2014 WATER QUALITY MONITORING BLUE MARSH RESERVOIR LEESPORT, PENNSYLVANIA



U.S. Army Corps of Engineers Philadelphia District Environmental Resources Branch

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1.0 INTRODUCTION

1.1 PURPOSE OF THE MONITORING PROGRAM

The U.S. Army Corps of Engineers (USACE) manages Blue Marsh Reservoir located in east-central Pennsylvania on the Tulpehocken Creek, which is within the Delaware River Basin. Blue Marsh Reservoir provides flood control and a dependable water supply to downstream communities west of Reading, PA. Additionally, the reservoir provides important habitat for fish, waterfowl, and other wildlife, and recreational opportunities through fishing, boating, and swimming. Due to the broad range of uses and demands that Blue Marsh Reservoir serves, the USACE monitors water quality, and other aspects related to ecological health, primarily to ensure public health safety. Results from water quality monitoring are compared to state water quality standards and used to diagnose other problems that commonly affect reservoir health such as low dissolved oxygen, nutrient enrichment and toxic loadings. This report summarizes the results of water quality monitoring at Blue Marsh Reservoir in 2014.

1.2 DESCRIPTION OF BLUE MARSH RESERVOIR

Blue Marsh Reservoir was designed to provide flood control, a water supply, and enhanced water quality to downstream communities along Tulpehocken Creek. Located about six miles northwest of Reading, Pennsylvania near Route 183, the reservoir dams a drainage area of 175 square miles. The dam, completed in 1979, can impound up to 42.3 billion gallons of water. The primary surface water inputs into Blue Marsh Reservoir other than Tulpehocken Creek include Wolf, Northkill, and Little Northkill Creek from the northwest; Spring Creek from the west; and Licking Creek from the northeast. The reservoir is approximately 6 miles long and is 52 feet deep immediately above the dam near Lower Heidelberg.

1.3 ELEMENTS OF THE STUDY

The USACE, Philadelphia District, has been monitoring the water quality of Blue Marsh Reservoir since 1979. Over this time, the yearly monitoring designs have evolved to address new concerns such as health of public drinking water and contamination of reservoir bottom sediments. The 2014 monitoring program follows that in most recent years and includes the following major elements:

- Monthly water quality and bacteria monitoring of reservoir and upstream sources to evaluate compliance with Pennsylvania state water quality standards and to evaluate the health of the reservoir ecosystem starting on 20 May and ending on 9 September 2014;
- Monthly profile samples for temperature, dissolved oxygen, chlorophyll, pH, turbidity, and conductivity at all stations in the reservoir and watershed; and
- Twice weekly coliform bacteria monitoring at three beach stations to ensure public health and safety at the Blue Marsh Reservoir swimming beach area.

2.0 METHODS

2.1 PHYSICAL STRATIFICATION MONITORING

Physical stratification monitoring of the water column was conducted monthly at Blue Marsh Reservoir from May to September 2014 (Table 2-1). Stratification parameters included temperature, dissolved oxygen (DO), pH, Chlorophyll a, turbidity, and conductivity. Monitoring was conducted at ten fixed stations located throughout the reservoir watershed (Fig. 2-1). Six stations were located within the reservoir body (BM-2, BM-6, BM-7, BM-8, BM-9, and BM-10) for which water quality was measured from surface to bottom at 5-ft depth intervals. Three stations (BM-1S, BM-5S, and BM-11S) were monitored for surface water quality only. All water quality parameters were measured with a calibrated YSI 6600 V2-4 water quality meter. For this report, all of the stratification monitoring results, when applicable, were summarized and compared to water quality standards enacted by the Pennsylvania Department of Environmental Protection (PADEP – Chapter 93 Water Quality Standards).

2.2 WATER COLUMN CHEMISTRY MONITORING

Water column chemistry monitoring was conducted five times (once a month) at Blue Marsh Reservoir during the 2014 sampling season (Table 2-1). Water samples were collected at 9 fixed stations in the reservoir watershed (Fig. 2-1). Surface water samples were collected at stations downstream of the reservoir (BM-1S), and upstream of the reservoir on Tulpehocken Creek (BM-5S) and Northkill Creek (BM-11S). Surface, middle, and bottom water samples were collected at the 6 stations within the reservoir (BM-2, BM-6, BM-7, BM-8, BM-9, and BM-10). Surface water samples were collected by opening sample containers approximately one foot below the surface of the water. Middle and bottom water samples were collected with a Van Dorn design horizontal water bottle.

Water samples from all depths were analyzed for ammonia, nitrite, nitrate, total Kjeldahl nitrogen (TKN), total phosphorus, ortho-phosphate, soluble phosphorus, total dissolved solids (TDS), total suspended solids (TSS), biochemical oxygen demand (BOD), alkalinity, and total organic carbon. Table 2-2 summarizes the laboratory methods detection limits, state water quality standards, and sample holding times for each water quality parameter monitored.

Date of Sample Collection	Physical Stratification Monitoring (all stations)	Water Column Chemistry Monitoring (all stations)	Trophic State Assessment (BM—6)	Coliform Bacteria Monitoring (all stations)	Drinking Water Monitoring *
20 May	Х	Х	Х	Х	
17 June	Х	Х	Х	Х	
22 July	X	Х	Х	Х	
11 August	Х	Х	Х	Х	
9 September	x	Х	Х	Х	

2.3 TROPHIC STATE DETERMINATION

The trophic state of Blue Marsh Reservoir was determined by methods outlined by Carlson (1977). In general, this method calculated trophic state indices (TSIs) independently for measures of total phosphorus, chlorophyll *a*, and secchi disk depth. Surface water measures of total phosphorus and chlorophyll *a* from chemistry monitoring were averaged in the calculation of monthly TSIs (Table 2-1). Secchi disk depth was measured at station BM-6. Trophic state determinations were made using criteria defined by Carlson and EPA (1983).

2.4 RESERVOIR COLIFORM BACTERIA MONITORING

Monitoring for coliform bacteria contaminants was conducted monthly at Blue Marsh Reservoir. Water samples were analyzed for total and fecal coliforms. Surface water samples were tested at all stations. Table 2-3 presents the test methods, detection limits, PADEP water quality standards, and sample holding times for the bacteria parameters monitored at Blue Marsh Reservoir in 2014. The bacteria analytical method was based on a membrane filtration technique. All of the samples were analyzed within their respective maximum allowable hold times.

Table 2-2.	Water quality test methods, detection limits, state regulatory criteria, and sample
	holding times for water quality parameters monitored at Blue Marsh Reservoir in
	2014

Parameter	(2) Method	Reporting Limit	PADEP Surface Water Quality Criteria	Allowable Hold Times (Days)
Total Alkalinity	SM20 2320B	1.0 mg/L	Min. 20 mg/L CaCO ₃	14
Biochemical Oxygen Demand (BOD)	SM20 5210B	2.0 mg/L	None	2
Total Phosphorus	SM20 4500-PE	0.01 mg/L	None	28
Diss./Ortho-Phosphate	SM20 4500-PE	0.01 mg/L	None	28
Soluble Phosphorus	SM20 4500-PE	0.05 mg/L	None	28
Total Organic Carbon (TOC)	SM20 5310C	1.0 mg/L	None	28
(3) Total Inorganic Carbon (TIC)	SM20 5310B	NA	None	28
(3) Total Carbon (TOC + TIC)	SM20 5310B	NA	None	28
(1) Chlorophyll a	YSI Probe		None	
Total Kjeldahl Nitrogen	351.2 MCAWW	0.25 mg/L	None	28
Ammonia	D6919-03	0.05 mg/L	Temp. and pH dependent	28
Nitrate	MCAWW 353.2	0.05 mg/L	Maximum 10 mg/L	28
Nitrite	MCAWW 353.2	0.05 mg/L	(nitrate + nitrite)	28
Total Dissolved Solids	SM20 2540C	5.0 mg/L	Maximum 750 mg/L	7
Total Suspended Solids	SM20 2540D	3.0 mg/L	None	7

(1) Chlorophyll *a* samples were recorded using a YSI 6600 with a chlorophyll sensor. (2) Laboratory Methods Reference:

MCAWW- "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SM-20- "Standard Methods for the Examination of Water and Wastewater", 22nd Edition, 2012. SW846- "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", 3rd. Edition, November 1986 and updates.

(3)Samples were not analyzed for Total Carbon and Total Inorganic Carbon in 2014 NA- Not sampled or analyzed by lab

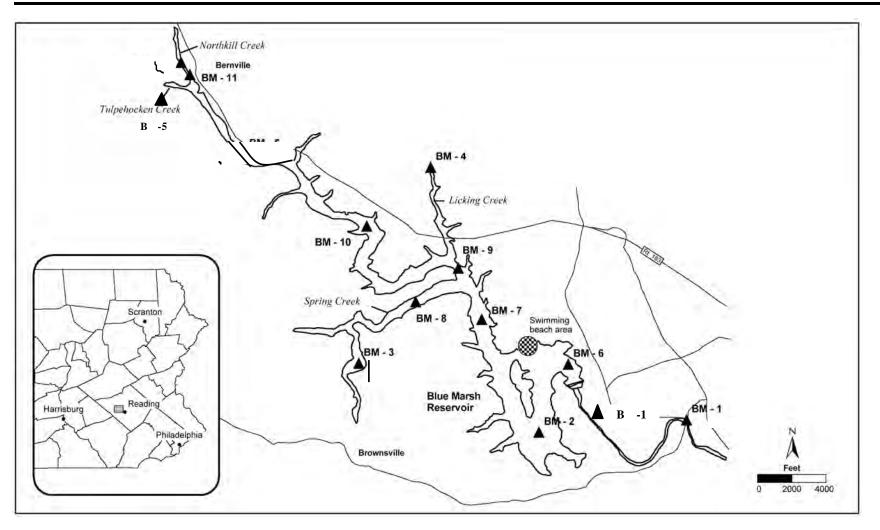


Figure 2-1. Blue Marsh Reservoir and the location of the 9 fixed stations monitored for water quality during 2014

Table 2-3.Water quality test methods, detection limits, PADEP water quality standards, and sample holding times for bacteria parameters monitored at Blue Marsh Reservoir in 2014.									
Parameter	Total Coliform/E-Coli	Fecal Coliform							
Test method	SM 9223B	SM9222D							
Minimum Detection limit	1 clns/100-mls	2 clns/100-mls							
PADEP water quality standard	-	Geometric mean < 200 clns/100-mls							
PA Department of Health	-	Geometric mean < 200 clns/100-mls. No sample > 1000 clns/100-mls							
Maximum allowable holding time	30 hours	30 hours							
Achieved holding time	< 30 hours	< 30 hours							

The PADEP monthly coliform bacteria standard is defined as a maximum geometric mean of 200 colonies/100-ml based on 5 consecutive samples collected on different days. In addition, a single sample standard of 1000 colonies/100-ml can also be used. These standards are most applicable at bathing beaches. The Philadelphia District maintains a bathing beach at Blue Marsh Reservoir and conducts separate bacteria sampling of that area. Given our logistical limitations (all monthly reservoir sampling conducted on one day) and the fact that water contact recreation is permitted within the reservoir, the reservoir coliform data collected by the Corps is compared to the single sample standard as a method of collecting and evaluating background coliform data on the main body of the reservoir. Although our sampling design does not fully meet PADEP guidelines for bathing beach monitoring, we feel that this interpretation of the coliform data meets the intent of the PADEP water quality standard for evaluating Blue Marsh Reservoir bacteria levels within the main reservoir body.

2.5 SWIMMING BEACH MONITORING

Additional coliform bacteria monitoring was conducted twice weekly near the public swimming beach at the Dry Brooks day use area (Table 2-4). Three stations (SB-1, SB-2, and SB-3) were monitored in the swimming beach area for total coliform, fecal coliform, and Escherichia coli (Figure 2-2). The coliform bacteria samples were collected and analyzed by the same methods used for monthly coliform bacteria sampling. The bacteria monitoring for Blue Marsh Swimming Beach followed a 4-step program of conditional monitoring. Each step or "condition" of monitoring responded to incremental increases of coliform contamination, and therefore reflected the risk to public health at the swimming beach area.

Table 2-4. Sampling dates for coliform bacteria monitoring at the Blue Marsh Reservoir swimming beach during 2014										
Week 1	12 and 15 May	Week 10	14 and 17 July							
Week 2	19 and 22 May	Week 11	21 and 24 July							
Week 3	27 and 29 May	Week 12	28 and 31 July							
Week 4	02 and 05 June	Week 13	04 and 07 August							
Week 5	09 and 12 June	Week 14	11 and 14 August							
Week 6	16 and 19 June	Week 15	18 and 21 August							
Week 7	23 and 26 June	Week 16	25 and 28 August							
Week 8	30 June and 03 July	Week 17	02 and 04 September							
Week 9	07 and 10 July									

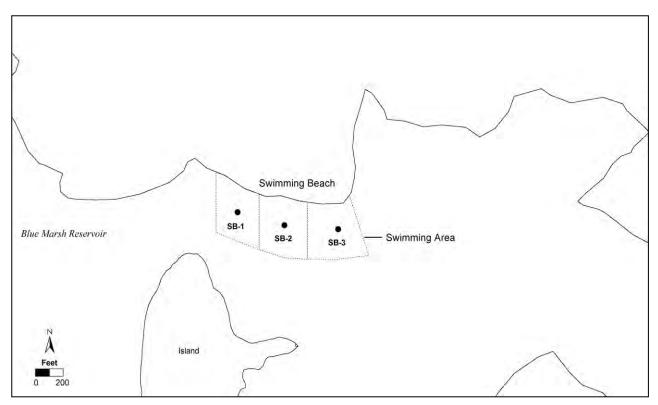


Figure 2-2. Swimming beach bacteriological monitoring stations at Blue Marsh Reservoir in 2014

3.0 RESULTS AND DISCUSSION

3.1 STRATIFICATION MONITORING

The following sections summarize the results of water quality monitoring for physical and chemical parameters: temperature, dissolved oxygen, and pH. Seasonal and spatial patterns of surface water quality measured throughout the reservoir watershed, and seasonal and depth related patterns of the stratified water column based on measures from the deepest portion of the reservoir (station BM-6 or the "Tower") are described. It is appropriate to focus discussion on tributary sampling stations and stratification at station BM-6 as water quality problems related to depth are generally most severe in deep water habitats. Corps personnel collected the physical/chemical water quality data discussed herein over the monitoring period from May to September 2014, the most productive time of the year for the reservoir. All of the parameters were measured with a calibrated YSI 6600 V2-4 water quality meter and are presented in Appendix A.

3.1.1 Temperature

Temperature is the primary influencing factor on water density, affects the solubility of many chemicals' compounds, and can therefore influence the effect of pollutants on aquatic life. Increased temperatures elevate the metabolic oxygen demand, in conjunction with reduced oxygen solubility, and can impact many species. Vertical stratification patterns naturally occurring in lakes affect the distribution of dissolved and suspended compounds.

Surface water temperature seasonal patterns upstream of the reservoir at stations BM-5 and BM-11 closely resembled each other throughout the sampling season (Fig. 3-1). Maximum temperatures of 21.22°C and 21.38°C were recorded at station BM-5S and BM-11S respectably in August. The maximum surface water temperature downstream of the reservoir at station BM-1S was 21.68°C in September with a minimum of 15.75°C in May. Downstream temperatures are influenced through selective withdrawals at the Blue Marsh Dam. Annually the Corps performs selective withdrawal releases in an attempt to maintain temperatures downstream in the Tulpehocken Creek of less than 20°C in support of the trout fishery. The ability to meet this objective is dependent on meteorological conditions and other physical and operational limitations. The temperature objective was routinely exceeded in 2014 from July through September.

Blue Marsh Reservoir was stratified with respect to temperature during 2014. The stratification pattern was most apparent at station BM-6 or the "Tower" station located in the deepest part of the reservoir (Fig. 3-2). The onset of stratification was evident in May sampling. May sampling showed the lake being stratified with temperatures from surface to bottom differing by 7.23 °C. The deeper and cooler temperature (<20°C) water was available for selective withdrawal to meet downstream temperature objectives through late July. Stratification peaked in late-July and a noticeable shift to deeper warmer water temperatures

was evident into August and September. An erosion of the epilimnion was seen in August sampling as the lake began the process of de-stratifying.

3.1.2 Dissolved Oxygen

Dissolved oxygen (DO) is the measure of the amount of DO in water. Typically, DO concentrations in surface waters are less than 10 mg/L. Dissolved Oxygen concentrations are subject to diurnal and seasonal fluctuations that can be influenced, in part, by temperature, river discharge, and photosynthetic activity. Dissolved Oxygen is essential to the respiratory metabolism of most aquatic organisms. It affects the availability and solubility of nutrients and subsequently the productivity of aquatic ecosystems. Low levels of oxygen can facilitate the release of nutrients from bottom sediments.

Surface waters upstream of the reservoir at tributary stations BM-5S and BM-11S had similar seasonal DO patterns except for August (Fig. 3-3). The maximum DO concentration of 10.34 mg/L was recorded in August at station BM-5S. The maximum surface water DO concentration downstream of the dam at station BM-1S was 10.72 mg/L recorded in May with a minimum of 7.89 recorded in September. The spike in DO at station BM-5S in August may be associated with an algal bloom and subsequent increase in surface DO levels.

Seasonal stratification and chemical and biological processes at Blue Marsh Reservoir dramatically influenced the distribution of DO in the water column during 2014 (Fig. 3-4). In May, the influence of stratification was apparent at station BM-6, as DO concentrations decreased from 12.01 mg/L near the surface to 3.03 mg/L near the lake bottom. Historically, the lower oxygen levels deeper in the lake progressively move up the water column to within approximately 15-feet of the surface in mid- to late August. In 2014, this pattern was recorded in July and continued into September. In most years the surface waters remain oxygenated as a result of surface algal productivity. In August, dissolved oxygen concentrations decreased from 11.59 mg/L at the surface to 3.84 mg/L at a depth of 10 feet and from 10 feet to the lake bottom ranged from 0.17 to 0.23 mg/L. Dissolved oxygen concentrations in the upper water column of Blue Marsh Reservoir were in compliance with PADEP water quality standards during the 2014 sampling season. The Pennsylvania water quality standard for DO is a minimum concentration of 5 mg/L within the epilimnion of stratified lakes.

The health of aquatic ecosystems can be impaired by low DO concentrations in the water column. Hypoxia, or conditions of DO concentrations less than 2 mg/L, is generally accepted as the threshold at which the most severe effects on biota occur. In June through September of 2014, the lower water column of Blue Marsh was severely affected by hypoxia (Fig. 3-4). Hypoxic water occupied more than half of the water column in some of these months. Hypoxia in the lower water column is a symptom of eutrophication. Nutrients in the water column feed explosive algal growth at the surface photic zone. Dead and decaying algae sink to lower levels of the water column and during the process of decay; oxygen is removed from the water.

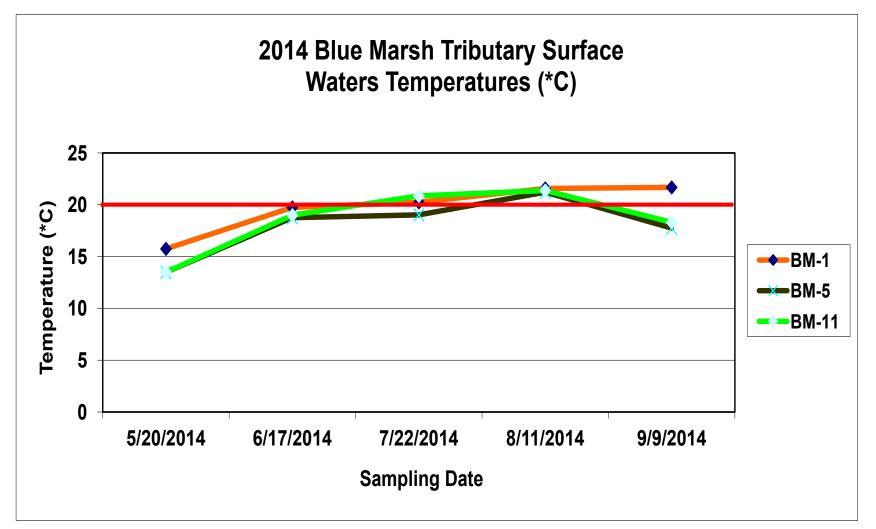


Figure 3-1. Tributary and downstream surface water temperatures (°C) measured at Blue Marsh Reservoir in 2014. Station BM-1S is located downstream of the reservoir. See Appendix A for summary of plotted values.

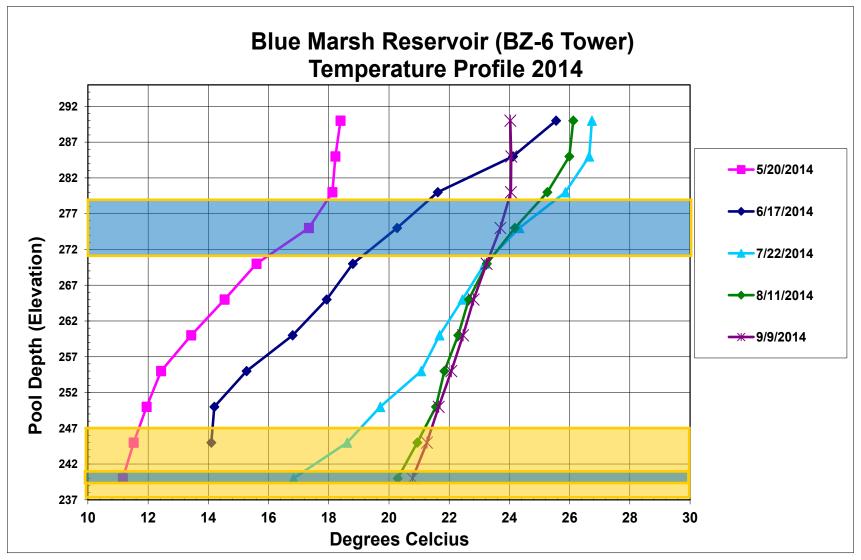


Figure 3-2. Temperature stratification and release portal elevations at station BM-6 of Blue Marsh Reservoir in 2014. See Appendix A for summary of plotted values.

3.1.3 pH

The hydrogen –ion concentration in water is measured as pH. The pH scale is 0-14. A pH below 7 is considered acidic and a pH above 7 is basic. High pH values tend to facilitate solubilization of ammonia, salts, and heavy metals. Low pH levels tend to increase carbonic acid and carbon dioxide concentrations. Lethal effects of pH on aquatic life typically occur below pH 4.5 and above pH 9.5.

Measures of pH in the surface waters of Blue Marsh Reservoirs upstream and downstream sampling stations followed a similar pattern during 2014 (Fig. 3-5). In the months sampled, no pH measures violated the PADEP water quality standard maximum or minimum pH level of 9.0 and 6.0, respectably. For the entire monitoring period and at all tributary stations, pH ranged from 7.69 to 8.45.

The pH profile in the water column of Blue Marsh Reservoir was consistent with a stratified lake during 2014 (Fig. 3-6). Throughout the monitoring period the upper 10 feet of the water column had consistently higher pH measures than the deeper waters. During most months, pH at the surface to a depth of 10 feet ranged between 7.86 and 9.04. In contrast, measures of pH in the lower water column (>10 feet) were consistently lower during the monitoring period and ranged between 6.94 and 8.13. The higher pH in surface waters (euphotic zone) of the reservoir is most likely a result of excessive algal blooms. As a function of increased productivity during photosynthesis, algae remove CO_2 from the water column. Dissolved CO_2 is slightly acidic; its reduction in the water column manifests an increase in pH. In May through September of 2014, one surface water sample at Blue Marsh Reservoir station BM-6 violated the PADEP pH standard. No other samples violated the state standard during the sampling season.

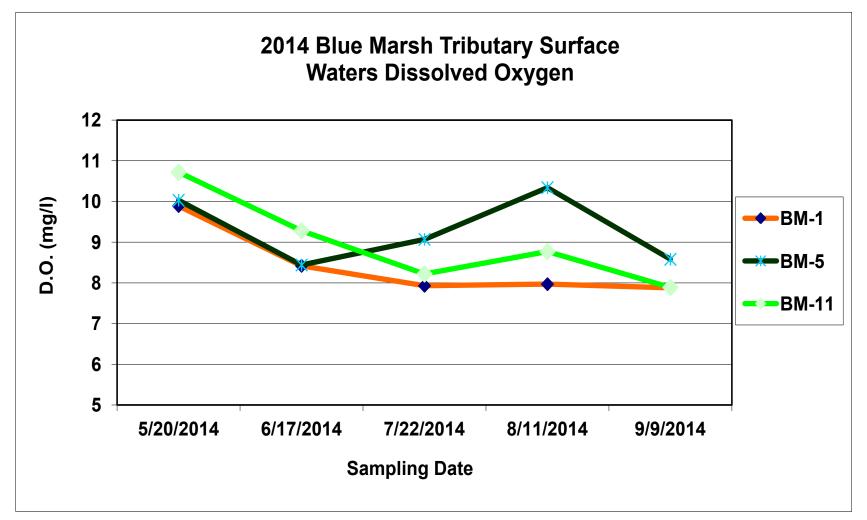


Figure 3-3. Tributary and outflow surface water dissolved oxygen concentrations measured at Blue Marsh Reservoir in 2014. (The PADEP water quality standard for DO is a minimum concentration of 5 mg/L.) See Appendix A for summary of plotted values.



Figure 3-4. Release portal elevations and dissolved oxygen stratification at station BM-6 of Blue Marsh Reservoir in 2014. (PADEP water quality standard for DO is a minimum concentration of 5 mg/L.) See Appendix A for summary of plotted values.

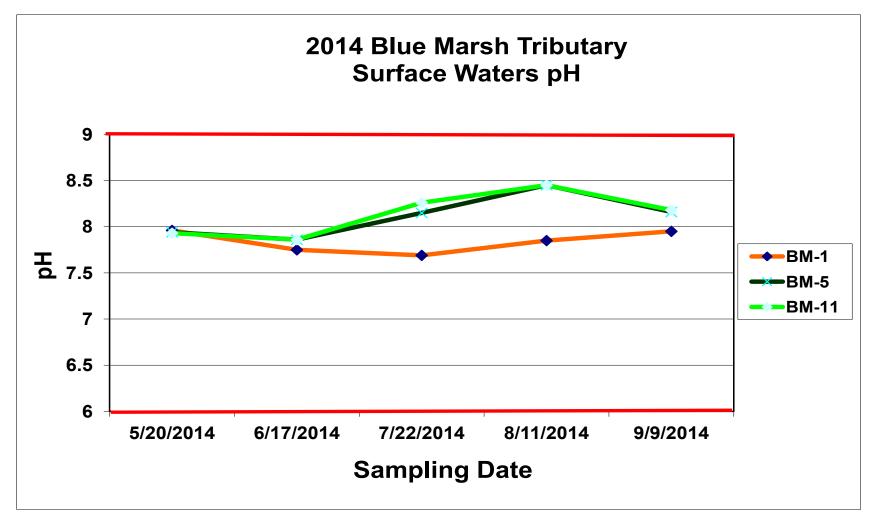


Figure 3-5. Tributary and outflow surface water pH measured at Blue Marsh Reservoir in 2014. (The PADEP water quality standard for pH is a range from 6 to 9.) See Appendix A for summary of plotted values.

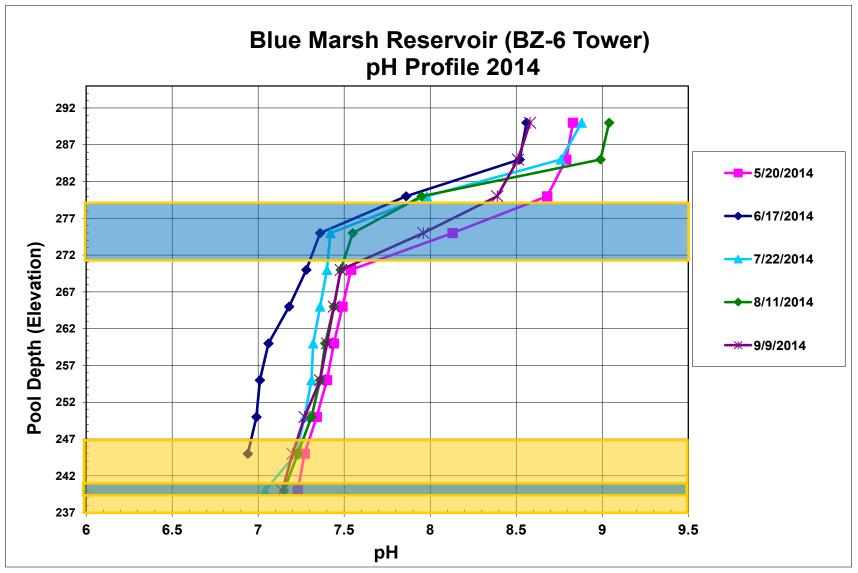


Figure 3-6. Release portal elevations and stratification of pH at station BM-6 of Blue Marsh Reservoir in 2014. (The PADEP water quality standard for pH is a range from 6 to 9.) See Appendix A for summary of plotted values.

3.2 WATER COLUMN CHEMISTRY MONITORING

The following sections describe temporal, spatial, and depth patterns for the water quality parameters measured in surface, middle, and bottom waters of Blue Marsh Reservoir during 2014 (Table 3-1).

3.2.1 Ammonia

Total Ammonia (NH3) is a measure of the most reduced inorganic form of nitrogen in water and includes dissolved ammonia and the ammonium ion. Ammonia is a small component of the nitrogen cycle but as an essential plant nutrient, it contributes to the trophic status of a water body. Excess ammonia contributes to eutrophication of water bodies. This can result in excessive algal growths and impacts on recreation and drinking water supplies. In high concentrations, ammonia is toxic to aquatic life.

In general, ammonia remained relatively low in the waters of Blue Marsh Reservoir with most upstream tributary and all lake surface samples less than the reporting limit (0.05 mg/L). Algal uptake in the surface waters may account for the low concentrations at these stations. Higher concentrations were seen in the middle and deep water samples at the deeper lake stations (Table 3-1). The maximum value recorded during the sampling season of 1.79 mg/L was measured in the lake bottom waters at station BM-6B during September. Concentrations of ammonia measured at Blue Marsh Reservoir were in compliance with PADEP water quality standards during all of the 2014 sampling season. The state water quality standard for ammonia is dependent on temperature and pH (Table 3-2).

Table 3-2.PADEP ammonia nitrogen criteria (Pennsylvania Code, Title 25, Chapter 93, 1996).1996).Specific ammonia (mg/l) criteria dependent on temperature and pH.										
1	996). Specific an	nmonia (mg/l) cri	iteria dependent	on temperature	and pH.					
Ph	10 °C 15 °C 20 °C 25 °C 30 °C									
6.50	25.5	17.4	12.0	8.4	5.9					
6.75	23.6	16.0	11.1	7.7	5.5					
7.00	20.6	14.0	9.7	6.8	4.8					
7.25	16.7	11.4	7.8	5.5	3.9					
7.50	12.4	8.5	5.9	4.1	2.9					
7.75	8.5	5.8	4.0	2.8	2.0					
8.00	5.5	5.8	4.0	2.8	2.0					
8.25	3.4	2.3	1.6	1.2	0.9					
8.50	2.0	1.4	1.0	0.7	0.6					
8.75	1.2	0.9	0.6	0.5	0.4					
9.00	0.8	0.5	0.4	0.3	0.3					
9.25	0.36	0.24	0.17	0.12	0.08					
9.50	0.20	0.13	0.10	0.07	0.05					

Table 3-1.	Table 3-1. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014												
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	101	<2	< 0.05	< 0.05	< 0.05	4.63	< 0.01	207	0.35	2.3	< 0.01	<3
	06/17/2014	130	<2	< 0.05	0.1	0.06	4.44	0.21	268	0.49	2	0.23	5
	07/22/2014	134	<2	< 0.05	0.26	0.1	3.42	< 0.01	234	0.54	2.2	0.06	4
	08/11/2014	147	3	< 0.05	0.74	0.05	2.56	0.05	178	0.48	2.3	0.05	4
BM-01S	09/09/2014	136	3	< 0.05	0.79	0.11	1.98	< 0.01	218	1.16	2.2	< 0.01	<3
DIVI-015	Mean	129.6	2.4	0.05	0.388	0.074	3.406	0.058	221	0.604	2.2	0.072	3.8
	Stdev	17.184	0.548	0	0.353	0.029	1.153	0.087	33.287	0.319	0.122	0.091	0.837
	Max	147	3	0.05	0.79	0.11	4.63	0.21	268	1.16	2.3	0.23	5
	Min	101	2	0.05	0.05	0.05	1.98	0.01	178	0.35	2	0.01	3
	No. of Dects	5	2	0	4	4	5	2	5	5	5	3	3
	05/20/2014	112	3	< 0.05	< 0.05	< 0.05	4.58	0.35	154	0.45	2.7	0.33	<3
	06/17/2014	103	2	< 0.05	< 0.05	< 0.05	4.07	0.02	204	0.37	2.4	0.03	5
	07/22/2014	64	<2	< 0.05	< 0.05	0.05	3.09	< 0.01	145	0.6	2.9	0.01	5
	08/11/2014	64	4	< 0.05	< 0.05	< 0.05	2.68	0.04	124	0.37	2.4	0.04	6
BM-02S	09/09/2014	127	5	< 0.05	0.71	0.16	2.26	< 0.01	224	0.92	2.1	< 0.01	<3
DIVI-025	Mean	94	3.2	0.05	0.182	0.072	3.336	0.086	170.2	0.542	2.5	0.084	4.4
	Stdev	28.697	1.304	0	0.295	0.049	0.966	0.148	42.038	0.231	0.308	0.138	1.342
	Max	127	5	0.05	0.71	0.16	4.58	0.35	224	0.92	2.9	0.33	6
	Min	64	2	0.05	0.05	0.05	2.26	0.01	124	0.37	2.1	0.01	3
	No. of Dects	5	4	0	1	2	5	3	5	5	5	4	3

Table 3-1 c	Table 3-1 continued. Summery of surface, mid-le, and bettom water quality monitoring data for Blue Marsh Reservir in 2014 ALK BODS DISS-P NH3 NO3 PO4 TRN TOC TP													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS	
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
	05/20/2014	92	3	< 0.05	< 0.05	< 0.05	4.58	0.02	108	0.38	3	0.02	<3	
	06/17/2014	115	<2	0.06	0.12	< 0.05	4.24	0.02	231	0.51	2.9	0.1	8	
	07/22/2014	126	<2	< 0.05	0.12	0.18	3.9	< 0.01	197	0.57	2.2	< 0.01	6	
	08/11/2014	102	4	< 0.05	< 0.05	0.1	3.05	0.12	172	0.48	2.1	0.12	4	
BM-02M	09/09/2014	96	<2	< 0.05	0.12	0.11	2.39	< 0.01	166	0.56	2.2	0.02	4	
DIVI-02IVI	Mean	106.2	2.6	0.052	0.092	0.098	3.632	0.036	174.8	0.5	2.48	0.054	5	
	Stdev	14.078	0.894	0.004	0.038	0.054	0.897	0.047	45.274	0.076	0.432	0.052	2	
	Max	126	4	0.06	0.12	0.18	4.58	0.12	231	0.57	3	0.12	8	
	Min	92	2	0.05	0.05	0.05	2.39	0.01	108	0.38	2.1	0.01	3	
	No. of Dects	5	2	1	3	3	5	3	5	5	5	4	4	
	05/20/2014	100	<2	< 0.05	0.06	< 0.05	5	0.05	205	0.35	1.9	0.058	3	
	06/17/2014	147	<2	0.24	0.52	0.09	3.07	0.11	274	0.76	1.6	0.28	6	
	07/22/2014	147	4	< 0.05	0.52	0.21	3.03	0.05	244	2.12	2	0.25	64	
	08/11/2014	128	6	< 0.05	0.5	0.15	2.94	0.21	201	0.89	2.1	0.21	7	
BM-02B	09/09/2014	75	<2	< 0.05	< 0.05	0.09	2.06	0.03	169	0.68	2.5	0.03	4	
DIVI-02D	Mean	119.4	3.2	0.088	0.33	0.118	3.22	0.09	218.6	0.96	2.02	0.166	16.8	
	Stdev	31.405	1.789	0.085	0.251	0.063	1.078	0.073	40.833	0.678	0.327	0.114	26.433	
	Max	147	6	0.24	0.52	0.21	5	0.21	274	2.12	2.5	0.28	64	
	Min	75	2	0.05	0.05	0.05	2.06	0.03	169	0.35	1.6	0.03	3	
	No. of Dects	5	2	1	4	4	5	5	5	5	5	5	5	

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 ALK BOD5 DISS-P NH3 NO2 NO3 PO4 TDS TKN TOC TP TSS													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	171	<2	0.06	< 0.05	< 0.05	8.07	0.05	306	< 0.25	1.4	0.07	7
	06/17/2014	200	<2	< 0.05	< 0.05	< 0.05	8.13	0.2	366	0.34	1.3	0.2	14
	07/22/2014	225	<2	< 0.05	< 0.05	< 0.05	7.82	< 0.01	348	< 0.25	1.2	0.05	11
	08/11/2014	184	<2	< 0.05	< 0.05	< 0.05	7.5	< 0.01	300	< 0.25	1.4	0.02	9
BM-05S	09/09/2014	141	<2	< 0.05	< 0.05	< 0.05	4.87	0.03	273	0.43	2.3	0.06	10
DIVI-035	Mean	184.2	2	0.052	0.05	0.05	7.278	0.06	318.6	0.304	1.52	0.08	10.2
	Stdev	31.444	0	0.004	0	0	1.369	0.08	37.733	0.08	0.444	0.07	2.588
	Max	225	2	0.06	0.05	0.05	8.13	0.2	366	0.43	2.3	0.2	14
	Min	141	2	0.05	0.05	0.05	4.87	0.01	273	0.25	1.2	0.02	7
	No. of Dects	5	0	1	0	0	5	3	5	2	5	5	5
	05/20/2014	99	2	< 0.05	< 0.05	< 0.05	4.53	0.02	193	0.3	2.4	0.07	4
	06/17/2014	109	<2	0.22	< 0.05	< 0.05	4.09	0.22	216	0.46	2.4	0.24	4
	07/22/2014	74	2	< 0.05	< 0.05	0.06	3.2	< 0.01	154	0.43	2.7	< 0.01	5
	08/11/2014	68	3	< 0.05	< 0.05	< 0.05	2.75	< 0.01	119	0.51	2.6	< 0.01	4
BM-06S	09/09/2014	80	2	< 0.05	< 0.05	0.1	2.14	< 0.01	177	0.51	3	< 0.01	4
DIVI-005	Mean	86	2.2	0.084	0.05	0.062	3.342	0.054	171.8	0.442	2.62	0.068	4.2
	Stdev	17.335	0.447	0.076	0	0.022	0.973	0.093	37.198	0.086	0.249	0.1	0.447
	Max	109	3	0.22	0.05	0.1	4.53	0.22	216	0.51	3	0.24	5
	Min	68	2	0.05	0.05	0.05	2.14	0.01	119	0.3	2.4	0.01	4
	No. of Dects	5	4	1	0	2	5	2	5	5	5	2	5

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 ALK BOD5 DISS-P NH3 NO2 NO3 PO4 TDS TKN TOC TP TSS													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	105	<2	< 0.05	0.06	< 0.05	5	0.02	206	0.38	2.1	0.03	<3
	06/17/2014	148	<2	0.09	0.14	0.05	4.76	0.1	256	0.3	2	0.11	5
	07/22/2014	147	<2	< 0.05	0.21	0.28	3.64	0.01	209	0.4	2.1	0.02	3
	08/11/2014	112	3	< 0.05	0.26	< 0.05	2.94	0.11	184	0.4	2.1	0.11	3
BM-06M	09/09/2014	116	3	< 0.05	0.18	< 0.05	2.19	< 0.01	205	0.66	2	0.02	3
DIVI-00IVI	Mean	125.6	2.4	0.058	0.17	0.096	3.706	0.05	212	0.428	2.06	0.058	3.4
	Stdev	20.379	0.548	0.018	0.075	0.103	1.191	0.05	26.524	0.136	0.055	0.048	0.894
	Max	148	3	0.09	0.26	0.28	5	0.11	256	0.66	2.1	0.11	5
	Min	105	2	0.05	0.06	0.05	2.19	0.01	184	0.3	2	0.02	3
	No. of Dects	5	2	1	5	2	5	4	5	5	5	5	4
	05/20/2014	108	<2	0.07	0.38	0.06	3.96	0.05	167	0.79	2.7	0.09	3
	06/17/2014	148	<2	< 0.05	0.37	0.1	3.47	0.04	218	0.53	1.6	0.05	5
	07/22/2014	145	<2	< 0.05	0.36	0.18	3.21	< 0.01	204	0.63	2.1	0.04	6
	08/11/2014	146	8	< 0.05	1.09	0.07	2.13	< 0.01	218	1.34	2.3	0.03	5
BM-06B	09/09/2014	162	3	< 0.05	1.79	0.09	1.42	0.18	222	3.88	4.5	0.8	26
DIVI-00D	Mean	141.8	3.4	0.054	0.798	0.1	2.838	0.058	205.8	1.434	2.64	0.202	9
	Stdev	20.105	2.608	0.009	0.636	0.047	1.038	0.07	22.742	1.403	1.113	0.335	9.566
	Max	162	8	0.07	1.79	0.18	3.96	0.18	222	3.88	4.5	0.8	26
	Min	108	2	0.05	0.36	0.06	1.42	0.01	167	0.53	1.6	0.03	3
	No. of Dects	5	2	1	5	5	5	3	5	5	5	5	5

Table 3-1 c	continued. Summa	ry of surfa	ace, midd	lle, and bo	ttom wate	r quality n	nonitorin	g data for	Blue Mars	h Reservo	ir in 2014	1	
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	105	3	< 0.05	< 0.05	< 0.05	4.6	< 0.01	196	0.5	3	< 0.01	<3
	06/17/2014	108	3	< 0.05	< 0.05	< 0.05	4.05	0.04	229	0.86	2.3	0.04	7
	07/22/2014	74	3	< 0.05	< 0.05	< 0.05	3.21	< 0.01	160	0.5	2.6	0.02	11
	08/11/2014	65	4	< 0.05	< 0.05	< 0.05	2.76	< 0.01	134	0.46	3.7	< 0.01	4
BM-07S	09/09/2014	84	<2	< 0.05	< 0.05	0.08	2.14	< 0.01	166	0.83	2.4	0.03	6
DM-075	Mean	87.2	3	0.05	0.05	0.056	3.352	0.016	177	0.63	2.8	0.022	6.2
	Stdev	18.887	0.707	0	0	0.013	0.985	0.013	36.483	0.197	0.57	0.013	3.114
	Max	108	4	0.05	0.05	0.08	4.6	0.04	229	0.86	3.7	0.04	11
	Min	65	2	0.05	0.05	0.05	2.14	0.01	134	0.46	2.3	0.01	3
	No. of Dects	5	4	0	0	1	5	1	5	5	5	3	4
	05/20/2014	107	3	< 0.05	< 0.05	< 0.05	4.64	0.03	197	0.37	2.4	0.03	3
	06/17/2014	106	<2	0.09	< 0.05	< 0.05	4.12	0.09	229	0.47	2.6	0.09	7
	07/22/2014	120	<2	< 0.05	0.07	0.07	3.8	< 0.01	221	0.5	2.2	< 0.01	5
	08/11/2014	83	3	< 0.05	0.11	0.08	3.09	< 0.01	148	0.48	2.2	< 0.01	4
BM-07M	09/09/2014	78	<2	< 0.05	0.09	0.08	2.34	< 0.01	166	0.66	2.3	< 0.01	3
DIVI-0/IVI	Mean	98.8	2.4	0.058	0.074	0.066	3.598	0.03	192.2	0.496	2.34	0.03	4.4
	Stdev	17.683	0.548	0.018	0.026	0.015	0.9	0.035	34.809	0.105	0.167	0.035	1.673
	Max	120	3	0.09	0.11	0.08	4.64	0.09	229	0.66	2.6	0.09	7
	Min	78	2	0.05	0.05	0.05	2.34	0.01	148	0.37	2.2	0.01	3
	No. of Dects	5	2	1	3	3	5	2	5	5	5	2	5

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 ALK BOD5 DISS-P NH3 NO2 NO3 PO4 TDS TKN TOC TP TSS													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	107	<2	< 0.05	0.14	< 0.05	4.41	0.05	222	0.26	1.9	0.06	13
	06/17/2014	107	<2	< 0.05	0.11	< 0.05	5.04	< 0.01	222	0.45	2.1	0.1	13
	07/22/2014	137	<2	< 0.05	0.12	0.08	4.21	< 0.01	252	0.6	2.2	0.04	9
	08/11/2014	118	3	< 0.05	0.1	0.2	3.42	0.12	197	0.26	1.9	0.12	3
BM-07B	09/09/2014	130	3	< 0.05	0.42	0.13	2.68	< 0.01	209	0.92	2	0.09	24
DIVI-0/D	Mean	119.8	2.4	0.05	0.178	0.102	3.952	0.04	220.4	0.498	2.02	0.082	12.4
	Stdev	13.517	0.548	0	0.136	0.064	0.917	0.048	20.501	0.276	0.13	0.032	7.668
	Max	137	3	0.05	0.42	0.2	5.04	0.12	252	0.92	2.2	0.12	24
	Min	107	2	0.05	0.1	0.05	2.68	0.01	197	0.26	1.9	0.04	3
	No. of Dects	5	2	0	5	3	5	2	5	5	5	5	5
	05/20/2014	100	4	< 0.05	< 0.05	< 0.05	4.32	0.01	197	0.5	2.6	0.01	5
	06/17/2014	104	2	< 0.05	< 0.05	< 0.05	3.88	0.04	191	0.59	2.3	0.04	5
	07/22/2014	58	5	< 0.05	< 0.05	< 0.05	3.04	< 0.01	127	0.86	3.1	< 0.01	11
	08/11/2014	71	5	< 0.05	< 0.05	< 0.05	2.72	< 0.01	152	0.8	3.2	0.02	8
BM-08S	09/09/2014	76	2	< 0.05	< 0.05	0.06	2.11	0.05	154	0.87	2.5	0.05	6
BM-085	Mean	81.8	3.6	0.05	0.05	0.052	3.214	0.024	164.2	0.724	2.74	0.026	7
	Stdev	19.627	1.517	0	0	0.004	0.889	0.019	29.287	0.169	0.391	0.018	2.55
	Max	104	5	0.05	0.05	0.06	4.32	0.05	197	0.87	3.2	0.05	11
	Min	58	2	0.05	0.05	0.05	2.11	0.01	127	0.5	2.3	0.01	5
	No. of Dects	5	5	0	0	1	5	3	5	5	5	4	5

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 ALK BOD5 DISS-P NH3 NO2 NO3 PO4 TDS TKN TOC TP TSS													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	99	3	< 0.05	< 0.05	< 0.05	4.33	< 0.01	207	0.52	2.6	< 0.01	<3
	06/17/2014	91	2	< 0.05	< 0.05	< 0.05	3.76	0.06	206	0.61	2.4	0.06	8
	07/22/2014	69	3	< 0.05	< 0.05	< 0.05	3.2	< 0.01	162	0.93	2.4	< 0.01	8
	08/11/2014	70	3	< 0.05	0.09	< 0.05	2.82	< 0.01	160	0.7	2.3	0.02	6
BM-08M	09/09/2014	75	<2	< 0.05	< 0.05	0.06	2.12	< 0.01	159	0.52	2.4	< 0.01	7
DIVI-08IVI	Mean	80.8	2.6	0.05	0.058	0.052	3.246	0.02	178.8	0.656	2.42	0.022	6.4
	Stdev	13.461	0.548	0	0.018	0.004	0.85	0.022	25.312	0.17	0.11	0.022	2.074
	Max	99	3	0.05	0.09	0.06	4.33	0.06	207	0.93	2.6	0.06	8
	Min	69	2	0.05	0.05	0.05	2.12	0.01	159	0.52	2.3	0.01	3
	No. of Dects	5	4	0	1	1	5	1	5	5	5	2	4
	05/20/2014	91	<2	0.06	< 0.05	< 0.05	3.69	0.03	198	0.29	2.3	0.07	3
	06/17/2014	101	<2	0.09	0.14	< 0.05	3.32	0.09	232	0.61	2.1	0.11	32
	07/22/2014	99	<2	< 0.05	0.09	< 0.05	3.38	< 0.01	214	0.63	2	0.1	35
	08/11/2014	89	4	< 0.05	0.27	0.06	2.88	0.17	183	1.72	3.4	0.43	74
BM-08B	09/09/2014	85	2	< 0.05	0.21	0.06	2.34	< 0.01	190	0.48	2.4	0.09	17
DIVI-00D	Mean	93	2.4	0.06	0.152	0.054	3.122	0.062	203.4	0.746	2.44	0.16	32.2
	Stdev	6.782	0.894	0.017	0.089	0.005	0.524	0.069	19.718	0.561	0.559	0.152	26.64
	Max	101	4	0.09	0.27	0.06	3.69	0.17	232	1.72	3.4	0.43	74
	Min	85	2	0.05	0.05	0.05	2.34	0.01	183	0.29	2	0.07	3
	No. of Dects	5	2	2	4	2	5	3	5	5	5	5	5

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 ALK BOD5 DISS-P NH3 NO2 NO3 PO4 TDS TKN TOC TP TSS													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	97	3	< 0.05	< 0.05	< 0.05	4.59	0.04	214	0.53	2.7	0.04	4
	06/17/2014	102	3	0.07	< 0.05	< 0.05	4.07	0.06	218	0.96	4	0.07	6
	07/22/2014	67	6	< 0.05	< 0.05	< 0.05	3.15	0.01	164	1.22	2.8	0.06	14
	08/11/2014	70	4	< 0.05	< 0.05	< 0.05	2.75	< 0.01	149	0.7	2.4	< 0.01	6
BM-09S	09/09/2014	77	<2	< 0.05	< 0.05	0.07	2.23	< 0.01	168	0.35	2.6	< 0.01	5
DM-095	Mean	82.6	3.6	0.054	0.05	0.054	3.358	0.026	182.6	0.752	2.9	0.038	7
	Stdev	15.947	1.517	0.009	0	0.009	0.963	0.023	31.334	0.345	0.632	0.028	4
	Max	102	6	0.07	0.05	0.07	4.59	0.06	218	1.22	4	0.07	14
	Min	67	2	0.05	0.05	0.05	2.23	0.01	149	0.35	2.4	0.01	4
	No. of Dects	5	4	1	0	1	5	3	5	5	5	3	5
	05/20/2014	103	2	< 0.05	< 0.05	< 0.05	4.6	0.02	214	0.51	2.5	0.02	3
	06/17/2014	108	<2	0.1	< 0.05	< 0.05	4.47	0.16	213	0.49	2.8	0.16	6
	07/22/2014	121	<2	< 0.05	< 0.05	0.06	4.15	< 0.01	228	0.25	2.3	0.02	5
	08/11/2014	92	3	< 0.05	0.12	< 0.05	3.23	0.18	183	0.81	2.3	0.19	8
BM-09M	09/09/2014	81	<2	< 0.05	0.06	0.07	2.29	< 0.01	159	< 0.25	2.2	0.04	7
DIVI-091VI	Mean	101	2.2	0.06	0.066	0.056	3.748	0.076	199.4	0.462	2.42	0.086	5.8
	Stdev	15.281	0.447	0.022	0.03	0.009	0.975	0.086	27.916	0.231	0.239	0.082	1.924
	Max	121	3	0.1	0.12	0.07	4.6	0.18	228	0.81	2.8	0.19	8
	Min	81	2	0.05	0.05	0.05	2.29	0.01	159	0.25	2.2	0.02	3
	No. of Dects	5	2	1	2	2	5	3	5	4	5	5	5

Table 3-1 c	ontinued. Summa	ry of sur	face, mic	ldle, and l	oottom wa	ater quali	ty monit	oring dat	a for Blue	e Marsh	Reservo	ir in 201	4
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	TP	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	127	<2	< 0.05	0.05	< 0.05	5.66	0.09	233	0.3	2	0.09	19
	06/17/2014	131	<2	0.09	0.17	0.06	4.17	0.25	222	0.34	1.8	0.26	20
	07/22/2014	163	<2	< 0.05	0.32	0.08	4.25	< 0.01	237	1.33	2.5	0.35	147
	08/11/2014	134	2	< 0.05	0.28	0.06	4.2	0.18	256	0.94	2.1	0.18	25
BM-09B	09/09/2014	127	4	< 0.05	0.66	0.1	2.39	< 0.01	238	< 0.25	2	0.07	12
DIVI-09D	Mean	136.4	2.4	0.058	0.296	0.07	4.134	0.108	237.2	0.632	2.08	0.19	44.6
	Stdev	15.159	0.894	0.018	0.229	0.02	1.161	0.106	12.276	0.48	0.259	0.117	57.431
	Max	163	4	0.09	0.66	0.1	5.66	0.25	256	1.33	2.5	0.35	147
	Min	127	2	0.05	0.05	0.05	2.39	0.01	222	0.25	1.8	0.07	12
	No. of Dects	5	2	1	5	4	5	3	5	4	5	5	5
	05/20/2014	109	3	0.07	< 0.05	< 0.05	4.83	0.06	210	0.7	3.4	0.08	3
	06/17/2014	85	9	< 0.05	< 0.05	< 0.05	3.72	0.04	174	1.85	3.7	0.1	20
	07/22/2014	62	6	< 0.05	< 0.05	< 0.05	3.13	< 0.01	137	0.92	2.9	< 0.01	11
	08/11/2014	74	7	< 0.05	< 0.05	< 0.05	2.65	< 0.01	156	1.9	2.9	0.13	14
BM-10S	09/09/2014	80	3	< 0.05	< 0.05	0.06	2.24	< 0.01	167	0.51	2.6	0.06	9
DIVI-105	Mean	82	5.6	0.054	0.05	0.052	3.314	0.026	168.8	1.176	3.1	0.076	11.4
	Stdev	17.364	2.608	0.009	0	0.004	1.011	0.023	26.939	0.655	0.442	0.045	6.269
	Max	109	9	0.07	0.05	0.06	4.83	0.06	210	1.9	3.7	0.13	20
	Min	62	3	0.05	0.05	0.05	2.24	0.01	137	0.51	2.6	0.01	3
	No. of Dects	5	5	1	0	1	5	2	5	5	5	4	5

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 ALK BOD5 DISS-P NH3 NO2 NO3 PO4 TDS TKN TOC TP TSS													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	116	<2	< 0.05	< 0.05	< 0.05	6.2	0.09	242	< 0.25	1.8	0.1	8
	06/17/2014	107	2	0.12	< 0.05	< 0.05	4.77	0.12	185	0.37	2.6	0.11	10
	07/22/2014	92	<2	< 0.05	0.08	< 0.05	3.94	< 0.01	167	0.53	2.3	0.04	10
	08/11/2014	73	5	< 0.05	< 0.05	< 0.05	2.9	< 0.01	166	1.03	2.6	0.05	10
BM-10M	09/09/2014	73	3	< 0.05	< 0.05	0.06	2.27	< 0.01	165	< 0.25	2.4	0.06	9
DIVI-10IVI	Mean	92.2	2.8	0.064	0.056	0.052	4.016	0.048	185	0.486	2.34	0.072	9.4
	Stdev	19.512	1.304	0.031	0.013	0.004	1.552	0.053	32.917	0.325	0.329	0.031	0.894
	Max	116	5	0.12	0.08	0.06	6.2	0.12	242	1.03	2.6	0.11	10
	Min	73	2	0.05	0.05	0.05	2.27	0.01	165	0.25	1.8	0.04	8
	No. of Dects	5	3	1	1	1	5	2	5	3	5	5	5
	05/20/2014	120	<2	< 0.05	< 0.05	< 0.05	6.22	0.04	244	< 0.25	1.6	0.05	25
	06/17/2014	131	<2	0.07	0.13	< 0.05	6.22	0.07	236	0.44	1.7	0.15	73
	07/22/2014	150	<2	0.07	0.13	< 0.05	5.58	< 0.01	246	0.78	1.8	0.25	75
	08/11/2014	141	4	< 0.05	0.19	< 0.05	4.78	< 0.01	258	1.06	2.2	0.27	154
BM-10B	09/09/2014	115	<2	< 0.05	0.06	< 0.05	3.53	< 0.01	225	< 0.25	2.5	0.18	45
DIVI-10D	Mean	131.4	2.4	0.058	0.112	0.05	5.266	0.028	241.8	0.556	1.96	0.18	74.4
	Stdev	14.467	0.894	0.011	0.058	0	1.137	0.027	12.256	0.355	0.378	0.088	49.1
	Max	150	4	0.07	0.19	0.05	6.22	0.07	258	1.06	2.5	0.27	154
	Min	115	2	0.05	0.05	0.05	3.53	0.01	225	0.25	1.6	0.05	25
	No. of Dects	5	1	2	4	0	5	2	5	3	5	5	5

Table 3-1 continued. Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014 Image: Summary of surface, middle, and bottom water quality monitoring data for Blue Marsh Reservoir in 2014													
		ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	ТР	TSS
Station	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	05/20/2014	26	<2	< 0.05	< 0.05	< 0.05	3.7	0.05	86	< 0.25	1.8	0.05	4
	06/17/2014	31	<2	0.2	< 0.05	< 0.05	4.36	0.21	108	< 0.25	1.8	0.31	11
	07/22/2014	145	<2	< 0.05	< 0.05	< 0.05	5.78	0.05	243	0.45	1.9	0.08	10
	08/11/2014	120	4	< 0.05	< 0.05	< 0.05	3.92	0.02	228	0.71	2.4	0.09	28
BM-11S	09/09/2014	140	<2	< 0.05	< 0.05	< 0.05	4.61	0.14	260	0.45	2.4	0.14	14
DIVI-115	Mean	92.4	2.4	0.08	0.05	0.05	4.474	0.094	185	0.422	2.06	0.134	13.4
	Stdev	59.104	0.894	0.067	0	0	0.813	0.079	81.498	0.19	0.313	0.104	8.933
	Max	145	4	0.2	0.05	0.05	5.78	0.21	260	0.71	2.4	0.31	28
	Min	26	2	0.05	0.05	0.05	3.7	0.02	86	0.25	1.8	0.05	4
	No. of Dects	5	1	1	0	0	5	5	5	3	5	5	5

3.2.2 Nitrite and Nitrate

Nitrite (NO2) is a measure of a form of nitrogen that occurs as an intermediate in the nitrogen cycle. It is unstable and can rapidly be oxidized to nitrate or reduced to nitrogen gas. Nitrite is a source of nutrients for plants and can be toxic to aquatic life in relatively low concentrations. Nitrite concentrations were low at Blue Marsh Reservoir during 2014 (Table 3-1). Concentrations ranged from less than the reporting limit of 0.05 mg/L to 0.28 mg/L during the sampling season.

Nitrate (NO3) is the measure of the most oxidized and stable form of nitrogen. It is the principal form of combined nitrogen in natural waters. Nitrate is the primary form of nitrogen used by plants as a nutrient to stimulate plant growth. Nitrate concentrations were similar across stations in Blue Marsh Reservoir in 2014 except for the consistently higher concentrations measured at upstream tributary station BM-5S (Table 3-1). Concentrations at all sampling locations and depths averaged 3.79 mg/L and ranged from 1.42 to 8.13 mg/L. Throughout the sampling period, concentrations at surface tributary station BM-5S averaged 7.28 mg/L with a maximum concentration of 8.13 mg/L in June and a minimum measure of 4.87 mg/L in September. It appears that the elevated nitrate concentrations at BM-5S are originating from somewhere in the Tulpehocken Creek watershed.

Concentrations of nitrate and nitrite measured at Blue Marsh Reservoir were in compliance with PADEP water quality standards during 2014. The state water quality standard for nitrogen from nitrite and nitrate sources is a summed concentration of not more than 10 mg/L. Summed concentrations at all stations were less than the State standard. The highest nitrogen summed concentration of 8.18 mg/L occurred in the surface waters at station BM-5S in May.

3.2.3 Total Kjeldahl Nitrogen

Total Kjeldahl nitrogen (TKN) is a measure of organic nitrogen that is inclusive of ammonia. Organic nitrogen is not immediately available for biological activity and is therefore not available for plant growth until decomposition to inorganic form occurs. In general, TKN remained low but variable throughout the water column of Blue Marsh Reservoir in 2014 (Table 3-1). Concentrations measured at all stations of the reservoir and tributaries ranged from less than the reporting limit of 0.25 mg/L to 3.88 mg/L. Higher readings were typically seen in the deeper waters of the reservoir.

3.2.4 Total Phosphorus

Total phosphorus (TP) is a measure of both organic and inorganic forms of phosphorus. It is an essential plant nutrient and is often the most limiting nutrient to plant growth in freshwater systems. Inputs of phosphorus are the prime contributing factors to eutrophication in most freshwater systems. Phosphorus bound to bottom sediments in lakes can be released when oxygen levels are depleted in bottom waters. This phosphorus then becomes available for plant growth. EPA guidance for nutrient criteria in lakes and reservoirs suggests a maximum concentration for total phosphorus of 0.01-mg/L (EPA 2000). Lakes and reservoirs exceeding this concentration are more likely to experience algal bloom problems during the growing season. Total phosphorus in the watershed and lake body of Blue Marsh Reservoir was frequently measured at concentrations well above this standard during 2014 (Table 3-1). Bottom waters within the lake routinely had the highest measured concentrations. This may be a direct result of phosphorus release from bottom sediments during anoxic conditions. In 2014, only 18 of the 105 samples measured for total phosphorus at Blue Marsh Reservoir, including its tributaries, were less than the EPA guideline. The single sample values for all stations and depths ranged from 0.80 mg/L to <0.01 mg/L. Agriculture and other land use found in the watershed contribute to the elevated total phosphorus level in Blue Marsh reservoir.

3.2.5 Total Dissolved Phosphorus

Total dissolved phosphorus (DISS P) in the water column of Blue Marsh Reservoir was consistently low during 2014. Eighty one out of the 105 samples collected during the sampling season were less than the laboratory reporting limit of 0.05 mg/L (Table 3-1). Most stations showed their highest readings during the June sampling period.

3.2.6 Dissolved Phosphate

Orthophosphate (PO4) is a measure of the inorganic oxidized form of soluble phosphorus. This form of phosphorus is the most readily available for uptake during photosynthesis. In freshwater environments, dissolved phosphate is usually a limiting nutrient and is readily taken up by freshwater plants and algae. Dissolved phosphate in the waters of Blue Marsh Reservoir was consistently low during 2014 (Table 3-1) with the majority of higher sample results occurring in the deeper waters of the reservoir. The single sample values for all stations and depths ranged from 0.35 mg/L to <0.01 mg/L (laboratory reporting limit).

3.2.7 Total Dissolved Solids

Total dissolved solids (TDS) are a measure of the amount of non-filterable dissolved material in the water. Dissolved salts such as sulfate, magnesium, chloride, and sodium contribute to elevated levels. Total dissolved solids (TDS) in the water column of Blue Marsh Reservoir at all stations and depths ranged from 366 mg/L to 86 mg/L in 2014 (Table 3-1). Among all sampled waters, upstream tributary station BM-5S had the highest single sample concentration of 366 mg/L in June and the highest sampling station seasonal average of 319 mg/L. The state water quality standard for TDS is a maximum concentration of 500 mg/L. Concentrations of total dissolved solids measured at Blue Marsh Reservoir did not exceed the PADEP water quality standard during 2014.

3.2.8 Total Suspended Solids

Total suspended solids (TSS) are a measure of the amount of filterable particulate matter that is suspended within the water column. High concentrations increase the turbidity of

the water and can hinder photosynthetic activity, result in damage to fish gills, and cause impairment to spawning habitat (smothering). Total suspended solids in the waters of Blue Marsh Reservoir were generally low during the 2014 sampling period (Table 3-1). Sample results at all stations and depths ranged from 154 mg/L to <3 mg/L (laboratory reporting limit). The maximum TSS readings were taken in the bottom water samples at reservoir deep water sampling locations. Uncharacteristically high single sample readings from bottom water samples can be attributed to sample collection error. On occasion, bottom sediments are resuspended during the sample collection process and are inadvertently included in the sample. All elevated sample results occurred at bottom water sampling stations. The Pennsylvania Department of Environmental Protection (PADEP) has not issued a water quality standard for TSS.

3.2.9 Biochemical Oxygen Demand

Five-day biochemical oxygen demand (BOD) is a measure of the oxygen-depleting burden imposed by organic material present in water. It measures the rate of oxygen uptake by organisms in the water sample over a period of time. It is an indicator of the quality of a water body and the degree of pollution by biodegradable organic matter can therefore be inferred. The five-day biochemical oxygen demand and commonly accepted water quality inferences are as follows:

- 1-2 mg/L is associated with very clean water and little biodegradable wastes;
- 3-5 mg/L is associated with moderately clean water with some biodegradable wastes;
- 6-9 mg/L is associated with fairly polluted water, many bacteria, and much biodegradable wastes;
- 10+ mg/L is associated with very polluted water and large amounts of biodegradable wastes.

BOD in the water column of Blue Marsh Reservoir, for the most part, was relatively low during the 2014 sampling period (Table 3-1) with many concentrations less than the laboratory reporting limit of 2.0 mg/L primarily in the Spring time period. The BOD at all monitoring stations and depths ranged from <2.0 mg/L to 9.0 mg/L for the sampling period. Based on the overall BOD results from 2014, it is inferred that Blue Marsh Reservoir and its tributaries range from very clean with little biodegradable wastes in Spring and transitioning to moderately clean waters with some biodegradable wastes in Summer and Fall. The Pennsylvania Department of Environmental Protection (PADEP) does not issue a water quality standard for BOD.

3.2.10 Alkalinity

Alkalinity is a measure of the acid-neutralizing capacity of water. Waters that have high alkalinity values are considered undesirable because of excessive hardness and high concentrations of sodium salts. Water with low alkalinity has little capacity to buffer acidic inputs and is susceptible to acidification (low pH). The PADEP standard is a minimum concentration of 20-mg/L CaCO₃ except where natural conditions are less.

Throughout the monitoring period in 2014, concentrations at all stations and depths for Blue Marsh Reservoir ranged from 26 mg/L $CaCO_3$ to 225 mg/L $CaCO_3$ (Table 3-1). Concentrations of alkalinity measured at Blue Marsh Reservoir were in compliance with PADEP water quality standards for all samples collected during 2014.

3.2.11 Total Organic Carbon

Total organic carbon (TOC) is a measurement of the amount of dissolved and particulate carbon that is bound in organic compounds. TOC can be derived from decaying vegetation, bacterial growth, and metabolic activities of living organisms. The bulk of organic carbon in water is composed of humic substances and partly degraded animal and plant materials. Other sources of TOC can include agricultural chemicals such as herbicides and insecticides and also wastewater treatment plants. The amount of carbon in a freshwater stream is an indicator of the organic character of a water body. High organic content can increase the growth of microorganisms which contribute to the depletion of oxygen. Total organic carbon concentrations in the water column and tributaries of Blue Marsh Reservoir were low during 2014 (Table 3-1). Concentrations of TOC at all stations and depths ranged from 1.2 mg/L to 4.5 mg/L.

3.2.12 Chlorophyll a

Chlorophyll a is the measure of the plant chlorophyll "a" primary pigment which helps plants get energy from light. It is found in most plants, algae, and cyanobacteria. Chlorophyll a measures increase in relation to algal densities in a water body. Chlorophyll *a* is used as a measure of algal biomass. In 2014, the average concentration during the monitoring period for lake surface waters (<10 feet) at lake station BM-6 was 14.95 ug/L. (Appendix A). For all reservoir sampling stations, a maximum concentration of 54.6 ug/L was measured in the surface waters at station BM-8 in July and the minimum concentration of 0.5 ug/L was measured at the upstream surface water station BM-5S in September.

3.3 TROPHIC STATE DETERMINATION

Carlson's (1977) trophic state index (TSI) is a method of quantitatively expressing the magnitude of eutrophication for a lake. The trophic state analysis calculates separate indices for eutrophication based on measures of total phosphorus, chlorophyll *a*, and secchi disk depth. Index values for each parameter range on the same scale from 0 (least enriched) to 100 (most enriched). The resulting indices can also be compared to qualitative threshold values that correspond to levels of eutrophication: oligotrophic (TSI <40), mesotrophic (TSI >40), and eutrophic (TSI >50).

During 2014, TSI's calculated for measures of secchi disk depth classified Blue Marsh Reservoir as eutrophic in May (56.22), June (56.22), July (53.68), August (53.23) and September (52.78) (Fig. 3-7). TSI's calculated for measures of total phosphorus classified Blue Marsh Reservoir as eutrophic in May (65.41) and June (83.18) and oligotrophic in July (37.35), August (37.35) and September (37.35). TSI's calculated for measures of chlorophyll *a* classified Blue Marsh Reservoir as eutrophic in May (57.77), June (50.62), July (56.80), August (59.04) and September (51.99). Carlson (1977) warned against averaging TSI values estimated for different parameters, and instead suggested giving priority to chlorophyll *a* in the summer and to

phosphorus in the spring, fall, and winter. With this in mind, the trophic state of the reservoir based on TSI's was eutrophic in all months sampled.

The EPA (1983) also provides criteria for defining the trophic conditions of lakes of the North Temperate Zone based on concentrations of total phosphorus, chlorophyll *a*, and secchi depth (Table 3-3). Based on these ranges of classification, Blue Marsh Reservoir was eutrophic throughout most of the 2014 monitoring period.

Table 3-3. EPA trophic classification criteria and average monthly measures for Blue Marsh Reservoir in 2014 Marsh Reservoir in 2014												
Water Quality VariableOligo- trophicMeso- trophic201722119MayJuneJulyAugustSeptember												
Total phos. (ppb)	<10	10-20	>20	70	240	10	10	10				
Chlorophyll (ppb)	<4	4-10	>10	15.95	7.7	14.45	18.15	8.85				
Secchi depth (m)	>4	2-4	<2	1.3	1.3	1.55	1.6	1.65				

3.4 RESERVOIR COLIFORM BACTERIA MONITORING

Three forms of coliform bacteria contamination were monitored in the tributary and lake surface waters at Blue Marsh Reservoir during 2014 including total and fecal coliform (Table 3-4). Total coliform includes *escherica coliform* (*E. coli*) and related bacteria that are associated with fecal discharges. Escherica coliform is used as an indicator of the presence of other potentially dangerous pathogens. Fecal coliform bacteria are a subgroup of the total coliform and are normally associated with waste derived from human and other warm-blooded animals and indicate the presence of fecal contamination but not the associated risk.

Total coliform contamination of Blue Marsh Reservoir was relatively high at most stations during the 2014 monitoring period and exceed the sample detection limit of 2400 colonies/100-ml in all months sampled at upstream tributary stations BM-5S and BM-11S. Total coliform values for all stations ranged from <1 colonies/100-ml to greater than the detection limit of 2400 colonies/100-ml. Bacteria in natural waters are common and their presence in the sample is not necessarily a human health concern. No State or federal standards exist for total coliform for water contact recreation.

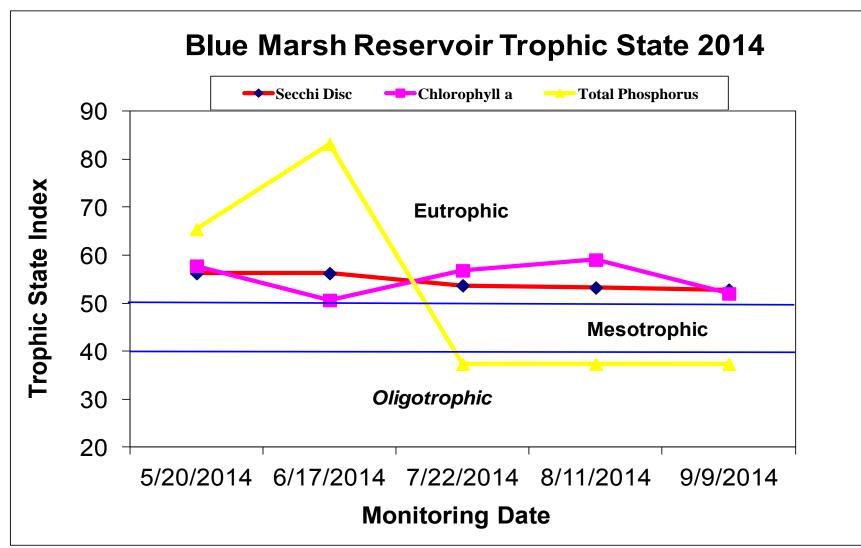


Figure 3-7. Trophic state indices calculated from secchi disk depth and concentrations of total phosphorus and chlorophyll *a* at Blue Marsh Reservoir in 2014.

The PADEP standard for fecal coliform bacteria during the swimming season (from 1 May to 30 September) is a geometric mean not greater than 200 colonies/100-ml calculated for not less than five fecal coliform samples collected over a consecutive thirty day period. Given that our regular monitoring was completed on one day as grab samples, single sample results were then compared to the Pennsylvania Department of Health single sample standard of <1000 colonies/100-ml. Fecal coliform contamination in surface waters of Blue Marsh Reservoir during 2014 ranged from less than the 2 clns/100-ml detection limit to a high of 990 clns/100-ml. Elevated bacteria readings were most often seen in upstream tributary surface waters to include stations BM-11S and BM-5S. The fecal coliform samples collected at Blue Marsh Reservoir did not exceed the State single sample standard in 2014. Water contact recreation, such as water skiing, is permitted at Blue Marsh Reservoir. The Corps recreational swimming beach is monitored and managed separately from the monthly routine water quality sampling (see Section 3.5).

Escherichia coli (E. coli) was monitored in the lake and tributaries to better understand bacteria trends. E. coli is the most reliable indicator of fecal bacterial contamination of surface waters in the United States according to water quality standards set by the EPA (2000). The EPA recommended recreational water quality standard for E. coli is based on two criteria: a geometric mean of 126 organisms/ 100 ml (geometric mean) threshold and 235 organisms/ 100 ml (single water sample) threshold. Escherichia coli measures exceeded the EPA single sample standard for swimming beaches on nine occasions during the sampling season. All of the samples were collected at upstream surface water tributary stations BM-11 and BM-5. High bacteria readings at these locations indicate that surface water bacterial contamination is originating from somewhere upstream of the Blue Marsh Reservoir.

Table 3-4. Bacteria counts (colonies/100 ml) at Blue Marsh Reservoir during 2014. Shaded values exceed the Pennsylvania Department of Health water quality standard for bathing beach of 1,000 fecal coliform colonies/100-ml or the EPA 235 colonies/100-ml single sample beach standard.

STATION	DATE	Te	otal Coliform	Fee	cal Coliform (FC)	Ε	scherichia coli
	5/20/2014		2400		120		91
	6/17/2014		1200		200		75
BM-1S	7/22/2014	>	2400		16		6
	8/11/2014	>	2400		3		4
	9/9/2014		1600		5		4
	5/20/2014		33		3		4
	6/17/2014		170	<	2		3
BM-2S	7/22/2014		550		2		2
	8/11/2014		580	<	2	<	1
	9/9/2014		190		5	<	1
	5/20/2014	>	2400		690		650
	6/17/2014	>	2400		980		980
BM-5S	7/22/2014	>	2400		390		260
	8/11/2014	>	2400		240		260
	9/9/2014	>	2400		990		980

STATION	DATE	То	tal Coliform	Fec	al Coliform (FC)	Es	scherichia coli
	5/20/2014		30	<	2	<	1
	6/17/2014		200		10	<	1
BM-6S	7/22/2014		2400		6		1
	8/11/2014	<	1		2		2
	9/9/2014	>	2400		5		4
	5/20/2014		180		38		32
	6/17/2014		58	<	2		2
BM-7S	7/22/2014		520	<	2	<	1
	8/11/2014		1700	<	2	<	1
	9/9/2014		980		3		2
	5/20/2014		410		52		52
	6/17/2014		240	<	2		3
BM-8S	7/22/2014		310	<	2	<	1
	8/11/2014		610	<	2	<	1
	9/9/2014		1300		3		2
	5/20/2014		410		74		26
	6/17/2014		120	<	2		2
BM-9S	7/22/2014		1100		5		4
	8/11/2014		980		2	<	1
	9/9/2014		690		2		1
	5/20/2014		1700		190		160
	6/17/2014		280		16		16
BM-10	7/22/2014		870		5		1
	8/11/2014		730		60	<	1
	9/9/2014		1100		50		46
	5/20/2014	>	2400		440		410
	6/17/2014	>	2400		520		490
BM-11	7/22/2014	>	2400		500		330
	8/11/2014	>	2400		210		160
	9/9/2014	>	2400		930		920

3.5 WEEKLY SWIMMING BEACH BACTERIA MONITORING

Weekly coliform bacteria monitoring was conducted at the public swimming beach of the Dry Brooks Day Use Area of Blue Marsh Reservoir to gauge compliance with Pennsylvania Department of Health bathing beach water quality standards to ensure public safety in this water contact recreation area. The bathing beach contamination standard, like the PADEP swimming season water quality standard, is based on a geometric mean of less than 200 colonies/100-ml for five samples collected over not more than a 30 consecutive day period, but also stipulates that no single sample should exceed 1,000 fecal coliform colonies/100-ml. Samples for coliform analysis were collected twice weekly from 3 fixed stations on each date in the regulated swimming area. During 2014, fecal coliform contamination at the swimming beach area of Blue Marsh Reservoir never exceeded the State single sample or geometric mean fecal criteria (Table 3-5).

Escherichia coli (E. coli) was monitored at the swimming beach to better understand bacteria trends. E. coli is the most reliable indicator of fecal bacterial contamination of surface waters in the United States according to water quality standards set by the EPA (2000). The EPA recommendation for recreational water quality standard for E. coli is based on two criteria: a geometric mean of 126 organisms/ 100 ml (geometric mean) threshold and 235 organisms/ 100 ml (single water sample) threshold. Escherichia coli measures never exceeded the EPA single sample or geometric mean standard at the Blue Marsh Reservoir swimming beach area in 2014.

 Table 3-5. Single sample Maximum counts and 5-day running fecal coliform geometric means at the three swimming beach stations of Blue Marsh Reservoir in 2014. Shaded values indicate results were not in compliance with PA Dep. of Health water quality standards for bathing beaches: maximum count greater than 1,000 colonies/100-ml; 5-day geometric mean greater than 200 colonies/100-ml.

		Single Maximum	5-Da	y Geometric Mea	ins
Week	Date	Count	sb1	sb2	sb3
W/1-1	12-May	3	-	-	-
Week 1	15-May	2	-	-	-
Week 2	19-May	2	-	-	-
week 2	22-May	3	-	-	-
Weels 2	27-May	2	2.00	2.00	2.35
Week 3	29-May	3	2.00	2.17	2.17
Weels 4	02-June	3	2.00	2.35	2.17
Week 4	05-June	2	2.00	2.35	2.17
Week 5	9-June	3	2.00	2.35	2.17
Week 5	12-June	30	3.10	4.04	3.53
Week 6	16-June	8	3.73	4.92	4.25
week o	19-June	110	7.36	10.11	8.83
Weels 7	23-June	3	7.98	10.11	8.83
Week 7	26-June	56	15.54	18.02	14.09
Week 8	30-June	2	10.02	10.49	8.65
week o	03-July	31	13.59	12.95	12.46
Week 9	07-July	6	8.58	6.30	6.49
week 9	10-July	3	7.91	6.30	7.04
Week 10	14-July	18	5.71	5.49	4.89
week 10	17-July	3	6.19	5.95	4.89
Week 11	21-July	5	4.12	3.96	3.39
Week II	24-July	11	4.65	4.82	3.13
Week 12	28-July	43	8.59	8.28	4.96
Week 12	31-July	3	6.63	5.33	4.13
Week 13	4-August	11	6.63	6.92	5.70
WEEK 15	7-August	3	6.63	6.92	4.74
Week 14	11-August	3	5.11	5.69	4.74
Week 14	14-August	6	3.45	3.31	2.76
Week 15	18-August	8	3.82	4.36	2.99
WEEK IJ	21-August	5	4.23	3.10	2.35
Week 16	25-August	6	4.86	3.44	2.93
WEEK ID	28-August	10	5.38	3.95	4.04
Week 17	2-September	5	5.19	4.28	4.86
Week 17	4-September	18	6.28	4.92	6.95

Table 3-6. Maximum counts and 5-day e-coli running geometric means of the three swimming beach stations of Blue Marsh Reservoir in 2014. Shaded values indicate results were not in compliance with PA Dep. of Health water quality standards for E-coli levels at bathing beaches: maximum single count greater than 235 colonies/100-ml; 5-day geometric mean greater than 126 colonies/100-ml.

		Single Maximum	5-Da	y Geometric Mea	nns
Week	Date	Count	sb1	sb2	sb3
XX7 1 1	12-May	1	-	-	-
Week 1	15-May	2	_	-	_
W1-2	19-May	1	-	-	-
Week 2	22-May	2	-	-	_
Week 3	27-May	2	1.00	1.15	1.32
week 5	29-May	3	1.00	1.43	1.52
Week 4	02-June	2	1.15	1.64	1.32
week 4	05-June	2	1.15	1.89	1.32
Week 5	9-June	3	1.15	2.05	1.52
week 5	12-June	23	2.15	3.76	2.40
Week 6	16-June	5	2.97	4.17	2.09
week o	19-June	93	5.86	8.99	4.99
Week 7	23-June	1	5.86	7.82	4.99
week /	26-June	43	12.43	11.07	8.45
Waals 9	30-June	1	6.64	6.02	4.64
Week 8	03-July	19	8.38	7.17	8.37
Week 9	07-July	5	5.10	3.61	4.03
week 9	10-July	1	5.10	3.61	4.03
Week 10	14-July	10	3.81	2.93	2.96
week 10	17-July	3	3.81	3.65	2.96
Weels 11	21-July	3	2.51	2.77	1.89
Week 11	24-July	2	2.09	2.22	1.64
Week 12	28-July	10	2.99	3.37	2.61
Week 12	31-July	3	2.35	2.35	1.82
Week 13	4-August	4	2.35	2.17	2.40
Week 15	7-August	1	2.05	1.74	2.09
Week 14	11-August	3	2.22	1.74	2.09
Week 14	14-August	4	2.05	1.43	1.64
Week 15	18-August	2	1.64	1.43	1.89
Week 15	21-August	2	1.89	1.25	1.64
Week 16	25-August	6	2.61	1.64	2.35
Week 16	28-August	11	2.99	2.49	3.80
Week 17	2-September	3	2.27	2.49	3.80
Week 17	4-September	13	3.79	4.16	5.13

4.0 **REFERENCES**

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APPENDIX A

STRATIFICATION DATA TABLES

Ctation	Dete	Time	Denth	Torrer			الم	n Line V	000	Turkista	Chlore	Specard
Station	Date M/D/X	Time	Depth ft	Temp C	DO %	DO ma/l	рН	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	π	ι L	70	mg/L		mV	mV	NTU	ug/L	mS/cm
	5/20/2014	13:08:10	1	15.75	99.8	9.89	7.96	-82	140	21.2	6.7	0.532
	6/17/2014	13:15:07	1	19.75	92.2	8.42	7.75	-70.7	171	22.9	5.4	0.567
BM-1	7/22/2014	12:55:38	1	20.24	87.7	7.93	7.69	-67.4	36	20.8	1.2	0.435
	8/11/2014	13:07:05	1	21.58	90.5	7.97	7.85	-76.7	149	21.3	0.7	0.443
	9/9/2014	12:09:32	1	21.68	89.6	7.88	7.95	-82.9	185	19.6	1.3	0.403
		9:32:33	0.5	18.86	137.4	12.76	8.89	-136.1	100	20.6	13.2	0.502
		9:30:55	5	18.53	131.4	12.29	8.84	-133	98	21	24.6	0.503
		9:29:47	10	18.43	124.7	11.68	8.76	-128.5	96	20.9	21.6	0.503
BM-2		9:28:06	15	17.46	89.6	8.57	8.17	-94.3	98	21	14.1	0.506
	5/20/2014	9:26:05	20	15.42	62.3	6.22	7.51	-56.4	100	24.5	6.2	0.492
		9:24:47	25	14.87	59.6	6.02	7.49	-55.1	98	25.4	5.4	0.497
		9:22:58	30	13.81	55.2	5.7	7.48	-54.7	94	23.2	2.8	0.542
		9:20:56	35	12.37	52	5.54	7.47	-53.8	87	22.6	3.3	0.544
		9:18:58	40	11.82	36.5	3.95	7.44	-52.2	76	33.8	8.1	0.547
			-	-	-				-	-		
		9:37:02	0.5	25.16	145.2	11.95	8.77	-131.6	130	23.9	4.7	0.502
		9:34:34	5	24.48	147.1	12.26	8.59	-120.8	128	26.9	11.5	0.507
		9:33:26	10	21.9	93.1	8.15	8.11	-91.9	129	23.4	12	0.544
BM-2		9:32:33	15	19.64	65.8	6.02	7.53	-58.3	134	27.9	6.1	0.548
Din-2	6/17/2014	9:30:52	20	18.46	57.9	5.43	7.44	-52.8	132	30.4	4.5	0.546
	0/11/2014	9:29:01	25	17.84	46.3	4.39	7.4	-50.4	129	29.2	4.1	0.594
		9:26:57	30	16.81	33.4	3.23	7.33	-46.5	123	24.7	2.4	0.648
		9:25:42	35	15.49	20.6	2.05	7.29	-44	120	24.3	2.2	0.639
		9:24:17	40	14.3	3.9	0.4	7.27	-42.7	110	25.6	2.8	0.653
		9:22:05	45	13.58	4.3	0.45	7.33	-46.6	82	61.3	3.3	0.658
		0.22.00	— <u> </u>	10.00			1.00	10.0				
		9:27:31	0.5	26.79	190.8	15.25	9.05	-148.3	31	20.5	11.7	0.29
		9:26:22	0.3 5	26.52	180.4	14.49	8.93	-141.5	22	20.3	19.8	0.289
		9:25:30	10	25.85	111.7	9.08	8.33	-141.5	22	22.1	19.0	0.289
BM-2		9:25:30	10		10.9		0.33 7.48	-106	18	23.1		
DIVI-Z	7/22/2014	9:24:32	20	24.58 23.01	2.6	0.91 0.22	7.40	-50 -53.3	13	21.9	11.6 3.6	0.39
	112212014	9:23:20	20 25	23.01	2.0	0.22	7.44	-53.5 -52.6	10	20.6	3.6 3.1	0.424
			25 30	22.4	2.7	0.23	7.43	-52.6 -52.5	6	20.6	2.6	0.426
		9:21:03							-			
		9:19:53	35	21.03	3.1	0.27	7.43	-52.5	-5 1	20.9	1.6	0.444
		9:18:42 9:17:25	40 45	20.06 19.44	3.6 4.3	0.33 0.39	7.45 7.49	-53.8 -56	-2	21 22.3	0.8 0.6	0.448
	┝━━━┥	9.17.20	40 	19.44	4.3	0.39	7.49	-30	-∠	22.3	0.0	0.45
		0.07.00	0.5	00.45	450 7	10.07	0.07	100.0		00.4	454	0.000
		9:37:20	0.5	26.15	156.7	12.67	9.27	-160.9	55	22.4	15.1	0.289
DM 0		9:34:39	5	26.04	153.6	12.44	9.19	-156.1	43	22.6	17.4	0.289
BM-2		9:33:03	10	25.44	94.7	7.76	8.51	-116	40	23	15	0.313
	9/11/2014	9:31:31	15	23.95	49	4.12	7.76	-71.8	40	21.6	5.8	0.342
	8/11/2014	9:29:19	20	23.36	2.2	0.19	7.61	-63	25	20.3	2.9	0.387
		9:26:52	25	22.69	2.3	0.2	7.58	-61.1	17	20.1	2.2	0.407
		9:24:44	30	22.28	2.5	0.21	7.56	-60.2	11	21.4	1	0.412
		9:23:27	35	21.97	2.7	0.23	7.57	-61	5	20.9	2.4	0.417
		9:21:26	40	21.49	3.1	0.27	7.58	-61	-13	22.7	1.8	0.427
		9:19:57	43	21.23	3.6	0.32	7.61	-63.1	-18	22.7	1.9	0.431

Station	Date	Time	Depth	Temp	DO	DO	pН	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	ft	C	%	mg/L		mV	mV	NTU	ug/L	mS/cm
					/0	<u>g</u> / _						
		9:27:50	0.5	24.29	110.1	9.21	8.88	-137.6	88.1	22.3	11.7	0.299
		9:27:18	5	24.29	109.5	9.16	8.86	-136.6	86.2	22.0	11.9	0.299
BM-2		9:26:19	10	24.27	107.7	9.01	8.8	-132.7	82.5	22.4	11.7	0.299
	9/9/2014	9:25:26	15	24.25	103.5	8.66	8.68	-125.6	78.5	22.1	11.2	0.3
		9:23:30	20	23.19	6.5	0.56	7.68	-67.2	80	21.2	4.5	0.364
		9:22:08	25	22.84	7.7	0.66	7.66	-66.1	75.4	21.2	3.6	0.379
		9:21:19	30	22.25	3	0.26	7.65	-65.3	70.8	20.9	1.5	0.387
		9:20:23	35	21.84	3.2	0.28	7.64	-64.9	67.3	20.9	1.1	0.396
		9:19:27	40	21.43	3.6	0.32	7.65	-65.5	54.2	22.4	1.7	0.417
		9:18:18	43	21.33	4.7	0.41	7.72	-69.6	33.2	23.3	2	0.419
BM-4					nactive	Sampling	Station					
	5/20/2014	12:37:36	1	13.48	96.4	10.03	7.94	-80.5	157	24.3	1.1	0.73
	6/17/2014	12:46:23	1	18.75	90.7	8.44	7.86	-76.7	153	30.8	1.4	0.775
BM-5	7/22/2014	12:21:26	1	19.03	98	9.07	8.15	-94	161	21.4	0.7	0.602
	8/11/2014	12:32:29	1	21.22	116.7	10.34	8.45	-111.4	183	25.4	5.6	0.478
	9/9/2014	11:45:03	1	17.75	90.3	8.58	8.16	-93.7	187.9	23.4	0.5	0.496
		8:58:08	0.5	18.39	128	12.01	8.83	-132.4	146	20.6	9.6	0.495
BM-6		8:56:20	5	18.22	125.7	11.83	8.79	-130	145	21.1	22.3	0.495
		8:55:00	10	18.12	118.8	11.2	8.68	-124	146	21.4	22	0.495
		8:53:30	15	17.34	91.4	8.76	8.13	-92.4	150	21.7	14	0.505
Secchi		8:51:56	20	15.6	66.3	6.59	7.54	-58.5	154	22.7	5.7	0.517
	5/20/2014	8:50:22	25	14.54	65.6	6.68	7.49	-55.3	156	21.8	4.9	0.529
1.30 m		8:49:10	30	13.43	64	6.67	7.44	-52.6	156	21.5	4.4	0.526
		8:46:44	35	12.43	59.1	6.3	7.4	-49.9	156	21.4	4	0.514
		8:45:16	40	11.95	51.9	5.59	7.34	-46.8	156	21.3	3.9	0.531
		8:43:00	45	11.52	39.2	4.26	7.27	-42.9	155	22	4.4	0.532
		8:40:45	50	11.16	27.6	3.03	7.23	-40.3	154	23	4.9	0.532
		8:37:42	52	10.91	25.8	2.85	7.23	-40.5	150	22.4	4.9	0.528
		0.05.40	0.5	05.55	140.0	44 54	0.50	110 5	007	00.0	F 0	0.407
		9:05:43	0.5	25.55	140.9	11.51	8.56	-119.5	207	23.9	5.6	0.497
BM 6		9:04:33	5	24.12	153	12.83	8.52	-116.1	209	25.2	9.8 11.9	0.499
BM-6		9:02:42 9:01:06	10	21.62	89.6 62.7	7.88	7.86 7.36	-77.5	220	24.2	11.8	0.565
		9:00:08	15 20	20.27 18.8	57.2	5.66 5.32	7.30	-48.4 -43.6	227 229	22.5 27.8	7.7 5.3	0.63 0.587
Secchi	6/17/2014	9:00:08 8:57:49	20	17.93	41.8	3.96	7.20	-43.0 -38	229	27.0	3.6	0.664
000011	5/17/2014	8:55:30	30	16.8	28.5	2.76	7.06	-31.1	231	23.1	3.1	0.647
1.30 m		8:54:24	35	15.27	17.7	1.77	7.00	-28.5	231	22.8	3	0.649
1.00 m		8:53:35	40	14.2	4.7	0.49	6.99	-27.2	230	23	2.1	0.659
		8:51:51	45	14.1	3.7	0.38	6.94	-24.3	230	27	2.2	0.67
		0.01.01	.0			0.00	0.01					,

MD/Y hh:mmss ft C % mg/L mV mV mV ug/L ms/rn BM-6 8:59:06 5 26.74 173.4 13.87 8.88 -138.3 22 21 13.6 0.301 BM-6 8:57.43 10 25.86 90 7.32 7.88 -85.5 10 22.3 12 0.344 8:54.46 15 24.33 2.5 0.21 7.4 55.12 52 0.9 4.4 0.405 8:52.13 25 22.44 2.4 0.21 7.32 48.5 76 20.4 2 0.41 8:50:10 0.5 26.107 2.4 0.22 7.31 45.5 62.5 20.2 1.4 0.422 8:48:16 40 19.71 2.6 0.23 7.27 43.2 -76 20.5 1.2 0.429 8:44:3 50 10.5 26.91 42.1 115.3 8.99 14.4	Station	Date	Time	Depth	Temp	DO	DO	рH	pHmV	ORP	Turbidity	Chloro.	SpCond
BM-6 8:59:50 0.5 28.74 17.34 13.87 8.88 -138.3 22 21 13.6 0.301 8:59:05 5 26.65 158.1 12.67 8.76 -131.4 16 21.3 15.3 0.301 8:57:43 10 22.86 90 7.32 7.46 -51.2 52.26 6.9 0.4 8:53:19 20 23:18 23 0.2 7.4 -51.2 52 20.4 2.4 0.40 0.48.7 -55 20.4 2.0 0.44.8 0.40.42 8:50:10 22.1 1.45 0.42 7.7 7.43.2 -76 20.5 1.3 0.425 8:48:43 45 16.61 2.6 0.24 7.27 -43.2 -76 20.5 1.3 0.425 8:46:43 45 16.81 2.6 0.24 7.22 -60.2 2.0 0.44 7.6 22.3 2.7.4 0.301 8:46:43 35		M/D/Y				%	mg/L						mS/cm
BM-6 8:59:05 5 26:66 158.1 12:27 8:76 1:31:4 16 21:3 15.3 0.304 Secchi 7/22/2014 8:53:19 20 23:18 2.3 0.21 7.42 -52:4 -45 22:3 12 0.344 1:55 m 7/22/2014 8:51:31 25 22:44 2.4 0.21 7.32 -46.5 -62 20:2 1.4 0.42 8:50:49 30 21:07 2.4 0.22 7.27 -46.5 -62 20:2 1.4 0.42 8:48:16 40 19:71 2.6 0.23 7.27 -43:2 -76 20:5 1.2 0.428 8:48:16 40 19:71 2.6 0.23 7.27 -43:2 -76 20:5 1.2 0.428 8:48:16 40 19:71 2.6 0.23 7.27 -43:2 -76 20:5 1.2 0.428 8:41:01 16:83 0.25			8:59:50	0.5	26.74	173.4		8.88	-138.3	22	21		0.301
BM-6 Secchi P:22/2014 B:5:7-33 10 25:86 90 7.32 7.98 -85:5 10 22:33 12 0.34 1:55 m 7:22/2014 8:53:19 20 23:18 2.3 0.2 7.4 -51:2 -52 20.9 4.4 0.40 8:50:49 30 21:68 2.4 0.21 7.36 -48.7 -55 20.4 2 0.41 8:49:45 35 21:07 2.4 0.22 7.31 -45.3 -62 20.2 1.4 0.44 8:48:46 40 107 2.4 0.22 7.31 -45.3 -66 20.5 1.3 0.422 8:48:16 40 19.71 2.6 0.23 7.72 -43.2 -76 20.5 1.2 0.442 8:46:33 45 18.61 2.6 0.24 7.22 -40.2 -44 2.1 0.423 8:46:33 45 25.99 12.1 115.3 8.													
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BM-6 B(11/2014) B(1) C <thc< th=""> <thc< th=""> C</thc<></thc<>			8:50:49	30	21.68	2.4	0.21	7.32	-46.5	-62	20.2	1.4	0.424
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Secchi 9/9/2014 8:56:41 20 23.24 2.1 0.18 7.48 -55.7 74.3 20.6 4.8 0.364 1.65 m 8:55:59 25 22.81 2.1 0.18 7.44 -53.4 72.9 20.1 2.7 0.376 8:54:55 30 22.46 2.1 0.18 7.4 -50.9 72.2 20.3 2.3 0.384 8:53:41 35 22.07 2.2 0.19 7.36 -48.7 74.6 20.3 2 0.391 8:50:22 40 21.65 2.3 0.2 7.27 -43.2 70.7 20.9 1.4 0.399 8:49:04 45 21.26 2.4 0.21 7.2 -39.5 65.7 21.8 1.3 0.417 8:48:00 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.429 8:46:28 53 20.67 2.7 0.24 7.			8:59:42	10		88.8	7.46	8.39	-108.9	83.4		9.4	0.310
1.65 m 8:55:59 25 22.81 2.1 0.18 7.44 -53.4 72.9 20.1 2.7 0.376 8:54:55 30 22.46 2.1 0.18 7.4 -50.9 72.2 20.3 2.3 0.384 8:53:41 35 22.07 2.2 0.19 7.36 -48.7 74.6 20.3 2 0.391 8:50:22 40 21.65 2.3 0.2 7.27 -43.2 70.7 20.9 1.4 0.399 8:49:04 45 21.26 2.4 0.21 7.2 -39.5 65.7 21.8 1.3 0.417 8:48:00 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.429 8:46:28 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 8:46:28 5 18.04 128.3 12.12 8.75 -128.6 138 20.8 21.9 0.505 10:06:08 5 18.04 128.3 <th></th> <th></th> <th>8:58:18</th> <th>15</th> <th>23.7</th> <th>53</th> <th>4.48</th> <th>7.96</th> <th>-83.8</th> <th>79</th> <th>21.4</th> <th>6.5</th> <th>0.322</th>			8:58:18	15	23.7	53	4.48	7.96	-83.8	79	21.4	6.5	0.322
1.65 m 8:54:55 30 22.46 2.1 0.18 7.4 -50.9 72.2 20.3 2.3 0.384 8:53:41 35 22.07 2.2 0.19 7.36 -48.7 74.6 20.3 2 0.391 8:50:22 40 21.65 2.3 0.2 7.27 -43.2 70.7 20.9 1.4 0.399 8:49:04 45 21.26 2.4 0.21 7.2 -39.5 65.7 21.8 1.3 0.417 8:48:00 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.427 8:46:28 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 Image: selectement of the sele	Secchi	9/9/2014	8:56:41	20	23.24	2.1	0.18	7.48	-55.7	74.3	20.6	4.8	0.364
BM-7 5/20/2014 35 22.07 2.2 0.19 7.36 -48.7 74.6 20.3 2 0.391 8:50:22 40 21.65 2.3 0.2 7.27 -43.2 70.7 20.9 1.4 0.399 8:49:04 45 21.26 2.4 0.21 7.2 -39.5 65.7 21.8 1.3 0.417 8:48:00 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.427 8:46:28 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 v			8:55:59	25	22.81		0.18	7.44	-53.4		20.1	2.7	0.376
BM-7 8:50:22 40 21.65 2.3 0.2 7.27 -43.2 70.7 20.9 1.4 0.399 8:49:04 45 21.26 2.4 0.21 7.2 -39.5 65.7 21.8 1.3 0.417 8:48:00 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.427 8:46:28 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 10:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.4 32.1 0.508 10:04:36 10 17.82 120.3 11.42 8.65 -122.1	1.65 m												0.384
BM-7 5/20/2014 45 21.26 2.4 0.21 7.2 -39.5 65.7 21.8 1.3 0.417 8:48:00 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.427 8:46:28 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 M-7 5/20/2014 10:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 10:01:43 20 16.2 73.6 7.2													
BM-7 5/20/2014 50 20.78 2.5 0.23 7.14 -35.9 55.7 23.9 1.4 0.427 5/20/2014 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 5/20/2014 10:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.			-	-									
BM-7 8:46:28 53 20.67 2.7 0.24 7.1 -33.4 36.7 24.4 1 0.429 5/20/2014 10:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.4 32.1 0.508 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 <th></th> <th></th> <th></th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>				-									
BM-7 5/20/2014 IO:06:57 0.5 18.29 129.6 12.18 8.76 -128.6 138 20.8 21.9 0.505 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 10:03:36 15 17.79 119.4 11.34 8.59 -118.4 138 21.6 32.2 0.512 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>													
BM-7 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 5/20/2014 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 5/20/2014 10:03:36 15 17.79 119.4 11.34 8.59 -118.4 138 21.6 32.2 0.512 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541			8:46:28	53	20.67	2.1	0.24	1.1	-33.4	36.7	24.4	1	0.429
BM-7 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 5/20/2014 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 5/20/2014 10:03:36 15 17.79 119.4 11.34 8.59 -118.4 138 21.6 32.2 0.512 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541													
BM-7 10:06:08 5 18.04 128.3 12.12 8.75 -127.8 138 21.1 28.3 0.506 5/20/2014 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 5/20/2014 10:03:36 15 17.79 119.4 11.34 8.59 -118.4 138 21.6 32.2 0.512 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541			10.06.57	0.5	18 20	129.6	12 18	8 76	-128.6	138	20.8	21 0	0 505
BM-7 10:04:36 10 17.82 120.3 11.42 8.65 -122.1 138 21.4 32.1 0.508 5/20/2014 10:03:36 15 17.79 119.4 11.34 8.59 -118.4 138 21.6 32.2 0.512 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541													
5/20/2014 10:03:36 15 17.79 119.4 11.34 8.59 -118.4 138 21.6 32.2 0.512 10:01:43 20 16.2 73.6 7.22 7.62 -63 145 22.9 8.3 0.495 10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541	BM-7												
10:01:432016.273.67.227.62-6314522.98.30.49510:00:182514.3975.37.687.6-61.814626.26.30.5219:58:513013.7163.46.577.55-58.714629.74.70.541	2 m-/	5/20/2014											
10:00:18 25 14.39 75.3 7.68 7.6 -61.8 146 26.2 6.3 0.521 9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541		5,20,20,4											
9:58:51 30 13.71 63.4 6.57 7.55 -58.7 146 29.7 4.7 0.541													
9:56:55 35 12.25 30 3.21 7.39 -49.6 146 27.2 3.3 0.558			9:56:55	35	12.25	30	3.21	7.39	-49.6	146	27.2	3.3	0.558

BM-7	M/D/Y 17/2014	hh:mm:ss 10:05:26 10:03:10 10:01:48 10:00:40 9:59:44 9:58:32 9:55:10 9:55:03	Depth ft 0.5 5 10 15 20 25 30	Temp C 25.36 23.41 21.46 19.89 18.16 17.51 17.05	% 147.9 147.5 99.5 75.6 71.1 68.7 52.5	mg/L 12.13 12.54 8.78 6.88 6.7 6.56	8.83 8.71 8.22 7.65 7.59	mV -134.9 -127.3 -98.5 -65.1	mV 166 168 172	NTU 25.8 25.5 25	Chloro. ug/L 5.1 12.9	SpCond mS/cm 0.503 0.516
	17/2014	10:03:10 10:01:48 10:00:40 9:59:44 9:58:32 9:55:10	5 10 15 20 25	23.41 21.46 19.89 18.16 17.51	147.5 99.5 75.6 71.1 68.7	12.13 12.54 8.78 6.88 6.7	8.71 8.22 7.65	-127.3 -98.5	168 172	25.5	12.9	0.516
	17/2014	10:03:10 10:01:48 10:00:40 9:59:44 9:58:32 9:55:10	5 10 15 20 25	23.41 21.46 19.89 18.16 17.51	147.5 99.5 75.6 71.1 68.7	12.54 8.78 6.88 6.7	8.71 8.22 7.65	-127.3 -98.5	172	25.5	12.9	0.516
	17/2014	10:01:48 10:00:40 9:59:44 9:58:32 9:55:10	15 20 25	19.89 18.16 17.51	99.5 75.6 71.1 68.7	8.78 6.88 6.7	8.22 7.65	-98.5	172			
	17/2014	9:59:44 9:58:32 9:55:10	20 25	18.16 17.51	71.1 68.7	6.7	7.65				12.1	0.515
6/17	17/2014	9:58:32 9:55:10	20 25	17.51	71.1 68.7		7 50		177	27.5	6.3	0.524
		9:55:10				6.56	1.00	-61.2	177	31.6	4.8	0.534
+		9:55:10			52.5	0.00	7.59	-61.3	176	32.8	3.8	0.549
+		9:56:03			02.0	5.06	7.57	-60.4	171	45.9	5.4	0.573
		9.56.03										
	-	9.56.03										
	-	0.00.00	0.5	26.84	193.6	15.46	9.07	-149.5	93	21.3	20.2	0.292
		9:54:47	5	26.53	184.2	14.8	8.94	-142	90	22.1	22.7	0.292
		9:53:43	10	26.18	149.6	12.09	8.48	-114.9	89	21.5	10.7	0.302
BM-7 7/22	22/2014	9:52:34	15	24.24	60.8	5.09	7.63	-64.7	94	20.9	9.9	0.377
		9:51:10	20	23.14	26.3	2.25	7.55	-59.8	91	20.6	8.9	0.398
		9:48:03	25	22.18	22.3	1.94	7.6	-62.6	77	22.1	4.8	0.434
		9:46:28	30	21.79	10.8	0.94	7.66	-65.8	66	23.6	4.9	0.449
┣╼╼╼┶╼	╸━━┛┛							╘┈┈┧				
		10:04:13	0.5	26.01	135.5	10.98	9.09	-150.4	113	22.7	4.5	0.296
		10:03:01	5	25.78	136.1	11.08	9.07	-149.3	110	22.4	17.1	0.295
		10:01:38	10	25.56	121.4	9.93	8.89	-138.4	108	22.6	14.5	0.297
BM-7		9:59:54	15	23.95	58.8	4.95	7.85	-77.3	112	21.3	5.4	0.336
8/11	11/2014	9:57:45	20	23.14	29.2	2.5	7.69	-67.9	106	21.1	2.8	0.37
	_	9:56:49	25	22.68	14.5	1.25	7.65	-65.2	104	21.2	1.8	0.387
	_	9:55:44	30	22.31	4.8	0.42	7.63	-64.3	100	24	2.7	0.405
┣━━━╇━╵												
	-	9:52:29	0.5	24.19	112.4	9.43	8.84	-135.4	143	22.8	10.1	0.304
	-	9:51:28	5	24.2	111.7	9.37	8.8	-132.5	138.6	22.8	11.5	0.304
	0/2014	9:50:22	10	24.18	107.1	8.98	8.64	-123.5	132	22.7	10.9	0.304
BM-7 9/9/	9/2014	9:49:09	15 20	24.04	76.6	6.44	8.1	-91.8	128.5	22.6	7.4	0.33
	-	9:47:51 9:46:49	20	22.85 22.35	8.8 2.9	0.76 0.25	7.67 7.69	-66.6 -68	127.7 119.8	24 22	2.9 2.4	0.404
	-	9:44:27	30	22.35	3.4	0.25	7.09	-72.2	88.1	22.5	2.4	0.395
	-	J.77.21	50	<u> </u>	0.4	0.5	1.11	-12.2	00.1	22.0	2.7	0101
		11:45:33	0.5	18.86	159.1	14.78	8.92	-137.9	182	20.6	25.3	0.509
	-	11:42:41	5	18.15	141.8	13.36	8.73	-126.7	182	20.0	47.9	0.503
	F	11:41:51	10	17.6	141.0	10.48	8.36	-105.1	189	21.4	35.4	0.513
BM-8 5/20	20/2014	11:40:33	10	16.27	97.3	9.54	7.91	-79.4	109	21.4	14.2	0.493
5	-5,2514	11:39:17	20	15.26	85.5	8.56	7.72	-68.4	190	22.0	6.3	0.496
					00.0	0.00		50.7		<u> </u>	0.0	0.100
┣╺╼╼┾╼╵	╺━━╇							┝╼╼┥				i -
	-	11:53:45	0.5	26.95	189.1	15.07	8.82	-135.1	181	25.1	4.2	0.458
	F	11:52:48	5	23.3	165.3	14.08	8.68	-125.6	186	29.5	16.2	0.49
BM-8 6/17	17/2014	11:50:58	10	21.4	123.7	10.93	8.54	-116.9	187	27.5	11.7	0.484
		11:49:14	15	19.42	76	6.98	7.72	-68.8	193	27.6	6.7	0.482
		11:47:57	20	18.31	65.3	6.13	7.61	-62.7	193	34.6	5.5	0.521
		11:46:24	22	17.81	56	5.31	7.6	-62.2	191	37.3	5.6	0.53

Station	Date	Time	Depth	Temp	DO	DO	pН	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	ft	C	%	mg/L		mV	mV	NTU	ug/L	mS/cm
		11:21:52	0.5	27.22	286.6	22.73	9.52	-176.3	138	24.9	54.6	0.272
		11:20:47	5	26.68	213.7	17.11	9.08	-150	139	22.6	47.9	0.273
BM-8	7/22/2014	11:19:59	10	25.41	162.4	13.31	8.45	-112.8	145	22.1	24.2	0.309
		11:19:15	15	24.22	133	11.14	8.14	-94.5	147	23.3	19.5	0.338
		11:17:59	20	23.02	78	6.68	7.9	-80	146	27.7	9	0.369
		11:16:39	22	22.58	87.2	7.54	8.01	-86.2	141	39.9	9.3	0.374
		11:33:11	0.5	26.3	164.2	13.24	9.3	-162.8	173	24.1	11.6	0.292
		11:31:35	5	25.94	156.2	12.68	9.22	-157.8	173	24	19.5	0.292
BM-8	8/11/2014	11:30:28	10	25.31	131.3	10.78	8.99	-144.5	174	22.9	9.5	0.29
		11:29:15	15	24.01	125.4	10.55	8.74	-129.4	175	25.1	7.4	0.313
		11:27:58	20	23.08	82.4	7.05	8.21	-98	179	30.5	7.1	0.349
		11:26:59	22	22.67	89.8	7.74	8.26	-100.8	177	50.2	11.3	0.361
		10:52:14	0.5	24.12	137.5	11.54	9.11	-150.6	165.1	24.5	10.8	0.297
BM-8	9/9/2014	10:51:31 10:50:38	5 10	24.14 24.1	137 133.1	11.5 11.17	9.1	-150 -146.7	163.1 160.9	25.1 24.8	11.9 12.3	0.297
DIVI-0	9/9/2014	10:30.38	10	24.1	133.1	10.67	9.04 8.94	-140.7	156.9	24.0	12.5	0.299
		10:49:20	20	24.03	92	7.93	8.53	-116.6	150.9	36.5	7.6	0.348
		10.40.13	20	22.14	52	1.55	0.00	-110.0	155.1	00.0	7.0	0.040
		10:34:25	0.5	18.21	131.7	12.4	8.73	-126.7	157	21	24	0.337
		10:33:21	5	17.83	124.7	11.83	8.67	-120.7	156	21.2	34.6	0.513
		10:30:35	10	17.65	106.8	10.17	8.41	-108	157	21.2	27.1	0.512
BM-9	5/20/2014	10:28:52	15	16.46	82.3	8.03	7.77	-71.7	160	22.4	15.1	0.496
-		10:27:40	20	15.46	81.8	8.16	7.73	-69.2	161	23.9	8	0.522
		10:26:39	25	14.2	82.4	8.44	7.74	-69.5	161	27.9	5.8	0.545
		10:25:03	30	13.82	82.3	8.5	7.78	-71.8	159	33	4.4	0.555
		10:23:51	32	13.79	82	8.48	7.81	-73.4	157	35.5	4.2	0.556
		10:45:43	0.5	26.09	155.4	12.57	8.85	-136.2	128	26.6	5.9	0.498
		10:43:56	5	24.45	146.4	12.21	8.71	-127.8	127	26.1	11.8	0.508
		10:44:35	10	24.33	151	12.62	8.76	-130.8	128	25.8	12.8	0.508
BM-9	6/17/2014	10:41:25	15	19.97	97.1	8.82	7.96	-82.7	129	28.9	7	0.516
		10:40:03	20	18.2	74.9	7.05	7.6	-62.3	129	31.3	4.7	0.541
		10:38:45	25	17.38	70.2	6.72	7.54	-58.7	127	33.9	3.5	0.566
		10:36:28	30	16.62	30.9	3.01	7.36	-48.4	118	31.8	3.9	0.579
		10:34:57	32	16.22	17.3	1.7	7.31	-45.4	100	28.4	3.5	0.636
		10:15:56	0.5	26.76	218.2	17.45	9.18	-155.9	85	22.6	49	0.285
		10:14:32 10:13:32	5 10	26.57 25.96	200.9 142.1	16.12 11.53	9.01 8.36	-146.3 -107.6	81 83	22.3 21.4	33.3 29.4	0.285
BM-9	7/22/2014	10:13:32	10	25.90	76.7	6.42	7.74	-70.7	84	21.4	29.4	0.313
D141-9	112212014	10:12:20	20	24.22	32.5	2.77	7.64	-64.9	80	22.0	16.1	0.383
		10:08:24	20	22.45	55.2	4.78	7.78	-04.9	68	26.2	7.2	0.407
		10:07:16	30	21.61	13.4	1.18	7.73	-70.1	59	37.9	7.5	0.485
		10:06:07	33	20.64	17.2	1.54	7.85	-77	40	57.6	12.2	0.505
L		10.00.07		20.04		1.04	1.00			07.0		0.000

Station	Date	Time	Depth	Temp	DO	DO	рН	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	ft	С	%	mg/L		mV	mV	NTU	ug/L	mS/cm
		10:26:51	0.5	25.79	136.1	11.08	9.1	-150.7	142	23.3	12	0.295
		10:25:57	5	25.66	131.5	10.73	9.04	-147.4	141	22.3	16	0.295
		10:24:31	10	25.27	108.3	8.9	8.8	-133.3	141	22.1	11.7	0.3
BM-9	8/11/2014	10:21:49	15	24.04	105.4	8.86	8.37	-107.8	140	23.5	7.5	0.33
		10:20:30	20	23.1	61.8	5.29	7.93	-81.5	143	22.5	4.8	0.373
		10:19:28	25	22.56	51	4.41	7.89	-79.3	142	24.3	3.5	0.402
		10:17:33	30	21.97	63.5	5.55	7.97	-84.2	137	32.9	6	0.442
		10:16:15	32	21.58	44.8	3.94	7.97	-83.8	134	53.7	7.5	0.461
		10:10:53	0.5	24.14	110.5	9.27	8.76	-130.2	117.7	22.8	10	0.307
		10:10:05	5	24.14	108	9.06	8.69	-126.5	113.5	22.7	10.3	0.309
BM-9		10:09:03	10	24.11	103.2	8.66	8.56	-118.9	106.6	22.8	9.6	0.313
	9/9/2014	10:07:47	15	23.97	84.7	7.13	8.22	-99.1	97.4	23.7	7.3	0.319
		10:06:13	20	23.24	38.3	3.27	7.77	-72.3	85.6	27.9	4.1	0.411
		10:04:56	25	22.35	3	0.26	7.69	-67.7	61.2	25.7	3.5	0.412
		10:03:32	30	22.04	3.4	0.3	7.74	-70.5	18.4	28.2	2.6	0.410
		10:01:58	32	21.97	4.5	0.4	7.84	-76.2	-4.5	35.9	4.1	0.413
		11:06:49	0.5	17.73	124.8	11.87	8.45	-110.8	178	21.8	16.9	0.524
		11:05:57	5	16.93	111.1	10.74	8.27	-100.1	179	22.2	36.6	0.529
BM-10	5/20/2014	11:02:24	10	14.6	97.8	9.93	7.96	-81.7	181	23.4	10.2	0.556
		11:01:14	15	13.71	95.1	9.84	7.95	-81	180	29	3.2	0.579
		11:00:02	20	13.73	94.1	9.73	8	-83.9	177	36.8	2.4	0.587
												i— — — —
		11:16:04	0.5	27.46	264	20.84	9.25	-160.4	151	44	12.1	0.433
BM-10		11:14:05	5	24.12	213.6	17.92	8.77	-130.9	156	30.5	21.6	0.468
	6/17/2014	11:12:27	10	21.95	141	12.33	8.4	-108.8	156	28.4	15	0.499
		11:10:55	15	19.57	87.7	8.03	7.81	-74.4	157	33.1	5.9	0.583
		11:09:48	20	18.76	78.2	7.28	7.75	-70.8	151	47.7	5	0.61
		10:49:02	0.5	26.72	242.4	19.4	9.3	-163.1	124	21.2	41.8	0.282
BM-10		10:47:06	5	26.51	222.6	17.89	9.14	-153.7	121	20.7	13.8	0.285
	7/22/2014	10:45:40	10	25.63	190.2	15.52	8.8	-133.2	122	21.7	7.6	0.334
		10:43:36	15	24.53	165.2	13.76	8.61	-121.6	117	25.7	6.4	0.379
		10:41:46	20	22.57	121.5	10.49	8.25	-100.5	114	56.6	4.8	0.472
		11:01:21	0.5	26.25	171.8	13.87	9.38	-167.6	160	25.6	15.2	0.289
BM-10		11:00:21	5	25.63	153.8	12.55	9.28	-161.5	160	27.1	19.4	0.289
	8/11/2014	10:55:29	10	25.12	154.8	12.75	9.1	-150.9	158	26.9	14.2	0.299
		10:54:29	15	24.66	144.4	12	8.96	-142.4	159	28.1	13.2	0.316
		10:52:52	20	22.25	97.8	8.5	8.24	-99.9	167	65.6	10.2	0.452
		10:31:06	0.5	24.06	146.6	12.32	9.1	-150.3	151	26	16.6	0.305
BM-10	9/9/2014	10:30:32	5	24.06	145	12.18	9.07	-148.4	149.2	26.1	15.2	0.306
		10:29:40	10	23.95	136.6	11.5	8.96	-142.1	146.9	26.7	14.3	0.311
		10:28:44	15	23.58	122.7	10.41	8.76	-130	145.3	29.5	11.5	0.326
		10:27:38	20	21.48	97.8	8.63	8.38	-107.8	149	68.89999	9.4	0.422

Station	Date	Time	Depth	Temp	DO	DO	рΗ	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	ft	С	%	mg/L		mV	mV	NTU	ug/L	mS/cm
	5/20/2014	12:40:45	1	13.49	103	10.72	7.93	-80	167	23	2.4	0.371
	6/17/2014	12:49:32	1	19	100.2	9.28	7.86	-77.1	167	26.6	2.3	0.319
BM-11	7/22/2014	12:18:57	1	20.86	92.1	8.22	8.26	-100.5	143	24	0.9	0.386
	8/11/2014	12:29:11	1	21.38	99.2	8.77	8.45	-111.6	168	27.3	3.7	0.384
	9/9/2014	11:41:32	1	18.31	84	7.89	8.18	-95.4	174.3	25.5	1.6	0.297

APPENDIX B

BACTERIA SAMPLING DATA TABLES

BLUE MARSH RESERVOIR SWIMMING BEACH MONITORING PROGRAM RESULTS Fecal/e-coli Coliform 2014

		FECA	L COLIFO	RM		E-COLI				
DAY	DATE	<u>SB1</u>	<u>SB2</u>	<u>SB3</u>	Arith. AVG.&LOG	<u>SB1 SB2 SB3</u>			Ave./LOG	
Mon.	12-May	2.00	2.00	3.00	2.33	1.00	1.00	1.00	1.00	
Thur.	15-May	2.00	2.00	2.00	2.00	1.00	1.00	2.00	1.33	
Mon.	19-May	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Thur.	22-May	2.00	2.00	3.00	2.33	1.00	2.00	1.00	1.33	
Tues.	27-May	2.00	2.00	2.00	2.00	1.00	1.00	2.00	1.33	
5 smpl. Log	y Value	0.30	0.30	0.37	0.33	0.00	0.06	0.12	0.07	
5 smpl. Ge	o. Mean	2.00	2.00	2.35	2.13	1.00	1.15	1.32	1.19	
Thur.	29-May	2.00	3.00	2.00	2.33	1.00	3.00	2.00	2.00	
5 smpl. Log	y Value	0.30	0.34	0.34	0.33	0.00	0.16	0.18	0.14	
5 smpl. Ge	o. Mean	2.00	2.17	2.17	2.13	1.00	1.43	1.52	1.37	
Mon.	2-Jun	2.00	3.00	2.00	2.33	2.00	2.00	1.00	1.67	
5 smpl. Log	Value	0.30	0.37	0.34	0.34	0.06	0.22	0.12	0.15	
5 smpl. Ge	o. Mean	2.00	2.35	2.17	2.19	1.15	1.64	1.32	1.43	
Thur.	5-Jun	2.00	2.00	2.00	2.00	1.00	2.00	1.00	1.33	
5 smpl. Log	Value	0.30	0.37	0.34	0.34	0.06	0.28	0.12	0.18	
5 smpl. Ge	o. Mean	2.00	2.35	2.17	2.19	1.15	1.89	1.32	1.51	
Mon.	9-Jun	2.00	2.00	3.00	2.33	1.00	3.00	2.00	2.00	
5 smpl. Log	y Value	0.30	0.37	0.34	0.34	0.06	0.31	0.18	0.21	
5 smpl. Ge	o. Mean	2.00	2.35	2.17	2.19	1.15	2.05	1.52	1.64	
Thur.	12-Jun	18.00	30.00	23.00	23.67	23.00	21.00	20.00	21.33	
5 smpl. Log	y Value	0.49	0.61	0.55	0.56	0.33	0.58	0.38	0.46	
5 smpl. Ge	o. Mean	3.10	4.04	3.53	3.60	2.15	3.76	2.40	2.85	
Mon.	16-Jun	5.00	8.00	5.00	6.00	5.00	5.00	1.00	3.67	
5 smpl. Log	y Value	0.57	0.69	0.63	0.64	0.47	0.62	0.32	0.51	
5 smpl. Ge	o. Mean	3.73	4.92	4.25	4.34	2.97	4.17	2.09	3.22	
Thur.	19-Jun	60.00	110.00	78.00	82.67	60.00	93.00	77.00	76.67	
5 smpl. Log	Value	0.87	1.00	0.95	0.95	0.77	0.95	0.70	0.84	
5 smpl. Ge	o. Mean	7.36	10.11	8.83	8.87	5.86	8.99	4.99	6.93	

		-	r –				1	
Mon. 23-	Jun 3.00	2.00	2.00	2.33	1.00	1.00	1.00	1.00
5 smpl. Log Value		1.00	0.95	0.96	0.77	0.89	0.70	0.82
5 smpl. Geo. Mea		10.11	8.83	9.14	5.86	7.82	4.99	6.54
Thur. 26-	Jun 56.00	36.00	31.00	41.00	43.00	17.00	28.00	29.33
5 smpl. Log Value	e 1.19	1.26	1.15	1.21	1.09	1.04	0.93	1.05
5 smpl. Geo. Mea	an 15.54	18.02	14.09	16.22	12.43	11.07	8.45	11.20
Mon. 30-	Jun 2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
5 smpl. Log Value	e 1.00	1.02	0.94	1.00	0.82	0.78	0.67	0.78
5 smpl. Geo. Mea	an 10.02	10.49	8.65	9.90	6.64	6.02	4.64	6.07
Thur. 3-	Jul 23.00	23.00	31.00	25.67	16.00	12.00	19.00	15.67
5 smpl. Log Value	e 1.13	1.11	1.10	1.12	0.92	0.86	0.92	0.91
5 smpl. Geo. Mea	an 13.59	12.95	12.46	13.23	8.38	7.17	8.37	8.12
Mon. 7-	Jul 6.00	3.00	3.00	4.00	5.00	3.00	2.00	3.33
5 smpl. Log Value	e 0.93	0.80	0.81	0.86	0.71	0.56	0.61	0.64
5 smpl. Geo. Mea	an 8.58	6.30	6.49	7.22	5.10	3.61	4.03	4.34
Thur. 10 [.]	-Jul 2.00	2.00	3.00	2.33	1.00	1.00	1.00	1.00
5 smpl. Log Value	e 0.90	0.80	0.85	0.86	0.71	0.56	0.61	0.64
5 smpl. Geo. Mea	an 7.91	6.30	7.04	7.22	5.10	3.61	4.03	4.34
Mon. 14	-Jul 11.00	18.00	5.00	11.33	10.00	6.00	6.00	7.33
5 smpl. Log Value	e 0.76	0.74	0.69	0.75	0.58	0.47	0.47	0.52
5 smpl. Geo. Mea	an 5.71	5.49	4.89	5.58	3.81	2.93	2.96	3.29
Thur. 17	-Jul 3.00	3.00	2.00	2.67	1.00	3.00	1.00	1.67
5 smpl. Log Value	e 0.79	0.77	0.69	0.77	0.58	0.56	0.47	0.56
5 smpl. Geo. Mea	an 6.19	5.95	4.89	5.91	3.81	3.65	2.96	3.64
Mon. 21	-Jul 3.00	3.00	5.00	3.67	2.00	3.00	2.00	2.33
5 smpl. Log Value	e 0.61	0.60	0.53	0.60	0.40	0.44	0.28	0.40
5 smpl. Geo. Mea	an 4.12	3.96	3.39	4.01	2.51	2.77	1.89	2.49
Thur. 24	-Jul 11.00	8.00	2.00	7.00	2.00	1.00	1.00	1.33
5 smpl. Log Value	e 0.67	0.68	0.50	0.65	0.32	0.35	0.22	0.32
5 smpl. Geo. Mea	an 4.65	4.82	3.13	4.48	2.09	2.22	1.64	2.07
Mon. 28	-Jul 43.00	30.00	30.00	34.33	6.00	8.00	10.00	8.00
5 smpl. Log Value	e 0.93	0.92	0.70	0.89	0.48	0.53	0.42	0.50

5 smpl. Geo	o. Mean	8.59	8.28	4.96	7.68	2.99	3.37	2.61	3.14
Thur.	31-Jul	3.00	2.00	2.00	2.33	3.00	1.00	1.00	1.67
5 smpl. Log		0.82	0.73	0.62	0.75	0.37	0.37	0.26	0.37
5 smpl. Geo		6.63	5.33	4.13	5.60	2.35	2.35	1.82	2.33
Mon.	4-Aug	3.00	11.00	10.00	8.00	1.00	2.00	4.00	2.33
5 smpl. Log	Value	0.82	0.84	0.76	0.84	0.37	0.34	0.38	0.40
5 smpl. Geo	o. Mean	6.63	6.92	5.70	6.97	2.35	2.17	2.40	2.50
Thur.	7-Aug	3.00	3.00	2.00	2.67	1.00	1.00	1.00	1.00
5 smpl. Log	Value	0.82	0.84	0.68	0.82	0.31	0.24	0.32	0.32
5 smpl. Geo	o. Mean	6.63	6.92	4.74	6.54	2.05	1.74	2.09	2.11
Mon.	11-Aug	3.00	3.00	2.00	2.67	3.00	1.00	1.00	1.67
5 smpl. Log	Value	0.71	0.75	0.68	0.73	0.35	0.24	0.32	0.34
5 smpl. Geo	o. Mean	5.11	5.69	4.74	5.39	2.22	1.74	2.09	2.20
Thur.	14-Aug	6.00	2.00	2.00	3.33	4.00	3.00	3.00	3.33
5 smpl. Log	Value	0.54	0.52	0.44	0.53	0.31	0.16	0.22	0.27
5 smpl. Geo	o. Mean	3.45	3.31	2.76	3.38	2.05	1.43	1.64	1.85
Mon.	18-Aug	5.00	8.00	3.00	5.33	1.00	1.00	2.00	1.33
5 smpl. Log	Value	0.58	0.64	0.48	0.60	0.22	0.16	0.28	0.25
5 smpl. Geo	o. Mean	3.82	4.36	2.99	3.99	1.64	1.43	1.89	1.77
Thur.	21-Aug	5.00	2.00	3.00	3.33	2.00	1.00	2.00	1.67
5 smpl. Log	Value	0.63	0.49	0.37	0.52	0.28	0.10	0.22	0.22
5 smpl. Geo	o. Mean	4.23	3.10	2.35	3.35	1.89	1.25	1.64	1.65
Mon.	25-Aug	6.00	5.00	6.00	5.67	5.00	4.00	6.00	5.00
5 smpl. Log	Value	0.69	0.54	0.47	0.59	0.42	0.22	0.37	0.36
5 smpl. Geo	o. Mean	4.86	3.44	2.93	3.89	2.61	1.64	2.35	2.28
Thur.	28-Aug	5.00	6.00	10.00	7.00	6.00	8.00	11.00	8.33
5 smpl. Log	Value	0.73	0.60	0.61	0.67	0.48	0.40	0.58	0.50
5 smpl. Geo	o. Mean	5.38	3.95	4.04	4.72	2.99	2.49	3.80	3.15
Tues.	2-Sep	5.00	3.00	5.00	4.33	1.00	3.00	3.00	2.33
5 smpl. Log	Value	0.71	0.63	0.69	0.70	0.36	0.40	0.58	0.47
5 smpl. Geo		5.19	4.28	4.86	4.98	2.27	2.49	3.80	2.93
Thur.	4-Sep	13.00	16.00	18.00	15.67	13.00	13.00	9.00	11.67
5 smpl. Log	Value	0.80	0.69	0.84	0.79	0.58	0.62	0.71	0.66
5 smpl. Geo	o. Mean	6.28	4.92	6.95	6.17	3.79	4.16	5.13	4.52

APPENDIX C

LABORATORY CUSTODY SHEETS



Attention: Gregory Wacik

CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



06/05/14

Date of Report:

Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of K Lab ID:	eport:	06/05 2294	-/14 14-0015752
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien)/14 13:15 it
Sample Desc: BM-1 Surface					Date Rece	ived:	05/20)/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	91	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	120	/100ml	2	1	SM 9222D	•	16:00	PLW
Total Coliform	2400	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
CHEMISTRY						·		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	05/20	16:33	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	05/21	17:11	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	14:47	JCL
Nitrogen, Nitrate	4.63	mg/l	.05	1	EPA 353.2	05/21	15:14	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	11:46	JCL
Nitrogen, Total Kjeldahl	0.35	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	05/27	09:21	ALD
RESIDUES						·		
Solids, Total Dissolved	207	mg/l	5	1	SM 2540C	05/21	12:30	тмн
Solids, Total Suspended	<3	mg/l	3	1	SM 2540D	05/21	12:30	тмн
TITRATIONS						·		
Alkalinity, Total to pH 4.5	101	mg/l	1	1	SM 2320 B	05/27	10:00	HRG

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Multine M. Sister

Christina Kistler Account Executive

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ACIL Seal of Excellence





Attention:	Gregory Wacik					Date of F	Report:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015752
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	/14 13:15
	Columbia MD 21045-1934					Collected	By:	Clien	, it
Sample Desc:	BM-1 Surface					Date Rece	eived:	05/20	/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.

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Reviewed and Approved by: Wristing M. stee

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 14-0015753
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 09:20 t
Sample Desc: BM-2 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	4	mpn/100ml	1	1	SM 9223B	05/21	09-15	DAD
Fecal Coliform	3	/100mL	2	1	SM 9222D	05/20	16:00	PLW
Total Coliform	33	, mpn/100ml	1	1	SM 9223B	'	09:15	DAD
CHEMISTRY						'		
COLORMETRIC								
Phosphate as P, Ortho	0.35	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.33	mg/l	.01	1	SM 4500P-E			ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	15:02	JCL
Nitrogen, Nitrate	4.58	mg/l	.05	1	EPA 353.2	05/21	15:15	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	11:52	JCL
Nitrogen, Total Kjeldahl	0.45	mg/l	.25	1	EPA 351.2	05/28	16:07	ALD
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.7	mg/l	1	1	SM5310 C	05/27	09:33	ALD
RESIDUES								
Solids, Total Dissolved	154	mg/l	5	1	SM 2540C	05/21	12:30	ТМН
Solids, Total Suspended	<3	mg/l	3	1	SM 2540D	05/21	12:30	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	112	mg/l	1	1	SM 2320 B	05/27	10:00	HRG

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Reviewed and Approved by: Wisting M. Ger)

Christina Kistler Account Executive

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		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
PWSID: 30609	12			Rep	Dilutn		Test	Test	
Sample Desc:	BM-2 Surface					Date Rece	eived:	05/20)/14 14:30
	Columbia MD 21045-1934					Collected		Clier	,
	Suite 100					Date Col	lected:	05/20)/14 09:20
	9200 Rumsey Road								
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		1	-14-0015753
Attention:	Gregory Wacik					Date of I	Report:	06/05	5/14

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.
- O3 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100					Date of R Lab ID:			-14-0015754
Columbia MD 21045-1934					Date Coll Collected		05/20 Clien)/14 09:20 It
Sample Desc: BM-2 Mid-Depth					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY		ی این این این این این این این این این ای			یہ ہے سے بہ اندر بنا سا جا اندا تھ			
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E	•	17:30	ALD
NITROGENS						•		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	15:17	JCL
Nitrogen, Nitrate	4.58	mg/l	.05	1	EPA 353.2	05/21	15:16	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	11:53	JCL
Nitrogen, Total Kjeldahl	0.38	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	3.0	mg/l	1	1	SM5310 C	05/27	09:46	ALD
RESIDUES								
Solids, Total Dissolved	108	mg/l	5	1	SM 2540C	05/21	12:30	ТМН
Solids, Total Suspended	<3	mg/l	3	1	SM 2540D	05/21	12:30	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	92	mg/l	1	1	SM 2320 B	05/27	10:00	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by: Hristina M.

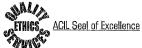
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Attention:	Gregory Wacik					Date of R	eport:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015754
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	/14 09:20
	Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc:	BM-2 Mid-Depth					Date Rece	ived:	05/20	/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
			ہے ہے ہے ہے ہے کا لیا تین						100 Mar - 100 Mar - 100 Mar - 100
02 T	he CM 5310D comple did not have a D	تسم مستخدم المتماس الأ							

O2 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	voir				Date of R Lab ID:	eport:	06/05 2294	/14 14-0015755
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 09:20 t
Sample Desc: BM-2 Deep					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.058	mg/l	.01	1	SM 4500P-E	05/28	14:15	HRG
NITROGENS								
Nitrogen, Ammonia	0.06	mg/l	. 05	1	D6919-03	06/04	16:00	JCL
Nitrogen, Nitrate	5.00	mg/l	.05	1	EPA 353.2	05/21	15:17	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	11:54	JCL
Nitrogen, Total Kjeldahl	0.35	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	1.9	mg/l	1	1	SM5310 C	05/27	09:59	ALD
RESIDUES								
Solids, Total Dissolved	205	mg/l	5	1	SM 2540C	05/21	12:30	ТМН
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	05/21	12:30	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	100	mg/l	1	1	SM 2320 B	05/27	10:15	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 14-0015756
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 12:40 t
Sample Desc: BM-5 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI			_					
MICROBIOLOGY								
Escherichia coli	650	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	690	/100mL	2	1	SM 9222D	05/20	16:00	PLW
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	'	09:15	DAD
CHEMISTRY						'		
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	0.06	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.07	mg/l	.01	1	SM 4500P-E	05/28	14:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	16:15	JCL
Nitrogen, Nitrate	8.07	mg/l	.1	2	EPA 353.2	05/21	15:55	JCL
Nitrogen, Nitrite	<.05	mg/l	. 05	1	EPA 353.2	05/21	11:55	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	. 25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	1.4	mg/l	1	1	SM5310 C	05/27	10:11	ALD
RESIDUES								
Solids, Total Dissolved	306	mg/l	5	1	SM 2540C	05/21	12:30	тмн
Solids, Total Suspended	7	mg/l	3	1	SM 2540D	05/21	12:30	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	171	mg/l	1	1	SM 2320 B	05/27	10:15	HRG

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Attention:	Gregory Wacik					Date of F	Report:	06/05	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	-	2294	, -14-0015756
	9200 Rumsey Road								
	Suite 100					Date Coll	.ected:	05/20)/14 12:40
	Columbia MD 21045-1934					Collected	By:	, Clier	, nt
Sample Desc:	BM-5 Surface					Date Rece	eived:	05/20)/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	ported To: Versar, Inc./Blue Marsh Reservoir				Date of Report: Lab ID:		06/05/14 2294-14-0015757	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 08:40 t
Sample Desc: BM-6 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI					<u> </u>			
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9222D	05/20	16:00	PLW
Total Coliform	30	, mpn/100ml	1	1	SM 9223B	•	09:15	DAD
CHEMISTRY	4	. ,				,		
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.07	mg/l	.01	1	SM 4500P-E	05/28	14:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	16:30	JCL
Nitrogen, Nitrate	4.53	mg/l	.05	1	EPA 353.2	05/21	15:21	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	11:56	JCL
Nitrogen, Total Kjeldahl	0.30	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B		13:15	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	05/27	10:23	ALD
RESIDUES								
Solids, Total Dissolved	193	mg/l	5	1	SM 2540C	05/21	12:30	ТМН
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	05/21	12:30	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	99	mg/l	1	1	SM 2320 B	05/27	10:15	HRG

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Attention:	Gregory Wacik					Date of F	leport:	06/05	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015757
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	0/14 08:40
	Columbia MD 21045–1934					Collected	By:	Clier	nt
Sample Desc:	BM-6 Surface					Date Rece	eived:	05/20	0/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.
- O3 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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Wistore

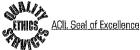
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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention: Gregory Wacik					Date of R	eport:	06/05	,
Reported To: Versar, Inc./Blue Marsh Reservo 9200 Rumsey Road	ir				Lab ID:		2294	-14-0015758
Suite 100					Date Coll	ected:	05/20)/14 08:40
Columbia MD 21045-1934					Collected	By:	, Clien	•
Sample Desc: BM-6 Mid-Depth					Date Rece	ived:	05/20)/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.03	mg/l	.01	1	SM 4500P-E	05/28	14:15	HRG
NITROGENS								-
Nitrogen, Ammonia	0.06	mg/l	.05	1	D6919-03	06/04	16:44	JCL
Nitrogen, Nitrate	5.00	mg/l	.05	1	EPA 353.2	05/21	15:22	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	11:57	JCL
Nitrogen, Total Kjeldahl	0.38	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	05/27	10:35	ALD
RESIDUES								
Solids, Total Dissolved	206	mg/l	5	1	SM 2540C	05/21	12:30	тмн
Solids, Total Suspended	<3	mg/l	3	1	SM 2540D	05/21	12:30	TMH
TITRATIONS		- •				•		
Alkalinity, Total to pH 4.5	105	mg/l	1	1	SM 2320 B	05/27	10:15	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	oir				Date of F Lab ID:	eport:	06/05 2294	/14 14-0015759
Suite 100 Columbia MD 21045–1934					Date Coll Collected		05/20 Clien)/14 08:40 t
Sample Desc: BM-6 Deep					Date Rece	eived:	05/20)/14 14:30
PWSID: 3060912	Result.	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	05/20	16:38	ALD
Phosphorus as P, Dissolved	0.07	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.09	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS								
Nitrogen, Ammonia	0.38	mg/l	.05	1	D6919-03	06/04	16:59	JCL
Nitrogen, Nitrate	3.96	mg/l	.05	1	EPA 353.2	05/21	15:23	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	05/21	11:58	JCL
Nitrogen, Total Kjeldahl	0.79	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.7	mg/l	1	1	SM5310 C	05/27	10:48	ALD
RESIDUES								
Solids, Total Dissolved	167	mg/l	5	1	SM 2540C	05/21	12:30	тмн
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	05/21	12:30	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	108	mg/l	1	1	SM 2320 B	05/27	10:15	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention: Gregory Wacik					Date of R	eport:	06/05	/14
Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Lab ID:		2294	-14-0015760
Suite 100					Date Coll	ected:	05/20	/14 10:00
Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc: BM-7 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	32	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	38	/100ml	2	1	SM 9222D	05/20	16:00	₽L₩
Total Coliform	180	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	05/20	16:49	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	•	17:13	JCL
Nitrogen, Nitrate	4.60	mg/l	.05	1	EPA 353.2	05/21	15:26	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21		JCL
Nitrogen, Total Kjeldahl	0.50	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B		13:15	EMW
Total Organic Carbon	3.0	mg/l	1	1	SM5310 C	05/27	11:00	ALD
RESIDUES								
Solids, Total Dissolved	196	mg/l	5	1	SM 2540C	05/21	12:30	тмн
Solids, Total Suspended	<3	mg/l	3	1	SM 2540D	05/21	12:30	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	105	m <u>g/</u> l	1	1	SM 2320 B	05/27	10:15	HRG

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Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of I	Report:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015760
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	05/20	/14 10:00
	Columbia MD 21045-1934					Collected	d By:	Clier	t
Sample Desc:	BM-7 Surface					Date Reco	eived:	05/20	/14 14:30
								·	
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.
- O3 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 140015761
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 10:00 t
Sample Desc: BM-7 Mid-Depth					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.03	mg/l	.01	1	SM 4500P-E	05/20	16:49	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.03	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	17:28	JCL
Nitrogen, Nitrate	4.64	mg/l	.05	1	EPA 353.2	05/21	15:27	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:02	JCL
Nitrogen, Total Kjeldahl	0.37	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	05/27	11:25	ALD
RESIDUES								
Solids, Total Dissolved	197	mg/l	5	1	SM 2540C	05/21	12:30	ТМН
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	05/21	12:30	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	107	mg/l	1	1	SM 2320 B	05/27	10:30	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of F	Report:	06/05	5/14	
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015761	
	9200 Rumsey Road									
	Suite 100					Date Coll	Lected:	05/20)/14 10:00	
	Columbia MD 21045-1934					Collected	i By:	Clier		
Sample Desc:	BM-7 Mid-Depth					Date Rece	eived:	05/20)/14 14:30	
PWSID: 30609	912			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
	The SM 5210B sample did not have a I ng/L.	DO depletion of	at least 2							

03 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik					Date of R	eport:	06/05	
Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Lab ID:		2294	-14-0015762
Suite 100					Date Coll	ected:	05/20	/14 10:00
Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc: BM-7 Deep					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	05/20	16:49	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.06	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS								
Nitrogen, Ammonia	0.14	mg/l	.05	1	D6919-03	06/04	17:43	JCL
Nitrogen, Nitrate	4.41	mg/l	.05	1	EPA 353.2	05/21	15:28	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:03	JCL
Nitrogen, Total Kjeldahl	0.26	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	1.9	mg/l	1	1	SM5310 C	05/27	12:50	ALD
RESIDUES								
Solids, Total Dissolved	222	mg/l	5	1	SM 2540C	05/21	12:55	тмн
Solids, Total Suspended	13	mg/l	3	1	SM 2540D	05/21	12:55	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	107	mg/l	1	1	SM 2320 B	05/27	10:30	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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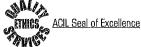
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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 140015763
Suite 100 Columbia MD 21045-1934	· ·				Date Coll Collected		05/20 Clien)/14 11:45 It
Sample Desc: BM-8 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	52	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	52	/100ml	2	1	SM 9222D	05/20	16:00	PLW
Total Coliform	410	, mpn/100ml	1	1	SM 9223B	,	09:15	DAD
CHEMISTRY						,		
COLORMETRIC								
Phosphate as P, Ortho	0.01	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.01	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	17:57	JCL
Nitrogen, Nitrate	4.32	mg/l	.05	1	EPA 353.2	05/21	15:29	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:06	JCL
Nitrogen, Total Kjeldahl	0.50	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	05/27	13:03	ALD
RESIDUES								
Solids, Total Dissolved	197	mg/l	5	1	SM 2540c	05/21	12:55	тмн
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	05/21	12:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	100	mg/l	1	1	SM 2320 B	05/27	10:30	HRG

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Attention:	Gregory Wacik					Date of F	eport:	06/05	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20)/14 11:45
	Columbia MD 21045-1934					Collected	l By:	Clier	nt
Sample Desc:	BM-8 Surface					Date Rece	ived:	05/20)/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.

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Attention: Gregory Wacik



Data of Departs 06/05/4/

				Date of R Lab ID:	eport:	•	/14 14-0015764
				Date Coll	ected:	05/20	/14 11:45
							•
				Date Rece	ived:	05/20	/14 14:30
		Rep	Dilutn		Test	Test	
Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
<.01	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
<.01	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
<.05	mg/l	.05	1	D6919-03	06/04	18:12	JCL
4.33	mg/l	.05	1	EPA 353.2	05/21	15:32	JCL
<.05	mg/l	.05	1	EPA 353.2	05/21	12:07	JCL
0.52	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
3	mg/l	2	1	SM 5210B	05/21	13:15	EMW
2.6	mg/l	1	1	SM5310 C	05/27	13:28	ALD
207	mg/l	5	1	SM 2540C	05/21	12:55	ТМН
<3	mg/l	3	1	SM 2540D	05/21	12:55	ТМН
					-		
99	mg/l	1	1	SM 2320 B	05/27	10:30	HRG
	Result 	Result Unit <.01	Result Unit Rep Limit <.01	Result Unit Rep Limit Dilutn Factor <.01	Lab ID: Lab ID: Date Coll Collected Date Coll Collected Result Unit Rep Imit Dilutn Factor Procedure <.01	Result Unit Rep Limit Dilutn Factor Procedure Date <.01	Lab ID: 2294 Date Collected: 05/20 Collected By: Clien Date Received: 05/20 Collected By: 05/20 Date Received: 05/20 Result Unit Limit Factor Procedure Date Test Test <.01

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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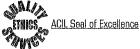
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Attention:	Gregory Wacik					Date of F	eport:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015764
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20)/14 11:45
	Columbia MD 21045-1934					Collected	l By:	Clier	it
Sample Desc:	BM-8 Mid-Depth					Date Rece	ived:	05/20)/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
02 T	he SM 5210B sample did not have a I	DO depletion of	at least 2						

mg/L.

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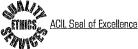
Reviewed and Approved by: Wisting M. Listler

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservo 9200 Rumsey Road	pir				Date of Report: Lab ID:		06/05/14 2294-14-0015765	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien)/14 11:45 t
Sample Desc: BM8 Deep					Date Rece	ived:	05/20)/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC				•				
Phosphate as P, Ortho	0.03	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
Phosphorus as P, Dissolved	0.06	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.07	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS						,		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	18:26	JCL
Nitrogen, Nîtrate	3.69	mg/l	.05	1	EPA 353.2	05/21	15:33	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:08	JCL
Nitrogen, Total Kjeldahl	0.29	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	05/27	13:40	ALD
RESIDUES								
Solids, Total Dissolved	198	mg/l	5	1	SM 2540C	05/21	12:55	тмн
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	05/21	12:55	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	91	mg/l	1	1	SM 2320 B	05/27	10:45	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 -14-0015766
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 10:30 t
Sample Desc: BM-9 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	26	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	74	/100ml	2	1	SM 9222D		16:00	PLW
Total Coliform	410	, mpn/100ml	1	1	SM 9223B	'	09:15	DAD
CHEMISTRY		. ,				- / · ·		
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E	05/21	17:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	18:41	JCL
Nitrogen, Nitrate	4.59	mg/l	.05	1	EPA 353.2	05/21	15:34	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:09	JCL
Nitrogen, Total Kjeldahl	0.53	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.7	mg/l	1	1	SM5310 C	05/27	13:52	ALD
RESIDUES								
Solids, Total Dissolved	214	mg/l	5	1	SM 2540C	05/21	12:55	TMH
Solids, Total Suspended	4 .	mg/l	3	1	SM 2540D	05/21	12:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	97	mg/l	1	1	SM 2320 B	05/27	10:45	HRG

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Attention:	Gregory Wacik					Date of F	eport:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015766
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	/14 10:30
	Columbia MD 21045-1934					Collected	By:	Clien	it
Sample Desc:	BM-9 Surface					Date Rece	ived:	05/20)/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

- O1 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.
- O3 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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•	egory Wacik rsar, Inc./Blue Marsh Reservo 00 Rumsey Road	ir				Date of R Lab ID:	eport:	06/05 2294	/14 -14-0015767
	ite 100 Lumbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 10:30 t
Sample Desc: BM	-9 Mid-Depth					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912		Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY				•					
COLORMETRIC			11			0W (5000 5	05 (00	A	
•	as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E			ALD
	is as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
•	is as P, Total	0.02	mg/l	.01	1	SM 4500P-E	05/21	17:42	ALD
NITROGENS									
Nitrogen,	Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	18:56	JCL
Nitrogen,	Nitrate	4.60	mg/l	.05	1	EPA 353.2	05/21	15:35	JCL
Nitrogen,	Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:10	JCL
Nitrogen,	Total Kjeldahl	0.51	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER									
Biochemic	al Oxygen Demand	2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Org	anic Carbon	2.5	mg/l	1	1	SM5310 C	05/27	14:04	ALD
RESIDUES									
Solids, T	otal Dissolved	214	mg/l	5	1	SM 2540C	05/21	12:55	ТМН
Solids, T	otal Suspended	3	mg/l	3	1	SM 2540D	05/21	12:55	TMH
TITRATIONS	·		- •				•		
Alkalinit	y, Total to pH 4.5	103	mg/l	1	1	SM 2320 B	05/27	10:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Wisting M.

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of R	eport:	06/05	6/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015767
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	0/14 10:30
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc:	BM-9 Mid-Depth					Date Rece	eived:	05/20	0/14 14:30
PWSID: 30609	212			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									يسا عث علا الله الله علا الله
02 т	he SM 5210B sample did not have a	DO depletion of	at least 2						

mg/L.

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Wistina ther)

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road Suite 100	voir				Date of R Lab ID: Date Coll	•		/14 14-0015768 1/14 10:30
Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc: BM-9 Deep					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC	0.00		04	4	au (500b 5	05 /00	44 55	
Phosphate as P, Ortho	0.09	mg/l	.01	1	SM 4500P-E	•		ALD
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.09	mg/l	.01	1	SM 4500P-E	05/21	17:42	ALD
NITROGENS								
Nitrogen, Ammonia	0.05	mg/l	.05	1	D6919-03	,	19:10	JCL
Nitrogen, Nitrate	5.66	mg/l	.05	1	EPA 353.2	05/21	15:37	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:12	JCL
Nitrogen, Total Kjeldahl	0.30	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	05/27	14:16	ALD
RESIDUES								
Solids, Total Dissolved	233	mg/l	5	1	SM 2540C	05/21	12:55	ТМН
Solids, Total Suspended	19	mg/l	3	1	SM 2540D	05/21	13:15	ТМН
TITRATIONS		-				•		
Alkalinity, Total to pH 4.5	127	mg/l	1	1	SM 2320 B	05/27	11:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Mistina M. Listler

Christina Kistler Account Executive

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	Gregory Wacik Versar, Inc./Blue Marsh Reservoir					Date of R Lab ID:	eport:	06/05 2294	/14 14-0015768
	9200 Rumsey Road Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien)/14 10:30 t
Sample Desc:	ВМ-9 Deep					Date Rece	ived:	05/20	/14 14:30
PWSID: 30609	912	Result	Unit 	Rep Limit	Dilutn Factor	Procedure	Test Date 	Test Time 	Analyst

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 -14-0015769
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 11:00 t
Sample Desc: BM-10 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	160	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	190	/100ml	2	1	SM 9222D		16:00	PLW
Total Coliform	1700	, mpn/100ml	1	1	SM 9223B		09:15	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.06	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
Phosphorus as P, Dissolved	0.07	mg/l	. 05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.08	mg/l	.01	1	SM 4500P-E	05/21	17:42	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	19:25	JCL
Nitrogen, Nitrate	4.83	mg/l	.05	1	EPA 353.2	05/21	15:38	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:13	JCL
Nitrogen, Total Kjeldahl	0.70	mg/l	.25	1	EPA 351.2	05/28	16:07	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	3.4	mg/l	1	1	SM5310 C	05/27	14:29	ALD
RESIDUES								
Solids, Total Dissolved	210	mg/l	5	1	SM 2540C	05/21	12:55	тмн
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	05/21	13:15	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	109	mg/l	1	1	SM 2320 B	05/27	11:00	HRG

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Christina Kistler Account Executive

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NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.







Attention:	Gregory Wacik					Date of R	eport:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015769
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	/14 11:00
	Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc:	BM-10 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Ünit	Limit	Factor	Procedure	Date	Time	Analyst

O1 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

- O2 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 03 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.
- 04 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh M 9200 Rumsey Road	Reservoir				Date of R Lab ID:	eport:	06/05 2294	/14 –14–0015770
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 11:00 t
Sample Desc: BM-10 Mid-Depth					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.09	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.10	mg/l	.01	1	SM 4500P-E	05/21	17:42	ALD
NITROGENS								
Nítrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	19:39	JCL
Nitrogen, Nitrate	6.20	mg/l	.1	2	EPA 353.2	05/21	15:56	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:14	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	05/29	16:03	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	1.8	mg/l	1	1	SM5310 C	05/27	14:41	ALD
RESIDUES								
Solids, Total Dissolved	242	mg/l	5	1	SM 2540C	05/21	12:55	тмн
Solids, Total Suspended	8	mg/l	3	1	SM 2540D	05/21	13:15	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	116	mg/l	1	1	SM 2320 B	05/27	11:00	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Kistine

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of R	eport:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015770
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	/14 11:00
	Columbia MD 21045-1934					Collected	By:	Clier	it
Sample Desc:	BM-10 Mid-Depth					Date Rece	ived:	05/20	/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									الت من حد حد حد من من عد

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Reviewed and Approved by: Wisting M. Kistler

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservo 9200 Rumsey Road	bir				Date of R Lab ID:	eport:	06/05 2294	/14 14-0015771
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 11:00 t
Sample Desc: BM-10 Deep					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY					منت الحا الحا علية الحة الحا الحا الحا الحا الحا علي الحا			
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	05/20	16:55	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:30	HRG
Phosphorus as P, Total	0.05	mg/l	.01	1	SM 4500P-E	05/21	17:42	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/04	20:38	JCL
Nitrogen, Nitrate	6.22	mg/l	.1	2	EPA 353.2	05/21	15:57	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	05/21	12:15	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	05/29	16:06	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	1.6	mg/l	1	1	SM5310 C	05/27	15:04	ALD
RESIDUES								
Solids, Total Dissolved	244	mg/l	5	1	SM 2540C	05/21	12:55	ТМН
Solids, Total Suspended	25	mg/l	3	1	SM 2540D	05/21	13:15	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	120	mg/l	1	1	SM 2320 B	05/27	11:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Wistine

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/05 2294	/14 -14-0015772
Suite 100 Columbia MD 21045-1934					Date Coll Collected		05/20 Clien	/14 12:40 t
Sample Desc: BM-11 Surface					Date Rece	ived:	05/20	/14 14:30
PWSID: 3060912	Resült	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	410	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
Fecal Coliform	440	/100ml	2	1	SM 9222D	05/20	16:00	PLW
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	05/21	09:15	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E			ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/02	14:45	HRG
Phosphorus as P, Totäl	0.05	mg/l	.01	1	SM 4500P-E	05/21	17:42	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03		20:52	JCL
Nitrogen, Nitrate	3.70	mg/l	.05	1	EPA 353.2	05/21	15:43	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2		12:18	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	05/29	16:07	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	05/21	13:15	EMW
Total Organic Carbon	1.8	mg/l	1	1	SM5310 C	05/27	16:16	ALD
RESIDUES								
Solids, Total Dissolved	86	mg/l	5	1	SM 2540C	05/21		тмн
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	05/21	13:15	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	26	mg/l	1	1	SM 2320 B	05/27	11:30	HRG

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Attention:	Gregory Wacik					Date of F	Report:	06/05	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0015772
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	05/20	/14 12:40
	Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc:	BM-11 Surface					Date Rece	eived:	05/20	/14 14:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator at 05/20/14 at 15:15.

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Relinquished by Received by: Date: $5/20/i4$ Time: 1:45	No: 1 Desc: BM-1 Surface , EC, TC, () 2-N, NO3-N, d-po4-p, o-po4, BOD, 3-N, tkm, Alk, tds, tss, po4-p, to No: 2 Desc: BM-2 Surface , EC, TC, () 2-N, NO3-N, d-po4-p, o-po4, BOD, 2-N, NO3-N, d-po4-p, o-po4, BOD, 3-N, tkm, Alk, tds, tss, po4-p, to	jbs 04/17/14 3:47:32 PM Account: 2294 Work Order: 004037 Customer: Gregory Wacik Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers: WACK
Received for laboratory by: Date: 5-2014 Fime: 1420 Sample entered by:	Matrix: O Date: $5/2c/i4$ Matrix: O Date: $5/2c/i4$ Time: $3/3/5$ B - 1 X L 250mlMicro P w/ Sterile/Na2S203; C - 1 X L Bod p w/ Cool to 6 C; D - 1 X 500ml NH3 p w/ Cool to 6 C; E - 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace; F - 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace; A - 1 X 250mlMicro P w/ Sterile/Na2S203; B - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ H3P04/zero headspace; F - 1 X 8oz Alk p w/ F - 1 X 8oz Alk p w/	M. J. REIDER ASSOCIATES, INC. COFC.PRT Chain of Custody Work Order: 004037 Project Leader: CMB No: 236461 Work Order Description: Seasonal Monthly Blue Marsh Reservoir No: 236461 Remarks: No: 236461 Remarks: Beservoir Total Sampling Time (hours): Bottle Prep by: Deg C. If Temp Unacceptable, On Ice? Y N Approved By: Jby I Temp Unacceptable, On Ice? Y N

5754 Sample No: 2720 252 Sample No: Date: Sample No: jbs 04/17/14 3:47:32 PM Relinquished by Samplers: Customer: Address: Account: Phone: PC, EC, TC, QIV NJ XU NO2-N, NO3-N, d-po4-p, o-po4, BOD y NH3-N, tkn, Alk, tds, tss, po4-p, toc, sle No: 4 Desc: BM-2 Deep NO2-N, NO3-N, d-po4-p, o-po4, BODAN NH3-N, tkm, Alk, tds, tss, po4-p, toc. NH3-N, tkn, Alk, tds, tss, po4-p, toc, NO2-N, NO3-N, d-po4-p, o-po4, BOD 5/20/14 Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Gregory Wacik 215-656-6561 Columbia MD 21045-1934 Suite 100 2294 σ ω WACK Desc: Desg BM-5 Surface BM-2 Mid-Depth Time: EXT: Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir 1:45 Received by: M. J. REIDER ASSOCIATES, INC. Laboratory Receipt Temp:_ Total Sampling Time (hours): Remarks: Chain of Custody Project Leader: CMB Approved By: JbS Date: 5 - 70-14 Received for laboratory в Þ - -B B ⊅ ч H 1 I ۱ ۲ ₽ 1 H θ 団 I 1 X 250mlMicro P w/ Sterile/Na2S203 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; 0001 Cool to 6 C/Zero Headspace; 0001 Matrix: 0 Matrix: 0 X L Bod p w/ Cool to 6 C; X 16ozNO2NO3 p w/ Cool to 6 C; X 500ml NH3 p w/ H2SO4(pH<2); X L Bod p w/ Cool to 6 C; X 16ozNO2NO3 p w/ Cool to 6 C; X 500ml NH3 p w/ H2SO4 (pH<2); Matrix: 0 X 8oz Alk p w/ × X 8oz Alk p w/ ool to 6 C/Zero Headspace; X 2xambervoa g w/ H3PO4/zero headspace; X 8oz Alk p w/ X 500ml NH3 p w/ H2SO4(pH<2); X 2xambervoa g w/ H3PO4/zero headspace; If Temp Unacceptable, On Ice? 2xambervoa g w/ H3PO4/zero headspace; to 6 C/Zero Headspace; : Āq Time: 1430 Bottle Prep by: No: Time: Date: Time: Date: Time: Date: 236461 <u>5/20/14</u> 5/20/14 5/20/14 0%20 Page: К COFC.PRT age: 2 z

Sample entered by:

12728 5757 Sample No: Date: 5/20/14 Relinquished by: Sample No: 04/17/14 3:47:32 PM Samplers: Customer: នុក្ខ Address: Account: Phone: Ne No: 7 Desc: BM-MMLU-LLE NO2-N, NO3-N, d-po4-P, o-po4, BODW PC, EC, TC, Y, Y, NO2-N, NO3-N, d-po4-p, o-po4, BOD, NH3-N, tkm, Alk, tds, tss, po4-p, toc, NH3-N, tkn, Alk, tds, tss, po4-p, toc, Versar, Inc./Blue Marsh Reservoir Columbia MD 21045-1934 215-656-6561 Ext: Gregory Wacik Suite 100 9200 Runsey Road 2294 თ WACIK 2 5 Desc: BM-6 Surface BM-Mid-Depth Time: 145 B Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir Received by: Laboratory Receipt Temp: 10 Total Sampling Time (hours): M. J. REIDER ASSOCIATES, INC. Remarks: Chain of Custody Approved By: MS Date: 5-10-14 Received for laboratory by; 89≱ ⊦ 1 и ц с и и и д С м М чы III A Q 1 X 250mlMicro P w/ Sterile/Na2S203; 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; 0001 Cool to 6 C/Zero Headspace; Matrix: Matrix: 0 X L Bod p w/ Cool to 6 C; X 16ozNO2NO3 p w/ Cool to 6 C; X 8oz Alk p w/ ool to 6 C/Zero Headspace; X 2xambervoa g w/ H3PO4/zero headspace; X 500ml NH3 p w/ H2SO4 (pH<2); X 8oz Alk p w/ X 500ml NH3 p w/ H2SO4 (pH<2); M If Temp Unacceptable, On Ice? 2xambervoa g w/ H3PO4/zero headspace; 0 Time: Sample entered by: 1430 Bottle No: Time: Time: Prep Date: Date: 236461 by: 2/20/14 5/20/14 Page: COFC.PRT age: 3 0840 К z

15759 5760 Date: 5/20/14 Relinquished by Sample No: Sample No: Customer: jbs 04/17/14 3:47:32 PM Samplers: Address: Account: Phone: NH3-N, tkn, Alk, tds, tss, po4-b, toc, FC, EC, TC, VI PN P. . NO2-N, NO3-N, d-po4-p, o-po4, BOD NO2-N, NO3-N, d-po4-p, o-po4, BOD/ NH3-N, tkn, Alk, tds, tss, po4-p, toc, Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road 215-656-6561 Gregory Wacik Columbia MD 21045-1934 Suite 100 2294 9 ω WACIK 2 Month Month Marcel Desc вм-фреер Time: 1:45 BM-7 Surface 5 Ext: Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir Received by: Laboratory Receipt Temp: M. J. REIDER ASSOCIATES, INC. Total Sampling Time Remarks: Chain of Custody Approved By: JUS Date: Received for laboratory by; (hours): HLOZ. S 88 ≱ - - **в** (р 1 – 1 Deg C. U 1 X 250mlMicro P w/ Sterile/Na2S203. 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; 1 X 500ml NH3 p w/ H2SO4 (pH<2); 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; 1 X 2xambervoa g w/ H3P04/zero headspace; 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Matrix: 0 X 500ml NH3 p w/ H2SO4 (pH<2); X 8oz Alk p w/ X 2xambervoa g w/ H3PO4/zero headspace; If Temp Unacceptable, On Ice? to 6 C/Zero Headspace; Time: Sample entered by: 1430 Bottle Prep No: Time: Time: Date: Date: 236461 by: <u>5/20/14</u> <u>0340</u> Page: COFC.PRT age: 4 М z

23

Relinquished by: Start Received by: Date: 5/20/14 Time: 1:45	Sample No: 12 Desc: BM-8 Surface FC, EC, TC, JJ W A NO2-N, NO3-N; d-po4-p, o-po4, BOD NH3-N, tkn, Alk, tds, tss, po4-p, toc,	15762 Sample No: 11 Desc: BM-7) Deep NO2-N, NO3-N, d-poi-p, o-poi, BOD NH3-N, tkn, Alk, tds, tss, poi-p, toc,	576 Sample No: 10 Desc: BM-7 Mid-Depth NO2-N, NO3-N, d-po1-p, o-po1, BOD NH3-N, tkn, Alk, tds, tss, po1-p, toc,	Customer: Gregory Wacik Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers:	
ed by: Date: 512/14 Date: 512/14 Sample entered by:	rix: 250ml Bod L6ozNC 160zNC 170zNC 160ZNC 160ZNC 1	rix: L Bod 160zN(500ml 2xambe 80z A to 6	Matrix: 0 Date: $\frac{5}{20/y}$ A - 1 X L Bod p w/ Cool to 6 C; B - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ H2SO4(pH<2); D - 1 X 2xambervoa g w/ H3PO4/zero headspace; E - 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace;	Bottle Prep by: Temp Unacceptable, On Ice? Y N	M. J. REIDER ASSOCIATES, INC. COFC.PRT Page: 5 Chain of Custody Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir

5765 15764 15766 Sample No: Sample No: Sample No: Date: _ jbs 04/17/14 3:47:33 PM Relinquished by: Samplers: Customer: Address: Account: Phone: FC, EC, TC, VI K K NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkn, Alk, tds, tss, po4-p, toc, Je No: 14 Desc: BM-8 Jeep MO2-N, NO3-N, d-po4-p, o-po4, BOD NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkm, Alk, tds, tss, po4-p, toc, 0 NH3-N, tkn, Alk, tds, tss, po4-p, toc, 5/20/14 15 Versar, Inc./Blue Marsh Reservoir Gregory Wacik Columbia MD 21045-1934 215-656-6561 Ext: 9200 Rumsey Road Suite 100 2294 SACIK 00 Desc: Y \mathcal{R} BM-9 Surface Time: Ŗ Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir 0 Received by: M. J. REIDER ASSOCIATES, INC. Laboratory Receipt Temp:_ Total Sampling Time (hours): Remarks: Chain of Custody Approved By: ______ Date: 5-70-14 Received for laboratory by: чы ... Bi≱ ⊦ I Br ⊅ α≱ ۲ ۱ U ы Г Ω Ω Q 1 X 250mlMicro P w/ Sterile/Na25203; 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; 1 X 500ml NH3 p w/ H2SO4(pH<2); 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; Cool Cool to 6 C/Zero Headspace; 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Matrix: 0 X L Bod p w/ Cool to 6 C; X 16ozNO2NO3 p w/ Cool to 6 C; X 500ml NH3 p w/ H2SO4 (pH<2); Matrix: 0 X 2xambervoa g w/ H3PO4/zero headspace; X 8oz Alk p w/ X 8oz Alk p w/ ool to 6 C/Zero Headspace; x 500ml NH3 p w/ H2SO4 (pH<2); X 2xambervoa g w/ H3PO4/zero headspace; X 2xambervoa g w/ H3PO4/zero headspace; If Temp Unacceptable, On Ice? Time: 1470 Bottle Prep No: Date: 5/20/14 Time: Time: Date: Date: 236461 by: 5/20/14 5/20/14 Page: К COFC.PRT age: 6 030 z

Sample entered by:

Relinquished by: Received by: Date: 5/20/14 Time: 1.45	Sample No: 18 Desc: BM-10 Surface FC, EC, TC, VI W W W NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkm, Alk, tds, tss, po4-p, toc,	(57)ゆる Sample No: 17 Desc, BM-9 Deep NO2-N, NO3-N, d-po4-P, o-po4, BOD NH3-N, tkm, Alk, tds, tss, po4-P, toc,	<pre>5767 sample No: 16 Debp: BM_P Mid-Depth NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkm, Alk, tds, tss, po4-p, toc,</pre>	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers: WACK	
Received for laboratory by Date: 5-2074 Time: (Y30)	Matrix: O Date: S/20/14 A - 1 X 250mlMicro P w/ Sterile/Na2SZO3; B - 1 X L Bod p w/ Cool to 6 C; C - 1 X 16ozNO2NO3 p w/ Cool to 6 C; D - 1 X 500ml NH3 p w/ H2SO4(pH<2); E - 1 X 2xambervoa g w/ H3PO4/zero headspace; F - 1 X 8oz Aik p w/ Cool to 6 C/Zero Headspace;	Cool to 6 C/Zero Headspace; Matrix: 0 Date: $5/26/14$ A - 1 X L Bod p w/ Cool to 6 C; B - 1 X L602N02N03 p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ Cool to 6 C; D - 1 X 2xambervoa g w/ H3P04/zero headspace; Z - 1 X 80z Alk p w/ Cool to 6 C/zero Headspace;		Bottle Prep by: p Unacceptable, On Ice? Y N	M. J. REIDER ASSOCIATES, INC. COFC.PRT Chain of Custody Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir Remarks:

12700 577Z Sample No: 21 Sample No: Sample No: Date: 5/20/14 Relinquished by Customer: jbs 04/17/14 3:47:33 PM Samplers: Address: Account: Phone: FC, EC, TC, A-poi-p, o-poi, BOD, M NO2-N, NO3-N, d-poi-p, o-poi, BOD, M NH3-N, tkm, Alk, tds, tss, poi-p, toc, no2-n, no3-n, d-po4-p, NH3-N, tkm, Alk, tds, tss, po4-p, toc, NO2-N, NO3-N, d-po4-p, NH3-N, tkn, Alk, tds, tss, po4-p, toc, Versar, Inc./Blue Marsh Reservoir Gregory Wacik 215-656-6561 9200 Runsey Road Columbia MD 21045-1934 Suite 100 20 51 2294 WACIK 5 Desc: Desc: BMALO Deep BM-11 Surface o-po4, BOD, BM-10 Mid-Depth Time: EXT: Work Order: 004037 Work Order Description: Seasonal Monthly Blue Marsh Reservoir 1:5 Received by: M. J. REIDER ASSOCIATES, INC. Total Sampling Time Remarks: Laboratory Receipt Temp: Chain of Custody Approved By: ______ Date: 5-20-14 Received for laboratory by: (hours): 0 ча (ж. 1 – 1 ₩≱ 1 1 ы U I I B ₽ - -B ⊅ I I ۲đ U Ð G 1 X 250mlMicro P w/ Sterile/Na2S203; 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; C001 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; 1 X 500ml NH3 p w/ H2SO4 (pH<2); 1 X L Bod p w/ Cool to 6 C; 1 X 16ozNO2NO3 p w/ Cool to 6 C; Cool to 6 C/Zero Headspace; 1 X 500ml NH3 p w/ H2SO4 (pH<2); Cool to 6 C/Zero Headspace; Matrix: 0 Matrix: 0 Matrix: 0 X 2xambervoa g w/ H3PO4/zero headspace; X 8oz Alk p w/ X 500ml NH3 p w/ H2SO4 (pH<2); x 8oz Alk p w/ ool to 6 C/Zero Headspace; X 8oz Alk p w/ X 2xambervoa g w/ H3PO4/zero headspace; X 2xambervoa g w/ H3PO4/zero headspace; If Temp Unacceptable, On Time: Sample entered by: 0470 Bottle Prep No: Date: Time: Date: Time: Time: Date: 236461 Hce? by: 5 <u> 1/0/15</u> U Page: 20 600 p н COFC.PRT 120/14 Ø. z œ



Attention: Gregory Wacik

CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



06/07/0/

Date of Peport:

Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		06/27/14 2294-14-0019470	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17/14 13:15 Client	
Sample Desc: BM-1 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI				· · · · · · · · · · · · · · · · · · ·				
MICROBIOLOGY								
Escherichia coli	75	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	200	/100ml	2	1	SM 9222D	•	15:15	
Total Coliform	1200	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.21	mg/l	.01	1	SM 4500P-E	06/17	16:45	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/18	10:50	ALD
Phosphorus as P, Total	0.23	mg/l	.01	1	SM 4500P-E	06/18	10:50	ALD
NITROGENS								
Nitrogen, Ammonia	0.10	mg/l	.05	1	D6919-03	06/17	16:33	JCL
Nitrogen, Nitrate	4.44	mg/l	.05	1	EPA 353.2	'	15:54	
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	'	13:48	
Nitrogen, Total Kjeldahl	0.49	mg/l	.25	1	EPA 351.2	06/19	12:31	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B		15:55	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	06/18	12:40	ALD
RESIDUES			_					
Solids, Total Dissolved	268	mg/L	5	1	SM 2540C	•	12:35	ТМН
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	06/18	12:35	ТМН
TITRATIONS	(70			_				
Alkalinity, Total to pH 4.5	130	mg/l	1	1	SM 2320 B	06/18	09:30	HRG

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Reviewed and Approved by:

Wistike n 'lev

Christina Kistler Account Executive

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		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
Sample Desc:	BM-1 Surface					Date Rece	eived:	06/17	/14 13:50	
	Columbia MD 21045-1934					Collected		Clier	,	
	Suite 100					Date Col	lected:	06/17	/14 13:15	
	9200 Rumsey Road									,
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		'	-140019470	ì
Attention:	Gregory Wacik					Date of I	Report:	06/27	/14	

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- 03 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Reviewed and Approved by: Mistine 7

Christina Kistler Account Executive

Page 2 of 2

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		06/27/14 229414-0019471	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 09:15 t
Sample Desc: BM-2 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	3	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	<2	/100mL	2	1	SM 9222D	06/17	15:15	PLW
Total Coliform	170	mpn/100ml	1	1	SM 9223B	,	10:15	
CHEMISTRY						,		
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E	06/17	16:45	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			ALD
Phosphorus as P, Total	0.03	mg/l	.01	1	SM 4500P-E	06/18	10:50	ALD
NITROGENS						-		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	17:16	JCL
Nitrogen, Nitrate	4.07	mg/l	.05	1	EPA 353.2	06/18	15:55	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	13:51	JCL
Nitrogen, Total Kjeldahl	0.37	mg/l	.25	1	EPA 351.2	06/19	12:34	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	06/18	13:11	ALD
RESIDUES								
Solids, Total Dissolved	204	mg/l	5	1	SM 2540C	06/18	12:35	ТМН
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	06/18	12:35	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	103	mg/l	1	1	SM 2320 B	06/18	09:30	HRG

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Reviewed and Approved by:

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Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of	Report:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0019471
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	06/17	'/14 09:15
	Columbia MD 21045-1934					Collecte	d By:	Clier	nt
Sample Desc:	BM-2 Surface					Date Rec	eived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

- O2 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 03 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- 04 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Christina Kistler Account Executive

Page 2 of 2

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road						eport:	06/27/14 2294-14-0019472	
Suite 100					Date Coll	ected:	06/17	//14 09:15
Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc: BM-2 Mid-Depth					Date Rece	eived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY					Naid Naid Lind Lind Lind ann ann ann ann ann ann ann			ومر بد وم نظر الك نظر الك
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E	06/17	16:52	ALD
Phosphorus as P, Dissolved	0.06	mg/l	.05	1	SM 4500P-E	06/18	10:50	ALD
Phosphorus as P, Total	0.10	mg/l	.01	1	SM 4500P-E	06/18	10:50	ALD
NITROGENS						•		
Nitrogen, Ammonia	0.12	mg/l	.05	1	D6919-03	06/17	17:31	JCL
Nitrogen, Nitrate	4.24	mg/l	.05	1	EPA 353.2	06/18	15:56	JCL
Nitrogen, Nitrite	<.05	mg/l	. 05	1	EPA 353.2	06/18	13:52	JCL
Nitrogen, Total Kjeldahl	0.51	mg/l	.25	1	EPA 351.2	06/19	12:35	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	10:04	EMW
Total Organic Carbon	2.9	mg/l	1	1	SM5310 C	06/18	13:58	ALD
RESIDUES								
Solids, Total Dissolved	231	mg/l	5	1	SM 2540C	06/18	12:35	TMH
Solids, Total Suspended	8	mg/l	3	1	SM 2540D	06/18	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	115	mg/l	1	1	SM 2320 B	06/18	09:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Wistore M. Fistle

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of R	eport:	06/27	//14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	2294	-14-0019472
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 09:15
	Columbia MD 21045-1934					Collected	Ву:	Clien	,
Sample Desc:	BM-2 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Reviewed and Approved by:

Wistore M. fistle

Christina Kistler Account Executive

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Attention: Gregory Wacik



06/27/14

Date of Report:

Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Lab ID:		2294-14-0019473	
Suite 100					Date Coll	ected:	06/17	/14 09:15
Columbia MD 21045-1934					Collected	By:	Clien	
Sample Desc: BM-2 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.11	mg/l	.01	1	SM 4500P-E	06/17	16:52	ALD
Phosphorus as P, Dissolved	0.24	mg/l	.05	1	SM 4500P-E	•		
Phosphorus as P, Total	0.28	mg/l	.01	1	SM 4500P-E	06/18	11:01	ALD
NITROGENS								
Nitrogen, Ammonia	0.52	mg/l	.05	1	D6919-03	06/17	17:46	JCL
Nitrogen, Nitrate	3,07	mg/l	.05	1	EPA 353.2	06/18	15:57	JCL
Nitrogen, Nitrite	0.09	mg/l	.05	1	EPA 353.2	06/18	13:53	JCL
Nitrogen, Total Kjeldahl	0.76	mg/l	.25	1	EPA 351.2	06/19	12:36	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	1.6	mg/l	1	1	SM5310 C	06/18	14:13	ALD
RESIDUES								
Solids, Total Dissolved	274	mg/l	5	1	SM 2540C	06/18	12:35	ТМН
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	06/18	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	147	mg/l	1	1	SM 2320 B	06/18	09:45	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of R	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0019473
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 09:15
	Columbia MD 21045-1934					Collected	By:	Clien	, it
Sample Desc:	BM-2 Deep					Date Rece	ived:	06/17	//14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/27 2294	/14 140019474
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	7/14 12:55 It
Sample Desc: BM-5 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI	، بینے سے ایک این							
MICROBIOLOGY								
Escherichia coli	980	mpn/100ml	1	1	SM 9223B	06/18	10:15	PL₩
Fecal Coliform	980	/100mL	2	1	SM 9222D		15:15	PLW
Total Coliform	>2400	, mpn/100ml	1	1	SM 9223B	•	10:15	
CHEMISTRY		. ,				/		
COLORMETRIC								
Phosphate as P, Ortho	0.20	mg/l	.01	1	SM 4500P-E	06/17	16:52	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/18	11:01	ALD
Phosphorus as P, Total	0.20	mg/l	.01	1	SM 4500P-E	06/18	11:01	ALD
NITROGENS						•		
Nitrogen, Ammonia	<.05	mg/l	. 05	1	D6919-03	06/17	18:00	JCL
Nitrogen, Nitrate	8.13	mg/l	.1	2	EPA 353.2	06/18	16:31	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	13:54	JCL
Nitrogen, Total Kjeldahl	0.34	mg/l	.25	1	EPA 351.2	06/19	12:37	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EM₩
Total Organic Carbon	1.3	mg/l	1	1	SM5310 C	06/18	14:28	ALD
RESIDUES								
Solids, Total Dissolved	366	mg/l	5	1	SM 2540C	06/18	12:35	ТМН
Solids, Total Suspended	14	mg/l	3	1	SM 2540D	06/18	12:35	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	200	mg/l	1	1	SM 2320 B	06/18	09:45	HRG

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Attention:	Gregory Wacik					Date of I	Report:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	, 4–14–0019474
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	06/17	7/14 12:55
	Columbia MD 21045-1934					Collecter	d By:	Clier	, nt
							-		
Sample Desc:	BM-5 Surface					Date Rec	eived:	06/17	7/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
•	Columbia MD 21045-1934 BM-5 Surface	Result	Unit			Collecter Date Reco	d By: eived: Test	CLier 06/17 Test	nt 7/14 13:50

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- O3 The total coliform sample was placed in the incubator on O6/17/14 at 16:10.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		06/27/14 2294-14-0019475	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 08:30 t
Sample Desc: BM-6 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI					وي حدود الله الله الله الله الله الله الله	*******		
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	04/18	10:15	ыш
Fecal Coliform	10	/100mL	2	1	SM 9222D	•	15:15	
Total Coliform	200	mpn/100ml		1	SM 9223B		10:15	
CHEMISTRY			•	•		00/10	10.15	1 6 4
COLORMETRIC								
Phosphate as P, Ortho	0.22	mg/l	.01	1	SM 4500P-E	06/17	16:52	ALD
Phosphorus as P, Dissolved	0.22	mg/l	.05	1	SM 4500P-E			
Phosphorus as P, Total	0.24	mg/l	.01	1	SM 4500P-E	06/18	11:06	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	18:15	JCL
Nitrogen, Nitrate	4.09	mg/l	.05	1	EPA 353.2	06/18	16:00	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	13:54	JCL
Nitrogen, Total Kjeldahl	0.46	mg/l	.25	1	EPA 351.2	06/19	12:38	JĊL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	06/18	14:43	ALD
RESIDUES								
Solids, Total Dissolved	216	mg/l	5	1	SM 2540C	06/18	12:35	ТМН
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	06/18	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	109	mg/l	1	1	SM 2320 B	06/18	09:45	HRG

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Attention:	Gregory Wacik					Date of I	Report:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	06/17	/14 08:30
	Columbia MD 21045-1934					Collected	By:	Clier	, it
Sample Desc:	BM-6 Surface					Date Rece	eived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

02 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of Report: Lab ID:		06/27/14 2294-14-0019476	
Suite 100 Columbia MD 21045–1934					Date Coll Collected		06/17 Clien	/14 08:30 t
Sample Desc: BM-6 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								وتتر وتتر وتتر بعن المار المار
COLORMETRIC								
Phosphate as P, Ortho	0.10	mg/l	.01	1	SM 4500P-E	06/17	16:52	ALD
Phosphorus as P, Dissolved	0.09	mg/l	.05	1	SM 4500P-E	06/18	11:06	ALD
Phosphorus as P, Total	0.11	mg/l	.01	1	SM 4500P-E	06/18	11:06	ALD
NITROGENS								
Nitrogen, Ammonia	0.14	mg/l	.05	1	D6919-03	06/17	18:29	JCL
Nitrogen, Nitrate	4.76	mg/l	.05	1	EPA 353.2	06/18	16:01	JCL
Nitrogen, Nitrite	0.05	mg/l	.05	1	EPA 353.2	06/18	13:55	JCL
Nitrogen, Total Kjeldahl	0.30	mg/l	.25	1	EPA 351.2	06/19	12:39	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	06/18	14:58	ALD
RESIDUES								
Solids, Total Dissolved	256	mg/l	5	1	SM 2540C	06/18	12:35	тмн
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	06/18	12:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	148	mg/l	1	1	SM 2320 B	06/18	10:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of R	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0019476
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 08:30
	Columbia MD 21045-1934					Collected	By:	Clier	it
Sample Desc:	BM-6 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservo [;] 9200 Rumsey Road	ir				Date of Report: Lab ID:		06/27 2294	7/14 ⊷14-0019477
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	7/14 08:30 ht
Sample Desc: BM-6 Deep					Date Rece	ived:	06/17	<u>/</u> 14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY				·	ینی وی _ا مر در بر بر بر بر بر بر بر بر ا			
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	06/17	16:52	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	-		
Phosphorus as P, Total	0.05	mg/l	.01	1	SM 4500P-E	06/18	11:15	ALD
NITROGENS								
Nitrogen, Ammonia	0.37	mg/l	.05	1	D6919-03	06/17	18:44	JCL
Nitrogen, Nitrate	3.47	mg/l	.05	1	EPA 353.2	06/18	16:02	JCL
Nitrogen, Nitrite	0.10	mg/l	.05	1	EPA 353.2	06/18	13:56	JCL
Nitrogen, Total Kjeldahl	0.53	mg/l	.25	1	EPA 351.2	06/19	12:40	J.CL.
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	1.6	mg/l	1	1	SM5310 C	06/18	15:12	ALD
RESIDUES								
Solids, Total Dissolved	218	mg/l	5	1	SM 2540C	06/18	12:35	тмн
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	06/18	12:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	148	mg/l	1	1	SM 2320 B	06/18	10:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of R	eport:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	2294	,
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 08:30
	Columbia MD 21045-1934					Collected	By:	, Clier	1
Sample Desc:	ВМ-6 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik



06/27/14

Date of Report:

Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	、					eport.	2294-14-0019478	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	7/14 09:45 nt
Sample Desc: BM-7 Surface					Date Rece	eived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI					and and the grad product over the second			
MICROBIOLOGY								
Escherichia coli	2	mpn/100mL	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	<2	/100ml	2	1	SM 9222D	•	15:15	
Total Coliform	58	mpn/100ml	1	1	SM 9223B	•	10:15	
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/18	11:15	ALD
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E	06/18	11:15	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	18:59	JCL
Nitrogen, Nitrate	4.05	mg/l	.05	1	EPA 353.2	06/18	16:05	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	13:59	JCL
Nitrogen, Total Kjeldahl	0.86	mg/l	.25	1	EPA 351.2	06/19	12:43	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	06/18	15:28	ALD
RESIDUES								
Solids, Total Dissolved	229	mg/l	5	1	SM 2540C	06/18	12:35	ТМН
Solids, Total Suspended	7	mg/l	3	1	SM 2540D	06/18	12:55	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	108	mg/l	1	1	SM 2320 B	06/18	10:00	HRG

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Attention:	Gregory Wacik					Date of F	Report:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	2294	, 4–14–0019478
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	7/14 09:45
	Columbia MD 21045-1934					Collected	By:	Clier	, nt
							-		
Sample Desc:	BM-7 Surface					Date Rece	ived:	06/17	7/14 13:50
								-	
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- 03 The SM 5210B sample did not have a DO depletion of at least 2 $\rm mg/L_{\star}$
- 04 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of Report: Lab ID:		06/27/14 2294-14-0019479	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 09:45 t
Sample Desc: BM-7 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.09	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	0.09	mg/l	.05	1	SM 4500P-E	06/18	11:15	ALD
Phosphorus as P, Total	0.09	mg/l	.01	1	SM 4500P-E	06/18	11:15	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	19:13	JCL
Nitrogen, Nitrate	4.12	mg/l	.05	1	EPA 353.2	06/18	16:06	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:00	JCL
Nitrogen, Total Kjeldahl	0.47	mg/l	.25	1	EPA 351.2	06/19	12:44	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	06/18	15:58	ALD
RESIDUES								
Solids, Total Dissolved	229	mg/l	5	1	SM 2540C	06/18	12:35	тмн
Solids, Total Suspended	7	mg/l	3	1	SM 2540D	06/18	12:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	106	mg/l	1	1	SM 2320 B	06/18	10:00	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of F	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•		, -14-0019479
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 09:45
	Columbia MD 21045-1934					Collected		Clier	,
Sample Desc:	BM-7 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		06/27 2294	7/14 140019480
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	7/14 09:45 ht
Sample Desc: BM-8 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.09	mg/l	. 01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	0.09	mg/l	.05	1	SM 4500P-E	06/18	11:25	ALD
Phosphorus as P, Total	0.11	mg/L	. 01	1	SM 4500P-E	06/18	11:25	ALD
NITROGENS						-		
Nitrogen, Ammonia	0.14	mg/l	.05	1	D6919-03	06/17	19:28	JCL
Nitrogen, Nitrate	3.32	mg/l	.05	1	EPA 353.2	06/18	16:07	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:01	JCL
Nitrogen, Total Kjeldahl	0.61	mg/l	.25	1	EPA 351.2	06/19	12:45	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	06/18	17:22	ALD
RESIDUES						•		
Solids, Total Dissolved	232	mg/l	5	1	SM 2540C	06/18	13:05	тмн
Solids, Total Suspended	32	mg/l	3	1	SM 2540D	06/18	12:55	тмн
TITRATIONS		•				,		
Alkalinity, Total to pH 4.5	101	mg/l	1	1	SM 2320 B	06/18	10:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of R	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		'	-14-0019480
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 09:45
	Columbia MD 21045-1934					Collected	By:	Clier	it
Sample Desc:	BM-8 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik



06/27/14

Date of Report:

Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Lab ID:	cpor c.	•	-14-0019481
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14-11:30 t
Sample Desc: BM-8 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	3	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	<2	/100ml	2	1	SM 9222D	06/17	15:15	PLW
Total Coliform	240	mpn/100mL	1	1	SM 9223B	06/18	10:15	PL₩
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/18	11:30	ALD
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E	06/18	11:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	•	19:42	
Nitrogen, Nitrate	3,88	mg/l	. 05	1	EPA 353.2	•	16:08	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2		14:04	
Nitrogen, Total Kjeldahl	0.59	mg/l	.25	1	EPA 351.2	06/19	12:46	JCL
OTHER	_							
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	•	15:55	
Total Organic Carbon	2.3	mg/L	1	1	SM5310 C	06/18	17:38	ALD
RESIDUES		<i>.</i> .		-				
Solids, Total Dissolved	191	mg/l	5	1	SM 2540C	•	13:05	ТМН
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	06/18	12:55	ТМН
TITRATIONS		<i>.</i> .	-					
Alkalinity, Total to pH 4.5	104	mg/l	1	1	SM 2320 B	06/18	10:15	HRG

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Attention:	Gregory Wacik					Date of F	Report:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	4–14–0019481
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 11:30
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc:	BM-8 Surface					Date Rece	eived:	06/17	7/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- O3 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.
- 04 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	•				Date of Report: Lab ID:		06/27 2294	/14 140019482
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 11:30 t
Sample Desc: BM-8 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.06	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/18	11:30	ALD
Phosphorus as P, Total	0.06	mg/l	.01	1	SM 4500P-E	06/18	11:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	06/17	19:57	JCL
Nitrogen, Nitrate	3.76	mg/l	.05	1	EPA 353.2	06/18	16:11	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:05	JCL
Nitrogen, Total Kjeldahl	0.61	mg/l	,25	1	EPA 351.2	06/19	12:47	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	06/18	17:53	ALD
RESIDUES								
Solids, Total Dissolved	206	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	8	mg/l	3	1	SM 2540D	06/18	12:55	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	91	mg/l	1	1	SM 2320 B	06/18	10:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of R	eport:	06/27	//14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0019482
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 11:30
	Columbia MD 21045-1934					Collected	By:	Clien	, it
Sample Desc:	BM-8 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									يعتد حسا لحا يحا الله كال كان

03 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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' Listle Christina Kistler

Account Executive

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Attention: Gregory Wacik					Date of R	eport:	06/27	/14
Reported To: Versar, Inc./Blue Marsh Reservoi	ir				Lab ID:		2294	-14-0019483
9200 Rumsey Road								
Suite 100					Date Coll	ected:	06/17	/14 11:30
Columbia MD 21045-1934					Collected	l By:	Clier	nt
Sample Desc: BM-7 Deep					Date Rece	eived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	06/18	11:30	ALD
Phosphorus as P, Total	0.10	mg/l	.01	1	SM 4500P-E	06/18	11:30	ALD
NITROGENS								
Nitrogen, Ammonia	0.11	mg/l	.05	1	D6919-03	06/17	20:12	JCL
Nitrogen, Nitrate	5.04	mg/l	.05	1	EPA 353.2	06/18	16:12	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:06	JCL
Nitrogen, Total Kjeldahl	0.45	mg/l	.25	1	EPA 351.2	06/19	12:48	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	06/18	18:08	ALD
RESIDUES								
Solids, Total Dissolved	222	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	13	mg/i	3	1	SM 2540D	06/18	12:55	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	107	mg/l	1	1	SM 2320 B	06/18	10:30	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Kistina M. Gistler

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of R	eport:	06/27	//14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 11:30
	Columbia MD 21045-1934					Collected	By:	Clien	, t
Sample Desc:	BM-7 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		06/27/14 229 4- 14-0019484	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 10:30 t
Sample Desc: BM-9 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	<2	/100ml	2	1	SM 9222D		15:15	PLW
Total Coliform	120	mpn/100ml	1	1	SM 9223B	,	10:15	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.06	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	0.07	mg/l	.05	1	SM 4500P-E	06/18	11:30	ALD
Phosphorus as P, Total	0.07	mg/l	.01	1	SM 4500P-E	06/18	11:30	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	20:26	JCL
Nitrogen, Nitrate	4.07	mg/l	.05	1	EPA 353.2	06/18	16:13	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:07	JCL
Nitrogen, Total Kjeldahl	0.96	mg/l	.25	1	EPA 351.2	06/19	12:48	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	4.0	mg/l	1	1	SM5310 C	06/18	18:25	ALD
RESIDUES								
Solids, Total Dissolved	218	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	06/18	12:55	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	102	mg/l	1	1	SM 2320 B	06/18	10:30	HRG

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Attention:	Gregory Wacik					Date of I	Report:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	-	2294	4-14-0019484
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	06/17	7/14 10:30
	Columbia MD 21045-1934					Collected	d By:	Clier	, nt
Sample Desc:	BM-9 Surface					Date Rece	eived:	06/17	/14 13:50
								-	
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- 03 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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M. Sistle KISTOR

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservo 9200 Rumsey Road	pir				Date of R Lab ID:	eport:	06/27 2294	/14 14-0019485
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 10:30 t
Sample Desc: BM-9 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.16	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	0.10	mg/l	.05	1	SM 4500P-E	06/18	11:36	ALD
Phosphorus as P, Total	0.16	mg/l	.01	1	SM 4500P-E	06/18	11:36	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	20:41	JCL
Nitrogen, Nitrate	4.47	mg/l	.05	1	EPA 353.2	06/18	16:14	JCL
Nitrogen, Nitrite	<.05	mg/l	. 05	1	EPA 353.2	06/18	14:08	JCL
Nitrogen, Total Kjeldahl	0.49	mg/l	.25	1	EPA 351.2	06/19	12:49	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.8	mg/l	1	1	SM5310 C	06/18	18:57	ALD
RESIDUES								
Solids, Total Dissolved	213	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	06/18	12:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	108	mg/l	1	1	SM 2320 B	06/18	10:30	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Mustine M. Listler

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Attention:	Gregory Wacik					Date of F	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 10:30
	Columbia MD 21045-1934					Collected	By:	Clien	it
Sample Desc:	BM-9 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Ultike M. Sistle

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi	r				Date of F Lab ID:	eport:	06/27 2294	'/14 140019486
9200 Rumsey Road Suite 100 Columbia MD 21045-1934				Date Coll Collected		06/17 Clier	/14 10:30 It	
Sample Desc: BM-9 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY		و برو هو برو این			میں ہیں میں بین میں اپنے اپنے اپنے اپنے اپنے اپنے اپنے اپنے			مخصر فعوة إيران فسن تست تسيد تسيد
COLORMETRIC								
Phosphate as P, Ortho	0.25	mg/l	.01	1	SM 4500P-E	06/17	17:02	ALD
Phosphorus as P, Dissolved	0.09	mg/l	.05	1	SM 4500P-E	06/18	11:36	ALD
Phosphorus as P, Total	0.26	mg/l	.01	1	SM 4500P-E	06/18	11:36	ALD
NITROGENS								
Nitrogen, Ammonia	0.17	mg/l	.05	1	D6919-03	06/17	20:55	JCL.
Nitrogen, Nitrate	4.17	mg/l	.05	1	EPA 353.2	06/18	16:17	JCL.
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	06/18	14:11	JCL
Nitrogen, Total Kjeldahl	0.34	mg/l	.25	1	EPA 351.2	06/19	14:09	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	1.8	mg/l	1	1	SM5310 C	06/18	19:41	AL.D
RESIDUES								
Solids, Total Dissolved	222	mg/l	5	1	SM 2540C	06/18	13:05	тмн
Solids, Total Suspended	20	mg/l	3	1	SM 2540D	06/18	13:20	тмң
TITRATIONS								
Alkalinity, Total to pH 4.5	131	mg/l	1	1	SM 2320 B	06/18	10:30	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of R	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	140019486
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 10:30
	Columbia MD 21045-1934					Collected	By:	Clier	, nt
Sample Desc:	BM-9 Deep					Date Rece	eived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/27 2294	/14 -14-0019487
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	/14 10:30 t
Sample Desc: BM-10 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	16	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	16	/100mL	2	1	SM 9222D	'	15:15	PLW
Total Coliform	280	, mpn/100ml	1	1	SM 9223B	'	10:15	
CHEMISTRY						,		
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	06/17	17:12	ALD
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E	06/18	11:36	ALD
Phosphorus as P, Total	0.10	mg/l	.01	1	SM 4500P-E	06/18	11:36	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	21:10	JCL
Nitrogen, Nitrate	3.72	mg/l	.05	1	EPA 353.2	06/18	16:18	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:12	JCL
Nitrogen, Total Kjeldahl	1.85	mg/l	.25	1	EPA 351.2	06/19	14:10	JCL
OTHER								
Biochemical Oxygen Demand	9	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	3.7	mg/l	1	1	SM5310 C	06/18	19:59	ALD
RESIDUES								
Solids, Total Dissolved	174	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	20	mg/l	3	1	SM 2540D	06/18	13:20	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	85	mg/l	1	1	SM 2320 B	06/18	11:00	HRG

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Reviewed and Approved by: ístlev

Christina Kistler Account Executive

Page 1 of 2

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Attention:	Gregory Wacik					Date of F	eport:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		.4	, · · · 4–14–0019487
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	7/14 10:30
	Columbia MD 21045–1934					Collected		Clier	•
							_, _		
Sample Desc:	BM-10 Surface					Date Rece	ived:	06/17	7/14 13:50
								,	/
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
	•								,

01 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

- O2 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- O3 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Listle Historie

Christina Kistler Account Executive

Page 2 of 2

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of F Lab ID:	Report:	06/27 2294	7/14 140019488
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clier	7/14 11:00 t
Sample Desc: BM-10 Mid-Depth					Date Rece	eived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY				• •••••	i fall laad and and an are seen over you produced and			
COLORMETRIC								
Phosphate as P, Ortho	0.12	mg/L	.01	1	SM 4500P-E	06/17	17:12	ALD
Phosphorus as P, Dissolved	0.12	mg/l	.05	1	SM 4500P-E			
Phosphorus as P, Total	0.11	mg/l	.01	1	SM 4500P-E	06/18	11:50	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	21:25	JCL
Nitrogen, Nitrate	4.77	mg/l	. 05	1	EPA 353.2	06/18	16:19	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:13	JCL
Nitrogen, Total Kjeldahl	0.37	mg/l	.25	1	EPA 351.2	06/19	14:11	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	06/18	20:15	ALD
RESIDUES								
Solids, Total Dissolved	185	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	10	mg/l	3	1	SM 2540D	06/18	13:20	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	107	mg/l ∘	1	1	SM 2320 B	06/18	11:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

estle

Christina Kistler Account Executive

Page 1 of 2

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Attention:	Gregory Wacik					Date of R	leport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		'	-14-0019488
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 11:00
	Columbia MD 21045-1934					Collected	By:	Clier	1
Sample Desc:	BM-10 Mid-Depth					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		رميز الحاد الحادقة والرجاب بعرجه الحالما الحاليل التلا							

03 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	voir				Date of R Lab ID:	eport:	06/27 2294	'/14 140019489
Suite 100 Columbia MD 21045-1934					Date Coll Collected		06/17 Clien	7/14 11:00 It
Sample Desc: BM-10 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	، هذا يون من الما العار بي الحد العار بي العالمين .					-	NH 64 64 64	
COLORMETRIC								
Phosphate as P, Ortho	0.07	mg/l	.01	1	SM 4500P-E	06/17	17:12	ALD
Phosphorus as P, Dissolved	0.07	mg/l	.05	1	SM 4500P-E			
Phosphorus as P, Total	0.15	mg/l	.01	1	SM 4500P-E	•		
NITROGENS								
Nitrogen, Ammonia	0.13	mg/l	.05	1	D6919-03	06/17	22:23	JCL
Nitrogen, Nitrate	6.22	mg/l	.1	2	EPA 353.2	06/18	16:32	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/18	14:14	JCL
Nitrogen, Total Kjeldahl	0.44	mg/L	.25	1	EPA 351.2	06/19	14:12	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	1.7	mg/l	1	1	SM5310 C	06/18	20:30	ALD
RESIDUES								
Solids, Total Dissolved	236	mg/l	5	1	SM 2540C	06/18	13:05	ТМН
Solids, Total Suspended	73	mg/L	3	1	SM 2540D	06/18	13:20	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	131	mg/l	1	1	SM 2320 B	06/18	11:00	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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estle HISTORA

Christina Kistler Account Executive

Page 1 of 2

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Attention:	Gregory Wacik					Date of R	eport:	06/27	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0019489
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	/14 11:00
	Columbia MD 21045-1934					Collected	By:	Clien	,
Sample Desc:	BM-10 Deep					Date Rece	ived:	06/17	/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

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Reviewed and Approved by:

Estle Christina Kistler

Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	06/27 2294	/14 14-0019490
Suite 100 Columbia MD 21045-1934					Date Coll Collected	1	06/17 Clien	/14 12:55 t
Sample Desc: BM-11 Surface					Date Rece	ived:	06/17	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI				يسم بعدة على بعد الملا الما الما				المراجعة ال
MICROBIOLOGY								
Escherichia coli	490	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
Fecal Coliform	520	/100mL	2	1	SM 9222D	06/17	15:15	PLW
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	06/18	10:15	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.21	mg/l	.01	1	SM 4500P-E	06/17	17:12	ALD
Phosphorus as P, Dissolved	0.20	mg/l	.05	1	SM 4500P-E	06/18	11:50	ALD
Phosphorus as P, Total	0.31	mg/l	.01	1	SM 4500P-E	06/18	11:58	ALD
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	06/17	22:38	JCL
Nitrogen, Nitrate	4.36	mg/l	.05	1	EPA 353.2	06/18	16:22	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	06/18	14:17	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	06/19	14:13	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	06/17	15:55	EMW
Total Organic Carbon	1.8	mg/l	1	1	SM5310 C	06/18	21:41	ALD
RESIDUES								
Solids, Total Dissolved	108	mg/l	5	1	SM 2540C	06/18	13:35	ТМН
Solids, Total Suspended	11	mg/l	3	1	SM 2540D	06/18	13:20	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	31	mg/l	1	1	SM 2320 B	06/18	11:00	HRG

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Reviewed and Approved by:

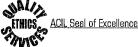
Listle

Christina Kistler Account Executive

Page 1 of 2

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Attention:	Gregory Wacik					Date of F	Report:	06/27	7/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		'	4-14-0019490
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	06/17	7/14 12:55
	Columbia MD 21045-1934					Collected	By:	, Clier	•
Sample Desc:	BM-11 Surface					Date Rece	eived:	06/17	7/14 13:50
PWSID: 30609	12			_					
FW31D: 50009				Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.
- O3 The total coliform sample was placed in the incubator on 06/17/14 at 16:10.

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Reviewed and Approved by:

fistle Mustike M.

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	jbs 05/12/14	1:05:50 PM		M. J. REIDER ASSOCIATES, INC.	COFC.PRT Page: 1
				Chain of Custody	
	Account: Customer:	: 2294 : Gregory Wacik	Work Order: 004037 Work Order Description	004037 Project Leader: CMB Description: Seasonal Monthly Blue Marsh Reservoir	No: 237777
	Address:		Marsh Reservoir	- Verligt V.	
	Phone:	suite 100 columbia MD 21045 215-656-6561 i. OA CiK	-1934 Ext:	Total Sampling Time (hours):	Bottle Prep by: Unacceptable, On Ice? Y N
9470					
nat Maa ≹ana⊒a	Samp	FC, EC, TC, OID DESC: BM-1 Surface FC, EC, TC, OID NO2-N, NO3-N, d-P04-P, 0-P04, BODN		HILL Mat	Date: C/7/74 Time: Time: V/7/75 w/ Sterile/Na2S203; ool to 6 C; w/ Cool to 6 C;
		LAUN, LUSS, L	1001 - FOQ	1 X 2xan 1 X 2xan 1 X 8oz Cool to	nzoot (ph/z) ; // H3P04/zero : ieadspace;
14471	Samp	2 Desc:	BM-2 Surface	Matrix: O	Date: 6///11
	РС, Б NO2-Б NH3-Б	FC, EC, TC, V & A BODA NO2-N, NO3-N, d-po4-p, o ² po4, BODA NJ NH3-N, tHL, Alk, tds, tss, po4-p, t	po4, BOD _A f , po4-p, toc,	 A - 1 X 250m1Micro P w/ Sterile B - 1 X 1 Bod P w/ Cool to 6 C; C - 1 X 160ZN03 P w/ Cool to C - 1 X 200m1 NH3 P w/ H3P04/pH E - 1 X 2xambervoa g w/ H3P04/z F - 1 X 80Z Alk P w/ Cool to 6 C/Zero Headspace; 	<pre>P w/ Sterile/Na2S203; Cool to 6 C; p w/ Cool to 6 C; w/ H2S04(pH<2); g w/ H3P04/zero headspace; c' Headspace;</pre>
	Relinquished by: Date: <u> </u>	ed by: Need	Time: 130	Received for laboratory by: Date: $t'l' d'$ Time:	1 march 1

Sample entered by: 280

	jbs 05/12/14	1:05:50 PM	M. J. REIDER ASSOCIATES, INC. Page: 2 Page: 2
			Chain of Custody
	Account: Customer:	2294 Work Order: 004037 Work Order Description: Gregory Wacik	ion: Seasonal Monthly Blue Marsh Reservoir
	Address:		Remarks:
	- oroda		Total Sampling Time (hours): Bottle Prep by:
	samplers:	WACIK	eipt Temp: ^V peg C. If Temp Unaccep Approved By: <u>VII</u>
21461	9472 Sample No: 3 NO2-N, NO3- NH3-N, tkn,	ple No: 3 Desc: BM-2 Wid-Depth NO2-N, NO3-N, d-Po4-P, o-Po4, BODV NH3-N, tkn, Alk, tds, tss, po4-P, toc,	Matrix: 0 Date: MM A - 1 X L Bod p w/ Cool to 6 C; Time: MS B - 1 X 16ozN02N03 p w/ Cool to 6 C; Cool to 6 C; C C - 1 X 500ml NH3 p w/ H3P04/zero headspace; D - 1 X 2xambervoa g w/ H3P04/zero headspace;
9473	Sample No: NO2-N, NH3-N,	No: 4 Desc: BM-2 peep NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, thm, Alk, tds, tss, po4-p, toc,	
hLhb)	sample No: FC, EC NO2-N, NH3-N,	ple No: 5 Desc: BM-5 Surface FC, EC, TC, M K M NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkn, Alk, tds, tss, po4-p, toc,	од жихихи ¹ аг
	Relinquished byw. Date: Uh J	hed by a full the face of the second by a grade of the second by a	: Received for laboratory by: Date: 6-17,14 Time: 135-0 Date: 6-17,14 Sample entered by: 05M

•

INC. COFC.PRT Page: 3	r: CMB No: 237777 Reservoir Bottle Prep by: Bottle Prep by:	Matrix: 0 Date: C M A - 1 X 250mlMicro P w/ Sterile/Na2S203; B - 1 X 160ZN02N03 P w/ Cool to 6 C; C	rix: 160z 2xam 2xam to to	Received for laboratory by:
M. J. REIDER ASSOCIATES, I	Chain of Custody 004037 Project Lea Description: Seasonal Monthly Blue Mar Remarks: Remarks: Total Sampling Time (hours Laboratory Receipt Temp: Approved			Received by: Received
jbs 05/12/14 1:05:50 PM	2294 Gregory Wacik Versar, Inc./Blue Mar 9200 Rumsey Road Suite 100 Columbia MD 21045-193 215-656-6561 Ext: 215-656-6561 Ext:	FC, EC, TC, AM & Desc: BM-6 Surface FC, EC, TC, AM & BM N02-N, N03-N, d-po4-p, o-po4, BOD MH3-N, thu, Alk, tds, tss, po4-p, toc,	ple No: 7 Desc; BM-6 Mid-Depth NO2-N, NO3-N, d-po4-p, o-po4, BOD N NH3-N, tkn, Alk, tds, tss, po4-p, toc,	hed by Juffing 1:30
jbs 05/12/1	Account: Customer: Address: Phone: Samplers:	OYYS Sample No: FC, EC NO2-N, NH3-N,	19476 Sample No: No2-N, NH3-N,	Relinquis Date: 6

	jbs 05/12/14	1:05:50 PM		M. J. REIDER ASSOCIATES, INC.	COFC.PRT Page: 4
				Chain of Custody	
	Account: Customer:	2294 Gregory Wacik	Work Order: 004037 Work Order Description:	Project Leader: CMB 1: Seasonal Monthly Blue Marsh Reservoir	No: 237777
	Address:	Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	Marsh Reservoir	Remarks:	
	Phone:	Suite 100 Columbia MD 21045-1934 215-656-6561 Ext:	-1934 Ext:	Total Sampling Time (hours):	Bottle Prep by:
	Samplers:	WACIK		ory Receipt Temp: 6 Deg 6, If Approved By: WW	Temp Unacceptable, On Ice? Y N
LL401	Sample No: 8 NO2-N, NO3- NH3-N, LYM,	mple No: 8 Desc: BM-6 Deep NO2-N, NO3-N, d-po4-p, o-po4, BOD NM3-N, tkm, Alk, tds, tss, po4-p,	toc,	Mat B - 1 X C - 1 X C - 1 X F - 1 X F - 1 X	Date: $\frac{\partial k}{\partial x}$ $\gamma \frac{d}{dx}$ $\psi = \frac{\partial k}{\partial x}$ $\psi = \frac{\partial k}{\partial x}$
19478	Sample No: FC, EC, NO2-N, MH3-N,	PEC, EC, TC, M Desc: BM-7 Surface FC, EC, TC, M M PO-204, BOD NO2-N, NO3-N, d-p04-p, o-p04, BOD NH3-N, thm, Alk, tds, tss, p04-p, t	-7 Surface	н н н н н н н н н н н н н н н н н н н	<pre>containing the set of the se</pre>
				Cool to 6 C/	to 6 C/Zero Headspace;
	Relinquished by:		Time: / 70	Received for laboratory by: Date: $\frac{\sqrt{2}\sqrt{2}}{\sqrt{2}}$ The	y:

J. REIDER ASSOCIATES, INC. Page: 5	ıstody	004037 Project Leader: CMB No: 237777 Description: Seasonal Monthly Blue Marsh Reservoir Remarks: <u>DM-7 dop ol DM-8 dom 98 HUE reverse</u> l	wurs):Bott1 : <u>6</u> Deg.CIf Temp Unacceptab1 red By:	Matrix: 0 Date: Matrix: 0 Time: A - 1 X L Bod p w/ Cool to 6 C; B - 1 X 160ZN02N03 p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ H3D04 (pH<2); D - 1 Y 250ml NH3 p w/ H3D04 (pH<2);	 1 X 802 Alk p w Cool to 6 C/Zer Matrix: 0 Matrix: 0 1 X L Bod p w/ 1 X 1602N03 1 X 5001 NH3 p 1 X 802 Alk p w Cool to 6 C/Zer 	Matrix:0Date:UNNYA - 1 X 250mlMicro P w/ Sterile/Na2S203;B - 1 X L Bod p w/ Cool to 6 C;I X 1602N02N03 p w/ Cool to 6 C;B - 1 X 1602N03 D w/ Cool to 6 C;D - 1 X 500ml NH3 p w/ H2S04(pH<2);F - 1 X 2xambervoa g w/ H3P04/zero headspace;F - 1 X 802 Alk p w/Cool to 6 C/Zero Headspace;Cool to 6 C/Zero Headspace;	Received for laboratory by: Received for laboratory by: $2\sqrt{2}$,
M. J. REIDER	Chain of Custody	004037 scription: Seasonal Mon Remarks: <u>b</u> M			and some		d by:
1:05:50 PM		2294 Work Order: 0 Work Order Des Gregory Wacik Versar, Inc./Blue Marsh Reservoir	E-1934 Ext: K	N, d Alk	ple No: 11 Desc: BM-N Deep USed BM-S de No2-N, N03-N, d-pol-p, o-pol, BODN NN3-N, thu, Alk, tds, tss, pol-p, toc,	12 Desc: BM-8 Surface TC, y J M M W N03-N, d-po4-p, o-po4, BOD M tkn, Alk, tds, tss, po4-p, toc,	by Mun Received by:
jbs 05/12/14 1:		Account: Customer: G: Address: V	Samplers:	$\left q_{YT} q \right $ sample No: 1 NO2-N, NC NH3-N, tk	$\left[\begin{array}{c} q_{4}g_{6}c \\ m_{1}g_{-N} \\ m_{2}e_{N} \\ m_{2}e_{N} \\ m_{3}e_{N} \\ m_{1}e_{N} \\ m_{1}e_$	qqqg Sample No: 12 FC, EC, TC, MO3-N, NO3-N, NO3-N, NO3-N, NH3-N, tkn, A	Relinquished by

COFC.PRT Page: 6		No: 237777	Bottle Prep by: ptable, On Ice? Y N	rix: 0 Date: Time: L Bod p w/ Cool to 6 C; 16ozNO2NO3 p w/ Cool to 6 C; 500ml NH3 p w/ H3P04/zero headspace; 2xambervoa g w/ H3P04/zero headspace; to 6 C/Zero Headspace; L Bod p w/ Cool to 6 C; 16ozNO2NO3 p w/ Cool to 6 C; 500ml NH3 p w/ H3P04/zero headspace; coml NH3 p w/ H3P04/zero headspace; 80z Alk p w/ to 6 C/Zero Headspace; 16ozNO2NO3 p w/ Cool to 6 C; 500ml NH3 p w/ H3P04/zero headspace; 80z Alk p w/ to 6 C/Zero Headspace; 16ozNO2NO3 p w/ Cool to 6 C; 500ml NH3 p w/ H3P04/zero headspace; 80z Alk p w/ to 6 C/Zero Headspace; 16ozNO2NO3 p w/ Cool to 6 C; 16ozNO2NO3 p w/ Cool to 6 C; 100 p w	Sec. 1
J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB Monthly Blue Marsh Reservoir	Total Sampling Time (hours): Bottle Prep by: Laboratory Receipt Temp: 0 Deg.C. If Temp Unacceptable, On Ice? Approved By: 200	Matrix: 0 Dat Tim A = 1 X L Bod p w/ Cool to 6 C; B = 1 X 1662N0303 p w/ Cool to 6 C; B = 1 X 2xambervoa g w/ H3D04/z B = 1 X 2xambervoa g w/ H3D04/z C = 1 X 80z Alk p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat Tim A = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat Tim A = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat Tim A = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat Tim A = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat Tim A = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat Pat A = 1 X 250mlNH3 p w/ H3504/z B = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; Matrix: 0 Dat B = 1 X 1602N03 p w/ Cool to 6 C/Zero Headspace; B = 1 X 1602N03 p w/ H3504/z B = 1 X 1802N03 p w/ Cool to 6 C/Zero Headspace; B = 1 X 1802N03 p w/ H3504/z B = 1 X 1802N03 p w/ Cool to 6 C/Zero Headspace; B = 1 X 802 Alk p w/ B = 1 X 802 Alk p w/ B = 1 X 802 Alk p w/ B = 1 X 802 Alk p w/ <t< td=""><td>Received for laboratory by:</td></t<>	Received for laboratory by:
M. J. REI	Chain o	Work Order: 004037 Project Leader: CMB Work Order Description: Seasonal Monthly Blue Marsh Reservoir Remarks:	h Reservoir	Mid-Depth Boy of-P, toc, of-P, toc, boy of-P, toc, boy of-P, toc, of-P, toc,	Time: 1'30
jbs 05/12/14 1:05:51 PM		Account: 2294 Customer: Gregory Wacik	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers:	9482 sample No: 13 Desc: BM-8 Mid-Depth NO2-N, NO3-N, d-po4-b, o-po4, BOD NH3-N, tkn, Alk, tds, tss, po4-p, toc, NO2-N, NO3-N, d-po4-p, o-po4, BOD NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkn, Alk, tds, tss, po4-p, toc, NH3-N, tkn, Alk, tds, tss, po4-p, toc,	Relinquished by: UND - Date: & 7/14 Tim

	jbs 05/12/14 1	1:05:51 PM		M. J. REIDER ASSOCIATES, INC.	COFC.FRT Page: 7
				Chain of Custody	
	Account: Customer:	2294 Gregory Wacik	Work Order: 004037 Work Order Description	004037 Project Leader: CMB Description: Seasonal Monthly Blue Marsh Reservoir	No: 237777
	Address:	Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	arsh Reservoir	Vellar KS :	
		Suite 100 Columbia MD 21045-1934 215-656-6561 Ext:	-1934 Ext:	Total Sampling Time (hours): Laboratory Receipt Temp: Mbeg,C; [[f_Te	Bottle Prep by: Deg _i C; <u>M</u> f.Temp Unacceptable, On Ice? Y N
	Samplers:	WHUR			
19485	Sample No:	16 Desc: BM-	9 Mid-Depth	Matrix: 0	: 0 Date: 6/17/14
	NO2-N, 1	NO2-N, NO3-N, d-p04-p, o-p04, B0D,	o4, BOD V	х х : 	col to 6 C; w/ Cool to 6
		NH3-N, UKU, ALK, UQS, USS, D04-D,	ро4-р, гос,	C - 1 X 500m D - 1 X 2xam E - 1 X 8oz Cool to	L X 500mL NH3 p w/ H2SO4(pH<2); l X 2xambervoa g w/ H3PO4/zero headspace; l X 8oz Alk p w/ Cool to 6 C/Zero Headspace;
98481	Sam	17 Desc: BM-9	9 Deep	Matrix:	<i>ت</i>
	NO2-N ₆ 7 NH3-N, 1	NO2-N, NO3-N, d-Po4-P, o-Po4, BOD NH3-N, tkn, Alk, tds, tss, po4-P,	o4, BODY po4-p, toc,	A - 1 X L BO B - 1 X 160z C - 1 X 500m C - 1 X 2Xam B - 1 X 80z C - 1 X 80z C - 1 - 1 X 80z	L Bod p w/ Cool to 6 C; 160zN02N03 p w/ Cool to 6 C; 500ml NH3 p w/ H2SO4(pH<2); 2xambervoa g w/ H3PO4/zero headspace; 80z Alk p w/ to 6 C/zero Headspace;
L&hb1	Sample No:	18 , Desc: BM-1	10 Surface	Matrix:	0
	FC, EC, NO2-NA NH3-N, t	FC, EC, TC, VIA DO4 D, NO FO, BODW N02-W, N03-N, d-po4-p, o-po4, BODW NH3-N, tkm, Alk, tds, tss, po4-p, too	24, BODW po4-p, toc,	A - 1 X 250m B - 1 X 1 Bo C - 1 X 160Z D - 1 X 500m E - 1 X 2xam F - 1 X 80Z F - 1 X 80Z	Time: 1/00 250mlMicro P w/ Sterile/Na2S203; L Bod p w/ Cool to 6 C; 16ozN02N03 p w/ Cool to 6 C; 500ml NH3 p w/ H2S04(pH<2); 2xambervoa g w/ H3P04/zero headspace; 8oz Alk p w/ to 6 C/Zero Headspace;
	Relinquished by	1 al		Received for laboratory by: $\sum_{z = 1}^{\infty} (y_z) [U]$	py:
	Date: 6/1/14		Time: 1' 5 0	Date: C t t	Time: 15800 Sample entered by:

M. J. REIDER ASSOCIATES, INC. Chain of Custody Chain of Custody Chain of Custody 004037 Description: Seasonal Monthly Blue Marsh Reservoir Remarks: Remarks: Total Sampling Time (hours): Total Sampling Time (hours): Laboratory Receipt Temp: Approved By: Approved by: Corc.PRT COFC.PRT Page: 8 Corc.PRT Page: 9 Corc.PRT Page: 9 Corc.PR	Matrix: 0 Date: Minime: A - 1 X L Bod p w/ Cool to 6 C; B - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ H2SO4 (pH<2); B - 1 X Sumbervoa g w/ H3P04/zero headspace; B - 1 X 80z Alk p w/ Matrix: 0 D - 1 X 2zambervoa g w/ H3P04/zero headspace; Cool to 6 C/Zero Headspace; Cool to 6 C/Zero Headspace; Matrix: 0 D - 1 X 100 p w/ Cool to 6 C; A - 1 X L Bod p w/ Cool to 6 C; B - 1 X 16ozN02N03 p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ H2SO4/Zero headspace; B - 1 X L Bod p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ H2SO4 (pH<2); D - 1 X 2zambervoa g w/ H3P04/Zero headspace; B - 1 X Sumbervoa g w/ H3P04/Zero headspace; D - 1 X 2zambervoa g w/ H3P04/Zero headspace; D - 1 X 2zambervoa g w/ H3P04/Zero headspace;	rix: 250H 2500H 25	$\frac{1}{2} \sum_{\text{Baceived for laboratory by:}} \frac{1}{250} \sum_{\text{Date:} \frac{1}{2} \circ \frac{1}{2} \sqrt{1}} \frac{1}{1} \sum_{\text{Time:} \frac{1}{2} \sqrt{5} \sqrt{1}} \frac{1}{2} \sum_{\text{Sample entered by:}} \frac{1}{2} \sum_{\text{Date}} $
jbs 05/12/14 1:05:51 PM Account: 2294 Work Order: 00403 Work Order Descript Customer: Gregory Wacik Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers:	Sample No: 19 Desc: BM-10 Mid-Depth NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkm, Alk, tds, tss, po4-p, toc, Sample No: 20 Desc: BM_10 Deep NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkm, Alk, tds, tss, po4-p, toc,	Sample No: 21 Desc: BM-11 Surface FC, EC, TC, No NO2-N, NO3-N, d-p04-P, o-p04, BOD MA3-N, tkn, Alk, tds, tss, p04-P, toc,	Relinquished by $M_{T,M}$ Received by: Date: $\frac{c/r}{r}$
	19489	0646	





Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31 2294	/14 -14-0023385
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 13:00 t
Sample Desc: BM-1 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI							مر <u>م</u> مد نم	
MICROBIOLOGY								
Escherichia coli	6	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	16	/100ml	2	1	SM 9222D	07/22	14:45	PLW
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:15	HRG
Phosphorus as P, Dissolved	<.05	mg∕l	.05	1	SM 4500P-E	07/23	14:35	HRG
Phosphorus as P, Total	0.06	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	0.26	mg/l	.05	1	D6919-03	07/23	00:12	JCL
Nitrogen, Nitrate	3.42	mg/l	.05	1	EPA 353.2	07/23	16:51	JCL
Nitrogen, Nitrite	0.10	mg/l	.05	1	EPA 353.2	,	14:33	JCL
Nitrogen, Total Kjeldahl	0.54	mg/l	.25	1	EPA 351.2	07/25	16:29	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	'	14:50	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	07/23	03:25	ALD
RESIDUES								
Solids, Total Dissolved	234	mg/l	5	1	SM 2540C	'	12:30	ТМН
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	07/23	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	134	mg/l	1	1	SM 2320 B	07/23	09:30	HRG

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Mistike M. tleV

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of R	eport:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0023385
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	07/22	2/14 13:00
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc: BM-1 Surface						Date Rece	ived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

O1 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O7/22/14 at 15:30.

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Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31 2294	/14 140023386
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 09:15 t
Sample Desc: BM-2 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI					المتأسية ومرجع بجر عدر بعد معانية			
MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	2	/100mL	2	1	SM 9222D		14:45	PLW
Total Coliform	550	, mpn/100ml	1	1	SM 9223B	,	11:30	
CHEMISTRY		. ,				1		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:15	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.01	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS						•		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	00:27	JCL
Nitrogen, Nitrate	3.09	mg/l	.05	1	EPA 353.2	07/23	16:52	JCL
Nitrogen, Nitrite	0.05	mg/l	.05	1	EPA 353.2	07/23	14:36	JCL
Nitrogen, Total Kjeldahl	0.60	mg/l	.25	1	EPA 351.2	07/25	16:30	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.9	mg/l	1	1	SM5310 C	07/23	03:42	ALD
RESIDUES								
Solids, Total Dissolved	145	mg/l	5	1	SM 2540C	07/23	12:30	тмн
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	07/23	12:35	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	64	mg/l	1	1	SM 2320 B	07/23	09:30	HRG

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Attention:	Gregory Wacik					Date of I	Report:	07/31	1/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	, 4–14–0023386
	9200 Rumsey Road								
	Suite 100					Date Coll	lected:	07/22	2/14 09:15
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc: BM-2 Surface						Date Rece	eived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limît	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O7/22/14 at 15:30.

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Reviewed and Approved by: Unistore M.

Christina Kistler Account Executive

Page 2 of 2

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Attention: Gregory Wacik					Date of F	eport:	07/31	/14
Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	oir				Lab ID:		2294	-14-0023387
Suite 100					Date Coll	.ected:	07/22	/14 09:15
Columbia MD 21045-1934					Collected	By:	Clien	
Sample Desc: BM-2 Mid-Depth					Date Rece	eived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY	tanti kant kant nany many kant pany mpany mpany many							
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:15	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:35	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS						-		
Nitrogen, Ammonía	0.12	mg/l	. 05	1	D6919-03	07/23	01:12	JCL
Nitrogen, Nitrate	3.90	mg/l	.05	1	EPA 353.2	07/23	16:53	JCL
Nitrogen, Nitrite	0.18	mg/l	.05	1	EPA 353.2	07/23	14:37	JCL
Nitrogen, Total Kjeldahl	0.57	mg/l	.25	1	EPA 351.2	07/25	16:31	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	07/23	04:00	ALD
RESIDUES								
Solids, Total Dissolved	197	mg/l	5	1	SM 2540C	07/23	12:30	тмн
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	07/23	12:35	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	126	mg/l	1	1	SM 2320 B	07/23	09:30	HRG

01

The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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ittee

Christina Kistler Account Executive

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				Date of R	eport:	07/31	/14
voir				Lab ID:		2294	-14-0023388
				Data Call		07/00	141 00.45
				Date Collected: Collected By:		07/22/14 09:15 Client	
				Date Rece	ived:	07/22	/14 13:50
		Rep	Dilutn		Test	Test	
Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
inan man ann ann ann an ann an an an an an an	1989 (1989)						
0.05	mg/l	.01	1	SM 4500P-E	07/22	16:15	HRG
<.05	mg/l	.05	1	SM 4500P-E	07/23	14:35	HRG
0.25	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
0.52	mg/l	.05	1	D6919-03	07/23	01:27	JCL
3.03	mg/l	.05	1	EPA 353.2	07/23	16:54	JCL
0.21	mg/l	.05	1	EPA 353.2	,		
2.12	mg/l	.25	1	EPA 351.2	07/25	16:32	JCL
4	mg/l	2	1	SM 5210B	07/22	14:50	EMW
2.0	mg/l	1	1	SM5310 C	, 07/23	04:17	ALD
					,		
244	mg/l	5	1	SM 2540C	07/23	12:30	ТМН
64	mg/l	3	1	SM 2540D	07/23	12:35	ТМН
	-				,		
147	mg/l	1	1	SM 2320 B	07/23	09:30	HRG
	0.05 <.05 0.25 0.52 3.03 0.21 2.12 4 2.0 244 64	Result Unit 0.05 mg/l <.05	Result Unit Rep Limit 0.05 mg/l .01 <.05	Result Unit Rep Limit Dilutn Factor 0.05 mg/l .01 1 <.05	voir Lab ID: Date Coll Collected Date Coll Collected Result Unit Rep Limit Dilutn Factor Procedure 0.05 mg/l .01 1 SM 4500P-E 0.05 mg/l .05 1 SM 4500P-E 0.25 mg/l .01 1 SM 4500P-E 0.25 mg/l .05 1 SM 4500P-E 0.25 mg/l .05 1 B6919-03 3.03 mg/l .05 1 EPA 353.2 0.21 mg/l .05 1 EPA 353.2 2.12 mg/l .25 1 EPA 353.2 4 mg/l 2 1 SM 5210B 2.0 mg/l 1 1 SM5310 c 244 mg/l 5 1 SM 2540C 64 mg/l 3 1 SM 2540D	Date Collected: Collected By: Result Unit Rep Limit Dilutn Factor Procedure Date 0.05 mg/l .01 1 SM 4500P-E 07/22 <.05	Lab ID: 2294 Date Collected: 07/22 Collected By: Clien Date Received: 07/22 Collected By: 07/22 Date Received: 07/22 Result Unit Employ Limit Factor Procedure Date 0.05 mg/l .01 1 SM 4500P-E 07/22 0.05 mg/l .05 1 SM 4500P-E 07/23 14:35 0.25 mg/l .01 1 SM 4500P-E 07/23 15:00 0.52 mg/l .05 1 D6919-03 07/23 01:27 3.03 mg/l .05 1 EPA 353.2 07/23 16:54 0.21 mg/l .05 1 EPA 353.2 07/25 16:32 4 mg/l .25 1 EPA 351.2 07/25 16:32 4 mg/l 2 1 SM 5210B 07/22 14:50 2.0 mg/l 1 1 SM5310 c 07/23 04:17 <tr< td=""></tr<>

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by: Wistike M. istlev

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		07/31/14 2294-14-0023389	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 12:20 t
Sample Desc: BM-5 Surface					Date Received:		07/22/14 13:50	
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Límit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	260	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	390	/100mL	2	1	SM 9222D	07/22		PLW
Total Coliform	>2400	, mpn/100ml	1	1	SM 9223B		11:30	DAD
CHEMISTRY						,		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:35	HRG
Phosphorus as P, Total	0.05	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	01:42	JCL
Nitrogen, Nitrate	7.82	mg/l	.1	2	EPA 353.2	07/23	17:39	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	07/23	14:39	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	07/26	14:36	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	1.2	mg/l	1	1	SM5310 C	07/23	04:32	ALD
RESIDUES								
Solids, Total Dissolved	348	mg/l	5	1	SM 2540C	07/23	12:30	TMH
Solids, Total Suspended	11	mg/l	3	1	SM 2540D	07/23	12:35	TMH
TITRÁTIONS								
Alkalinity, Total to pH 4.5	225	mg/l	1	1	SM 2320 B	07/23	09:30	HRG

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Attention:	Gregory Wacik					Date of R	eport:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0023389
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	07/22	2/14 12:20
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc:	BM-5 Surface					Date Rece	ived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O7/22/14 at 15:30.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31 2294	/14 140023390
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 08:40 t
Sample Desc: BM-6 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	6	/100ml	2	1	SM 9222D	07/22	14:45	PLW
Total Coliform	2400	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:35	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	01:57	JCL
Nitrogen, Nitrate	3.20	mg/l	.05	1	EPA 353.2	07/23	16:58	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	'	14:40	JCL
Nitrogen, Total Kjeldahl	0.43	mg/l	.25	1	EPA 351.2	07/26	14:39	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.7	mg/l	1	1	SM5310 C	07/23	04:55	ALD
RESIDUES								
Solids, Total Dissolved	154	mg/l	5	1	SM 2540C	07/23	12:30	ТМН
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	07/23	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	74	mg/l	1	1	SM 2320 B	07/23	09:45	HRG

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Attention:	Gregory Wacik					Date of R	eport:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0023390
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	07/22	2/14 08:40
	Columbia MD 21045-1934					Collected	By:	Clier	
Sample Desc:	BM-6 Surface					Date Rece	ived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O7/22/14 at 15:30.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	oir				Date of R Lab ID:	eport:	07/31 2294	/14 ⊢14-0023391
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 08:40 t
Sample Desc: BM-6 Mid-Depth					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.01	mg/l	.01	1	SM 4500P-E	07/22	16:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:35	HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	0.21	.mg/l	.05	1	D6919-03	07/23	02:12	JCL
Nitrogen, Nitrate	3.64	mg/l	.05	1	EPA 353.2	07/23	16:59	JCL
Nitrogen, Nitrite	0.28	mg/l	. 05	1	EPA 353.2	07/23	14:40	JCL
Nitrogen, Total Kjeldahl	0.40	mg/l	.25	1	EPA 351.2	07/26	14:40	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	07/23	05:07	ALD
RESIDUES								
Solids, Total Dissolved	209	mg/l	5	1	SM 2540C	07/23	12:30	ТМН
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	07/23	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	147	mg/l	1	1	SM 2320 B	07/23	09:45	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik					Date of F	eport:	07/31	/14
Reported To: Versar, Inc./Blue Marsh Reservoi	r				Lab ID:		2294	-14-0023392
9200 Rumsey Road								
Suite 100					Date Coll	ected:	07/22	/14 08:40
Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc: BM-6 Deep					Date Rece	eived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY					<u> </u>			768 [°] 1993 1993 1993 1994 1994 1994 1994
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E	•		HRG
NITROGENS								
Nitrogen, Ammonia	0.36	mg/l	.05	1	D6919-03	07/23	02:27	JCL
Nitrogen, Nitrate	3.21	mg/l	.05	1	EPA 353.2	07/23	17:00	JCL
Nitrogen, Nitrite	0.18	mg/l	.05	1	EPA 353.2	07/23	14:42	JCL
Nitrogen, Total Kjeldahl	0.63	mg/L	.25	1	EPA 351.2	07/26	14:40	JCL
OTHER						•		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C		05:23	ALD
RESIDUES						,		
Solids, Total Dissolved	204	mg/l	5	1	SM 2540C	07/23	12:30	тмн
Solids, Total Suspended	6	mg/l	3	1	SM 2540D		12:35	ТМН
TITRATIONS						,		
Alkalinity, Total to pH 4.5	145	mg/l	1	1	SM 2320 B	07/23	09:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31/14 2294-14-0023393	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	2/14 09:45 It
Sample Desc: BM-7 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
DACTY					والمراجع المراجع المراجع المسار المسار المسار المسار المسار			
BACTI MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9223D	07/22	15:15	PLW
Total Coliform	520	mpn/100ml		1	SM 9223B		11:30	
CHEMISTRY			·			01/10	11,50	DAD
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E		14:35	HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	02:42	JCL
Nitrogen, Nitrate	3.21	mg/l	.05	1	EPA 353.2	07/23	17:03	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	07/23	14:45	JCL
Nitrogen, Total Kjeldahl	0.50	mg/l	.25	1	EPA 351.2	07/26	14:41	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	07/23	05:41	ALD
RESIDUES								
Solids, Total Dissolved	160	mg/l	5	1	SM 2540C	07/23	12:30	ТМН
Solids, Total Suspended	11	mg/l	3	1	SM 2540D	07/23	12:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	74	mg/l	1	1	SM 2320 B	07/23	09:45	HRG

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Attention:	Gregory Wacik					Date of F	eport:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	2294	, -14-0023393
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	07/22	2/14 09:45
	Columbia MD 21045-1934					Collected	By:	Clier	, nt
							-		
Sample Desc:	BM-7 Surface					Date Rece	ived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 07/22/14 at 15:30.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservo ⁴	ir				Date of R Lab ID:	eport:	07/31 2294	/14 14-0023394
9200 Rumsey Road Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 09:45 t
Sample Desc: BM-7 Mid-Depth					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E		14:40	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS						•		
Nitrogen, Ammonia	0.07	mg/l	.05	1	D6919-03	07/23	02:57	JCL
Nitrogen, Nitrate	3.80	mg/l	.05	1	EPA 353.2	07/23	17:04	JCL
Nitrogen, Nitrite	0.07	mg/l	.05	1	EPA 353.2	07/23	14:46	JCL
Nitrogen, Total Kjeldahl	0.50	mg/l	.25	1	EPA 351.2	07/26	14:42	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	07/23	11:37	ALD
RESIDUES								
Solids, Total Dissolved	221	mg/l	5	1	SM 2540C	07/23	12:30	ТМН
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	07/23	13:00	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	120	mg/l	1	1	SM 2320 B	07/23	10:00	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik					Date of R	eport:	07/31	,
Reported To: Versar, Inc./Blue Marsh Reser 9200 Rumsey Road	voir				Lab ID:		2294	-14-0023395
Suite 100					Date Coll	ected.	07/22	2/14 09:45
Columbia MD 21045-1934					Collected		Clier	•
Sample Desc: BM-7 Deep					Date Rece	eived:	07/22	2/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS								
Nitrogen, Ammonia	0.12	mg/l	.05	1	D6919-03	07/23	03:12	JCL
Nitrogen, Nitrate	4.21	mg/l	.05	1	EPA 353.2	07/23	17:05	JCL
Nitrogen, Nitrite	0.08	mg/l	.05	1	EPA 353.2	07/23	14:47	JCL
Nitrogen, Total Kjeldahl	0.60	mg/l	.25	1	EPA 351.2		14:43	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	07/23	12:09	ALD
RESIDUES						,		
Solids, Total Dissolved	252	mg/l	5	1	SM 2540C	07/23	13:00	тмн
Solids, Total Suspended	9	mg/l	3	1	SM 2540D	07/23	13:00	тмн
TITRATIONS		- •				,		
Alkalinity, Total to pH 4.5	137	mg/l	1	1	SM 2320 B	07/23	10:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31/14 2294-14-0023396	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 11:00 t
Sample Desc: BM-8 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9222D	07/22	15:15	PLW
Total Coliform	310	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	-		HRG
Phosphorus as P, Dissolved	<.05	mg/L	. 05	1	SM 4500P-E	07/23	14:40	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	,	03:27	JCL
Nitrogen, Nitrate	3.04	mg/L	.05	1	EPA 353.2	,	17:06	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	•		JCL
Nitrogen, Total Kjeldahl	0.86	mg/l	.25	1	EPA 351.2	07/26	14:44	JCL
OTHER	_							
Biochemical Oxygen Demand	5	mg/L	2	1	SM 5210B		14:50	EMW
Total Organic Carbon	3.1	mg/l	1	1	SM5310 C	07/23	12:40	ALD
RESIDUES	407		_					
Solids, Total Dissolved	127	mg/L	5	1	SM 2540C	07/23	13:00	тмн
Solids, Total Suspended	11	mg/l	3	1	SM 2540D	07/23	13:00	тмн
TITRATIONS	50		_					
Alkalinity, Total to pH 4.5	58	mg/l	1	1	SM 2320 B	07/23	10:00	HRG

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Attention:	Gregory Wacik					Date of R	eport:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	'	, 14-0023396
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	07/22	2/14 11:00
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc:	BM-8 Surface					Date Rece	ived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

The Ortho-phosphate was filtered and the dissolved phosphorous 01 was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

02 The total coliform sample was placed in the incubator on 07/22/14 at 15:30.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		07/31/14 2294-14-002339	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	2/14 11:00 It
Sample Desc: BM-8 Mid-Depth					Date Rece	eived:	07/22	2/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	ĤRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:45	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	07/23	15:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	03:42	JCL
Nitrogen, Nitrate	3.20	mg/l	.05	1	EPA 353.2	07/23	17:08	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	07/23	14:50	JCL
Nitrogen, Total Kjeldahl	0.93	mg/l	.25	1	EPA 351.2	07/26	14:47	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	07/23	12:57	ALD
RESIDUES								
Solids, Total Dissolved	162	mg/l	5	1	SM 2540C	07/23	13:00	тмн
Solids, Total Suspended	8	mg/l	3	1	SM 2540D	07/23	13:00	ТМН
TITRATIONS						-		
Alkalinity, Total to pH 4.5	69	mg/l	1	1	SM 2320 B	07/23	10:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	oir				Date of Report: Lab ID:		07/31/14 2294-14-0023398	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	2/14 11:00 nt
Sample Desc: BM-8 Deep					Date Rece	eived:	07/22	2/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY		tani tani dayi ayya guya guya dadi dadi kasi kasi :						and has not see in in in in it.
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.10	mg/l	.01	1	SM 4500P-E	•		HRG
NITROGENS								
Nitrogen, Ammonia	0.09	mg/l	.05	1	D6919-03	07/23	03:57	JCL
Nitrogen, Nitrate	3.38	mg/l	.05	1	EPA 353.2	07/23	17:09	JCL
Nitrogen, Nitrite	<.05	mg/l	. 05	1	EPA 353.2	07/23	14:52	JCL
Nitrogen, Total Kjeldahl	0.63	mg/l	.25	1	EPA 351.2	07/26	14:48	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	07/23	13:14	ALD
RESIDUES								
Solids, Total Dissolved	214	mg/l	5	1	SM 2540C	07/23	13:00	ТМН
Solids, Total Suspended	35	mg/l	3	1	SM 2540D	07/23	13:00	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	99	mg/l	1	1	SM 2320 B	07/23	10:15	HRG
							,	

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31 2294	/14 ~14-0023399
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 10:05 t
Sample Desc: BM-9 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	4	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	5	/100ml	2	1	SM 9222D		15:15	
Total Coliform	1100	mpn/100ml	1	1	SM 9223B	•	11:30	
CHEMISTRY						,		
COLORMETRIC								
Phosphate as P, Ortho	0.01	mg∕l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.06	mg∕l	.01	1	SM 4500P-E			HRG
NITROGENS						•		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	04:12	JCL
Nitrogen, Nitrate	3.15	mg/l	.05	1	EPA 353.2	•	17:10	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2		14:52	
Nitrogen, Total Kjeldahl	1.22	mg/l	.25	1	EPA 351.2		14:49	
OTHER						•		
Biochemical Oxygen Demand	6	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.8	mg/l	1	1	SM5310 C	,	13:30	ALD
RESIDUES						,		
Solids, Total Dissolved	164	mg/l	5	1	SM 2540C	07/23	13:00	ТМН
Solids, Total Suspended	14	mg/l	3	1	SM 2540D	•	13:00	
TITRATIONS						, –		
Alkalinity, Total to pH 4.5	67	mg/l	1	1	SM 2320 B	07/23	10:30	HRG

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Attention:	Gregory Wacik					Date of F	Report:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	2294	, -14-0023399
	9200 Rumsey Road								
	Suite 100					Date Coll	.ected:	07/22	2/14 10:05
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc:	BM-9 Surface					Date Rece	eived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
	-	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O7/22/14 at 15:30.

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Attention: Gregory Wacik					Date of R	eport:	07/31	/14
Reported To: Versar, Inc./Blue Marsh Reservo	ír				Lab ID:		2294	-14-0023400
9200 Rumsey Road								
Suite 100					Date Coll			2/14 10:05
Columbia MD 21045-1934					Collected	By:	Clien	it
Sample Desc: BM-9 Mid-Depth					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS		-7						
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	04:27	JCL
Nitrogen, Nitrate	4.15	mg/l	.05	1	EPA 353.2	07/23	17:11	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2		14:53	JCL
Nitrogen, Total Kjeldahl	0.25	mg/l	.25	1	EPA 351.2	•	14:52	JCL
OTHER		-,				,		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	, 07/23	13:47	ALD
RESIDUES		-,				ľ		
Solids, Total Dissolved	228	mg/l	5	1	SM 2540C	07/23	13:00	ТМН
Solids, Total Suspended	.5	mg/l	3	1	SM 2540D	07/23	13:00	ТМН
TITRATIONS		-,				,		
Alkalinity, Total to pH 4.5	121	mg/l	1	1	SM 2320 B	07/23	10:30	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31 2294	/14 -14-0023401
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 10:05 t
Sample Desc: BM-9 Deep					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	···· ··· ··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··				anna han dan dan dan dan dan dan dan dan dan d			
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:45	HRG
Phosphorus as P, Total	0.35	mg/l	.01	1	SM 4500P-E	07/23	15:10	HRG
NITROGENS								
Nitrogen, Ammonia	0.32	mg/l	. 05	1	D6919-03	07/23	16:42	JCL
Nitrogen, Nitrate	4.25	mg/l	.05	1	EPA 353.2	07/23	17:14	JCL
Nitrogen, Nitrite	0.08	mg/l	. 05	1	EPA 353.2	07/23	14:56	JCL
Nitrogen, Total Kjeldahl	1.33	mg/l	.25	1	EPA 351.2	07/26	14:53	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.5	mg/l	1	1	SM5310 C	07/23	14:03	ALD
RESIDUES								
Solids, Total Dissolved	237	mg/l	5	1	SM 2540c	07/23	13:00	тмн
Solids, Total Suspended	147	mg/l	3	1	SM 2540D	07/23	13:00	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	163	mg/l	1	1	SM 2320 B	07/23	11:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		07/31/14 2294-14-002340	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 10:35 t
Sample Desc: BM-10 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								Band hand dang hand jint jing pang
MICROBIOLOGY								
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	5	/100ml	2	1	SM 9222D		15:15	
Total Coliform	870	, mpn/100ml	1	1	SM 9223B	•	11:30	
CHEMISTRY						,		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	07/23	14:45	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	07/23	15:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	05:42	JCL
Nitrogen, Nitrate	3.13	mg/l	.05	1	EPA 353.2	07/23	17:15	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	07/23	14:57	JCL
Nitrogen, Total Kjeldahl	0.92	mg/l	.25	1	EPA 351.2	07/26	14:54	JCL
OTHER								
Biochemical Oxygen Demand	6	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.9	mg/l	1	1	SM5310 C	07/23	14:20	ALD
RESIDUES								
Solids, Total Dissolved	137	mg/l	5	1	SM 2540C	07/23	13:00	ТМН
Solids, Total Suspended	11	mg/l	3	1	SM 2540D	07/23	13:00	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	62	mg/l	1	1	SM 2320 B	07/23	11:15	HRG

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Attention:	Gregory Wacik					Date of F	eport:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0023402
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	07/22	2/14 10:35
	Columbia MD 21045-1934					Collected	By:	Clier	nt .
Sample Desc:	BM-10 Surface					Date Rece	eived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

02 The total coliform sample was placed in the incubator on 07/22/14 at 15:30.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reserv 9200 Rumsey Road	oir				Date of Report: Lab ID:		07/31 2294	/14 140023403
Suite 100 Columbia MD 21045–1934					Date Coll Collected		07/22 Clien	/14 10:35 t
Sample Desc: BM-10 Mid-Depth					Date Received:		07/22	/14 13:50
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	,	14:45	HRG
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS						,		
Nitrogen, Ammonia	0.08	mg/l	.05	1	D6919-03	07/23	06:27	JCL
Nitrogen, Nitrate	3.94	mg/L	.05	1	EPA 353.2	, 07/23	17:16	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	'	14:58	
Nitrogen, Total Kjeldahl	0.53	mg/L	.25	1	EPA 351.2	, 07/26	14:55	JCL
OTHER						,		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	2.3	mg/L	1	1	SM5310 C	•	15:09	ALD
RESIDUES						1		
Solids, Total Dissolved	167	mg/l	5	1	SM 2540C	07/23	13:00	тмн
Solids, Total Suspended	10	mg/L	3	1	SM 2540D	07/23	13:00	тмн
TITRATIONS						, -		
Alkalinity, Total to pH 4.5	92	mg/l	1	1	SM 2320 B	07/23	11:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik



07/74/4/

Reported To: Versar, Inc./Blue Marsh Reservo 9200 Rumsey Road	ir				Date of R Lab ID:	Report:	07/31 2294	/14 14-0023404
Suite 100					Date Coll	ected:	07/22	2/14 10:35
Columbia MD 21045-1934					Collected		Clier	
Sample Desc: BM-10 Deep					Date Rece	eived:	07/22	2/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY	,	, <u></u>						RN 121 121 121 121 121 121 121
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	07/22	16:30	HRG
Phosphorus as P, Dissolved	0.07	mg/l	.05	1	SM 4500P-E	•		
Phosphorus as P, Total	0.25	mg/l	.01	1	SM 4500P-E	07/23	15:15	HRG
NITROGENS								
Nitrogen, Ammonia	0.13	mg/l	.05	1	D6919-03	07/23	06:43	JCL
Nitrogen, Nitrate	5.58	mg/l	.05	1	EPA 353.2	07/23	17:18	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	07/23	14:59	JCL
Nitrogen, Total Kjeldahl	0.78	mg/l	.25	1	EPA 351.2	07/26	14:56	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	1.8	mg/l	1	1	SM5310 с	07/23	16:26	ALD
RESIDUES								
Solids, Total Dissolved	246	mg/l	5	1	SM 2540C	07/23	13:00	тмн
Solids, Total Suspended	75	mg/l	3	1	SM 2540D	07/23	13:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	150	mg/l	1	1	SM 2320 B	07/23	11:30	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	07/31 2294	/14 140023405
Suite 100 Columbia MD 21045-1934					Date Coll Collected		07/22 Clien	/14 12:20 t
Sample Desc: BM-11 Surface					Date Rece	ived:	07/22	/14 13:50
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	330	mpn/100ml	1	1	SM 9223B	07/23	11:30	DAD
Fecal Coliform	500	/100ml	2	1	SM 9222D	,	15:15	
Total Coliform	>2400	, mpn/100ml	1	1	SM 9223B		11:30	
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	07/22	16:30	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.08	mg/l	.01	1	SM 4500P-E	07/23	15:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	07/23	06:58	JCL
Nitrogen, Nitrate	5.78	mg/l	.05	1	EPA 353.2	07/23	17:20	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	07/23	15:02	JCL
Nitrogen, Total Kjeldahl	0.45	mg/l	.25	1	EPA 351.2	07/26	14:59	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	07/22	14:50	EMW
Total Organic Carbon	1.9	mg/l	1	1	SM5310 C	07/23	16:42	ALD
RESIDUES								
Solids, Total Dissolved	243	mg/l	5	1	SM 2540C	07/23	13:45	ТМН
Solids, Total Suspended	10	mg/l	3	1	SM 2540D	07/23	13:35	тмн
TITRATIONS						-		
Alkalinity, Total to pH 4.5	145	mg/l	1	1	SM 2320 B	07/23	11:30	HRG

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Attention:	Gregory Wacik					Date of A	Report:	07/31	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•	'	, 4–14–0023405
	9200 Rumsey Road								
	Suite 100					Date Coll	lected:	07/22	2/14 12:20
	Columbia MD 21045-1934					Collected	By:	Clier	, it
Sample Desc:	BM-11 Surface					Date Rece	eived:	07/22	2/14 13:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- 02 The total coliform sample was placed in the incubator on 07/22/14 at 15:30.
- 03 One of the matrix spike/matrix spike duplicate results was outside of the recommended range but the other passed the criteria for Nitrate.

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Suite 100 Suite 100 Columbia MD 21045-1934 Samplers: Desc: BM-2 Mid-Def Sample No: 3 Desc: BM-2 Mid-Def Sample No: 3 Desc: BM-2 Mid-Def NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, tkn, Alk, tds, tss, po4-p, the NH3-N, tkn, Alk, tds, tss, po4-p, the NH3-N, tkn, Alk, tds, tss, po4-p, the Sample No: 5 Desc: BM-5 Surface Sample No: 5 Desc: BM-5 Surface NH3-N, tkn, Alk, tds, tss, po4-p, the NH3-N, tkn, Alk, tds, tss, po4-p, the NH3-N, tkn, Alk, tds, tss, po4-p, the NH3-N, tkn, Alk, tds, tss, po4-p, the

COFC.PRT Page: 3	No: 239130	Bottle Frep by: Unacceptable, On Ice? Y N	rix: 0 Date: 7/22/4 Time: 7/22/4 250mlMicro P w/ Sterile/Na2S203; L Bod p w/ Cool to 6 C; 16ozN02N03 p w/ Cool to 6 C; 500ml NH3 p w/ H2S04(pH<2); 2xambervoa g w/ H3P04/zero headspace; 8oz Alk p w/ to 6 C/Zero Headspace;	LTLX: 0 Date: 72 44 Time: 15 40 L Bod p w/ Cool to 6 C; 160zN02N03 p w/ Cool to 6 C; 500ml NH3 p w/ H2S04(pH<2); 2xambervoa g w/ H3P04/zero headspace; 80z Alk p w/ L to 6 C/Zero Headspace;	y: By MM Time: 1350 Sample entered by W
IDE	Chain of Custody Project Leader: CMB : Seasonal Monthly Blue Marsh Reservoir Remarks:	Total Sampling Time (hours): Laboratory Receipt Temp: <u>S</u> Deg C. If Temp Una Approved By: <u>SS</u> w	<pre>Matrix: 0 A - 1 X 250mlMicro B - 1 X 160zN02N03 C - 1 X 160zN02N03 D - 1 X 500ml NH3 1 E - 1 X 2xambervoa F - 1 X 80z Alk p v Cool to 6 C/Zee</pre>	Matrix: 0 A - 1 X L Bod P W B - 1 X 16ozNO2NO C - 1 X 500ml NH3 C - 1 X 2xambervo E - 1 X 8oz Alk P Cool to 6 C/2	BANK Received for laboratory by: Date: 2-22-14 Ti
jbs 06/05/14 1:30:16 PM	Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers: WACK	<pre>sample No: 6 Desc: FC, Ed, TC, NO2-N, NO3-N, d-po4-p, NH3-N, tkn, Alk, tds,</pre>	Sample No: 7 Desc: BM-6 Mid-Depth NO2-N MO3-N, d-po4-p, o-po4, BOD NH3-N, thm, Alk, tds, tss, po4-p, toc,	Relinquished by: Relinquished by: Date: 7/20/4 Time: 1/20
			03390	123391	

23392	<pre>jbs 06/05/14 1:30:17 PM Account: 2294 Work Order: 004037 Work Order: 004037 Customer: 2294 Work Order Description: Customer: Gregory Wacik Address: Versar, Inc./Blue Marsh Reservoir Baddress: Versar, Inc./Blue Marsh Reservoir Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Phone: 215-656-6561 Ext: I Samplers: WACK NO2-N, NO3-N, d-Po4-P, o-Po4, BOD NO2-N, NO3-N, d-Po4-P, o-Po4, BOD NH3-N, thn, Alk, tds, tss, po4-P, toc,</pre>	<pre>M. J. REIDER ASSOCIATES, INC. Chain of Custody Chain of Custody m: Seasonal Monthly Blue Marsh Reservoir Remarks: Total Sampling Time (hours): Total Sampling Time (hours): Iaboratory Receipt Temp: Solog C. If Temp Unacceptable, On Ice? Y M Approved By: Deg C. If Temp Unacceptable, On Ice? Y M Approved By: Deg C. If Temp Unacceptable, On Ice? Y M Approved By: Deg C. If Temp Unacceptable, On Ice? Y M Bettle Prep by: Coll to 6 C; B - 1 X 160202003 p w/ Cool to 6 C; C - 1 X 500ml NH3 p w/ H3D04/Zero headspace; E - 1 X 802 Alk p W</pre>
23393	Sample No: 9 Desc: BM-7 Surface FC, EC, TC, NO2-N, NO3-N, d-po4-p, o-po4, BOD, NH3-N, tkn, Alk, tds, tss, po4-p, toc,	Matrix: 0 Date: Matrix: A - 1 X 250mlMicro P w/ Sterile/Ma2S203; B - 1 X L Bod p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; B - 1 X 250ml NH3 p w/ H3204/zero headspace; F - 1 X 80z Alk p w/ Cool to 6 C; Cool to 6 C/Zero Headspace; F - 1 X 80z Alk p w/
	Relinquished by: Received by: Received by: Date: 7/20/14 Time: 1:00	By Mr Received for laboratory by: By Mall Date: 7,32-14 rime: 1350 Sample entered by:

	jbs 06/05/14 1:30:17 PM	M. J. REIDER ASSOCIATES, INC. Page: 5
		Chain of Custody
	Account: 2294 Work Order: 004037 Work Order Description	004037 Project Leader: CMB No: 239130 Description: Seasonal Monthly Blue Marsh Reservoir
	Customer: Gregory Wacik	Remarks:
	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsev Road	
	suite 100 columbia MD 21045-1934	Total Sampling Time (hours):Bottle Prep by:
	Phone: 215-656-6561 Ext: Samplers: UHCCK	0
73394	sample No: 10 Desc: BM ₋ 7 Mid-Depth	Matrix: 0 Date: AcULY Time: AGUC
	NO2-NMNO3-N, d-po4-p, o-po4, BOD	A - 1 X L Bod p w/ Cool to 6 C; B - 1 X 1602N02N03 p w/ Cool to 6 C;
	U NH3-N, tkm, Alk, tds, tss, po4-p, toc,	
		י ה י
7,2395	Sample No: 11 Desc: BM-7Deep	Matrix: 0 Date: //c///
1 0	NO2-N, NO3-N, d-po4-p, o-po4, BOD	A - 1 X I Bod p w/ Cool to 6 C; B - 1 X 16ozNO2NO3 p w/ Cool to 6 C;
	M^{\prime} MH3-N, tkm, Alk, tds, tss, po4-p, toc,	X 500ml NH3 p w/ H2SO4 X 2xambervoa g w/ H3PO
		ı
	Sample No: 12 Desc: BM-8 Surface	Matrix: 0 Date: ////
06527	FC, FC, TC,	A - 1 X 250mlMicro P w/ Sterile/Na28263; B - 1 X L Bod p w/ Cool to 6 C;
		- 1 X 160ZN02N03 P w/ Cool - 1 X 500ml NH3 P w/ H2S04
	NH3-N, thm, Alk, tds, tss, po4-p, toc,	1 X 2xambervoa g w/ 1 X 8oz Alk p w/
	ł	Cool to 6 C/Zero Headspace;
	and the second se	Bow Mar Beceived for laboratory by: But Mith
	Relinquished by: \sqrt{T} Time: 1:00	Date: 7-22-14 Time: 1350
	.	Sample entered by: ()
))

	jbs 06/05/14 1:30:18 PM	M. J. REIDER ASSOCIATES, INC. Page: 6
		Chain of Custody
	: 2294 Work Order: Work Order	004037 Project Leader: CMB No: 239130 Description: Seasonal Monthly Blue Marsh Reservoir
	Customer: Gregory wacık	Remarks:
	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	
		Total Sampling Time (hours): Bottle Prep by:
	Phone: 215-656-6561 Ext: Samplers:	table
		pl/ra/C
23397	Sample No: 13 Desc: BM-8 Mid-Depth	
	NO2-NW NO3-N, d-po4-p, d-po4, BOD	- 1 X L BOG P W/ COOL - 1 X 160ZN02N03 P W/
	NH3-N, tkn, Alk, tds, tss, po4-p, toc,	XXX
		чŬ 1
86522	Sample No: 14 Desc: BM-8 Deep	Matrix: 0 Date: 104/1
	NO2-N, NO3-N, d-po4-p, o-po4, BODN	- 1 X L Bod p w/ Cool to 6
		X 500ml NH3 P w/ H2S04 (pH<2) X 2xambervoa g w/ H3P04/zerc
		E - 1 X 80z Alk P w/ Cool to 6 C/Zero Headspace; 76.76
52299	Sample No: 15 Desc: BM-9 Surface	Matrix: 0 Date: 1/2/1/
1110	I	- 1 X 250mlMicro P w/ Ster
	~ 7 ~	- 1 X 160ZNO2NO3 P w/ COC - 1 X 160ZNO2NO3 P w/ Coc
	NH3-N, tkn, Alk, tds, tss, po4-p, toc,	IX 2xambervoa g w/ IX 8oz Alk D w/
		Cool
		to l
	Relinquished by Received by:	By W W Received for laboratory by: DW HAN
	Date: $7/2 c/14/$ Time: 1/00	0 Date: 7-22-14 Time: 1350
		Sample entered by: $\left(\begin{array}{c} \mathcal{O} \end{array} \right)$

	jbs 06/05/14 l:30:18 PM	M. J. REIDER ASSOCIATES, INC. Page: 7
		Chain of Custody
	Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik	Project Leader: CMB No: 239130 n: Seasonal Monthly Blue Marsh Reservoir Remarks:
	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	
	Suite 100 Columbia MD 21045	Total Sampling Time (hours): Bottle Prep by:
	Phone: 215-656-6561 Ext: Samplers: UACIK	e, On
	Sample No: 16 Desc: BM ₇ 9 Mid-Depth	Matrix: 0 Date: $\frac{\gamma x y}{\gamma x y}$
C5400		- 1 X L Bod p w/ Coo.
·	NH3-N, thu, Alk, tds, tss, po4-p, toc,	- 1 X 160ZNUZNUS P W/ COUL LU 0 - 1 X 500ml NH3 P W/ H2SO4(PH<2) - 1 X 2xambervoa g w/ H3PO4/zerc
		E - 1 X 80Z Alk p w/ Cool to 6 C/Zero Headspace;
10422	Sample No: 17 Desc: BM-9 Deep	Matrix: 0 Date: $\frac{\sqrt{2}\sqrt{7}}{\sqrt{9}\sqrt{7}}$
	$NO2-N, \lambda NO3-N, d-po4-p, o-bo4, BOD V$	L Bod p w/ Cool to (1602N02N03 p w/ Cool
	NH3-N, tkn, Alk, tds, tss, po4-p, toc,	- 1 X 500ml NH3 p w/ H2S04 - 1 X 2xambervoa g w/ H3P04
72402	Sample No: /18 Desc: BM-10 Surface	Matrix: 0 Date: 1240
	FC, FC, TC,	A - 1 X 250mlMicro P w/ Sterile/Na282037
	NO2-N, NO3-N, d-po4-p, o-pò4, BODV M	4 X
	NH3-N, tkm, Alk, tds, tss, po4-p, toc,	
		4 Ω γ
	, (f	
	Relinquished by: Angle Received by:	NW Received for laboratory by: Day Mr.
	Date: $7/v v/v/$ Time: 100	Date: 7,23-141 Time: 0,350
	<i>b</i>	Sample entered by:

J. REIDER ASSOCIATES, INC. COFC.PRT Page: 8	:	004037 Project Leader: CMB No: 239130 Description: Seasonal Monthly Blue Marsh Reservoir Remarks:		Total Sampling Time (hours):Bottle Frep by:	oratory Receipt Temp: $\sum_{Approved BY:} Deg C. If$	Matrix: 0	 A - 1 X I Bod p w/ COOL to b C; B - 1 X 16ozNO2NO3 p w/ COOl to 6 C; C - 1 X 500ml NH3 p w/ H2SO4(pH<2); D - 1 X 80z Alk p w/ H3P04/zero headspace; C - 1 X 80z Alk p w/ 		- 1 X L Bod p w/ Cool to 6	<pre>x 500ml NH3 p w/ H2SO4 (pH<2) x 2xambervoa g w/ H3PO4/zerc x 8oz alk p w/ ool to 6 C/zero Headspace;</pre>	rix: 0 Date: 7	 A - 1 X 250mlMicro P w/ Sterile/Na2S203; B - 1 X L Bod P w/ Cool to 6 C; C - 1 X 16ozN02N03 P w/ Cool to 6 C; C - 1 X 500ml NH3 P w/ H2S04 (PH<2); E - 1 X 2xambervoa g w/ H3P04/zero headspace; F - 1 X 80z Alk P w/ Cool to 6 C/Zero Headspace; 	Received for laboratory by:	Date: $7.22 \cdot j.4$ Time: $\sqrt{350}$ Sample entered by:	
jbs 06/05/14 1:30:19 PM		Account: 2294 Work Order: 004037 Work Order Description: S Customer: Gregory Wacik Re	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	Columbia MD 21045-1934	Phone: 215-650-650-Exc: Samplers:	ZZYWS sample No: 19 Desc: BM-10 Mid-Depth N	NO2-N, NO3-N, d-po4-p, d-po4, BOD, M- NH3-N, tkm, Alk, tds, tss, po4-p, toc,	Z3404 Sample No: 20 Desc: BM-10 Deep	NO3-N, d-po4-p, o-p	tkm, Alk, tds, tss, po	720st sammie No. 21 Desc: BM-11 Surface	FC, EC, TC, NO2-N, NO3-N, d-p04-p, o-p04. NH3-N, tkm, Alk, tds, tss, p0	And the second sec	Date: 722/14 Time: 170	





Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	08/21 2294	/14 14-0030950
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	/14 13:05 it
Sample Desc: BM-1 Surface					Date Rece	ived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI					ومرجعا بمدعنا للت كار حج بعد العالمي			
MICROBIOLOGY								
Escherichia coli	4	mpn/100ml	1	1	SM 9223B	08/12	11:20	ТВР
Fecal Coliform	3	/100ml	2	1	SM 9222D	08/11	15:00	PLW
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B		11:20	TBP
CHEMISTRY						•		
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	08/11	15:40	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	08/12	14:14	HRG
Phosphorus as P, Total	0.05	mg/l	.01	1	SM 4500P-E	08/12	13:30	HRG
NITROGENS								
Nitrogen, Ammonia	0.74	mg/l	. 05	1	D6919-03	08/11	22:02	JCL
Nitrogen, Nitrate	2.56	mg/l	. 05	1	EPA 353.2	08/12	14:58	JCL
Nitrogen, Nitrite	0.05	mg/l	. 05	1	EPA 353.2	08/12	13:17	JCL
Nitrogen, Total Kjeldahl	0.48	mg/l	.25	1	EPA 351.2	08/14	17:30	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	08/13	23:29	ALD
RESIDUES								
Solids, Total Dissolved	178	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended TITRATIONS	4	mg/l	3	1	SM 2540D	08/15	13:25	ТМН
Alkalinity, Total to pH 4.5	147	mg/l	1	1	SM 2320 B	08/18	12:00	HRG

Reviewed and Approved by: Ulstine M. Bistler

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of f	Report:	08/21/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294-14-0030950
	9200 Rumsey Road							
	Suite 100					Date Coll	ected:	08/11/14 13:05
	Columbia MD 21045-1934					Collected		Client
							•	
Sample Desc:	BM-1 Surface					Date Rece	eived:	08/11/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test
		Result	Unit	Limit	Factor	Procedure	Date	Time Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator on O8/11/14 at 15:35.
- 03 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Reviewed and Approved by:

Extle Kustine ?

Christina Kistler Account Executive

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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention: Gregory Wacik					Date of F	Penort.	08/21	/14
Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Lab ID:		'	i/14 i−14-0030951
Suite 100					Date Coll	ected.	08/11	/14 09:15
Columbia MD 21045-1934					Collected		Clier	
Sample Desc: BM-2 Surface					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI			ے سے بنیا وہ جب سے اس					
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	08/12	11:20	твр
Fecal Coliform	<2	/100mL	2	1	SM 9222D		15:00	PLW
Total Coliform	580	mpn/100ml	1	1	SM 9223B	-	11:20	
CHEMISTRY						1 -		
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/l	.01	1	SM 4500P-E	08/11	15:40	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	-	14:14	
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E			
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/11	22:16	JCL
Nitrogen, Nitrate	2.68	mg/l	.05	1	EPA 353.2	08/12	14:59	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	08/12	13:20	JCL
Nitrogen, Total Kjeldahl	0.37	mg/l	.25	1	EPA 351.2	08/14	17:32	JCL
OTHER								
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	08/13	23:45	ALD
RESIDUES								
Solids, Total Dissolved	124	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	08/15	13:25	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	64	mg/l	1	1	SM 2320 B	08/18	12:00	HRG

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Reviewed and Approved by:

Mistine M. fistler

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of F	Report:	08/21	1/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:			4–14–0030951
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	08/11	1/14 09:15
	Columbia MD 21045-1934					Collected	By:	Clier	•
Sample Desc:	BM-2 Surface					Date Received:		08/11	1/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator on 08/11/14 at 15:35.
- 03 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoid 9200 Rumsey Road Suite 100 Columbia MD 21045-1934	r				Date of F Lab ID: Date Coll Collected	.ected:	2294	-14-0030952 /14 09:15
Sample Desc: BM-2 Mid-Depth					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.12	mg/L	.01	1	SM 4500P-E	08/11	15.43	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			
Phosphorus as P, Total	0.12	mg/l	.01	1	SM 4500P-E			
NITROGENS		-,				/ -=	10100	into
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/11	22:31	JCL
Nitrogen, Nitrate	3.05	mg/l	.05	1	EPA 353.2	•	15:00	JCL
Nitrogen, Nitrite	0.10	mg/l	.05	1	EPA 353.2	-	13:21	
Nitrogen, Total Kjeldahl	0.48	mg/l	. 25	1	EPA 351.2		17:33	
OTHER						- 7		
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	•	00:01	
RESIDUES						/ · ·		
Solids, Total Dissolved	172	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	08/15	13:25	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	102	mg/l	1	1	SM 2320 B	08/18	12:00	HRG

01

The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by: tlev Wistice M.

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Repo Lab ID:		08/21 2294	I/14 ⊊−14-0030953
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 09:15 ht
Sample Desc: BM-2 Deep					Date Rece	eived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Ðilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY				·				
COLORMETRIC								
Phosphate as P, Ortho	0.21	mg/l	.01	1	SM 4500P-E	08/11	15:43	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.21	mg/l	.01	1	SM 4500P-E	•		
NITROGENS						'		
Nitrogen, Ammonia	0.50	mg/l	.05	1	D6919-03	08/11	22:45	JCL
Nitrogen, Nitrate	2.94	mg/l	.05	1	EPA 353.2	,	15:01	JCL
Nitrogen, Nitrite	0.15	mg/l	.05	1	EPA 353.2	08/12	13:22	JCL
Nitrogen, Total Kjeldahl OTHER	0.89	mg/L	.25	1	EPA 351.2	08/14	17:34	JCL
Biochemical Oxygen Demand	6	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	•	00:16	
RESIDUES						/ · ·		
Solids, Total Dissolved	201	mg/l	5	1	SM 2540C	08/15	13:25	ТМН
Solids, Total Suspended TITRATIONS	7	mg/l	3	1	SM 2540D	08/15	13:25	
Alkalinity, Total to pH 4.5	128	mg/l	1	1	SM 2320 B	08/18	12:00	HRG

01

The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Hustine m. Lev

Christina Kistler Account Executive

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THE NELAC INSTITUTE

ENVIRONMENTAL TESTING LABORATORY 107 ANGELICA STREET, READING, PA 19611 PHONE: 610-374-5129 • FAX: 610-374-7234 • www.mjreider.com







Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/22 2294	/14 ⊊−14−0030954
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 12:30 nt
Sample Desc: BM-5 Surface					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
ВАСТІ								
MICROBIOLOGY								
Escherichia coli	260	mpn/100ml	1	1	SM 9223B	08/12	11:20	твр
Fecal Coliform	240	/100mL	2	1	SM 9222D	'	15:00	
Total Coliform	>2400	mpn/100ml		1	SM 9223B		11:20	
CHEMISTRY				·		00/12	11.20	IDF
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15.43	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS						/	.0100	into
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/11	23:00	JCL
Nitrogen, Nitrate	7.50	mg/l	.05	1	EPA 353.2		15:29	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	•	13:23	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	•	17:35	JCL
OTHER		- •				/		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	1.4	mg/l	1	1	SM5310 C	08/15	00:57	
RESIDUES		•				/		
Solids, Total Dissolved	300	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended	9	mg/l	3	1	SM 2540D	08/15	13:25	ТМН
TITRATIONS		-,						
Alkalinity, Total to pH 4.5	184	mg/l	1	1	SM 2320 B	08/18	12:00	HRG

Reviewed and Approved by:

Wistine M. stle

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of F	Report:	08/21	1/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		4	4-14-0030954
	9200 Rumsey Road							/	
	Suite 100					Date Coll	.ected:	08/11	1/14 12:30
	Columbia MD 21045-1934					Collected		Clier	-
Sample Desc:	BM-5 Surface					Date Rece	e Received:		1/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O8/11/14 at 15:35.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		08/21/14 2294-14-0030955	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clien	/14 08:25 it
Sample Desc: BM-6 Surface					Date Rece	ived:	08/11	/14 14:05
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI			— <u>—</u> ———			<u></u>		
MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	08/12	11:20	ТВР
Fecal Coliform	2	/100mL	2	1	SM 9222D	08/11		PLW
Total Coliform	<1	mpn/100ml	1	1	SM 9223B	•	11:20	TBP
CHEMISTRY						/ -=		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15:43	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E			
NITROGENS		-				,		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/11	23:15	JCL
Nitrogen, Nitrate	2.75	mg/l	.05	1	EPA 353.2		15:04	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2		13:24	
Nitrogen, Total Kjeldahl	0.51	mg/l	.25	1	EPA 351.2		17:36	
OTHER						,		
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C		01:22	
RESIDUES						'		
Solids, Total Dissolved	119	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	•	13:25	ТМН
TITRATIONS		-				1 -		
Alkalinity, Total to pH 4.5	68	mg/l	1	1	SM 2320 B	08/18	12:30	HRG

Mustice M. Sis Sistle

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Attention:	Gregory Wacik					Date of	Report:	08/2′	1/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		'	4-14-0030955
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	08/11	1/14 08:25
	Columbia MD 21045-1934					Collecter		Clier	•
							, .		
Sample Desc:	BM-6 Surface					Date Rec	eived:	08/11	1/14 14:05
									,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									•

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator on O8/11/14 at 15:35.
- 03 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	`					Report:	08/21 2294	/14 14-0030956
Suite 100 Columbia MD 21045-1934					Date Coll Collected			
Sample Desc: BM-6 Mid-Depth					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								And in a set of a set of a set
COLORMETRIC								
Phosphate as P, Ortho	0.11	mg/l	.01	1	SM 4500P-E	08/11	15:43	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.11	mg/l	. 01	1	SM 4500P-E			
NITROGENS						,		
Nitrogen, Ammonia	0.26	mg/l	.05	1	D6919-03	08/11	23:29	JCL
Nitrogen, Nitrate	2.94	mg/l	. 05	1	EPA 353.2	08/12	15:05	JCL
Nitrogen, Nitrite	<.05	mg/l	. 05	1	EPA 353.2	'	13:25	JCL
Nitrogen, Total Kjeldahl	0.40	mg/l	.25	1	EPA 351.2	08/15	17:08	JCL
OTHER						,		
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	08/15	01:59	
RESIDUES						,		
Solids, Total Dissolved	184	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	08/15	13:25	
TITRATIONS						, -		• •
Alkalinity, Total to pH 4.5	112	mg/l	1	1	SM 2320 B	08/18	12:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Kistike M. Gistle

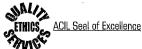
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Attention:	Gregory Wacik					Date of R	eport:	08/21	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		'	-14-0030956
	9200 Rumsey Road								
	Suite 100					Date Coll	ected.	08/11	/14 08:25
	Columbia MD 21045-1934					Collected		Clier	
Sample Desc:	BM-6 Mid-Depth					Date Rece	ived:	08/11	/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
			بيني بسا بعد الله الله التر الله معا معا						

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gnogony Hosik



Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of A Lab ID:	Report:	08/21 2294	1/14 4–14–0030957
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 08:25 nt
Sample Desc: BM-6 Deep					Date Rece	eived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	ین ور بدر بد ما تن بور به زمر ما							
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15:43	HRG
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E			
NITROGENS						'		
Nitrogen, Ammonia	1.09	mg/l	.05	1	D6919-03	08/11	23:44	JCL
Nitrogen, Nitrate	2.13	mg/l	.05	1	EPA 353.2	,	15:06	
Nitrogen, Nitrite	0.07	mg/l	.05	î	EPA 353.2	'	13:26	
Nitrogen, Total Kjeldahl	1.34	mg/l	.25	1	EPA 351.2		17:09	
OTHER						,		_
Biochemical Oxygen Demand	8	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.3	mg/L	1	1	SM5310 C	•	02:11	
RESIDUES						,		
Solids, Total Dissolved	218	mg/l	5	1	SM 2540c	08/15	13:25	тмн
Solids, Total Suspended	5	mg/l	3	1	SM 2540D		13:25	
TITRATIONS		- •						
Alkalinity, Total to pH 4.5	146	mg/l	1	1	SM 2320 B	08/18	12:45	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Ustixa

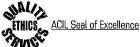
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Attention:	Gregory Wacik					Date of F	enort.	08/21	1/17
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	cepore.		-14-0030957
	9200 Rumsey Road					Lub ID.		<i>LL 7</i>	- 14-0030937
	Suite 100					Date Coll	ected.	09/11	/14 08:25
	Columbia MD 21045-1934					Collected		Clier	
						COLLECTED	ь БУ.	ctier	11
Sample Desc:	BM-6 Deep					Date Rece	ived.	00/14	141 41-05
	·					Date Rece	iveu:	06/11	/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Duranalisma			
			Unite		ractor	Procedure	Date	Time	Analyst
02 т	he duplicate analysis of this sampl	a fan tatal aw							

02 The duplicate analysis of this sample for total suspended solids was outside the recommended limit of 5% of their average weight.

O3 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/21 2294	/14 14-0030958
Suite 100 Columbia MD 21045-1934					Date Coll Collectec		08/11 Clien	/14 09:50 t
Sample Desc: BM-7 Surface					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	<1	······································	4					
Fecal Coliform	<2	mpn/100ml /100ml		1	SM 9223B	-	11:20	ТВР
Total Coliform	N2 1700	/100ml	2	1	SM 9222D		15:30	
CHEMISTRY	1700	mpn/100ml	.1	1	SM 9223B	08/12	11:20	ТВР
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15.45	UDC
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	•		
NITROGENS				•		00/12	12:22	пко
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/11	23:58	JCL
Nitrogen, Nitrate	2.76	mg/l	.05	1	EPA 353.2	•		JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2		13:29	
Nitrogen, Total Kjeldahl	0.46	mg/l	.25	1	EPA 351.2		17:10	
OTHER		-,				,		0.05
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	3.7	mg/l	1	1	SM5310 C	'	02:24	
RESIDUES						,		
Solids, Total Dissolved	134	mg/l	5	1	SM 2540C	08/15	13:25	ТМН
Solids, Total Suspended	4	mg/l	3	1	SM 2540D		13:25	
TITRATIONS						-4 -2		
Alkalinity, Total to pH 4.5	65	mg/l	1	1	SM 2320 B	08/18	12:45	HRG

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Account Executive

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									-
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
PWSID: 30609	12			Rep	Dilutn		Test	Test	
Sample Desc:	BM-7 Surface					Date Rece	eived:	08/1′	1/14 14:05
	Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/1′ Clien	1/14 09:50 nt
	Gregory Wacik Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/2 229	1/14 4–14–0030958

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 08/11/14 at 15:35.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	,				Date of Report: Lab ID:		08/21/14 2294-14-0030959	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 09:50 ht
Sample Desc: BM-7 Mid-Depth					Date Rece	eived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	ی ورد پیم میں تنہ سے تینے سے اور پی میں پینے میں							
COLORMETRIC		,						
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15.45	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•	14:20	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS		-,				/ -=	10100	inte
Nitrogen, Ammonia	0.11	mg/l	.05	1	D6919-03	08/12	00:13	JCL
Nitrogen, Nitrate	3.09	mg/l	.05	1	EPA 353.2	•	15:10	JCL
Nitrogen, Nitrite	0.08	mg/l	.05	1	EPA 353.2		13:30	JCL
Nitrogen, Total Kjeldahl	0.48	mg/l	.25	1	EPA 351,2	•		JCL
OTHER						,		
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	, 08/15	02:36	ALD
RESIDUES								
Solids, Total Dissolved	148	mg/l	5	1	SM 2540C	08/15	13:25	тмн
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	, 08/15	13:25	тмн
TITRATIONS						,		
Alkalinity, Total to pH 4.5	83	mg/l	1	1	SM 2320 B	08/18	12:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Wistore 7 stle

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	eport:	08/21/14 2294–14–0030960	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clien	/14 09:50 nt
Sample Desc: BM-7 Deep					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	ر این علی بوار اس سر می نیا نقه بیم ربید سر				یس سے اپنے این بھر بین ہیں اس کا اعلا ہے	P88 lant lant lant and		
COLORMETRIC								
Phosphate as P, Ortho	0.12	mg/l	.01	1	SM 4500P-E	08/11	15:45	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.12	mg/L	.01	1	SM 4500P-E	•		
NITROGENS								
Nitrogen, Ammonia	0.10	mg/l	.05	1	D6919-03	08/12	00:28	JCL
Nitrogen, Nitrate	3.42	mg/l	.05	1	EPA 353.2		15:11	JCL
Nitrogen, Nitrite	0.20	mg/l	.05	1	EPA 353.2	•	13:31	JCL
Nitrogen, Total Kjeldahl	0.26	mg/l	.25	1	EPA 351.2	•	17:14	JCL
OTHER						,		
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	1.9	mg/l	1	1	SM5310 C	-	02:49	
RESIDUES						,		
Solids, Total Dissolved	197	mg/l	5	1	SM 2540C	08/15	13:55	ТМН
Solids, Total Suspended TITRATIONS	3	mg/l	3	1	SM 2540D	08/15	13:55	ТМН
Alkalinity, Total to pH 4.5	118	mg/l	1	1	SM 2320 B	08/18	12:45	HRG

01

The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Mittice M. Gistle

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/2′ 2294	1/14 4–14–0030961
Suite 100					Date Col	ected:	08/1/	1/14 11:15
Columbia MD 21045-1934					Collected		Clier	•
Sample Desc: BM-8 Surface					Date Rece	eived:	08/1′	1/14 14:05
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI			With land land, party party lists to					
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	08/12	11:20	ТВР
Fecal Coliform	<2	/100mL	2	1	SM 9222D		15:30	
Total Coliform	610	mpn/100ml	1	1	SM 9223B	•	11:20	
CHEMISTRY						/		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15:45	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E		15:06	
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E			
NITROGENS						,		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/12	00:42	JCL
Nitrogen, Nitrate	2.72	mg/l	.05	1	EPA 353.2	•	15:12	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2		13:34	
Nitrogen, Total Kjeldahl	0.80	mg/l	.25	1	EPA 351.2	•	17:15	
OTHER								
Biochemical Oxygen Demand	5	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	3.2	mg/l	1	1	SM5310 C	08/15	03:01	ALD
RESIDUES								
Solids, Total Dissolved	152	mg/l	5	1	SM 2540C	08/15	13:55	тмн
Solids, Total Suspended	8	mg/l	3	1	SM 2540D	08/15	13:55	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	71	mg/l	1	1	SM 2320 B	08/18	13:00	HRG

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istle Wistone 7

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	Gregory Wacik Versar, Inc./Blue Marsh Reservoir					Date of F Lab ID:	Report:	08/21 2294	I/14 ⊊-14-0030961
	9200 Rumsey Road Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 11:15 ht
Sample Desc:	BM-8 Surface					Date Rece	eived:	08/11	/14 14:05
PWSID: 30609	12 [.]			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O8/11/14 at 15:35.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservo 9200 Rumsey Road Suite 100 Columbia MD 21045-1934	ir				Date of F Lab ID: Date Coll Collected	.ected:		4-14-0030962 1/14 11:15
Sample Desc: BM-8 Mid-Depth					Date Rece	eived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limít	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY		19 000 Allah yang geng geng kand kana, kana yang gang						NAME AND ADDRESS AND ADDRESS ADDRE
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15:45	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS						,		
Nitrogen, Ammonia	0.09	mg/l	.05	1	D6919-03	08/12	00:57	JCL
Nitrogen, Nitrate	2.82	mg/l	.05	1	EPA 353.2	•	15:15	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	08/12	13:35	JCL
Nitrogen, Total Kjeldahl OTHER	0.70	mg/l	.25	1	EPA 351.2	08/15	17:15	
Biochemical Oxygen Demand	3	<u>/</u> 1						
Total Organic Carbon	2.3	mg/l	2	1	SM 5210B	08/11	16:30	
RESIDUES	2.5	mg/l	1	1	SM5310 C	08/15	03:14	ALD
Solids, Total Dissolved	160	mg/l	5	1	SM 2540C	08/15	13:55	тмн
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	08/15	13:55	
TITRATIONS		0,				50/10		
Alkalinity, Total to pH 4.5	70	mg/l	1	1	SM 2320 B	08/18	13:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	voir				Date of Report: Lab ID:		08/21/14 2294-14-0030963	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 11:15 ht
Sample Desc: BM-8 Deep					Date Rece	ived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY				• • • • • • • • • • • • • • • • • • •				
COLORMETRIC								
Phosphate as P, Ortho	0.17	mg/l	.01	1	SM 4500P-E	08/11	15:45	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		
Phosphorus as P, Total	0.43	mg/l	.01	1	SM 4500P-E			
NITROGENS						,		
Nitrogen, Ammonia	0.27	.mg/l	. 05	1	D6919-03	08/12	01:11	JCL
Nitrogen, Nitrate	2.88	mg/l	.05	1	EPA 353.2	08/12	15:16	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	08/12	13:36	JCL
Nitrogen, Total Kjeldahl	1.72	mg/l	.25	1	EPA 351.2	08/15	17:18	JCL
OTHER						-		
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	3.4	mg/l	1	1	SM5310 C	08/15	03:27	ALD
RESIDUES								
Solids, Total Dissolved	183	mg/l	5	1	SM 2540C	08/15	13:55	T'MĤ
Solids, Total Suspended	74	mg/l	3	1	SM 2540D	08/15	13:55	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	89	mg/l	1	1	SM 2320 B	08/18	13:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention:	Gregory Wacik					Date of F	eport:	08/21	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	•		-14-0030963
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	08/11	/14 11:15
	Columbia MD 21045-1934					Collected	By:	, Clier	•
Sample Desc:	BM-8 Deep					Date Rece	ived:	08/11	/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		08/2′ 2294	1/14 4-14-0030964
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/1′ Clier	1/14 10:15 nt
Sample Desc: BM-9 Surface					Date Rece	eived:	08/1′	I/14 14:05
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	08/12	11.20	TDD
Fecal Coliform	2	/100mL	2	1	SM 9222D		11:20 15:30	TBP PLW
Total Coliform	980	mpn/100ml		1	SM 9223B	,	11:20	
CHEMISTRY		1.17		•	011 72200	00/12	11.20	IDF
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15:45	HRG
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E			HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E			
NITROGENS							10100	inte
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	08/12	01:26	JCL
Nitrogen, Nitrate	2.75	mg/l	.05	1	EPA 353.2		15:17	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	-	13:36	JCL
Nitrogen, Total Kjeldahl	0.70	mg/l	.25	1	EPA 351.2	,	17:21	. –
OTHER						,		
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	08/15		
RESIDUES						,		
Solids, Total Dissolved	149	mg/l	5	1	SM 2540C	08/15	13:55	тмн
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	'	13:55	
TITRATIONS						,	'	
Alkalinity, Total to pH 4.5	70	mg/l	1	1	SM 2320 B	08/18	13:00	HRG

Reviewed and Approved by:

Risting M. Gistle

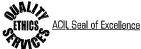
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Attention:	Gregory Wacik					Date of I	enort.	08/2′	1/1/
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:	seport.	'	4-14-0030964
	9200 Rumsey Road					LGD 10.		22.75	+ 14:0030904
	Suite 100					Date Coll	ected.	08/11	1/14 10:15
	Columbia MD 21045-1934					Collected		Clier	•
							- Dy -	utier	1.
Sample Desc:	BM-9 Surface					Date Rece	aived.	08/11	1/14 14:05
						bate Nete	iveu.	00/1	1/14 14:05
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure			Amm 1
		noouee	onne	Limit	ractor	Procedure	Date	Time	Analyst
									and that has seen any set and

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

02 The total coliform sample was placed in the incubator on 08/11/14 at 15:35.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh 9200 Rumsey Road	Reservoir					Date of F Lab ID:	Report:	08/21 2294	/14 14-0030965
Suite 100 Columbia MD 21045–1934						Date Coll Collected		08/11 Clier	/14 10:15 it
Sample Desc: BM-9 Mid-Depth						Date Rece	ived:	08/11	/14 14:05
PWSID: 3060912		Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY									
COLORMETRIC									
Phosphate as P, Ortho		0.18	mg/l	.01	1	SM 4500P-E	08/11	15.45	HRG
Phosphorus as P, Dissolved		<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total		0.19	mg/l	.01	1	SM 4500P-E			
NITROGENS			-,				/ -=	10100	into .
Nitrogen, Ammonia		0.12	mg/l	. 05	1	D6919-03	08/12	01:41	JCL
Nitrogen, Nitrate		3.23	mg/l	.05	1	EPA 353.2	•	15:18	JCL
Nitrogen, Nitrite		<.05	mg/l	.05	1	EPA 353.2		13:37	JCL
Nitrogen, Total Kjeldahl		0.81	mg/l	.25	1	EPA 351.2	•	17:24	
OTHER							,		
Biochemical Oxygen Demand		3	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon		2.3	mg/l	1	1	SM5310 C	08/15	04:27	
RESIDUES							,		
Solids, Total Dissolved		183	mg/l	5	1	SM 2540c	08/15	13:55	тмн
Solids, Total Suspended		8	mg/l	3	1	SM 2540D	, 08/15	13:55	тмн
TITRATIONS							/ -		
Alkalinity, Total to pH 4.5		92	mg/l	1	1	SM 2320 B	08/18	13:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Wristine M. Sistle

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	Gregory Wacik Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/2′ 2294	/14 ⊊−14−0030965
	Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	/14 10:15 ht
Sample Desc:	BM-9 Mid-Depth					Date Rece	ived:	08/11	/14 14:05
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
4									

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of A Lab ID:	Report:	08/2′ 2294	1/14 414-0030966
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/1′ Clier	1/14 10:15 nt
Sample Desc: BM-9 Deep					Date Rece	eived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY		ana ann a si dhi kun pan aya dha ana pan g		. <u></u>	وجيع وسنا عند الله وسع (عند عند الله وجيع الله عنه الله وجيع			والمتا والجرجية ومعا علما المتا
COLORMETRIC								
Phosphate as P, Ortho	0.18	mg/l	.01	1	SM 4500P-E	08/11	15 . / 7	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0.18	mg/l	.01	1	SM 4500P-E			
NITROGENS		-,				00/12	10.40	пка
Nitrogen, Ammonia	0.28	mg/l	.05	1	D6919-03	08/12	01:55	JCL
Nitrogen, Nitrate	4.20	mg/l	.05	1	EPA 353.2		15:21	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	08/12		JCL
Nitrogen, Total Kjeldahl	0.94	mg/l	.25	1	EPA 351.2	•	17:25	
OTHER						,		
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	08/15	05:45	ALD
RESIDUES						,		
Solids, Total Dissolved	256	mg/l	5	1	SM 2540C	08/15	13:55	тмн
Solids, Total Suspended	25	mg/l	3	1	SM 2540D	, 08/15	13:55	тмн
TITRATIONS						1.5		
Alkalinity, Total to pH 4.5	134	mg/l	1	1	SM 2320 B	08/18	13:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

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	Gregory Wacik Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/2′ 2294	1/14 4-14-0030966
	Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 10:15 ht
Sample Desc:	BM-9 Deep					Date Rece	eived:	08/11	/14 14:05
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
00 -		یے بینے ہیں ہے اس میں میں بین ہی ہے ہی ہے اس من این اور ا							

02 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/2′ 2294	I/14 ⊊−14~0030967
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/1′ Clier	1/14 10:40 ht
Sample Desc: BM-10 Surface					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI	یں کے پہر بے نے نے نیز پر بے بے اس	ور بد بد نا نا نیا پیر بد بد با نا بر			رس سا من بين بن بن بن ما اين اين بين ب			
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	08/12	11:20	твр
Fecal Coliform	60	/100ml	2	1	SM 9222D	, 08/11	15:30	PLW
Total Coliform	730	mpn/100ml	1	1	SM 9223B	08/12	11:20	ТВР
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	08/11	15:47	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	08/20	14:45	HRG
Phosphorus as P, Total NITROGENS	0.13	mg/l	.01	1	SM 4500P-E	08/12	13:40	HRG
Nitrogen, Ammonia Nitrogen, Nitrate	<.05	mg/l	. 05	1	D6919-03	•	02:10	JCL
Nitrogen, Nitrite	2.65	mg/l	. 05	1	EPA 353.2		15:22	1 C L
Nitrogen, Total Kjeldahl	<.05	mg/l	.05	1	EPA 353.2	•	13:41	JCL
OTHER	1.90	mg/l	.25	1	EPA 351.2	08/15	17:26	JCL
Biochemical Oxygen Demand	7		-					
Total Organic Carbon	2.9	mg/l	2	1	SM 5210B	08/11	16:30	EMW
RESIDUES	2.7	mg/l	1	1	SM5310 C	08/15	04:40	ALD
Solids, Total Dissolved	156	mg/l	5	4	DM 05 (0 a	00/45	4	
Solids, Total Suspended	150		5 3	1	SM 2540C	08/15		TMH
TITRATIONS	· ·	mg/l	5	1	SM 2540D	08/15	13:55	ТМН
Alkalinity, Total to pH 4.5	74	mg/l	1	1	SM 2320 B	08/18	13:15	HRG

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Christina Kistler Account Executive

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	Gregory Wacik Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	Report:	08/2′ 2294	1/14 4-14-0030967
	Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 10:40 nt
Sample Desc:	BM-10 Surface					Date Rece	eived:	08/11	1/14 14:05
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 08/11/14 at 15:35.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	eport:	08/21 2294	/14 14~0030968
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	/14 10:40 it
Sample Desc: BM-10 Mid-Depth					Date Rece	eived:	08/11	/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/11	15.47	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	0,05	mg/L	.01	1	SM 4500P-E			
NITROGENS		0,				00/12	13.40	niko
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/12	03:09	JCI
Nitrogen, Nitrate	2.90	mg/l	.05	1	EPA 353.2		15:23	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	-	13:42	
Nitrogen, Total Kjeldahl	1.03	mg/L	.25	1	EPA 351.2		17:27	
OTHER						,		
Biochemical Oxygen Demand	5	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	08/15	04:52	
RESIDUES						/		/120
Solids, Total Dissolved	166	mg/l	5	1	SM 2540C	08/15	13:55	ТМН
Solids, Total Suspended	10	mg/l	3	1	SM 2540D	08/15	13:55	
TITRATIONS						/ ••		
Alkalinity, Total to pH 4.5	73	mg/l	1	1	SM 2320 B	08/18	13:30	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

fistle Kuttike 7

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of F Lab ID:	Report:	08/2′ 2294	1/14 4–14–0030969
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/1′ Clier	1/14 10:40 nt
Sample Desc: BM-10 Deep					Date Rece	eived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								من من وم امر مع مع مع مع
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/11	15:47	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.27	mg/l	.01	1	SM 4500P-E	'		HRG
NITROGENS						/		into .
Nitrogen, Ammonia	0.19	mg/l	. 05	1	D6919-03	08/12	03:24	10
Nitrogen, Nitrate	4.78	mg/l	.05	1	EPA 353.2	'	15:24	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	-	13:43	JCL
Nitrogen, Total Kjeldahl OTHER	1.06	mg/l	.25	1	EPA 351.2		17:28	
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	08/15	05:05	ALD
RESIDUES		0,				00/15	05.05	
Solids, Total Dissolved	258	mg/l	5	1	SM 2540C	08/15	13:55	ТМН
Solids, Total Suspended TITRATIONS	154	mg/l	3	1	SM 2540D	08/15	13:55	ТМН
Alkalinity, Total to pH 4.5	141	mg/l	1	1	SM 2320 B	08/18	13:30	HRG

01

The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of F Lab ID:	eport:	08/21 2294	I/14 ¥−14−0030970
Suite 100 Columbia MD 21045-1934					Date Coll Collected		08/11 Clier	1/14 12:30 nt
Sample Desc: BM-11 Surface					Date Rece	vived:	08/11	1/14 14:05
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI	المستعمل المستعمل ومراجع ومستعمل المستعمل والمستعمل والمستعمر والمستعمل							partie party lines into anny party party.
MICROBIOLOGY								
Escherichia coli	160	mpn/100ml	1	1	SM 9223B	08/12	11:20	ТВР
Fecal Coliform	210	/100mL	2	1	SM 9222D		15:30	
Total Coliform	>2400	, mpn/100ml	1	1	SM 9223B		11:20	
CHEMISTRY						00/12	11.20	
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/l	.01	1	SM 4500P-E	08/11	15:50	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	<i>.</i> -	14:45	HRG
Phosphorus as P, Total	0.09	mg/l	.01	1	SM 4500P-E	/		
NITROGENS		-,				,	10140	inte
Nitrogen, Ammonia	<.05	mg/l	. 05	1	D6919-03	08/12	04:09	JCL
Nitrogen, Nitrate	3.92	mg/l	.05	1	EPA 353.2		15:26	
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	-	13:46	
Nitrogen, Total Kjeldahl	0.71	mg/l	.25	1	EPA 351.2	,	17:28	
OTHER						,		
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	08/11	16:30	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C		05:18	
RESIDUES						,		
Solids, Total Dissolved	228	mg/l	5	1	SM 2540c	08/15	14:25	тмн
Solids, Total Suspended	28	mg/l	3	1	SM 2540D		13:55	
TITRATIONS		-				/ -		
Alkalinity, Total to pH 4.5	120	mg/l	1	1	SM 2320 B	08/18	13:45	HRG

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Reviewed and Approved by: Wistore M. Sistler

Christina Kistler Account Executive

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	Gregory Wacik Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Lab ID:	Report:	'	1/14 4–14–0030970
	Suite 100 Columbia MD 21045-1934					Date Col Collecte		08/11 Clier	1/14 12:30 nt
Sample Desc:	BM-11 Surface					Date Rec	eived:	08/11	I/14 14:05
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

- O2 The total coliform sample was placed in the incubator on 08/11/14 at 15:35.
- 03 The sample container for alkalinity contained headspace. Proper sample collection technique would not contain headspace.

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Reviewed and Approved by: Kistore M. Listle

Christina Kistler Account Executive

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COFC. PRT Page: 1	No: 241687	Bottle Prep by: C. If Temp Unacceptable, On Ice? 🖉 N	H A A A A A A A A A A A A A A A A A A A	Time: 0 Date: $3/11/14$ Time: $6/15$ X 250mlMicro P w/ Sterile/Na25203 X 1602N03 p w/ Cool to 6 C; X 500ml NH3 p w/ H2504 ($H<2$); X 2xambervoa g w/ H3P04/zero headspace; X 80z Alk p w/ Ol to 6 C/Zero Headspace;	ory by: phas: 1405 Sample entered by:
M. J. REIDER ASSOCIATES, INC.	ion:	Total Sampling Time (hours): Laboratory Receipt Temp: 10 Deg	Matrix: A - 1 X 250m B - 1 X 1602 C - 1 X 1602 C - 1 X 260m E - 1 X 200m F - 1 X 802 F - 1 X 802 F - 1 X 802	Matrix: Matrix: A - 1 X 250m B - 1 X 160z C - 1 X 160z C - 1 X 250m F - 1 X 250m F - 1 X 80z F - 1 X 80z F - 1 X 80z	Received for laboratory by: Date: 8-11-14
raq 07/16/14 4:26:54 PM	Account: 2294 Work Order: 004037 Work Order Descript Customer: Gregory Wacik	eservoir	Sample No: 1 Desc: BM-1 Surface FC, C, TC, NO2-N, NO3-N, d-P04-P, o-P04, BOD NH3-N, tkm, Alk, tds, tss, po4-P, toc,	Sample No: 2 Desc: BM-2 Surface FC, FC, TC, NO2-N, NO3-N, d-po4-p, o-po4, BOD M NH3-N, thu, Alk, tds, tss, po4-p, toc,	Relinquished by: Received by Date: 8/11/14 Time: 130
ra(07,	Ac	S S S S S S S S S S S S S S S S S S S	30950 san	30951 ^{sar}	면 면 고

COFC.PRT Page: 2		No: 241687	Bottle Prep by: Unacceptable, On Ice? 🖉 N	Julid	Date: 3/1/1 7 Time: 09/5 Cool to 6 C; P w/ Cool to 6 C;	bumn MH3 P W/ H2004 (pn/2); 2xambervoa g w/ H3P04/zero headspace; 8oz Alk p w/ . to 6 C/Zero Headspace;	Date: Time:		Time: $\frac{\delta/n/14}{12.30}$	OOl W/F W/F		e:/405 Sample entered by:
J. REIDER ASSOCIATES, INC.	Chain of Custody	004037 Project Leader: CMB Description: Seasonal Monthly Blue Marsh Reservoir Remarks:	mpling Time (hours): ry Receipt Temp: 10 Deg C. If Temp		- 1 Mat	C - I X 2NUML NH3 \mathcal{P} W/ H2O4/ \mathcal{P} D - I X 2xambervoa \mathcal{G} W/ H3PO4/Z E - I X 8oz Alk \mathcal{P} W/ Cool to 6 C/Zero Headspace;	Mat	A - 1 X L BOO P W/ COOL B - 1 X 1602N03 P W/ C - 1 X 500ml NH3 P W/ F C - 1 X 2xambervoa 9 W/ E - 1 X 802 Alk P W/ E - 1 X 802 Alk P W/	Mat	A - 1 X 250mlMicro P W/ B - 1 X L Bod p W/ Cool C - 1 X 160zN02N03 p W/ D - 1 X 500ml NH3 p W/ E - 1 X 2xambervoa g W/ F - 1 X 80z Alk p W/ Cool to 6 C/Zero Hé	Received for laboratory by:	
M. J. RE	Chain	Work Order: 004037 Work Order Description: Seasona Remarks:			d-Depth Boyy	-P, toc,	dər	BODA 	ırface	BOD w toc,		1:30 VECETAED DA
t 4:26:54 PM		2294 Gregory Wacik	<pre>s: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 e: 215-656-6561 Ext:</pre>		ple No: 3 Desc: BM-2 Mid-Depth NO2-N, NO3-N, d-po4-p, o-po4, BODY	NH3-N, tkm, Alk, tds, tss, po4-p, toc,	No: 4 Desc: BM-2 Deep	NO2-N, NO3-N, d-PO4-P, o'PO4, BOP, NH3-N, tkn, Alk, tds, tss, PO4-P,	No: 5 Desc: BM-5 Surface	FC, FC, TC, NO2-N, NO3-N, d-p04-p, o-p04, BOD, M NH3-N, tkm, Alk, tds, tss, p04-p, t		hed by T Time:
rag 07/16/14		Account: Customer:	Address: Phone:	Samplers: =======	30952 sample No: NO2-N,	· EHN	30953 sample No:	. ZON	30454 sample No:	FC, NO2, NH3		Relinquis Date: S

raq 07/16/14 4:26:54 PM	M. J. REIDER ASSOCIATES, INC. COFC.PRT Page: 3
Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik	Chain of Custody Project Leader: CMB : Seasonal Monthly Blue Marsh Reservoir Remarks:
Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers:	Total Sampling Time (hours):Bottle Prep by:Bottle Prep by:Laboratory Receipt Temp: /0 Deg C. If Temp Unacceptable, On Ice? Ø N Approved By:
30455 Sample No: 6 Desc: BM-6 Surface Fc, Ec, Tc, NO2-N, NO3-N, d-PO4-P, o-PO4, BOD NH3-N, tkn, Alk, tds, tss, po4-P, toc,	Matrix: 0 Date: 8/11/1/4 A - 1 X 250mlMicro P w/ Sterile/Na2S203; B - 1 X 160zN02N03 P w/ Cool to 6 C; 0.8255 B - 1 X 160zN02N03 P w/ Cool to 6 C; D - 1 X 500ml NH3 P w/ H3P04/Decol to 6 C; 0.8256 F - 1 X 80z Alk P w/ F - 1 X 80z Alk P w/ 0.82504(pH<2);
30956 Sample No: 7 Desc: BM-6 Mid-Depth NO2-N, NO3-N, d-po4-p, o-po4, BOD M NH3-N, tkm, Alk, tds, tss, po4-p, toc,	
Relinquished by Received by Received by Pate: Still 4	Received for laboratory by: Bate: 8-(1-4) Date: 8-11-40 Sample entered by:

	 B - 1 X L BOG P W/ COOL CO & C; C - 1 X 160ZNO2NO3 P w/ COOL to 6 C; D - 1 X 500ml NH3 P w/ H3P04/pH<2); E - 1 X 2xambervoa g w/ H3P04/zero headspace; F - 1 X 80z Alk P w/ Cool to 6 C/Zero Headspace;
NO2-N, NO3-N, d-po4-P, olpo4, BOD, NH3-N, thm, Alk, tds, tss, po4-P, toc, NH3-N, thm, Alk, tds, tss, po4-P, toc, Relinquished by Relinquished by Time: 1:30	Received for laboratory by A Rime: 405

rag 07/16/14 4:26:54 PM	M. J. REIDER ASSOCIATES, INC. Page: 5
	Chain of Custody
Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik	Project Leader: CMB No: 241687 1: Seasonal Monthly Blue Marsh Reservoir Remarks:
Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100	
Columbia MD 21045-1934 Phone: 215-656-6561 Ext: Samplers:	Bottle P ptable,
30959 mple No: 10 Desc: BM-7 Mid-Depth	Matrix: 0 $\frac{8/n/1+1}{1+1+1+1+1}$
NO2-N, NO3-N, d-po4-p, dfpo4, BOD	- 1 X L Bod P w/ Cool to 6 - 1 X 16ozNO2NO3 P w/ Cool
NH3-N, tkm, Alk, tds, tss, po4-p, toc,	hea
Soflosample No: 11 Desc: BM-7 Deep	Matrix: 0 $\frac{g(l(l))}{m_{ime}}$
NO2-N, NO3-N, d-po4-p, J. pop, M NH3-N, tim, Alk, tds, tss, po4-p, toc,	L Bod p w/ Cool to (16ozN02N03 p w/ Cool 500ml NH3 p w/ H2S04 2xambervoa g w/ H3PC 3oz Alk p w/
3096/ surface	Cool to b C/Zero Headspace; $8/1/14$ Matrix: 0 Date: $8/1/14$
TC, NO3-N, d- Ekn, Alk,	 A - 1 X 250mlMicro P w/ Sterile/Na2S203; B - 1 X L Bod P w/ Cool to 6 C; C - 1 X 16ozNO2NO3 P w/ Cool to 6 C; D - 1 X 500ml NH3 P w/ H2S04 (pH<2); E - 1 X 80z Alk P w/ Cool to 6 C/Zero Headspace;
Relinquished by: UCOUN Received by: Date: 8/11/14 Time: 1250	pate: 8-1(-14 rime: 1405
	Sample entered by:

COFC.PRT Page: 6	: CMB Reservoir Bottle Prep by: Deg C. If Temp Unacceptable, On Ice?	<pre>Matrix: 0 Matrix: 0 B - 1 X L Bod p w B - 1 X 16ozNo2N0 C - 1 X 250M1 NH3 C - 1 X 8oz Alk p Cool to 6 C/Z Matrix: 0 A - 1 X L Bod p w A - 1 X L Bod p w A - 1 X 16ozN02N0 C - 1 X 250M1 NH3 C - 1 X 250M1 NH3 C - 1 X 16ozN02N0 C - 1 X 250M1 NH3 E - 1 X 250M1 NH3</pre>	Received for laboratory by: Date: 8-11-14 Sample entered by:
M. J. REIDER ASSOCIATES, INC. Chain of Custody	004037 escription: Seasonal M Remarks: Total Sampl Laboratory		eived by:
raq 07/16/14 4:26:54 PM	Work Order: Work Order Mork Drder Marsh Reservoi Ext:	3 6962 Sample No: 13 Desc: BM-8 Mid-Depth NO2-N _M NO3-N, d-PO4-P, off04, BOD NH3-N, tkn, Alk, tds, tss, po4-P, toc, NH3-N, tkn, Alk, tds, tss, po4-P, toc,	Relinquished by Lund Rec Date: Sluft 4 Time: 1:30

. .

COFC.PRT Page: 7		No: 241687		серсарте, оп тсе, 6		<pre>cool to 6 C; > w/ Cool to 6 C w/ H2SO4(pH<2); f w/ H3PO4/zero] / Headspace;</pre>	Date: $8/1/1/4$ Time: $18/5$	to 6 Cool 12S04 H3PC	Date: $\frac{8/n/4}{100}$	P w/ Stei Cool to (p w/ Coo p w/ H2SO g w/ H3P(g w/ H3P v/		Trime: 1405 Sample entered by:
J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB Seasonal Monthly Blue Marsh Reservoir temarks:	(0)	tory Receipt Temp: / Ueg C. 11 Temp Approved By: Approved By:		<pre>A - 1 X L Bod p w/ Cool B - 1 X 16ozNO2NO3 p w/ C - 1 X 500ml NH3 p w/ D - 1 X 2xambervoa g w/ E - 1 X 8oz Alk p w/ Cool to 6 C/Zero He</pre>	Matrix: O	A - 1 X L Bod P w/ Cool B - 1 X 16ozNO2NO3 P w/ C - 1 X 500ml NH3 P w/ D - 1 X 2xambervoa g w/ E - 1 X 80z Alk P w/	COOL TO & C/ Matrix: O	 A - 1 X 250mlMicro P w/ B - 1 X L Bod p w/ Cool C - 1 X 16ozNOZNO3 p w/ D - 1 X 500ml NH3 p w/ F - 1 X 80x Alk p w/ F - 1 X 80x Alk p w/ Cool to 6 C/Zero He 	Received for laboratory by:	Date: 8-(1-1-4 Tr
W	Chai	Work Order: 004037 Work Order Description: ry Wacik –	Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 Columbia MD 21045-1934 215-656-6561 Ext:		Sample No: 16 Desc: BM-9 Mid-Depth	NO2-N _W NO3-N, d-po4-p, o-po4, BOD NH3-N, thn, Alk, tds, tss, po4-p, toc,	Desc: BM-9 Deep	NO2-N, NO3-N, d-po4-p, o-po4, BOD \mathcal{N} NA NH3-N, the, alk, tds, tss, po4-p, toc,	Desc: BM-10 Surface	FC, EC, TC, W NO2-N', NO3-N', d-P04-P, OLP04, BOD, W NH3-N, tkn, Alk, tds, tss, p04-P, toc,	And by:	Time: 1:30
raq 07/16/14 4:26:54 PM		Account: 2294 Customer: Grego	Address: Veri 9200 Sui Coli Phone: 215	Samplers:	30965 sample No: 16	NO2-N NO3. NH3-N, thu	30466 _{sample No: 17}	NO2-N, NO3 У(NH3-N, tЪ	30967 sample No: 18	FC, EC, TC NO2-N' _N NO3 NH3-N, tkn		Date: 8/11/14

COFC.PRT Page: 8	No: 241687 Bottle Prep by:	If Temp Unacceptable, On Ice? (y N	0 Date: d p w/ Cool to 6 C; NO2NO3 p w/ Cool to 6 C; NU2NO3 p w/ H3P04/Zero b bervoa g w/ H3P04/Zero b Alk p w/	rix: 0 Date: $\forall U// Y$ L Bod p w/ Cool to 6 C; 160zN02N03 p w/ Cool to 6 C; 500ml NH3 p w/ H3P04/zero headspace; 2xambervoa g w/ H3P04/zero headspace; 80z Alk p w/	rix: 0 Date: $\left \frac{2}{12}\right $ 250mlMicro P w/ Sterile/Na2S203; L Bod P w/ Cool to 6 C; 160zN02N03 P w/ Cool to 6 C; 500ml NH3 P w/ H3P04/zero headspace; 80z Alk P w/ to 6 C/Zero Headspace;	ry by: Time: 1405 Sample entered by:
M. J. REIDER ASSOCIATES, INC.	Chain of Custody 004037 Project Leader: CMB Description: Seasonal Monthly Blue Marsh Reservoir Remarks: r Total Sampling Time (hours):	Laboratory Receipt Temp: 1 Deg C.	Mat A - 1 X B - 1 X Cool B - 1 X B - 1 X Cool	Matrix: A - 1 X 1602 B - 1 X 1602 C - 1 X 500m D - 1 X 2xam E - 1 X 302 - 1 X 2xam	Matrix: Matrix: A - 1 X 250m B - 1 X 160Z C - 1 X 160Z E - 1 X 200m E - 1 X 2xam F - 1 X 80Z F - 1 X 80Z	Received for laboratory by: Date: 8-11-14
raq 07/16/14 4:26:54 PM	ork Order: ork Order h Reservoi	Phone: 215-656-6561 Ext: Samplers: $OACiK$	19 Desc: BM-10 Mid-Depth NO3-N, d-po4-p, of po4, BOD thm, Alk, tds, tss, po4-p, toc,	ろの存ら存 Sample No: 20 Desc: BM-10 Deep NO2-N _M NO3-N, d-Po4-P, d-Po4, BOD N NH3-N, tkn, Alk, tds, tss, po4-P, toc,	30970 Sample No: 21 Desc: BM-11 Surface FC, EC, TC, A NO2-N, NO3-N, d-po4-p, o-po4, BOD, MH3-N, tkn, Alk, tds, tss, po4-p, toc,	Relinquished by: Control Market by: Date: 8/11/14 Trime: 1/30



Attention: Gregory Wacik



09/23/14

Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/23 2294	6/14 14-0034304
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clier	9/14 12:10 nt
Sample Desc: BM-1 Surface					Date Rece	ived:	09/09	9/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	4	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	5	/100mL	2	1	SM 9222D	09/09		PLW
Total Coliform	1600	mpn/100ml	1	1	SM 9223B	09/10	09:00	
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:05	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:00	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	09/10	13:30	HRG
NITROGENS								
Nitrogen, Ammonia	0.79	mg/l	.05	1	D6919-03	09/09	15:47	JCL
Nitrogen, Nitrate	1.98	mg/l	.05	1	EPA 353.2	09/10	14:35	JCL
Nitrogen, Nitrite	0.11	mg/l	. 05	1	EPA 353.2	09/10	12:55	JCL
Nitrogen, Total Kjeldahl	1.16	mg/l	. 25	1	EPA 351.2	09/11	17:46	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	09/10	22:51	ALD
RESIDUES								
Solids, Total Dissolved	218	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	<3	mg/l	3	1	SM 2540D	09/11	13:05	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	136	mg/l	1	1	SM 2320 B	09/10	11:15	HRG

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Reviewed and Approved by: Wisting M. Gistler

Date of Report:

Christina Kistler Account Executive

Page 1 of 2

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Attention:	Gregory Wacik					Date of I	Report:	09/23	8/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034304
	9200 Rumsey Road								
	Suite 100					Date Col	lected:	09/09	9/14 12:10
	Columbia MD 21045-1934					Collected	d By:	Clier	nt
Sample Desc:	BM-1 Surface					Date Rece	eived:	09/09	9/14 13:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The dissolved oxygen depletion of the SM5210B dilution water blank was greater than 0.2 mg/L.

- O2 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 03 The total coliform sample was placed in the incubator on 09/09/14 at 15:00.

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Reviewed and Approved by: Histler Wistike M.

Christina Kistler Account Executive

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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/23 2294	/14 -14-0034305
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 09:30 t
Sample Desc: BM-2 Surface					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	5	/100ml	2	1	SM 9222D	09/09	15:00	PLW
Total Coliform	190	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:05	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:00	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	09/10	13:30	HRG
NITROGENS								
Nitrogen, Ammonia	0.71	mg/l	.05	1	D6919-03	09/09	16:02	JCL
Nitrogen, Nitrate	2.26	mg/l	.05	1	EPA 353.2	09/10	14:36	JCL
Nitrogen, Nitrite	0.16	mg/l	.05	1	EPA 353.2	09 <u>/</u> 10	12:58	JCL
Nitrogen, Total Kjeldahl	0.92	mg/l	.25	1	EPA 351.2	09/11	17:49	JCL
OTHER								
Biochemical Oxygen Demand	5	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.1	mg/l	1	1	SM5310 C	09/10	23:07	ALD
RESIDUES								
Solids, Total Dissolved	224	mg/l	5	1	SM 2540C	09/11	13:05	тмн
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	09/11	13:05	тмн
TITRATIONS						·		
Alkalinity, Total to pH 4.5	127	mg/l	1	1	SM 2320 B	09/10	11:45	HRG

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Reviewed and Approved by:

Wistike M. stle

Christina Kistler Account Executive

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ENVIRONMENTAL TESTING LABORATORY 107 ANGELICA STREET, READING, PA 19611 PHONE: 610-374-5129 • FAX: 610-374-7234 • www.mjreider.com







Attention:	Gregory Wacik					Date of F	eport:	09/23	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	, -14-0034305
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	09/09	9/14 09:30
	Columbia MD 21045-1934					Collected	By:	Clier	,
Sample Desc:	BM-2 Surface					Date Rece	ived:	09/09	9/14 13:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 09/09/14 at 15:00.

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Muttine M. Bistler

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of R Lab ID:	eport:	09/23 2294	/14 -14-0034306
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 09:30 t
Sample Desc: BM-2 Mid-Depth					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	, پیر سر سر اس اس اس اس این ا				and the last has been been been any one of a set of the			
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:00	HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E	09/10	13:30	HRG
NITROGENS						-		
Nitrogen, Ammonia	0.12	mg/l	.05	1	D6919-03	09/09	16:17	JCL
Nitrogen, Nitrate	2.39	mg/l	.05	1	EPA 353.2	09/10	14:36	JCL
Nitrogen, Nitrite	0.11	mg/l	.05	1	EPA 353.2	09/10	12:59	JCL
Nitrogen, Total Kjeldahl	0.56	mg/l	.25	1	EPA 351.2	09/11	17:50	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	09/10	23:23	ALD
RESIDUES								
Solids, Total Dissolved	166	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	09/11	13:05	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	96	mg/l	1	1	SM 2320 B	09/10	11:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Wistina stler

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of R Lab ID:	eport:	09/23 2294	/14 14-0034307
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 09:30 t
Sample Desc: BM-2 Deep					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY					hann, ann part ann ann aine)een een een een		
COLORMETRIC								
Phosphate as P, Ortho	0.03	mg/l	.01	1	SM 4500P-E	09/09	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.03	mg/l	.01	1	SM 4500P-E	09/10	13:30	HRG
NITROGENS						·		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	16:31	JCL
Nitrogen, Nitrate	2.06	mg/l	. 05	1	EPA 353.2	09/10	14:37	JCL
Nitrogen, Nitrite	0.09	mg/l	. 05	1	EPA 353.2	09/10	13:00	JCL
Nitrogen, Total Kjeldahl	0.68	mg/l	.25	1	EPA 351.2	09/11	17:51	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.5	mg/l	1	1	SM5310 C	09/10	23:40	ALD
RESIDUES								
Solids, Total Dissolved	169	mg/l	5	1	SM 2540C	09/11	13:05	тмн
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	09/11	13:05	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	75	mg/l	1	1	SM 2320 B	09/10	11:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by: Wistixe M. tev)

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/23 2294	/14 -14-0034308
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 11:45 t
Sample Desc: BM-5 Surface					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI	یہ ہے ہے کا ایک کے نک کا تعاد کے 201	White Solid Acad Junct Source source yours yours many			———— — ————			
MICROBIOLOGY								
Escherichia coli	980	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	990	/100ml	2	1	SM 9222D	09/09	15:30	PLW
Total Coliform	>2400	, mpn/100ml	1	1	SM 9223B	'	09:00	DAD
CHEMISTRY		. ,				1		
COLORMETRIC								
Phosphate as P, Ortho	0.03	mg/l	.01	1	SM 4500P-E	09/09	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:05	HRG
Phosphorus as P, Total	0.06	mg/l	.01	1	SM 4500P-E	09/10	13:30	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	16:46	JCL
Nitrogen, Nitrate	4.87	mg/l	.05	1	EPA 353.2	09/10	14:40	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	09/10	13:01	JCL
Nitrogen, Total Kjeldahl	0.43	mg/l	.25	1	EPA 351.2	09/11	17:51	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	09/10	23:56	ALD
RESIDUES								
Solids, Total Dissolved	273	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	10	mg/l	3	1	SM 2540D	09/11	13:05	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	141	mg/l	1	1	SM 2320 B	09/10	11:45	HRG

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Attention:	Gregory Wacik					Date of R	eport:	09/23	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-140034308
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	09/09	9/14 11:45
	Columbia MD 21045-1934					Collected	By:	, Clier	,
Sample Desc:	BM-5 Surface					Date Rece	ived:	09/09	/14 13:45
								,	1
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									-

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 09/09/14 at 15:00.

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09/09/14 13:45

Gregory Wacik Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	Date of Report: Lab ID:	09/23/14 2294-14-0034309
Suite 100	Date Collected:	09/09/14 08:45
Columbia MD 21045-1934	Collected By:	Client

Sample Desc: BM-6 Surface

PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	4	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	5	/100ml	2	1	SM 9222D	09/09	15:30	PLW
Total Coliform	>2400	, mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
CHEMISTRY						.,		
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:05	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	, 09/10	13:30	HRG
NITROGENS		-,				'		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	17:01	JCL
Nitrogen, Nitrate	2.14	mg/l	.05	1	EPA 353.2	09/10	14:41	JCL
Nitrogen, Nitrite	0.10	mg/l	.05	1	EPA 353.2	09/10	13:02	JCL
Nitrogen, Total Kjeldahl	0.51	mg/l	.25	1	EPA 351.2	09/11		JCL
OTHER		-,						
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	3.0	mg/l	1	1	SM5310 C	, 09/11	01:00	ALD
RESIDUES		0,				1		
Solids, Total Dissolved	177	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	4	mg/l	3	1	SM 2540D	09/11	13:05	ТМН
TITRATIONS		0,						
Alkalinity, Total to pH 4.5	80	mg/l	1	1	SM 2320 B	09/10	12:00	HRG

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Christina Kistler Account Executive

Date Received:

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Attention:	Gregory Wacik					Date of R	eport:	09/23	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034309
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	09/09	/14 08:45
	Columbia MD 21045–1934					Collected	By:	Clier	, it
Sample Desc:	BM-6 Surface					Date Rece	ived:	09/09	/14 13:45
								-	
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		م من مد بد ان مر بد بد ان ان ان م ر ا							

O1 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O9/O9/14 at 15:00.

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Reviewed and Approved by:

istle Vustixa

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservc 9200 Rumsey Road	bir				Date of R Lab ID:	eport:	09/23 2294	/14 140034310
Suite 100 Columbia MD 21045-1934			;		Date Coll Collected		09/09 Clien	/14 08:45 t
Sample Desc: BM-6 Mid-Depth					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:05	HRG
Phosphorus as P, Total	0.02	mg/l	.01	1	SM 4500P-E	09/10	13:30	HRG
NITROGENS						•		
Nitrogen, Ammonia	0.18	mg/l	.05	1	D6919-03	09/09	17:15	JCL
Nitrogen, Nitrate	2.19	mg/l	.05	1	EPA 353.2	09/10	14:42	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	09/10	13:03	JCL
Nitrogen, Total Kjeldahl	0.66	mg/l	.25	1	EPA 351.2	09/11	17:55	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	09/11	01:16	ALD
RESIDUES								
Solids, Total Dissolved	205	mg/l	5	1	SM 2540C	09/11	13:05	тмн
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	09/11	13:05	тмн
TITRATIONS						-		
Alkalinity, Total to pH 4.5	116	mg/l	1	1	SM 2320 B	09/10	12:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Wristing M. fistle

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/23/14 2294-14-003431	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 08:45 t
Sample Desc: BM-6 Deep					Date Rece	ived:	09/09/14 13:45	
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY					ہے، جم ہے جب عن عمر مط لما تھا اللہ اللہ			
COLORMETRIC								
Phosphate as P, Ortho	0.18	mg/l	.01	1	SM 4500P-E	09/09	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/09	16:05	HRG
Phosphorus as P, Total	0.80	mg/l	.01	1	SM 4500P-E	09/10	13:35	HRG
NITROGENS								
Nitrogen, Ammonia	1.79	mg/l	.05	1	D6919-03	09/09	17:30	JCL
Nitrogen, Nitrate	1.42	mg/l	.05	1	EPA 353.2	09/10	14:43	JCL
Nitrogen, Nitrite	0.09	mg/l	.05	1	EPA 353.2	09/10	13:04	JCL
Nitrogen, Total Kjeldahl	3.88	mg/l	.25	1	EPA 351.2	09/11	17:56	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	09/15	13:50	EMW
Total Organic Carbon	4.5	mg/l	1	1	SM5310 C	09/11	01:34	ALD
RESIDUES								
Solids, Total Dissolved	222	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	26	mg/l	3	1	SM 2540D	09/11	13:05	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	162	mg/l	1	1	SM 2320 B	09/10	12:00	HRG

01 The TOC duplicates were greater than 20%RPD due to settling of sample.

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Reviewed and Approved by:

Wistike M. istlev

Christina Kistler Account Executive

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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Sample Desc:						Date Rece	ivea.	07/07	9/14 13:45
PWSID: 30609'	12			Rep	Dilutn		Test	Test	
1 #310. 50007		. .					Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		Neouce	onne	C 1001 C	100.00	rioccuure	pare	1.110	ANALYSL

02 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

03 The SM 5210B sample did not have a DO depletion of at least 2 $\rm mg/L.$

04 BOD was reanalyzed after the recommended holding time had elapsed. Original dilutions were not appropriate for this sample. Values should be considered an estimate.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	Date of Report: 09/23/14 Lab ID: 2294-14		
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 10:00 t
Sample Desc: BM-7 Surface					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI	ن این این این این این این این این این ای							
MICROBIOLOGY								
Escherichia coli	2	mpn/100mL	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	3	/100ml	2	1	SM 9222D	-	15:30	
Total Coliform	980	mpn/100ml	1	1	SM 9223B		09:00	
CHEMISTRY		. ,						
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.03	mg/l	.01	1	SM 4500P-E	09/10	13:35	HRG
NITROGENS						·		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	17:44	JCL
Nitrogen, Nitrate	2.14	mg/l	.05	1	EPA 353.2	09/10	14:46	JCL
Nitrogen, Nitrite	0.08	mg/l	.05	1	EPA 353.2	09/10	13:07	JCL
Nitrogen, Total Kjeldahl	0.83	mg/l	.25	1	EPA 351.2	09/11	17:57	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	09/11	02:10	ALD
RESIDUES								
Solids, Total Dissolved	166	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	09/11	13:05	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	84	mg/l	1	1	SM 2320 B	09/10	12:15	HRG

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Mistike M. Gistle

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ENVIRONMENTAL TESTING LABORATORY 107 ANGELICA STREET, READING, PA 19611 PHONE: 610-374-5129 · FAX: 610-374-7234 · www.mjreider.com NELAP accredited by PA. (PADEP #06-00003) (NYSDOH11630) Visit our website to view our current



NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.





		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
PWSID: 30609	12			Rep	Dilutn		Test	Test	
Sample Desc:	BM-7 Surface					Date Rece	ived:	09/09	9/14 13:45
	Columbia MD 21045-1934					Date Coll Collected		Clier	9/14 10:00 ht
	9200 Rumsey Road Suite 100						ootod.	00/00	14/ 40.00
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034312
Attention:	Gregory Wacik					Date of R	eport:	09/23	6/14

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 09/09/14 at 15:00.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/23 2294	/14 -14-0034313
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 10:00 t
Sample Desc: BM-7 Mid-Depth					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY			. — — — — — — — — — — — — — — — — — — —					
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E			HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	'		HRG
NITROGENS					•			
Nitrogen, Ammonia	0.09	mg/l	.05	1	D6919-03	09/09	17:59	JCL
Nitrogen, Nitrate	2.34	mg/l	.05	1	EPA 353.2	09/10	14:47	JCL
Nitrogen, Nitrite	0.08	mg/l	.05	1	EPA 353.2	09/10	13:08	JCL
Nitrogen, Total Kjeldahl	0.66	mg/l	.25	1	EPA 351.2	09/11	17:58	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.3	mg/l	1	1	SM5310 C	09/11	02:27	
RESIDUES						,		
Solids, Total Dissolved	166	mg/l	5	1	SM 2540C	09/11	13:05	ТМН
Solids, Total Suspended	3	mg/l	3	1	SM 2540D	09/11	13:05	тмн
TITRATIONS		-,						
Alkalinity, Total to pH 4.5	78	mg/l	1	1	SM 2320 B	09/10	12:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik					Date of R	eport:	09/23	•
Reported To: Versar, Inc./Blue Marsh Reservo ⁻ 9200 Rumsey Road	ir				Lab ID:		2294	-14-0034314
Suite 100					Date Coll	ected:	09/09	/14 10:00
Columbia MD 21045-1934					Collected	By:	Clier	
Sample Desc: BM-7 Deep					Date Rece	ved:	09/09	/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY	آریس پسر پسر سر اسا است مند است اینه است				یہ سے پہا ہے اور			
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:10	HRG
Phosphorus as P, Total	0.09	mg/l	.01	1	SM 4500P-E	09/10	13:35	HRG
NITROGENS								
Nitrogen, Ammonia	0.42	mg/l	.05	1	D6919-03	09/09	18:14	JCL
Nitrogen, Nitrate	2.68	mg/l	. 05	1	EPA 353.2	09/10	14:48	JCL
Nitrogen, Nitrite	0.13	mg/l	. 05	1	EPA 353.2	09/10	13:09	JCL
Nitrogen, Total Kjeldahl	0.92	mg/l	.25	1	EPA 351.2	09/11	17:59	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	09/11	02:43	ALD
RESIDUES						-		
Solids, Total Dissolved	209	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	24	mg/l	3	1	SM 2540D	09/11	13:35	тмн
TITRATIONS						•		
Alkalinity, Total to pH 4.5	130	mg/l	1	1	SM 2320 B	09/10	12:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Mustine M. Listler

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Attention: Gregory Wacik					Date of R	eport:	09/23	/14
Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Lab ID:			-14-0034315
Suite 100					Date Coll	ected.	09/09	9/14 10:00
Columbia MD 21045-1934					Collected		Clien	•
Sample Desc: BM-8 Surface					Date Rece	ived:	09/09	9/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI	، وهم جهم بين حين على عليا الما الما							
MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	3	/100ml	2	1	SM 9222D	09/09	15:30	PLW
Total Coliform	1300	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.05	mg/l	.01	1	SM 4500P-E	09/09	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:10	HRG
Phosphorus as P, Total	0,05	mg/l	.01	1	SM 4500P-E	09/10	13:40	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	18:28	JCL
Nitrogen, Nitrate	2.11	mg/l	.05	1	EPA 353.2	09/10	14:49	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	09/10	13:12	JCL
Nitrogen, Total Kjeldahl	0.87	mg/l	. 25	1	EPA 351.2	09/11	18:00	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/t	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.5	mg/l	1	1	SM5310 C	09/11	03:31	ALD
RESIDUES								
Solids, Total Dissolved	154	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	6	mg/l	3	1	SM 2540D	09/11	13:35	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	76	mg/l	1	1	SM 2320 B	09/10	12:30	HRG

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Attention:	Gregory Wacik					Date of I	Report:	09/23	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034315
	9200 Rumsey Road								
	Suite 100				Date Collected:		09/09	9/14 10:00	
	Columbia MD 21045-1934					Collecte	d By:	Client	
Sample Desc: BM-8 Surface						Date Received:		09/09	9/14 13:45
PWSID: 3060912				Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O9/O9/14 at 15:00.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/2 3 2294	/14 140034316
Suite 100 Columbia MD 21045-1934	•				Date Coll Collected		09/09 Clien	/14 10:50 t
Sample Desc: BM-8 Mid-Depth					Date Rece	Date Received:		/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:20	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:10	HRG
Phosphorus as P, Total	<.01	mg/l	.01	1	SM 4500P-E	09/10	13:40	HRG
NITROGENS						•		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	19:27	JCL
Nitrogen, Nitrate	2.12	mg/l	.05	1	EPA 353.2	09/10	14:51	JCL
Nitrogen, Nitrite	0.06	.mg/l	.05	1	EPA 353.2	09/10	13:13	JCL
Nitrogen, Total Kjeldahl	0.52	mg/l	.25	1	EPA 351.2	09/10	16:40	JCL
OTHER						-		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	09/11	03:47	ALD
RESIDUES								
Solids, Total Dissolved	159	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	7	mg/l	3	1	SM 2540D	09/11	13:35	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	75	mg/l	1	1	SM 2320 B	09/10	12:30	HRG

01 One of the matrix spike/matrix spike duplicate results was outside of the recommended range but the other passed the criteria for TKN.

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	Gregory Wacik					Date of R	eport:	09/23	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034316
	9200 Rumsey Road							00 /00	141 40 50
	Suite 100					Date Coll			/14 10:50
	Columbia MD 21045-1934					Collected	By:	Clien	it
Sample Desc:	BM-8 Mid-Depth					Date Rece	ived:	09/09	9/14 13:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
						<u></u>			

O2 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of R Lab ID:	eport:	09/23 2294	/14 14-0034317
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 10:50 t
Sample Desc: BM-8 Deep					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:10	HRG
Phosphorus as P, Total	0.09	mg/l	.01	1	SM 4500P-E	09/10	13:40	HRG
NITROGENS								
Nitrogen, Ammonia	0.21	mg/l	.05	1	D6919- 03	09/09	19:41	JCL
Nitrogen, Nitrate	2.34	mg/l	.05	1	EPA 353.2	09/10	14:53	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	09/10	13:13	JCL
Nitrogen, Total Kjeldahl	0.48	mg/l	.25	1	EPA 351.2	09/10	16:43	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	09/11	04:04	ALD
RESIDUES								
Solids, Total Dissolved	190	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	17	mg/l	3	1	SM 2540D	09/11	13:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	85	mg/l	1	1	SM 2320 B	09/10	12:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		09/23/14 2294-14-003431	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	9/14 10:10 It
Sample Desc: BM-9 Surface					Date Rece	ived:	09/09	9/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI				*				
MICROBIOLOGY								
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	2	/100mL	2	1	SM 9222D	-	15:30	
Total Coliform	690	mpn/100ml		1	SM 9223B		09:00	
CHEMISTRY		1 /				0//10	07.00	
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:25	HRG
Phosphorus as P, Dissolved	<,05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E			
NITROGENS						,		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	19:56	JCL
Nitrogen, Nitrate	2.23	mg/l	.05	1	EPA 353.2	•		JCL
Nitrogen, Nitrite	0.07	mg/l	.05	1	EPA 353.2	•	13:14	JCL
Nitrogen, Total Kjeldahl	0.35	mg/l	.25	1	EPA 351.2	09/10	16:44	JCL
OTHER						•		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	09/11	04:20	ALD
RESIDUES								
Solids, Total Dissolved	168	mg/l	5	1	SM 2540C	09/11	13:35	тмн
Solids, Total Suspended	5	mg/l	3	1	SM 2540D	09/11	13:35	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	77	mg/l	1	1	SM 2320 B	09/10	12:45	HRG

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Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of F	Report:	09/23	6/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034318
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	09/09	/14 10:10
	Columbia MD 21045-1934					Collected	By:	Clier	nt
Sample Desc:	BM-9 Surface					Date Rece	eived:	09/09	9/14 13:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

O1 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O9/O9/14 at 15:00.

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Wisting M. Listler

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of R Lab ID:	eport:	09/23 2294	/14 -14-0034319
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 10:10 t
Sample Desc: BM-9 Mid-Depth					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								بسم وهما فست الما القار الله والم
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	. 05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.04	mg/l	.01	1	SM 4500P-E			HRG
NITROGENS						,		
Nitrogen, Ammonia	0.06	mg/l	.05	1	D6919-03	09/09	20:10	JCL
Nitrogen, Nitrate	2.29	mg/l	. 05	1	EPA 353.2	09/10		
Nitrogen, Nitrite	0.07	mg/l	. 05	1	EPA 353.2	09/10	13:15	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	09/10	16:45	JCL
OTHER						,		
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.2	mg/l	1	1	SM5310 C	09/11	05:24	ALD
RESIDUES						·		
Solids, Total Dissolved	159	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	7	mg/l	3	1	SM 2540D	09/11	13:35	ТМН
TITRATIONS						•		
Alkalinity, Total to pH 4.5	81	mg/l	1	1	SM 2320 B	09/10	12:45	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

Listle Westixe 7

Christina Kistler Account Executive

Page 1 of 1

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of R Lab ID:	eport:	09/23 2294	/14 14-0034320
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 10:10 t
Sample Desc: BM-9 Deep					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY COLORMETRIC					میں پینے اور میں میں این اول کی کی اور اور			
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15-25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	'		HRG
Phosphorus as P, Total	0.07	mg/l	.01	1	SM 4500P-E	'		HRG
NITROGENS		0,						
Nitrogen, Ammonia	0.66	mg/l	.05	1	D6919-03	09/09	20:25	JCL
Nitrogen, Nitrate	2.39	mg/l	.05	1	EPA 353.2	•	14:57	JCL
Nitrogen, Nitrite	0.10	mg/l	.05	1	EPA 353.2	•	13:18	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	09/10	16:46	JCL
OTHER						•		
Biochemical Oxygen Demand	4	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.0	mg/l	1	1	SM5310 C	09/11	05:40	ALD
RESIDUES						-		
Solids, Total Dissolved	238	mg/l.	5	1	SM 2540C	09/11	13:35	тмн
Solids, Total Suspended	12	mg/l	3	1	SM 2540D	09/11	13:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	127	mg/l	1	1	SM 2320 B	09/10	13:00	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.





Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		09/23/14 2294-14-0034321	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 10:30 t
Sample Desc: BM-10 Surface					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI	· · · · · · · · · · · · · · · · · · ·							
MICROBIOLOGY								
Escherichia coli	46	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	50	/100ml	2	1	SM 9222D	•	15:30	
Total Coliform	1100	, mpn/100ml	1	1	SM 9223B		09:00	
CHEMISTRY		. ,						
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:25	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	•		HRG
Phosphorus as P, Total	0.06	mg/l	.01	1	SM 4500P-E	09/10	13:40	HRG
NITROGENS						•		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	20:40	JCL
Nitrogen, Nitrate	2.24	mg/l	.05	1	EPA 353.2	09/10	14:58	JCL
Nitrogen, Nitrite	0.06	mg/l	. 05	1	EPA 353.2	09/10	13:19	JCL
Nitrogen, Total Kjeldahl	0.51	mg/l	.25	1	EPA 351.2	09/10	16:46	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.6	mg/l	1	1	SM5310 C	09/11	05:56	ALD
RESIDUES								
Solids, Total Dissolved	167	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	9	mg/l	3	1	SM 2540D	09/11	13:35	тмн
TITRATIONS						-		
Alkalinity, Total to pH 4.5	80	mg/l	1	1	SM 2320 B	09/10	13:00	HRG

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Attention:	Gregory Wacik					Date of R	eport:	09/23	/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034321
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	09/09	/14 10:30
	Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc:	BM-10 Surface					Date Rece	ived:	09/09	/14 13:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
									وحميز باستم رسنم المنبة فسنا المك

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on 09/09/14 at 15:00.

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Christina Kistler Account Executive

Page 2 of 2

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoi 9200 Rumsey Road	r				Date of R Lab ID:	eport:	09/23 2294	;/14 ;140034322
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	9/14 10:30 t
Sample Desc: BM-10 Mid-Depth					Date Rece	eived:	09/09	9/14 13:45
PWSID: 3060912	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY	ید هی بی بی بی بی بی بی این این این این این این ا							
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:30	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	'		HRG
Phosphorus as P, Total	0.06	mg/l	.01	1	SM 4500P-E	,		HRG
NITROGENS						,		
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	21:23	JCL
Nitrogen, Nitrate	2.27	mg/l	. 05	1	EPA 353.2	09/10	14:59	JCL
Nitrogen, Nitrite	0.06	mg/l	.05	1	EPA 353.2	09/10	13:20	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	09/10	16:47	JCL
OTHER						·		
Biochemical Oxygen Demand	3	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	09/11	06:12	ALD
RESIDUES								
Solids, Total Dissolved	165	mg/l	5	1	SM 2540C	09/11	13:35	тмн
Solids, Total Suspended	9	mg/l	3	1	SM 2540D	09/11	13:35	тмн
TITRATIONS								
Alkalinity, Total to pH 4.5	73	mg/l	1	1	SM 2320 B	.09/10	13:15	HRG

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Attention: Gregory Wacik



09/23/14

Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Lab ID:	eport.	2294	-14-0034323
Suite 100					Date Coll	ected:	09/09	/14 10:30
Columbia MD 21045-1934					Collected	By:	Clien	t
Sample Desc: BM-10 Deep					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
CHEMISTRY	بری ہے ہی ہے اور ای کر این کا ایک کا ایک			·				
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/l	.01	1	SM 4500P-E	09/09	15:30	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/09	16:15	HRG
Phosphorus as P, Total	0.18	mg/L	.01	1	SM 4500P-E	09/10	13:40	HRG
NITROGENS								
Nitrogen, Ammonia	0.06	mg/l	.05	1	D6919-03	09/09	21:38	JCL
Nitrogen, Nitrate	3.53	mg/l	.05	1	EPA 353.2	09/10	15:00	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	09/10	13:21	JCL
Nitrogen, Total Kjeldahl	<.25	mg/l	.25	1	EPA 351.2	09/10	16:48	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.5	mg/l	1	1	SM5310 C	09/11	06:29	ALD
RESIDUES								
Solids, Total Dissolved	225	mg/l	5	1	SM 2540C	09/11	13:35	ТМН
Solids, Total Suspended	45	mg/l	3	1	SM 2540D	09/11	13:35	ТМН
TITRATIONS								
Alkalinity, Total to pH 4.5	115	mg/l	1	1	SM 2320 B	09/10	13:15	HRG

COMMENTS

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:

stle Kustine

Date of Report:

Christina Kistler Account Executive

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Attention: Gregory Wacik Reported To: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road					Date of Report: Lab ID:		09/23/14 2294-14-0034324	
Suite 100 Columbia MD 21045-1934					Date Coll Collected		09/09 Clien	/14 11:50 t
Sample Desc: BM-11 Surface					Date Rece	ived:	09/09	/14 13:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	920	mpn/100ml	1	1	SM 9223B	09/10	09:00	DAD
Fecal Coliform	930	/100ml	2	1	SM 9222D	09/09	15:30	PLW
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	•	09:00	DAD
CHEMISTRY						1		
COLORMETRIC								
Phosphate as P, Ortho	0.14	mg/l	.01	1	SM 4500P-E	09/09	15:30	HRG
Phosphorus as P, Dissolved	<.05	mg/l	.05	1	SM 4500P-E	09/12	13:00	HRG
Phosphorus as P, Total	0.14	mg/l	.01	1	SM 4500P-E	09/12	12:45	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/l	.05	1	D6919-03	09/09	21:53	JCL
Nitrogen, Nitrate	4.61	mg/l	.05	1	EPA 353.2	09/10	15:03	JCL
Nitrogen, Nitrite	<.05	mg/l	.05	1	EPA 353.2	09/10	13:24	JCL
Nitrogen, Total Kjeldahl	0.45	mg/l	.25	1	EPA 351.2	09/10	16:51	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/l	2	1	SM 5210B	09/09	15:20	EMW
Total Organic Carbon	2.4	mg/l	1	1	SM5310 C	09/11	07:02	ALD
RESIDUES								
Solids, Total Dissolved	260	mg/l	5	1	SM 2540C	09/11	14:05	тмн
Solids, Total Suspended	14	mg/l	3	1	SM 2540D	09/11	14:05	тмн
TITRATIONS						-		
Alkalinity, Total to pH 4.5	140	mg/l	1	1	SM 2320 B	09/10	13:30	HRG

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ENVIRONMENTAL TESTING LABORATORY 107 ANGELICA STREET, READING, PA 19611 PHONE: 610-374-5129 • FAX: 610-374-7234 • www.mjreider.com NELAP accredited by PA. (PADEP #06-00003) (NYSDOH11630) Visit our website to view our current

NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.







Attention:	Gregory Wacik					Date of R	eport:	09/23	5/14
Reported To:	Versar, Inc./Blue Marsh Reservoir					Lab ID:		2294	-14-0034324
	9200 Rumsey Road								
	Suite 100					Date Coll	ected:	09/09	9/14 11:50
	Columbia MD 21045-1934					Collected	By:	Clier	, nt
							-		
Sample Desc:	BM-11 Surface					Date Rece	ived:	09/09	9/14 13:45
									,
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst

01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

O2 The total coliform sample was placed in the incubator on O9/O9/14 at 15:00.

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Christina Kistler Account Executive

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COFC. FRT Page: 1	Bott Bott cceptab	<pre>Pate: Date: Time: Time: Cool to 6 C; p w/ Cool to 6 C; p w/ H2SO4 (pH<2) ; g w/ H3PO4/zero h c Headspace;</pre>	<pre>rrix: 0 Date: 9/9/14 250mlmicro P w/ Sterile/Na2S203; L Bod p w/ Cool to 6 C; 16ozN02N03 p w/ Cool to 6 C; 500ml NH3 p w/ H2S04(pH<2); 2xambervoa g w/ H3P04/zero headspace; 80z Alk p w/ to 6 C/Zero Headspace;</pre>	y: Time: 345 Rafael Qui Jada Time: 345 Rafael Qui Jada Sample entered by: VCC
J. REIDER ASSOCIATES, INC. Chain of Custody	Project Leader: CMB Monthly Blue Marsh Reservoir Put un Luc ling Time (hours): Receipt Temp: 23 Deg C Lf Temp Approved By: Deg C Lf Temp	Matrix: 0 A - 1 X 250m1Micro 1 B - 1 X L Bod p W/ (C - 1 X 160zN02N03 p C - 1 X 500m1 NH3 p E - 1 X 2xambervoa (F - 1 X 80z Alk p W/	Matrix: O A - 1 X 250mlMicro 1 B - 1 X 16ozNO2NO3 F C - 1 X 16ozNO2NO3 F D - 1 X 500ml NH3 P E - 1 X 8oz Alk P w/ F - 1 X 8oz Alk P w/	Received for laboratory by: Date: $\frac{q/\epsilon/(\gamma)}{T}$ Ti
jbs 08/06/14 12:22:12 РМ Сћ	2294 Gregory Wacik Versar, Inc./Blue Mar 9200 Rumsey Road Suite 100 columbia MD 21045-193 215-656-6561 Ext: 215-656-6561	Sample No: 1 Desc: BM-1 Surface FC, EC, TC, N, d-p04-p, 0-p04, BODY NO2-N, NO3-N, d-p04-p, 0-p04, BODY NH3-N, tkm, Alk, tds, tss, p04-p, toc,	Sample No: 2 Desc: BM-2 Surface FC, EC, TC, No No2-N, No3-N, d-po4-p, Hopon NH3-N, thu, Alk, tds, tss, po4-p, toc,	Relinquished by: $\frac{1}{100}$ Received by: $\frac{1}{1320}$ Bate: $\frac{9}{9}$
'nο	υά	34304 ^{sa}	3 d302 a	Ϋ́Α Ϋ́Α

	jbs 08/06/14 12:22:12 PM	M. J. REIDER ASSOCIATES, INC. Page: 2
		Chain of Custody
	2294	Work Order: 004037 Project Leader: CMB No: 242817 Work Order Description: Seasonal Monthly Blue Marsh Reservoir
	Customer: Gregory Wacik	Remarks:
	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	ONICE
		Total Sampling Time (hours):
	Phone: 215-656-6561 Ext: Samplers: <i>(いろっ)人</i>	Laboratory Receipt Temp: 23 Deg C. If Temp Unacceptable, On Ice? Y.M. Approved By: CACC
24306	sample No: 3 Desc: BM-2 Mid-Depth	Matrix: 0 $\frac{96/6}{1000}$
2	NO2-N, NO3-N, d-po4-p, d-po4, BODA	A - 1 X I Bod p w/ Cool to 6 C; B - 1 X 1602N03 p w/ Cool to 6 C;
	NH3-N, tkm, Alk, tds, tss, po4-p, toc,	 1 X 500ml NH3 p w/ H2SO4 (pH<2) 1 X 2xambervoa g w/ H3P04/zerc 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace;
50200	Sample No: 4 Desc: BM-2 Deep	Matrix: 0 Date: 9/9/14
	NO2-N, NO3-N, d-pb4-p, o-po4, BOD NH3-N, thm. Alk, tds, tss, po4-p, toc,	- 1 X L Bod P w/ Cc - 1 X 16ozN02N03 P - 1 X 500ml NH3 P w
		- 1 X - 1 X Cool
20200	Sample No: 5 Desc: BM-5 Surface	Matrix: 0 Date: $\frac{\gamma \beta / \gamma f}{T_{\text{me:}}}$
~	FC, EC, TC, Nud NO2-N, NO3-N, d-p04-p, o/p04, BODN NH3-N, LHM, Alk, tds, tss, p04-p, toc,	X 250mlMicro P w/ X L Bod p w/ Cool X 160zN02N03 p w/ X 500ml NH3 p w/
		E – 1 X 2xambervoa g w/ H3P04/zero headspace; F – 1 X 8oz Alk p w/ Cool to 6 C/Zero Headspace;
		L'ade
	Relinquished by Received by:	=-6[
	Date: $\frac{2p}{12}$ Time: $\frac{1:00}{1320}$	Date: $\frac{9/9}{14}$ Time: 1345
		Sample entered by:

COFC.PRT Page: 3		No: 242817		Bottle Prep by:	eptable	<pre>Matrix: 0 Date: 9/9//4 I X 250mlMicro P w/ Sterile/Na2S203; I X L Bod p w/ Cool to 6 C; I X 1602N02N03 p w/ Cool to 6 C; I X 500ml NH3 p w/ H2S04(pH<2); I X 2xambervoa g w/ H3P04/zero headspace; I X 8oz Alk p w/</pre>	<pre>t to 6 C/Zero Headspace; rrix: 0 Date:</pre>	by: Rafael Quijade Time: 1345 Sample entered by: 200
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	037 Project Leader: CMB iption: Seasonal Monthly Blue Marsh Reservoir	Remarks:		Z Deg	Mat Mat B - 1 X C - 1 X D - 1 X F - 1 X	Cool to Matrix: A - 1 X L Bo B - 1 X 16oz C - 1 X 500m D - 1 X 2xam E - 1 X 8oz Cool to	Muhl Leujade By: Rafael Quijeda Received for laboratory by: Date: 9/5/14 Ti
jbs 08/06/14 12:22:12 PM		Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik		9200 kumsey koad Suite 100 Columbia MD 21045-1934	Phone: 215-656-6561 Ext: Samplers: WACiK	Sample No: 6 Desc: BM-6 Surface FC, EC, TC, N, A-D64-p, o-po4, BOD, NO2-N, NO3-N, d-D64-p, o-po4, BOD, NH3-N, tkn, Alk, tds, tss, po4-p, toc,	<pre>Sample No: 7 Desc: BM-6 Mid-Depth NO2-N, NO3-N, d-po4-p, o-po4, BOD NH3-N, thn, Alk, tds, tss, po4-p, toc,</pre>	Relinquished by $\frac{1}{2}$ Received Date: $\frac{9}{9}$ $\frac{9}{10}$ $\frac{1}{20}$ Time: $\frac{1}{320}$
						24304	34310	

	. PRT 4					2	is in	a trans
(14 11:22:12 RK Chain of Custody mi: 224 Nork Order: 004037 Chain of Custody mi: 2294 Nork Order: 004037 Eroject Leader: CMB Nork Order: 004037 Rescrut: Remarks: Chain of Custody resconal Monthly Blue March Reservoir 2000 Namey Road State 100 State 1000 State 1000 State 1000	COFC.PRT Page: 4				ptable, On Ice? 🕎	====== I I ol to 6 w/ Cool w/ H3P04	<pre>6 C/Zero Headspace; 0 Date: 1Micro P w/ Sterile/Na2S2 d p w/ Cool to 6 C; w02N03 p w/ Cool to 6 C; n1 NH3 p w/ H3P04/Zero he Alk p w/ Alk p w/ 6 C/Zero Headspace;</pre>	Rafael 1845 Rafael
<pre>/14 12:22:12 PM mt: 2294 mer: Gregory Wacik sess: Versar, Inc./Blue Mar 9200 Rumsey Road suite 100 columbia MD 21045-193 pne: 215-656-6561 Ext: sno: 8 Desc: BM-6 2-N, N03-N, d-p64-p, 0-p04 2-N, N03-N, d-p64-p, 0-p04 p1-N, tkn, Alk, tds, tss, p mushed by: tkn, Alk, tds, tss, p mushed by: Time: Time:</pre>		unain of tustouy Project Leader: CMB 1: Seasonal Monthly Blue Marsh Reservoir	0	Total Sampling Time (hours):	Deg C.2If	м м л - 1 л - 1 м л - 1 л	Соој Соој жжжж жа Соој соој	Qui Jeda
	6/14 12:22:12 PM	2294 Gregory Wacik			WACIK	8 Desc: BM-6 Deep NO3-N, d-p6f-p, d-p64, BODV VVV Alk, tds, tss, p04-p, toc,	9 Desc: BM-7 Surfac TC, M, d-pd4-p, o-po4, BOD NO3-N, d-pd4-p, o-po4, BOD thm, Alk, tds, tss, po4-p,	nished by: Received by:

COFC. PRT Page: 5	No: 242817	Bottle Prep by: Unacceptable, On Ice? 🕑 N	Date: Time: Time: Cool to 6 C; w/ H2SO4(pH<2); y w/ H3PO4/Zero];	Date: Time: 79/9/ Cool to 6 C; w/ H2SO4 (pH<2); w/ H3PO4/zero headspa	0 Date: Time: Minicro P w/ Sterile/Na25203; d p w/ Cool to 6 C; MO2N03 p w/ Cool to 6 C; i NH3 p w/ H2S04 (pH<2); bervoa g w/ H3P04/zero headspace; Alk p w/ 6 C/Zero Headspace;	Rafael Quijade Rafael Quijada e: 1345 Sample entered by: 25C
J. REIDER ASSOCIATES, INC. Chain of Custody	Project Leader: CMB Seasonal Monthly Blue Marsh Reservoir Remarks:	mpling Time (bours): ry Receipt Temp: 23 Deg C. If Temp Approved By: 202	Matrix: 0 A - 1 X L Bod p B - 1 X 1602N021 C - 1 X 2xamberv E - 1 X 802 Alk E - 1 X 802 Alk Cool to 6 C	Matrix: 0 A - 1 X L Bod p w/ Cool B - 1 X 16ozNO2NO3 p w/ C - 1 X 500ml NH3 p w/ 1 D - 1 X 2xambervoa g w/ E - 1 X 8oz Alk p w/ Cool to 6 C/Zero Hee	<pre>Matrix: 0 A - 1 X 250mlMicro P w/ B - 1 X 16ozN02N03 p w/ C - 1 X 16ozN02N03 p w/ D - 1 X 500ml NH3 p w/ F - 1 X 8oz Alk p w/ F - 1 X 8oz Alk p w/ Cool to 6 C/Zero Hec</pre>	Rafael Qui Jada Received for laboratory by:
jbs 08/06/14 12:22:12 PM C	Account: 2294 Work Order: 004037 Work Order Description: Se Customer: Gregory Wacik Rem	Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road Suite 100 columbia MD 21045-1934 215-656-6561 Ext: WACiK	Sample No: 10 Desc: BM-7 Mid-Depth NO2-N, NO3-N, d-pof-p, bloo4, BODW NH3-N, tkm, Alk, tds, tss, pof-p, toc,	Sample No: 11 Desc: BM-7 Deep NO2-N, NO3-N, d-p04-p, olfo4, BOD NH3-N, tkn, Alk, tds, tss, p04-p, toc,	Sample No: 12 Desc: BM-8 Surface FC, EC, TC, A NO2-N, NO3-N, d-p04-p, d-p04, BOD NH3-N, tkm, Alk, tds, tss, p04-p, toc,	Relinquished by: $M_{Time: 1/M}$ Received by: Received by: $\frac{9}{1320}$ Date: $\frac{9}{1320}$
			51242	34314	34315	

	jbs 08/06/14 12:22:12 PM	M. J. REIDER ASSOCIATES, INC. Page: 6
		Chain of Custody
		Project Leader: CMB : Seasonal Monthly Blue Marsh Reservoir
	Customer: Gregory Wacık	Remarks:
	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	On rcc
		Total Sampling Time (hours): Bottle Prep by:
	Phone: 215-6561 Ext: Samplers: $WACiK$	Laboratory Receipt Temp: 23 Deg C.If Temp Unacceptable, On Ice? In Approved By: 200
مالالم		Matrix: 0 - 1 X L Bod p w/ Cool - 1 X 1602N033 p w/
	NH3-N, tkn, Alk, tds, tss, po4-p, toc,	C - 1 X 500mL NH3 P W/ H2504 (PH<2); D - 1 X 2xambervoa g w/ H3P04/zero headspace; E - 1 X 80z Alk P W/ Cool to 6 C/Zero Headspace;
74317	Sample No: 14 Desc: BM-8 Deep	Matrix: 0
	NO2-N, NO3-N, d-PO#-P, o-PO4, BUDAW NH3-N, tkn, Alk, tds, tss, po4-p, toc,	ш (O
31542	Sample No: 15 Desc: BM-9 Surface	Matrix: 0
2	FC, EC, TC, NVV H, M, NO2-N, NO3-N, d-po4-p, o-po4, BOD, NH3-N, tKH, Alk, tds, tss, po4-p, toc,	 A - 1 X 250mIMicro P w/ Sterile/Na2S203; B - 1 X L Bod p w/ Cool to 6 C; C - 1 X 16ozN02N03 p w/ Cool to 6 C; D - 1 X 500mL NH3 p w/ H2S04(pH<2); E - 1 X 2xambervoa g w/ H3P04/zero headspace; F - 1 X 80z Alk p w/
	Relinquished by: $\frac{1}{10000000000000000000000000000000000$	Rafael Quijeda Rafael Quijeda Received for laboratory by: Date: 9/9/14 Time: 1345
		Sample entered by:

COFC.PRT Page: 7	No: 242817		Bottle Prep by:	Unacceptable, On Ice? $\overbrace{\mathcal{X}}^{\mathrm{N}}$	Matrix: 0 Date: Time: 1 X L Bod p w/ Cool to 6 C; 1 X 160ZN02N03 p w/ Cool to 6 C; 1 X 500ml NH3 p w/ H2SO4 (pH<2); 1 X 2xambervoa g w/ H3PO4/zero headspace; 1 X 802 ALK p w/	e: 6 C;	<pre>latrix: 0 Date: 7/9// 4 latrix: 0 Time: 7/9// 4 x 250mlMicro P w/ Sterile/Na2S203; x L Bod p w/ Cool to 6 C; x 160zN02N03 p w/ Cool to 6 C; x 500ml NH3 p w/ H2S04 (pH<2) ; x 2xambervoa g w/ H3P04/zero headspace; x 80z Alk p w/ ool to 6 C/Zero Headspace;</pre>	Ruful Juniada Rafeel aufrid e: 1345 Sample entered by: 250
M. J. REIDER ASSOCIATES, INC. Chain of Custody	Project Leader: CMB : Seasonal Monthly Blue Marsh Reservoir Remarks:	on ice	Total Sampling Time (hours):	Laboratory Receipt Temp: <mark>Z3 Deg C. If Temp Unacceptable, On Ice?</mark> Approved By: CAC	Matrix: 0 A - 1 X L Bod p w/ Cool B - 1 X 16ozNO2N03 p w/ C - 1 X 500ml NH3 p w/ E - 1 X 802 Alk p w/ E - 1 X 802 Alk p w/	Matrix: 0 Matrix: 0 A - 1 X L Bod p w/ Cool B - 1 X 1602N02N03 p w/ C - 1 X 500ml NH3 p w/ D - 1 X 2xambervoa g w/ E - 1 X 80z Alk p w/ Cool to 6 C/Zero He	Matrix: O A - 1 X 250mlMicro P W/ B - 1 X 1602N02N03 P W/ C - 1 X 1602N02N03 P W/ D - 1 X 500ml NH3 P W/ F - 1 X 802 Alk P W/ F - 1 X 802 Alk P W/	Rafael quijed Received for laboratory by: Date: $\frac{q/q}{(\tau - \tau_{time})}$
jbs 08/06/14 12:22:13 PM	Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik	Address: Versar, Inc./Blue Marsh Reservoir 9200 Rumsey Road	Suite 100 Columbia MD 21045-1934 Mirror Orr erector Ward			Sample No: 17 Desc: BM-9 Deep NO2-N, NO3-N, d-p04-p, orp04, B0D-W NH3-N, thm, Alk, tds, tss, p04-p, toc,	Sample No: 18 Desc: BM-10 Surface FC, EC, TC, N, H, A-p04-p, o-p04, BOD, NO2-N, NO3-N, d-p04-p, o-p04, BOD, NH3-N, thn, Alk, tds, tss, p04-p, toc,	Relinquished by $\frac{1}{10000000000000000000000000000000000$
					34319	orent	12222	

	jbs 08/06/14 12:22:13 PM	M. J. REIDER ASSOCIATES, INC. COFC.PRT Page: 8
		Chain of Custody
	Account: 2294 Work Order: 004037 Work Order Description: Customer: Gregory Wacik	Project Leader: CMB : Seasonal Monthly Blue Marsh Reservoir
	Address: Versar, Inc./Blue Marsh Reservoir	Remarks:
	9200 Rumsey Road Suite 100 Columbia MD 21045-1934	
	Phone: 215-656-6561 Ext: Samplers: \mathcal{OACK}	Laboratory Receipt Temp: ZZ Deg C If Temp Unacceptable, On Ice? C M Approved By: 200
22542	Sample No: 19 Desc: BM-10 Mid-Depth NO2-N, NO3-N, d-D04-P, o-P04, BOD	$\begin{array}{c cccc} \text{Matrix: 0} & \text{Date:} & \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \end{array} \\ \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \end{array} & \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} & \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} & \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} & \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} & \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} & \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} & \begin{array}{c} \begin{array}{c} \end{array} \\ \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} $
surres	Sample No: 20 Desc: BM-10 Deep NO2-N, NO3-N, d-po4-p, d ¹ po4, BOD, W NH3-N, tkn, Alk, tds, tss, po4-p, toc,	Cool Co Cool to Matrix: 1 X L Bo 1 X L Bo 1 X 2xem - 1 X 2xem - 1 X 8xz
42642	Sample No: 21 Desc: BM-11 Surface FC, EC, TC, NU NO2-N, NO3-N, d-p64-p, d-p04, BOD NH3-N, tkn, Alk, tds, tss, p04-p, toc,	M XXXXX M T O
	Relinquished by: $M = M = M = M = M = M = M = M = M = M $	$\frac{1}{2}$ Received for laboratory Date: $\frac{9/9/(7)}{2}$



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Data of Devents OF 104 141

Attention:	Gregory Wacik					Date of R	leport:	05/21	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0020620	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	05/19	/14 08:15	
	Philadelphia PA 19107					Collected	By:	JBS		
Sample Desc:	SB-1					Date Rece	ived:	05/19	/14 09:00	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	05/20	10:00	DAD	
Fecal	Coliform	2	/100ml	2	1	SM 9222D	05/19	10:00	DAD	
Total	Coliform Bacteria	88	mpn/100ml	1	1	SM 9223B	05/20	10:00	DAD	

COMMENTS

01 The total coliform sample was placed in the incubator at 05/19/14 at 10:00.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	05/21 2294	/14 14-0020621
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/19 JBS	9/14 08:20
Sample Desc: SB-2					Date Rece	eived:	05/19	9/14 09:00
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		Web live not use the bar had been been						
BACTI								
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	05/20	10:00	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9222D	05/19	10:00	DAD
Total Coliform Bacteria	70	mpn/100ml	1	1	SM 9223B	05/20	10:00	DAD

01 The total coliform sample was placed in the incubator at 05/19/14 at 10:00.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	<pre>leport:</pre>	05/21 2294	/14 140020622
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/19 JBS	/14 08:25
Sample Desc: SB-3					Date Rece	eived:	05/19	/14 09:00
PWSID: 3060912			Rep	Dilutn		Test	Test	
·	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	05/20	10:00	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9222D	05/19	10:00	DAD
Total Coliform Bacteria	56	mpn/100ml	1	1	SM 9223B	05/20	10:00	DAD

01 The total coliform sample was placed in the incubator at 05/19/14 at 10:00.

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M. Listle UUUXR

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	j×s 05/19/14	6:08:35 AM		M. J. REIDER ASSOC Chain of Custody	J. REIDER ASSOCIATES, INC. Main of Custody	COFC.FRT Page: 1
	Account:	2294	Work Order: Work Order De	002788 Description: Beach 1.2.3	Project Leader: CMB	No: 238069
	Customer:	Gregory Wacik		Remarks:		
	Address:	USACE, Philadelphia District Environmental Resources Branch	District rces Branch			
	ī	100 Penn Square East Philadelphia PA 19107	t 07	Total Sampling Time	(hours	Bottle Prep by:
	rnone: Samplers:	59L		Laboratory Receipt Temp: Approve	U Deg C. If	Temp Unacceptable, On Ice? Y N
70620	sample No:		1 <i>Left</i>		Matrix: o	Date: 5-1914
2	fc, ec,	t, tcb, OW			A - 1 X 250mlMicro P	w/ Sterile/Na25
12900	Sample No:	2 Desc: SB-2	2 middle		Matrix: o	Date: <u>5-}9-74</u> Time: 03720
	fc, ec,	tcb, 0¦√			A - 1 X 250mlMicro	P w/ Sterile/Na2
229,02	Sample No:	3 Desc:	SB-3 Right		Matrix: o	Date: Sully
>	fc, ec,	i, tcb, plud			A - 1 X 250mlMicro P w/	sterile/Na2
						1
						/.
Π	Relinquished by:	ed by:	Recei	eived by	Received for laboratory by	W-J-
П	Date: 5-	14-14 Tim	Time: 0830		Date: 5-19-14 Tim	т ^{іме:} 0 7.00
						Sample entered by: ECC





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	05/21 2294	/14 140020106
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/15 mxb	/14 07:15
Sample Desc: SB-1					Date Rece	eived:	05/15	/14 07:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	05/16	09:30	DAD
Fecal Coliform	<2	mpn/100ml	2	1	SM 9222D	05/15	09:40	DAD
Total Coliform Bacteria	71	mpn/100ml	1	1	SM 9223B	05/16	09:30	DAD

01 The total coliform sample was placed in the incubator at 05/15/14 at 09:30.

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Attention:	Gregory Wacik					Date of f	Report:	05/21	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0020107
	Environmental Resources Branch								
	100 Penn Square East					Date Col	ected:	05/15	/14 07:16
	Philadelphia PA 19107					Collected	l By:	mxb	
Sample Desc:	SB-2					Date Rece	eived:	05/15	/14 07:45
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	DGY								
Escher	richia coli	1	mpn/100ml	1	1	SM 9223B	05/16	09:30	DAD
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	05/15	09:40	DAD
Total	Coliform Bacteria	62	mpn/100ml	1	1	SM 9223B	05/16	09:30	DAD

01 The total coliform sample was placed in the incubator at 05/15/14 at 09:30.

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istle Mustine M

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Attention:	Gregory Wacik					Date of F	Report:	05/21	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0020108
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	05/15	/14 07:17
	Philadelphia PA 19107					Collected	By:	mxb	,
Sample Desc:	SB-3					Date Rece	eived:	05/15	/14 07:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI		رست پس راست ارسا ارسا است است است ارسا است است است است است ا		یہ سر سا سا سا سا سا					
MICROBIOLO	GY								
Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	05/16	09:30	DAD
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	05/15	09:40	DAD
Total	Coliform Bacteria	54	mpn/100ml	1	1	SM 9223B	05/16	09:30	DAD

01 The total coliform sample was placed in the incubator at 05/15/14 at 09:30.

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COFC.PRT Page: 1		No: 237974			Bottle Frep by:	Temp Unacceptable, On Ice? Y N		Stei	Date: 5/15/14	Time: <u>071</u> 0 P w/ Sterile/Na2S203;	Date: 5/15/14	w/ Stei						22 In Bust	s: 0745	Sample entered by: \mathcal{OSM}
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB Beach 1,2,3	Bamarles.		Total Sampling Time (hours):	Laboratory Receipt Temp: <u>5</u> Deg C. If Temp Ur Approved By: <u>ww.f</u> 3	Matrix: o	A - 1 X 250mlMicro P w/	Matrix: o	A - 1 X 250mlMicro	Matrix: o	A - 1 X 250mlMicro P						2. All Received for laboratory by:	Date: 5/15/14 Time:	
7:46:57 AM		2294 Work Order: 002788 Work Order Description: Beach 1,2,3	Gregory Wacik	District ces Branch	100 Pemn Square East Philadelphia PA 19107 215-656-6561 Ext:		l Desc: SB-1	tcb,	2 Desc: SB-2	tcb,	3 Desc: SB-3	tcb,						1 by: NP Received by:	14 Time: 6720	1997 1997 1997 1997 1997 1997 1997 1997
mxb 05/15/14 7			Customer: (Address: 1	Phone:		nov(o Sample No:	fc, ec,	9000 Sample No:	r, ec,	Sample No:	5	-	, ²¹	 			Relinquished by:	Date: Slish	·





	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	05/19 2294	9/14 14-0019382
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/12 mxb	2/14 07:15
Sample Desc:	SB-1					Date Rece	eived:	05/12	/14 07:39
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI MICROBIOLO	GY				Ris 22 - La				
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	05/13	09:25	DAD
Fecal	Coliform	2	/100mL	1	1	SM 9222D	05/12	09:48	DAD
Total	Coliform Bacteria	44	mpn/100ml	1	1	SM 9223B	05/13	09:25	DAD

01 The total coliform sample was placed in the incubator at 05/12/14 at 09:25.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia Distr Environmental Resources E				·	Date of F Lab ID:	Report:	05/21 2294	/14 -14-0019383
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/12 mxb	/14 07:17
Sample Desc: SB-2					Date Rece	eived:	05/12	/14 07:39
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	05/13	09:25	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9222D	05/12	09:48	DAD
Total Coliform Bacteria	66	mpn/100ml	1	1	SM 9223B	05/13	09:25	DAD

COMMENTS

01 The total coliform sample was placed in the incubator at 05/12/14 at 09:25.

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estle KISTIKE 1

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Attention:	Gregory Wacik					Date of F	eport:	05/21	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0019384
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	05/12	/14 07:19
	Philadelphia PA 19107					Collected	By:	mxb	
Sample Desc:	SB-3					Date Rece	ived:	05/12	/14 07:39
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	θGY								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	05/13	09:25	DAD
Fecal	Coliform	3	/100mL	1	1	SM 9222D	05/12	09:48	DAD
Total	Coliform Bacteria	69	mpn/100ml	1	1	SM 9223B	05/1 3	09:25	DAD

01 The total coliform sample was placed in the incubator at 05/12/14 at 09:25.

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COFC.PRT Page: 1	No: 237743			Bottle Prep by:	Temp Unacceptable, On Ice? (Y) N	rix: ها ما	w/ Stei	o Date: Slizliy	/m ₫	o Date: Slizliy	X 250mlMicro P w/ Sterile/Na2S203;			by: Pall and	Time: 0739	Sample entered by:
J. REIDER ASSOCIATES, INC.	Chain of Custody Project Leader: CMB	Beach 1,2,3		Sampling Time (hour	<u>]</u> Deg C. If By: WXR	matrix:	A - 1 X 250mlMicro P	Matrix:	A - 1 X 250mlMicro	Matrix:	A - 1 X 250ml			Received for laboratory by:	Date: 5/12/14	
W.	Order:	Work Order Description:	District ces Branch	1011 Total Total Total 51 Ext:		Desc: SB-1	,	Desc: SB-2	~~	Desc: SB-3				NP Received by:	Time: 0725	
mxb 05/12/14 7:46:32 AM	Account: 2294	Customer: Gregory Wacik	Address: USACE, Philadelphia Environmental Resour 100 Penn Smare Rest	Phone: 215-656-6561	Samplers: MXC	ASC Sample No: 1 Desc: SB-1	fc, ec, tcb,	いたてなく Sample No: 2 De	fc, ec, tcb,	19784 Sample No: 3 De	fo, ec, tcb,			Relinquished by:	Date: Slizlių	





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	05/27 2294	/14 140021130
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/22 МХВ	/14 07:10
Sample Desc: SB-1					Date Rece	eived:	05 <u>/</u> 22	/14 07:35
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY			است بسر سن من من من هو					
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	05/23	09:00	ТВР
Fecal Coliform	2	/100ml	1	1	SM 9222D	05/22	09:06	DAD
Total Coliform Bacteria	460	mpn/100ml	1	1	SM 9223B	05/23	09:00	ТВР

01 The total coliform sample was placed in the incubator at 05/22/14 at 09:20.

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istle Christina Kistler

Account Executive

Page 1 of 1

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Attention:	Gregory Wacik					Date of F	Report:	05/27	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0021131
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	05/22	/14 07:12
	Philadelphia PA 19107					Collected	By:	MXB	-
Sample Desc:	SB-2					Date Rece	eived:	05/22	/14 07:35
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	IGY								
Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	05/23	09:00	ТВР
Fecal	Coliform	2	/100ml	1	1	SM 9222D	05/22	09:06	DAD
Total	Coliform Bacteria	220	mpn/100ml	1	1	SM 9223B	05/23	09:00	ТВР

01 The total coliform sample was placed in the incubator at 05/22/14 at 09:20.

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Attention: Gregory Wacik					Date of F	Report:	05/27	/14
Reported To: USACE, Philadelphia District					Lab ID:		2294	-14-0021132
Environmental Resources Branch								
100 Penn Square East					Date Coll	.ected:	05/22	/14 07:14
Philadelphia PA 19107					Collected	l By:	MXB	
Sample Desc: SB-3					Date Rece	eived:	05/22	/14 07:35
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	05/23	09:00	ТВР
Fecal Coliform	3	/100ml	1	1	SM 9222D	05/22	09:06	DAD
Total Coliform Bacteria	190	mpn/100ml	1	1	SM 9223B	05/23	09:00	ТВР

01 The total coliform sample was placed in the incubator at 05/22/14 at 09:20.

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21130	05/22/14 7:45:47 AM Account: 2294 Work Orde Customer: 2294 Wacik Work Orde Customer: 2294 Wacik Work Orde Customer: 2294 Wacik Work Orde Address: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East phone: 215-656-6561 Ext: Samplers: MXG fo, ec, tcb, fo, ec, tcb,	der: 002788 der Description:	ER ASSOCIATES, INC. Custody Project Leader: CMB , Receipt Temp: <u>5</u> Deg C. If Temp Unac Approved By:	COFC.PRT Page: 1 No: 238262 Bottle Prep by: Bottle Prep by: Ceptable, On Ice? Y N ceptable, Ceptable, On Ice? Y N Ceptable, Ceptable, On Ice? Y N Ceptable, Ceptable,
	Relinquished by: N^{7}	Received by	Received for laboratory by M. L.	lent
	Date: <u>5-22-14</u> T	Time: 0720	Date: 5-21-14 Time: 6735	N
			Sample	Sample entered by: ECC





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of I Lab ID:	{eport:	06/05 2294	/14 14-0022099
100 Penn Square East Philadelphia PA 19107					Date Col Collected		05/29 mxb	9/14 07:18
Sample Desc: SB-1					Date Rece	eived:	05/29	/14 07:40
PWSID: 3060912	5 Ú	•.	Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY						_,		
Escherichia coli	<1	mpn/100ml	1	1	SM 9223B	05/30	08:45	DAD
Fecal Coliform	2	/100ml	1	1	SM 9222D	05/29	08:45	DAD
Total Coliform Bacteria								

01 The total coliform sample was placed in the incubator on 05/29/14 at 08:40.

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Attention:	Gregory Wacik					Date of F	leport:	06/05	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0022100
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	05/29	/14 07:19
	Philadelphia PA 19107					Collected		mxb	,
	•						, .		
Sample Desc:	SB-2					Date Rece	eived:	05/29	/14 07:40
•								,	,
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		مسر مسر رسم مسر است مست بعبد است است المد المنا الما							
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	3	mpn/100ml	1	1	SM 9223B	05/30	08:45	DAD
Fecal	Coliform	3	/100mL	1	1	SM 9222D	05/29	08:45	DAD
Total	Coliform Bacteria	770	mpn/100ml	1	1	SM 9223B	05/30	08:45	DAD
			•				'		

01 The total coliform sample was placed in the incubator on 05/29/14 at 08:40.

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R		Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of R Lab ID:	eport:	06/05 2294	/14 -14-0022101
		100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/29 mxb	/14 07:20
S	ample Desc:	SB-3					Date Rece	ived:	05/29	/14 07:40
Р	WSID: 30609	12			Rep	Dilutn		Test	Test	
			Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
B	ACTI									
	MICROBIOLO	GY								
	Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	05/30	08:45	DAD
	Fecal	Coliform	2	/100ml	1	1	SM 9222D	05/29	08:45	DAD
	Total	Coliform Bacteria	520	mpn/100ml	1	1	SM 9223B	05/30	08:45	DAD

01 The total coliform sample was placed in the incubator on 05/29/14 at 08:40.

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	mxb 05/29/14 7:39:37 AM		M. J. REIDER ASSOCIATES, INC. COFC.FRT Page: 1	C. PRT 1
			Chain of Custody	
	Account: 2294	Work Order: 002788 Work Order Description: Beach 1,2,3	Project Leader: CMB n: Beach 1,2,3	
	Customer: Gregory Wacik		Remarks:	1
	Address: USACE, Philadelphia District Environmental Resources Branch	phia District esources Branch		1
		East 19107	Total Sampling Time (hours): Bottle Prep by:	1
	Phone: 215-656-6561 Samplers: MK3	EXT :	ipt Temp: 5 Deg C. If Temp Unacceptable Approved By: <u>MX3</u>	Z
22099	Sample No: 1 Desc: SB-1 しれん のみ fc, ec, tcb,	17 17 17 17 17 17 17 17 17 17 17 17 17 1	Matrix: o Date: <u>5حماریا</u> Time: <u>57،13</u> A - 1 X 250mlMicro P w/ Sterile/Na2S203;	
Ş	Sample No: 2 Desc:	SB-2	Matrix: o $\frac{5 z_3 (y)}{r_1me}$	
Jaren	fc, ec, tcb,			
	DAU AN Sample No: 3 Desc:	SB-3	Matrix: o Date: <u>Sl2414</u> Time: A72A	-
10/88	fc, ec, tcb, 2,		A - 1 X 250mlMicro P w/ Sterile/Na2S203;	
	DARDAD			
			·	
			۲ ۲	((
	Relinquished by:	Received by:	Red Received for laboratory by: The second for laboratory by:	X
	Date: 5/29/14	Time: <u>0725</u>	Date: 5/29/14 Time: 0740	
			Sample entered by: ()	





Attention:	Gregory Wacik					Date of R	eport:	06/05	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0021654
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	05/27	/14 07:08
	Philadelphia PA 19107					Collected	By:	МХВ	
Sample Desc:	SB-1					Date Rece	ived:	05/27	/14 07:38
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
DACTI		المراجع معرفين والمراجع معرفين والمراجع والمراجع معر							
BACTI									
MICROBIOLC	DGY								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	05/28	09:10	DAD
Fecal	Coliform	2	/100mL	1	1	SM 9222D	05/27	09:19	DAD
Total	Coliform Bacteria	550	mpn/100ml	1	1	SM 9223B	05/28	09:10	DAD

01 The total coliform sample was placed in the incubator on 05/27/14 at 09:05.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia D Environmental Resourc					Date of F Lab ID:	Report:	06/05 2294	/14 14-0021655
100 Penn Square East Philadelphia PA 19107	· ·				Date Coll Collected		05/27 MXB	/14 07:10
Sample Desc: SB-2					Date Rece	eived:	05/27	/14 07:38
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY			<u> </u>					
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	05/28	09:10	DAD
Fecal Coliform	2	/100ml	1	1	SM 9222D	05/27	09:19	DAD
Total Coliform Bacteria	340	mpn/100ml	1	1	SM 9223B	05/28	09:10	DAD

01 The total coliform sample was placed in the incubator on 05/27/14 at 09:05.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	06/05 2294	/14 14-0021656
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		05/27 МХВ	/14 07:11
Sample Desc: SB-3					Date Rece	eived:	05/27	/14 07:38
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY			<u></u>					
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	05/28	09:10	DAD
Fecal Coliform	2	/100ml	1	1	SM 9222D	05/27	09:19	DAD
Total Coliform Bacteria	240	mpn/100ml	1	1	SM 9223B	05/28	09:10	DAD

01 The total coliform sample was placed in the incubator on 05/27/14 at 09:05.

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COFC.PRT Page: 1		No: 238467			Bottle Frep by:	Unacceptable, On Ice? Y N		matrix: o Date: 5/27/14	Time: Sterile/Na2	Date: SZ7114	Time: 0110 co P w/ Sterile/Na2S203;	Date: 527114	Time:	ro P w/ Sterile/Na2S203;						ŀ	mal last	Time: <u>6738</u>	for the second have been been been been been been been be	sample entered by:
J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB each 1,2,3	Remarks:		Total Sampling Time (hours):	Deg C. If Temp	d By:		A - 1 X 250mlMicro P w/	Matrix: o	A - 1 X 250mlMicro P w/	Matrix: o		A - 1 X 250mlMicro P w/			٠			·	2 Received for laboratory by:2	Date: $5/27/14$		
	0	Work Order: 002788 Work Order Description: Beach 1,2,3	Ren	ch				аналанан саранан сарана Стата	4	SB-2		и И И И И И И И И И И И И И И И И И И И									Received by:	one: مراجع Time: مرجع		
mxb 05/27/14 7:45:05 AM		Account: 2294	Customer: Gregory Wacik	Address: USACE, Philadelphia District Environmental Resources Bran	100 Penn Square East Philadelphia PA 19107	Phone: 215-656-6561	Samplers: WX3		þ,	A Samule No: 2 Desc:	, d	Descr. 2 Descr.	ົດ	Action Decides, teb,							Relinquished by: N	nate. 5/27/14	I	





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of I Lab ID:	Report:	06/09 2294	/14 14-0022585
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		06/02 mxb	2/14 07:10
Sample Desc: SB-1					Date Rece	eived:	06/02	/14 07:35
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	06/03	10:00	DAD
Fecal Coliform	<2	/100ml	2	1	SM 9222D	06/02	09:50	DAD
Total Coliform Bacteria	280	mpn/100ml	1	1	SM 9223B	06/03	10:00	DAD

COMMENTS

01 The total coliform sample was placed in the incubator on 06/02/14 at 09:45.

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Attention: Gregory Waci Reported To: USACE, Phila Environmenta					Date of F Lab ID:	Report:	06/09 2294	/14 14-0022586
100 Penn Squ Philadelphia					Date Coll Collected		06/02 mxb	/14 07:11
Sample Desc: SB→2					Date Rece	eived:	06/02	/14 07:35
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	06/03	10:00	DAD
Fecal Coliform	3	/100mL	2	1	SM 9222D	06/02	09:50	DAD
Total Coliform Bact	eria 440	mpn/100ml	1	1	SM 9223B	, 06/03	10:00	DAD

01 The total coliform sample was placed in the incubator on 06/02/14 at 09:45.

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Attention:	Gregory Wacik					Date of F	Report:	06/09	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0022587
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	06/02	/14 07:12
	Philadelphia PA 19107					Collected	By:	mxb	
Sample Desc:	SB-3					Date Rece	eived:	06/02	/14 07:35
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLC	ΟGΥ								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	06/03	10:00	DAD
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	06/02	09:50	DAD
Total	Coliform Bacteria	290	mpn/100ml	1	1	SM 9223B	06/03	12:00	DAD

01 The total coliform sample was placed in the incubator on 06/02/14 at 09:45.

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NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.



	mxb 06/02/14 7:56:56 AM	M. J. REIDER ASSOCIATES, INC. Page: 1
		Chain of Custody
		: Beach 1,2,3
	Customer: Gregory Waclk	Remarks:
	Address: USACE, Philadelphia District Fuvironmental Resources Branch	
	100 Penn Square East Philadelphia PA 19107	Total Sampling Time (hours): Bottle Frep by:
	Phone: 215-656-6561 Ext:	Laboratory Receipt Temp: <u>5</u> Deg C. If Temp Unacceptable, On Ice? Y N Approved By: wXG
33585	Sample No: 1 Desc: SB-1 ດນາງ ແນງ ຄຸມໃ	
	Samule No: 2	A - 1 A 2000LMICTOF W DELITE AND DATE: $6^2 -14$
	Tarte, ec, tcb,	Time: $\Delta_7(i)$ A - 1 X 250mlMicro P w/ Sterile/Na2S203;
18300	sample No: 3 Desc: SB-3	Matrix: 0 Date: <u>6-2-14</u>
	V _{tcb}	
	-	
		Y
	Relinquished by: N? Received by:	Be all Received for laboratory by: Plant Recht
	Date: 6-2-14 Time: 6715	Date: 6-2-14 Time: 0735
		Sample entered by:



CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of I Lab ID:	{eport:	06/16 2294	/14 14-0023247
100 Penn Square East Philadelphia PA 19107					Date Col Collected		06/05 mxb	/14 07:05
Sample Desc: SB-1					Date Rece	eived:	06/05	/14 07:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	1	mpn/100ml	1	1	SM 9223B	06/06	09:40	PLW
Fecal Coliform	2	/100ml	1	1	SM 9222D	06/05	08:45	PL₩
Total Coliform Bacteria	440	mpn/100ml	1	1	SM 9223B	06/06	09:40	PL₩

COMMENTS

01 The total coliform sample was placed in the incubator on 06/05/14 at 08:45.

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CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention:	Gregory Wacik					Date of R	eport:	06/16	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0023248	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	06/05	/14 07:06	
	Philadelphia PA 19107					Collected	By:	mxb	1	
	·									
Sample Desc:	SB-2					Date Rece	ived:	06/05	/14 07:30	
								1	,	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
		یہ ہے جہ سے در آند یہ سر بچ بے س								
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	06/06	09:40	PLW	
Fecal	Coliform	2	/100ml	1	1	SM 9222D	06/05	08:45	PLW	
Total	Coliform Bacteria	490	, mpn/100ml	1	1	SM 9223B	06/06	09:40	PLW	
			· ·				,			

COMMENTS

01 The total coliform sample was placed in the incubator on 06/05/14 at 08:45.

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(Mustixa M. t.

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Attention:	Gregory Wacik					Date of H	Report:	06/16	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0023249
	Environmental Resources Branch								
	100 Penn Square East					Date Col	lected:	06/05	/14 07:07
	Philadelphia PA 19107					Collected		mxb	,
							,-		
Sample Desc:	SB-3					Date Rece	eived:	06/05	/14 07:30
·								,	,
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
				` 					
BACTI									
MICROBIOLO	θGΥ								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	06/06	09:40	PLW
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	06/05	08:45	PLW
Total	Coliform Bacteria	250	mpn/100ml	1	1	SM 9223B	06/06	09:40	PLW
			· ·				'		

01 The total coliform sample was placed in the incubator on 06/05/14 at 08:45.

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M. J. REIDER ASSOCIATES, INC. COFC.PRT Page: 1	Chain of Custody Project Leader: CMB Beach 1,2,3	Bottle eg C. If Temp Unacceptable MX3	Matrix: o Date: c)sit A - 1 X 250mlMicro P w/ Sterile/Ma23203; Matrix: o Date: c/sit A - 1 X 250mlMicro P w/ Sterile/Ma23203; Matrix: o Time: c)obi A - 1 X 250mlMicro P w/ Sterile/Ma23203; Matrix: o Date: c/sit A - 1 X 250mlMicro P w/ Sterile/Ma23203; A - 1 X 250mlMicro P w/ Sterile/Ma23203;	Date: 6 5 14 Time: 0730 Sample entered by:
mxb 06/05/14 7:39:48 AM	Chain of C Account: 2294 Work Order: 002788 Work Order Description: Beach 1,2,3 Customer: Gregory Wacik	Address: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 Phone: 215-656-6561 Ext: Samplers:	A33H Sample No: 1 Desc: SB-1 fc, ec, tcb, fc, ec, tcb, 2 Desc: SB-2 A33H Sample No: 2 Desc: SB-2 fc, ec, tcb, fc, ec, tcb, 3 Desc: SB-3 fc, ec, tcb, fc, ec, tcb, fc, ec, tcb, fc, ec, tcb,	Relinquished by: NR Received by Monte: 65/4 Time: 0710





Attention:	Gregory Wacik					Date of F	Report:	06/16	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0023811
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	06/09	/14 07:15
	Philadelphia PA 19107					Collected	By:	mxb	
Sample Desc:	SB-1					Date Rece	eived:	06/09	/14 07:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	IGY								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	06/10	11:00	DAD
Fecal	Coliform	<2	/100mL	2	1	SM 9222D	06/09	11:25	PLW
Total	Coliform Bacteria	360	mpn/100ml	1	1	SM 9223B	06/10	11:00	DAD

- 01 The total coliform sample was placed in the incubator on 06/09/14 at 10:55.
- 02 Duplicate analysis of this sample for fecal coliform was outside the acceptable limit of 20% RPD.

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Reviewed and Approved by:

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	06/16 2294	/14 -14-0023812
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		06/09 mxb	/14 07:16
Sample Desc:	SB-2					Date Rece	eived:	06/09	/14 07:45
PWSID: 306091	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOG	GY								
Escheri	ichia coli	3	mpn/100ml	1	1	SM 9223B	06/10	11:00	DAD
Fecal (Coliform	2	/100ml	1	1	SM 9222D	06/09	11:25	PLW
Total (Coliform Bacteria	360	mpn/100ml	1	1	SM 9223B	06/10	11:00	DAD

01 The total coliform sample was placed in the incubator on 06/09/14 at 10:55.

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Attention:	Gregory Wacik					Date of H	Report:	06/16	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0023813
	Environmental Resources Branch								
	100 Penn Square East					Date Col	.ected:	06/09	/14 07:17
	Philadelphia PA 19107					Collected	By:	, mxb	,
							,		
Sample Desc:	SB-3					Date Rece	eived:	06/09	/14 07:45
								,	,
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	06/10	11:00	DAD
Fecal	Coliform	3	/100ml	1	1	SM 9222D	06/09	11:25	PĹW
Total	Coliform Bacteria	410	mpn/100ml	1	1	SM 9223B	06/10	11:00	DAD

01 The total coliform sample was placed in the incubator on 06/09/14 at 10:55.

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COFC.PRT Page: 1	CMB No: 239295	Bottle Frep by: Deg C. If Temp Unacceptable, On Ice? Y N &&Xf3	Date: Character Time: Date: Character Character Date: Characte	Received for laboratory by: M. C. M. C. M. Date: 69/14 Time: 6745
M. J. REIDER ASSOCIATES, INC.	Chain of Custody der: 002788 der Description: Beach 1,2,3 Remarks:	ling T Recei		Received by: Mg Allel Received for
mxtb 06/09/14 10:22:03 AM	Account: 2294 Work Order: Work Order Customer: Gregory Wacik	Address: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 215-656-6561 Ext: Samplers: MXT	23811 Sample No: 1 Desc: SB-1 M^{0} Ec, ec, tcb; 233813 Sample No: 2 Desc: SB-2 M^{0} fc, ec, tcb; 33813 Sample No: 3 Desc: SB-3 M^{0} fc, ec, tcb; M^{0} fc; M^{0}	Relinquished by: N? Date: 69/14 Time: 0725





Attention:	Gregory Wacik					Date of H	Report:	06/26	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0024487
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	06/12	/14 07:10
	Philadelphia PA 19107					Collected	Bv:	mxb	/
Sample Desc:	sB-1					Date Rece	eived:	06/12	/14 07:30
								/	,
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	23	mpn/100ml	1	1	SM 9223B	06/13	08:30	DAD
Fecal	Coliform	18	/100ml	1	1	SM 9222D	06/12	08:20	DAD
Total	Coliform Bacteria	730	mpn/100ml	1	1	SM 9223B	, 06/13	08:30	DAD
							1		

01 The total coliform sample was placed in the incubator on 06/12/14 at 08:15.

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Attention:	Gregory Wacik					Date of F	eport:	06/26	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0024488	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	06/12	/14 07:11	
	Philadelphia PA 19107					Collected	By:	mxb	,	
Sample Desc:	SB-2					Date Rece	eived:	06/12	/14 07:30	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
DACTI										
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	21	mpn/100mլ	1	1	SM 9223B	06/13	08:30	ÐAD	
Fecal	Coliform	.30	/100ml	1	1	SM 9222D	06/12	08:20	DAD	
Total	Coliform Bacteria	730	mpn/100ml	1	1	SM 9223B	06/13	08:30	DAD	
					-		/	00.00	DIND	

O1 The total coliform sample was placed in the incubator on 06/12/14 at 08:15.

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Attention:	Gregory Wacik		•			Date of F	Report:	06/26	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0024489	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	06/12	/14 07:12	
	Philadelphia PA 19107					Collected	By:	mxb	,	
	an 7									
Sample Desc:	SB-3					Date Rece	eived:	06/12	/14 07:30	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	20	mpn/100ml	1	1	SM 922 3 B	06/13	08:30	DAD	
Fecal	Coliform	23	/100ml	1	1	SM 9222D	06/12	08:20	DAD	
Total	Coliform Bacteria	730	mpn/100ml	1	1	SM 9223B	06/13	08:30	DAD	

01 The total coliform sample was placed in the incubator on 06/12/14 at 08:15.

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COFC.PRT Page: 1		No: 239564			Bottle Prep by:	Unacceptable, On Ice? Y N	o Date: <u>الاان</u> Time: مارد	Sterile/Na2S20	o Date: <u>(ماز2)انا</u> Time: مكانا	P w/ Sterile/Na	o Date: <u>Coliciul</u>	Ste		1.722 CJ Burt	Time: 0730 Sample entered by:	1
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	002788 Project Leader: CMB Description: Beach 1.2.3	Remarks:		Total Sampling Time (hours):	Laboratory Receipt Temp: 5 Deg C. If Temp Approved By: Mx3	Matrix: 0	A - 1 X 250mlMicro P w/	Matrix: 0	A - 1 X 250mlMicro	Matrix: 0	A - 1 X 250mlMicro P w/		hand for laboratory by	Date: 612/14	
7:46:23 AM		2294 Work Order: 002788 Work Order Description		USACE, Philadelphia District Environmental Resources Branch	100 Perm Square East Philadelphia PA 19107		: l Desc: SB-l	z, tcb,	: 2 Desc: SB-2	c, tçb,	: 3 Desc: SB-3			hed by:	colizity Time: OTIS	
mzb 06/12/14		Account:	Customer:	Address:	1	Phone: Samplers:	JUUS DAD Sample No:	fc, ec,	Sample No:	fc, ec,	Sample No:	Julisony fr er	···	Relinquished by:	Date: (0)	





Attention:	Gregory Wacik					Date of F	eport:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0025120
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	06/16	/14 07:10
	Philadelphia PA 19107					Collected	By:	, mxb	,
Sample Desc:	SB-1					Date Rece	eived:	06/16	/14 07:45
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLC	DGY								
Escher	richia coli	5	mpn/100ml	1	1	SM 9223B	06/17	13:00	ТВР
Fecal	Coliform	5	/100ml	1	1	SM 9222D	06/16	11:05	PLW
Total	Coliform Bacteria	340	mpn/100ml	1	1	SM 9223B	06/17	11:05	PLW

O1 The total coliform sample was placed in the incubator on O6/16/14 at 11:05.

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Attention:	Gregory Wacik					Date of H	Report:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0025121
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	06/16	/14 07:11
	Philadelphia PA 19107					Collected	Bv:	mxb	,
	·						,.		
Sample Desc:	SB-2					Date Rece	eived.	06/16	/14 07:45
•								00/10	711 01112
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	DGY								
Escher	ichia coli	5	mpn/100ml	1	-1	SM 9223B	06/17	13:00	ТВР
	Coliform	8		1	1	SM 9222D	'	11:05	
	Coliform Bacteria	550	mpn/100ml		1		'		
TOLAL		000	mpny toomt	I	I	SM 9223B	06/17	11:05	PLW

01 The total coliform sample was placed in the incubator on 06/16/14 at 11:05.

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Attention:	Gregory Wacik					Date of R	eport:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0025122
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	06/16	/14 07:12
	Philadelphia PA 19107					Collected		mxb	,
							,.	11776	
Sample Desc:	SB-3					Date Rece	ived.	06/16	/14 07:45
						Date Neoc	TVCu.	00/10	/14 07.49
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
							Date	TIME	Anatyst
BACTI									
MICROBIOLC									
Escher	richia coli	1	mpn/100ml	1	1	SM 9223B	06/17	13:00	ТВР
Fecal	Coliform	5	/100ml	1	1	SM 9222D	06/16	11:05	PLW
Total	Coliform Bacteria	440	mpn/100ml	1	1	SM 9223B	06/17	11:05	PLW
			· ·				'		

O1 The total coliform sample was placed in the incubator on O6/16/14 at 11:05.

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COFC.PRT Page: 1 No: 239716 Bottle Frep by:	Matrix: o Date: <u>clicku</u> 1 X 250mlMicro P w/ Sterile/Na2S203; Matrix: o Date: <u>clucku</u> 1 X 250mlMicro P w/ Sterile/Na2S203; Matrix: o Date: <u>colucku</u> 1 X 250mlMicro P w/ Sterile/Na2S203;	by The state of th
<pre>M. J. REIDER ASSOCIATES, INC. Chain of Custody Chain of Custody : 002788 Description: Beach 1,2,3 Project Leader: CMB Pescription: Beach 1,2,3 Remarks: </pre>	Matrix: o A - 1 X 250mlMicro P Matrix: o A - 1 X 250mlMicro P Matrix: o A - 1 X 250mlMicro P	The for face for laboratory by The for laboratory by The The formation of the
<pre>mxb 06/16/14 7:46:46 AM Account: 2294 Work Order: 002788 Customer: Gregory Wacik Work Order Description: Customer: Gregory Wacik Address: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Phone: 215-656-6561 Ext: Samplers: MXC</pre>	Sample No: 1 Desc: 5B-1 fc, ec, tcb, Sample No: 2 Desc: 5B-2 fc, ec, tcb, Sample No: 3 Desc: 5B-3 fc, ec, tcb, fc, ec, tcb,	Relinquished by:
<u></u> ξο ΰ' й	25120 se 25120	R D





Attention:	Gregory Wacik					Date of R	eport:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0025747
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	06/19	/14 07:05
	Philadelphia PA 19107					Collected	By:	mxb	,
Sample Desc:	SB-1					Date Rece	vived:	06/19	/14 07:35
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	60	mpn/100ml	1	1	SM 9223B	06/20	09:15	DAD
Fecal	Coliform	60	/100mL	1	1	SM 9222D	06/19	08:48	DAD
Total (Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	06/20	09:15	DAD

01 The total coliform sample was placed in the incubator on 06/19/14 at 09:00.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia Environmental Resou					Date of F Lab ID:	eport:	06/30 2294	/14 140025748
100 Penn Square Eas Philadelphia PA 191	t				Date Coll Collected		06/19 mxb	/14 07:06
Sample Desc: SB-2					Date Rece	ived:	06/19	/14 07:35
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI				999 WE HALL	jina mai na ma na ma na na ha ha ha			
MICROBIOLOGY								
Escherichia coli	93	mpn/100ml	1	1	SM 9223B	06/20	09:15	DAD
Fecal Coliform	110	/100ml	1	1	SM 9222D	06/19	08:48	DAD
Total Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	06/20	09:15	DAD

01 The total coliform sample was placed in the incubator on 06/19/14 at 09:00.

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Attention:	Gregory Wacik					Date of F	Report:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0025749
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	06/19	/14 07:07
	Philadelphia PA 19107					Collected	By:	mxb	,
Sample Desc:	\$B3					Date Rece	eived:	06/19	/14 07:35
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI		- 				——————————————————————————————————————			
MICROBIOLO	GY								
Escher	ichia coli	77	mpn/100ml	1	1	SM 9223B	06/20	09:15	DAD
Fecal	Coliform	78	/100ml	1	1	SM 9222D	06/19	08:48	DAD
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	06/20	09:15	DAD

01 The total coliform sample was placed in the incubator on 06/19/14 at 09:00.

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COFC.PRT Page: 1 No: 239967 Bottle Prep by: Temp Unacceptable, On Ice? Y N	OPw/ OPw/ Sample	
ASSOCIATES, INC. ustody Project Leader: CMB ng Time (hours): eceipt Temp: 5 Deg C. If	Matrix: A - 1 X 250mlM Matrix: A - 1 X 250mlM Matrix: A - 1 X 250mlM Received for laboratory b Date: <u>6/19/14</u>	
Work Order: 002788 Work Order Description: elphia District Resources Branch re East PA 19107 Ext:	ceived by:	
rag 06/19/14 7:40:55 AM Account: 2294 Customer: Gregory Wacik Address: USACE, Philad Environmental 100 Penn Squa Philadelphia Phone: 215-656-6561 Samplers: <u>MXS</u>		
	25749 Aurse Purse	





Attention:	Gregory Wacik					Date of F	leport:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0026337
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	06/23	/14 08:20
	Philadelphia PA 19107					Collected	By:	jbs	,
Sample Desc:	SB-1					Date Rece	eived:	06/23	/14 08:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	06/24	09:30	DAD
Fecal	Coliform	3	/100ml	1	1	SM 9222D	06/23	09:15	DAD
Total	Coliform Bacteria	360	mpn/100ml	1	1	SM 9223B	06/24	09:30	DAD

01 The total coliform sample was placed in the incubator on 06/23/14 at 09:20.

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Reported To: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 Lab ID: 2294-14-0026338 Sample Desc: SB-2 Date Collected: 06/23/14 08:20 Collected By: Date Received: 06/23/14 08:20 PWSID: 3060912 Result Unit Rep Limit Dilutn Test BACTI MICROBIOLOGY Result Unit Imit Factor Procedure Date Test Collected 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2 /100ml 2 1 SM 9222D 06/23 09:15 DAD	Attention:	Gregory Wacik					Date of R	eport:	06/30	/14
100 Penn Square East Philadelphia PA 19107 Date Collected: 06/23/14 08:20 jbs Sample Desc: SB-2 Date Received: 06/23/14 08:40 PWSID: 3060912 Result Unit Rep Limit Dilutn Factor Test Date Test Time Analyst BACTI MICROBIOLOGY Escherichia coli Fecal Coliform 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD AD	Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0026338
Philadelphia PA 19107 Collected By: jbs Sample Desc: SB-2 Date Received: 06/23/14 08:40 PWSID: 3060912 Result Unit Limit Factor Procedure Date Test Test Time Analyst BACTI MICROBIOLOGY 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform 2 /100ml 2 1 SM 9222D 06/23 09:15 DAD		Environmental Resources Branch								
Sample Desc: SB-2 Date Received: 06/23/14 08:40 PWSID: 3060912 Result Unit Factor Procedure Date Test Test BACTI MICROBIOLOGY Escherichia coli 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2		100 Penn Square East					Date Coll	ected:	06/23	/14 08:20
PWSID: 3060912 Rep Dilutn Test Test Result Unit Limit Factor Procedure Date Time Analyst BACTI MICROBIOLOGY Escherichia coli 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2		Philadelphia PA 19107					Collected	By:	'	,
Result Unit Limit Factor Procedure Date Time Analyst BACTI MICROBIOLOGY Escherichia coli 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2	Sample Desc:	SB-2					Date Rece	ived:	06/23	/14 08:40
BACTI MICROBIOLOGY Escherichia coli 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2	PWSID: 30609	12			Rep	Dilutn		Test	Test	
MICROBIOLOGY Escherichia coli 1 mpn/100ml 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2			Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
Escherichia coli 1 mpn/100ml 1 1 SM 9223B 06/24 09:30 DAD Fecal Coliform <2	BACTI									
Fecal Coliform <2 /100ml 2 1 SM 9222D 06/23 09:15 DAD	MICROBIOLO	GY								
	Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	06/24	09:30	DAD
Total Californian $2/0$ $mm/400ml 4$ 4 $mm/200777 - 0.007777 - 0.007777 - 0.007777 - 0.00777 - 0.007777 - 0.007777 - 0.0077$	Fecal	Coliform	<2	/100ml	2	1	SM 9222D	06/23	09:15	DAD
Totat cornorm Bacterna 240 mpn/100mt 1 1 SM 9223B 06/24 09:30 DAD	Total	Coliform Bacteria	240	mpn/100ml	1	1	SM 9223B	06/24	09:30	DAD

01 The total coliform sample was placed in the incubator on 06/23/14 at 09:20.

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Reviewed and Approved by: Unistore M. stle

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	Attention:	Gregory Wacik					Date of R	eport:	06/30	/14
F	Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0026339
		Environmental Resources Branch								
		100 Penn Square East					Date Coll	ected:	06/23	/14 08:20
		Philadelphia PA 19107					Collected		jbs	/
		•						2).	100	
ę	Sample Desc:	SB-3					Date Rece	ived.	06/23	/14 08:40
							bate neoc	TVCG.	00/25	/14 00.40
F	PWSID: 30609	12			Rep	Dilutn		Test	Test	
			Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
								Ducc		Anatyst
F	BACTI									
-	MICROBIOLO	ςγ.								
				1400		-				
		ichia coli	1	mpn/100ml	1	1	SM 9223B	06/24	09:30	DAD
	Fecal	Coliform	<2	/100ml	2	1	SM 9222D	06/23	09:15	DAD
	Total	Coliform Bacteria	260	mpn/100ml	1	1	SM 9223B	06/24	09:30	DAD
				-				'		

01 The total coliform sample was placed in the incubator on 06/23/14 at 09:20.

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Mistore & stle

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;/90	jbs 06/23/14	7:32:42 /	AM		м. J.	M. J. REIDER ASSOCIATES, INC.	LATES, INC.	д	COFC.PRT Page: 1
					Chai	Chain of Custody			
Gr ₽ C	Account: Customer:	2294 Gregory Wacik	Wacik	Work Order: (Work Order De,	002788 Description: Beach 1,2,3		Project Leader: CMB	No: 240112	
đ.	Address:		USACE, Philadelphia Environmental Resour 100 Penn Square East	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East	4 10100				
ы С	Phone: Samplers:		Philadelphia PA 19107 215-656-6561 Ext: 71555	9107 Ext:	Total Labora	Total Sampling Time (hours): Laboratory Receipt Temp: 10 Approved By	Deg C. If	Bottle Prep by: Temp Unacceptable, On Ice?	R N
	່ ຍຸ່ງ	PLAY ec, tcb,	Desc: SI	SB-1			Matrix: A - 1 X 250m	Matrix: o Date: <u>6.(}.(</u>] 1 X 250mlMicro P w/ Sterile/Na2S203;	<u>5-73-17</u> <u>5820</u> 203;
26338 Sau	່ຄີ	: 2 c, tcb,	Desc: 31	SB-2			Matrix: A - 1 X 250m	o lmicro P w/	6-7747 <u>5203;</u> 5203;
les phinz	Sample No:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Desc: SI	SB-3			Matrix: A - 1 X 250m	o Date: Time: IMicro P w/ Sterile/Na	С-7314 <u>0820</u> 25203;
Daj Ke	Relinquished by: Date: 63.14	hed by: 2./4	d l	Receir Time: 0830	Received by:		Received for laboratory by: $\frac{1}{2}$	rry by: Time: 0840	
					2			Sample entered by:	PEAN





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of I Lab ID:	Report:	06/30 2294	/14 14-0027204
100 Penn Square East Philadelphia PA 19107					Date Col Collected		06/26 mxb	/14 07:20
Sample Desc: SB-1					Date Rece	eived:	06/26	/14 07:40
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit 	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	43	mpn/100ml	1	1	SM 9223B	06/27	08:30	DAD
Fecal Coliform	56	/100ml	1	1	SM 9222D	06/26	08:48	DAD
Total Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	06/27	08:30	DAD

01 The total coliform sample was placed in the incubator on 06/26/14 at 08:25.

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Attention:	Gregory Wacik					Date of R	eport:	06/30	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0027205	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	06/26	/14 07:21	
	Philadelphia PA 19107					Collected	By:	mxb	,	
Sample Desc:	SB-2					Date Rece	ived:	06/26	/14 07:40	
								, -	,	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
		معر فعد فقد المراجعة عليا عليا الله المرافعة التلك وي 199								
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	17	mpn/100ml	1	1	SM 9223B	06/27	08:30	DAD	
Fecal	Coliform	36	/100mL	1	1	SM 9222D	06/26	08:48	DAD	
Total	Coliform Bacteria	2400	, mpn/100ml	1	1	SM 9223B	06/27	08:30	DAD	
							'			

01 The total coliform sample was placed in the incubator on 06/26/14 at 08:25.

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Attention:	Gregory Wacik					Date of F	Report:	06/30	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0027206
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	06/26	/14 07:22
	Philadelphia PA 19107					Collected	By:	mxb	,
Sample Desc:	SB-3					Date Rece	eived:	06/26	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	28	mpn/100ml	1	1	SM 9223B	06/27	08:30	DAD
Fecal	Coliform	31	/100ml	1	1	SM 9222D	06/26	08:48	DAD
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	06/27	08:30	DAD

01 The total coliform sample was placed in the incubator on 06/26/14 at 08:25.

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COFC.PRT Page: 1	No: 240411 Bottle Prep by: Temp Unacceptable, On Ice? Y N	o o limicro P w/ o limicro P w/	ory by M. L. R. K Time: 0740 Sample entered by:
M. J. REIDER ASSOCIATES, INC. Chain of Custody	002788 Project Leader: CMB escription: Beach 1,2,3 Remarks: Total Sampling Time (hours): Laboratory Receipt Temp: 5 Deg C. If Te Approved By: 000 C. If Te	* + * + * +	by: 22 12 Received for laboratory by, Date: 62014 Th
MA 3	Work Order: Work Order D Work Order D Work Order D Philadelphia District mental Resources Branch m Square Bast anphia PA 19107 6-6561 Ext:	Desc: SB-2 Desc: SB-3 Desc: SB-3	NP Received by S
bsw 06/26/14 7:58:06	Account: 2294 Customer: Gregor Address: USACE, Enviro Philad Phone: 215-65 Samplers: M)	JTJ0H Sample No: 1 fc, ec, tcb, fc, ec, tcb, fc, ec, tcb, fc, ec, tcb, fc, ec, tcb,	Relinquished by: Date: <u>(adulul</u>





Attention:	Gregory Wacik					Date of F	Report:	07/08	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0027692
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	06/30	/14 07:10
	Philadelphia PA 19107					Collected	By:	mxb	,
							2 -		
Sample Desc:	SB-1					Date Rece	rived:	06/30	/14 07:40
								,	/
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	DGY								
Escher	richia coli	<1	mpn/100ml	1	1	SM 9223B	07/01	09:30	DAD
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	06/30	09:32	
	Coliform Bacteria	210	,	<u>د</u> ۱	-		'		
Totat		210	mpn/100ml	I	1	SM 9223B	07/01	09:30	DAD

01 The total coliform sample was placed in the incubator on 06/30/14 at 09:20.

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Reported To:	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	07/08 2294	/14 140027693
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		06/30 mxb	/14 07:12
Sample Desc:	SB-2					Date Rece	eived:	06/30	/14 07:40
PWSID: 306091	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOG						kan kat kat an an an an an an an an an			
	ichia coli	<1	mpn/100ml	1	1	SM 9223B	07/01	09:30	DAD
Fecal C	Coliform	<2	/100mL	2	1	SM 9222D	06/30		
Total C	Coliform Bacteria	170	mpn/100ml	1	1	SM 9223B	07/01	09:30	DAD

01 The total coliform sample was placed in the incubator on 06/30/14 at 09:20.

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Attention:	Gregory Wacik					Date of F	eport:	07/08	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0027694	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	06/30	/14 07:13	
	Philadelphia PA 19107					Collected	By:	mxb	<i>,</i>	
	an 7									
Sample Desc:	SB-3					Date Rece	eived:	06/30	/14 07:40	
PWSID: 30609'	12			Rep	Dilutn		Test	ĩest		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	07/01	09:30	DAD	
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	06/30	09:32	DAD	
Total (Coliform Bacteria	180	mpn/100ml	1	1	SM 9223B	07/01	09:30	DAD	

01 The total coliform sample was placed in the incubator on 06/30/14 at 09:20.

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INC. COFC.PRT Page: 1	ader: CMB No: 240587	s): Bottle Prep by: <u>S</u> Deg C. If Temp Unacceptable, On Ice? Y N By: MXX	Matrix: o Date: <u>cl30/14</u> A - 1 X 250mlMicro P w/ Sterile/Na2S203; Matrix: o Date: <u>cl30/14</u> A - 1 X 250mlMicro P w/ Sterile/Na2S203; Matrix: o Date: <u>cl30/14</u> A - 1 X 250mlMicro P w/ Sterile/Na2S203; A - 1 X 250mlMicro P w/ Sterile/Na2S203;	Received for laboratory by Ma Land
M. J. REIDER ASSOCIATES, 1 Chain of Custody	Work Order: 002788 Work Order Description: Beach 1,2,3 Remarks: istrict	Branch Total Sampling Time (hours): Laboratory Receipt Temp: 5 Approved By:		Received by
7:52:42 AM	2294 Work Or Work Or Gregory Wacik USACE, Philadelphia District	Environmental Resources Branch 100 Penn Square East 215-656-6561 Ext: 215-656-6561 Ext:	1 Desc: SB-1 tcb, Desc: SB-2 tcb, 3 Desc: SB-3 tcb, tcb,	tshed by:
mxb 06/30/14	Account: Customer: Address:	Phone: Samplers:	ATION Sample No: ATION Sample No: ATION Ec, ec, ATION Sample No: ATION Ec, ec, ATION Ec, ec,	Relinquished by: Date: 630/14





Attention:	Gregory Wacik					Date of R	eport:	07/11	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0028393
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/03	/14 07:10
	Philadelphia PA 19107					Collected	By:	, mxb	/
	·						, -		
Sample Desc:	SB-1					Date Rece	ived:	07/03	/14 07:30
·							, rear	01/05	/ 4 01.50
PWSID: 30609'	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		ورو الم الم الم الم الم الما الما الما الم							
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	16	mpn/100ml	1	1	SM 9223B	07/04	10:00	DAD
Fecal	Coliform	23	/100ml	1	1	SM 9222D	07/03	08:45	
			,	1	-		1		DAD
Iotal	Coliform Bacteria	>2400	mpn/100ml	T	1	SM 9223B	07/04	10:00	DAD

O1 The total coliform sample was placed in the incubator on 07/03/14 at 09:15.

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Attention:	Gregory Wacik					Date of F	eport:	07/11	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0028394	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	07/03	/14 07:11	
	Philadelphia PA 19107					Collected	l By:	mxb		
Sample Desc:	SB-2					Date Rece	ived:	07/03	/14 07:30	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
BACTI						And had had had had had had had had had ha				
MICROBIOLO	GY									
Escher	ichia coli	12	mpn/100ml	1	1	SM 9223B	07/04	10:00	DAD	
Fecal	Coliform	23	/100mL	1	1	SM 9222D	07/03	08:45	DAD	
	Coliform Bacteria	50/00	·····	4	4	an 00075	07/0/	40.00		
lotal	COLITORM Bacteria	>2400	mpn/100ml	.1	1	SM 9223B	07/04	10:00	DAD	

O1 The total coliform sample was placed in the incubator on 07/03/14 at 09:15.

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Wistike 7 stle

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Attention:	Gregory Wacik					Date of F	leport:	07/11	/14
Reported To:	USACE, Philadelphia District					Lab ID:	-	2294	-14-0028395
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/03	/14 07:12
	Philadelphia PA 19107					Collected		mxb	,
	·						~,.		
Sample Desc:	SB-3					Date Rece	ived.	07/03	/14 07:30
								01705	14 01.50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	19	mpn/100ml	1	1	SM 9223B	07/04	10:00	DAD
	Coliform	31		1	1		,		
			· .			SM 9222D	,	08:45	DAD
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	07/04	10:00	DAD

O1 The total coliform sample was placed in the incubator on 07/03/14 at 09:15.

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Wistize W istle

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by: M. Bart rime: <u>0730</u> Sample entered by: M.CM.	by: M. Los Received for laboratory by: Date: 7314 rime:	W Received by: 22	Relinquished by: Date: 734
Micro P w/ Sterile/Na2S2O3;	A - 1 X 250mLM		$\int J J J J J J J J J J J J J J J J J J J$
$\frac{1}{2}$	Matrix:	Desc: SB-3	A A A A A A A A A A A A A A A A A A A
Time: <u>0711</u> Micro P w/ Sterile/Na2S2O3;	片		JR JUL Sompte NO: -
o Date: 7/3/14	ы	Doca. CH- 3	,
o Date: <u>7[2]i4</u> Time: <u>5716</u> Micro P w/ Sterile/Na2S203;	Matrix: o A - 1 X 250mlMicro	Desc: SB-1	NR393 sample No: 1
Bottle Prep by: Temp Unacceptable, On Ice? Y N	Total Sampling Time (hours): Laboratory Receipt Temp: <u>S</u> Deg C. If Temp Approved By: with	100 Penn Square East Philadelphia PA 19107 215-656-6561 Ext: NXB	DOD Pen Philade Phone: 215-656 Samplers: MX
	Remarks:		Account: 2294 Customer: Grego Address: USACE
Page: 1 No: 240920	Chain of Custody	AM	7:
COFC. PRT	M J. REIDER ASSOCIATES, INC.		

Sample entered by: $\underline{M} \underbrace{M}$,



CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branci	h				Date of H Lab ID:	Report:	07/15 2294	/14 140028757
100 Penn Square East Philadelphia PA 19107	-				Date Coll Collected		07/07 mxb	/14 07:15
Sample Desc: SB-1					Date Rece	eived:	07/07	/14 07:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY								
Escherichia coli	5	mpn/100ml	1	1	SM 9223B	07/08	09:40	PLW
Fecal Coliform	6	/100ml	1	1	SM 9222D	07/07	09:45	PLW
Total Coliform Bacteria	770	mpn/100ml	1	1	SM 9223B	07/08	09:40	PLW

COMMENTS

01 The total coliform sample was placed in the incubator on 07/07/14 at 09:30.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	07/15 2294	/14 -14-0028758
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/07 mxb	/14 07:16
Sample Desc: SB-2					Date Rece	eived:	07/07	/14 07:45
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	3	mpn/100ml	1	1	SM 9223B	07/08	09:40	PLW
Fecal Coliform	3	/100mL	1	1	SM 9222D	07/07	09:45	
Total Coliform Bacteria	580	mpn/100ml	1	1	SM 9223B	07/08	09:40	PLW

01 The total coliform sample was placed in the incubator on 07/07/14 at 09:30.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	07/15 2294	/14 14-0028759
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/07 mxb	/14 07:17
Sample Desc:	SB-3					Date Rece	eived:	07/07	/14 07:45
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLO	GY								
	ichia coli	2	mpn/100ml	1	1	SM 9223B	07/08	09:40	PL₩
Fecal	Coliform	3	/100ml	1	1	SM 9222D	07/07		
Total	Coliform Bacteria	980	mpn/100ml	1	1	SM 9223B	, 07/08	09:40	PLW

The total coliform sample was placed in the incubator on 07/07/14 at 09:30.

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COFC.PRT Page: 1	No: 240995		Bottle Prep by:	Temp Unacceptable, On Ice? Y N				Time: Sterile/Na2	Date: $\frac{7}{7}$	Ste				ill But	074S	
	Project Leader: CMB ach 1,2,3	Remarks:	Total Sampling Time (hours):	Temp: 5 Deg C. If	Approved By: <u>war</u>	Matrix: o	ſ	Ě.	Matrix: o	A - 1 X 250mlMicro P w/				Land Received for laboratory by: M2	Date: 7/1/14 Time: 6	
W.	Work Order: 002788 Work Order Description: Béach 1,2,3							707						Received by:	: 0720	
7:57:51 AM	2294 Gregorv Wacik		usach, fuitadetputa district Environmental Resources Branch 100 Penu Square East Philadelphia PA 19107	215-656-6561 RXt:	MXB	1 Desc:	tcb,	z Desc: 25-2 tcb,	3 Desc: SB-3	tcb,				d by: N?	TIU Time:	
mxb 07/07/14 7:	Account: Customer: (Samplers:	۰۰ ا	fc, ec,	2875% sample no: fc, ec,	Sample No:	2875 fc, ec,				Relinquished by:	Date: 7	





Attention: Gregory Waci								te of Re	eport:	07/15	
Reported To: USACE, Phila Environmenta	delphia District Il Resources Branch						La	ab ID:		2294	-14-0029586
100 Penn Squ	are East						Da	ite Colle	ected:	07/10	/14 07:15
Philadelphia	PA 19107						Co	llected	By:	МХВ	
Sample Desc: SB-1							Da	ite Rece	ived:	07/10	/14 07:40
PWSID: 3060912					Rep	Dilutn			Test	Test	
		Result		Unit	Limit	Factor	Proc	edure	Date	Time	Analyst
BACTI								• • • • • • • • • • • • • • • • • • •			
MICROBIOLOGY											
Escherichia coli		<1	,	mpn/100ml	1	1	SM 9	223B	07/11	08:30	DAD
Fecal Coliform		2		/100ml	1	1	SM 9	222D	07/10	08:48	DAD
Total Coliform Bact	eria	390		mpn/100ml	1	1	SM 9	223B	07/11	08:30	DAD

01 The total coliform sample was placed in the incubator on 07/10/14 at 08:25.

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Attention:	Gregory Wacik					Date of F	Report:	07/15	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0029587
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/10	/14 07:16
	Philadelphia PA 19107					Collected	By:	MXB	1
Sample Desc:	\$B-2					Date Rece	eived:	07/10	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		يرجع يحمر محمر الحال الحما لمحا لمحا لمحا الما الخا الما							
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	07/11	08:30	DAD
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	07/10	08:48	DAD
Total	Coliform Bacteria	240	mpn/100ml	1	1	SM 9223B	07/11	08:30	DAD

01 The total coliform sample was placed in the incubator on 07/10/14 at 08:25.

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	Gregory Wacik					Date of F	Report:	07/15	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0029588
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/10	/14 07:17
	Philadelphia PA 19107					Collected	By:	MXB	
Sample Desc:	SB-3					Date Rece	eived:	07/10	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	07/11	08:30	DAD
Fecal	Coliform	3	/100ml	1	1	SM 9222D	07/10	08:48	DAD
Total	Coliform Bacteria	580	mpn/100ml	1	1	SM 9223B	07/11	08:30	DAD

01 The total coliform sample was placed in the incubator on 07/10/14 at 08:25.

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Westing M.

Christina Kistler

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NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.



COFC.PRT Page: 1		CMB No: 241300		Bottle Prep by:	ig C. If Temp Unacceptable, On Ice? Y N אאקל	Matrix: o Date: C7/10/14 - 1 X 250mlMicro P w/ Sterile/Na2S203;	Matrix: o Date: c7/10/14	- 1 X 250mlMicro P w/ Sterile/Na2S203;	Matrix: o Date: <u>c1/10/14</u>	- 1 % 250mlMicro P w/ Sterile/Na2S203;	Poreired for lahoratory hv.		Time: 0740	Sample entered by: N CV
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	: 002788 Description: Beach 1,2,3	Remarks:	Total Sampling Time (hours):	Laboratory Receipt Temp: 5 Deg Approved By:			A		K		Received by the providence of	Date: 07[10]14	
7:59:50 AM		Work Order Work Order	Gregory Wacik	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107	215-656-6561 Ext: ۲۰۰۰ کی	: 1 Desc: SB-1	: 2 Desc: SB-2	c, tcb,	: 3 Desc: SB-3	c, tcb,		22	ieliy Time: 0720	
mxb 07/10/14		Account:	Customer:	Address:	Phone:	ASSIC Sample No:	MC&7 Sample No:		COC Sample No:	2950° V fc, ec,		Relinquished by:	Date: 07/1414	



CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention:	Gregory Wacik					Date of R	eport:	07/22	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0030993	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	07/17	/14 07:20	
	Philadelphia PA 19107					Collected	By:	mxb		
Sample Desc:	SB-1					Date Rece	ived:	07/17	/14 07:50	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	07/18	10:00	DAD	
Fecal	Coliform	3	/100ml	1	1	SM 9222D	07/17	08:48	DAD	
Total	Coliform Bacteria	1400	mpn/100ml	1	1	SM 9223B	07/18	10:00	DAD	

COMMENTS

01 The total coliform sample was placed in the incubator on 07/17/14 at 09:55.

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Attention:	Gregory Wacik					Date of A	Report:	07/22	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0030994	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	lected:	07/17	/14 07:21	
	Philadelphia PA 19107					Collected	d By:	mxb		
Sample Desc:	SB-2					Date Rece	eived:	07/17	/14 07:50	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	3	mpn/100ml	1	1	SM 9223B	07/18	10:00	DAD	
Fecal	Coliform	2	/100ml	1	1	SM 9222D	07/17	08:48	DAD	
Total	Coliform Bacteria	1000	mpn/100ml	1	1	SM 9223B	07/18	10:00	DAD	

01 The total coliform sample was placed in the incubator on 07/17/14 at 09:55.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	07/22 2294	/14 -14-0030995
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/17 mxb	/14 07:22
Sample Desc:	SB-3					Date Rece	eived:	07/17	/14 07:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLO	IGY								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	07/18	10:00	DAD
Fecal	Coliform	3	/100mL	1	1	SM 9222D	07/17	08:48	DAD
Total	Coliform Bacteria	980	mpn/100ml	1	1	SM 9223B	07/18	10:00	DAD

COMMENTS

01 The total coliform sample was placed in the incubator on 07/17/14 at 09:55.

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	Date: $7/17/14$ Time: 6730	Relinquished by: NP Received by:		Ρ,		30994 Sample No: 2 Desc: SB-2	fc, ec, tcb,	၇၉၀၀၀ Sample No: 1 Desc: SB-1	s: wro	100 Penn Square East Philadelphia PA 19107 Phone: 215-656-6561 Ext:	Address: USACE, Philadelphia District Environmental Resources Branch	Gregory Wacik	Account: 2294 Work Order: 002788		mxb 07/17/14 8:01:33 AM
Sample entered by: UNUC	Date: $7(1)$ Time: 075	Y: Mal Received for laboratory by: Mark Rept.		Time: <u>0,122</u> A - 1 X 250mlMicro P w/ Sterile/Na2S2O3;	Matrix: o Date: 7-17-14	Matrix: o Date: <u>7-17-14</u> Time: <u>072)</u> A - 1 X 250mlMicro P w/ Sterile/Na2S2O3;	lMicro P w/ Sterile/Na2:	Matrix: o		Total Sampling Time (hours):Bottle Prep by:Bottle Prep by:		ion: Beach 1,2,3 Remarks:	1 L	Chain of Custody	M. J. REIDER ASSOCIATES, INC. Page: 1





Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	07/17 2294	/14 14-0030197
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/14 mxb	/14 07:10
Sample Desc: SB-1					Date Rece	eived:	07/14	/14 07:30
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	10	mpn/100ml	1	1	SM 9223B	07/15	09:00	DAD
Fecal Coliform	11	/100ml	1	1	SM 9222D	07/14	08:34	DAD
Total Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	07/15	09:00	DAD

01 The total coliform sample was placed in the incubator on 07/14/14 at 09:00.

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Wittike

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Attention:	Gregory Wacik					Date of F	Report:	07/17	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0030198
	Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/14 mxb	/14 07:12
Sample Desc:	SB-2					Date Rece	ved:	07/14	/14 07:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	6	mpn/100ml	1	1	SM 9223B	07/15	09:00	DAD
Fecal	Coliform	18	/100ml	1	1	SM 9222D	07/14	08:34	DAD
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	07/15	09:00	DAD

01 The total coliform sample was placed in the incubator on 07/14/14 at 09:00.

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Attention:	Gregory Wacik					Date of F	Report:	07/17	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0030199
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	07/14	/14 07:13
	Philadelphia PA 19107					Collected	d By:	mxb	
Sample Desc:	SB-3					Date Rece	eived:	07/14	/14 07:30
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		Adad Bilda Jiani band kanay kanar many many pany pany pany pany							
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	6	mpn/100ml	1	1	SM 9223B	07/15	09:00	DAD
Fecal	Coliform	5	/100ml	1	1	SM 9222D	07/14	08:34	DAD
Total	Coliform Bacteria	2000	mpn/100ml	1	1	SM 9223B	07/15	09:00	DAD

01 The total coliform sample was placed in the incubator on 07/14/14 at 09:00.

Distribution of Reports:

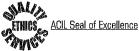
Reviewed and Approved by: Huitore n stle

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COFC.PRT Page: 1		No: 241454		Bottle Prep by:	p Unacceptable, On Ice? Y N	Matrix: o Date: OTUHH Matrix: o Date: OTUHH Matrix: o Date: OTUHH 1 X 250mIMicro P w/ Sterile/Wa2S203; Matrix: o Date: OTUHH Matrix: o Date: OTUHHH Matrix: o Date: OTUHHH Matrix: o Date: OTUHHH Matrix: o Date: OTUHHH Matrix: o Date: OTUHHHH Matrix: o Date: OTUHHHHH Matrix: o Date: OTUHHHH Matrix: o DATE: OTUHHH Matrix: O DATE: OTUHHH M	by Brand Bard	Time: 0730	Sample entered by: $\mathcal{O}_{\mathcal{P}\mathcal{N}}$
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB Beach 1,2,3	Remarks:	Total Sampling Time (hours):	Laboratory Receipt Temp: 5 Deg C. If Temp Approved By:	Matrix: Matrix: A - 1 X 250ml Matrix: A - 1 X 250ml A - 1 X 250ml	illeft Received for laboratory by	Date: 7/14/14	
W		Work Order: 002788 Work Order Description: Beach 1,2,3	cħ			Desc: SB-1 Desc: SB-2 Desc: SB-3	Received by:	Time: 0720	
mxb 07/14/14 7:53:56 AM		Account: 2294 Customer: Gregory Wacik	Address: USACE, Philadelphia District Environmental Resources Branch		FLODE: 212-000 Samplers:	30197 DH Gample No: 1 Desc: SI 30198 Ex. ec. tcb, 30199 Sample No: 2 Desc: SI 30199 Here, ec. tcb, 30199 Here, ec. tcb, 30199 Here, ec. tcb,	Relinquished by: NP	Date: 7/14/14 Ti	





Attention:	Gregory Wacik					Date of F	Report:	07/25	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0031661	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	07/21	/14 07:15	
	Philadelphia PA 19107					Collected	By:	, mxb	<i>r</i>	
							,			
Sample Desc:	SB-1					Date Rece	eived:	07/21	/14 07:50	
								,	,	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
		نا نا نا بر بر م م م م م ار از از از ا								
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	07/22	11:00	PLW	
Food	Coliform	3	/100ml	1	1	SM 9222D	07/21	10:45	PIW	
recat			/		•			10112		
	Coliform Bacteria	1100	mpn/100ml	1	1	SM 9223B	'	11:00		

01 The total coliform sample was placed in the incubator on 07/21/14 at 10:45.

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Attention:	Gregory Wacik					Date of F	Report:	07/25	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0031662
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	07/21	/14 07:16
	Philadelphia PA 19107					Collected	H By:	mxb	
Sample Desc:	SB-2					Date Rece	eived:	07/21	/14 07:50
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
			فسو الملك والله والله والله والله والمراجع						· see see all the had been been
BACTI					ہے ہے سر اعا اعا اعا اعا ا				ann ann aic sin had an an an
BACTI MICROBIOLO	GY							<u></u>	
MICROBIOLO	GY ichia coli	3	 mpn/100mL	1	1	 SM 9223B			PLW
MICROBIOLO Escher		3 3	 mpn/100ml /100ml	 1 1	 1 1	SM 9223B SM 9222D	1	 11:00 10:45	

01 The total coliform sample was placed in the incubator on 07/21/14 at 10:45.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	eport:	07/25 2294	/14 -14-0031663
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/21 mxb	/14 07:17
Sample Desc:	SB-3					Date Rece	eived:	07/21	/14 07:50
PWSID: 30609'	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI MICROBIOLO	- •								
	ichia coli Coliform	2 5	mpn/100ml /100ml	1 1	1 1	SM 9223B SM 9222D	07/22 07/21	11:00 10:45	PLW PLW
Total	Coliform Bacteria	1200	mpn/100ml	1	1	SM 9223B	07/22	11:00	PLW

01 The total coliform sample was placed in the incubator on 07/21/14 at 10:45.

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<pre>:52:04 AM 2294 Work Green Work Green Steadelphia Distri Environmental Resources Bi 100 Penn Square East Philadelphia PA 19107 215-656-6561 Ext: MNG 2 Desc: SB-1 tch, 3 Desc: SB-3 tch, d by: d by: Time:</pre>	M. J. REIDER ASSOCIATES, INC. COFC.PRT Page: 1	Chain of Custody	Order: 002788 Project Leader: CMB Order Description: Beach 1,2,3	Remarks:		Total Sampling Time (hours):Bottle Prep by:	Laboratory Receipt Temp: <u>5</u> Deg C. If Temp Unacceptable, On Ice? Y N Approved By: <u>\\\\\\</u>	Matrix: o Date: 7 31/14	A - 1 X 250mlMicro P w/ Sterile/Na2S203;	Matrix: o Date: <u>" A !4</u> Time: 0716	A - 1 X 250mlMicro P w/ Sterile/Na2S203;	Matrix: o Date: $\frac{7 z_1 }{1} \cdot $	A - 1 X 250mlMicro P w/ Sterile/Na2S203;					d by Mr. Were Received for laboratory by: Mr. 1 Bant	Date: $7/21/14$ Time: 0.750	Camula entered hv.
<pre>mxb 07/21/14 7 Account: customer: Address: samplers: sample No: fc, ec, fc, ec, fc, ec, fc, ec, fanple No: fc, ec, fc, ec, fanple No: fc, ec, fanple No: fc, ec, fc, ec,</pre>	7:52:04 AM		Work Work	Gregory Wacik	USACE, Philadelphia District Environmental Resources Branch	100 Penn Square East Philadelphia PA 19107		Desc:		Desc:		Desc:	ec, tcb,						Time:	



CERTIFICATE OF ANALYSIS M.J. Reider Associates, Inc.



Attention:	Gregory Wacik					Date of I	Report:	07/31	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0032351
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	07/24	/14 07:08
	Philadelphia PA 19107					Collected	By:	mxb	,
							, -		
Sample Desc:	SB-1					Date Rece	ved:	07/24	/14 07:30
								01/24	/ 4 01 000
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	DGY								
Escher	richia coli	2	mpn/100ml	1	1	SM 9223B	07/25	08:30	DAD
Fecal	Coliform	11		1	1	SM 9222D	07/24	09:40	DAD
		••	/ 100///0				V1/24	07.40	
Total	Coliform Bacteria	2400	mpn/100ml	1	1	SM 9223B	07/25	08:30	DAD

COMMENTS

01 The total coliform sample was placed in the incubator on 07/24/14 at 08:40.

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Attention: Grego	ry Wacik					Date of F	Report:	07/31	/14
Reported To: USACE	, Philadelphia District					Lab ID:		2294	140032352
Enviro	onmental Resources Branch								
100 Pe	enn Square East					Date Coll	.ected:	07/24	/14 07:09
Philad	delphia PA 19107					Collected	By:	mxb	
Sample Desc: SB-2						Date Rece	eived:	07/24	/14 07:30
PWSID: 3060912				Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLOGY									
Escherichia	coli	1	mpn/100ml	1	1	SM 9223B	07/25	08:30	DAD
Fecal Colifo	^m	8	/100mL	1	1	SM 9222D	07/24	09:40	DAD
Total Colifo	°m Bacteria	1700	mpn/100ml	1	1	SM 9223B	07/25	08:30	DAD

01 The total coliform sample was placed in the incubator on 07/24/14 at 08:40.

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Attention:	Gregory Wacik					Date of R	eport:	07/31	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0032353
	Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/24 mxb	/14 07:10
Sample Desc:	SB-3					Date Rece	eived:	07/24	/14 07:30
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI			بد بدر ه بد ب با بن بن	area non ann tùs tao ann ann					
MICROBIOLO	DGY								
Escher	richia coli	1	mpn/100ml	1	1	SM 9223B	07/25	08:30	DAD
Fecal	Coliform	2	/100ml	1	1	SM 9222D	07/24	09:40	DAD
Total	Coliform Bacteria	2000	mpn/100ml	1	1	SM 9223B	07/25	08:30	DAD

01 The total coliform sample was placed in the incubator on 07/24/14 at 08:40.

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	bsw 07/24/14	7:31:09 AM		M. J. REIDER ASSOCIATES, INC. Pa	Page: 1
				Chain of Custody	
	Account:	2294	Work Order: 002788 Work Order Description:	002788 Project Leader: CMB No: 242077 Description: Beach 1.2.3	
	Customer:	Gregory Wacik	MULA ULGAL DESCRIPTION	Remarks:	
	Address:	USACE, Philadelphia District	hia District		
		Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107	sources Branch East 19107	Total Sampling Time (hours):Bottle Prep by:	
	Phone: Samolars:	215-656-6561 WXX		Laboratory Receipt Temp: S Deg C. If Temp Unacceptable, On Ice? Approved By: <u>MAR</u>	И Х
22351	Sample No:	1 Desc:	SB-1	Matrix: o Date: <u>7 24 14</u> Time: 0708	24/14
040	fc, ec,	t, tcb,		A - 1 X 250mlMícro P w/ Sterile/Na2 ^{S2}	03;
	Sample No:	2 Desc:	SB-2	Matrix: o Date: <u>7/24/14</u>	Izuliy 700
32353-		t, tcb,		A - 1 X 250mlMicro P w/ Sterile/Na2S20	03;
Ś	Sample No:	3 Desc:	SB-3	Matrix: o Date: 71	7124/14
22353		•		TIME: <u>CT(6</u> A - 1 X 250m1Micro P w/ Sterile/Na2S203;	716
and and	g IC, ec,	, tcb,			
				W. A. Bereived for laboratory by: 72, 800	t
	Relinquished by:	ied by: NY	Received by:		
	Date: 724/14		Time: OTiS	Date: 724/14 Time: 0730	. A.
				Sample entered by:	540





Attention:	Gregory Wacik					Date of F	Report:	08/04	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0033447
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	.ected:	07/31	/14 07:10
	Philadelphia PA 19107					Collected	l By:	mxb	
Sample Desc:	SB-1					Date Rece	eived:	07/31	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO									
Escher	ichia coli	3	mpn/100ml	1	1	SM 9223B	08/01	08:15	DAD
Fecal	Coliform	3	/100ml	1	1	SM 9222D	07/31	08:35	DAD
Total	Coliform Bacteria	1200	mpn/100ml	1	1	SM 9223B	08/01	08:15	DAD

01 The total coliform sample was placed in the incubator on 07/31/14 at 08:15.

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Reviewed and Approved by:

Kistle Vilstone M.

Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of F	eport:	08/04	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0033448
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/31	/14 07:11
	Philadelphia PA 19107					Collected	By:	mxb	
Sample Desc:	SB-2					Date Rece	eived:	07/31	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO)GY								
Escher	richia coli	<1	mpn/100ml	1	1	SM 9223B	08/01	08:15	DAD
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	07/31	08:35	DAD
Total	Coliform Bacteria	1200	mpn/100ml	1	1	SM 9223B	08/01	08:15	DAD

01 The total coliform sample was placed in the incubator on 07/31/14 at 08:15.

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Christina Kistler Account Executive

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Attention:	Gregory Wacik					Date of H	Report:	08/04	/14	
Reported To:	USACE, Philadelphia District					Lab ID:	•	•	140033449	
	Environmental Resources Branch 100 Penn Square East					Date Col	ected.	07/31	/14 07:12	
	Philadelphia PA 19107					Collected		mxb	/14 01.12	
							/-			
Sample Desc:	\$B-3					Date Rece	eived:	07/31	/14 07:40	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
		میں میں ہیں ہیں جب بھر بھر بھر بھر بھر بھر بھر میں اس میں اس میں ا								
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	<1	mpn/100ml	1	1	SM 9223B	08/01	08:15	DAD	
Fecal	Coliform	<2	/100ml	2	1	SM 9222D	07/31	08:35	DAD	
Total	Coliform Bacteria	1000	mpn/100ml	1	1	SM 9223B	08/01	08:15	DAD	

01 The total coliform sample was placed in the incubator on 07/31/14 at 08:15.

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COFC.PRT Page: 1		No: 242473			Bottle Prep by:	emp Unacceptable, On Ice? Y N	1011	- m	o Date: <u>حتراكاانا</u> Time: مكال	P w/ Stei	o Date: مراكارات	250mlMicro P w/ Sterile/Na2S203;					Y: Mart Bal	Time: 0740	Sample entered by: DAM
J. REIDER ASSOCIATES, INC.	ustody	Project Leader: CMB			Total Sampling Time (hours):	Laboratory Receipt Temp: <u>5</u> Deg C. If Temp Approved By: <u>wrk</u> R	Matrix:	A - 1 X 250mlà	Matrix:	A - 1 X 250mlMicro	Matrix:	AL 1 X 250ml					${\mathscr A}$ Received for laboratory by ${\mathscr A}$	Date: 73 H	
M. J. REIDER	Chain of Custody	rder: 002788 rder Description, Beach 1 2 3			Total Sampli	Laboratory R											Received by: Mr. L. Bu		
7:56:41 AM		2294 Work Order	Gregory Wacik	USACE, Philadelphia District Environmental Resources Branch	100 Penn Square East Philadelphia PA 19107 215-656-6561 Ext:		1 Desc: SB-1 DAD	t, tcb,	2 Desc: SB-2	:, tcb,	3 Desc: SB-3	i, tcb,					ed by: NP	13 الم: Time: 13	
mxb 07/31/14		Account:	Customer:	Address:	Phone:	Samplers:	33447 Sample No:	fc, ec,	AAHS Sample No:	Du Fa, ec,	Sample No:	JOWN fo, ec,					Relinguished by:	Date: 7[3]	

COFC. PRT





Attention:	Gregory Wacik					Date of F	Report:	08/04	/14
Reported To:	USACE, Philadelphia District				•	Lab ID:		2294	-14-0032803
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/28	/14 07:10
	Philadelphia PA 19107					Collected	ł By:	mxb	,
Sample Desc:	SB-1					Date Rece	eived:	07/28	/14 07:35
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
DACTI									
BACTI									
MICROBIOLO	DGY								
Escher	ichia coli	6	mpn/100ml	1	1	SM 9223B	07/29	11:20	PLW
Fecal	Coliform	43	/100ml	1	1	SM 9222D	07/28	11:15	PLW
Total	Coliform Bacteria	2400	mpn/100ml	1	1	SM 9223B	07/29	11:20	PLW

01 The total coliform sample was placed in the incubator on 07/28/14 at 11:15.

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Attention:	Gregory Wacik					Date of F	Report:	08/04	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0032804
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	07/28	/14 07:11
	Philadelphia PA 19107					Collected		mxb	,
							/-		
Sample Desc:	SB-2					Date Rece	eived:	07/28	/14 07:35
								01720	714 01135
PWSID: 30609	912			Rep	Dilutn		Test	Test	
	х.	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	DGY								
Escher	richia coli	8	mpn/100ml	1	1	SM 9223B	07/29	11:20	PLW
Fecal	Coliform	30	/100ml	1	1	SM 9222D	07/28		
Total	Coliform Bacteria	1600	mpn/100ml	1	1	SM 9223B	07/29	11:20	
		1000				011 72200	01/29	11.20	L LW

01 The total coliform sample was placed in the incubator on 07/28/14 at 11:15.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	08/04 2294	/14 -14-0032805
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		07/28 mxb	/14 07:12
Sample Desc: SB-3					Date Rece	eived:	07/28	/14 07:35
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	10	mpn/100ml	1	1	SM 9223B	07/20	11:20	bi u
Fecal Coliform	30	/100mL	1	1	SM 9222D	07/28	11:15	PLW
Total Coliform Bacteria	2400	mpn/100mL	1	1	SM 9223B	07/29	11:20	PLW

01 The total coliform sample was placed in the incubator on 07/28/14 at 11:15.

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M. J. REIDER ASSOCIATES, INC. COFC.PRT Page: 1	Chain of Custody Project Leader: CMB No: 242208	Description: Beach 1,2,3 Remarks:	mpling Time (hours):Bottle Prep by: ry Receipt Temp: 5Deg C. If Temp Unacceptable, On Ice? Y N Approved By:WXR	Matrix: O Date: 1)28[id] A - 1 X 250mlMicro P w/ Sterile/Ma22203; Matrix: o Date: $\pi/28[id]$ Matrix: o Date: $\pi/28[id]$ Time: σ_{11} A - 1 X 250mlMicro P w/ Sterile/Ma22203; Matrix: o Date: $\pi/28[id]$ A - 1 X 250mlMicro P w/ Sterile/Ma22203; Matrix: o Date: $\pi/28[id]$ A - 1 X 250mlMicro P w/ Sterile/Ma22203; A - 1 X 250mlMicro P w/ Sterile/Ma22203; $\pi/16$ $\pi/16$	Date: 128/14 Time: 0735 Sample entered by:
mxb 07/28/14 7:56:04 AM	Account. 2294 Work Order: 002788	Gregory Wacik	Address: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square Bast Philadelphia PA 19107 Phone: 215-656-6561 Ext: Samplers: MXC	33805 Sample No: 1 Desc: SB-1 fc, ec, tcb, $3_{ample No:} 2$ Desc: SB-2 fc, ec, tcb, Sample No: 3 Desc: SB-3 fc, ec, tcb, fc, ec, tcb,	Relinquished by: NG Received by: Received by: Date: 7/28/14 Time: 0705





	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	08/1 3 2294	/14 -14-00 33 868
	100 Penn Square East					Date Coll			/14 07:15
	Philadelphia PA 19107					Collected	з ву:	mxb	
Sample Desc:	SB-1					Date Rece	eived:	08/04	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO)GY								
Escher	richia coli	<1	mpn/100ml	1	1	SM 9223B	08/05	09:30	DAD
Fecal	Coliform	3	/100ml	1	1	SM 9222D	08/04	09:34	DAD
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	08/05	09:50	DAD

01 The total coliform sample was placed in the incubator on 08/04/14 at 09:40.

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Attention: Gregory Wacik Reported To: USACE, Philadel Environmental R	•				Date of R Lab ID:	eport:	08/13 2294	/14 -14-0033869
100 Penn Square Philadelphia PA					Date Coll Collected		08/04 mxb	/14 07:16
Sample Desc: SB-2					Date Rece	eived:	08/04	/14 07:40
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result 	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	08/05	09:30	DAD
Fecal Coliform	11	/100mL	1	1	SM 9222D	08/04	09:34	DAD
Total Coliform Bacteri	a >2400	mpn/100ml	1	1	SM 9223B	08/05	09:50	DAD

01 The total coliform sample was placed in the incubator on 08/04/14 at 09:40.

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Attention:	Gregory Wacik					Date of F	Report:	08/13	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0033870
	Environmental Resources Branch								
	100 Penn Square East					Date Col	lected:	08/04	/14 07:18
	Philadelphia PA 19107					Collected	By:	mxb	
Sample Desc:	SB-3					Date Rece	eived:	08/04	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI			ہے ہے کہ چاک من کا کا ت						ر چردی پسی پیش است است
MICROBIOLO	DGY								
Escher	ichia coli	4	mpn/100ml	1	1	SM 9223B	08/05	09:30	DAD
Fecal	Coliform	10	/100ml	1	1	SM 9222D	08/04	09:34	DAD
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	08/05	09:50	DAD

01 The total coliform sample was placed in the incubator on 08/04/14 at 09:40.

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COFC.FRT Page: 1		No: 242659			Bottle Prep by:	Temp Unacceptable, On Ice? Y N		Date: 8/4/14 Time: 0705	sterile/Na		P w/ Stei		Ster					mail Reaf	Time: 2740	Sample entered by:
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB	Temarks:		Total Sampling Time (hours):	Laboratory Receipt Temp: لل Deg C. If Temp Approved Bv: سيرك		Matrix:	A - 1 X 250mlMicro P w/	Matrix: o	A - 1 X 250mlMicro	Matrix: o	A - 1 X 250mlMicro P w/					Received for laboratory by	Date: 84414 T	
1 8:06:29 AM		2294 Work Order: 002788 Work Order hearrintion, Reach 1.2.3		bhia District sources Branch East	Philadelphia PA 19107 215-656-6561 W2++				teb,	2 Desc: SB-2	tcb,	3 Desc: SB-3	tcb,					by: NP Received by:	Time: 6725	
mxb 08/04/14 8:0		Account: 2	Customer: Gre	Address: USJ En 10(Phone. 21		L L	ij	AD fc, ec,	23869 Sample No: 2	fc, ec,	22870 Sample No:	/ fc, ec,			·		Relinquished by:	Date: 844/14	





				Date of I	Report:	08/18	3/14
				Lab ID:	•	'	, -14-0034547
				Date Col	lected:	08/07	/14 07:11
				Collected	d By:	mxb	,
				Date Rece	eived:	08/07	/14 07:40
		Rep	Dilutn		Test	Test	
Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
1	mpn/100ml	1	.1	SM 9223B	08/08	09:30	DAD
3	/100ml	1	1	SM 9222D	08/07	09:39	DAD
>2400	mpn/100ml	1	1	SM 9223B	08/08	09:30	DAD
	Result 1 3	Result Unit 1 mpn/100mL 3 /100mL	Rep Result Unit Limit 	Rep Dilutn Result Unit Limit Factor 	Lab ID: Date Col Collected Date Reco Date Reco Meg Dilutn Factor Procedure 1 mpn/100ml 1 1 SM 9223B 3 /100ml 1 1 SM 9222D	Date Collected: Collected By: Date Received: Result Unit Rep Dilutn Test Result Unit Factor Procedure Date 1 mpn/100ml 1 1 SM 9223B 08/08 3 /100ml 1 1 SM 9222D 08/07	Lab ID: 2294 Date Collected: 08/07 Collected By: mxb Date Received: 08/07 Result Unit Rep Dilutn Test Test 1 mpn/100ml 1 1 SM 9223B 08/08 09:30 3 /100ml 1 1 SM 9222D 08/07 09:39

01 The total coliform sample was placed in the incubator on 08/07/14 at 09:30.

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Attention:	Gregory Wacik					Date of R	eport:	08/18	/14	
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0034548	
	Environmental Resources Branch									
	100 Penn Square East					Date Coll	ected:	08/07	/14 07:12	
	Philadelphia PA 19107					Collected	By:	mxb		
	an 0					_				
Sample Desc:	SB-2					Date Rece	ived:	08/07	/14 07:40	
PWSID: 30609	12			Rep	Dilutn		Test	Test		
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst	
										
BACTI										
MICROBIOLO	GY									
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	08/08	09:30	DAD	
Fecal	Coliform	3	/100ml	1	1	SM 9222D	08/07	09:39	DAD	
Total	Coliform Bacteria	2400	mpn/100ml	1	1	SM 9223B	08/08	09:30	DAD	
				•		011 /2200	00,00	07.00	DAD	

01 The total coliform sample was placed in the incubator on 08/07/14 at 09:30.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	08/18 2294	/14 14-0034549
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		08/07 mxb	/14 07:13
Sample Desc:	SB-3					Date Rece	eived:	08/07	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result 	Unit 	Limit 	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO)GY								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	08/08	09:30	DAD
Fecal	Coliform	3	/100ml	1	1	SM 9222D	08/07	09:39	DAD
Total	Coliform Bacteria	2400	mpn/100ml	1	1	SM 9223B	08/08	09:30	DAD

01 The total coliform sample was placed in the incubator on 08/07/14 at 09:30.

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COFC. PRT Page: 1		242877			p by:	Ice? Y N		Date: <u>ארוו</u> Time: ארוו	/Na2S203;	Date: <u>\$ 7 4</u> Time: 2212	/Na2S203;	e: 817/14	sterile/Na2S203;				-		Set.	1	MSO :Mq	
		No: 24			Bottle Frep by:) Unacceptable, On Ice?		o Dat Tim	I X 250mlMicro P w/ Sterile	о Dat	ticro P w/ Sterile	o Dat	X 250mlMicro P w/ Sterile					V	R	Time: 0740	Sample entered by:	
CIATES, INC.	Ň	Project Leader: CMB			me (hours):	t Temp: <u>S</u> Deg C. If Temp Approved By: <u>wxg</u>	882779787922222222222222222222222222222	Matrix:	A - I X 250mlM	Matrix:	A - 1 X 250mlMicro P w/	Matrix:	A - 1 X 250mlw						Received for laboratory by: Z	Date: 3/7/14		
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	Work Order: 002788 Work Order Description: Beach 1,2,3	Remarks:		Total Sampling Time (hours):	Laboratory Receipt Temp: <u>S</u> Approved By:													Received by: Dail Kat			
		Work Order: Work Order De		USACE, Philadelphia District Environmental Resources Branch	uare East a PA 19107 1 Fvt.			Desc: SB-1		Desc: SB-2		Desc: SB-3							NP Receiv	Time: 0720		
7:50:48 AM		2294	Gregory Wacik	USACE, Phil Environment	100 Penn Square East Philadelphia PA 19107 215_65651 Free	WXB			, tcb,	7	, tcb,	3 De	, tcb,						ed by:	ווין		
mxb 08/07/14 '		Account:	Customer:	Address:	• erodu	samplers:		34547 Sample No:	(M) fc, ec,	34548 Sample No:	fc, ec,	34549 Sample No:	e to for for ec,						Relinquished by:	Date: 8/7/14		





Attention:	Gregory Wacik					Date of F	Report:	08/18	/14
Reported To:	USACE, Philadelphia District					Lab ID:	•	•	,
	Environmental Resources Branch 100 Penn Square East					Date Coll	ected.	08/11	/14 07:10
	Philadelphia PA 19107					Collected		. mxb	/14 01:10
Sample Desc:	SB-1					Date Rece	eived:	08/11	/14 07:35
PWSID: 30609	912			Rep	Dilutn		Test	Test	
	•	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO									
Escher	richia coli	3	mpn/100ml	1	1	SM 9223B	08/12	11:20	PLW
Fecal	Coliform	3	/100ml	1	1	SM 9222D	08/11	10:20	PLW
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	08/12	11:20	PLW

01 The total coliform sample was placed in the incubator on 08/11/14 at 10:25.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	08/18 2294	/14 14-0035096
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		08/11 mxb	/14 07:11
Sample Desc:	SB-2					Date Rece	eived:	08/11	/14 07:35
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLO	юqү		بھر جہ بھر میں نہ لیے اور						
	richia coli	<1	mpn/100ml	1	1	SM 9223B	08/12	11:20	PLW
Fecal	Coliform	3	/100mL	1	1	SM 9222D	, 08/11	10:20	PLW
Total	Coliform Bacteria	2400	mpn/100ml	1	1	SM 9223B	08/12	11:20	PLW

01 The total coliform sample was placed in the incubator on 08/11/14 at 10:25.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	08/18 2294	/14 14-0035097
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		08/11 mxb	/14 07:12
Sample Desc:	SB-3					Date Rece	eived:	08/11	/14 07:35
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit 	Limit 	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLO									
	ichia coli	4		4		au 0007-	00/40		
		1	mpn/100ml		1	SM 9223B		11:20	
Fecal	Coliform	2	/100ml	1	1	SM 9222D	08/11	10:20	PLW
Total	Coliform Bacteria	>2400	mpn/100ml	1	1	SM 9223B	08/12	11:20	PLW

01 The total coliform sample was placed in the incubator on 08/11/14 at 10:25.

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bsw 08/11/14 7: Account: Customer: 6 Address: 1 Phone: 2 Sample No: 550916 Sample No: fc, ec, 55097 Sample No: fc, ec, fc, ec, fc, ec,	:51:47 AM 2294 Gregory Wacik USACE, Philadelp Environmental Re 215-656-6561 MNO 215-656-6561 1 Desc: tcb, 3 Desc: tcb, tcb,	Work Order. Work Order istrict es Branch	<pre>M. J. REIDER ASOCIATES, INC. Deain of Custody Chain of Custody Description: Beach 1,2,3 Project Leader: CMB No: 243047 Percentaling Time (hours): Total Sampling Time (hours): Total Sampling Time (hours): Description: Beach 1,2,3 Remarks: Total Sampling Time (hours): Total Sampling Time (hours): Total</pre>
Ę.	çıv	Received by	Rad Busy Received for laboratory by; Mad Kont
Date: 08/11/14		Time: 0715	





Attention:	Gregory Wacik					Date of F	Report	08/21	/14
Reported To:	USACE, Philadelphia District					Lab ID:			-14-0036421
	Environmental Resources Branch							22/7	14 0050421
	100 Penn Square East					Date Col	ected.	08/19	8/14 07:05
	Philadelphia PA 19107					Collected			714 07.05
						<i>offerte</i>	и шу.	mxb	
Sample Desc:	SB-1					Date Rece	ivod.	00/10	14/ 07.70
						Date Rece	erveu.	00/10	3/14 07:30
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure			A
				L.11111	Tactor	Frocedure	Date	Time	Analyst
BACTI									
MICROBIOLO	0GY								
	ichia coli	1	mpn/100ml	1	4	00020	00/40	00 70	
	Coliform	•			1	SM 9223B	08/19	08:30	DAD
		5	/100ml	1	1	SM 9222D	08/18	08:35	DAD
Total	Coliform Bacteria	550	mpn/100ml	1	1	SM 9223B	08/19	08:30	DAD

01 The total coliform sample was placed in the incubator on 08/18/14 at 08:30.

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Reported To:	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch		•			Date of I Lab ID:	Report:	08/21 2294	/14 14-0036422
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		08/18 mxb	3/14 07:06
Sample Desc:	\$B-2					Date Rece	eived:	08/18	/14 07:30
PWSID: 306091	12	Result	11-24	Rep	Dilutn	_ /	Test	Test	
			Unit 	Limit 	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLOG	βY								
Escheri	ichia coli	<1	mpn/100ml	1	1	SM 9223B	08/19	08:30	DAD
	Coliform	8	/100ml	1	1	SM 9222D	08/18	08:35	DAD
Total C	Coliform Bacteria	690	mpn/100ml	1	1	SM 9223B	08/19	08:30	DAD

01 The total coliform sample was placed in the incubator on 08/18/14 at 08:30.

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Attention: Gregory Wacik					Date of	Report:	08/21	/14
Reported To: USACE, Philadelphia District					Lab ID:		'	-14-0036423
Environmental Resources Branch								
100 Penn Square East					Date Col	lected:	08/18	3/14 07:07
Philadelphia PA 19107					Collected	d By:	mxb	,
Ormula David OD 7								
Sample Desc: SB-3					Date Rec	eived:	08/18	8/14 07:30
PWSID: 3060912			Dan	D d L u tu			_ .	
	Designation		Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI					<u>رس سے سے میں بھر بھر بھر بھر بھر م</u> اند			
MICROBIOLOGY								
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	08/19	08:30	DAD
Fecal Coliform	3	/100ml	1	1	SM 9222D	08/18		
Total Coliform Bacteria	920	mpn/100ml	1	1		'		
	/20		I	I	SM 9223B	08/19	08:30	DAD

01 The total coliform sample was placed in the incubator on 08/18/14 at 08:30.

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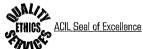
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	08/18/14	7:46:27 AM			υ	Chain of Custody		Pa	Page: 1
	Account:	2294		Work Order: Work Order I	002788 Description: Beach 1,2,3		Project Leader: CMB	No: 243381	
	Customer:	Gregory Wacik	зік		Rem	Remarks:			
	Address:	USACE, Philadelphia District Environmental Resources Branch	Philadelphia District mental Resources Bran	District ses Branch					
	.erofd	100 Penn Square East Philadelphia PA 19107 21516561551	guare East La PA 19107 Si Tvt·	-	Total	al Sampling Time	ne (hours):	Bottle Prep by:	
	Samplers:				Lab	Laboratory Receipt Temp:_ Approve	J By: MXC	Temp Unacceptable, On Ice? ' S	л х

36421	Sample No:	Ч	Desc: SB-1				Matrix:	: o Date: <u>Sisin</u>	HIS H
e۲	gh Dife, ec,	a, tcb,					A - 1 X 250	1 X 250mlMicro P w/ Sterile/Na2S20	3;
36422	Sample No:	0	Desc: SB-2				Matrix:	: o Date: OS/IS/IH Time: A700	18/14
	fα, eα,	ı, tcb,					A - 1 X 250	1 X 250mlMicro P w/ Sterile/Na2S20	3;
314433	Sample No:	ň	Desc: SB-3				Matrix:	o Date: Time:	palislin 2227
•	V fc, ec,	t, tcb,					A - 1 X 2501	1 X 250mlMicro P w/ Sterile/Na2S203;	3;
	Relinquished by:		NP NP	Rece	eived by: M	i ant	Received for laboratory by:2	I by: mar & Bear	
	Date:	ette Sirgiri	Time:	OILO			Date: CXISIT		242





Attention:	Gregory Wacik					Date of I	Renort.	08/21	/1/
Reported To:	USACE, Philadelphia District					Lab ID:		•	-14-0035928
	Environmental Resources Branch					LGD 10.		2274	-14-0033720
	100 Penn Square East					Date Col	ected.	08/1/	/14 07:00
	Philadelphia PA 19107					Collected		mxb	14 07:00
						corrected	и Шу.	IIIXO	
Sample Desc:	SB-1					Date Rece	ived.	08/1/	/14 07:40
						bate neo	rveu.	00/14	/14 07.40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
		ی در هر به مر مر می او مر به مر او مر او او ا	70 mil						
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	4	mpn/100ml	1	1	SM 9223B	08/15	08:30	DAD
Fecal	Coliform	6	/100ml	1	1	SM 9222D	08/14		DAD
Total	Coliform Bacteria	2400	, mpn/100ml	1	1	SM 9223B	08/15		DAD

01 The total coliform sample was placed in the incubator on 08/14/14 at 08:00.

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ALLENTION	Gregory Wacik					Date of F	Report:	08/21	/14
Reported To:	USACE, Philadelphia District					Lab ID:			-14-0035929
	Environmental Resources Branch							22/1	14 0000727
	100 Penn Square East					Date Coll	ected.	08/14	/14 07:01
	Philadelphia PA 19107					Collected		mxb	
	·					Corrected	. Бу.		
Sample Desc	SB-2					Date Rece	vived.	08/14	/14 07:40
								00/14	/ 14 01.40
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure			Analyst
		Result	Unit 		Factor	Procedure	Date	Time	Analyst
BACTI		Result	Unit 		Factor	Procedure			Analyst
BACTI MICROBIOLO	JGY	Result 	Unit 		Factor	Procedure			Analyst
MICROBIOLO	DGY •ichia coli	Result 		Limit 	Factor 		Date	Time	
MICROBIOLC Escher				Limit 	Factor 1 1	SM 9223B	Date 08/15	Time 08:30	DAD
MICROBIOLO Escher Fecal	richia coli	3		Limit 	Factor 1 1 1		Date	Time 08:30	

01 The total coliform sample was placed in the incubator on 08/14/14 at 08:00.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of I Lab ID:	Report:	08/21 2294	/14 14-0035930
	100 Penn Square East Philadelphia PA 19107					Date Col Collected		08/14 mxb	/14 07:02
Sample Desc:	SB−3					Date Rece	eived:	08/14	/14 07:40
PWSID: 30609	12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI MICROBIOLO	GY			<u> </u>					
Fecal	ichia coli Coliform Coliform Bacteria	3 2 >2400	mpn/100ml /100ml mpn/100ml	1 1 1	1 1 1	SM 9223B SM 9222D SM 9223B	08/15 08/14 08/15	08:30 08:26 08:30	

01 The total coliform sample was placed in the incubator on 08/14/14 at 08:00.

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COFC.FRT Page: 1		No: 243251			Bottle Frep by:	Temp Unacceptable, On Ice? Y N		Date: Shulid Time: ATAO	P w/ Sterile/Na2S203;	Date: 8/iu/i4	P w/ Sterile/Na2S203;	Date: Slullid Time: 0707	P w/ Sterile/Na2S203;						r	and bad	0140	Sample entered by:
SOCIATES, INC.	dy	Project Leader: CMB			time (hours):	5 Deg C. If		Matrix: o	A - 1 X 250mlMicro P w/	Matrix: o	A - I X 250mlMicro P w/	Matrix: o	A - 1 X 250mlMicro P w/							Received for laboratory by	Date: 8/14/14 Time:	Sar
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	: 002788 Description: Beach 1,2,3			Total Sampling Time	Laboratory Receipt Temp: Interve								•						Received by: Mr. Knat		
7:41:57 AM		94 Work Order Work Order	Gregory Wacik	USACE, Philadelphia District Environmental Resources Branch	100 Penn Square East Philadelphia PA 19107	: 1357 TOCO-OCO-CT7	sampters: MXS	Desc: SB-1	b,	Desc: SB-2	р,	Desc: SB-3	, d							NP	rime: 0708	
jbs 08/14/14 7:41;		Account: 2294	Customer: Greg	Address: USA(Envi				2 ແປງ 8 sample No: 1	Jo W Fc, ec, tcb,	Sample No: 2	STATE fc, ec, tcb,	CCZO Sample No: 3	357.00 N fc, ec, tcb,							Relinquíshed by:	Date: 8/14/14	





	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of I Lab ID:	Report:	08/26 2294	/14 14-0037243
	100 Penn Square East Philadelphia PA 19107					Date Col Collected		08/21 mxb	/14 07:10
Sample Desc:	sB-1					Date Rec	eived:	08/21	/14 07:40
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI MICROBIOLO	юGY			یسیر پسیر پسی است است					
Escher	ichia coli	2	mpn/100ml	1	1	SM 9223B	08/22	11:45	DAD
Fecal	Coliform	5	/100ml	1	1	SM 9222D	08/21	11:35	DAD
Total	Coliform Bacteria	330	mpn/100ml	1	1	SM 9223B	08/22	11:45	DAD

01 The total coliform sample was placed in the incubator on 08/21/14 at 11:45.

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	Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	08/26 2294	/14 -14-0037244
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		08/21 mxb	/14 07:11
Sample Desc:	SB-2					Date Rece	eived:	08/21	/14 07:40
PWSID: 30609	212			Rep	Dilutn		Test	Test	
		Result	Unit 	Limit 	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLC	DGY								
Escher	richia coli	1	mpn/100ml	1	1	SM 9223B	08/22	11:45	DAD
Fecal	Coliform	2	/100ml	1	1	SM 9222D	08/21	11:35	DAD
Total	Coliform Bacteria	1200	mpn/100ml	1	1	SM 9223B	08/22	11:45	DAD

01 The total coliform sample was placed in the incubator on 08/21/14 at 11:45.

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Attention: Gregory Wacik Reported To: USACE, Philadelphia Dis Environmental Resources					Date of F Lab ID:	Report:	08/26 2294	/14 14-0037245
100 Penn Square East Philadelphia PA 19107					Date Coll Collected		08/21 mxb	/14 07:12
						J Dy.		
Sample Desc: SB-3					Date Rece	eived:	08/21	/14 07:40
PWSID: 3060912			Rep	Dilutn		Test	Test	
	Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI								
MICROBIOLOGY		•						
Escherichia coli	2	mpn/100ml	1	1	SM 9223B	08/22	11:45	DAD
Fecal Coliform	3	/100mL	1	1	SM 9222D	08/21	11:35	DAD
Total Coliform Bacteria	1100	mpn/100ml	1	1	SM 9223B	08/22	11:45	DAD

01 The total coliform sample was placed in the incubator on 08/21/14 at 11:45.

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COFC.PRT Page: 1		No: 243651			Bottle Prep by:	If Temp Unacceptable, On Ice? Y N **X&	Matrix: o Date: 3/21/14 Time: 0710	1 X 250mlMicro P w/ Sterile/Na2S203;	Matrix: o Date: <u>8 21/14</u> Time: 0711	250mlMicro P w/ Sterile/Na2S203;	Matrix: o Date: 8/21/14 Time: 217	X 250mlMicro P w/ Sterile/Na2S203;				atory by M. L. But	Time: 0740	Sample entered by:
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	Project Leader: CMB on: Beach 1,2,3	Remarks:		Total Sampling Time (hours):	Laboratory Receipt Temp: 5 Deg C. 1 Approved By:	Mat	A - 1 X	Mat	A - 1 X	Mat	A - 1 X				Mr. Received for laboratory by	Date: 3/21/14	
7:46:18 AM		2294 Work Order: 002788 Work Order Description: Beach 1,2,3	Gregory Wacik	USACE, Philadelphia District Environmental Resources Branch	100 Penn Square East Philadelphia PA 19107	215-656-6561 Ext: WXG	Desc: SB-1	tcb,	2 Desc: SB-2	tcb,	3 Desc: SB-3		LCD,			by: NO Received by:	Time: 0720	
jbs 08/21/14 7:40		Account: 22	Customer: Gre	Address: US En		Phone: 21 Samplers:	シースサラ Sample No:	DAD TC, ec,	2000 Sample No:	fc, ec,			IC, EC, U			Relinquished by:	Date: 821/14	





Attention:	Gregory Wacik					Date of R	eport:	09/12	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0039271
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	09/02	/14 07:10
	Philadelphia PA 19107					Collected	By:	mxb	
Sample Desc:	SB−1					Date Rece	eived:	09/02	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI				- way non the long and the same					
MICROBIOLC	θGY								
Escher	ichia coli	1	mpn/100ml	1	1	SM 9223B	09/03	09:15	DAD
Fecal	Coliform	5	/100ml	1	1	SM 9222D	09/02	09:18	DAD
Total	Coliform Bacteria	520	mpn/100ml	1	1	SM 9223B	09/03	09:15	DAD

01 The total coliform sample was placed in the incubator on 09/02/14 at 09:15.

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Reported To: USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 Lab ID: 2294-14-0039272 Sample Desc: SB-2 Date Collected: 09/02/14 07:11 collected By: Date Collected: 09/02/14 07:40 PWSID: 3060912 Result Unit Factor Procedure Date Test BACTI MICROBIOLOGY Sampn/100ml 1 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9223B 09/03 09:15 DAD Total Coliform Bacteria 580 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD	Attention:	Gregory Wacik					Date of R	eport:	09/12	/14
100 Penn Square East Philadelphia PA 19107 Date Collected: Collected By: 09/02/14 07:11 mxb Sample Desc: SB-2 Date Received: 09/02/14 07:40 PWSID: 3060912 Result Unit Rep Limit Dilutn Factor Test Date Test Time Analyst BACTI MICROBIOLOGY Escherichia coli Fecal Coliform 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD	Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0039272
Philadelphia PA 19107 Collected By: mxb Sample Desc: SB-2 Date Received: 09/02/14 07:40 PWSID: 3060912 Result Unit Rep Dilutn Test Test Test BACTI MICROBIOLOGY Scherichia coli 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD		Environmental Resources Branch								
Philadelphia PA 19107 Collected By: mxb Sample Desc: SB-2 Date Received: 09/02/14 07:40 PWSID: 3060912 Result Unit Rep Limit Dilutn Factor Test Date Test Time Analyst BACTI MICROBIOLOGY Escherichia coli Fecal Coliform 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD		100 Penn Square East					Date Coll	ected:	09/02	/14 07:11
Sample Desc: SB-2 Date Received: 09/02/14 07:40 PWSID: 3060912 Result Unit Rep Dilutn Test Test Test Time Analyst BACTI MICROBIOLOGY Scherichia coli 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD		Philadelphia PA 19107								,
PWSID: 3060912 Rep Dilutn Test Test Result Unit Limit Factor Procedure Date Time Analyst BACTI MICROBIOLOGY Escherichia coli 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD							001100100	- 2) -	11718	
PWSID: 3060912 Rep Dilutn Test Test Result Unit Limit Factor Procedure Date Time Analyst BACTI MICROBIOLOGY Escherichia coli 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD	Sample Desc:	SB-2					Date Rece	ived.	09/02	/14 07.40
Result Unit Limit Factor Procedure Date Time Analyst BACTI MICROBIOLOGY									07702	/14 01.40
ResultUnitLimitFactorProcedureDateTimeAnalystBACTIMICROBIOLOGYEscherichia coliFecal Coliform3/100ml11SM 9223B09/0309/0209/0209/0209/0209/0209/02	PWSID: 30609	12			Rep	Dilutn		Test	Test	
BACTI MICROBIOLOGY Escherichia coli 3 mpn/100ml 1 SM 9223B 09/03 09/02 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD			Result	Unit	•		Procedure			Analyst
MICROBIOLOGY SM 9223B 09/03 09:15 DAD Escherichia coli 3 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD										
Escherichia coli 3 mpn/100ml 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD	BACTI									
Escherichia coli 3 mpn/100ml 1 SM 9223B 09/03 09:15 DAD Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD	MICROBIOLO	GY								
Fecal Coliform 3 /100ml 1 1 SM 9222D 09/02 09:18 DAD			3	mpp/100ml	1	1	SM 9223B	09/03	09.15	DAD
						4		'		
Total Coliform Bacteria 580 mpn/100ml 1 1 SM 9223B 09/03 09:15 DAD				,	1			'		DAD
	Total	Coliform Bacteria	580	mpn/100ml	1	1	SM 9223B	09/03	09:15	DAD

01 The total coliform sample was placed in the incubator on 09/02/14 at 09:15.

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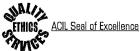
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Attention:	Gregory Wacik					Date of F	leport:	09/12	/14
Reported To:	USACE, Philadelphia District	,				Lab ID:		2294	-14-0039273
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	ected:	09/02	/14 07:12
	Philadelphia PA 19107					Collected	By:	mxb	,
Sample Desc:	SB-3					Date Rece	eived:	09/02	/14 07:40
PWSID: 30609	12			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	GY								
Escher	ichia coli	3	mpn/100ml	1	1	SM 9223B	09/03	09:15	DAD
Fecal	Coliform	5	/100ml	1	1	SM 9222D	09/02	09:18	DAD
Total	Coliform Bacteria	820	mpn/100ml	1	1	SM 9223B	09/03	09:15	DAD

01 The total coliform sample was placed in the incubator on 09/02/14 at 09:15.

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ENVIRONMENTAL TESTING LABORATORY 107 ANGELICA STREET, READING, PA 19611 PHONE: 610-374-5129 · FAX: 610-374-7234 · www.mjreider.com NELAP accredited by PA. (PADEP #06-00003) (NYSDOH11630) Visit our website to view our current



NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.

COFC.PRT Page: 1		No: 244251		Bottle Prep by:	Temp Unacceptable, On Ice? Y N	Matrix: o Date: 9-2-14 Time: 07/0 1 X 250mlMicro P w/ Sterile/Na2S203;	: 0 Date: <u>9-2-14</u>	1 X 250mlMicro P w/ Sterile/Na2S203;	Ō	X 250mlMicro P w/ Sterile/Na2S203;				y by: Mark Rent	Time: る 7 4 0	sample entered by:
M. J. REIDER ASSOCIATES, INC.	Chain of Custody	: 002788 Project Leader: CMB Description: Beach 1,2,3	Remarks:	Total Sampling Time (hours):	Laboratory Receipt Temp: <u>5</u> Deg C. If T Approved By: <u>MXB</u>	Matrix: A - 1 X 250m	Matrix:	A - 1 X 250	Matrix:	A - 1 X 250				d by: 22 (201 Avid For laboratory by:	Date: 9-2-14	
ткр 09/02/14 8:07:16 дМ		Account: 2294 Work Order: 00 Work Order Desc Customer: Gredory Wacik			Fhone: 215-656-6561 Ext: Samplers:	39071 Sample No: 1 Desc: SB-1	Sample No:	, tcb,	、0.01名 Sample No: 3 Desc: SB-3	Digital fect ect teb,	>			Relinguished by: NP Received by:	Date: §-å-14 Time: 0720	





	: Gregory Wacik : USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	Report:	09/18 2294	/14 140039708
	100 Penn Square East Philadelphia PA 19107					Date Coll Collected		09/04 mxb	/14 07:10
Sample Desc:	: SB-1					Date Rece	eived:	09/04	/14 07:40
PWSID: 30609	012	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
Fecal	DGY richia coli Coliform Coliform Bacteria	13 13 1400	mpn/100ml /100ml mpn/100ml	1 1 1	1 1 1	SM 9223B SM 9222D SM 9223B	09/05 09/04 09/05	09:30 09:17 09:30	DAD DAD DAD

01 The total coliform sample was placed in the incubator on 09/04/14 at 09:20.

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Account Executive

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Attention:	Gregory Wacik					Date of F	Report:	09/18	/14
Reported To:	USACE, Philadelphia District					Lab ID:		2294	-14-0039709
	Environmental Resources Branch								
	100 Penn Square East					Date Coll	lected:	09/04	/14 07:11
	Philadelphia PA 19107					Collected	By:	mxb	/
							,		
Sample Desc:	sB-2					Date Rece	eived:	09/04	/14 07:40
								/	,
PWSID: 30609	912			Rep	Dilutn		Test	Test	
		Result	Unit	Limit	Factor	Procedure	Date	Time	Analyst
BACTI									
MICROBIOLO	DGY								
Escher	richia coli	13	mpn/100ml	1	1	SM 9223B	09/05	09:30	DAD
Fecal	Coliform	16	/100mL	1	1	SM 9222D	, 09/04	09:17	DAD
Total	Coliform Bacteria	2000	mpn/100ml	1	1	SM 9223B	09/05	09:30	DAD
			•				'		

01 The total coliform sample was placed in the incubator on 09/04/14 at 09:20.

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Gregory Wacik USACE, Philadelphia District Environmental Resources Branch					Date of F Lab ID:	<pre>leport:</pre>	09/18 2294	/14 -14-0039710
100 Penn Square East Philadelphia PA 19107							09/04 mxb	/14 07:12
SB-3					Date Rece	eived:	09/04	/14 07:40
12	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
GY ichia coli Coliform Coliform Bacteria	9 18 1600	mpn/100ml /100ml mpn/100ml	1 1 1	1 1 1	SM 9223B SM 9222D SM 9223B	09/04		DAD DAD DAD
	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 GY ichia coli Coliform	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 GY ichia coli 9 Coliform 18	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 GY ichia coli 9 mpn/100ml Coliform 18 /100ml	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 Rep Result Unit Limit GY ichia coli 9 mpn/100ml 1 Coliform 18 /100ml 1	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 Result Unit Limit Factor GY ichia coli 9 mpn/100ml 1 1 Coliform 18 /100ml 1 1	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 Arr Result Collected Date Coll Collected Date Rece 12 Result Unit Result Unit Limit Factor Procedure GY ichia coli 9 mpn/100ml 1 1 SM 9223B Coliform 18 /100ml 1 1 SM 9222D	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 GY ichia coli 9 mpn/100ml 1 1 SM 9223B 09/05 Coliform 18 /100ml 1 1 SM 9222D 09/04	USACE, Philadelphia District Environmental Resources Branch 100 Penn Square East Philadelphia PA 19107 SB-3 12 GY ichia coli Coliform 18 Date Collected: 09/04 Lab ID: 2294 Lab ID: 2294 Date Collected: 09/04 Collected By: mxb Date Received: 09/04 Collected By: mxb Date Time Collected By: mxb Date Collected: 09/04 Collected By: mxb Date Received: 09/04 Collected By: mxb Date Received: 09/04 Collected By: mxb Date Received: 09/04 Collected By: mxb Date Collected By: mxb Collected By: mxb Date Collected By: mx

01 The total coliform sample was placed in the incubator on 09/04/14 at 09:20.

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Phone: 215-656-6561 Ext: Samplers: wxG sample No: 1 Desc: SB-1 Off fc, ec, tcb, fc, ec, tcb, fc, ec, tcb, fc, ec, tcb, fec, ec, tcb, fec, ec, tcb, from 3 Desc: SB-3 Relinquished by: NP
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