

Effluent Quality Assessment

Study Estates Mobile Home Park

Duval County

NPDES #FL0043419

Sampled October 6, 2014

December 2014

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration
2014 FDEP Bureau of Labs Quality Manual
NELAC Certification No. E31780

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Study Estates Mobile Home Park, 4631 Magill Road, Jacksonville, Duval County, Florida, 32219. NPDES #FL0043419.

Facility Overview

Study Estates Mobile Home Park is a domestic wastewater treatment facility serving a 30-lot mobile home park. See Appendix A for a description of the facility, summary of permit limits, Administrative Order (AO) and Discharge Monitoring Report (DMR) information.

Methods

Effluent grab samples for toxicity testing and biological and chemical analyses were collected on October 6, 2014. All samples were collected from the EFD-01 NPDES sampling point for Outfall D-001 by Sharon Piltz and Jann Gruentzel (FDEP Northeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The 48-hour acute screening toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_01, TA07_02, and TA08_01 through TA08_09 (see Appendix B).

Results

Chemistry Results (See Tables 1, 2, 3, 5 and Appendix C)

- The total ammonia concentration in the grab sample collected and preserved for chemical analysis was 0.03 mg N/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.
- The concentration of total residual chlorine (TRC) detected in the effluent sample in the bioassay laboratory was greater than both the Class III Fresh Water Quality Criterion (62-302.530, (18) F.A.C.) and the facility's permitted limit .
- Turbidity, alkalinity, fluoride, arsenic, copper, nickel, and zinc, were detected in the effluent at levels that comply with Class III Fresh Water Quality Criteria (62-302.530, F.A.C.) and/or the facility's permit limits. Carbonaceous biochemical oxygen demand (CBOD), total suspended solids, cadmium, iron and selenium were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).
- 1,4-dioxane and total ammonia were detected in the field blank.

Algal Growth Potential (See Table 4 and Appendix C)

- The effluent Algal Growth Potential (AGP) was 103 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Schultz (1987) determined that AGP values above 5.0 mg dry weight/L, which represents a "problem" threshold for fresh receiving waters, imply nutrient enrichment. The ratio of inorganic nitrogen to ortho-phoshate determined by analytical chemistry results suggests that the effluent is co-limited by both nitrogen and phosphorus; whereas, the ratio of total nitrogen to total phosphorus suggests that the effluent may be nitrogen limited (Miller et al. 1978). To determine actual nutrient limitation, a limiting-nutrient algal growth potential test with associated nutrient chemistry should be performed (Miller et al. 1978).

Toxicity Test Results (See table 2 and Appendices B and C)

- Tests were performed October 7 - 9, 2014.

Ceriodaphnia dubia 48-hour acute screening bioassay –	LC_{50} < 100%, 100%* mortality in 100% sample at 2 hours
Ceriodaphnia dubia 48-hour acute screening bioassay – (Dechlorinated sample)	LC_{50} < 100%, 90%* mortality in 100% sample at 48 hours
Pimephales promelas 48-hour acute screening bioassay –	LC_{50} > 100%, 5%* mortality in 100% sample at 48 hours

Pimephales promelas 48-hour acute screening bioassay – (Dechlorinated sample)	LC_{50} > 100%, 5%* mortality in 100% sample at 48 hours

*NOTE: In a 48-hour acute definitive test of 100% effluent, mortality of <20% provides confidence that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1) (a) 4, F.A.C.). Mortality between 20-50% indicates low to moderate levels of toxicity, and further action may be required. Mortality of >50% indicates that the effluent fails to meet the minimum requirement to discharge to waters of the state (Rule 62-4.244(3) (a), F.A.C.).

- The bioassay samples were acutely toxic to the *Ceriodaphnia dubia* test organisms but were not toxic to the *Pimephales promelas* test organisms. The cause of toxicity was attributed at least in part to the total residual chlorine (TRC) in the sample; however, the mortality in the *Ceriodaphnia dubia* dechlorinated sample test suggests that a substance(s) other than TRC contributed to the observed mortality.
- TRC concentrations as low as 0.028 mg/L have been found to be acutely toxic to some freshwater fish and invertebrates (EPA *Quality Criteria for Water* 1986, EPA 44015-86-001, 1986).
- An aliquot of the bioassay sample (LIMS # 1641885) was dechlorinated by the addition of sodium thiosulfate 0.025 N) at a rate of 0.9 mL per liter of sample to neutralize the chlorine (0.83 mg/L). Bioassays were performed on the dechlorinated aliquot in addition to the bioassays performed on the original sample. The same concentration of sodium thiosulfate was added to the dechlorinated test controls. The purpose of the dechlorinated test controls was to confirm that there was no adverse effect of adding sodium thiosulfate to the sample. There was no mortality in the dechlorinated controls of either test species.

Conclusion

The effluent sample collected from the EFD-01 NPDES sampling point for this facility on October 6, 2014, and the dechlorinated aliquot of effluent were both acutely toxic to the *Ceriodaphnia dubia* test organisms but were not acutely toxic to the *Pimephales promelas* test organisms during the 48-hour acute screening bioassays. The cause of toxicity was attributed at least in part to the total residual chlorine (TRC) in the sample; however, the mortality in the *Ceriodaphnia dubia* dechlorinated sample test suggests that a substance(s) other than TRC contributed to the observed mortality. The effluent AGP result was greater than the "problem" threshold for fresh receiving waters, suggesting that nutrient enrichment may be an issue. Effluent water quality samples collected on October 6, 2014, did not exceed any applicable water quality standards or represent an excursion from any permit conditions for analytes other than total residual chlorine and the undetermined constituent(s) resulting in acute toxicity to the *Ceriodaphnia dubia* tests organisms.

For additional information concerning this sampling event, including bioassay bench sheets and SRT data, please contact Diane.Power@dep.state.fl.us and/or Joseph.Faircloth@dep.state.fl.us.

Literature Cited

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The Selenastrum capricornutum Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Stevenson, R. J. and L. L. Bahls. 1999. Periphyton protocols. Pp. 6.1-6.22 in: Rapid bioassessment protocols for use in wadeable streams and rivers. 2nd edition. By: M. T. Barbour, J. Gerritsen, B. D. Snyder and J. B. Stribling. EPA 841-B-99-002. U. S. Environmental Protection Agency, Office of Water, Washington, D. C.

USEPA. 2002. Methods for measuring the acute toxicity of effluents to freshwater and marine organisms. 5th edition. EPA-821-R-02-012.

USEPA. 2000. Nutrient Criteria Technical Guidance Manual – River and Streams. EPA-822-B-00-002.

Table 1. Effluent limits, Class III Freshwater Criteria and field parameters

Study Estates Mobile Home Park	Units	Class III Criteria	Effluent Permit Limits	Effluent
Temperature	°C	-	-	20.47
pH	SU	6.0 - 8.5 s	6.0 - 8.5 s	7.41
Specific Conductance	umhos/cm	≤ 1,275	-	858
Salinity	ppth	-	-	0.5 c
Dissolved Oxygen	% saturation	≥ 34	-	106.6
Dissolved Oxygen	mg/L	≥ 5.0 s	≥ 5.0 s	9.58
Flow	MGD	-	0.0175 r	0.00323 r
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01	0.83 eQ[1]

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
e - Value exceeds the Class III Water Quality Criteria or permit limits
c - Value is calculated
r - Annual average
s - Single sample
Q - Sample held beyond normal holding time
1 - Measurement taken in the FDEP laboratory

Table 2. Effluent limits, Class III Freshwater Criteria and analytical water chemistry data

Study Estates Mobile Home Park	Units	Class III Criteria	Effluent Permit Limits	Effluent	Field Blank
Ortho-phosphate	mg P/L	-	Report	2.7	0.022
Total Phosphorus	mg P/L	-	Report	3.0	0.002 U
Total Ammonia	mg N/L	-	Report	0.030	0.002 I
Un-ionized Ammonia (calculated salinity)	mg/L	≤ 0.02 s	≤ 0.02 s	< 0.02 c	
Nitrate and Nitrite	mg N/L	-	Report	28	0.004 U
Total Kjeldahl Nitrogen	mg N/L	-	-	1.1	0.080 U
Organic Nitrogen	mg N/L	-	Report	1.1 c	0.038 c
Total Nitrogen	mg N/L	-	Report	29 c	0.042 c
Total Organic Carbon	mg C/L	-	-	12	0.50 U
Chlorophyll *a* - Corrected	ug/L	-	-	0.55 U	-
Phaeophytin	ug/L	-	-	0.40 U	-
CBOD, 5 day, N - inhibited	mg/L	-	≤ 60 s	0.68 IJ	-
Total Suspended Solids	mg/L	-	≤ 60 s	3 I	-
Turbidity	NTU	< 29 t	-	2.1 A	0.10 U
Color (true)	PCU	-	-	17	2.5 U
Alkalinity	mg CaCO3/L	≥ 20 s	-	163	0.65 U
Chloride	mg Cl/L	-	-	77	0.20 U
Fluoride	mg F/L	≤ 10.0 s	-	0.12	0.035 U
Sulfate	mg SO4/L	-	-	43	0.20 U
Microbiology					
Fecal Coliforms [2]	cfu/100 mL	≤ 400 s[3]	≤ 800 s	2.0 U	-
Toxicity (Acute Screen, percent LC50)					
Bioassay - Water flea *(Ceriodaphnia dubia)*	%	≥ 100	-	100 K	-
Bioassay - Water flea dechlorinated	%	≥ 100	-	100 K	-
Bioassay - Fish *(Pimephales promelas)*	%	≥ 100	-	100 L	-
Bioassay - Fish dechlorinated	%	≥ 100	-	100 L	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
s - Single sample
t - Shall not exceed 29 NTUs above background
A - Value reported is the mean of two or more determinations
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
U - Material analyzed for but not detected; value reported is the method detection limit
2 - Fecal coliform analysis performed by Columbia Analytical Laboratory, Jacksonville
3 - If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)

Table 3. Effluent limits, Class III Freshwater Criteria and analytical metals data

Study Estates Mobile Home Park	Units	Class III Criteria	Effluent Permit Limits	Effluent
Hardness	mg CaCO3/L	-	-	295 c
Aluminum	ug/L	-	-	36
Arsenic	ug/L	≤ 50	-	3.12
Cadmium	ug/L	≤ 0.604 b	-	0.075 I
Calcium	mg/L	-	-	96.9
Chromium, Total [g]	ug/L	≤ 209 b	-	0.30 U
Copper	ug/L	≤ 23.5 b	-	5.32
Iron	ug/L	≤ 1,000	-	70 I
Lead	ug/L	≤ 12.6 b	-	0.20 U
Magnesium	mg/L	-	-	13.0
Nickel	ug/L	≤ 130 b	-	1.66
Potassium	mg/L	-	-	8.7
Selenium	ug/L	≤ 5.0	-	0.33 I
Silver	ug/L	≤ 0.07	-	0.025 U
Sodium	mg/L	-	-	49.5
Zinc	ug/L	≤ 300 b	-	25

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

b - Value is calculated based on hardness, (62-302.530(3))

c - Value is calculated

g - Class III Freshwater Quality Criterion (62-302.530(19)(a), F.A.C.) is for chromium-III

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

U - Material analyzed for but not detected; value reported is the method detection limit

Table 4. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN), ortho-phosphate (OP), total nitrogen (TN) and total phosphorus (TP) limitation and ratios of nitrogen to phosphorus

Study Estates Mobile Home Park								
Location	**Test Species**	**AGP (measured)**	**Predicted AGP (TSIN) ± 20%**	**Predicted AGP (OP) ± 20%**	**Predicted AGP (TN) ± 20%**	**Predicted AGP (TP) ± 20%**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent	*Pseudokirchneriella subcapitata*	103	1065.1 ± 213	1161 ± 232.2	1105.8 ± 221.2	1290 ± 258	10.4	9.7

Table 5. Effluent limits, Class III Freshwater Criteria and analytical organic and pesticide data

Study Estates Mobile Home Park	Units	Class III Criteria	Effluent Permit Limits	Effluent	Field Blank
1,4-Dioxane	ug/L	-	-	2.4 Y	0.075 IY

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.

Appendix A

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Max Schwartz	Contact Number: 904-256-1568
Facility Name (as it appears on permit): Study Estates Mobile Home Park	Former Names: Not Applicable
NPDES Permit Number: FL0043419	Permit Expiration Date: April 29,2015
Physical Address: 4631 Magill Road Jacksonville, FL 32219	
District: Northeast	County: Duval
Function of Facility: Treat Domestic Wastewater	
Facility Type: Domestic Wastewater Treatment Plant	Permitted Capacity (MGD): 0.0135
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 0.00323	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): Not Applicable	
Description of type of Discharge: ☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify	

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s):

EFA-1 Effluent, immediately after disinfection prior to dechlorination
EFD-1 Effluent, immediately after dechlorination prior to discharge to outfall D-001

Description of Permitted Outfall(s):

Surface Water Discharge D-001: An existing 0.0175 MGD annual average daily flow (AADF) design capacity discharge to an unnamed ditch flowing 950-ft east and then approximately 2,000-ft northwest along a mainline right-of-way CSX ditch to Nine Mile Creek (Class III fresh waters – WBID 2220) in the Lower St. Johns River basin. Outfall D-001 is a 4" PVC pipe approximately 2 feet in length and discharging 2" above grade to an unnamed ditch approximately 0.5-miles from Nine Mile Creek, and located approximately at latitude 30° 24' 5" N, longitude 81° 45' 2" W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):
To operate an existing 0.0175 MGD annual average daily flow (AADF) design capacity extended aeration domestic wastewater treatment facility (WWTF) serving a 30-lot mobile home park. The treatment system consists of an on-site collection system, a 70-gpm lift station pumping influent to an above ground compartmentalized steel package plant with a manual bar-screen, a 19,000-gallon aeration tank, a 5,000-gallon clarifier (63-ft^2 surface area), a 340-gallon baffled chlorine contact tank and a 4,550-gallon aerobic digester. Flow is measured by elapsed time meters at the influent lift-station pumps. Effluent disinfection is by sodium hypochlorite solution, and dechlorination is by a sodium bisulfate tablet dechlorinator. Domestic wastewater residuals are stabilized at the facility prior to transport to JEA-Buckman residuals management facility (RMF) for further treatment and/or final disposal in a Class I or Class II solid waste landfill. The permitted capacity of the WWTF is limited to 0.0071 MGD AADF during an interim period per applicant request.

PART I: Continued										
List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)										
			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Flow	MGD	Max	0.0071	Report	N/A	N/A	5 Days/Week	Elapsed Time Measurement on pump	FLW-1	See I.A.3
Percent Capacity	Percent	Max	NA	NA	NA	NA	Monthly	Calculated	CAL-1	See I.B.10
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	NA	NA	NA	Report	Monthly	Grab	INF-1	See I.B.3
Solids, Total Suspended (Influent)	mg/L	Max	NA	NA	NA	Report	Monthly	Grab	INF-1	See I.B.3
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20	25	40	60	Monthly	Grab	EFD-1	
CBOD, % Removal, 5-day	percent	Min	NA	85	NA	NA	Monthly	Calculated	CAL-1	See I.A.7
Solids, Total Suspended	mg/L	Max	20	30	45	60	Monthly	Grab	EFD-1	
Solids, Total Suspended, % Removal	percent	Min	NA	85	NA	NA	Monthly	Calculated	CAL-1	See I.A.7
pH	S.U.	Min	NA	NA	NA	6	5 Days/Week	Grab	EFD-1	
pH	S.U.	Max	NA	NA	NA	8.5	5 Days/Week	Grab	EFD-1	
Oxygen, Dissolved (DO)	mg/L	Min	NA	NA	NA	5	5 Days/Week	Grab	EFD-1	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	NA	NA	NA	.5	5 Days/Week	Grab	EFA-1	See I.A.5
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	NA	NA	NA	.01	Monthly	Grab	EFD-1	
Coliform, Fecal	#/100mL	Max Max Max	200	200	NA	800	Monthly	Grab	EFD-1	See I.A.4

PART I: Continued										
List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)										
			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Nitrogen, Ammonia, Total (as N)	mg/L	Max	NA	NA	NA	Report	Monthly	Grab	EFD-1	See I.A.6
Temperature (C), Water	Deg C	Max	NA	NA	NA	Report	Monthly	Meter or Instrument	EFD-1	See I.A.6
Ammonia, Unionized (as NH3)	mg/L	Max	NA	NA	NA	.02	Monthly	Calculated	CAL-1	See I.A.6
Nitrogen, Total	mg/L	Max	NA	NA	NA	Report	Annually	Grab	EFD-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	NA	NA	NA	Report	Annually	Grab	EFD-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	NA	NA	NA	Report	Annually	Grab	EFD-1	
Nitrogen, Organic, Total (as N)	mg/L	Max	NA	NA	NA	Report	Annually	Grab	EFD-1	
Phosphorus, Total (as P)	mg/L	Max	NA	NA	NA	Report	Annually	Grab	EFD-1	
Phosphate, Ortho (as P)	mg/L	Max	NA	NA	NA	Report	Annually	Filtered Grab	EFD-1	

PART I: Continued	
Receiving Waters: Nine Mile Creek	Classification (indicate whether fresh or marine): Class III Fresh
Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.): Not Applicable	
Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.): Not Applicable	
Facility Mixing Zone Details (if applicable): Not Applicable	

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:

Date	Parameter and Units	Limit	Result
7/31/14	Unionized Ammonia	0.02	0.024

Describe previous FYI and WQBEL study:
2009 FYI revealed minor paper work Issues noted in the CEI and sampling revealed a Fecal exceedance of 5700 colonies/ 100 mL

Water Body Impairment D001- DO, Fecal, Chlorophyll-a
Water Body Impairment Trout River (Downstream)- Hg, Fecal Coliform

Describe previous or current Enforcement Actions (including WLs):
Warning letter issued June 29, 2009 For high Fecal. Corrected by New BMPs

Describe any violations or problems noted in previous inspection:
During the inspection it was noted that on occasion incorrect data was being reported for DO on the DMR. These DMRs have since been resubmitted with correct data. Please make sure that from this point forward the DMR is accurately filled out.

Discuss whether DMR trends within previous five years are improving or declining:
Flow is showing a downward trend with a best fit slope of -3*10^-5 MGD/period with an r^2 value of 67%
No other Parameter has demonstrated any significant evidence of a trend. All in all the site has been relatively consistent over the period.

Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse):

PART II: Sampling Event Information	
Date(s) sample collected:	Sampler(s):
Temperature (Deg C):	pH (SU):

Dissolved Oxygen (mg/L):	Conductivity (umhos/cm):
Total Residual Chlorine (mg/L):	Total Residual Chlorine - after Disinfection (mg/L):
Method of Chlorination:	Method of De-chlorination:
Flow During Sample Collection for each outfall(MGD):	
Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day):	
Describe Discharge during Sampling Event: ☐ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify	
Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:	

Appendix B

Explanation of Measurements

(1) Quality Assurance and Quality Control

FDEP's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, F.A.C., Quality Assurance (QA Rule) and in internal Standard Operating Procedures (FDEP SOPs). Methods for all analyses are on file at the FDEP Central Laboratory in Tallahassee and may be viewed on the web at http://www.dep.state.fl.us/labs/library/lab_sops.htm and/or http://www.dep.state.fl.us/water/sas/sop/sops.htm.

(2) Chemical Analyses of the Effluent

The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following FDEP SOPs. The results from these analyses were compared with Water Quality Criteria (62-302, F.A.C.) and facility permit limits.

(3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62-302.500(1)a and/or facility permit limits. A 25% inhibition concentration (IC25) is the effluent concentration causing a 25% reduction in a biological response such as biomass or reproduction when compared to a control population. An IC25 of less than 100% in a chronic test may constitute exceedances of 62-302.530(20), 62-302.530(61) and/or facility permit limits. A no observed effect concentration (NOEC) less than 100% effluent in a chronic test may constitute an exceedance of 62-302.530(61) and/or facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Bacteriological Testing

High levels of fecal coliform bacteria may constitute an exceedance of 62-302.530(6) and/or facility permit limits. Fecal coliform and enterococci results often are based on colony counts outside the acceptable range (B-qualifier). The dilutions performed on the sample did not yield results within the method acceptable range of 20- 60 colony forming units per plate. The B-qualifier does not affect data quality.

(5) Chlorophyll *a* Content

Chlorophyll *a* content is an estimate of algal biomass. High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., and/or 62-302.530(47)(b), F.A.C..

(6) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 5.0 mg dry weight/L represents a "problem" threshold for fresh receiving waters, implying nutrient enrichment. High AGP values may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C..

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP in a low salinity sample under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of $\pm$ 20%. When the ratio of nitrogen to phosphorus (N:P) is less than 10:1, nitrogen limitation of algal production is likely. When the N:P ratio is 20:1 or greater, phosphorus limitation is likely (EPA-822-B-00-002). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may constitute an exceedance of 62-302.530(61) F.A.C. Expected AGP is not calculated for marine samples incubated with *Dunaliella*.

(7) Definition of Qualifiers

A - Value reported is the mean of two or more determinations.
B - Results based on colony counts outside the acceptable range.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
V - Analyte was detected in both sample and method blank.
X - Too few individuals to calculate SCI value.
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate
Z - Colonies were too numerous to count (TNTC)

Appendix C

Chemical analysis of effluent

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 9:50	Effluent	AGP/LN	Algal Growth Potential	103	mg DryWt/L	0.3	0.9
10/6/2014 9:50	Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
10/6/2014 9:50	Effluent	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.68 IJ	mg/L	0.2	2
10/6/2014 9:50	Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	ug/L	0.55	1.7
10/6/2014 9:50	Effluent	Overflow	Fecal Coliforms-Membrane Filter	2.0 U	cfu/100 mL	2	2
10/6/2014 9:50	Effluent	Toxicology	Bioassy-Acute-Scrn-FW-Cdubia,LC50-dechlr	100 K	LC50		
10/6/2014 9:50	Effluent	Toxicology	Bioassay-Acute-Scrn-FW-Fish,LC50-dechlr	100 L	LC50		
10/6/2014 9:50	Effluent	Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100 K	LC50		
10/6/2014 9:50	Effluent	Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100 L	LC50		
10/6/2014 9:50	Effluent	Metals	Iron	70 I	ug/L	30	120
10/6/2014 9:50	Effluent	Metals	Sodium	49.5	mg/L	0.5	2
10/6/2014 9:50	Effluent	Metals	Arsenic	3.12	ug/L	0.25	1
10/6/2014 9:50	Effluent	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/6/2014 9:50	Effluent	Metals	Potassium	8.7	mg/L	0.3	1.2
10/6/2014 9:50	Effluent	Metals	Calcium	96.9	mg/L	0.075	0.3
10/6/2014 9:50	Effluent	Metals	Magnesium	13.0	mg/L	0.04	0.16
10/6/2014 9:50	Effluent	Metals	Copper	5.32	ug/L	0.5	1
10/6/2014 9:50	Effluent	Metals	Nickel	1.66	ug/L	0.25	1
10/6/2014 9:50	Effluent	Metals	Selenium	0.33 I	ug/L	0.2	0.8
10/6/2014 9:50	Effluent	Metals	Aluminum	36	ug/L	5	20
10/6/2014 9:50	Effluent	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/6/2014 9:50	Effluent	Metals	Cadmium	0.075 I	ug/L	0.05	0.2
10/6/2014 9:50	Effluent	Metals	Zinc	25	ug/L	5	20
10/6/2014 9:50	Effluent	Metals	Chromium	0.30 U	ug/L	0.3	1.2
10/6/2014 9:50	Effluent	Nutrients	Total-P	3.0	mg P/L	0.025	0.25
10/6/2014 9:50	Effluent	Nutrients	NO2NO3-N	28	mg N/L	0.4	1
10/6/2014 9:50	Effluent	Nutrients	Fluoride	0.12	mg F/L	0.035	0.1
10/6/2014 9:50	Effluent	Nutrients	O-Phosphate-P	2.7	mg P/L	0.04	0.1
10/6/2014 9:50	Effluent	Nutrients	Organic Carbon	12	mg C/L	1	2
10/6/2014 9:50	Effluent	Nutrients	Color (true)	17	PCU	2.5	6
10/6/2014 9:50	Effluent	Nutrients	Ammonia-N	0.030	mg N/L	0.002	0.005
10/6/2014 9:50	Effluent	Nutrients	Sulfate	43	mg SO4/L	2	5
10/6/2014 9:50	Effluent	Nutrients	Turbidity	2.1 A	NTU	0.1	0.1
10/6/2014 9:50	Effluent	Nutrients	Alkalinity	163	mg CaCO3/L	0.65	2.5
10/6/2014 9:50	Effluent	Nutrients	TSS	3 I	mg/L	2	10
10/6/2014 9:50	Effluent	Nutrients	Chloride	77	mg Cl/L	2	5

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 9:50	Effluent	Nutrients	Kjeldahl Nitrogen	1.1	mg N/L	0.4	1
10/6/2014 9:50	Effluent	Pesticides	Atrazine Desisopropyl	0.010 UJ	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Bromacil	0.040 U	ug/L	0.04	0.16
10/6/2014 9:50	Effluent	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Prometon	0.020 U	ug/L	0.02	0.08
10/6/2014 9:50	Effluent	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.08
10/6/2014 9:50	Effluent	Pesticides	Ethoprop	0.0050 U	ug/L	0.005	0.02
10/6/2014 9:50	Effluent	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
10/6/2014 9:50	Effluent	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.08
10/6/2014 9:50	Effluent	Pesticides	Carbamazepine	0.016	ug/L	0.002	0.01
10/6/2014 9:50	Effluent	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Fenamiphos	0.030 UJ	ug/L	0.03	0.12
10/6/2014 9:50	Effluent	Pesticides	Phorate	0.0050 U	ug/L	0.005	0.02
10/6/2014 9:50	Effluent	Pesticides	Sucralose	7.9	ug/L	0.1	0.5
10/6/2014 9:50	Effluent	Pesticides	Alachlor	0.060 U	ug/L	0.06	0.24
10/6/2014 9:50	Effluent	Pesticides	Norflurazon	0.030 UJ	ug/L	0.03	0.12
10/6/2014 9:50	Effluent	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Chlorpyrifos Ethyl	0.010 UJ	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Disulfoton	0.0050 U	ug/L	0.005	0.02
10/6/2014 9:50	Effluent	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.08
10/6/2014 9:50	Effluent	Pesticides	Naled	0.040 U	ug/L	0.04	0.16
10/6/2014 9:50	Effluent	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Demeton	0.024 UJ	ug/L	0.024	0.096
10/6/2014 9:50	Effluent	Pesticides	Malathion	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Metalaxyl	0.040 U	ug/L	0.04	0.16
10/6/2014 9:50	Effluent	Pesticides	Simazine	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Metolachlor	0.060 U	ug/L	0.06	0.24
10/6/2014 9:50	Effluent	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.08
10/6/2014 9:50	Effluent	Pesticides	Butylate	0.020 U	ug/L	0.02	0.08
10/6/2014 9:50	Effluent	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Ethion	0.010 U	ug/L	0.01	0.04
10/6/2014 9:50	Effluent	Pesticides	Acetaminophen	0.0020 UJ	ug/L	0.002	0.01
10/6/2014 9:50	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	0.96 U	ug/L	0.96	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Phenol	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 UJ	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	9.6 U	ug/L	9.6	38
10/6/2014 9:50	Effluent	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	58
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Benzidine	96 UJ	ug/L	96	380
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.7
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Dimethyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.7
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Diethyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Hexachlorobenzene	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2-Chlorophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.7
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Isophorone	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.7
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.7

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 9:50	Effluent	Priority Organic Pollutants	1,4-Dioxane	2.4 Y	ug/L	0.02	0.1
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	58
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	12
10/6/2014 9:50	Effluent	Priority Organic Pollutants	2-Nitrophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.77
10/6/2014 9:50	Effluent	Nutrients	Specific Conductance	858	umhos/cm		
10/6/2014 9:50	Effluent	Nutrients	Dissolved Oxygen	9.58	mg/L		
10/6/2014 9:50	Effluent	Nutrients	Temperature	20.47	C		
10/6/2014 9:50	Effluent	Nutrients	pH	7.41			
10/6/2014 10:00	Field Blanks	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
10/6/2014 10:00	Field Blanks	Metals	Arsenic	0.25 U	ug/L	0.25	1
10/6/2014 10:00	Field Blanks	Metals	Copper	0.50 U	ug/L	0.5	1
10/6/2014 10:00	Field Blanks	Metals	Sodium	0.50 U	mg/L	0.5	2
10/6/2014 10:00	Field Blanks	Metals	Potassium	0.30 U	mg/L	0.3	1.2
10/6/2014 10:00	Field Blanks	Metals	Iron	30 U	ug/L	30	120
10/6/2014 10:00	Field Blanks	Metals	Chromium	0.30 U	ug/L	0.3	1.2
10/6/2014 10:00	Field Blanks	Metals	Zinc	5.0 U	ug/L	5	20
10/6/2014 10:00	Field Blanks	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
10/6/2014 10:00	Field Blanks	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/6/2014 10:00	Field Blanks	Metals	Nickel	0.25 U	ug/L	0.25	1
10/6/2014 10:00	Field Blanks	Metals	Calcium	0.075 U	mg/L	0.075	0.3
10/6/2014 10:00	Field Blanks	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/6/2014 10:00	Field Blanks	Metals	Aluminum	5.0 U	ug/L	5	20
10/6/2014 10:00	Field Blanks	Metals	Selenium	0.20 U	ug/L	0.2	0.8
10/6/2014 10:00	Field Blanks	Nutrients	O-Phosphate-P	0.022	mg P/L	0.004	0.01
10/6/2014 10:00	Field Blanks	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
10/6/2014 10:00	Field Blanks	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
10/6/2014 10:00	Field Blanks	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
10/6/2014 10:00	Field Blanks	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
10/6/2014 10:00	Field Blanks	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
10/6/2014 10:00	Field Blanks	Nutrients	Ammonia-N	0.002 I	mg N/L	0.002	0.005
10/6/2014 10:00	Field Blanks	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
10/6/2014 10:00	Field Blanks	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 10:00	Field Blanks	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
10/6/2014 10:00	Field Blanks	Nutrients	Color (true)	2.5 U	PCU	2.5	6
10/6/2014 10:00	Field Blanks	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
10/6/2014 10:00	Field Blanks	Pesticides	Alachlor	0.058 U	ug/L	0.058	0.23
10/6/2014 10:00	Field Blanks	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.077
10/6/2014 10:00	Field Blanks	Pesticides	Disulfoton	0.0048 U	ug/L	0.0048	0.019
10/6/2014 10:00	Field Blanks	Pesticides	Norflurazon	0.029 UJ	ug/L	0.029	0.12
10/6/2014 10:00	Field Blanks	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.05
10/6/2014 10:00	Field Blanks	Pesticides	Ethion	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Fenamiphos	0.029 U	ug/L	0.029	0.12
10/6/2014 10:00	Field Blanks	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
10/6/2014 10:00	Field Blanks	Pesticides	Parathion Methyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Carbamazepine	0.0020 U	ug/L	0.002	0.01
10/6/2014 10:00	Field Blanks	Pesticides	Atrazine	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Phorate	0.0048 U	ug/L	0.0048	0.019
10/6/2014 10:00	Field Blanks	Pesticides	Prometon	0.019 U	ug/L	0.019	0.077
10/6/2014 10:00	Field Blanks	Pesticides	Ametryn	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Demeton	0.023 UJ	ug/L	0.023	0.092
10/6/2014 10:00	Field Blanks	Pesticides	Naled	0.038 U	ug/L	0.038	0.15
10/6/2014 10:00	Field Blanks	Pesticides	Butylate	0.019 U	ug/L	0.019	0.077
10/6/2014 10:00	Field Blanks	Pesticides	Malathion	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Metalaxyl	0.038 U	ug/L	0.038	0.15
10/6/2014 10:00	Field Blanks	Pesticides	Metolachlor	0.058 U	ug/L	0.058	0.23
10/6/2014 10:00	Field Blanks	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.077
10/6/2014 10:00	Field Blanks	Pesticides	Mevinphos	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Acetaminophen	0.0020 UJ	ug/L	0.002	0.01
10/6/2014 10:00	Field Blanks	Pesticides	Chlorpyrifos Methyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Ethoprop	0.0048 U	ug/L	0.0048	0.019
10/6/2014 10:00	Field Blanks	Pesticides	Simazine	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Atrazine Desethyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Diazinon	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.077
10/6/2014 10:00	Field Blanks	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.077
10/6/2014 10:00	Field Blanks	Pesticides	Atrazine Desisopropyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Bromacil	0.038 U	ug/L	0.038	0.15
10/6/2014 10:00	Field Blanks	Pesticides	Chlorpyrifos Ethyl	0.0096 UJ	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Pesticides	Fonofos	0.0096 U	ug/L	0.0096	0.038
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2,4-Dichlorophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	12

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Diethyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	12
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.7
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Hexachlorobenzene	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.7
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2,4-Dimethylphenol	9.6 U	ug/L	9.6	38
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2-Nitrophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	58
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Butyl benzyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Di-n-octyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	12
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2-Chloronaphthalene	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	12
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Di-n-butyl phthalate	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	12
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Phenol	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2-Chlorophenol	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Benzidine	96 U	ug/L	96	380
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.7
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Dimethyl phthalate	0.96 U	ug/L	0.96	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	1,4-Dioxane	0.075 IY	ug/L	0.02	0.1
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Isophorone	0.96 U	ug/L	0.96	3.8
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.7
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	58
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	12
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.77
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.7
10/6/2014 10:00	Field Blanks	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	12

The Bioassay of Study Estates Mobile Home Park effluent sampled on October 6, 2014. NPDES #FL0043419.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1	N	2 5	3 FL0043419	11 12	141006	18 **B**	19 **S**	20 22

Remarks

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The Priority Pollutants Analysis of Study Estates Mobile Home Park effluent sampled on October 6, 2014. NPDES #FL0043419.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1	N	2 5	3 FL0043419	11 12	141006	18 **X**	19 **S**	20 22

Remarks

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Biological Analyses of Study Estates Mobile Home Park effluent sampled on October 6, 2014. NPDES #FL0043419.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1	N	2 5	3 FL0043419	11 12	141006	18 **S**	19 **S**	20 22

Remarks

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