

Effluent Quality Assessment

Mosaic Fertilizer, L.L.C. – Hookers Prairie Mine

(formerly known as Cargill Fertilizer – Hooker Prairie Mine)

Polk County

NPDES #FL0033294

Sampled September 9, 11, and 13, 2013

December 2013

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration
2013 FDEP Bureau of Labs Quality Manual
NELAC Certification No. E31780

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Mosaic Fertilizer, L.L.C. – Hookers Prairie Mine (formerly known as Cargill Fertilizer – Hooker Prairie Mine), 110 Agricola Mine Road, Bradley, Polk County, Florida, 33835. NPDES #FL0033294.

Facility Overview

Mosaic Fertilizer is a phosphate mine and beneficiation plant which treats mine recirculation water. See Appendix A for a description of the facility, summary of permit limits, Administrative Order (AO) and Discharge Monitoring Report (DMR) information.

Methods

Effluent composite samples for chronic toxicity testing and chemical analysis were collected from the EFF-005 sampling point for Outfall D-005 on September 9, 11, and 13, 2013. Effluent grab samples for acute toxicity testing and biological and chemical analyses for this facility were collected from the EFF-001 sampling point for Outfall D-001 on September 9, 2013. All samples were collected by Jacki Champion and Scott Rose (FDEP DWRM/PM District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The 7-day chronic definitive toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_05, TA07_09, and TA08_01 through TA08_09, and the 96- hour acute definitive tests followed internal DEP SOPs TA07_01 and TA07_02 (see Appendix B).

Results

Chemistry Results (See Table 1a, 1b, and Appendix C)

- The total ammonia concentrations in the effluent samples collected and preserved for chemical analysis were 0.005 (D-001) and 0.11 (D-005) mg N/L. Based on the pH, salinity, and temperature of the effluents as collected, the calculated unionized ammonia concentrations were <0.02 mg/L.
- **D-001**
- Arsenic, iron, selenium, total phosphorus, chlorophyll *a,* turbidity, fluoride, sulfate, total alpha, and radium 226 + 228 were detected in the effluent at levels that comply with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or permit limits. Total chromium, lead, nickel, total suspended solids, and oils and greases were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).
- **D-005**
- Arsenic, iron, total phosphorus, total nitrogen, chlorophyll *a,* total suspended solids, turbidity, fluoride, and sulfate were detected in the effluent at levels that comply with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or permit limits. Total chromium, lead, nickel, and oils and greases were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).
- Di-n-butyl phthalate, total phosphorus, and oils & greases were detected in the field blank at levels that fall between the MDL and the PQL of the analyses.

Algal Growth Potential (See Table 2 and Appendix C)

- The effluent Algal Growth Potential (AGP) values were 12.8 A (D-001) and 14.2 (D-005) 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 effluents are nitrogen–limited (Miller et al. 1978). Due to ortho-phosphate not being measured, the inorganic nitrogen: ortho-phosphate ratio could not be determined for the sample originating from Outfall D-005**.**

Toxicity Test Results (See Appendix C)

- Tests were performed September 10 -17, 2013.

D-001

Ceriodaphnia dubia 96-hour acute definitive bioassay – LC_{50} > 100%, 0%* mortality in 100% sample at 96 hours

Pimephales promelas 96-hour acute definitive bioassay – LC_{50} > 100%, 0%* mortality in 100% sample at 96 hours

D-005

Ceriodaphnia dubia 7-day chronic definitive bioassay – IC25: >100
NOEC: 100%

Pimephales promelas 7-day chronic definitive bioassay – IC25: > 100%
NOEC: 50%

*NOTE: In a 96-hour acute definitive test of 100% effluent, mortality of <20% provides confidence that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1) (a) 4, F.A.C.). Mortality between 20-50% indicates low to moderate levels of toxicity, and further action may be required. Mortality of >50% indicates that the effluent fails to meet the minimum requirement to discharge to waters of the state (Rule 62-4.244(3) (a), F.A.C.).

- The D-001 bioassay sample was not acutely toxic to the test organisms.
- The D-005 bioassay sample was not chronically toxic to the test organisms.
- The 2nd chronic bioassay sample from D-005 was aerated for 30 minutes at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.2 mg/L to 8.1 mg/L.

Conclusion

The effluent sample collected from the EFF-001 sampling point for this facility on September 9, 2013, was not acutely toxic to either test species during the 96-hour acute definitive bioassays. The effluent sample collected from the EFF-005 sampling point for this facility on September 9, 11, and 13, 2013 was not chronically toxic to either test species during the 7-day chronic definitive bioassay. Both effluent AGP results were greater than the "problem" threshold for fresh receiving waters suggesting that nutrient enrichment may be an issue. Effluent water quality samples collected on September 9, 2013, did not exceed any applicable water quality standards or violate any permit conditions for either outfall.

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

Literature Cited

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

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

Table 1a. Effluent limits, Class III Freshwater Criteria, chemical data, and qualifiers

Mosaic Fertilizer, LLC-Hookers Prairie Mine	Class III Criteria	Effluent Limits	D-001	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	540	
Arsenic	≤ 50	-	3.07	
Cadmium	≤ 0.394 b	-	0.050	U
Calcium (mg/L)	-	-	39.7	
Chromium, total ‡	≤ 131 b	-	1.0	I
Copper	≤ 14.4 b	-	0.50	U
Iron	≤ 1,000	-	160	
Lead	≤ 6.08 b	-	0.22	I
Magnesium (mg/L)	-	-	16.3	
Nickel	≤ 80.2 b	-	0.85	I
Selenium	≤ 5.0	-	0.84	
Silver	≤ 0.07	-	0.025	U
Sodium	-	-	50.1	
Zinc	≤ 184 b	-	5.0	U
Nutrients (mg/L)				
Ortho-phosphate	-	Report	0.19	
Total Phosphorus	-	≤ 5.0	0.52	
Total Ammonia	-	Report	0.005	
Un-ionized Ammonia	≤ 0.02 s	< 0.02	< 0.02	c
Nitrate and Nitrite	-	-	0.004	U
Total Kjeldahl Nitrogen	-	-	1.6	
Organic Nitrogen	-	-	1.595	c
Total Nitrogen	-	≤ 3.0	1.602	c
Total Organic Carbon	-	-	11	
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0	7.18	
pH (SU)	6.0 - 8.5	6.0 - 8.5	7.35	J
Specific Conductance (µmhos/cm)	≤ 1,275	≤ 1,275	558	
Temperature (°C)	-	Report	29.86	
Salinity	-	-	≤ 0.25	c
Total Residual Chlorine (mg/L)	≤ 0.01	-	≤ 0.03	UQ£
Chlorophyll *a* (µg/L) - Corrected	-	Report	63	
Phaeophytin (µg/L)	-	-	17	
Total Suspended Solids (mg/L)	-	≤ 60.0	8	I
Turbidity (NTU)	< 29 t	< 29	9.8	
Alkalinity (mg CaCO3/L)	-	-	48	
CBOD, 5 day (mg/L), N - inhibited	-	-	6.1	
Oils and Greases (mg/L)	≤ 5.0	-	0.94	I
Chloride (mg/L)	-	-	21	
Fluoride (mg/L)	≤ 10.0	≤ 10.0	3.2	
Sulfate (mg/L)	-	Report	180	
Alpha, Total (pCi/L)	≤ 15	≤ 15	9.6	
Alpha-Counting Error (pCi/L)	-	-	2.5	
Radium 226 (pCi/L)	-	-	1.5	
Radium 226-Counting Error (pCi/L)	-	-	0.2	
Radium 228 (pCi/L)	-	-	1	
Radium 228-Counting Error (pCi/L)	-	-	0.6	
Radium 226 + 228 (pCi/L)	≤ 5	≤ 5	2.5	c
Flow (MGD)	-	Report	3.24	a*
Hardness (mg $CaCO_3$)	-	-	166.25	c

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

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average

b - Value is calculated based on hardness

c - Value is calculated

s - Single sample

t - Shall not exceed 29 NTUs above background

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

J - Estimated value

Q - Sample held beyond normal holding time

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

£ - measurement taken in the FDEP laboratory

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

* - Measured from 8/12 - 7/13

Table 1b. Effluent limits, Class III Freshwater Criteria, chemical data, and qualifiers

Mosaic Fertilizer, LLC-Hookers Prairie Mine	Class III Criteria	Effluent Limits	D-005	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	680	
Arsenic	≤ 50	-	1.3	
Cadmium	0.33 b	-	0.050	U
Calcium (mg/L)	-	-	27.8	
Chromium, total ‡	107 b	-	1.1	I
Copper	11.7 b	-	0.50	U
Iron	≤ 1,000	-	440	
Lead	4.48 b	-	0.39	I
Magnesium (mg/L)	-	-	14.9	
Nickel	65.5 b	-	0.36	I
Selenium	≤ 5.0	-	0.20	U
Silver	≤ 0.07	-	0.025	U
Sodium	-	-	18.9	
Zinc	37.0 b	-	5.0	U
Nutrients (mg/L)				
Total Phosphorus	-	≤ 5.0	0.74	
Total Ammonia	-	-	0.11	
Un-ionized Ammonia	≤ 0.02 s	-	< 0.02	c
Nitrate and Nitrite	-	-	0.005	I
Total Kjeldahl Nitrogen	-	-	1.4	
Organic Nitrogen	-	-	1.29	c
Total Nitrogen	-	≤ 3.0	1.405	c
Total Organic Carbon	-	-	13	
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0	6.01	
pH (SU)	6.0 - 8.5	6.0 - 8.5	7.14	J
Specific Conductance (µmhos/cm)	≤ 1,275	-	330	
Temperature (°C)	-	Report	28.63	
Salinity	-	-	≤ 0.15	c
Total Residual Chlorine (mg/L)	≤ 0.01	-	0.08	Q£†
Chlorophyll *a* (µg/L) - Corrected	-	Report	53	A
Phaeophytin (µg/L)	-	-	25	A
Total Suspended Solids (mg/L)	-	≤ 20.0	20	
Turbidity (NTU)	< 29 t	-	7.6	
Color (true, PCU)	-	-	42	
Alkalinity (mg CaCO3/L)	-	-	119	
CBOD, 5 day (mg/L), N - inhibited	-	-	4	
Oils and Greases (mg/L)	≤ 5.0	-	1.2	I
Chloride (mg/L)	-	-	13	
Fluoride (mg/L)	≤ 10.0	-	1.5	
Sulfate (mg/L)	-	Report	25	
Flow (MGD)	-	Report	2.16	a*
Hardness (mg $CaCO_3$)	-	-	130.77	c

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

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average

b - Value is calculated based on hardness

c - Value is calculated

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

J - Estimated value

Q - Sample held beyond normal holding time

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

£ - measurement taken in the FDEP laboratory

† - TRC detection is most likely due to interference in the sample, as the facility does not use chlorine in th treatment process

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

* - Measured from 8/12 - 7/13

Table 2. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN) and total nitrogen (TN) limitation of the freshwater species *Pseudokirchneriella subcapitata* and ratios of nitrogen to phosphorus.

Mosaic Fertilizer, LLC-Hookers Prairie Mine					
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
D-001	12.8 A	0.3 ± 0.1	61.0 ± 12.2	0.00	3.1
D-005	14.2	4.4 ± 0.9	53.4 ± 10.7		1.9

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: Jacki Champion	Contact Number: 813-470-5918
Facility Name (as it appears on permit): Mosaic Fertilizer, L.L.C. – Hookers Prairie Mine	Former Names: Cargill Fertilizer-Hooker Prairie Mine
NPDES Permit Number: FL0033294	Permit Expiration Date: April 15, 2014
Physical Address: 110 Agricola Mine Road, Bradley, Florida	
District: DWRM/PM	County: Polk
Function of Facility: Mined matrix is sent to the beneficiation plant were phosphate rock is separated from clays and sand.	
Facility Type: Phosphate Mine and Beneficiation Plant	Permitted Capacity (MGD): NA
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): D-001 3.24 MGD (8/12-7/13); D-002 0 MGD (8/12-7/13); D-003A 3.13 MGD (8/12-7/13); D-005 2.16 MGD (8/12-7/13)	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): NA	
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): D-001/EFF-001 discharges into Hookers Prairie, a tributary of the South Prong Alafia River. D-002/EFF-002 discharges into Hookers Prairie, a tributary of the South Prong Alafia River. D-003A/EFF-03A discharges into reclaimed lakes belonging to Dream Lakes of Florida, Inc., which may flow into Whidden Creek, a tributary of the Peace River. D-005/EFF-005 discharges into Bryants Branch, a tributary of the Peace River.	
Description of Permitted Outfall(s): D-001 is an 11 foot wide rectangular concrete weir D-002 is three rectangular 30 inch weirs D-003A is a 10 foot rectangular steel weir D-005 is two four foot steel weirs	
Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility): Treatment of mine recirculation water includes settling in Clay Settling Areas and nutrient uptake. Other potential effluent treatments include aeration, CO_2 addition, sulfuric acid treatment, application of algal growth blocking dye, flocculant addition, dilution, and aluminum sulfate (Alum) treatment if needed.	

PARAMETERS (UNITS)	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	Daily Minimum	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type	Sample Point ††
Flow (MGD)	N/A	Report	Report	1/Week	Instantaneous	EFF-002 EFF-03A
pH (standard units) (See Conditions I.A.3. & I.A.18.)	6.0	Report	8.5	1/Week	Grab	EFF-002 EFF-03A
Turbidity (NTUs)	N/A	Report	See Condition I.A.16.	Once Every 2 Weeks	Grab	EFF-002 EFF-03A
Solids, Total Suspended (TSS) (mg/l)	N/A	30.0	60.0	Once Every 2 Weeks	Grab	EFF-002 EFF-03A
Solids, Fixed (FS) (mg/l) *	N/A	12.0	25.0	Once Every 2 Weeks	Grab	EFF-002 EFF-03A
Phosphate, Ortho (as P) (mg/l) (See Condition I.A.19.)	N/A	Report	Report	Once Every 2 Weeks	Grab	EFF-002
Phosphorus, Total (as P) (mg/l)	N/A	3.0 **	5.0	Once Every 2 Weeks	Grab	EFF-002 EFF-03A
Phosphorus, Total (as P) (lbs/day)	N/A	Report †	Report †	Once Every 2 Weeks	Calculation	EFF-002 EFF-03A
Ammonia, Total (as N) (mg/l) (See Conditions I.A.18. & I.A.19.)	N/A	Report	Report	Once Every 2 Weeks	Grab	EFF-002
Ammonia, Unionized (as NH_3) (mg/l) (See Conditions I.A.18. & I.A.19.)	N/A	Report	0.02	Once Every 2 Weeks	Calculation	EFF-002
Specific Conductance (µmhos/cm)	N/A	N/A	See Condition I.A.4.	1/Month	Grab	EFF-002 EFF-03A
Oxygen, Dissolved (DO) (mg/l) (See Condition I.A.8.)	5.0	N/A	N/A	1/Month	Grab	EFF-002 EFF-03A
Temperature (°C) (See Conditions I.A.18.)	N/A	N/A	Report	1/Month	Grab	EFF-002 EFF-03A
Nitrogen, Total (as N) (mg/l)	N/A	N/A	3.0 ***	1/Month	Grab	EFF-002 EFF-03A
Nitrogen, Total (as N) (lbs/day)	N/A	N/A	Report †	1/Month	Calculation	EFF-002 EFF-03A
Chlorophyll a (µg/l)	N/A	N/A	Report	1/Month	Grab	EFF-002 EFF-03A
Alpha, Gross Particle Activity (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	N/A	15	1/Month	Grab	EFF-002 EFF-03A
$Radium^{226}$ + $Radium^{228}$, Total (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	N/A	5	1/Month	Grab	EFF-002 EFF-03A
Uranium, Total (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	N/A	Report	1/Month	Grab	EFF-002 EFF-03A
$Radon^{222}$, Total (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	N/A	Report	1/Month	Grab	EFF-002 EFF-03A

PARAMETERS (UNITS)	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	Daily Minimum	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type	Sample Point ††
Sulfate, Total (as SO_4) (mg/l)	N/A	N/A	Report	1/Quarter	Grab	EFF-002 EFF-03A
Fluoride, Total (as F) (mg/l)	N/A	N/A	10.0	1/Quarter	Grab	EFF-002 EFF-03A
Sodium, Total Recoverable (mg/l)	N/A	N/A	Report	1/Quarter	Grab	EFF-002 EFF-03A
Whole Effluent Toxicity – Chronic	See Permit Condition I.A.6.					EFF-002 EFF-03A

PARAMETERS (UNITS)	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	Daily Minimum	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type	Sample Point ††
Flow (MGD)	N/A	Report	Report	Continuous	Recorder	EFF-005
pH (standard units) (See Conditions I.A.3. & I.A.18.)	6.0	Report	8.5	1/Week	Grab	EFF-005
Turbidity (NTUs)	N/A	Report	See Condition I.A.16.	1/Week	Grab	EFF-005
Solids, Total Suspended (TSS) (mg/l)	N/A	15.0	20.0	1/Week	Grab	EFF-005
Solids, Fixed (FS) (mg/l) *	N/A	10.0	15.0	1/Week	Grab	EFF-005
Phosphate, Ortho (as P) (mg/l) (See Condition I.A.19.)	N/A	Report	Report	1/Week	Grab	EFF-005
Phosphorus, Total (as P) (mg/l)	N/A	3 **	5	1/Week	Grab	EFF-005
Phosphorus, Total (as P) (lbs/day)	N/A	150	200	1/Week	Calculation	EFF-005
Specific Conductance (µmhos/cm)	N/A	Report	See Condition I.A.4.	1/Week	Grab	EFF-005
Oxygen, Dissolved (DO) (mg/l) (See Condition I.A.8.)	5.0	Report	N/A	1/Week	Grab	EFF-005
Temperature (°C) (See Conditions I.A.18.)	N/A	Report	Report	1/Week	Grab	EFF-005
Nitrogen, Total (as N) (mg/l)	N/A	2.0	3.0 ***	1/Week	Grab	EFF-005
Nitrogen, Total (as N) (lbs/day)	N/A	Report	Report †	1/Week	Calculation	EFF-005
Chlorophyll a (µg/l)	N/A	Report	Report	1/Week	Grab	EFF-005
Sulfate, Total (as SO_4) (mg/l)	N/A	Report	Report	1/Week	Grab	EFF-005
Atrazine (µg/l)	N/A	N/A	Report	Semiannually	Grab	EFF-005
Whole Effluent Toxicity – Chronic	See Permit Condition I.A.6.					EFF-005

PARAMETERS (UNITS)	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	Daily Minimum	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	N/A	Report	Report	Continuous	Recorder	EFF-001
pH (standard units) (See Conditions I.A.3. & 18.)	6.0	Report	8.5	1/Week	Grab	EFF-001
Turbidity (NTUs)	N/A	Report	29	1/Week	Grab	EFF-001
Solids, Total Suspended (TSS) (mg/l)	N/A	30	60	1/Week	Grab	EFF-001
Solids, Fixed (FS) (mg/l) *	N/A	12	25	1/Week	Grab	EFF-001
Phosphate, Ortho (as P) (mg/l) (See Condition I.A.19.)	N/A	Report	Report	1/Week	Grab	EFF-001
Phosphorus, Total (as P) (mg/l)	N/A	3 **	5	1/Week	Grab	EFF-001
Phosphorus, Total (as P) (lbs/day)	N/A	Report †	Report †	1/Week	Calculation	EFF-001
Ammonia, Total (as N) (mg/l) (See Conditions I.A.18. & I.A.19.)	N/A	Report	Report	1/Week	Grab	EFF-001
Ammonia, Unionized (as NH_3) (mg/l) (See Conditions I.A.18. & I.A.19.)	N/A	Report	0.02	1/Week	Calculation	EFF-001
Alpha, Gross Particle Activity (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	Report	15	1/Week	Grab	EFF-001
$Radium^{226}$ + $Radium^{228}$, Total (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	Report	5	1/Week	Grab	EFF-001
Uranium, Total (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	N/A	Report	1/Week	Grab	EFF-001
$Radon^{222}$, Total (pCi/L) (See Conditions I.A.17. & I.A.19.)	N/A	N/A	Report	1/Week	Grab	EFF-001
Specific Conductance (µmhos/cm)	N/A	N/A	1275	1/Week	Grab	EFF-001
Oxygen, Dissolved (DO) (mg/l) (See Condition I.A.8.)	5.0	N/A	N/A	1/Month	Grab	EFF-001
Temperature (°C) (See Condition I.A.18.)	N/A	N/A	Report	1/Month	Grab	EFF-001
Nitrogen, Total (as N) (mg/l)	N/A	N/A	3.0 ***	1/Month	Grab	EFF-001
Nitrogen, Total (as N) (lbs/day)	N/A	N/A	Report †	1/Month	Calculation	EFF-001
Chlorophyll a (µg/l)	N/A	N/A	Report	1/Quarter	Grab	EFF-001
Sulfate, Total (as SO_4) (mg/l)	N/A	N/A	Report	1/Quarter	Grab	EFF-001
Fluoride, Total (as F) (mg/l)	N/A	N/A	10.0	1/Quarter	Grab	EFF-001
Whole Effluent Toxicity – Chronic	See Permit Condition I.A.6.					EFF-001

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
Hookers Prairie, Whidden Creek, Bryants Branch	Class III Fresh

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):
Chronic Definitive Fresh water tests annually.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):
None

Facility Mixing Zone Details (if applicable): NA

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

Date	Parameter and Units	Limit	Result
10/31/12-D-001	Gross Alpha pCi/L	15 max	22.4
11/30/12-D-001	Gross Alpha pCi/L	15 max	15.3
12/31/12-D-001	Chronic Toxicity-*c.dubia*%	100 minimum	88.2
5/31/13-D-005	pH s.u.	8.5 max	8.93
5/31/13 D-005	TSS	15 max	18

Describe previous FYI and WQBEL study: The previous FYI sampled August 2002 included macroinvertebrate sampling. The results indicated that a healthy macroinvertebrate community existed downstream of Outfalls D-002 and D-004. D-004 has been reclaimed and released and no longer exists at this facility.

Describe previous or current Enforcement Actions (including WLs): No current enforcement actions related to surface waters.

Describe any violations or problems noted in previous inspection: None noted related to surface waters.

Discuss whether DMR trends within previous five years are improving or declining: Static

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: 9/9/13, 9/11/13 (toxicity), 9/13/13 (toxicity)	Sampler(s): Jacki Champion, Scott Rose
Temperature (Deg C): D-005 -28.63°C D-001-29.86°C	pH (SU): D-005 -7.14 J D-001-7.35 J
Dissolved Oxygen (mg/L): D-005 -6.01 D-001-7.18	Conductivity (umhos/cm): D-005 -330 D-001-558
Total Residual Chlorine (mg/L): NA	Total Residual Chlorine - after Disinfection (mg/L): NA
Method of Chlorination: NA	Method of De-chlorination: NA
Flow During Sample Collection for each outfall (MGD): D-005-5.13 D-001-7.17	
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): D-001 3.24 MGD (8/12-7/13); D-002 0 MGD (8/12-7/13); D-003A 3.13 MGD (8/12-7/13); D-005 2.16 MGD (8/12-7/13)	
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: pH data is qualified as the meter did not pass the post-calibration.	

Appendix B
Explanation of measurements

(1) Quality Assurance and Quality Control

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

(2) Chemical Analyses of the Effluent

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

(3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62-302.500(1)a and/or a violation of 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 a violation of 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 a violation of facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Bacteriological Testing

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

(5) Algal Growth Potential (AGP)

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

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of $\pm$ 20%. When the ratio of nitrogen to phosphorus (N: P) is less than 10:1, nitrogen limitation of algal production is likely. When the N: P ratio is 20:1 or greater, phosphorus limitation is likely (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.

(6) 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.

(7) Definition of Qualifiers

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

Appendix C
Chemical Analyses of Effluent

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:45	D-001	AGP/LN	Algal Growth Potential	12.8	A	mg DryWt/L	0.3	0.9
9/9/2013 11:45	D-001	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	6.1		mg/L	0.2	2
9/9/2013 11:45	D-001	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	63		ug/L	0.92	2.8
9/9/2013 11:45	D-001	Chlorophyll/Grain Size/BOD	Phaeophytin-a	17		ug/L	0.67	2
9/9/2013 11:45	D-001	Toxicology	Bioassay-Acute-Def-FW-Fish, LC50	100	L	LC50		
9/9/2013 11:45	D-001	Toxicology	Bioassay-Acute-Def-FW-C.dubia, LC50	100	L	LC50		
9/9/2013 11:45	D-001	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
9/9/2013 11:45	D-001	Metals	Calcium	39.7		mg/L	0.075	0.3
9/9/2013 11:45	D-001	Metals	Iron	160		ug/L	30	120
9/9/2013 11:45	D-001	Metals	Sodium	50.1		mg/L	0.5	2
9/9/2013 11:45	D-001	Metals	Zinc	5.0	U	ug/L	5	20
9/9/2013 11:45	D-001	Metals	Arsenic	3.07		ug/L	0.25	1
9/9/2013 11:45	D-001	Metals	Chromium	1.0	I	ug/L	0.3	1.2
9/9/2013 11:45	D-001	Metals	Aluminum	540		ug/L	60	240
9/9/2013 11:45	D-001	Metals	Silver	0.025	U	ug/L	0.025	0.1
9/9/2013 11:45	D-001	Metals	Magnesium	16.3		mg/L	0.04	0.16
9/9/2013 11:45	D-001	Metals	Selenium	0.84		ug/L	0.2	0.8
9/9/2013 11:45	D-001	Metals	Lead	0.22	I	ug/L	0.2	0.8
9/9/2013 11:45	D-001	Metals	Copper	0.50	U	ug/L	0.5	1
9/9/2013 11:45	D-001	Metals	Nickel	0.85	I	ug/L	0.25	1
9/9/2013 11:45	D-001	Nutrients	Alkalinity	48		mg CaCO3/L	0.65	2.5
9/9/2013 11:45	D-001	Nutrients	TSS	8	I	mg/L	2	10
9/9/2013 11:45	D-001	Nutrients	Total-P	0.52		mg P/L	0.005	0.05
9/9/2013 11:45	D-001	Nutrients	Sulfate	180		mg SO4/L	2	5
9/9/2013 11:45	D-001	Nutrients	Kjeldahl Nitrogen	1.6		mg N/L	0.08	0.2
9/9/2013 11:45	D-001	Nutrients	Fluoride	3.2		mg F/L	0.035	0.1
9/9/2013 11:45	D-001	Nutrients	Ammonia-N	0.005		mg N/L	0.002	0.005
9/9/2013 11:45	D-001	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
9/9/2013 11:45	D-001	Nutrients	Turbidity	9.8		NTU	0.1	0.1
9/9/2013 11:45	D-001	Nutrients	Chloride	21		mg Cl/L	0.4	1
9/9/2013 11:45	D-001	Nutrients	Organic Carbon	11		mg C/L	0.5	1
9/9/2013 11:45	D-001	Nutrients	O-Phosphate-P	0.19		mg P/L	0.004	0.01
9/9/2013 11:45	D-001	Overflow	Oil and Grease	0.94	I	mg/L	0.73	2.6
9/9/2013 11:45	D-001	Overflow	Alpha-Counting Error	2.5		pCi/L		
9/9/2013 11:45	D-001	Overflow	Radium 228-Counting Error	0.6		pCi/L		
9/9/2013 11:45	D-001	Overflow	Radium 228	1		pCi/L	0.9	
9/9/2013 11:45	D-001	Overflow	Alpha, Total	9.6		pCi/L	1.7	
9/9/2013 11:45	D-001	Overflow	Radium 226-Counting Error	0.2		pCi/L		
9/9/2013 11:45	D-001	Overflow	Radium 226	1.5		pCi/L	0.1	

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:45	D-001	Pesticides	Metribuzin	0.019	U	ug/L	0.019	0.077
9/9/2013 11:45	D-001	Pesticides	Prometryn	0.019	U	ug/L	0.019	0.077
9/9/2013 11:45	D-001	Pesticides	Chlorpyrifos Methyl	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Fonofos	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Metalaxyl	0.039	U	ug/L	0.039	0.15
9/9/2013 11:45	D-001	Pesticides	Metolachlor	0.058	U	ug/L	0.058	0.23
9/9/2013 11:45	D-001	Pesticides	Norflurazon	0.029	U	ug/L	0.029	0.12
9/9/2013 11:45	D-001	Pesticides	Atrazine	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Hexazinone	0.029	U	ug/L	0.029	0.12
9/9/2013 11:45	D-001	Pesticides	Fenamiphos	0.029	U	ug/L	0.029	0.12
9/9/2013 11:45	D-001	Pesticides	Malathion	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Phorate	0.0048	U	ug/L	0.0048	0.019
9/9/2013 11:45	D-001	Pesticides	Mevinphos	0.0096	UJ	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Bromacil	0.039	U	ug/L	0.039	0.15
9/9/2013 11:45	D-001	Pesticides	Ethoprop	0.0048	U	ug/L	0.0048	0.019
9/9/2013 11:45	D-001	Pesticides	Naled	0.039	U	ug/L	0.039	0.15
9/9/2013 11:45	D-001	Pesticides	Parathion Ethyl	0.019	U	ug/L	0.019	0.077
9/9/2013 11:45	D-001	Pesticides	Simazine	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Ethion	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Diazinon	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Butylate	0.019	U	ug/L	0.019	0.077
9/9/2013 11:45	D-001	Pesticides	Azinphos Methyl	0.019	U	ug/L	0.019	0.077
9/9/2013 11:45	D-001	Pesticides	Parathion Methyl	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Chlorpyrifos Ethyl	0.0096	U	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Pesticides	Alachlor	0.058	U	ug/L	0.058	0.23
9/9/2013 11:45	D-001	Pesticides	Ametryn	0.0096	UJ	ug/L	0.0096	0.039
9/9/2013 11:45	D-001	Priority Organic Pollutants	2,4-Dichlorophenol	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	2-Chlorophenol	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Benzo(k)fluoranthene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.1	U	ug/L	3.1	12
9/9/2013 11:45	D-001	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.1	U	ug/L	2.1	8.3
9/9/2013 11:45	D-001	Priority Organic Pollutants	Butyl benzyl phthalate	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Pentachlorophenol	3.1	U	ug/L	3.1	12
9/9/2013 11:45	D-001	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	420
9/9/2013 11:45	D-001	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Chrysene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Di-n-octyl phthalate	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Diethyl phthalate	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Dimethyl phthalate	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Fluorene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.1	U	ug/L	3.1	12
9/9/2013 11:45	D-001	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.1	U	ug/L	3.1	12

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:45	D-001	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	3,3'-Dichlorobenzidine	42	U	ug/L	42	170
9/9/2013 11:45	D-001	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1	U	ug/L	2.1	8.3
9/9/2013 11:45	D-001	Priority Organic Pollutants	Hexachloroethane	3.1	U	ug/L	3.1	12
9/9/2013 11:45	D-001	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Phenol	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	2-Chloronaphthalene	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.1	U	ug/L	3.1	12
9/9/2013 11:45	D-001	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Naphthalene	0.21	U	ug/L	0.21	0.81
9/9/2013 11:45	D-001	Priority Organic Pollutants	Nitrobenzene	2.1	U	ug/L	2.1	8.3
9/9/2013 11:45	D-001	Priority Organic Pollutants	2-Nitrophenol	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Acenaphthene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Benzo(a)anthracene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1	U	ug/L	2.1	8.3
9/9/2013 11:45	D-001	Priority Organic Pollutants	Di-n-butyl phthalate	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Hexachlorobenzene	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	Isophorone	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1	U	ug/L	2.1	8.3
9/9/2013 11:45	D-001	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	62
9/9/2013 11:45	D-001	Priority Organic Pollutants	Fluoranthene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Hexachlorobutadiene	3.1	U	ug/L	3.1	12
9/9/2013 11:45	D-001	Priority Organic Pollutants	Pyrene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0	U	ug/L	1	4.2
9/9/2013 11:45	D-001	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	42
9/9/2013 11:45	D-001	Priority Organic Pollutants	2,4-Dinitrophenol	16	UJ	ug/L	16	62
9/9/2013 11:45	D-001	Priority Organic Pollutants	Acenaphthylene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Anthracene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Benzo(a)pyrene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Benzo(b)fluoranthene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Priority Organic Pollutants	Phenanthrene	0.21	U	ug/L	0.21	0.83
9/9/2013 11:45	D-001	Field Parameter	Dissolved Oxygen	7.18		mg/L		
9/9/2013 11:45	D-001	Field Parameter	pH	7.35				
9/9/2013 11:45	D-001	Field Parameter	Specific Conductance	558		umhos/cm		
9/9/2013 11:45	D-001	Field Parameter	Temperature	29.86		C		
9/9/2013 11:45	D-001	Field Parameter	pH	7.35				
9/9/2013 11:45	D-001	Field Parameter	Dissolved Oxygen	7.18		mg/L		
9/9/2013 11:45	D-001	Field Parameter	Temperature	29.86		C		

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:45	D-001	Field Parameter	Specific Conductance	558		umhos/cm		
9/9/2013 9:50	D-005	AGP/LN	Algal Growth Potential	14.2		mg DryWt/L	0.3	0.9
9/9/2013 9:50	D-005	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	4		mg/L	0.2	2
9/9/2013 9:50	D-005	Chlorophyll/Grain Size/BOD	Phaeophytin-a	25	A	ug/L	0.67	2
9/9/2013 9:50	D-005	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	53	A	ug/L	0.92	2.8
9/9/2013 9:45	D-005	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	100	L	IC25		
9/9/2013 9:45	D-005	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	100		NOEC		
9/9/2013 9:45	D-005	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	100	L	IC25		
9/9/2013 9:45	D-005	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	50		NOEC		
9/9/2013 9:50	D-005	Metals	Silver	0.025	U	ug/L	0.025	0.1
9/9/2013 9:50	D-005	Metals	Nickel	0.36	I	ug/L	0.25	1
9/9/2013 9:50	D-005	Metals	Arsenic	1.3		ug/L	0.25	1
9/9/2013 9:50	D-005	Metals	Calcium	27.8		mg/L	0.075	0.3
9/9/2013 9:50	D-005	Metals	Lead	0.39	I	ug/L	0.2	0.8
9/9/2013 9:50	D-005	Metals	Aluminum	680		ug/L	60	240
9/9/2013 9:50	D-005	Metals	Selenium	0.20	U	ug/L	0.2	0.8
9/9/2013 9:50	D-005	Metals	Chromium	1.1	I	ug/L	0.3	1.2
9/9/2013 9:50	D-005	Metals	Sodium	18.9		mg/L	0.5	2
9/9/2013 9:50	D-005	Metals	Magnesium	14.9		mg/L	0.04	0.16
9/9/2013 9:50	D-005	Metals	Copper	0.50	U	ug/L	0.5	1
9/9/2013 9:50	D-005	Metals	Zinc	5.0	U	ug/L	5	20
9/9/2013 9:50	D-005	Metals	Iron	440		ug/L	30	120
9/9/2013 9:50	D-005	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
9/9/2013 9:50	D-005	Nutrients	NO2NO3-N	0.005	I	mg N/L	0.004	0.01
9/9/2013 9:50	D-005	Nutrients	Color (true)	42		PCU	2.5	6
9/9/2013 9:50	D-005	Nutrients	Alkalinity	119		mg CaCO3/L	0.65	2.5
9/9/2013 9:50	D-005	Nutrients	Chloride	13		mg Cl/L	0.2	0.5
9/9/2013 9:50	D-005	Nutrients	Fluoride	1.5		mg F/L	0.035	0.1
9/9/2013 9:50	D-005	Nutrients	Kjeldahl Nitrogen	1.4		mg N/L	0.08	0.2
9/9/2013 9:50	D-005	Nutrients	Turbidity	7.6		NTU	0.1	0.1
9/9/2013 9:50	D-005	Nutrients	Organic Carbon	13		mg C/L	0.5	1
9/9/2013 9:50	D-005	Nutrients	Total-P	0.74		mg P/L	0.005	0.05
9/9/2013 9:50	D-005	Nutrients	Ammonia-N	0.11		mg N/L	0.002	0.005
9/9/2013 9:50	D-005	Nutrients	TSS	20		mg/L	2	10
9/9/2013 9:50	D-005	Nutrients	Sulfate	25		mg SO4/L	0.2	0.5
9/9/2013 9:50	D-005	Overflow	Oil and Grease	1.2	I	mg/L	0.72	2.6
9/9/2013 9:50	D-005	Pesticides	Butylate	0.019	U	ug/L	0.019	0.078
9/9/2013 9:50	D-005	Pesticides	Mevinphos	0.0097	UJ	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Fenamiphos	0.029	U	ug/L	0.029	0.12
9/9/2013 9:50	D-005	Pesticides	Malathion	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Norflurazon	0.029	U	ug/L	0.029	0.12
9/9/2013 9:50	D-005	Pesticides	Simazine	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Alachlor	0.058	U	ug/L	0.058	0.23

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 9:50	D-005	Pesticides	Ethoprop	0.0049	U	ug/L	0.0049	0.019
9/9/2013 9:50	D-005	Pesticides	Fonofos	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Metalaxyl	0.039	U	ug/L	0.039	0.16
9/9/2013 9:50	D-005	Pesticides	Naled	0.039	U	ug/L	0.039	0.16
9/9/2013 9:50	D-005	Pesticides	Parathion Ethyl	0.019	U	ug/L	0.019	0.078
9/9/2013 9:50	D-005	Pesticides	Phorate	0.0049	U	ug/L	0.0049	0.019
9/9/2013 9:50	D-005	Pesticides	Ethion	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Ametryn	0.0097	UJ	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Azinphos Methyl	0.019	U	ug/L	0.019	0.078
9/9/2013 9:50	D-005	Pesticides	Chlorpyrifos Methyl	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Metribuzin	0.019	U	ug/L	0.019	0.078
9/9/2013 9:50	D-005	Pesticides	Atrazine	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Diazinon	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Parathion Methyl	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Pesticides	Metolachlor	0.058	U	ug/L	0.058	0.23
9/9/2013 9:50	D-005	Pesticides	Prometryn	0.019	U	ug/L	0.019	0.078
9/9/2013 9:50	D-005	Pesticides	Bromacil	0.039	U	ug/L	0.039	0.16
9/9/2013 9:50	D-005	Pesticides	Hexazinone	0.029	U	ug/L	0.029	0.12
9/9/2013 9:50	D-005	Pesticides	Chlorpyrifos Ethyl	0.0097	U	ug/L	0.0097	0.039
9/9/2013 9:50	D-005	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Benzidine	97	U	ug/L	97	390
9/9/2013 9:50	D-005	Priority Organic Pollutants	Benzo(a)pyrene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Di-n-butyl phthalate	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
9/9/2013 9:50	D-005	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Naphthalene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.8
9/9/2013 9:50	D-005	Priority Organic Pollutants	2-Chlorophenol	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	U	ug/L	39	160
9/9/2013 9:50	D-005	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Diethyl phthalate	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
9/9/2013 9:50	D-005	Priority Organic Pollutants	Pyrene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	2,4-Dimethylphenol	9.7	U	ug/L	9.7	39
9/9/2013 9:50	D-005	Priority Organic Pollutants	2-Chloronaphthalene	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
9/9/2013 9:50	D-005	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	58
9/9/2013 9:50	D-005	Priority Organic Pollutants	Acenaphthene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 9:50	D-005	Priority Organic Pollutants	Butyl benzyl phthalate	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Phenol	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.8
9/9/2013 9:50	D-005	Priority Organic Pollutants	Dimethyl phthalate	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Chrysene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Di-n-octyl phthalate	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Fluorene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
9/9/2013 9:50	D-005	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.8
9/9/2013 9:50	D-005	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
9/9/2013 9:50	D-005	Priority Organic Pollutants	Phenanthrene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	2-Nitrophenol	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Benzo(a)anthracene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9	U	ug/L	1.9	7.8
9/9/2013 9:50	D-005	Priority Organic Pollutants	Hexachlorobenzene	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.8
9/9/2013 9:50	D-005	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Anthracene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
9/9/2013 9:50	D-005	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	58
9/9/2013 9:50	D-005	Priority Organic Pollutants	Acenaphthylene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Fluoranthene	0.19	U	ug/L	0.19	0.78
9/9/2013 9:50	D-005	Priority Organic Pollutants	Isophorone	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Priority Organic Pollutants	2,4-Dichlorophenol	0.97	U	ug/L	0.97	3.9
9/9/2013 9:50	D-005	Field Parameter	pH	7.14				
9/9/2013 9:50	D-005	Field Parameter	Specific Conductance	330		umhos/cm		
9/9/2013 9:45	D-005	Field Parameter	Dissolved Oxygen	6.01		mg/L		
9/9/2013 9:50	D-005	Field Parameter	Temperature	28.63		C		
9/9/2013 9:45	D-005	Field Parameter	Temperature	28.63		C		
9/9/2013 9:45	D-005	Field Parameter	pH	7.14				
9/9/2013 9:50	D-005	Field Parameter	Dissolved Oxygen	6.01		mg/L		
9/9/2013 9:45	D-005	Field Parameter	Specific Conductance	330		umhos/cm		
9/9/2013 11:25	FIELD BLANK	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
9/9/2013 11:25	FIELD BLANK	Metals	Aluminum	60	U	ug/L	60	240
9/9/2013 11:25	FIELD BLANK	Metals	Lead	0.20	U	ug/L	0.2	0.8
9/9/2013 11:25	FIELD BLANK	Metals	Selenium	0.20	U	ug/L	0.2	0.8
9/9/2013 11:25	FIELD BLANK	Metals	Iron	30	U	ug/L	30	120
9/9/2013 11:25	FIELD BLANK	Metals	Magnesium	0.040	U	mg/L	0.04	0.16

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:25	FIELD BLANK	Metals	Calcium	0.075	U	mg/L	0.075	0.3
9/9/2013 11:25	FIELD BLANK	Metals	Nickel	0.25	U	ug/L	0.25	1
9/9/2013 11:25	FIELD BLANK	Metals	Silver	0.025	U	ug/L	0.025	0.1
9/9/2013 11:25	FIELD BLANK	Metals	Copper	0.50	U	ug/L	0.5	1
9/9/2013 11:25	FIELD BLANK	Metals	Chromium	0.30	U	ug/L	0.3	1.2
9/9/2013 11:25	FIELD BLANK	Metals	Zinc	5.0	U	ug/L	5	20
9/9/2013 11:25	FIELD BLANK	Metals	Arsenic	0.25	U	ug/L	0.25	1
9/9/2013 11:25	FIELD BLANK	Metals	Sodium	0.50	U	mg/L	0.5	2
9/9/2013 11:25	FIELD BLANK	Nutrients	Sulfate	0.20	U	mg SO4/L	0.2	0.5
9/9/2013 11:25	FIELD BLANK	Nutrients	Chloride	0.20	U	mg Cl/L	0.2	0.5
9/9/2013 11:25	FIELD BLANK	Nutrients	Turbidity	0.10	U	NTU	0.1	0.1
9/9/2013 11:25	FIELD BLANK	Nutrients	Ammonia-N	0.002	U	mg N/L	0.002	0.005
9/9/2013 11:25	FIELD BLANK	Nutrients	Alkalinity	0.65	U	mg CaCO3/L	0.65	2.5
9/9/2013 11:25	FIELD BLANK	Nutrients	Organic Carbon	0.50	U	mg C/L	0.5	1
9/9/2013 11:25	FIELD BLANK	Nutrients	Kjeldahl Nitrogen	0.080	U	mg N/L	0.08	0.2
9/9/2013 11:25	FIELD BLANK	Nutrients	Total-P	0.003	I	mg P/L	0.002	0.005
9/9/2013 11:25	FIELD BLANK	Nutrients	Fluoride	0.035	U	mg F/L	0.035	0.1
9/9/2013 11:25	FIELD BLANK	Nutrients	Color (true)	2.5	U	PCU	2.5	6
9/9/2013 11:25	FIELD BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
9/9/2013 11:25	FIELD BLANK	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
9/9/2013 11:25	FIELD BLANK	Overflow	Alpha-Counting Error	0.4		pCi/L		
9/9/2013 11:25	FIELD BLANK	Overflow	Alpha, Total	0.6	U	pCi/L	0.6	
9/9/2013 11:25	FIELD BLANK	Overflow	Radium 226	0.2	U	pCi/L	0.2	
9/9/2013 11:25	FIELD BLANK	Overflow	Oil and Grease	0.84	I	mg/L	0.73	2.6
9/9/2013 11:25	FIELD BLANK	Overflow	Radium 228	0.8	U	pCi/L	0.8	
9/9/2013 11:25	FIELD BLANK	Overflow	Radium 226-Counting Error	0.1		pCi/L		
9/9/2013 11:25	FIELD BLANK	Overflow	Radium 228-Counting Error	0.6		pCi/L		
9/9/2013 11:25	FIELD BLANK	Pesticides	Diazinon	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Simazine	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Metribuzin	0.019	U	ug/L	0.019	0.078
9/9/2013 11:25	FIELD BLANK	Pesticides	Naled	0.039	U	ug/L	0.039	0.16
9/9/2013 11:25	FIELD BLANK	Pesticides	Alachlor	0.058	U	ug/L	0.058	0.23
9/9/2013 11:25	FIELD BLANK	Pesticides	Chlorpyrifos Ethyl	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Metalaxyl	0.039	U	ug/L	0.039	0.16
9/9/2013 11:25	FIELD BLANK	Pesticides	Azinphos Methyl	0.019	U	ug/L	0.019	0.078
9/9/2013 11:25	FIELD BLANK	Pesticides	Bromacil	0.039	U	ug/L	0.039	0.16
9/9/2013 11:25	FIELD BLANK	Pesticides	Parathion Ethyl	0.019	U	ug/L	0.019	0.078
9/9/2013 11:25	FIELD BLANK	Pesticides	Ametryn	0.0097	UJ	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Atrazine	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Prometryn	0.019	U	ug/L	0.019	0.078
9/9/2013 11:25	FIELD BLANK	Pesticides	Metolachlor	0.058	U	ug/L	0.058	0.23
9/9/2013 11:25	FIELD BLANK	Pesticides	Mevinphos	0.0097	UJ	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Norflurazon	0.029	U	ug/L	0.029	0.12

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:25	FIELD BLANK	Pesticides	Butylate	0.019	U	ug/L	0.019	0.078
9/9/2013 11:25	FIELD BLANK	Pesticides	Chlorpyrifos Methyl	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Phorate	0.0048	U	ug/L	0.0048	0.019
9/9/2013 11:25	FIELD BLANK	Pesticides	Ethion	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Ethoprop	0.0048	U	ug/L	0.0048	0.019
9/9/2013 11:25	FIELD BLANK	Pesticides	Fenamiphos	0.029	U	ug/L	0.029	0.12
9/9/2013 11:25	FIELD BLANK	Pesticides	Hexazinone	0.029	U	ug/L	0.029	0.12
9/9/2013 11:25	FIELD BLANK	Pesticides	Malathion	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Parathion Methyl	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Pesticides	Fonofos	0.0097	U	ug/L	0.0097	0.039
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Nitrobenzene	2.0	U	ug/L	2	7.8
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	2.8	I	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Isophorone	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Pyrene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	59
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Anthracene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0	U	ug/L	2	7.8
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2-Nitrophenol	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	U	ug/L	39	160
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2-Chloronaphthalene	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0	U	ug/L	2	7.8
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Acenaphthylene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Chrysene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Fluorene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0	U	ug/L	2	7.8
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Phenanthrene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2-Chlorophenol	0.98	U	ug/L	0.98	3.9

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Hexachlorobenzene	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Phenol	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	59
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Acenaphthene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Benzidine	98	U	ug/L	98	390
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0	U	ug/L	2	7.8
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Diethyl phthalate	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Dimethyl phthalate	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Fluoranthene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	UJ	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Naphthalene	0.20	U	ug/L	0.2	0.78
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	0.98	U	ug/L	0.98	3.9
9/9/2013 11:25	FIELD BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	9.8	U	ug/L	9.8	39

The Bioassay of Mosaic Fertilizer, L.L.C. - Hookers Prairie Mine effluent sampled on September 9, 11, and 13, 2013. NPDES #FL0033294.

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 F L 0 0 3 3 2 9 4 11	12 1 3 0 9 0 9	18 **B**	19 **S**	20 2

Remarks

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The Priority Pollutants Analysis of Mosaic Fertilizer, L.L.C. - Hookers Prairie Mine effluent sampled on September 9, 2013. NPDES #FL0033294.

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 F L 0 0 3 3 2 9 4 11	12 1 3 0 9 0 9	18 **X**	19 **S**	20 2

Remarks

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Biological Analyses of Mosaic Fertilizer, L.L.C. - Hookers Prairie Mine effluent sampled on September 9, 2013. NPDES #FL0033294.

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 F L 0 0 3 3 2 9 4 11	12 1 3 0 9 0 9	18 **S**	19 **S**	20 2

Remarks

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