. POTW: publicly owned treatment works.

r. Sampling plan: a plan required to be submitted by the permittee for approval by the Division that, at a minimum, describes the strategies, sampling and monitoring methods, equipment, protocols, record keeping, design, and operational aspects of the CSO control facilities and CSO WQCF that relate to facility compliance and monitoring requirements.

s. Sampling point: the point at which the CSO discharge from the CSO control facilities and the CSO WQCF must meet the terms and conditions in Part II B. of this permit. For purposes of this permit, the approved sampling points are defined in Part II.B.1 and Part II.B.2 unless a different location is identified in the sampling plan approved by the Division.

t. Water quality standards: water quality criteria established to protect designated uses of waters of the State in accordance with the State Rules.

2. Best Management Practices. The permittee shall immediately comply with the following technology-based requirements:

   a. The permittee shall implement proper operation and maintenance programs for the combined sewer system and all CSO control facilities and the CSO WQCF to reduce the magnitude, frequency, and duration of CSO discharges. The program shall consider regular combined sewer inspections; sewer, catch basin, and regulator cleaning; equipment and combined sewer system repair or replacement, where necessary, and disconnection of illegal connections.

   b. The permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSO discharges.

   c. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from non-domestic users.

   d. The permittee shall operate the POTW at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSO discharges. The permittee shall deliver all flows to the treatment plant within the constraints of the conveyance capacity of the system and the treatment capacity of the POTW. After construction of the CSO WQCF is complete and EPD has given written permission to discharge, the permittee shall continue to maximize use of the POTW and collection system as described above. In addition, the permittee shall operate the CSO WQCF at maximum treatable flow once capacity at the POTW is reached and storage in the collection system is maximized in order to reduce the magnitude, frequency and duration of CSO discharges from the CSO control facilities.

   e. Dry weather overflows are prohibited. Each dry weather overflow must be reported to the permitting authority as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

   f. The permittee shall implement measures to control and prevent solid and floatable materials in CSO discharges.

   g. The permittee shall implement a pollution prevention program focused on reducing the impact of CSO discharges on the receiving waters.

   h. The permittee shall implement a public notification process to inform citizens of when and where CSO discharges occur. The process shall include the following:

(1) A public information program to inform the public of the occurrence of CSO discharges into the receiving stream; and

(2) Signs posted in clear view at the CSO control facilities' outfalls, the CSO WQCF outfall, and at all public points of access to the receiving stream for at least the first half mile downstream of the CSO control facilities' and the CSO WQCF outfalls.

i. The permittee shall monitor the outfalls of the CSO control facilities and CSO WQCF in order to evaluate the efficacy of the CSO controls.

PART II

A. Monitoring and Reporting

1. Effluent Toxicity and Biomonitoring Requirements

The permittee shall comply with effluent standards or prohibitions established by Section 307(a) of the Federal Act and with Chapter 391- 3-6-.03(5) of the State Rules and may not discharge toxic pollutants in "concentrations or combinations that are harmful to humans, animals, or aquatic life." If toxicity is suspected in the effluent, the Division may require the permittee to perform any of the following actions:

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

The Division will specify the requirements and methodologies for performing any of these tests or studies, or consider for approval, the methodologies submitted by the permittee. Sample collection shall be representative of the CSO control facility and CSO WQCF hydrograph and shall at a minimum include a sample within the first thirty minutes of discharge and during the declining limb of the hydrograph.

Acute toxicity testing shall be conducted in accordance with "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms", EPA 821-R-02-012, or the most current edition. Unless other concentrations are specified by the Division, the critical concentration used to determine toxicity in the biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the flow of the CSO discharge during the first flush and the design storm event flow. Samples for toxicity testing are to be taken after the final treatment process. The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test

organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the Division with data and evidence to confirm toxicity elimination. When approved by the Division, all study plans and TRE plans will become part of the requirements of this permit.

2. Flow Monitoring

a. The permittee shall have a primary flow measuring device that is correctly installed and operable. Secondary flow measurements must be made using a continuous totalizer and an indicating recorder. Calibration of secondary instruments will be maintained to within 10% of the actual flow. Calibration shall be performed in accordance with accepted engineering practice on a quarterly basis. Records of the calibration checks shall be maintained.

b. If primary and secondary flow instruments malfunction or fail to maintain calibration as required in Part II.A.2.a., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples or as described in the approved sampling plan.

3. Monitoring Procedures

Analytical procedures, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and procedures listed in 40 CFR Part 136 or as approved by the Division in the approved sampling plan. The methods used must be applicable to the concentration ranges of the CSO samples.

4. Detection Limit Requirements

All parameters will be analyzed using the appropriate detection limits as specified by the Division. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "not detected" will be reported for that sample and the detection limit will also be reported.

5. Representative Sampling

Samples and measurements of the monitored waste shall be representative of the volume and nature of the waste stream. The permittee shall maintain a written sampling and monitoring schedule.

6. Reporting

All reports or information submitted in compliance with this permit or requested by the Division must be signed by a principal executive officer, elected official, or other authorized representative. Required analytical results obtained by the permittee shall be summarized on a Combined Sewer Overflow Monitoring Report form and any additional Division specified forms. Monitoring results shall be submitted to the Division postmarked no later than the 15th day of the month following the end of the reporting period. The Division may require in writing that additional monitoring results

be reported. Signed copies of these and all other required reports shall be submitted to:

Georgia Environmental Protection Division
Permitting, Compliance and Enforcement Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

7. Record Retention

The permittee shall retain the following records:

a. All laboratory analyses performed including sample data, quality control data, standard curves, etc;

b. Calibration and maintenance records of laboratory instruments;

c. CSO monitoring records;

d. Sewer system operation and maintenance records;

e. Copies of all reports required by this permit; and

f. All data and information used to complete the application for this permit.

These records shall be maintained for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by Division written notification.

B.1. Monitoring Requirements – CSO Control Facilities

a) Clear Creek CSO Control Facility (002) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge box culvert above the juncture with Clear Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00817[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0195[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.194[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

b) Proctor Creek – North Avenue CSO Control Facility (003) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipe above the juncture of the discharge into the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00882[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0247[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, lead, nickel and zinc to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

c) Tanyard Creek CSO Control Facility (004) - Beginning on the effective date of this permit and continuing until the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each measured CSO discharge event and total hours of discharge	Each Discharge Event[4]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[4] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00356[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0173[2]	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	0.172[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, zinc, lead and nickel to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

B.1. Monitoring Requirements – CSO Control Facilities (Continued)

d) Proctor Creek – Greensferry CSO Control Facility (005) - Beginning on the effective date of this permit and continuing until the sewer separation project in this subbasin is complete and approved by EPD, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located immediately below the control facility at the foot bridge over the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division. Once the sewer separation project in this basin is complete and approved by EPD, this outfall will no longer be covered under this permit and any discharge of sanitary sewage from this outfall will be prohibited.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each measured CSO discharge event and total hours of discharge	Each Discharge Event[3]	Continuous Recording	Effluent
Temperature	Report °C of each sample	12/Year[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Residual Chlorine	Report mg/l for each grab sample	See Part II.B.1.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[2] 2,000 (daily max) 1,000 (monthly avg)[2] 4,000 (daily max)	See Part II.B.1.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	12/Year[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 12 times per year[1]. See Part II.D.2 of the permit for the compliance schedule for meeting these limits.

[1] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

[2] The permittee shall report the monthly average value in accordance with Part II.B.1.e.3 of the permit and attain compliance with the monthly average fecal coliform limits in accordance with Part II.D.2. of the permit.

[3] The permittee shall measure and report the flow and duration of each CSO discharge event as defined in Part I.A.1.j.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	0.00458[2]	12/Year[3]	Composite	Effluent
Total Recoverable Copper[1]	0.0111[2]	12/Year[3]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each composite sample	12/Year[3]	Composite	Effluent

[1] The permittee is to analyze total recoverable cadmium, copper, lead, nickel and zinc to the detection limits specified by the Division.
[2] This is a daily maximum limitation. The permittee will attain compliance with these limits in accordance with Part II.D.2. of the permit.
[3] The permittee shall measure a minimum of 12 CSO discharge events per year with best efforts to monitor at least 2 CSO discharges during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan.

e) Additional Monitoring Requirements and Effluent Limitations for all CSO control facilities (002-005)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling: The permittee shall collect a grab sample from a minimum of four overflow sampling events per calendar month from each CSO control facility at the Sampling Point during first flush. If fewer than four overflow sampling events occur, then the permittee shall collect a grab sample from each that does occur. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

5) Within 30 days of permit issuance, the permittee shall submit an update of its approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) to the Division for approval. The update is to reflect any new sampling requirements under Part II.B.1 of this permit.

6) The CSO discharge(s) must not cause or contribute to violations of the Georgia water quality standards, at flow rates less than or equal to 7700 MGD for the Clear Creek CSO Control Facility, 2600 MGD for the Proctor Creek – North Avenue CSO Control Facility, 3600 MGD for the Tanyard Creek CSO Control Facility, and 1337 MGD for the Proctor Creek – Greensferry CSO Control Facility pursuant to the

State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code. See the Compliance Schedule for meeting specific water quality standards in Part II.D.2.

f) The CSO discharge(s) from the CSO control facilities must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1. Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2. Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3. Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.I of the permit;

4. Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5. Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

B.2. Monitoring Requirements – CSO WQCF

a) West Area CSO WQCF (001) - Beginning on the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is after the final treatment process and prior to discharge to the Chattahoochee River unless a different location is identified in the sampling plan approved by the Division.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Suspended Solids	Report mg/l for each composite sample. See Part II.F.	1/Discharge Event[1]	Composite	Influent and Effluent
Total Phosphorus	Report mg/l for each composite sample	1/Discharge Event[1]	Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken during each CSO discharge event[1].

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

b) Clear Creek CSO Control Facility (002) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge box culvert above the juncture with Clear Creek unless a different location is identified in a sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/ Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/ Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

c) Proctor Creek – North Avenue CSO Control Facility (003) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the CSO discharge pipe above the juncture of the discharge into the tributary to Proctor Creek unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1 [2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

B.2. Monitoring Requirements (Continued) – CSO Control Facilities

d) Tanyard Creek CSO Control Facility (004) - Beginning the date that the CSO WQCF construction is substantially complete and EPD has provided the permittee with written approval to operate the CSO WQCF, the permittee shall monitor the following parameters and be limited as follows. The approved sampling point is located in the box culvert below the discharge from the control facility and above the juncture with the open channel unless a different location is identified in the sampling plan approved by the Division. The Control Facility should discharge an average of four times per year (See Part II.E. of the permit).

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow- (MG)	Report total flow of each CSO discharge event and total hours of discharge	Each Discharge Event[1]	Continuous Recording	Effluent
Temperature	Report °C of each sample	1/Discharge Event[1]	Grab	Effluent
Ammonia as N	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Residual Chlorine	0.1[2]	See Part II.B.2.e.3	Grab	Effluent
Fecal Coliform Bacteria (#/100ml) May – Oct Nov – April	 200 (monthly avg)[3] 2,000 (daily max) 1,000 (monthly avg)[3] 4,000 (daily max)	See Part II.B.2.e.3	Grab	Effluent
Biochemical Oxygen Demand (5-day)	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Suspended Solids	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent
Total Phosphorus	Report mg/l for each grab and composite sample	1/Discharge Event[1]	Grab and Composite	Effluent

The pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored on the effluent by analyzing grab samples taken 1/discharge event.

[1] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each grab and composite sample on its discharge monitoring reports.

[2] This is a daily maximum limitation. See Part II.D.1. of the permit.

[3] The permittee shall report the monthly average value in accordance with Part II.B.2.e.3 of the permit.

Parameter	Discharge Limitations mg/l unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Total Recoverable Cadmium[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Copper[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Lead[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Nickel[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent
Total Recoverable Zinc[1]	Report mg/l for each sample	1/Discharge Event[2]	Composite	Effluent

[1] Total recoverable cadmium, copper, lead, nickel and zinc shall be analyzed to the detection limits provided by the Division.
[2] The permittee shall take samples during each CSO discharge event as defined in Part I.A.1.j. The permittee shall report the result of each composite sample on its discharge monitoring reports. See Part II.C. of the permit.

e) Additional Monitoring Requirements and Effluent Limitations for the CSO WQCF and the CSO control facilities (001-004)

1) Grab samples shall be collected at the sampling point during the first flush of the CSO discharge.

2) Composite samples shall be collected at the sampling point beginning during the first flush of the CSO discharge and continuing until the discharge stops, with the sample period not to exceed 24 hours.

3) Fecal Coliform Bacteria and Total Residual Chlorine Sampling:

The permittee shall collect a grab sample from each CSO overflow sampling event from the CSO WQCF and the CSO control facilities. An "overflow sampling event", as it applies to this paragraph, begins at the start of a CSO discharge lasting more than 50 minutes and continues until the overflow stops. The next overflow sampling event shall not begin until at least 48 hours have elapsed since the end of the last CSO discharge. One grab sample shall be taken during the first hour of the overflow sampling event, and once during each successive 24 hour period of continuous overflow. Each sample from a continuous overflow shall be taken no less than 24 hours from the previous sample. The monthly average fecal coliform concentration shall be calculated as a geometric mean of at least 4 grab samples collected over the calendar month at intervals of not less than 24 hours. Since at least 4 samples are needed to calculate a monthly average value, if fewer than four grab samples are taken as described above, the permittee is to report "not applicable" on the discharge monitoring report for the monthly average fecal coliform bacteria concentration and will only report the maximum value. The permittee is to report the result of every grab sample for Total Residual Chlorine on its discharge monitoring report.

4) The permittee shall perform a scan of the priority pollutants on the CSO WQCF and CSO control facilities' effluent once during the term of this permit after the permittee has received written permission to operate the WQCF. The permittee should attempt to take these samples within 90 days of being given permission to operate the WQCF (if rainfall is adequate to result in overflows from the CSO WQCF and/or the CSO control facilities). The permittee shall take the sample as a grab sample. If substances are measured at levels which may be of concern, the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to address the specific pollutants of concern.

5) The permittee shall monitor the amount of rainfall every hour at a location or locations which provide representative data for the combined sewer area in accordance with the approved sampling plan.

6) The permittee shall update their approved sampling plan (referenced in Parts I.A., II.A., and II.B. of this permit) and receive Division approval of the updated plan, prior to operation of the CSO WQCF and the CSO control facilities at their Part II.B.2. limits. The plan is to be updated to reflect the sampling requirements under Part II.B.2 of the permit.

7) The CSO discharge(s) must not cause or contribute to violation of the Georgia water quality standards, at flow rates less than or equal to 7700 MGD for the Clear Creek CSO Control Facility, 2600 MGD for the Proctor Creek – North Avenue CSO Control Facility, and 3600 MGD for the Tanyard Creek CSO Control Facility, pursuant to the State Rules and Chapters 12-5-29.1 and 12-5-30.2 of the Code.

f) The CSO discharge(s) from the CSO WQCF and the CSO control facilities must be controlled to prevent the following conditions for waters downstream of the discharge(s):

1) Materials which will settle to form sludge deposits that become putrescent, unsightly or interfere with legitimate water uses;

2) Oil and scum in amounts sufficient to be unsightly or to interfere with legitimate water uses;

3) Floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses at flow rates less than or equal to the flows established in Part I.A.1.l of the permit;

4) Materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses; and

5) Toxic, corrosive, acidic or caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

g) Upstream and Downstream Monitoring:

The permittee shall sample the waters of the State upstream and downstream from the CSO WQCF while it is discharging a minimum of 12 times per year with best efforts to collect samples at least twice during each quarter of the year and with best efforts to collect at least one sample per calendar month in accordance with the approved sampling plan. Upstream and downstream samples are to be taken at the representative sampling locations defined in the permittee's sampling plan. The downstream sample is to be collected at a point after adequate mixing of the CSO discharge with the receiving stream. The samples shall be analyzed for the same parameters found in Part II.B.2.a. of the permit (except for flow).

C. Long-Term Control Plan and Metal Limits

The limits for metals found in Part II.B.1.(a-d) were developed using the State's dissolved instream criteria and translation factors that were calculated using data gathered by the permittee during characterization of the CSO discharge. The permittee has also performed some preliminary water-effect ratio (WER) work on copper and zinc for the CSO control facility discharges and is also pursuing a recalculation of the zinc standard for the area of the CSO discharges. Whole effluent toxicity data indicates that the CSO effluent from the CSO control facilities is not acutely toxic. The WER data indicates that the copper limits could be higher than those in the permit and still be protective of aquatic life. However, there was insufficient data at the time of permit issuance to make any changes to the metal limits based on the WER.

The permittee has developed a long-term control plan to enable it to attain compliance with the requirements of the Clean Water Act including metal limitations. The long-term control plan involves a combination of sewer separation and the construction of additional storage and treatment capacity (i.e. West Area CSO WQCF) in accordance with the Authorized Revised CSO Remedial Measures Plan. The CSO WQCF will provide enhanced primary treatment and disinfection. The storage and treatment component of the WQCF and tunnel were designed to provide for the capture and treatment of all but an average of four storm events per year over a five year period. The portion of the CSOs in excess of the capacity of the proposed storage system will be screened, disinfected and discharged to the local streams through the remaining CSO control facilities (except for any that are separated as part of the plan). The CSO control facilities should only discharge during very large rain events, approximately four times a year as described above.

Once the WQCF is constructed and operational, the effluent from the remaining CSO control facilities is predicted to be different than that which was discharged prior to CSO WQCF operation. Since discharges will only occur in heavy rain events, the discharge should be more dilute. The permittee will be required to sample for metals during each CSO discharge event from the CSO control facilities and the CSO WQCF once the WQCF is operational. Since the effluent from the CSO control facilities is predicted to be different, the site-specific translators used in the calculation of B.1.(a-d) limits and the permittee's preliminary WERs are predicted to change. The permittee is encouraged to collect data for developing site-specific translators and/or water-effect ratios (or other analyses as provided using current EPA Site Specific Criteria Guidance in accordance with Chapter 391-3-6-.06(4)(d)5(ii) of the State Rules) at the same time it collects the metal data required by the permit. Once at least 10 data points are gathered for each metal for the CSO control facilities and the CSO WQCF, EPD will use its Reasonable Potential Procedures to determine if effluent limitations for metals are required or whether the monitoring requirements may be reduced or terminated. EPD will use the permittee's translator and/or WER data (if it is found to be acceptable) in the Reasonable Potential analysis and in the development of permit limits if necessary.

D. Compliance Schedules

1. The permittee shall attain compliance with the total residual chlorine limit at the CSO control facilities (other than Proctor Creek – Greensferry control facility) and the CSO WQCF effective sixty (60) days after the scheduled completion dates of the dechlorination facilities as provided through the Federal Consent Decree or sixty (60)