

Effluent Quality Assessment of

Napoli MHP LLC

Duval County

NPDES # FL0043150

Sampled October 20, 2014

December 2014

Biology Section

Bureau of Laboratories

Division of Environmental Assessment and Restoration

2014 FDEP Bureau of Laboratories Quality Manual

NELAC Certification No. E31780

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Napoli MHP LLC, 10201 Normandy Blvd., Jacksonville, Duval County, Florida, 32219. NPDES #FL0043150.

Facility Overview

Napoli MHP LLC is a domestic wastewater treatment facility serving a 77-unit 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 for this facility were collected on October 20, 2014. All samples were collected from the EFD-01 NPDES sampling point for Outfall D-001 by Sharon Piltz and Amy Kalmbacher (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 and Appendix C)

- The total ammonia concentration in the grab sample collected and preserved for chemical analysis was 0.032 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.
- Turbidity, alkalinity, fluoride, copper, and zinc were detected in the effluent at levels that comply with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and /or permitted limits. Carbonaceous biochemical oxygen demand (CBOD), arsenic, cadmium, total chromium, iron, lead, nickel, and selenium were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).

Algal Growth Potential (See Table 4 and Appendix C)

- The effluent Algal Growth Potential (AGP) was 256 A 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 analytical chemistry suggests that the effluent is nitrogen limited (Miller et al. 1978).

Toxicity Test Results (See Appendix C)

- Tests were performed October 21 - 23, 2014.

Ceriodaphnia dubia 48-hour acute screening bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 48 hours
Pimephales promelas 48-hour acute screening bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 48 hours

*NOTE: In a 48-hour acute screening 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 not acutely toxic to the test organisms.

Conclusion

The effluent sample collected from the EFD-01 NPDES sampling point for this facility on October 20, 2014, was not acutely toxic to either test species during the 48-hour acute definitive bioassays. 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 20, 2014, did not exceed any applicable water quality standards or violate any permit conditions.

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

Napoli MHP LLC	Units	Class III Criteria	Effluent Permit Limits	Effluent, Grab, 10/20/14
Sample Depth	m	-	-	0.1
Temperature	°C	-	Report	22.57
pH	SU	6.0 - 8.5	6.0 - 8.5 s	7.42
Specific Conductance	umhos/cm	≤ 1,275	-	596
Salinity	ppth	-	-	0.3 c
Dissolved Oxygen	% saturation	≥ 34	-	96.5 c
Dissolved Oxygen	mg/L	-	≥ 5 s	8.33
Flow	MGD	-	≤ 0.015 r	0.0082 r
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01 s	< 0.03 d

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

c - Value is calculated

d - Measurement taken in the FDEP laboratory

r - Annual average

s - Single sample

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

Napoli MHP LLC	Units	Class III Criteria	Effluent Permit Limits	Effluent, Grab, 10/20/14
Ortho-phosphate	mg P/L	-	Report	2.6
Total Phosphorus	mg P/L	-	Report	3.0
Total Ammonia	mg N/L	-	≤ 3.2 s	0.032
Un-ionized Ammonia (calculated salinity)	mg/L	≤ 0.02 s	≤ 0.02 c	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	21
Total Kjeldahl Nitrogen	mg N/L	-	Report	1.4
Organic Nitrogen	mg N/L	-	-	1.4 c
Total Nitrogen	mg N/L	-	Report	22 c
Total Organic Carbon	mg C/L	-	-	10 A
Chlorophyll *a* - Corrected	ug/L	-	-	0.62 U
Phaeophytin	ug/L	-	-	0.45 U
CBOD, 5 day, N - inhibited	mg/L	-	≤ 60 s	1.6 I
Total Suspended Solids	mg/L	-	Report	3 I
Turbidity	NTU	< 29 t	-	2.2
Color (true)	PCU	-	-	27 A
Alkalinity	mg CaCO3/L	≥ 20	-	111 A
Chloride	mg Cl/L	-	-	50 A
Fluoride	mg F/L	≤ 10.0	-	0.27
Sulfate	mg SO4/L	-	-	16 A
Microbiology				
Fecal Coliforms[1]	cfu/100 mL	≤ 400 s #	≤ 800 s	46
Toxicity (Acute Screen, percent LC50)				
Bioassay - Water flea *(Ceriodaphnia dubia)*	%	≥ 100	-	100 L
Bioassay - Fish (*Pimephales promelas*)	%	≥ 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

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

1 - Fecal coliform analysis performed by Columbia Analyical Services, Jacksonville

- 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

Napoli MHP LLC	Units	Class III Criteria	Effluent Permit Limits	Effluent, Grab, 10/20/14
Hardness	mg/L	-	-	183 c
Aluminum	ug/L	-	-	40
Arsenic	ug/L	≤ 50	-	0.97 I
Cadmium	ug/L	≤ 0.423 b	-	0.13 I
Calcium	mg/L	-	-	57.2
Chromium, Total [2]	ug/L	≤ 141 b	-	0.75 I
Copper	ug/L	≤ 15.6 b	-	8.29
Iron	ug/L	≤ 1,000	-	47 I
Lead	ug/L	≤ 6.86 b	-	0.39 I
Magnesium	mg/L	-	-	9.70
Nickel	ug/L	≤ 86.9 b	-	0.85 I
Potassium	mg/L	-	-	9.8
Selenium	ug/L	≤ 5.0	-	0.26 I
Silver	ug/L	≤ 0.07	-	0.025 U
Sodium	mg/L	-	-	49.5
Zinc	ug/L	≤ 200 b	-	42

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

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

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

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

Napoli MHP LLC								
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*	256 A	799.2 ± 159.8	1118 ± 223.6	851.2 ± 170.2	1290 ± 258	8.1	7.5

A - Value reported is the mean of two or more determinations

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): Napoli MHP LLC	**Former Names:** Not Applicable
NPDES Permit Number: FL0043150	**Permit Expiration Date:** July 11, 2015
Physical Address: 10201 Normandy Blvd Jacksonville, FL 32219	
District: Northeast	**County:** Duval
Function of Facility: Treat Domestic Wastewater	
Facility Type: Domestic Wastewater Treatment Plant	**Permitted Capacity (MGD):** 0.015
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 0.00847	
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 0.015 MGD annual average daily flow (AADF) permitted capacity extended aeration domestic wastewater treatment facility (WWTF) serving a 77-unit mobile home park. The treatment system consists of an on-site influent lift-station, three aeration basins (3,733-gallon each) in series, a secondary clarifier with a surface area of approximately 87-ft^2, a 610-gallon chlorine contact chamber, and a 1,093 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 sodium sulfite injection and re-aeration in the effluent discharge pipe. 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.

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	0.015	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	Report	NA	800	**Monthly**	**Grab**	**EFD-1**	**See I.A.4**
Nitrogen, Ammonia, Total (as N)	**mg/L**	**Max**	1.6	2	2.4	3.2	**Monthly**	**Grab**	**EFD-1**	**See I.A.6**

PART I: Continued

List <u>current</u> 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
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**	
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: Unnamed Swamp	**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
11/30/2013	**Unionized Ammonia**	**0.02**	**0.042**

Describe previous FYI and WQBEL study:
No Previous FYI in File. Last FYI of on record was 2004. CEI, IBI, CSI, and XSI are all in compliance. The CBI was Minor Out of Compliance. The fact sheet references a FYI in 2008 that found the Following:

(1) Water Chemistry Results: Total ammonia was not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for analysis was 0.063 mg/L. Based on the pH, salinity and temperature of the effluent, the calculated un-ionized ammonia in the sample was < 0.02 mg/L. Effluent total nitrogen level was 14.2 mg/L primarily due to the Nitrate/Nitrite concentration of 13 mg/L.

(2) Metals: Arsenic, chromium III, iron, lead, selenium and silver were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Nickel was detected in the effluent at levels that comply with Class III fresh water quality criteria. Cadmium, copper and zinc concentrations in the effluent were incorrectly reported as exceeding Class III fresh surface water criteria, as the Class III fresh surface water criteria for these metals is hardness based. When adjusted for hardness (as $CaCO_3$ of 220 mg/L), these parameters were in compliance with water quality standards as follows:

Parameter		62-302 Hardness Limit	April 2008 Bioassay	December 2009 Influent	December 2009 Effluent	January 2010 Effluent
Cadmium	ug/L	**0.486**	0.13	0.14	0.32 U	
Copper	ug/L	**18.31**	6.5	34	13	14
Zinc	ug/L	**233.9**	63	71	40	52

Follow-up effluent testing for these metals in December 2009 and January 2010, indicated presence of copper and zinc; the influent was also sampled and found to be elevated for copper and zinc. Cadmium was not an issue in the December re-sample in either the influent or effluent. As the mobile home park has an on-site potable water supply well, the pH of the potable water was tested by Florida Rural Water Association (FRWA) and was found to be aggressive, suggesting leaching of copper and zinc from the copper water distribution pipes. The pH of the potable water will be adjusted to a more neutral pH level in order to reduce the potential for leaching of copper and zinc from the distribution system. Additional countermeasures under consideration to further reduce the concentrations of these metals include chemical addition to potable water, the addition of coagulants in the wastewater treatment train and increased frequency of sludge hauling from the WWTF. Lastly, the effluent was sampled for total hardness in February 2010, resulting in a laboratory reported value of 180 mg/L (as $CaCO_3$), demonstrating no significant deviation from the previously reported value of 220 mg/L from the 2008 bioassay (or the 224 mg/L value from the April 2004 bioassay), and thereby providing reasonable assurance of compliance of these parameters with Class III fresh surface water quality standards, if no further countermeasures are implemented.

(a) Algal Growth Potential (AGP): The effluent AGP was 345 mg dry weight/L of the unicellular green alga, *Pseudokirchneriella subcapitata*. AGP values above 5.0 mg dry weight/L represent a 'problem' threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests the effluent is nitrogen-limited. The effluent AGP greatly exceeded (69 times) the "problem" threshold for fresh receiving waters, and was significantly elevated from the reported AGP levels (64.8 mg dry weight/L) from the previous 5^{th}-year bioassay in 2004.

Further investigation by the permittee included a re-testing of the effluent for nutrients in January 2010, with the following parameter results: Orthophosphate 2.8 mg/L, Total Phosphorous (TP) 5.99 mg/L, Nitrate/Nitrite 20.7 mg/L, TKN 1.28 mg/L, Total Nitrogen (TN) 22.0 mg/L. These effluent orthophosphate (ORP) and nitrate/nitrite concentrations also confirm the effluent is nitrogen-limited, as these parameters represent the bioavailability or soluble fractions of TP and TN, respectively, which are readily available for biological growth activities. The January 2010 effluent sample may not be indicative of the plant's nutrient removal capability due to cold-weather conditions inhibiting denitrification rates, as the semi-

annual nutrient monitoring results from September 2009 reported effluent ORP levels of 0.36 mg/L and Nitrate/Nitrite levels of 10.4 mg/L. The permittee and WWTF operator plan to enhance the plant's nitrification/denitrification efficiency by managing the blower on/off cycles supplying air to the aeration basins to manage effluent nitrate/nitrite levels.

(b) Toxicity Results: The dechlorinated aliquots of effluent were not acutely toxic to either test species during the 48-hour static acute screening toxicity bioassays conducted by the Department. Total residual chlorine (0.34 mg/L) was detected in the bioassay sample in the laboratory. An aliquot of this sample was dechlorinated by the addition of sodium thiosulfate to neutralize the chlorine. The original bioassay sample and the dechlorinated sample aliquots were not acutely toxic to the test organisms.

Water Body Impairment Downstream- DO, Fecal Coliform

Describe previous or current Enforcement Actions (including WLs):
Not Applicable

Describe any violations or problems noted in previous inspection:
Not Applicable

Discuss whether DMR trends within previous five years are improving or declining:
Fecal Coliform Annual Average has a best fit trend with a slope of -0.1993 colonies/100 ML and an R^2 value of 0.902
Annual Flow has a downward trend of -0.0001MGD with an R^2 value of 0.81
pH max and Min have shown a downward trend of -0.0327(min) units per period and -0.0187 (max) units per period with an R^2 of 0.66 (min) and 0.45(max)
In general the parameters are trending downward or staying consistent with no significant relationship between parameter and period.

TSS, TSS % removal, and Temperature have had a slight trend upward but there is no significant relationship between parameter and 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 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
10/20/2014 9:10	Napolis WWTF EFD-1	AGP/LN	Algal Growth Potential	256 A	mg DryWt/L	0.3	0.9
10/20/2014 9:10	Napolis WWTF EFD-1	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.45 U	ug/L	0.45	1.4
10/20/2014 9:10	Napolis WWTF EFD-1	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.6 I	mg/L	0.2	2
10/20/2014 9:10	Napolis WWTF EFD-1	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.62 U	ug/L	0.62	1.9
10/20/2014 9:10	Napolis WWTF EFD-1	Overflow	Fecal Coliforms-Membrane Filter	46	cfu/100 mL	2	2
10/20/2014 9:10	Napolis WWTF EFD-1	Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100 L	LC50		
10/20/2014 9:10	Napolis WWTF EFD-1	Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100 L	LC50		
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Magnesium	9.70	mg/L	0.04	0.16
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Nickel	0.85 I	ug/L	0.25	1
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Chromium	0.75 I	ug/L	0.3	1.2
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Selenium	0.26 I	ug/L	0.2	0.8
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Calcium	57.2	mg/L	0.075	0.3
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Iron	47 I	ug/L	30	120
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Arsenic	0.97 I	ug/L	0.25	1
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Sodium	49.5	mg/L	0.5	2
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Aluminum	40	ug/L	5	20
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Lead	0.39 I	ug/L	0.2	0.8
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Potassium	9.8	mg/L	0.3	1.2
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Cadmium	0.13 I	ug/L	0.05	0.2
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Copper	8.29	ug/L	0.5	1
10/20/2014 9:10	Napolis WWTF EFD-1	Metals	Zinc	42	ug/L	5	20
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	TSS	3 I	mg/L	2	10
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Fluoride	0.27	mg F/L	0.035	0.1
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Sulfate	16 A	mg SO4/L	2	5
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Color (true)	27 A	PCU	2.5	6
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Turbidity	2.2	NTU	0.1	0.1
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Alkalinity	111 A	mg CaCO3/L	0.65	2.5
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	O-Phosphate-P	2.6	mg P/L	0.08	0.2
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Ammonia-N	0.032	mg N/L	0.002	0.005
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Total-P	3.0	mg P/L	0.025	0.25
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Kjeldahl Nitrogen	1.4	mg N/L	0.4	1

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Organic Carbon	10 A	mg C/L	1	2
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	NO2NO3-N	21	mg N/L	0.4	1
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Chloride	50 A	mg Cl/L	2	5
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Bromacil	0.040 U	ug/L	0.04	0.16
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Sucralose	41	ug/L	0.4	2
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Acetaminophen	0.0020 U	ug/L	0.002	0.01
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Atrazine Desisopropyl	0.050 U	ug/L	0.05	0.2
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Disulfoton	0.0050 U	ug/L	0.005	0.02
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Malathion	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Metalaxyl	0.040 U	ug/L	0.04	0.16
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Prometon	0.020 UJ	ug/L	0.02	0.08
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Naled	0.040 UJ	ug/L	0.04	0.16
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Norflurazon	0.030 UJ	ug/L	0.03	0.12
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.08
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Metolachlor	0.060 U	ug/L	0.06	0.24
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Fenamiphos	0.030 UJ	ug/L	0.03	0.12
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.08
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Simazine	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Butylate	0.020 U	ug/L	0.02	0.08
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Ethion	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Ethoprop	0.0050 U	ug/L	0.005	0.02
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.08
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.08
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Demeton	0.024 UJ	ug/L	0.024	0.096
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Phorate	0.0050 U	ug/L	0.005	0.02
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Carbamazepine	0.55	ug/L	0.002	0.01

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Alachlor	0.060 U	ug/L	0.06	0.24
10/20/2014 9:10	Napolis WWTF EFD-1	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.04
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	57
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Pentachlorophenol	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
10/20/2014 9:10	Napolis WWTF EFD-1	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Specific Conductance	596	umhos/cm		
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	pH	7.42			
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Sample Depth	0.1	m		
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Temperature	22.57	C		
10/20/2014 9:10	Napolis WWTF EFD-1	Nutrients	Dissolved Oxygen	8.33	mg/L		
10/20/2014 9:20	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
10/20/2014 9:20	Field Blank	Metals	Zinc	5.0 U	ug/L	5	20
10/20/2014 9:20	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
10/20/2014 9:20	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
10/20/2014 9:20	Field Blank	Metals	Iron	30 U	ug/L	30	120
10/20/2014 9:20	Field Blank	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
10/20/2014 9:20	Field Blank	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Metals	Chromium	0.30 U	ug/L	0.3	1.2
10/20/2014 9:20	Field Blank	Metals	Arsenic	0.25 U	ug/L	0.25	1
10/20/2014 9:20	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/20/2014 9:20	Field Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Metals	Aluminum	5.0 U	ug/L	5	20
10/20/2014 9:20	Field Blank	Metals	Nickel	0.25 U	ug/L	0.25	1
10/20/2014 9:20	Field Blank	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/20/2014 9:20	Field Blank	Metals	Copper	0.50 U	ug/L	0.5	1
10/20/2014 9:20	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
10/20/2014 9:20	Field Blank	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
10/20/2014 9:20	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
10/20/2014 9:20	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
10/20/2014 9:20	Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
10/20/2014 9:20	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
10/20/2014 9:20	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
10/20/2014 9:20	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
10/20/2014 9:20	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
10/20/2014 9:20	Field Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
10/20/2014 9:20	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
10/20/2014 9:20	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
10/20/2014 9:20	Field Blank	Pesticides	Alachlor	0.058 U	ug/L	0.058	0.23
10/20/2014 9:20	Field Blank	Pesticides	Disulfoton	0.0049 U	ug/L	0.0049	0.019
10/20/2014 9:20	Field Blank	Pesticides	Fenamiphos	0.029 U	ug/L	0.029	0.12
10/20/2014 9:20	Field Blank	Pesticides	Metolachlor	0.058 U	ug/L	0.058	0.23
10/20/2014 9:20	Field Blank	Pesticides	Atrazine Desethyl	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Parathion Methyl	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.078
10/20/2014 9:20	Field Blank	Pesticides	Metalaxyl	0.039 U	ug/L	0.039	0.16
10/20/2014 9:20	Field Blank	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.078
10/20/2014 9:20	Field Blank	Pesticides	Norflurazon	0.029 U	ug/L	0.029	0.12
10/20/2014 9:20	Field Blank	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.078
10/20/2014 9:20	Field Blank	Pesticides	Simazine	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Bromacil	0.039 U	ug/L	0.039	0.16
10/20/2014 9:20	Field Blank	Pesticides	Butylate	0.019 U	ug/L	0.019	0.078
10/20/2014 9:20	Field Blank	Pesticides	Demeton	0.023 UJ	ug/L	0.023	0.094
10/20/2014 9:20	Field Blank	Pesticides	Fonofos	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Mevinphos	0.0097 U	ug/L	0.0097	0.039

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/20/2014 9:20	Field Blank	Pesticides	Diazinon	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Ethoprop	0.0049 U	ug/L	0.0049	0.019
10/20/2014 9:20	Field Blank	Pesticides	Malathion	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Naled	0.039 UJ	ug/L	0.039	0.16
10/20/2014 9:20	Field Blank	Pesticides	Atrazine Desisopropyl	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Prometon	0.019 UJ	ug/L	0.019	0.078
10/20/2014 9:20	Field Blank	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.078
10/20/2014 9:20	Field Blank	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.05
10/20/2014 9:20	Field Blank	Pesticides	Ametryn	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Acetaminophen	5.0E-04 U	ug/L	0.0005	0.0025
10/20/2014 9:20	Field Blank	Pesticides	Chlorpyrifos Methyl	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Ethion	0.0097 U	ug/L	0.0097	0.039
10/20/2014 9:20	Field Blank	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
10/20/2014 9:20	Field Blank	Pesticides	Phorate	0.0049 U	ug/L	0.0049	0.019
10/20/2014 9:20	Field Blank	Pesticides	Carbamazepine	5.0E-04 U	ug/L	0.0005	0.0025
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	ug/L	3	12
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Hexachloroethane	3.0 U	ug/L	3	12
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	60
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	ug/L	3	12

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Phenol	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	ug/L	10	40
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	60
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Benzidine	100 U	ug/L	100	400
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	ug/L	3	12
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	ug/L	3	12
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	ug/L	40	160
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Isophorone	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Pentachlorophenol	3.0 U	ug/L	3	12
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2-Nitrophenol	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Diethyl phthalate	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2-Chlorophenol	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.8
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	ug/L	1	4
10/20/2014 9:20	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	ug/L	1	4

EPA End Sheet

The Bioassay of Napoli Mobile Home Park LLC effluent sampled on October 20, 2014. NPDES #FL0043150.

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 FL0043150	11 12 141020	18 B	19 S	20 2

Remarks

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The Priority Pollutants Analysis of Napoli Mobile Home Park LLC effluent sampled on October 20, 2014. NPDES #FL0043150.

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 FL0043150	11 12 141020	18 X	19 S	20 2

Remarks

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Biological Analyses of Napoli Mobile Home Park LLC effluent sampled on October 20, 2014. NPDES #FL0043150.

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 FL0043150	11 12 141020	18 S	19 S	20 2

Remarks

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