Effluent Quality Assessment of St Marks Powder Inc Wakulla County NPDES # FL0002518 Sampled April 30, 2018

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection
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Summary of Results

Effluent samples complied with permit limits and water quality standards for all analytes measured. Not all permitted field parameters were measured at the time of sampling. The effluent sample was not toxic to either test species during the 7-day chronic definitive test.

Facility Overview

St Marks Powder Inc is an industrial wastewater treatment plant for a small and intermediate arms propellant manufacturing facility. A Facility Summary, including a description of the facility, summary of permit limits, and any relevant Administrative Order (AO), Consent Order (CO), and Discharge Monitoring Report (DMR) information is provided in Appendix A. An AO (AO096NW) was issued on February 27, 2015 and expires February 26, 2020. It allows the facility a reasonable amount of time for the facility's discharge to meet the currently acceptable criteria for minimum percent dissolved oxygen saturation and the applicable Numeric Nutrient Criteria in the receiving water. The effluent is continuously discharged into Big Boggy Branch, a Class III Fresh Water.

Big Boggy Branch falls within the Panhandle East Nutrient Watershed Region for Numeric Nutrient Criteria (NNC). For this region, the NNC thresholds, expressed as annual geometric means, are 0.18 mg/L total phosphorus and 1.03 mg/L total nitrogen. This FYI event only provides single sample results. It should be noted that waterbody impairment assessments are based on longer-term data, and individual exceedances of a criterion do not indicate use impairment. http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria

Methods

Effluent grab and composite samples were collected from multiple monitoring site locations, per permit specifications. Composite samples were collected from EFF-4 (Outfall D-003) for toxicity testing, and grab samples were collected from EFA-1 (chlorine contact tank), EFF-2 (Outfall D-002), and EFF-3 (industrial reuse). Samples were collected by Sydney Cummings and Kristen Sapp. Field parameters were measured by samplers and reported in the inspection report, not on the sample submittal forms.

All field and laboratory methods followed DEP Standard Operating Procedures (see https://floridadep.gov/dear/quality-assurance/content/dep-sops and https://floridadep.gov/dear/florida-dep-laboratory/content/dep-laboratory-quality-assurance-manual-and-sops for details) and met DEP quality assurance/quality control standards (see https://floridadep.gov/dear/quality-assurance). Explanations of specific methods and measurements can be found in Appendix B.

All references to 62-302.530, F.A.C. are to the surface water quality criteria table with an effective date of 02/17/2016 and a notice identification number of 17115667.

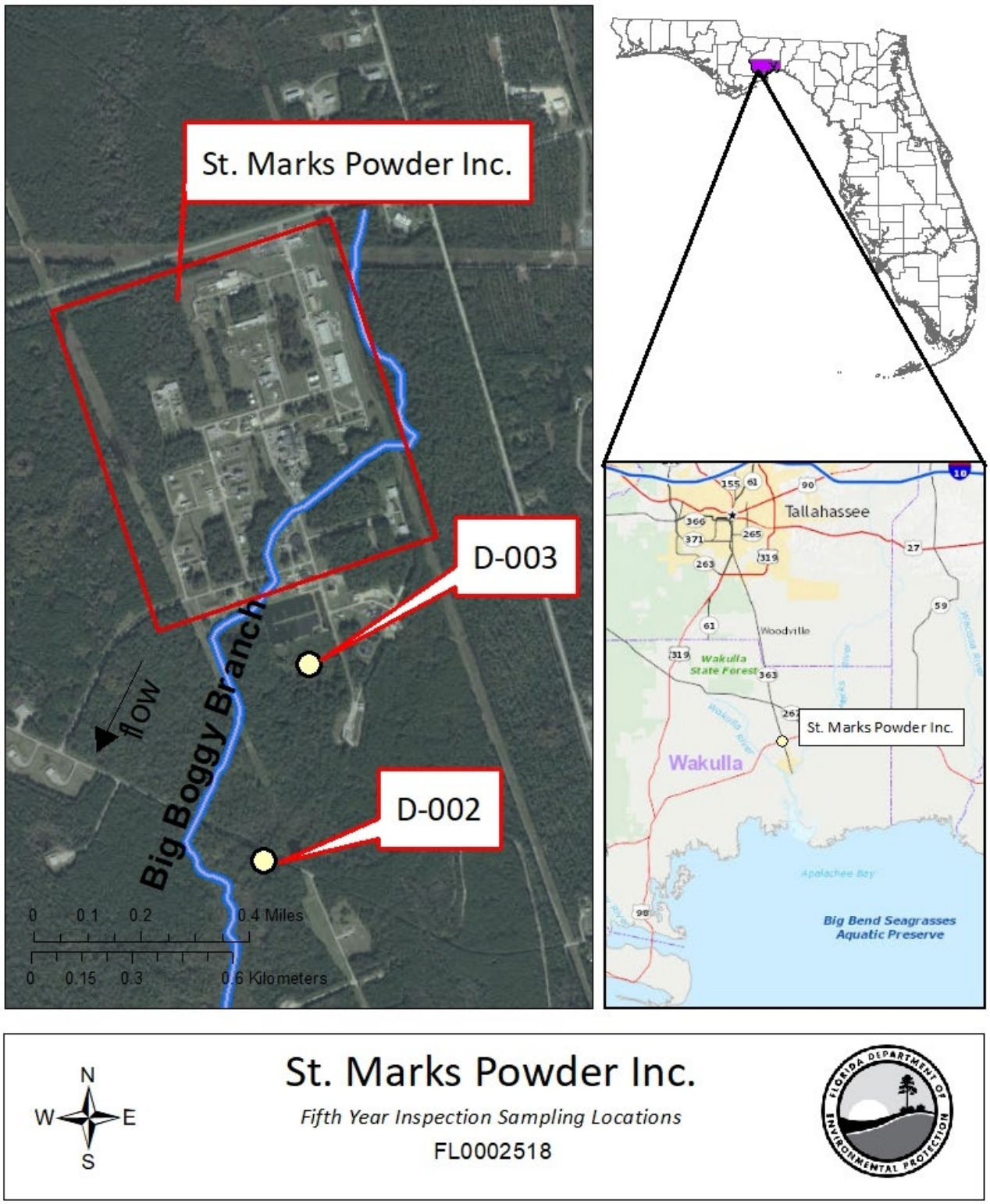


Figure 1. Map of facility and sampling locations

Results

Physical and Chemical Parameters (See Table 1)

- The effluent pH and total residual chlorine for disinfection complied with effluent permit limits and/or Class III Freshwater Quality Criteria (62-302.530, F.A.C.).

- Effluent temperature, total residual chlorine after dechlorination, and dissolved oxygen have permit limits but were not measured during this sampling event.

Analytical Water Chemistry (See Table 2 and Appendix C)

- Carbonaceous biochemical oxygen demand and total suspended solids levels complied with permit limits.

- Turbidity, alkalinity, and fluoride levels complied with Class III Freshwater Criteria (62-302.530, F.A.C.).

Microbiology (See Table 2 and Appendix C)

- *Escherichia coli* (*E. coli*) and fecal coliform were not detected in the effluent sample and therefore complied with Class III Freshwater Quality Criterion (62-302.530(11)(c), F.A.C.) and/or facility permit limits.

Toxicity Whole Effluent Test (See Table 2 and Appendix B)

- Tests were performed May 1 through May 8, 2018.

- The sample was aerated for 20 minutes before test initiation at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.6 mg/L to 8.6 mg/L.

- The 25% Inhibition Concentration (IC25) of the composite effluent sample for the water flea, *Ceriodaphnia dubia*, and the fish, *Pimephales promelas*, were calculated as being greater than 100% effluent.

- The effluent sample was not toxic to either species and complied with permit limits.

- For more information or to obtain copies of the toxicity bench sheets, please contact the Biology Laboratory at 850-245-8177.

Metals (See Table 3 and Appendix C)

- All metals detected in the effluent grab samples were present at levels that complied with effluent permit limits and Class III Freshwater Quality Criteria (62-302.530, F. A. C.).

- Copper was detected in the field blank above the PQL.

Algal Growth Potential (See Table 4 and Appendix B)

- The freshwater unicellular green alga, *Pseudokirchneriella subcapitata*, was used to determine the AGP values in the effluent. The effluent AGP was 3.67 mg DryWt/L. The analytical chemistry suggests that the effluent is ortho-phosphate limited (Miller et al. 1978).

- By comparing the laboratory AGP result to the predicted AGP values for inorganic nitrogen, total nitrogen, ortho-phosphate, and total phosphorus, an inference can be made that not all of the nutrients in the effluent were bio-available to the test species. To determine actual nutrient limitation, a limiting-nutrient algal growth potential test should be performed (Miller et al. 1978).

- There was at least an order of magnitude difference between the actual and predicted AGP values for the effluent total soluble nitrogen and total nitrogen. Differences greater than an order of magnitude between actual and predicted AGP values are considered sufficient evidence to warrant follow up testing with the algal growth inhibition bioassay. 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. True algal growth inhibition can only be determined by performing a *Pseudokirchneriella subcapitata* chronic toxicity test. This test is most beneficial to determine if toxic compounds are a problem and if the chronic toxicity water quality standard is exceeded. Should algal growth inhibition be suspected, the district should request that the algal toxicity test be performed as a follow-up to the inspection.

Literature Cited

Miller, W. E., Maloney, T. E. and Greene, J. C. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA600/978-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Stevenson, R. J. and Bahls, L. L. 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. 2000. Nutrient Criteria Technical Guidance Manual – River and Streams. EPA-822-B-00-002.

Table 1. Measured field parameters

Effluent limits, Class III Freshwater Criteria, and field parameters for St. Marks Powder Inc.

Parameter	Units	Class III Criteria	Effluent Permit Limits	Effluent
pH	SU	6.0 - 8.5	6.0 - 8.5	7.8
Total Residual Chlorine (for disinfection)	mg/L	-	≥ 0.5	0.8

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

Table 2. Analytical water chemistry, microbiological, and toxicological data

Effluent limits, Class III Freshwater Criteria, and analytical water chemistry, microbiological, and toxicological data for St. Marks Powder Inc

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab EFF-3	Effluent Grab EFA-1	Effluent Composite EFF-4
Ortho-phosphate	mg P/L	-	-	0.032	-	-
Total Phosphorus	mg P/L	0.18 [1]	Report	0.067	-	-
Total Ammonia	mg N/L	-	-	0.088	-	-
Nitrate and Nitrite	mg N/L	-	Report	34	-	-
Total Kjeldahl Nitrogen	mg N/L	-	Report	1.3	-	-
Organic Nitrogen	mg N/L	-	-	1.2 c	-	-
Total Nitrogen	mg N/L	1.03 [1]	Report	35 c	-	-
Total Organic Carbon	mg C/L	-	-	8.7 A	-	-
Chlorophyll *a* - Corrected	ug/L	-	-	9.1	-	-
Phaeophytin	ug/L	-	-	5.3	-	-
Chlorophyll *a*	ug/L	-	-	13	-	-
CBOD, 5 day, N - inhibited	mg/L	-	≤ 40	2.2 A	-	-
Total Suspended Solids	mg/L	-	≤ 40	2 I	-	-
Turbidity	NTU	< 29 t	-	1.1	-	-
Color (true)	PCU	-	-	47 A	-	-
Alkalinity	mg $CaCO_3$/L	≥ 20	-	180 A	-	-
Chloride	mg Cl/L	-	-	110 A	-	-
Fluoride	mg F/L	≤ 10.0	-	0.13	-	-
Sulfate	mg SO4/L	-	-	290 A	-	-
Fecal Coliforms	cfu/100 mL	-	≤ 800	-	2 U	-
Escherichia coli	MPN/100 mL	≤ 410	-	-	10.0 U	-
Bioassay - Water flea *(Ceriodaphnia dubia)*, IC25	% effluent	-	≥ 100 p	-	-	> 100
Bioassay - Fish *(Pimephales promalas)*, IC25	% effluent	-	≥ 100 p	-	-	> 100

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

c - Value is calculated
p – 24-hour flow proportioned composite
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
U - Material analyzed for but not detected; value reported is the method detection limit
1 - Panhandle East Nutrient Watershed Region for Numeric Nutrient Criteria (NNC), 62-302.531(2)(c), F.A.C. Value expressed as an annual geometric mean.

Table 3. Analytical metals data

Effluent limits, Class III Freshwater Criteria, and analytical metals data for St. Marks Powder Inc.

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab EFF-3
Hardness	mg $CaCO_3$/L	-	-	184 c
Aluminum	ug/L	-	-	60 U
Arsenic	ug/L	≤ 50	-	0.64
Cadmium	ug/L	≤ 0.426 b	-	0.020 U
Calcium	mg/L	-	-	60.3
Chromium, Total [2]	ug/L	≤ 142 b	-	0.40 U
Copper [3]	ug/L	≤ 15.7 b	-	6.82
Iron	ug/L	≤ 1,000	-	32 I
Lead	ug/L	≤ 6.93 b	-	0.050 U
Magnesium	mg/L	-	-	8.21
Nickel	ug/L	≤ 87.5 b	-	0.80
Potassium	mg/L	-	-	25.7
Selenium	ug/L	≤ 5.0	-	0.20 U
Silver	ug/L	≤ 0.07	-	0.010 U
Sodium	mg/L	-	-	236
Zinc	ug/L	≤ 201 b	-	8.2 I

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
3 - Analyte detected in blank

Table 4. Algal Growth Potential (AGP)

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.

Location	Test Species	AGP (measured) mg DryWt/L	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 Grab EFF-3	*Pseudokirchneriella subcapitata*	3.67 A	1,295.3 ± 259.1	13.8 ± 2.8	1,341.4 ± 268.3	28.8 ± 5.8	1,065.3	526.9

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: Sydney Cummings/Josie Penton	**Contact Number:** (850) 245-7629
Facility Name (as it appears on permit): St Marks Powder Inc	**Former Names:**
NPDES Permit Number: FL0002518	**Permit Expiration Date:** February 26, 2020
Physical Address: US Hwy 98 & SR 363, Saint Marks, FL 32355	
District: NWD	**County:** Wakulla
Function of Facility: Wastewater treatment plant for a small and intermediate arms propellant manufacturing facility.	
Facility Type: Industrial	**Permitted Capacity (MGD):** 0.786 MGD Monthly Average Daily Flow (MADF
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 01/2017 – 12/2017 External Outfalls: D-002 = 0.822 MGD D-003 = 0.098 MGD	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): **01/2017 – 12/2017** Industrial Reuse R-001 = 0.600 MGD	
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): **Monitoring Site Number** **Description of Monitoring Site** **EFF-2** **Plant Ditch at 90-degree V-notch weir (Station #1)** **Monitoring Site Number** **Description of Monitoring Site** **EFF-4** **Primary location is after carbon filters and the reclaimed water tank.** **Extreme weather by-pass location is at the polishing pond monitoring station.** **EFA-1** **Discharge of chlorine contact tank**	

Description of Permitted Outfall(s):

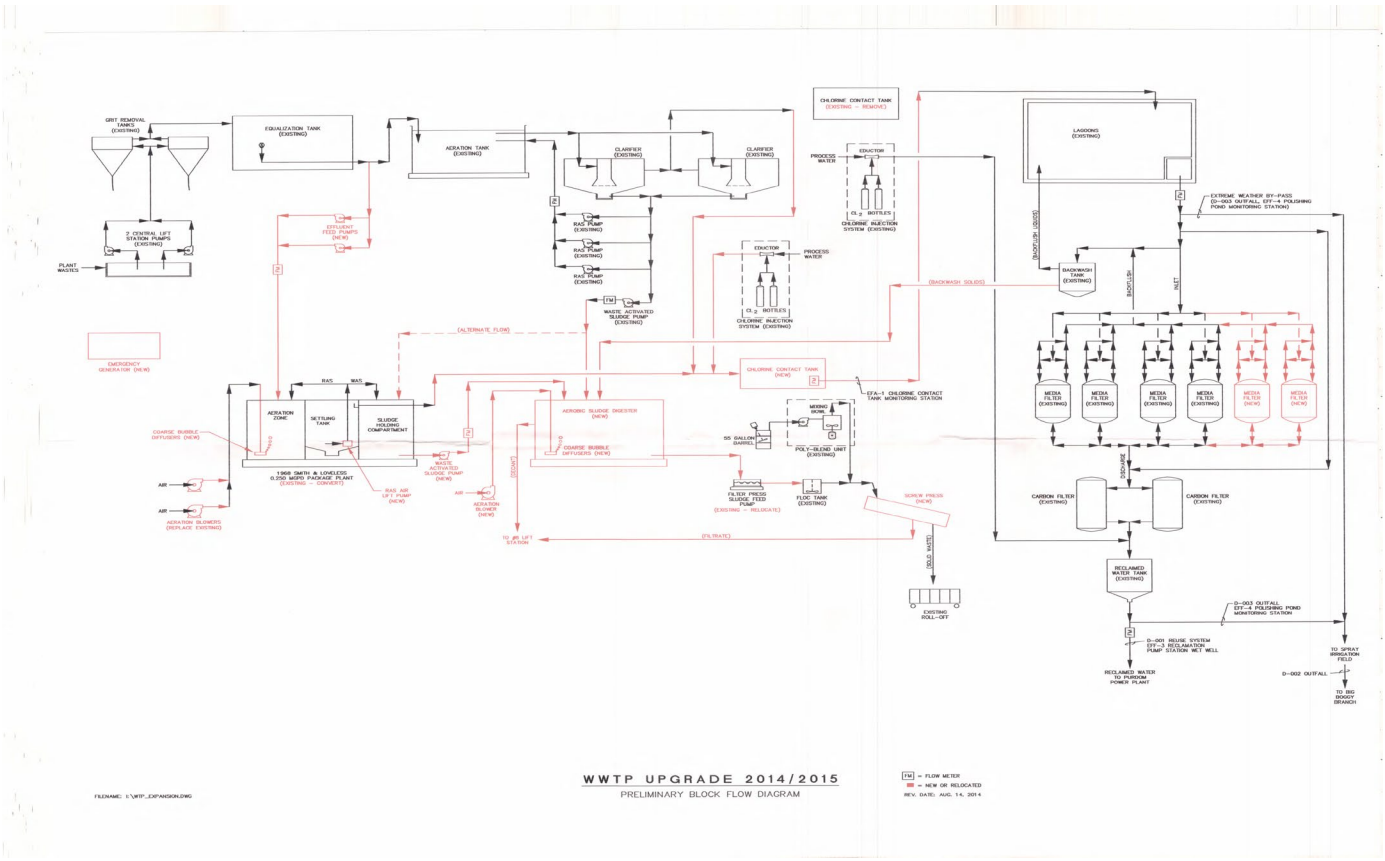
Surface Water Discharge D-002: An existing 2.138 MGD Annual Average Daily Flow permitted discharge from the Plant Ditch to Big Boggy Branch, Class III Fresh Waters, (WBID #1124) over a 90-degree V-notch weir. The point of discharge is located approximately at latitude 30°10' 20" N, longitude 84°13' 14" W.

Surface Water Discharge D-003: An existing 0.786 MGD Monthly Average Daily Flow (MADF) permitted capacity intermittent land application system consisting of 10 Rain Bird impact sprinkler heads irrigating 8-acres of native grass, cat tails and scrub pine trees with an estimated 0.544 MGD overland flow permitted discharge to the Plant Ditch which discharges through D-002 to Big Boggy Branch, Class III Fresh Waters, (WBID #1124). The point of discharge is located approximately at latitude 30°10' 39" N, longitude 84°13' 9" W.

Industrial Reuse R-001: An existing 0.786 MGD Monthly Average Daily Flow (MADF) permitted capacity industrial reuse system for cooling tower make-up water at the City of Tallahassee's Purdom Generating Station in the City of St. Marks. Effluent is pumped to the Purdom Generating Station through a 2-mile, 10-inch diameter PVC pipeline that has an integrated flow monitoring system that automatically shuts down the pumps in the event of a pipeline leak or loss of flow condition. The flow of reclaimed wastewater is controlled by the Purdom Generating Station at all times. The Purdom Generating Station, at its sole discretion, may disrupt the flow for outages (maintenance, forced, operational, or scheduled) and for equipment/process protection. Additionally, Purdom’s ability to accept reclaimed water may be reduced during severe weather.

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

St. Marks Powder, Inc. manufactures small and intermediate arms propellant. The facility operates a 0.786 MGD Monthly Average Daily Flow (MADF) capacity activated sludge industrial wastewater treatment system consisting of primary, secondary and tertiary treatment. The primary use of the effluent is industrial reuse (R-001) for cooling tower make-up water at the City of Tallahassee's Purdom Generating Station in the City of St. Marks. A backup discharge (D-003) effluent is irrigated on an 8 acre sprayfield with overland flow to the Plant Ditch. The Plant Ditch has a final discharge point over a 90-degree v-notch weir (Outfall D-002) to Big Boggy Branch which flows into the Wakulla River. Outfall D-002 has a routine discharge made up of 0.067 MGD non-contact cooling water, industrial activity stormwater runoff, and off-site stormwater.


GRIT REMOVAL TANKS (EXISTING)
EQUALIZATION TANK (EXISTING)
AERATION TANK (EXISTING)
CLARIFIER (EXISTING)
CLARIFIER (EXISTING)
CHLORINE CONTACT TANK (EXISTING – REMOVE)
LAGOONS (EXISTING)
5 CENTRAL LIFT STATION PUMPS (EXISTING)
PLANT WASTES
EFFLUENT FEED PUMPS (NEW)
RAS PUMP (EXISTING)
RAS PUMP (EXISTING)
RAS PUMP (EXISTING)
WASTE ACTIVATED SLUDGE PUMP (EXISTING)
EDUCTOR
PROCESS WATER
CHLORINE INJECTION SYSTEM (EXISTING)
EMERGENCY GENERATOR (NEW)
(ALTERNATE FLOW)
CHLORINE CONTACT TANK (NEW)
EFA-1 CHLORINE CONTACT TANK MONITORING STATION
EXTREME WEATHER BY-PASS (D-003 OUTFALL, EFF-4 POLISHING POND MONITORING STATION)
BACKWASH TANK (EXISTING)
BACKWASH
NET
MEDIA FILTER (EXISTING)
MEDIA FILTER (NEW)
CARBON FILTER (EXISTING)
RECLAIMED WATER TANK (EXISTING)
RECLAIMED WATER TO PURDOM POWER PLANT
D-003 OUTFALL EFF-4 POLISHING POND MONITORING STATION
D-002 OUTFALL
TO SPRAY IRRIGATION FIELD
TO BIG BOGGY BRANCH
RAS
WAS
AERATION ZONE
SETTLING TANK
SLUDGE HOLDING COMPARTMENT
1968 SMITH & LOVELESS 0.250 MGD PACKAGE PLANT (EXISTING – CONVERT)
COARSE BUBBLE DIFFUSERS (NEW)
AIR
AERATION BLOWERS (REPLACE EXISTING)
RAS AIR LIFT PUMP (NEW)
WASTE ACTIVATED SLUDGE PUMP (NEW)
AEROBIC SLUDGE DIGESTER (NEW)
COARSE BUBBLE DIFFUSERS (NEW)
DECANT
TO lift STATION
55 GALLON BARREL
MIXING WORK
POLY-BLEND UNIT (EXISTING)
FILTER PRESS SLUDGE FEED PUMP (EXISTING – TO RELOCATE)
FLOC TANK (EXISTING)
SCREW PRESS (NEW)
(FILTRATE)
(SOLID WASTE)
EXISTING ROLL-OFF
WWTP UPGRADE 2014/2015
PRELIMINARY BLOCK FLOW DIAGRAM
FM = FLOW METER
= NEW OR RELOCATED
REV. DATE: AUG. 14, 2014
FILENAME: I:\WTP_EXPANSION.DWG

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)

Outfall D-002 to Big Boggy Branch

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Min Max	Report Report	Monthly Average Daily Maximum	Continuous	Recording Flow Meter with Totalizer	EFF-2	
pH	s.u.	Min Max	6.0 8.5	Daily Minimum Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	
Temperature (F), Water	Deg F	Max	90	Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	
Nitrogen, Total	mg/L	Max	Report	Daily Maximum	Bi-Weekly: every 2 weeks	Calculated	EFF-2	See I.A.5
Nitrogen, Total	lb/day	Max Max	Report Report	Monthly Average Daily Maximum	Bi-Weekly: every 2 weeks	Calculated	EFF-2	See I.A.5
Nitrogen, Total	lb/mth	Max	Report	Monthly Total	Monthly	Calculated	EFF-2	See I.A.5
Phosphorus, Total (as P)	mg/L	Max	Report	Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	See I.A.5
Phosphorus, Total (as P)	lb/day	Max Max	Report Report	Monthly Average Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	See I.A.5
Chlorine, Total Residual	mg/L	Max	0.01	Daily Maximum	Bi-Weekly: every 2 weeks	Grab	EFF-2	
Oxygen, Dissolved Percent Saturation	% smpcmpln	Min	90	Monthly Total	Bi-Weekly: every 2 weeks	Meter	EFF-2	See I.A.4
N-nitrosodiphenylamine	ug/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-2	
Diphenylamine	ug/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-2	

Outfall D-003 to the sprayfield that has overland flow to the Plant Ditch to Big Boggy Branch

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	Report Report	Monthly Average Daily Maximum	Daily; 24 hours	Recording Flow Meter with Totalizer	EFF-4	
pH	s.u.	Min Max	6.0 8.5	Daily Minimum Daily Maximum	Daily; 24 hours	Grab	EFF-4	
Chlorine, Total Residual (For Basic Disinfection)	mg/L	Min	0.5	Single Sample	5 Days /Week	Grab	EFA-1	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max	25 40	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
BOD, Carbonaceous 5 day, 20C	lb/day	Max Max	112.6 181.1	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
Chemical Oxygen Demand (COD)	mg/L	Max	Report	Daily Maximum	Weekly	24-hr TPC	EFA-1	
Chemical Oxygen Demand (COD)	lb/day	Max Max	191.2 324.2	Annual Average Daily Maximum	Weekly	24-hr TPC	EFA-1	
Solids, Total Suspended	mg/L	Max Max	25 40	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
Solids, Total Suspended	lb/day	Max Max	111.8 179.4	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
Coliform, Fecal	#/100mL	Max Max	200 800	Annual Average Daily Maximum	Weekly	Grab	EFA-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Weekly	Grab	EFF-4	See I.A.11
Ammonia, Unionized (as NH3)	mg/L	Max	0.02	Single Sample	Weekly	Calculated	EFF-4	See I.A.11
Temperature (F), Water	Deg F	Max	Report	Single Sample	Weekly	Meter	EFF-4	See I.A.11
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
Nitrogen, Total	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Calculated	EFF-4	
Nitrogen, Total	lb/day	Max Max	Report 400	Monthly Average Daily Maximum	Weekly	Calculated	EFF-4	
Nitrogen, Total	lb/mth	Max	8,000	Monthly Total	Monthly	Calculated	EFF-4	

Nitrogen, Total	lb/yr	Max	16,535	Annual Total	Monthly	Calculated	EFF-4	See I.A.10
Phosphorus, Total (as P)	mg/L	Max Max	1 2	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
Phosphorus, Total (as P)	lb/day	Max Max	4.53 9.06	Monthly Average Daily Maximum	Weekly	24-hr TPC	EFF-4	
N-nitrosodiphenylamine	ug/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-4	
Diphenylamine	ug/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-4	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Annually	24-hr FPC	EFF-4	See I.A.9
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	percent	Min	100	Single Sample	Annually	24-hr FPC	EFF-4	See I.A.9

Industrial Reuse System R-001

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	Report Report	Monthly Average Daily Maximum	Daily; 24 hours	Meter	EFF-3	
Flow, Total Volume	Mgal	Max	Report	Monthly Total	Monthly	Meter	EFF-3	
pH	s.u.	Min Max	6.0 9.0	Daily Minimum Daily Maximum	Monthly	Meter	EFF-3	
Chlorine, Total Residual (For Basic Disinfection)	mg/L	Min	0.5	Daily Maximum	5 Days/Week	Meter	EFA-1	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max	20 25 40	Annual Average Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
BOD, Carbonaceous 5 day, 20C	lb/day	Max Max Max	131 164 262	Annual Average Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Solids, Total Suspended	mg/L	Max Max Max	20 25 40	Annual Average Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Solids, Total Suspended	lb/day	Max Max Max	131 164 262	Annual Average Monthly Average Daily Maximum	Weekly	Grab	EFF-3	

Chemical Oxygen Demand (COD)	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFA-1	
Chemical Oxygen Demand (COD)	lb/day	Max Max	278 472	Annual Average Daily Maximum	Weekly	Grab	EFA-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Nitrogen, Kjeldahl, Total (as N)	lb/day	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Nitrite plus Nitrate, Total 1 det. (as N)	lb/day	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Nitrogen, Total	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Calculated	EFF-3	
Nitrogen, Total	lb/day	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Calculated	EFF-3	
Nitrogen, Total	lb/mth	Max	Report	Monthly Total	Monthly	Calculated	EFF-3	
Phosphorus, Total (as P)	mg/L	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Phosphorus, Total (as P)	lb/day	Max Max	Report Report	Monthly Average Daily Maximum	Weekly	Grab	EFF-3	
Coliform, Fecal	#/100mL	Max Max	200 800	Annual Average Daily Maximum	Weekly	Grab	EFA-1	
N-nitrosodiphenylamine	ug/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-3	
Diphenylamine	ug/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-3	

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
Big Boggy Branch	Class III Fresh Waters

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

Routine toxicity tests shall be conducted annually, the first starting within the annual period and lasting for the duration of this permit.

(1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: **100%**, **50%**, **25%**, **12.5%**, and **6.25%** final effluent.

(2) The permittee shall conduct a daphnid, **Ceriodaphnia dubia**, Survival and Reproduction Test and a fathead minnow, **Pimephales promelas**, Larval Survival and Growth Test, concurrently.

(3) 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 Edition, EPA-821-R-02-013. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.

(4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02- 013, Section 7.2.3.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):
AO096NW was issued along with Permit FL0002518 on February 27, 2015 and expires February 26, 2020. The AO allows St. Mark's Powder a reasonable amount of time for the facility's discharge to meet the currently applicable criteria for minimum % Dissolved Oxygen saturation in the Big Boggy Branch, Class III Freshwater, pursuant to Rule 62-302.533(1)(a)1., F.A.C. and the applicable and Numeric Nutrient Criteria (NNC).

Facility Mixing Zone Details (if applicable):

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:
01/01/2017 to 03/30/2018

Date	Parameter and Units	Limit	Result
2/28/2018	BOD, Carbonaceous	40.0 mg/L	57 mg/L
2/28/2018	BOD, Carbonaceous	262.0 lb/day	303.7 lb/day

Describe previous FYI and WQBEL study:
Previous FYI sampling was conducted June 23, 2014. No violations of effluent quality and/or permit limits, or Rule62-302, FAC water quality criteria were noted.

Describe previous or current Enforcement Actions (including WLs):
None

Describe any violations or problems noted in previous inspection:
CEI inspection performed April 14, 2016 noted the following effluent quality and/or permit limit violations:

Date	Parameters	Permit Limit	Analytical Value
07/31/2015	Coliform, Fecal (Max)	200/100mL	1020/100mL
04/30 2015	Coliform, Fecal (Max)	200/100mL	238/100mL

Discuss whether DMR trends within previous five years are improving or declining:
2013 – 0 violations
2014 – 0 violations
2015 – 2 violations
2016 – 6 violations
2017 – 0 violations
Based on the above information, the DMRs showed an improving trend from 2013 thru 2015 but experienced a decline in 2016. 2017 started to show an improvement.

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: **April 30, 2018**	**Sampler(s):** **Sydney Cummings and Kristen Sapp**
Temperature (Deg C):	**pH (SU):** **7.8 (on inspection report)**
Dissolved Oxygen (mg/L):	**Conductivity (umhos/cm):**
Total Residual Chlorine (mg/L):	**Total Residual Chlorine - after Disinfection (mg/L):** **0.8 mg/L (on inspection report)**
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. Explanations of Measurements

Biological assessments are prepared by DEP staff to provide information for review of NPDES permit renewal applications. Biological assessments, in conjunction with other information concerning the subject facility and its receiving-water body, are used to determine appropriate permit conditions. References to Rule 62-302.530, F.A.C., are to the currently applicable surface water quality criteria table with an effective date of 02/17/2016 and a notice identification number of 17115667.

- **Chemical Analyses of the Effluent**

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

- **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.

- **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.

- **Chlorophyll *a* Content**

  Chlorophyll *a* content is an estimate of algal biomass. High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may be 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..

- **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. AGP results within the range 6.10 to 20.0 mg dry wt/L are suggested to be representative of high productivity for freshwaters (Miller et al. 1978). 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 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 ± 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 (USEPA 2000). 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.

- **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. Chain of Custody

Request Number: RQ-2018-04-16-32

FYI3 St Marks Powder Inc. FL0002518 Sampling Inspection

Customer: NW-DIST

Project ID: FYI3

Florida Department of Environmental Protection

Central Laboratory Submittal Form

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last revised Jan 25, 2018

Requester: Lillian Haynes

Field Report Prepared By:

Collected By: Sydney Cummings & Kristen Sapp

Sampling Agency: FDEP

ST MARKS POWDER 4/30/18 KS, SC Effluent		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 11:35 AM	Time 1:15pm	Eastern / Central	Composite end Date	Time	Bottle Group(s) (See pg 2) A			
		Matrix (type, e.g., Salt, Fresh, etc) FRESH			Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)	pH		Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments NO FT; sample bottle group, different analytes @ different locations during diff times						
ST MARKS POWDER 4/30/18 KS, SC Blank		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 10:45AM	Time	Eastern / Central	Composite end Date	Time	Bottle Group(s) B			
		Matrix (type, e.g., Salt, Fresh, etc) FRESH			Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)	pH		Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments NO FT						
ST MARKS POWDER 4/30/18 KS, SC Composite		☒ Comp ☐ Grab	Collection (comp begin or grab) Date 4/29/18	Time 8:00AM	Eastern / Central	Composite end Date 4/30/18	Time 8:00AM	Bottle Group(s) A			
		Matrix (type, e.g., Salt, Fresh, etc)			Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)	pH		Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments NO FT						
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date	Time	Eastern / Central	Composite end Date	Time	Bottle Group(s)			
Field ID		Matrix (type, e.g., Salt, Fresh, etc)			Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)	pH		Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments						

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Kristen Sapp	4/30/18 2:20 pm	Delivery	4		4/30/18 1420

2 bioassay jugs DF 4.30.18

* Logged in by sample collection times written on sample containers.

Request Number: RQ-2018-04-16-32

FYI3 St Marks Powder Inc. FL0002518 Sampling Inspection

Customer: NW-DIST

Project ID: FYI3

Florida Department of Environmental Protection
Central Laboratory Submittal Form

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last revised Jan 25, 2018

Requester: Lillian Haynes

Collected By: Sydney Cummings

Field Report Prepared By: Sydney Cummings

Sampling Agency: FDEP

Location: EFF-4	☒ Comp ☐ Grab	Collection (comp begin or grab) Eastern Central Date 05-01-18 Time 8:00 a.M.			Composite end Date 5-2-18 Time 8:00 a.M.		Bottle Group(s) (See pg 2): A
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Eastern Central Date Time			Composite end Date Time		Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Eastern Central Date Time			Composite end Date Time		Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Eastern Central Date Time			Composite end Date Time		Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Eastern Central Date Time			Composite end Date Time		Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Cummings	5-2-18 11:20a			ABR	5-2-18 11:20

✓ 2 BSY jugs 5.2.18 1145 ABR

Request Number: RQ-2018-04-16-32

FYI3 St Marks Powder Inc. FL0002518 Sampling Inspection

Customer: NW-DIST

Project ID: FYI3

Florida Department of Environmental Protection

Central Laboratory Submittal Form

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last revised Jan 25, 2018

Requester: Lillian Haynes

Collected By: Sydney Cummings

Field Report Prepared By: Sydney Cummings

Sampling Agency: FDEP NWD

Location: ST. MARKS POWDER	☒ Comp ☐ Grab	Collection (comp begin or grab) Date 05-03-18 Time 8:00a.M.	Eastern Central	Composite end Date 05-03-18 Time 8:00A.M.			Bottle Group(s) (See pg 2): 3
Field ID: EFFLUENT	Matrix (type, e.g., Salt, Fresh, etc): fresh		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date Time			Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date Time			Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date Time			Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Cummings	05-04-18 10:17 a.M.	HT	2		5/4/18 1020

From Sample Rec'd 5/4/18

✓ 5.4.18 1027 3 BSY 1 WS NDZ

Appendix D. Chemical Analysis of Effluent and Receiving Water

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
4/30/2018	Effluent Grab	AGP/LN	Algal Growth Potential	3.67 A	mg DryWt/L	0.3	0.9
4/30/2018	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	9.1	ug/L	0.55	1.7
4/30/2018	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	5.3	ug/L	0.4	1.2
4/30/2018	Effluent Grab	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.2 A	mg/L	0.2	2
4/30/2018	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	13	ug/L	0.4	1.2
4/30/2018	Effluent Grab	Microbiology	Fecal Coliforms-Membrane Filter	2 U	cfu/100 mL	2	2
4/30/2018	Effluent Grab	Microbiology	Escherichia Coli-Quanti-Tray	10.0 U	MPN/100 mL	10	10
4/30/2018	Effluent Grab	Metals	Aluminum	60 U	ug/L	60	240
4/30/2018	Effluent Grab	Metals	Potassium	25.7	mg/L	1.5	6
4/30/2018	Effluent Grab	Metals	Magnesium	8.21	mg/L	0.04	0.16
4/30/2018	Effluent Grab	Metals	Silver	0.010 U	ug/L	0.01	0.04
4/30/2018	Effluent Grab	Metals	Selenium	0.20 U	ug/L	0.2	0.8
4/30/2018	Effluent Grab	Metals	Lead	0.050 U	ug/L	0.05	0.2
4/30/2018	Effluent Grab	Metals	Copper	6.82	ug/L	0.2	0.8
4/30/2018	Effluent Grab	Metals	Nickel	0.80	ug/L	0.2	0.8
4/30/2018	Effluent Grab	Metals	Calcium	60.3	mg/L	0.075	0.3
4/30/2018	Effluent Grab	Metals	Iron	32 I	ug/L	30	120
4/30/2018	Effluent Grab	Metals	Zinc	8.2 I	ug/L	5	20
4/30/2018	Effluent Grab	Metals	Sodium	236	mg/L	2.5	10
4/30/2018	Effluent Grab	Metals	Arsenic	0.64	ug/L	0.05	0.2
4/30/2018	Effluent Grab	Metals	Cadmium	0.020 U	ug/L	0.02	0.08
4/30/2018	Effluent Grab	Metals	Chromium	0.40 U	ug/L	0.4	1.6
4/30/2018	Effluent Grab	Nutrients	Color (true)	47 A	PCU	2.5	6
4/30/2018	Effluent Grab	Nutrients	Kjeldahl Nitrogen	1.3	mg N/L	0.4	1
4/30/2018	Effluent Grab	Nutrients	Turbidity	1.1	NTU	0.1	0.13
4/30/2018	Effluent Grab	Nutrients	Ammonia-N	0.088	mg N/L	0.002	0.005
4/30/2018	Effluent Grab	Nutrients	Total Alkalinity	180 A	mg CaCO3/L	0.65	2.5
4/30/2018	Effluent Grab	Nutrients	Sulfate	290 A	mg SO4/L	2	5
4/30/2018	Effluent Grab	Nutrients	Organic Carbon	8.7 A	mg C/L	1	2
4/30/2018	Effluent Grab	Nutrients	Total-P	0.067	mg P/L	0.005	0.05
4/30/2018	Effluent Grab	Nutrients	O-Phosphate-P	0.032	mg P/L	0.004	0.01
4/30/2018	Effluent Grab	Nutrients	Chloride	110 A	mg Cl/L	2	5
4/30/2018	Effluent Grab	Nutrients	Fluoride	0.13	mg F/L	0.035	0.1

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
4/30/2018	Effluent Grab	Nutrients	NO2NO3-N	34	mg N/L	0.4	1
4/30/2018	Effluent Grab	Nutrients	TSS	2 I	mg/L	2	10
4/30/2018	Effluent Grab	Overflow	Chemical Oxygen Demand	39 J	mg/L	5	10
4/30/2018	Effluent Grab	Pesticides	Metolachlor	0.058 UJ	ug/L	0.058	0.23
4/30/2018	Effluent Grab	Pesticides	Fenamiphos	0.029 UJ	ug/L	0.029	0.12
4/30/2018	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Bromacil	0.039 U	ug/L	0.039	0.15
4/30/2018	Effluent Grab	Pesticides	Atrazine	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Butylate	0.019 UJ	ug/L	0.019	0.077
4/30/2018	Effluent Grab	Pesticides	Naproxen	0.0080 U	ug/L	0.008	0.032
4/30/2018	Effluent Grab	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.077
4/30/2018	Effluent Grab	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.077
4/30/2018	Effluent Grab	Pesticides	Disulfoton	0.0048 U	ug/L	0.0048	0.019
4/30/2018	Effluent Grab	Pesticides	Diazinon	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Simazine	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Mevinphos	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Ethoprop	0.0048 U	ug/L	0.0048	0.019
4/30/2018	Effluent Grab	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.077
4/30/2018	Effluent Grab	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.077
4/30/2018	Effluent Grab	Pesticides	Prometon	0.019 U	ug/L	0.019	0.077
4/30/2018	Effluent Grab	Pesticides	Ethion	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Demeton	0.023 U	ug/L	0.023	0.093
4/30/2018	Effluent Grab	Pesticides	Atrazine Desisopropyl	0.0097 UJ	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Ametryn	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Sucralose	0.58	ug/L	0.1	0.4
4/30/2018	Effluent Grab	Pesticides	Norflurazon	0.029 UJ	ug/L	0.029	0.12
4/30/2018	Effluent Grab	Pesticides	Naled	0.039 U	ug/L	0.039	0.15
4/30/2018	Effluent Grab	Pesticides	Atrazine Desethyl	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
4/30/2018	Effluent Grab	Pesticides	Ibuprofen	0.020 U	ug/L	0.02	0.08
4/30/2018	Effluent Grab	Pesticides	Metalaxyl	0.039 U	ug/L	0.039	0.15
4/30/2018	Effluent Grab	Pesticides	Malathion	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Fonofos	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Pesticides	Alachlor	0.058 U	ug/L	0.058	0.23

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
4/30/2018	Effluent Grab	Pesticides	Phorate	0.0048 U	ug/L	0.0048	0.019
4/30/2018	Effluent Grab	Pesticides	Parathion Methyl	0.0097 U	ug/L	0.0097	0.039
4/30/2018	Effluent Grab	Priority Organic Pollutants	Hexachloroethane	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Anthracene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	2-Chlorophenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Dimethyl phthalate	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	2-Nitrophenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	1,4-Dioxane	0.020 U	ug/L	0.02	0.08
4/30/2018	Effluent Grab	Priority Organic Pollutants	Pentachlorophenol	0.48 U	ug/L	0.48	1.9
4/30/2018	Effluent Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Chrysene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
4/30/2018	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Fluorene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrophenol	9.5 U	ug/L	9.5	38
4/30/2018	Effluent Grab	Priority Organic Pollutants	2,4-Dimethylphenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Acenaphthene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	4-Nitrophenol	9.5 U	ug/L	9.5	38
4/30/2018	Effluent Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
4/30/2018	Effluent Grab	Priority Organic Pollutants	Pyrene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Phenol	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Phenanthrene	0.024 U	ug/L	0.024	0.095

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
4/30/2018	Effluent Grab	Priority Organic Pollutants	Nitrobenzene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Hexachlorobutadiene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Fluoranthene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Di-n-butyl phthalate	1.9 U	ug/L	1.9	7.6
4/30/2018	Effluent Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Acenaphthylene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	9.5 U	ug/L	9.5	38
4/30/2018	Effluent Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Isophorone	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Diethyl phthalate	1.9 U	ug/L	1.9	7.6
4/30/2018	Effluent Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
4/30/2018	Effluent Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	Naphthalene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Grab	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	0.095 U	ug/L	0.095	0.38
4/30/2018	Effluent Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
4/30/2018	Effluent Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.024 U	ug/L	0.024	0.095
4/30/2018	Effluent Grab	Priority Organic Pollutants	Benzidine	9.5 U	ug/L	9.5	38
4/30/2018	Effluent Grab	Priority Organic Pollutants	Hexachlorobenzene	0.048 U	ug/L	0.048	0.19
4/30/2018	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	100 L	IC25		
4/30/2018	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	100 L	IC25		
4/30/2018	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	100	NOEC		
4/30/2018	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	50	NOEC		
4/30/2018	Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
4/30/2018	Blank	Metals	Arsenic	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
4/30/2018	Blank	Metals	Copper	1.40	ug/L	0.2	0.8
4/30/2018	Blank	Metals	Nickel	0.20 U	ug/L	0.2	0.8
4/30/2018	Blank	Metals	Iron	30 U	ug/L	30	120
4/30/2018	Blank	Metals	Chromium	0.40 U	ug/L	0.4	1.6
4/30/2018	Blank	Metals	Silver	0.010 U	ug/L	0.01	0.04
4/30/2018	Blank	Metals	Cadmium	0.020 U	ug/L	0.02	0.08
4/30/2018	Blank	Metals	Aluminum	60 U	ug/L	60	240

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4/30/2018	Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
4/30/2018	Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
4/30/2018	Blank	Metals	Zinc	5.0 U	ug/L	5	20
4/30/2018	Blank	Metals	Lead	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
4/30/2018	Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
4/30/2018	Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
4/30/2018	Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
4/30/2018	Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
4/30/2018	Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.13
4/30/2018	Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
4/30/2018	Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
4/30/2018	Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
4/30/2018	Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
4/30/2018	Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
4/30/2018	Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
4/30/2018	Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
4/30/2018	Blank	Pesticides	Simazine	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.081
4/30/2018	Blank	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Metalaxyl	0.041 U	ug/L	0.041	0.16
4/30/2018	Blank	Pesticides	Disulfoton	0.0051 U	ug/L	0.0051	0.02
4/30/2018	Blank	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Ibuprofen	0.020 U	ug/L	0.02	0.08
4/30/2018	Blank	Pesticides	Fenamiphos	0.030 UJ	ug/L	0.03	0.12
4/30/2018	Blank	Pesticides	Ethoprop	0.0051 U	ug/L	0.0051	0.02
4/30/2018	Blank	Pesticides	Bromacil	0.041 U	ug/L	0.041	0.16
4/30/2018	Blank	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Metolachlor	0.061 U	ug/L	0.061	0.24
4/30/2018	Blank	Pesticides	Malathion	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
4/30/2018	Blank	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Butylate	0.020 U	ug/L	0.02	0.081
4/30/2018	Blank	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.081

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
4/30/2018	Blank	Pesticides	Alachlor	0.061 U	ug/L	0.061	0.24
4/30/2018	Blank	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.081
4/30/2018	Blank	Pesticides	Naled	0.041 U	ug/L	0.041	0.16
4/30/2018	Blank	Pesticides	Norflurazon	0.030 UJ	ug/L	0.03	0.12
4/30/2018	Blank	Pesticides	Ethion	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Demeton	0.024 U	ug/L	0.024	0.097
4/30/2018	Blank	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Naproxen	0.0080 U	ug/L	0.008	0.032
4/30/2018	Blank	Pesticides	Prometon	0.020 U	ug/L	0.02	0.081
4/30/2018	Blank	Pesticides	Phorate	0.0051 U	ug/L	0.0051	0.02
4/30/2018	Blank	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.081
4/30/2018	Blank	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Atrazine Desisopropyl	0.010 UJ	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.041
4/30/2018	Blank	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.04
4/30/2018	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Pyrene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	9.9 U	ug/L	9.9	40
4/30/2018	Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	0.099 U	ug/L	0.099	0.4
4/30/2018	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Acenaphthene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	1,4-Dioxane	0.020 U	ug/L	0.02	0.08
4/30/2018	Blank	Priority Organic Pollutants	Isophorone	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Fluorene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Phenanthrene	0.025 U	ug/L	0.025	0.099

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
4/30/2018	Blank	Priority Organic Pollutants	Hexachlorobenzene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Dimethyl phthalate	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Diethyl phthalate	2.0 U	ug/L	2	7.9
4/30/2018	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	ug/L	2	7.9
4/30/2018	Blank	Priority Organic Pollutants	Chrysene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.99 U	ug/L	0.99	4
4/30/2018	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	7.9
4/30/2018	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Benzidine	9.9 U	ug/L	9.9	40
4/30/2018	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Phenol	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	7.9
4/30/2018	Blank	Priority Organic Pollutants	Hexachloroethane	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Hexachlorobutadiene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	2-Chlorophenol	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Naphthalene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Fluoranthene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Pentachlorophenol	0.50 U	ug/L	0.5	2
4/30/2018	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	Anthracene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	Acenaphthylene	0.025 U	ug/L	0.025	0.099
4/30/2018	Blank	Priority Organic Pollutants	4-Nitrophenol	9.9 U	ug/L	9.9	40
4/30/2018	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	2-Nitrophenol	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12
4/30/2018	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	9.9 U	ug/L	9.9	40
4/30/2018	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.050 U	ug/L	0.05	0.2
4/30/2018	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.050 U	ug/L	0.05	0.2