

Effluent Quality Assessment

City of Venice East Side
Advanced Wastewater Treatment Plant

Sarasota County

NPDES #FL0041441

Sampled November 15, 2010

(No Bioassay)

April 2011

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration

Quality Manual No. 870346G
NELAC Certification No. E31780

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City of Venice East Side Advanced Wastewater Treatment Facility, 3510 East Laurel Road, Venice, Sarasota County, Florida, 34285. NPDES #FL0041441. Effluent grab and composite samples for chemical analyses and grab samples for biological analyses for this facility were collected on November 15, 2010.

Introduction

City of Venice East Side Advanced Wastewater Treatment Facility (AWWTF) is a Type 1 advanced wastewater treatment facility which uses the Bardenpho Process to treat domestic wastewater. Discharge is intermittent to Curry Creek, a Class III fresh water. The facility was not discharging during this inspection. (See Appendixes C and D for detailed facility information provided by Jason Cohen of FDEP Southwest District.)

Methods

Samples were collected from the EFA-01 (after disinfection and prior to dechlorination) and EFB-01 (after filtration and prior to disinfection; grab sample for TSS only) NPDES sampling points for Outfall D-001 by Jason Cohen and Ramandeep Kaur (FDEP Southwest District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: http://www.floridadep.org/labs/bars/sas/sop/index.htm.

The algal growth potential tests were performed following internal DEP SOPs TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

See Appendix A for the completed chain of custody form.

Samples for Bioassay analyses were not collected during this sampling event.

Results and Discussion

- **Algal Growth Potential**
  The effluent Algal Growth Potential (AGP) was 80.8 A (A - Value reported is the mean of two or more determinations) 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 represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is nitrogen limited. The predicted AGP based on inorganic nitrogen concentrations was 92.8 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

  See Table 1 for AGP results.

- **Chemistry Results**
  Total residual chlorine (TRC) (1.54 mg/L) was detected in the field in the effluent sample collected from the EFA-01 NPDES sample collection. This concentration complied with the facility's NPDES permit limit for TRC of ≥ 1.0 mg/L for disinfection. The total ammonia concentration in the composite sample collected and preserved for chemical analysis was 0.041 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.

  Arsenic, bromoform, chloroform, dibromochloromethane, nickel and zinc were detected in the effluent (EFA-01) at levels that comply with Class III fresh water quality criteria (62-302.530, F.A.C.). Aluminum, chromium -III and selenium were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). The concentration of Bromodichloromethane (71 µg/L; Annual Average limit ≤22 µg/L, 62-302.500 (35)(b)(5), F.AC. and permit # FL0041441) was greater in the single sample than the Class III Freshwater criterion and permitted annual average limit; however, the annual average bromodichloromethane concentration (5.9 µg/L) (September 1, 2009 – October 1, 2010)

reported on the facility's Discharge Monitoring Report was well below both the Class III criterion and permitted limit. The total suspended solids (TSS) concentration (6 I) (I – the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit) mg/L in the effluent collected from the EFB-01 NPDES sampling point exceeded the facility's permitted single sample limit of 5 mg/L. The effluent specific conductance (1,286 µmhos-cm) was greater than the Class III Freshwater numeric criterion (Shall not be increased more than 50% above background or to 1,275 µmhos-cm whichever is greater (62-302.530 (22) F.A.C.) of 1,275 µmhos-cm. Since there was no discharge or background flow and conductivity data, it cannot be determined if the effluent would have caused an exceedence of (62-302.530 (22) F.A.C.).

Fecal coliforms were not detected in the effluent.

See Table 2 for results of analytes detected in the effluent and corresponding limits. See Appendix B for a complete list of chemical analyses performed. See Appendix E for the EPA end page.

Conclusion

Effluent samples for algal growth potential, chemical analyses and microbiology analysis were collected from the EFA-01 NPDES sampling points for Outfall D-001 for this facility on November 15, 2010. An effluent grab sample for TSS was collected from the EFB-01 NPDES sampling point for Outfall D-001. The effluent AGP, 80.8 A (A - Value reported is the mean of two or more determinations) mg dry wt/L exceeded the "problem" threshold for fresh receiving waters, implying nutrient enrichment.

TSS exceeded both Class III freshwater criteria and the permitted limit. The concentration of Bromodichloromethane (71 µg/L; Annual Average limit ≤22 µg/L, 62-302.500 (35)(b)(5), F.AC. and permit # FL0041441) was greater in the single sample than the Class III Freshwater criterion and permitted annual average limit; however, the annual average bromodichloromethane concentration (5.9 µg/L) (September 1, 2009 – October 1, 2010) reported on the facility's Discharge Monitoring Report was well below both the Class III criterion and permitted limit. It could not be determined if the effluent specific conductance would have caused an exceedence of (62-302.530 (22) F.A.C.). The facility was not discharging during this inspection; therefore, samples for everything except TSS were collected from the chlorine contact chamber.

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.

Table 1. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN) and orthophosphate (OP) limitation of the freshwater species *Pseudokirchneriella subcapitata* for samples collected from the Venice East Side AWWTF on November 15, 2010.

Venice East Side AWWTF					
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (OP) ± 20%	Inorganic N:P ratio	Total N:P ratio
EFA-01 Effluent	80.8 A	92.8 ± 18.6	288.1 ± 57.6	3.6	3.8

Table 2. Effluent limits, Class III Freshwater Criteria and chemical and microbiological data for samples collected from the Venice East Side AWWTF on November 15, 2010.

Venice East Side AWWTF NPDES# FL0041441	Class III Criteria	Effluent Limits	EFA-01 Effluent	
Organic Constituents (µg/L)				
Bromodichloromethane	≤ 22 a	≤ 22 a	71	
Bromoform	≤ 360 a	-	2.4	
Chloroform	≤ 470.8 a	-	86	
Dibromochloromethane	≤ 34 a	≤ 34 a	29	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	64	I
Arsenic	≤ 50	-	1.09	
Cadmium	≤ 0.71 b	-	0.03	U
Calcium (mg/L)	-	-	75.5	
Chromium-III	≤ 251.93 b	-	0.95	I
Copper	≤ 28.57 b	-	0.5	U
Iron	≤ 1,000	-	30	U
Lead	≤ 16.86 b	-	0.2	U
Magnesium (mg/L)	-	-	44.2	
Mercury	≤ 0.012	-	-	
Nickel	≤ 157.98 b	-	1.71	
Selenium	≤ 5.0	-	0.21	I
Silver	≤ 0.07	-	0.025	U
Zinc	≤ 363.49 b	-	21	
Nutrients (mg/L)				
Ortho-phosphate	-	-	0.67	
Total Phosphorus	-	2.0 s	0.89	
Total Ammonia	-	-	0.041	
Un-ionized Ammonia	≤ 0.02 s	-	≤ 0.02	c
Nitrate and Nitrite	-	-	2.4	
Total Kjeldahl Nitrogen	-	-	0.96	J
Organic Nitrogen	-	-	0.919	c
Total Nitrogen	-	6.0 s	3.36	c
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0 s	≥ 7.0 s	7.2	
pH (SU)	6.0 - 8.5 s	6.0 - 8.5 s	7.4	
Conductivity (µmhos/cm)	≤ 1,275 s	-	1,286	
Temperature (°C)	-	-	25.1	
Total Residual Chlorine (mg/L)	≤ 0.01	≥ 1.0	1.54	*
Chlorophyll *a* (µg/L) - Corrected	-	-	0.55	U
Phaeophytin (µg/L)	-	-	0.4	U
Total Suspended Solids (mg/L) EFA-01	-	10 p	4	U
Total Suspended Solids (mg/L) EFB-01	-	5 s	6	I
CBOD, 5 day (mg/L), N - inhibited	-	10 s	0.2	U
Flow (MGD) Sept. 2009 - Aug. 2010	-	3	0.206	a
Hardness (mg $CaCO_3$)	-	-	370.54	c
Microbiology (Number of colony forming units/100ml)				
Fecal Coliforms ¥	≤ 400s #	≤ 25	1	U

Value exceeds the Class III Water Quality Criteria or permit limits

b - Value is calculated based on hardness

c - Value is calculated

p - 24 hour flow proportioned composite

s - Single sample

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

J - Estimated value

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

* - Sample collected from chlorine contact chamber

¥ - Fecal coliform analysis performed by Advanced Environmental Labs, Tampa

- If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Request Number: RQ-2010-11-15-23
Venice Eastside FYI3

Event ID *

Requester: Cari Butler
Field Report Prepared By:

Customer: SW-DIST
Project ID: FYI3
PMAS: 1143

Collected By: J. Cohen, R. Kaur
Send Final Report To: Joe Squitieri

Sampling Agency: FDEP SWD

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	EFA-01 (38104)	☐ Comp ☑ Grab Date 11/15/10 Time 0955 ☑ Eastern ☐ Central	Date Time ☐ Eastern ☐ Central	A
	Field ID	Tot Res Chlorine (mg/L): 1.54	Diss Oxygen (mg/L): 7.16	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): Fresh	Temp (C): 25.14	pH: 7.44	Sample Depth ☑ m ☐ ft: 0.2
				☑ Salinity (PPTh): 0.64 ☑ Sp Conductance (umho/cm): 1286
				NPDES Number
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: Composite Samples Begin 11/14/10 530 End 11/15/10 500	

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	EFB-01 (38106)	☐ Comp ☐ Grab Date 11/15/10 Time 930 ☑ Eastern ☐ Central	Date Time ☐ Eastern ☐ Central	C
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft
				☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
				NPDES Number
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments	

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	BLANK (38105)	☐ Comp ☐ Grab Date 11-15-10 Time 1030 ☐ Eastern ☐ Central	Date Time ☐ Eastern ☐ Central	B, D
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): LAB DI WATER	Temp (C)	pH	Sample Depth ☐ m ☐ ft
				☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
				NPDES Number
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: NH3, TCP, Samples not received. ARG 11-16-10	

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
☆		☐ Comp ☐ Grab Date Time ☐ Eastern ☐ Central	Date Time ☐ Eastern ☐ Central	
	Field ID: TRIP-BLK-1 and 2	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft
				☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
				NPDES Number
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments	

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	11/15/10 1345	FED EX	ARG	11-16-10 0935				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

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☆ Filled by Amzad 11-16-10

Appendix B. Chemical Analyses performed on the effluent from the Venice East Side Advanced Wastewater Treatment Facility Plant Outfall D-001, sampled on November 15, 2010.

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 9:55	EFA-01 Effluent	AGP/LN	Algal Growth Potential	80.8	A	mg DryWt/L	0.3	0.9
11/15/2010 9:55	EFA-01 Effluent	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.2	U	mg/L	0.2	2
11/15/2010 9:55	EFA-01 Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
11/15/2010 9:55	EFA-01 Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55	U	ug/L	0.55	1.7
11/15/2010 9:55	EFA-01 Effluent	Overflow	Fecal Coliforms-Membrane Filter	1	U	cfu/100 mL		
11/15/2010 17:00	EFA-01 Effluent	Metals	Aluminum	64	I	ug/L	60	240
11/15/2010 17:00	EFA-01 Effluent	Metals	Iron	30	U	ug/L	30	120
11/15/2010 17:00	EFA-01 Effluent	Metals	Antimony	0.47	I	ug/L	0.25	1
11/15/2010 17:00	EFA-01 Effluent	Metals	Selenium	0.21	I	ug/L	0.2	0.8
11/15/2010 17:00	EFA-01 Effluent	Metals	Magnesium	44.2		mg/L	0.04	0.16
11/15/2010 17:00	EFA-01 Effluent	Metals	Zinc	21		ug/L	5	20
11/15/2010 17:00	EFA-01 Effluent	Metals	Arsenic	1.09		ug/L	0.25	1
11/15/2010 17:00	EFA-01 Effluent	Metals	Chromium	0.95	I	ug/L	0.3	1.2
11/15/2010 17:00	EFA-01 Effluent	Metals	Copper	0.5	U	ug/L	0.5	1
11/15/2010 17:00	EFA-01 Effluent	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
11/15/2010 17:00	EFA-01 Effluent	Metals	Nickel	1.71		ug/L	0.25	1
11/15/2010 17:00	EFA-01 Effluent	Metals	Calcium	75.5		mg/L	0.075	0.3
11/15/2010 17:00	EFA-01 Effluent	Metals	Beryllium	0.025	U	ug/L	0.025	0.1
11/15/2010 17:00	EFA-01 Effluent	Metals	Lead	0.2	U	ug/L	0.2	0.8
11/15/2010 17:00	EFA-01 Effluent	Metals	Silver	0.025	U	ug/L	0.025	0.1
11/15/2010 17:00	EFA-01 Effluent	Nutrients	Ammonia-N	0.041		mg N/L	0.01	0.02
11/15/2010 17:00	EFA-01 Effluent	Nutrients	Kjeldahl Nitrogen	0.96	J	mg N/L	0.08	0.2
11/15/2010 9:55	EFA-01 Effluent	Nutrients	O-Phosphate-P	0.67		mg P/L	0.02	0.05
11/15/2010 17:00	EFA-01 Effluent	Nutrients	Total-P	0.89		mg P/L	0.005	0.05
11/15/2010 17:00	EFA-01 Effluent	Nutrients	NO2NO3-N	2.4		mg N/L	0.04	0.1
11/15/2010 17:00	EFA-01 Effluent	Nutrients	TSS	4	U	mg/L	4	16
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Ethoprop	0.1	UJ	ug/L	0.1	0.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Alpha-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Endosulfan II	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Azinphos Methyl	0.2	UJ	ug/L	0.2	0.8
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Naled	0.8	U	ug/L	0.8	3.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Beta-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 9:55	EFA-01 Effluent	Pesticides	DDE-p,p'	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Aldrin	0.01	U	ug/L	0.01	0.04
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Delta-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Endrin	0.05	U	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Gamma-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Heptachlor	0.01	U	ug/L	0.01	0.04
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Methoxychlor	0.05	U	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Endosulfan Sulfate	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Toxaphene	0.75	U	ug/L	0.75	3
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Phorate	0.05	UJ	ug/L	0.05	0.2
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Chlordane	0.2	U	ug/L	0.2	0.8
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Dieldrin	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Endrin Aldehyde	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Metalaxyl	0.25	UJ	ug/L	0.25	1
11/15/2010 9:55	EFA-01 Effluent	Pesticides	DDD-p,p'	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Endosulfan I	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Mevinphos	0.2	UJ	ug/L	0.2	0.8
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
11/15/2010 9:55	EFA-01 Effluent	Pesticides	DDT-p,p'	0.03	U	ug/L	0.03	0.12
11/15/2010 9:55	EFA-01 Effluent	Pesticides	Heptachlor Epoxide	0.02	U	ug/L	0.02	0.08
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	53	U	ug/L	53	210
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Dimethyl phthalate	13	U	ug/L	13	53
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Isophorone	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.6	U	ug/L	2.6	11
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.9	U	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Dibromochloromethane	29		ug/L	0.2	1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Diethyl phthalate	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Hexachlorobutadiene	3.9	U	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Pyrene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Bromodichloromethane	71		ug/L	0.2	1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	20	U	ug/L	20	79
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2-Chloronaphthalene	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Anthracene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	6.6	U	ug/L	6.6	26
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.9	U	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Pentachlorophenol	3.9	U	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Bromoform	2.4		ug/L	0.5	2
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Chloroform	86		ug/L	0.2	1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2-Chlorophenol	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Acenaphthene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Hexachlorobenzene	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	2.6	U	ug/L	2.6	11
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	13	U	ug/L	13	53
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Acenaphthylene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	0.26	U	ug/L	0.26	1.1

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Fluorene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Phenol	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	4-Nitrophenol	20	U	ug/L	20	79
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.9	U	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Hexachloroethane	3.9	U	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Benzidine	130	UJ	ug/L	130	530
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	20	U	ug/L	20	79
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Chrysene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Fluoranthene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Nitrobenzene	2.6	U	ug/L	2.6	11
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.9	UJ	ug/L	3.9	16
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	2-Nitrophenol	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.6	U	ug/L	2.6	11
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Benzo(a)anthracene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Benzo(a)pyrene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	6.6	U	ug/L	6.6	26
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Naphthalene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	Phenanthrene	0.26	U	ug/L	0.26	1.1
11/15/2010 9:55	EFA-01 Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.3	U	ug/L	1.3	5.3
11/15/2010 9:55	EFA-01 Effluent	Field Parameter	pH	7.44				
11/15/2010 17:00	EFA-01 Effluent	Field Parameter	Temperature	25.14		C		
11/15/2010 9:55	EFA-01 Effluent	Field Parameter	Specific Conductance	1286		umhos/cm		
11/15/2010 17:00	EFA-01 Effluent	Field Parameter	Dissolved Oxygen	7.16		mg/L		
11/15/2010 9:55	EFA-01 Effluent	Field Parameter	Dissolved Oxygen	7.16		mg/L		
11/15/2010 9:55	EFA-01 Effluent	Field Parameter	Total Residual Chlorine	1.54		mg/L		
11/15/2010 17:00	EFA-01 Effluent	Field Parameter	Sample Depth	0.2		m		

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 17:00	EFA-01 Effluent	Field Parameter	Specific Conductance	1286		umhos/cm		
11/15/2010 9:55	EFA-01 Effluent	Field Parameter	Sample Depth	0.2		m		
11/15/2010 9:55	EFA-01 Effluent	Field Parameter	Temperature	25.14		C		
11/15/2010 17:00	EFA-01 Effluent	Field Parameter	pH	7.44				
11/15/2010 9:30	EFB-01 Effluent	Nutrients	TSS	6	I	mg/L	4	16
11/15/2010 10:30	Blank	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.2	U	mg/L	0.2	2
11/15/2010 10:30	Blank	Nutrients	TSS	4	U	mg/L	4	16
11/15/2010 10:30	Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
11/15/2010 10:30	Blank	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
11/15/2010 10:30	Blank	Pesticides	DDT-p,p'	0.031	U	ug/L	0.031	0.12
11/15/2010 10:30	Blank	Pesticides	Dieldrin	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	DDD-p,p'	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Delta-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 10:30	Blank	Pesticides	Heptachlor	0.01	U	ug/L	0.01	0.04
11/15/2010 10:30	Blank	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
11/15/2010 10:30	Blank	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
11/15/2010 10:30	Blank	Pesticides	Phorate	0.051	UJ	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	DDE-p,p'	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Methoxychlor	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Toxaphene	0.77	U	ug/L	0.77	3.1
11/15/2010 10:30	Blank	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
11/15/2010 10:30	Blank	Pesticides	Mevinphos	0.2	UJ	ug/L	0.2	0.8
11/15/2010 10:30	Blank	Pesticides	Simazine	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Endosulfan II	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Endrin	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Azinphos Methyl	0.2	UJ	ug/L	0.2	0.8
11/15/2010 10:30	Blank	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
11/15/2010 10:30	Blank	Pesticides	Chlorpyrifos Ethyl	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Aldrin	0.01	U	ug/L	0.01	0.04
11/15/2010 10:30	Blank	Pesticides	Alpha-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 10:30	Blank	Pesticides	Endosulfan I	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Diazinon	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
11/15/2010 10:30	Blank	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 10:30	Blank	Pesticides	Beta-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 10:30	Blank	Pesticides	Chlordane	0.2	U	ug/L	0.2	0.8
11/15/2010 10:30	Blank	Pesticides	Heptachlor Epoxide	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Alachlor	0.61	U	ug/L	0.61	2.4
11/15/2010 10:30	Blank	Pesticides	Ametryn	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Atrazine	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
11/15/2010 10:30	Blank	Pesticides	Metalaxyl	0.26	UJ	ug/L	0.26	1
11/15/2010 10:30	Blank	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
11/15/2010 10:30	Blank	Pesticides	Endrin Aldehyde	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Gamma-BHC	0.01	U	ug/L	0.01	0.04
11/15/2010 10:30	Blank	Pesticides	Ethion	0.051	U	ug/L	0.051	0.2
11/15/2010 10:30	Blank	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
11/15/2010 10:30	Blank	Pesticides	Metolachlor	0.51	U	ug/L	0.51	2
11/15/2010 10:30	Blank	Pesticides	Naled	0.82	U	ug/L	0.82	3.3
11/15/2010 10:30	Blank	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
11/15/2010 10:30	Blank	Pesticides	Ethoprop	0.1	UJ	ug/L	0.1	0.4
11/15/2010 10:30	Blank	Pesticides	Endosulfan Sulfate	0.02	U	ug/L	0.02	0.08
11/15/2010 10:30	Blank	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Acenaphthene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	61
11/15/2010 10:30	Blank	Priority Organic Pollutants	Hexachlorobenzene	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3	U	ug/L	3	12
11/15/2010 10:30	Blank	Priority Organic Pollutants	Phenol	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Bromoform	0.5	U	ug/L	0.5	2
11/15/2010 10:30	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	5.1	U	ug/L	5.1	20
11/15/2010 10:30	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2	U	ug/L	2	8.1
11/15/2010 10:30	Blank	Priority Organic Pollutants	Chloroform	0.2	U	ug/L	0.2	1
11/15/2010 10:30	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	15	U	ug/L	15	61
11/15/2010 10:30	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3	UJ	ug/L	3	12

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 10:30	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	U	ug/L	40	160
11/15/2010 10:30	Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	5.1	U	ug/L	5.1	20
11/15/2010 10:30	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2	U	ug/L	2	8.1
11/15/2010 10:30	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	40
11/15/2010 10:30	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2	U	ug/L	2	8.1
11/15/2010 10:30	Blank	Priority Organic Pollutants	Anthracene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	400
11/15/2010 10:30	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Pyrene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Dibromochloromethane	0.2	U	ug/L	0.2	1
11/15/2010 10:30	Blank	Priority Organic Pollutants	2-Chloronaphthalene	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	2-Chlorophenol	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Acenaphthylene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Fluoranthene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Naphthalene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Pentachlorophenol	3	U	ug/L	3	12
11/15/2010 10:30	Blank	Priority Organic Pollutants	Chrysene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Dimethyl phthalate	10	U	ug/L	10	40
11/15/2010 10:30	Blank	Priority Organic Pollutants	Fluorene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Nitrobenzene	2	U	ug/L	2	8.1
11/15/2010 10:30	Blank	Priority Organic Pollutants	Phenanthrene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	2-Nitrophenol	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3	U	ug/L	3	12
11/15/2010 10:30	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.2	U	ug/L	0.2	0.81
11/15/2010 10:30	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	3	U	ug/L	3	12

Appendix B. Continued

Date	Sample ID	Analysis	Component	Result	Remark	Units	MDL	PQL
11/15/2010 10:30	Blank	Priority Organic Pollutants	Isophorone	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	61
11/15/2010 10:30	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Diethyl phthalate	1	U	ug/L	1	4
11/15/2010 10:30	Blank	Priority Organic Pollutants	Hexachlorobutadiene	3	U	ug/L	3	12
11/15/2010 10:30	Blank	Priority Organic Pollutants	Hexachloroethane	3	U	ug/L	3	12
11/15/2010 10:30	Blank	Priority Organic Pollutants	Bromodichloromethane	0.2	U	ug/L	0.2	1
11/15/2010 9:55	Trip Blank 1	Priority Organic Pollutants	Chloroform	0.2	U	ug/L	0.2	1
11/15/2010 9:55	Trip Blank 1	Priority Organic Pollutants	Bromoform	0.5	U	ug/L	0.5	2
11/15/2010 9:55	Trip Blank 1	Priority Organic Pollutants	Dibromochloromethane	0.2	U	ug/L	0.2	1
11/15/2010 9:55	Trip Blank 1	Priority Organic Pollutants	Bromodichloromethane	0.2	U	ug/L	0.2	1
11/15/2010 9:55	Trip Blank 2	Priority Organic Pollutants	Bromodichloromethane	0.2	U	ug/L	0.2	1
11/15/2010 9:55	Trip Blank 2	Priority Organic Pollutants	Dibromochloromethane	0.2	U	ug/L	0.2	1
11/15/2010 9:55	Trip Blank 2	Priority Organic Pollutants	Bromoform	0.5	U	ug/L	0.5	2
11/15/2010 9:55	Trip Blank 2	Priority Organic Pollutants	Chloroform	0.2	U	ug/L	0.2	1

Appendix C. Pre-Sampling Facility Summary, Effluent Limits, and Permit Violations Recorded on Discharge Monitoring Report

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Jason Cohen Jason.Cohen@dep.state.fl.us	**Contact Number:** 813-632-7600 x429
Facility Name (as it appears on permit): City of Venice East Side AWWTF	**Former Names:**
NPDES Permit Number: FL0041441	**Permit Expiration Date:** August 16, 2011
Physical Address: 3510 East Laurel Road Venice, Fl 34285	
District: Southwest	**County:** Sarasota
Function of Facility: Type I AWWTF (Bardenpho4 process) domestic wastewater treatment plant.	
Facility Type: Major	**Permitted Capacity (MGD):** 6.0 MGD 3 Month average daily flow
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): Sept 09-Aug 10 D-001: 0.206 MGD	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): Sept 09-Aug 10 R-001: 2.912 MGD R-002: 1.001 MGD	
Description of type of Discharge: ☐ **Continuous** ☒ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify**	

Appendix C. Continued

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

Monitoring Location Site Number	Description of Monitoring Location
EFA-01	After disinfection and prior to dechlorination
EFB-01	After filtration and prior to disinfection
EFD-01	Prior to discharge to Curry Creek
FLW-02	Flow meter prior to discharge to Curry Creek
FLW-06	Flow meter in Curry Creek

Description of Permitted Outfall(s):

DISPOSAL:

Surface Water Discharge: An existing 3.0 MGD annual average daily flow (AADF) permitted discharge to Curry Creek (Class III Fresh Water) and thence to Roberts Bay at Discharge Location (D-001) which is an aerated cascade flowing into Curry Creek. The point of discharge is located approximately at latitude 27 ° 6' 55" N, longitude 82 ° 24' 4" W.

Reclaimed water is discharged into stormwater storage lake system, Capri Isles Golf Course North, which intermittently overflows to Curry Creek, D-002.

Reclaimed water is discharged into stormwater storage lake system, Capri Isle Golf Course South, which intermittently overflows to Curry Creek, D-003.

Reclaimed water is discharged into stormwater storage lake system, Bird Bay Golf Course, which intermittently overflows to Roberts Bay, D-004.

Reclaimed water is discharged into stormwater storage lake system, Island Beach, which intermittently overflows to Red Lake, D-005.

REUSE:

Land Application: An existing 2.0 MGD annual average daily flow (AADF) permitted capacity slow-rate public access (R-001) consisting of the boundaries of the City of Venice. Reclaimed water is used for irrigation of public-access areas (residential lawns, golf courses, parks and playgrounds, highway medians and rights-of way and landscaped areas) within the areas identified in Attachment 1, titled " Reuse Service Areas", of the letter dated December 16, 2002 from Boyle Engineering Corporation to the Department.

Land Application: An existing 3.0 MGD annual average daily flow (AADF) permitted capacity slow-rate public access (R-002) consisting of discharge to Sarasota County's South Master Reuse System, FLA176303, under an interagency agreement.

INTERNAL OUTFALL:

An existing discharge of reclaimed water limited to 1.0 mgd annual average daily flow discharge location (R-003) of reclaimed water to the Venice Reverse Osmosis Concentrate Disposal system, regulated under Industrial Wastewater Permit No. FL0035335 located approximately at latitude 27° 06' 04" N, longitude 82° 26' 17" W.

Appendix C. Continued

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):

Operation of an existing 6.0 MGD three-month average daily flow Type I advanced wastewater treatment (Bardenpho process) domestic wastewater treatment plant. The plant consists of preliminary treatment followed by dual four-stage Bardenpho process trains, four clarifiers (each with a surface area of 5,675 ft), three dual media (sand and anthracite) automatic backwash traveling bridge filters (each with a surface area of 1,056 ft) and a liquid chlorination system consisting of three contact chambers with a combined capacity of 133,200 gallons. Aeration is provided at the chlorine contact chambers when surface discharge is necessary. Waste sludge is discharged to four aerated holding tanks and dewatered by two belt filter presses. This plant provides advanced wastewater treatment with high-level disinfection.

Sub-standard effluent that fails to meet the standards for public access irrigation is diverted to a six-million gallon capacity, clay-lined reject pond for return to the headworks of the plant. Reclaimed water is stored in either a 3.0 million gallon above-ground storage tank or is directed to a 35-million gallon on-site lined storage pond. All reclaimed water stored in the lined storage pond can be filtered and disinfected again, if necessary, before being sent to the reuse system.

Appendix C. Continued

			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 (D-001)	MGD	Maximum	3.0	Report	-	-	Continuous	Recording flow meters and totalizers	FLW-02	See Cond.I.A.5
Flow (Curry Creek)[1]	CFS	Minimum	-	-	-	47.0	Continuous	Recording flow meters and totalizers	FLW-06	See Cond.I.A.4
BOD, Carbonaceous 5 day, 20C	MG/L	Maximum	5.0	6.25	7.5	10.0	5 Days/Week	24-hour flow proportioned composite	EFA-01	
Solids, Total Suspended	MG/L	Maximum	5.0	6.25	7.5	10.0	5 Days/Week	24-hour flow proportioned composite	EFA-01	
Nitrogen, Total (as N)	MG/L	Maximum	3.0	3.75	4.5	6.0	5 Days/Week	24-hour flow proportioned composite	EFA-01	
Phosphorus, Total (as P)	MG/L	Maximum	1.0	1.25	1.5	2.0	5 Days/Week	24-hour flow proportioned composite	EFA-01	
Solids, Total Suspended	MG/L	Maximum	-	-	-	5.0	Daily	Grab	EFB-01	
Nitrogen, Total as N	Lbs/Year	Maximum	6370				Monthly	Calculation	EFD-01	See Cond. I.A.4
pH	SU	Range	-	-	-	6.0 to 8.5	Continuous	Meter	EFA-01	See Cond.I.A.3
Oxygen, Dissolved (DO)	MG/L	Minimum	-	-	-	7.0	Daily	Grab	EFD-01	
Coliform, Fecal, % less than detection	PERCENT	Minimum	75				Monthly	Calculation	EFA-01	See Cond.I.A.6
Coliform, Fecal	#/100ML	Maximum				25	7 Days/Week	Grab	EFA-01	See Cond.I.A.6
Total Residual Chlorine (For Disinfection)	MG/L	Minimum	-	-	-	1.0	Continuous	Meter	EFA-01	See Cond.I.A.7

Appendix C. Continued

Parameter	Units	Max/Min	Effluent Limitations				Monitoring Requirements			Notes
			Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	
Total Residual Chlorine (For Dechlorination)	MG/L	Maximum	-	-	-	0.01	Daily	Grab	EFD-01	
Dichlorobromomethane	UG/L	Maximum	22.0	-	-	-	Monthly	Grab	EFD-01	
Dibromochloromethane	UG/L	Maximum	34.0	-	-	-	Monthly	Grab	EFD-01	
Chronic Whole Effluent Toxicity	PERCENT	Minimum	-	-	-	100	Quarterly	24-hour flow proportioned composite	EFD-01	See Cond. I. A. 8.

[1]Based on average daily creek flow at least 24 hours prior to initiating discharge.

Appendix C. Continued

PART I: Continued	
Receiving Waters: Curry Creek	**Classification (indicate whether fresh or marine):** Class III Fresh

PART I: Continued

Appendix C. Continued

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):

8. Chronic Whole Effluent Toxicity Testing

The permittee shall comply with the following whole effluent toxicity testing requirements and initiate the series of tests described below within 60 days of permit issuance, unless otherwise directed by the Department in writing, to evaluate chronic whole effluent toxicity of the discharge from outfall D-001 to Curry Creek.

a. Effluent Limitation

1. A No Observed Effect Concentration (NOEC) of greater than or equal to 100% effluent in any routine test or any additional test shall constitute compliance with these permit conditions and Rule 62-302.530(62), F.A.C.
2. A NOEC of less than 100% effluent in any routine test or additional test shall constitute a failure of the test. The permittee shall notify the Department via telephone or e-mail within 24 hours of notification that a routine or additional test failed.

b. Monitoring Frequency

The "routine" toxicity tests specified shall be conducted *once every two months.*

c. Routine Test Requirements

1. The permittee shall conduct a daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test and a fathead minnow, *Pimephales promelas*, Larval Survival and Growth Test, concurrently.
2. All test species, procedures and quality assurance criteria used shall be in accordance with Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th ed., EPA-821-R-02-013, or the most current edition. Any deviation of the toxicity procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use.
3. The control water and dilution water used shall be moderately hard water as described in EPA-821-R-02-013, Section 7, or the most current edition.
4. All routine tests shall be conducted using a control (0% effluent) and a minimum of five test concentrations: 100%, 50%, 25%, 12.5%, and 6.25% final effluent.

d. Sampling Requirements

1. For each routine test or additional test required, a total of three 24-hour, flow-proportioned composite samples of final effluent shall be collected and used per the sampling protocol discussed in EPA-821-R-02-013, Section 8, or the most current edition. The first sample shall be used to initiate the test. The remaining two composite samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test. If the duration of the discharge is less than 24-hours, the duration of discharge shall be documented on the chain of custody.

e. Additional Testing Requirements, if required

1. If chronic toxicity (an NOEC of less than 100% effluent) is found in any routine test, the permittee shall conduct two valid additional definitive tests on each species indicating an NOEC of less than 100% effluent.
2. Each valid additional test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5% and 6.25% effluent. The dilution series may be modified in the second test to more accurately bracket the toxicity, such that at least two dilutions above (not to exceed 100% effluent) and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be statistically analyzed according to the Appendices in EPA-821-R-02-013, or the most current edition.
3. The first valid additional test shall be initiated within two weeks of the end of the failed routine test. The second valid additional test shall be conducted one week thereafter. The additional tests will be used to evaluate the persistence of the observed toxicity.

f. Quality Assurance Requirements

1. A standard reference toxicant quality assurance chronic toxicity test (SRT-QA) shall be conducted with each species used in the toxicity tests, either concurrently or no more than 30 days before the date of each routine or additional test conducted. The SRT-QA data shall be submitted with each companion routine or additional test required.
2. A test, routine or additional, will be considered valid only if control mortality does not exceed 20% for either test species and all test acceptability criteria are met as described in 3 and 6.

The results of any invalid test shall be submitted to the Department in conjunction with the results of the repeat test.

3. Test acceptability criteria for each species are defined in EPA-821-R-02-013, Section 13.12 (C. dubia) and Section 11.12 (P. promelas) or the most current edition.
4. If the mortality in the control (0% effluent) exceeds 20% for either species in any test, the test for that species (including the control) shall be invalidated and the test repeated.
5. If, in any test, 100% mortality occurs in any test concentration prior to the end of the seven days, and control mortality is less than 20% at that time, that test (including the control) shall be terminated with the conclusion that the test failed.
6. Routine and additional tests shall be evaluated for acceptability based on the observed dose-response relationship and the percent minimum significant difference (PMSD) as required by EPA-821-R-02-013, Sections 10.2.6 and 10.2.8, respectively.

Appendix C. Continued

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):			
Facility Mixing Zone Details (if applicable):			
List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:			
Date	Parameter and Units	Limit	Result
3/31/10	Total Nitrogen (mg/L)	4.5 Weekly Average 6.0 Maximum	6.27 7.74
	Ceriodaphnia (%)	100	50
4/30/10	Total Nitrogen (mg/L)	4.5 Weekly Average 6.0 Maximum	5.04 6.37
Describe previous FYI and WQBEL study:			
Describe previous or current Enforcement Actions (including WLs):			
Describe any violations or problems noted in previous inspection:			
Discuss whether DMR trends within previous five years are improving or declining:			
Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse): Note that toxicity testing for FYI3 (acute definitive from EFA-01) is not representative of toxicity requirements of the permit.			

NOTE: Pages 9, 10 and 11 of 11 were duplicates of pages 6, 7 and 8 of 11 and thus were not entered into the report.

Appendix D. Post Sampling Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART II: Sampling Event Information	
Date(s) sample collected: 11/15/10	**Sampler(s):** Jason Cohen, Ramandeep Kaur
Temperature (Deg C): 25.14	**pH (SU):** 7.44
Dissolved Oxygen (mg/L): 7.16	**Conductivity (umhos/cm):** 1286
Total Residual Chlorine (mg/L): 1.54	**Total Residual Chlorine - after Disinfection (mg/L):**
Method of Chlorination: Sodium Hypochlorite	**Method of De-chlorination:** Sodium Bisulfite
Flow During Sample Collection for each outfall(MGD): No discharge during collection. Samples taken from chlorine contact chamber.	
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**	

Appendix D. Continued

Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:

No discharge during collection. Samples were taken from EFA-01 with an additional grab TSS sample taken from EFB-01.

Composite samples from EFA-01:
Nutrients, Metals, and TSS

Appendix E. EPA End Sheet

Bioassay samples were not collected for the City of Venice East Side Advanced Wastewater Treatment Facility effluent sampled on November 15, 2010. NPDES #FL0041441.

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 FL0041441 11	12 101115	18 B	19 S	20 1

Remarks

66

The Priority Pollutants Analysis of the City of Venice East Side Advanced Wastewater Treatment Facility effluent sampled on November 15, 2010. NPDES #FL0041441.

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 FL0041441 11	12 101115	18 X	19 S	20 1

Remarks

66

Biological Analyses of the City of Venice East Side Advanced Wastewater Treatment Facility effluent sampled on November 15, 2010. NPDES #FL0041441.

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 FL0041441 11	12 101115	18 S	19 S	20 1

Remarks

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