

Annual Report for Wastewater Treatment Works / Wastewater Collection System

I. General Information

Name of regulated entity:

Town of Carolina Beach

Responsible entity, person, or contact with phone number & address:

Name: William J. Raymond

Title: Wastewater Treatment Superintendent

Address: 404 S. Dow Road, Carolina Beach, NC

Phone: (910) 458-2976

Listing of applicable permits:

NPDES NC0023256

L.A. WQ0007728

S.I. WQ0019336

WWC WQCS00076

Description of collection or treatment process:

The Town of Carolina Beach has fourteen lift stations in the collection system, 30 miles of 10" & 8" gravity sewer lines, 5 miles of force main lines, and a wastewater treatment facility with a permitted flow of 3.0 million gallons per day (MGD) consisting of a mechanical bar screen, manual bar screen, mechanical grit removal, influent and effluent flow recorder & samplers, three extended aeration basins, dual clarifiers, aerobic digestion / dual sludge storage basins, equalization basin, three media down flow filters, gas chlorination / dechlorination system, chlorination / dechlorination contact chamber, dual generators, and a spray irrigation / reclaimed water utilization system on a 6.7 acre field adjacent to the treatment facility. The facility is permitted to spray a maximum average daily volume of 30,000 gallons of treated effluent water per day on the field, which is seeded with Bermuda sod. A total of 14,602 gallons were sprayed on the reuse field during the 2011 fiscal year. The facility is also permitted to land apply residual biosolids from the treatment process on 41.9 acres of agricultural sites in Columbus County. The Town of Carolina Beach uses Synagro Central, LLC, for all contract land applications. A total of 328,600 gallons of biosolids were land applied from the WWTP during the 2011 fiscal year.

II. Performance

Text Summary System Performance for the 2011 fiscal year (beginning July 1, 2010):

The Town of Carolina Beach wastewater facility treated 496,471,000 gallons of wastewater during the 2011 fiscal year. The daily average flow treated during the 2010 fiscal year was 1.360 MGD, or 45% of the 3.0 MGD treatment capacity. NPDES Permit # NC0023256 requires the Town of Carolina Beach WWTP to analyze its effluent discharge daily Monday through Friday (excluding holidays) for the following parameters: Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Residual Chlorine (TRC), Dissolved Oxygen (DO), pH, Enterococcus, Ammonia Nitrogen, Conductivity, and Temperature. All of these tests are analyzed on site at the certified WWTP laboratory. The WWTP must also analyze its incoming influent for BOD and TSS; both of these are analyzed on site as well. Total Nitrogen and Total Phosphorus are required to be analyzed monthly; these analyses are sent out to a contract laboratory. Total Copper, Total Zinc, and Acute Toxicity are required to be analyzed quarterly; these are sent out to a contract laboratory as well. An annual effluent pollutant scan of 109 parameters is also required once a year. The results of all these parameters are summarized in the attached spreadsheets with this report.

List (by month) of the number and type of any violations of permit conditions, environmental regulations or environmental laws (i.e. date, type, permit limit violations, monitoring and reporting violations, (illegal) bypass of treatment facilities, sanitary sewer overflows and estimated total monthly volumes and locations of events in which more than 1000 gallons of waste reached surface waters), and describe corrective actions taken:

Permit Limit Violations (Discharge / Non-Discharge)

There were no discharge or non-discharge permit limit violations during the 2011 fiscal year.

Monitoring and Reporting Violations or Deficiencies

There were 4 monitoring and reporting violations during the 2011 fiscal year (August 2010 – 3, September 2010 – 1). The August 2010 noncompliances were no total copper or total zinc values reported for the month of August and no effluent NH₃ value reported on 8/13. The NH₃ noncompliance was caused by the sample being mistakenly discarded by the laboratory technician, and it was addressed as an internal personnel matter. The total copper and total zinc samples are sent out to a contract laboratory quarterly, and the August samples were missed due to a scheduling error. The September 2010 noncompliance was no effluent NH₃ value reported on 9/7 due to the sample being mistakenly discarded by the lab tech. This matter was addressed internally as well.

Sanitary Sewer Overflows

There were three reportable sanitary sewer overflow (SSO) events during the 2011 fiscal year. All three events occurred between 9/29/2010 and 10/4/2010 as a result of the 21.2 inches of rain and the tidal flooding associated with Tropical Storm Nicole. An estimated 571,650 gallons of wastewater reached surface waters at Myrtle Grove Sound and Carolina Beach Lake from SSOs at 23 manholes on the gravity sewer lines

leading to Lift Station #1 on Canal Drive near the Boardwalk from 9/29/2010 to 10/4/2010. An estimated 33,750 gallons of wastewater reached surface waters at Myrtle Grove Sound and Carolina Beach Lake from an SSO at a manhole at Spartanburg Ave. and South Lake Park Blvd. from 9/29/2010 to 10/4/2010. An estimated 31,680 gallons of wastewater reached surface waters through the marsh area leading to Myrtle Grove Sound from SSOs at two manholes on St. Joseph St. and a manhole at Lewis Drive and St. Joseph St. from 9/29/2010 to 10/1/2010. All three SSO events were properly reported to the N.C. Division of Water Quality and the public was notified of the events.

Any known environmental impact of violations:

The sanitary sewer overflows associated with Tropical Storm Nicole did not cause any fishkills or other significant environmental impacts. Since the overflows occurred as a result of the collection system becoming inundated with stormwater, the wastewater that reached surface waters was extremely diluted; and therefore, the sewer overflows did not have the impacts that a spill of typical domestic wastewater would have had.

III. Notification

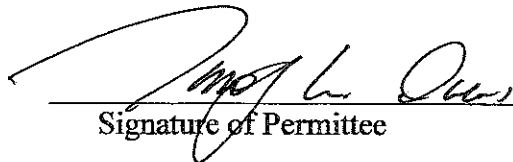
Statement as to how users or customers have been provided access to the report:

A public notice is placed in the local newspapers stating that copies of the annual report for the wastewater treatment plant and collection system are available upon request at the Town of Carolina Beach administration building. The report is also available on the town's website.

IV. Certification

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the users or customers of the named system and that those users have been notified of its availability.

Tim Owens, Manager, Town of Carolina Beach
Permittee (Name of permittee, Title, Entity)


Signature of Permittee

Sept 1, 2011
Date

IMPORTANT DEFINITIONS

NPDES Permit – National Pollutant Discharge Elimination System Permit is the regulatory agency document issued by either a federal state agency designed to control all discharges of pollutants from point sources into U.S. waterways. NPDES permits regulate discharges into navigable waters from all point sources of pollution, including industries, municipal wastewater treatment plants, sanitary landfills; large agricultural feed lots and return irrigation flows.

L.A. Permit – Land Application permit is the document that regulates the land application of biosolids.

Biochemical Oxygen Demand (BOD) – The rate at which organisms use the oxygen in water or wastewater while stabilizing decomposable matter serves as food for the bacteria and energy results from its oxidation. BOD measurements are used as a measure of the organic strength of wastewater.

Total Suspended Solids (TSS) – TSS are solids that either float on the surface or are suspended in water, wastewater, or other liquids.

Total Chlorine Residual (Tot. Cl₂) – This is the amount of chlorine remaining after a given contact time. It is also the sum of the combined available residual chlorine and the free available residual chlorine.

pH – A liquid measurement range of acidity or basicity scaled from 0 to 14, with 0 being the most acidic, 14 being the most basic, and 7 being neutral. Natural water usually has a pH between 6.5 and 8.5. NPDES permits in N.C. do not ask for average pH values because pH is measured on a logarithmic scale and arithmetic or geometric means do not apply to the data. This is the reason only monthly maximum and minimum pH values are reported.

Fecal Coliform (FECAL COLIF.) – Fecal coliforms are the coliform bacteria found in the feces of various warm-blooded animals.

Dissolved Oxygen (DO) – Molecular (atmospheric) oxygen dissolved in water and wastewater.

Acute Toxicity (ACUTE TOX.) – This is a bioassay method of determining toxic effects of industrial or other wastes by using live organisms such as fish for test organisms.

Conductivity (COND.) – Conductivity is a numerical measurement representing the ability of a solution to carry electric current.

Enterococci (ENTERO.) – Enterococci are indicator bacteria found in the feces of warm-blooded animals. The switch from fecal coliform to enterococci testing requirements on our discharge permit is a result of EPA studies which indicate enterococci to have a greater correlation with swimming-associated gastrointestinal illness than fecal coliform.

Ammonia Nitrogen (NH₃-N) – Biological processes reduce NH₃-N concentration. Concentration of NH₃-N has permit limits because of its direct relation to fish toxicity.

Total Nitrogen, Total Phosphorus (TOTAL NITR., TOTAL PHOS.) – Nitrogen and phosphorus are important nutrients in the reproduction of microorganisms necessary for biological treatment of waste. However, the concentrations of these two nutrients are monitored because excessive amounts of these nutrients in an effluent can affect the oxygen demand in a receiving stream and cause algal blooms.

Total Copper, Total Zinc (TOTAL CU, TOTAL ZN) – The concentrations of the metals, copper and zinc, are monitored because they are commonly found pollutants that have toxic effects on a receiving stream in excessive amounts.

Parts per million (ppm) or Milligrams per liter (mg/L) – one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/L) – one part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

Colony-forming units per 100 milliliters (CFU/100 mL) – Fecal coliform bacteria form colonies on plates prepared in laboratory analysis. After 24 hours of bacterial growth is allowed on the plates, the colonies are counted and reported as colony-forming units per 100 milliliters of sample.

Micromhos per centimeter (µMHOS/CM) – Since conductivity represents the ability of a solution/sample to carry electric current (also known as “conductance”) and the reciprocal of conductance is electric resistance, measured in ohms, the measurement of conductance is in reciprocal ohms, or mhos. Micromhos per centimeter is an expression of conductance in mhos converted into a more convenient unit for water analysis.

Most probable number per 100 milliliters (MPN/100 mL) – These are the units designated to count the concentration of enterococci in a test sample.

Median Lethal Concentration (LC₅₀) – This measure is used to estimate the acute toxicity of the organism *Menidia beryllina* for our quarterly acute toxicity requirement. It refers to the estimated concentration of wastewater effluent that would be lethal to 50% of the test organisms in 24 hours.

PLANT PERFORMANCE FORM								
Plant Name: Carolina Beach Wastewater Facility								
YEAR	FLOW	BOD	BOD	TSS	TSS	Tot.CL2	DO	Temp.
2010/ 2011	OUT (MGD)	IN (ppm)	OUT (ppm)	IN (ppm)	OUT (ppm)	OUT (ppb)	OUT (ppm)	OUT (*C)
NPDES								
PERMIT	3.000	X X X	S / 5.0	X X X	30.0	13	5.0	X X X
LIMITS			W / 10.0					
JUL.	1.822	132.0	0.9	60	0.4	0	5.4	29.0
AUG.	1.588	127.6	1.3	63	0.5	1	6.2	29.5
SEPT.	1.508	131.8	0.9	107	0.2	0	6.7	28.1
OCT.	1.974	77.9	0.8	77	0.2	0	6.5	24.7
NOV.	1.283	104.3	0.5	83	0.1	0	7.3	20.9
DEC.	1.162	130.4	0.9	94	0.2	0	8.9	15.4
JAN.	1.038	136.0	0.9	93	0.6	0	8.8	13.9
FEB.	1.212	106.9	2.2	75	0.4	1	8.7	14.7
MAR.	1.080	114.1	1.1	83	0.7	0	7.3	17.0
APR.	1.206	141.8	2.1	54	0.3	2	6.4	20.2
MAY	1.123	137.3	0.4	69	0.8	1	6.2	23.9
JUN.	1.309	196.3	0.9	152	0.3	0	6.4	28.2
YEARLY								
AVG.	1.360	128.4	1.1	84	0.4	0	7.0	22.2
Sample frequency - Daily: BOD, TSS, Tot. CL2, DO, Ph, ENTERO., NH3-N, COND., TEMP., (Daily sample frequency represents the Monday through Friday workweek, excluding weekends and holidays.)								
Monthly: TOTAL NITR., TOTAL PHOS.,								
Quarterly: ACUTE TOX., TOTAL CU, TOTAL ZN								
* "S" represents the permitted summer months (April through October)								
* "W" represents the permitted winter months (November through March)								

PLANT PERFORMANCE FORM										
Plant Name: Carolina Beach Wastewater Facility										
YEAR	pH	ENTERO.	NH3-N	TOTAL	TOTAL	COND.	TOTAL	TOTAL	ACUTE TOX	ACUTE TOX
				NITR.	PHOS.		CU	ZN	Mysidopsis	Meridia
2010/ 2011	OUT (UNITS)	OUT (MPN/ 100 mL)	OUT (ppm)	OUT (ppm)	OUT (ppm)	OUT (µMHOS/ CM)	OUT (ppm)	OUT (ppm)	OUT bahia	OUT beryllina
NPDES										
PERMIT LIMITS	6.8 / 8.5	35/100mL	S: 2.0 W: 4.0	X X X	X X X	X X X	X X X	X X X	PASS/ FAIL	LC ₅₀ %
JUL.	7.0 / 7.4	6	0.1	31.1	4.83	1707				
AUG.	7.1 / 7.3	11	0.8	13.6	3.53	1855			PASS	>100%
SEP.	6.9 / 7.3	11	0.3	28.6	3.17	2310				
OCT.	6.8 / 7.3	9	0.2	7.2	0.84	1434				
NOV.	6.9 / 7.7	4	0.7	15.8	1.64	1804	<0.010	0.022	PASS	>100%
DEC.	7.0 / 7.5	4	0.2	14.2	2.23	1409				
JAN.	7.1 / 7.4	3	0.0	11.6	2.69	1352				
FEB.	7.1 / 7.3	5	0.0	14.1	2.03	1147	<0.010	0.035	PASS	>100%
MAR.	7.1 / 7.3	6	1.1	16.2	2.58	1296				
APR.	7.0 / 7.4	4	1.0	21.8	4.91	1285				
MAY	7.2 / 7.4	4	0.5	15.7	3.44	1705	0.012	0.035	PASS	>100%
JUN.	7.1 / 7.4	8	0.2	18.7	4.14	1640				
YEARLY AVG.	X X X	5	0.4	17.4	3.00	1581	0.004	0.031	X X X	X X X
* "S" represents the permitted summer months (April through October)										
* "W" represents the permitted winter months (November through March)										

Non-Discharge Wastewater/Spray Irrigation Performance Form

Facility Name: Town of Carolina Beach Wastewater Treatment Facility

YEAR 2010/2011	Daily Rate (Flow) Irrigated (GPD)	pH (UNITS)	Turbidity (NTU)	BOD (mg/L)	NH₃-N (mg/L)	TSS (mg/L)
Conjunctive Use Reclaimed Water Permit Limits	30,000	6.0 / 9.0	10 (instantaneous)	10.0	4.0	5.0
JULY	0	NA	NA	NA	NA	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	0	NA	NA	NA	NA	NA
JANUARY	0	NA	NA	NA	NA	NA
FEBRUARY	0	NA	NA	NA	NA	NA
MARCH	0	NA	NA	NA	NA	NA
APRIL	0	NA	NA	NA	NA	NA
MAY	0	NA	NA	NA	NA	NA
JUNE	14602	7.1 / 7.4	0.5	1.2	0.2	0.3
YEARLY AVG.	40	X X X X X	0.5	1.2	0.2	0.3
YEARLY MAX.	14602	7.4	0.5	1.2	0.2	0.3
YEARLY MIN.	0	7.1	0.5	1.2	0.2	0.3

Sample frequency requirements:

As used: Flow

Continuous: Turbidity

2 / Month: BOD, NH₃-N, TSS, Fecal Coliform

Triannually: NO₃, TDS, TOC, Chloride

Non-Discharge Wastewater/Spray Irrigation Performance Form

Facility Name: Town of Carolina Beach Wastewater Treatment Facility

YEAR 2010/2011	Fecal Coliform (CFU / 100 mL)	NO₃ (mg/L)	TDS (mg/L)	TOC (mg/L)	Chloride (mg/L)
Conjunctive Use Reclaimed Water Permit Limits	14.0				
JULY	NA	30.8	1120	8.7	723
AUGUST	NA				
SEPTEMBER	NA				
OCTOBER	NA				
NOVEMBER	NA	13.8	1150	11.2	524
DECEMBER	NA				
JANUARY	NA				
FEBRUARY	NA				
MARCH	NA	15.5	748	12.1	241
APRIL	NA				
MAY	NA				
JUNE	0				
YEARLY AVG.	0	20.0	1006	10.7	496
YEARLY MAX.	0	30.8	1150	12.1	723
YEARLY MIN.	0.0	13.8	748	8.7	241

Sample frequency requirements:

As used: Flow

Continuous: Turbidity

2 / Month: BOD, NH₃-N, TSS, Fecal Coliform

Triannually: NO₃, TDS, TOC, Chloride

Town of Carolina Beach NORTH CAROLINA • USA • 28428



Operations Department, 1121 N. Lake Park Blvd., Carolina Beach, NC 28428
Phone: (910) 458-8291; Fax: (910) 458-2528

January 12, 2011

North Carolina Department of Environment and Natural Resources
Division of Water Quality
Compliance and Enforcement Unit
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Enclosed is a copy of the Annual Effluent Pollutant Scan for the Town of Carolina Beach Wastewater Treatment Facility effluent sampled on December 1, 2010. The NPDES Permit number for the facility is NC0023256. If there are any questions or concerns, feel free to contact me at your convenience.

William J. Raymond
Wastewater Treatment Superintendent
Town of Carolina Beach
1121 N. Lake Park Blvd.
Carolina Beach, NC 28428
Phone: 910-458-2976; Fax: 910-458-2984; Cell: 910-465-1946
E-mail: bill.raymond@carolinabeach.org

Annual Monitoring and Pollutant Scan

Permit No. NC 0023256
Outfall 001Month December
Year 2010Facility Name Town of Carolina Beach WWTP
Date of sampling December 1, 2010
Analytical Laboratory Environmental Chemists, Inc.ORC William J. Raymond
Phone (910) 458 - 2976

Parameter	Sample Type	Analytical Method	Quantitation Level	Sample Result	Units of Measurement	Number of samples
Ammonia (as N)	Composite	EPA 350.1	0.2	<0.2	mg/L	18
Dissolved oxygen	Grab	S.M. 4500-o G.	0.01	7.26 @ 20.8°C	mg/L	1
Nitrate/Nitrite	Composite	EPA 353.2/S.M.4500NO ₂ -B	0.02	12.3	mg/L	18
Total Kjeldahl nitrogen	Composite	EPA 351.2	0.5	0.9	mg/L	18
Total Phosphorus	Composite	S.M. 4500-P-F	0.04	2.24	mg/L	18
Total dissolved solids	Composite	S.M. 2540-C	2.5	923	mg/L	18
Hardness	Composite	S.M. 2340-C	5	295	mg/L	18
Chlorine (total residual, TRC)	Grab	HACH 10070DPD	10	<10	µg/L	1
Oil and grease	Grab	EPA 1664	5	<5	mg/L	1
Metals (total recoverable), cyanide and total phenols						
Antimony	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Arsenic	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Beryllium	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Cadmium	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Chromium	Composite	EPA 200.8	0.010	<0.010	mg/L	18
✓ Copper	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Lead	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Mercury	Composite	EPA 1631 E	0.500	0.577	ng/L	18
Nickel	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Selenium	Composite	EPA 200.8	0.010	<0.010	mg/L	18
Silver	Composite	EPA 200.8	0.010	<0.010	mg/L	18
✓ Thallium	Composite	EPA 200.8	0.010	<0.010	mg/L	18
✓ Zinc	Composite	EPA 200.8	0.010	0.033	mg/L	18
✓ Cyanide	Grab	EPA 335.4	0.005	<0.005	mg/L	1
Total phenolic compounds	Grab	EPA 420.1	0.004	<0.004	mg/L	1
Volatile organic compounds						
Acrolein	Grab	EPA 624	5	<5	µg/L	1
Acrylonitrile	Grab	EPA 624	5	<5	µg/L	1
Benzene	Grab	EPA 624	0.5	<0.5	µg/L	1
Bromoform	Grab	EPA 624	0.5	7.39	µg/L	1
Carbon tetrachloride	Grab	EPA 624	0.5	<0.5	µg/L	1
Chlorobenzene	Grab	EPA 624	0.5	<0.5	µg/L	1
Chlorodibromomethane	Grab	EPA 624	0.5	15.9	µg/L	1
Chloroethane	Grab	EPA 624	0.5	<0.5	µg/L	1
2-chloroethylvinyl ether	Grab	EPA 624	0.5	<0.5	µg/L	1
Chloroform	Grab	EPA 624	0.5	3.73	µg/L	1
Dichlorobromomethane	Grab	EPA 624	0.5	11.6	µg/L	1
1,1-dichloroethane	Grab	EPA 624	0.5	<0.5	µg/L	1
1,2-dichloroethane	Grab	EPA 624	0.5	<0.5	µg/L	1
Trans-1,2-dichloroethylene	Grab	EPA 624	0.5	<0.5	µg/L	1

Annual Monitoring and Pollutant Scan

Permit No. NC0023256
Outfall 001Month December
Year 2010

Parameter	Sample Type	Analytical Method	Quantitation Level	Sample Result	Units of Measurement	Number of samples
Volatile organic compounds (Cont.)						
1,1-dichloroethylene	Grab	EPA 624	0.5	<0.5	µg/L	1
1,2-dichloropropane	Grab	EPA 624	0.5	<0.5	µg/L	1
1,3-dichloropropylene	Grab	EPA 624	0.5	<0.5	µg/L	1
Ethylbenzene	Grab	EPA 624	0.5	<0.5	µg/L	1
Methyl bromide	Grab	EPA 624	0.5	<0.5	µg/L	1
Methyl chloride	Grab	EPA 624	0.5	<0.5	µg/L	1
Methylene chloride	Grab	EPA 624	0.5	<0.5	µg/L	1
1,1,2,2-tetrachloroethane	Grab	EPA 624	0.5	<0.5	µg/L	1
Tetrachloroethylene	Grab	EPA 624	0.5	<0.5	µg/L	1
Toluene	Grab	EPA 624	0.5	<0.5	µg/L	1
1,1,1-trichloroethane	Grab	EPA 624	0.5	<0.5	µg/L	1
1,1,2-trichloroethane	Grab	EPA 624	0.5	<0.5	µg/L	1
Trichloroethylene	Grab	EPA 624	0.5	<0.5	µg/L	1
Vinyl chloride	Grab	EPA 624	0.5	<0.5	µg/L	1
Acid-extractable compounds						
P-chloro-m-cresol	Grab	EPA 625	5	<5	µg/L	1
2-chlorophenol	Grab	EPA 625	5	<5	µg/L	1
2,4-dichlorophenol	Grab	EPA 625	5	<5	µg/L	1
2,4-dimethylphenol	Grab	EPA 625	5	<5	µg/L	1
4,6-dinitro-o-cresol	Grab	EPA 625	25	<25	µg/L	1
2,4-dinitrophenol	Grab	EPA 625	25	<25	µg/L	1
2-nitrophenol	Grab	EPA 625	25	<25	µg/L	1
4-nitrophenol	Grab	EPA 625	25	<25	µg/L	1
Pentachlorophenol	Grab	EPA 625	25	<25	µg/L	1
Phenol	Grab	EPA 625	5	<5	µg/L	1
2,4,6-trichlorophenol	Grab	EPA 625	5	<5	µg/L	1
Base-neutral compounds						
Acenaphthene	Grab	EPA 625	5	<5	µg/L	1
Acenaphthylene	Grab	EPA 625	5	<5	µg/L	1
Anthracene	Grab	EPA 625	5	<5	µg/L	1
Benzidine	Grab	EPA 625	10	<10	µg/L	1
Benzo(a)anthracene	Grab	EPA 625	5	<5	µg/L	1
Benzo(a)pyrene	Grab	EPA 625	5	<5	µg/L	1
3,4 benzofluoranthene	Grab	EPA 625	5	<5	µg/L	1
Benzo(ghi)perylene	Grab	EPA 625	5	<5	µg/L	1
Benzo(k)fluoranthene	Grab	EPA 625	5	<5	µg/L	1
Bis (2-chloroethoxy) methane	Grab	EPA 625	5	<5	µg/L	1
Bis (2-chloroethyl) ether	Grab	EPA 625	5	<5	µg/L	1
Bis (2-chloroisopropyl) ether	Grab	EPA 625	5	<5	µg/L	1
Bis (2-ethylhexyl) phthalate	Grab	EPA 625	5	<5	µg/L	1
4-bromophenyl phenyl ether	Grab	EPA 625	5	<5	µg/L	1
Butyl benzyl phthalate	Grab	EPA 625	5	<5	µg/L	1
2-chloronaphthalene	Grab	EPA 625	5	<5	µg/L	1

Annual Monitoring and Pollutant Scan

Permit No. NC 0023256
Outfall 001Month December
Year 2010

Parameter	Sample Type	Analytical Method	Quantitation Level	Sample Result	Units of Measurement	Number of samples
4-chlorophenyl phenyl ether	Grab	EPA 625	5	<5	µg/L	1
Base-neutral compounds (cont.)						
Chrysene	Grab	EPA 625	5	<5	µg/L	1
Di-n-butyl phthalate	Grab	EPA 625	5	<5	µg/L	1
Di-n-octyl phthalate	Grab	EPA 625	5	<5	µg/L	1
Dibenzo(a,h)anthracene	Grab	EPA 625	5	<5	µg/L	1
1,2-dichlorobenzene	Grab	EPA 625	5	<5	µg/L	1
1,3-dichlorobenzene	Grab	EPA 625	5	<5	µg/L	1
1,4-dichlorobenzene	Grab	EPA 625	5	<5	µg/L	1
3,3-dichlorobenzidine	Grab	EPA 625	10	<10	µg/L	1
Diethyl phthalate	Grab	EPA 625	5	<5	µg/L	1
Dimethyl phthalate	Grab	EPA 625	5	<5	µg/L	1
2,4-dinitrotoluene	Grab	EPA 625	5	<5	µg/L	1
2,6-dinitrotoluene	Grab	EPA 625	5	<5	µg/L	1
1,2-diphenylhydrazine	Grab	EPA 625	5	<5	µg/L	1
Fluoranthene	Grab	EPA 625	5	<5	µg/L	1
Fluorene	Grab	EPA 625	5	<5	µg/L	1
Hexachlorobenzene	Grab	EPA 625	5	<5	µg/L	1
Hexachlorobutadiene	Grab	EPA 625	5	<5	µg/L	1
Hexachlorocyclo-pentadiene	Grab	EPA 625	25	<25	µg/L	1
Hexachloroethane	Grab	EPA 625	5	<5	µg/L	1
Indeno(1,2,3-cd)pyrene	Grab	EPA 625	5	<5	µg/L	1
Isophorone	Grab	EPA 625	5	<5	µg/L	1
Naphthalene	Grab	EPA 625	5	<5	µg/L	1
Nitrobenzene	Grab	EPA 625	5	<5	µg/L	1
N-nitrosodi-n-propylamine	Grab	EPA 625	5	<5	µg/L	1
N-nitrosodimethylamine	Grab	EPA 625	5	<5	µg/L	1
N-nitrosodiphenylamine	Grab	EPA 625	5	<5	µg/L	1
Phenanthrene	Grab	EPA 625	5	<5	µg/L	1
Pyrene	Grab	EPA 625	5	<5	µg/L	1
1,2,4,-trichlorobenzene	Grab	EPA 625	5	<5	µg/L	1

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system to design to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons that manage the system, or those persons directly responsible for gathering the information, the information submitted 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 fines and imprisonment for knowing violations.

Timothy W. Owens

Authorized Representative name

Signature

Date