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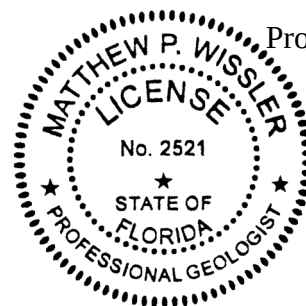
**21th SEMI-ANNUAL WATER QUALITY
MONITORING REPORT**

**J.E.D. Solid Waste Management Facility
1501 Omni Way
St. Cloud, Osceola County, Florida 34773**

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1. INTRODUCTION

1.1 Terms of Reference

On behalf of Omni Waste of Osceola County, LLC (Omni), Geosyntec Consultants (Geosyntec) has prepared the 21st semi-annual water quality monitoring report for the J.E.D. Solid Waste Management (JED) facility. This report summarizes and provides interpretation of the water quality monitoring performed in accordance with the Water Quality Monitoring Plan (Plan) prepared as part of the JED facility permit application. The requirements for executing the Plan were presented in Appendix 3 - Monitoring Plan Implementation Schedule (MPIS) of the current Permit (Permit Number SO49-0199726-022) that authorizes the development of Phases 1 through 4 at the JED facility issued by the Florida Department of Environmental Protection (FDEP) on 12 July 2012.

This report was prepared by Geosyntec on behalf of Progressive Waste Solutions of FL, Inc. (PWS), parent company of Omni Waste of Osceola County, LLC, owner and operator of the JED facility. A completed water quality monitoring certification form (FDEP Form 62-701.900[31]) is included in **Appendix A**.

1.2 Overview

The Plan and the MPIS describe a water quality monitoring program at the JED facility that has as its intent to: (i) measure and report groundwater and surface water conditions for the monitoring network; (ii) monitor the groundwater flow direction; and (iii) monitor the groundwater and surface water quality on a semi-annual basis. The 21st semi-annual water quality monitoring event was completed from 6 November through 13 November 2014. This report includes presentation and discussions of the sample locations, sampling procedures, laboratory analyses and results, field data measurements, groundwater level measurements, groundwater flow direction and surface water quality monitoring. In addition, this report includes a comparison of the analytical results of this sampling event to applicable Groundwater Cleanup Target Levels (GCTLs) as promulgated in Chapter 62-777, Florida Administrative Code (FAC).

1.3 Site Description

The JED facility is located in eastern Osceola County, Florida, west of highway U.S. 441, and approximately 6.5 miles south of Holopaw. The facility is a Class I landfill which is linked to highway U.S. 441 by a 2.9-mile access road. The JED facility comprises a total of approximately 2,179 acres. The landfill footprint at build-out will be approximately 360 acres and consist of 23 landfill cells that will provide available waste capacity for a period of approximately 30 years. The FDEP issued a permit to construct and operate Phase 1 development of the JED facility in October 2003. Phase 1 development includes four landfill

cells (Cells 1 through 4), located in the northern part of the landfill encompassing approximately 54 acres. As part of Phase 1, forty-five (45) groundwater monitoring wells were installed in fifteen (15) clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. The baseline water quality report for the Phase 1 monitoring well network was submitted to FDEP in May 2004. All components of the Phase 1 development have been constructed.

The FDEP issued a permit to construct and operate Phases 2 and 3 at the JED facility in March 2007. The development of Phases 2 and 3 includes six cells (Cells 5 through 10) with a total footprint of approximately 72 acres. As part of Phases 2 and 3 development, and as approved by FDEP, six (6) existing Phase 1 monitoring wells (MW-14 A, B, and C, and MW-15 A, B, and C), and ten (10) piezometers were decommissioned. The wells and piezometers were decommissioned to allow for construction of future cells, construction of a storm water retention basin located within Phases 2 and 3, and due to the close proximity of piezometers to the new network wells installed. The decommissioning of the monitoring wells and piezometers was discussed in the Phases 2 and 3 baseline water quality report. For the development of Phases 2 and 3, twenty-four (24) additional groundwater monitoring wells were installed in eight (8) well clusters (MW-16 through MW-23) around the perimeter of the Phases 2 and 3 development areas in September 2007. The baseline water quality report for the Phases 2 and 3 monitoring well network was submitted to FDEP in January 2008.

The FDEP issued a permit to construct and operate Phases 1 through 3 with vertical expansion at the JED facility in April 2008. In April 2009, the MPIS for the semi-annual water quality monitoring well network and sampling schedule were updated for Phases 1, 2 and 3. The modification included a reduction of the Phase 3 monitoring wells required to be sampled semi-annually until such time that waste placement commences in one of the Phase 3 cells (i.e., Cells 8, 9 and 10) and the sampling schedule was modified for the B-zone (intermediate) and C-zone (deep). These monitoring wells were sampled on an alternating annual basis. The C-zone monitoring wells MW-1 through MW-13, MW-16, MW-19 through MW-23 and B-zone monitoring well MW-16B were sampled in November and reported in January; B-zone monitoring wells MW-1 through MW-13, MW-16, MW-19 through MW-23 and C-zone monitoring well MW-16C were sampled in May and reported in July.

Cell 1 was completed in January 2004, Cell 4 was completed in May 2005, Cell 2 was completed in April 2006, Cell 3 was completed in October 2006, Cell 5 was completed in October 2007, Cell 6 was completed in July 2008 and Cell 7 was completed in August 2010. The FDEP issued a permit to construct a lateral expansion of the facility on 8 August 2011, which authorizes construction of Phases 3-8, Cells 8-23. Cell 8 was completed in April 2012. During construction startup of Cell 8 in November 2011, monitoring well cluster MW-22 (A, B and C) was decommissioned to accommodate the perimeter road access to Cell 8. The MW-22 cluster abandonment report was submitted to the FDEP in April 2012. The well cluster was replaced in March 2012 and located on the perimeter access road approximately 800 feet south of well

cluster MW-23. The shallow, intermediate and deep monitoring wells were designated MW-22RA, MW-22RB and MW-22RC, respectively. The baseline water quality report for cluster MW-22R was submitted to the FDEP in July 2012.

The Cell 9 disposal area construction was completed in October 2013 and approved by the FDEP in November 2013. As with previous construction and expansion efforts (i.e., Cell 8 disposal area) well cluster MW-20 was installed in a temporary location on the Phase 3 stormwater berm. Cell 9 construction activities included substantial modifications to the berm and as such, a request was made to abandon the well cluster. In addition, MW-16 cluster was abandoned at its temporary location and replaced in a permanent location on the backside of the perimeter berm near the Cell 9 sump. Monitoring well clusters MW-16 and MW-20 were abandoned on 24 June 2013. Replacement monitoring wells MW-16RA, MW-16RB and MW-16RC were installed in October 2013. The monitoring well abandonment and installation report was submitted to the FDEP in November 2013.

A permit minor modification application was submitted to the FDEP on December 24, 2013. The minor modification application was a request to modify the MPIS prior to the initiation of construction of Cell 10 of Phase 3 and Cells 11-13 of Phase 4 as discussed with the FDEP during the 19 November 2013 meeting. The minor modification was approved by the FDEP in January 2014. The major changes include the

- Installation and sampling schedule of monitoring wells for the Phase 4 construction (includes Cells 10, 11, 12 and 13),
- Removal of the “C” zone wells from the semi-annual sampling schedule, and
- Installation of only “A” and “B” zone wells at the new monitoring well cluster locations.

The January 2014 MPIS revision was implemented during the 20th semi-annual groundwater sampling event in May 2014. In an email dated 14 May 2014, the FDEP, based on review of past semi-annual water quality monitoring reports, removed total phenols analysis from the laboratory parameters list in requirement 9 of the MPIS.

Construction of the Cell 10 disposal area began in March 2014 which necessitated the abandonment of temporary groundwater monitoring well clusters MW-17, 18, 19 and 21. The wells were located on the Phase 3 interim storm water berm and were abandoned during Cell 10 construction on 5 March 2014. The monitoring well abandonment report was submitted to the FDEP on 13 March 2014. The installation of monitoring well clusters MW-17R, MW-24, MW-25 and MW-26 which are associated with the completion of Cell 10 and initiation of Phase 4 construction activities was summarized in a report submitted to the FDEP on 30 July 2014.

2. MONITORING WELL DETAILS

2.1 Well Layout and Construction

For the Phase 1 development, forty five (45) groundwater monitoring wells were installed in fifteen (15) clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. In accordance with the FDEP permit requirements monitoring well clusters were located such that the spacing between well clusters was no greater than 500 feet. For development of Phases 2 and 3, twenty four (24) groundwater monitoring wells were installed in eight (8) clusters (MW-16 through MW-23) around the perimeter of the Phases 2 and 3 development areas. In accordance with the FDEP permit requirements, the monitoring well clusters were located such that the spacing between detection well clusters (MW-16 through MW-21) was approximately 500 feet, and the spacing between background well clusters (MW-22R and MW-23) was approximately 800 feet. Each monitoring well cluster consisted of three (3) groundwater monitoring wells installed: (i) across the water table to monitor the upper limit of the surficial aquifer (identified as shallow [A-zone] wells); (ii) within the lower limit of the upper surficial aquifer above the intermediate clay layer (identified as deep [C-zone] wells); and (iii) at an intermediate depth between the shallow and deep wells (identified as intermediate [B-zone] wells). For Phase 4, Cell 10 construction, twelve (12) monitoring wells were abandoned (MW-17, MW-18, MW-19 and MW-21 clusters) and six (6) groundwater monitoring wells were installed in three (3) clusters (MW-24 through MW-26) along the interim Phase 4 stormwater berm. The monitoring well placement of MW-24 through MW-26 were approximately 1,400 feet apart. Additionally, monitoring well cluster MW-17R was reinstalled adjacent to Cell 10. In accordance with the January 2014 MPIS revision, the four (4) new monitoring wells consisted of two (2) groundwater monitoring wells installed in the A-zone and B-zone at each clustered location.

A layout depicting the location of groundwater monitoring wells installed for construction Phases 1 through 4 are shown for the A-zone wells on **Figure 1**. As shown, groundwater monitoring well clusters MW-1 through MW-13, MW-16R, MW-17R, MW-22R and MW-23 were installed along the top of the outer edge of the landfill perimeter berm. The ground surface at the location of the wells in the perimeter berm is approximately 92 feet elevation with respect to National Geodetic Vertical Datum of 1929 (NGVD, 1929). Monitoring well clusters MW-24, MW-25 and MW-26 were installed in June 2014 along the interim Phase 4 storm water berm at the southern limit of the Phase 4 development. The ground surface at the location of the wells in the interim Phase 4 berm is approximately 84 feet elevation with respect to NGVD, 1929. The locations of each well, in Florida state plane coordinates and latitude/longitude, and elevation NGVD, 1929 were surveyed by professional land surveyors licensed in the State of Florida.

Wells were constructed with 2-inch diameter schedule (SCH) 40 polyvinyl chloride (PVC) casing. The well screens were 10-ft in length with #6-slot (0.006-in.). A 30/45 graded silica

sand was placed around the screen to a height of 2 to 3 ft above the top of the screen. A seal of 30/65 graded fine silica sand was placed above the sand filter around the screen. The remaining annular space from the top of the fine sand filter seal to the existing ground surface was grouted using a tremie pipe with a cement/bentonite mixture containing no more than 5 percent bentonite by dry weight. The PVC well casings were extended approximately 2.5 to 3 ft above the existing ground surface. Surface completion consisted of a protective aluminum casing with a lockable cover set in a concrete pad. Each well was provided with a well cap, padlock, and an identification label. A summary of the monitoring well construction details are presented in **Table 1**.

2.2 Turbidity Issues

As discussed in the baseline water quality reports for the Phase 1, and Phases 2 and 3 monitoring networks, the formation around the screened intervals consists primarily of a fine, brown to dark brown, silty sand. Due to the subsurface formation properties, fine-grained and colloidal material are able to pass through the sand filter pack in many wells, primarily in the B-zone and C-zone wells. This is the case even though the wells are constructed using the smallest screen slot size (0.006 in.) commonly available. Most of the intermediate and deep wells had turbidity values in excess of the 20 nephelometric turbidity unit (NTU) criterion even after extended well development and the removal of multiple well volumes.

The difficulty in attaining the desired turbidity criterion was originally discussed at a meeting between Geosyntec and FDEP on 12 January 2004 during the well development activities associated with the wells installed as part of the Phase 1 development. Geosyntec notified FDEP again on 14 September 2007 of the elevated turbidity levels even after extended well development during development of the Phases 2 and 3 monitoring wells. In accordance with these discussions, it was agreed to collect field-filtered (1-micron) and unfiltered samples for metals analyses for any sample with a turbidity value greater than 20 NTU. The data generated by the dual sampling is expected to help demonstrate: (i) what effect turbidity may have on metal analyses (i.e., compare total and dissolved metals concentrations); and (ii) whether groundwater samples with turbidities greater than 20 NTU showed higher concentrations of metals than those samples with turbidities less than 20 NTU.

3. MONITORING WELL SAMPLING

3.1 Sampling Locations and Procedures

In accordance with the MPIS, twenty-six (26) monitoring wells installed as part of the Phase 1 development, six (6) monitoring wells installed as part of the Phase 2 and 3 development, and eight (8) monitoring wells installed as part of the Phase 4 development were sampled during the 21st semi-annual sampling event. Monitoring wells sampled this monitoring event included A and B-zone monitoring wells MW-1 through MW-13, MW-16R, MW-17R, MW-22R and MW-23 through MW-26. Low-flow sampling techniques were used for groundwater sample collection. Except for the turbidity considerations as described in the previous section, all groundwater sampling was performed in accordance with the current applicable FDEP Standard Operating Procedures (DEP-SOP-001-01, December 2008) for groundwater sampling. Additionally, for quality control (QC) purposes, one duplicate sample and one equipment blank were collected and analyzed. Peristaltic pumps were used to purge thirty-six (36) of the monitoring wells with electric submersible pumps purging the remaining four (4) wells. All of the monitoring wells were purged and sampled with new tubing (silicone and high density polyethylene).

During the purging process, a YSI 556 water quality meter equipped with a flow-through cell was used to monitor the following field parameters: pH; temperature; field conductivity; oxidation-reduction potential (ORP); and dissolved oxygen. Turbidity levels were measured using a LaMotte 2020e turbidity meter. Field parameters were recorded on sample collection forms, which are contained in **Appendix B**. Observations pertaining to the color of the groundwater samples collected were also noted on the sample collection forms. When the field parameters stabilized within the acceptable tolerances required by the FDEP SOP, well purging was considered complete and groundwater samples were collected.

Volatile organic compound (VOC) sample vials were filled directly from the tubing on the discharge end of the peristaltic pump at a flow rate between 100 and 400 milliliters (mL) per minute. The calibration of the water quality monitoring instruments was checked daily and re-calibrated when necessary. Water quality instrument calibration forms are presented in **Appendix C**. Samples were placed in coolers and packed with bagged ice for transport to the analytical laboratory. Chain-of-Custody (COC) forms were completed and accompanied the samples to the analytical laboratory. All COC forms are included in **Appendix D**. Trip blank samples accompanied all sample coolers with VOC samples. Temperature blanks were packed in each sample cooler and security seals were affixed to every cooler shipped.

3.2 Sample Analyses

Samples were analyzed by ALS Environmental of Jacksonville, Florida (ALS) in accordance with the National Environmental Laboratory Accreditation Conference (NELAC) standards. ALS holds certification from the Florida Department of Health (FDOH) for the analytical test methods used for this project and is certified in the State of Florida for analysis of environmental samples.

Groundwater samples were analyzed by ALS for total ammonia as nitrogen (N), chlorides, nitrate, total dissolved solids (TDS), iron, mercury, sodium and the 40 Code of Federal Regulations (CFR) Part 258 Appendix I parameters. Other required parameters (pH; temperature; conductivity; turbidity; ORP; and dissolved oxygen) were measured in the field during collection of the groundwater samples.

4. ANALYTICAL RESULTS

4.1 Field Parameters

Table 2 provides a summary of the field measurements of the required water quality parameters utilized for determining sample stability for this semi-annual monitoring event. The secondary drinking water standard (SDWS) range for pH is between 6.5 and 8.5 standard units (SU). The groundwater pH was below the SDWS in every monitoring well. The pH ranged from 5.78 to 3.23 SU. The low values may be attributable to the shallow nature of the monitoring wells and the infiltration of low pH precipitation. The median pH concentration for precipitation in Florida (based on 1,217 data points at 6 rainfall monitoring stations located statewide) is 4.77 SU (Maddox, et.al., 1992). The data obtained from the monitoring wells are consistent with what would be expected in shallow groundwater from this environment. The groundwater pH values measured at the site have historically been below the SDWS lower limit of 6.5 SU

4.2 Groundwater Monitoring Wells

The analytical laboratory results for this groundwater sampling event have been transferred to a compact disc (CD) and are included in **Appendix E**. Analytical results have been summarized in **Table 3** to show all parameters where a constituent concentration was reported above the laboratory practical quantitation limit (PQL). Any parameter exceeding the applicable FDEP Groundwater Cleanup Target Level (GCTL) has been highlighted orange. Detection reported above the PQL but below the GCTL have been highlighted green. The following discussion regarding groundwater quality is limited to those parameters where the GCTL was exceeded in at least one groundwater monitoring well and has been organized by analytical method.

Total Metals (Methods 6020 and 6010B)

Iron

Iron was reported above the GCTL of 300 µg/L in all sixteen (16) of the A-zone monitoring wells sampled with the concentrations ranging between 540 and 19,300 µg/L, with the highest concentration from MW-6A. Iron was detected above the GCTL in all sixteen (16) of the B-zone monitoring wells sampled this event with concentrations ranging between 350 and 40,000 µg/L, with the highest concentration from MW-7B. Iron has historically exceeded the GCTL in all wells at the site for all monitoring events including the baseline events. The iron concentrations reported for the 21th semi-annual event are consistent with period of record data.

Lead

Lead was detected above the GCTL of 15 mg/L in the unfiltered samples from intermediate monitoring wells MW-25B (18.4 mg/L) and MW-26B (34.7 mg/L). This exceedance is likely a

false positive due to high turbidity at the time of sampling (MW-25B [270 NTU], MW-26B [330 NTU]). As stipulated in section 2.2, a filtered sample was collected at each of these monitoring well locations which yielded detections of lead below the GCTL (MW-25B [4.23 mg/L] and MW-26B [4.97 mg/L]).

Sodium

Sodium was detected above the GCTL of 160 mg/L in shallow monitoring well MW-1A (289 mg/L).

Ammonia-N (Method 350.1)

Ammonia-N was reported above the GCTL of 2.8 mg/L in twelve (12) of the A-zone monitoring wells sampled this event with the highest concentration from MW-1A (12.8 mg/L). The GCTL for Ammonia-N was exceeded in B-zone monitoring wells MW-5B (4.61 mg/L), MW-10B (18.8 mg/L), and MW-23B (4.47 mg/L).

As indicated in correspondence by HDR, (Class I Permit Renewal Request for Additional Information – January 2012), given that the JED facility is a double geosynthetically lined landfill including a witness zone (secondary liner), an alternative and probable source of ammonia in groundwater at the JED facility includes naturally occurring sources of nitrogen containing compounds present in the organic rich soils. Under the right biogeochemical conditions, nitrogen containing compounds can be converted to ammonia under reducing geochemical conditions. Reducing conditions can be formed in a variety of ways including, shadow effect due to reduction of oxygen rich precipitation infiltration over a large area, displacement of oxygen by landfill gas immediately above the water table, and release of organic matter which promotes the growth of microorganisms which can consume oxygen.

As HDR noted, reductive dissolution is a plausible explanation for the detection of ammonia at the facility. Researchers have recently found good correlation with arsenic and ammonia with iron which supports the concept of reductive dissolution of iron hydroxide as a dominant reaction mobilizing these compounds in groundwater. The reductive dissolution of iron and the associated mobilization of iron in groundwater are well documented in literature. More recent research demonstrates this same mechanism can explain the release of arsenic at landfills. The mechanisms of iron and arsenic chemistry are well established; however, the presence of ammonia in groundwater at landfills has only recently been evaluated.

It has been reported that ammonium will co-precipitate with iron. Conversely as a result of reductive dissolution, ammonium would be mobilized in the groundwater if no other adsorption sites are readily available for the ammonium cation. As a cation, ammonium may be bound to soil particles through ion exchange. If high concentrations of Fe^{+2} are released (such as those

that occur during reductive dissolution), an increase in ammonium ion concentrations in groundwater would be expected.

A large scale leachate release would produce pronounced concentration increases in groundwater, but the increases in ammonia seem to occur at the onset of construction without correlation to the filling sequence. Neither the constituents nor the concentrations detected in groundwater appear to correlate well with leachate. As discussed in the recent 4th Technical Report on Water Quality, if detections in groundwater were due to a direct leachate release, the concentrations of various indicator constituents (such as chloride, sodium etc.) found in groundwater should be relatively proportional to those found in leachate samples, particularly given the close proximity of the groundwater wells to the leachate sumps, however this is not the case. The VOC's (and concentrations) detected in leachate are markedly different than the VOC fingerprint at individual wells (which further supports landfill gas as the source of the benzene in groundwater). A direct release of leachate should also indicate proportional levels of other indicator compounds such as sodium, chloride and metals concurrent with ammonia.

Although ammonia is considered a common leachate indicator, no definitive evidence of a leachate discharge exists. The preponderance of evidence does support the concept that the source of ammonia is from reductive dissolution reactions mobilizing ammonia present in site soils. Shallow groundwater at the site is strongly reducing favoring the process of reductive dissolution.

Total Dissolved Solids (Method SM 2540C)

TDS was detected above the GCTL of 500 mg/L in five (5) A-zone monitoring wells (MW-1A [1,260 mg/L], MW-3A [518 mg/L], MW-4A [639 mg/L], MW-6A [1,520 mg/L] and MW-22AR [1,010 mg/L]) and in eight (8) B-zone monitoring wells (MW-1B [535 mg/L], MW-3B [1,170 mg/L], MW-4B [1,670 mg/L], MW-5B [1,700 mg/L], MW-7B [820 mg/L], MW-9B [836 mg/L], MW-10B [1,600 mg/L] and MW-26B [531 mg/L]). TDS is an indicator parameter whose value can be attributable to the presence of major cations and anions, such as calcium, magnesium, sodium, chloride, and sulfate.

Chloride (Method 300.0)

Chloride was detected above the GCTL of 250 mg/L in shallow monitoring well MW-1A (513 mg/L). The remaining monitoring wells are consistent with period of record data.

40 CFR Part 258, Appendix I Volatile Compounds (Method 8260)

Benzene was detected above the GCTL of 1.0 µg/L in ten (10) A-zone monitoring wells with the highest concentration from MW-11A (10 µg/L).

As indicated in correspondence by HDR (Class I Permit Renewal Request for Additional Information – January 2012) and by Geosyntec (Groundwater Contamination and Landfill Gas Migration Investigation and Assessment – December 2013) the source of benzene in groundwater is likely attributed to landfill gas. As noted in the previous discussion for detections of Ammonia-N, neither the constituents nor the concentrations of VOC's detected in groundwater appear to correlate well with leachate results. As discussed in the recent 5th Technical Report on Water Quality, if detections in groundwater were due to a direct leachate release, the concentrations of various indicator constituents (such as chloride, sodium etc.) found in groundwater should be relatively proportional to those found in leachate samples, particularly given the close proximity of the groundwater wells to the leachate sumps, however this is not the case with the exception of at MW-1A. The VOC's (and concentrations) detected in leachate are markedly different than the VOC fingerprint at individual wells (which further supports landfill gas as the source of the benzene in groundwater).

4.3 Data Validation

All analyses were performed within the method specified holding times. One duplicate sample was collected during the 21st semi-annual monitoring event. The duplicate sample was collected at monitoring well MW-1A. Results of the duplicate samples are included in **Table 3**. Duplicate sample bottles were collected immediately following the original samples to assure near identical conditions were maintained during sampling. In addition, an equipment blank was collected in the field using a peristaltic pump with new tubing (silicone and high density polyethylene). De-ionized water supplied by ALS was pumped through the tubing and analyzed for the same parameters as the groundwater samples. Analysis of the equipment blank sample resulted in a detection of chloroform (5.4 µg/L), methylene chloride (8.0 µg/L) and TDS (14 µg/L) at concentrations above the Practical Quantitation Limit (PQL). Chloroform and methylene chloride are common laboratory contaminants which may have impacted the de-ionized water prepared and sent by ALS. This is supported by methylene chloride detections in each of the six (6) trip blanks which were also prepared by ALS. TDS was also detected in the associated method blank (10 mg/L) indicating the detection in the equipment blank may be a false positive result. The TDS result for monitoring well MW-22BR has been “v” qualified due to this exceedance in the associated method blank. The detection of the remaining constituents analyzed for were not detected in the equipment blank sample.

To confirm sample validity, a relative percent difference (RPD) calculation was performed between the original samples and the duplicate samples for analytes detected above the PQL. The average RPD for the duplicate sample was below five percent which indicates a strong correlation. This analysis shows that the laboratory analytical results are validated.

Additionally, the surrogate recovery, trip blanks, method blanks, matrix spike and matrix spike duplicates were within acceptable criterion on each laboratory report with the exception of the TDS detection in the method blank discussed above.

4.4 Impact of Turbidity on Metals Concentrations

In monitoring wells where purging was performed using a peristaltic pump, the minimum purge requirements were adequate to achieve turbidity levels less than the FDEP guidance of 20 NTU. In the four (4) monitoring wells where purging was performed using electric submersible pumps, turbidity was elevated above 20 NTU in two (2) wells (MW-25BR [270 NTU] and MW-26B [332 NTU]). More than three (3) well volumes were purged from both monitoring wells. A filtered sample was collected for metals after the use of a 1 micron (μm) filter at these two monitoring well locations. The resulting turbidity in MW-25B and MW-26B were 103 NTU and 97 NTU respectively. These turbidity values remained above the FDEP guidance of 20 NTU, but the removal of the large colloidal solids from the filtered sample yielded an average 76 percent reduction in metal concentrations detected above the PQL (with the exception of sodium [3 percent]). The results of the filtered samples have been included in **Table 3**.

Historical data shows that the turbidity levels for the monitoring well network has improved over the course of the semi-annual groundwater sampling events. The need to collect dissolved metal samples in the current well network may no longer be necessary; however, newly installed monitoring wells still require the collection of a sample for dissolved metals analysis.

5. GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

5.1 Field Measurements

Groundwater level measurements were obtained on 5 November 2014 from Phases 1 through 4 groundwater monitoring wells and the remaining piezometers installed as part of the original site hydrogeological investigation. The groundwater level measurements were made within an approximate 4-hr period. The groundwater level measurements and calculated groundwater elevation from the monitoring wells and piezometers are presented in **Table 4**.

5.2 Water Level Contours

The water level contour map prepared from groundwater level measurements for the surficial aquifer in the A-zone (shallow) is presented in **Figure 1**. Historically, the direction of the horizontal component of groundwater flow for all three zones is predominantly east-northeast towards Bull Creek. The groundwater elevation data collected on 5 November 2014 from the A-zone monitoring well network indicates the direction of groundwater flow on the southern portion of the site was to the northwest. The high surface water levels prevented groundwater level measurement from the seven (7) shallow monitoring wells and piezometers in the southeast portion of the Site. These high water surface levels have shifted the groundwater flow in the southern portion of the Site from northeast to northwest. Groundwater flow in the northern portion of the Site remains predominantly east-northeast toward Bull Creek.

Historically, comparison of water levels between the A, B and C wells shows a similar vertical gradient (1E^{-3} ft/ft). These gradients are consistent with the regional gradient in the upper surficial aquifer and indicate an interconnected, sluggish flow regime in the saturated zone above the Intermediate Confining Unit (ICU).

6. SURFACE WATER SAMPLING

6.1 Sampling Locations and Procedures

During the November 2014 water quality monitoring event, Bull Creek was dry with the exception of scattered stagnant pools; therefore a representative surface water sample could not be collected.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Sampling Locations

The existing monitoring well network is adequate for monitoring purposes and no changes are recommended.

7.2 Sample Analyses

The detections of ammonia, iron, TDS and chloride above the GCTLs in specific groundwater monitoring wells have been discussed in detail in the 1st, 2nd, 3rd, 4th, and 5th Technical Reports on Water Quality (November 2006, September 2008, November 2010, November 2011 and July 2014 respectively). As discussed in Section 4.2, it is likely that the iron and ammonia are not related to a leachate release from the disposal boundary, but rather mobilization of these constituents due to the presence of nitrogen containing compounds under reducing conditions. Our recommendation is to continue to monitor these constituents as part of the current MPIS.

The detections of sodium and chloride above the GCTLs in groundwater monitoring well MW-1A have decreased since the 19th semi-annual water quality monitoring event. Sodium and chloride are leachate indicator parameters; however the concentrations seen in MW-1A are well below those observed in past leachate analyses. A release of leachate is not suspected to be the cause of the increased sodium and chloride. Rather, these detections are likely due to stormwater runoff and cover soil erosion from uncapped areas that occurred within the past year directly upslope of the Cell 5 sump area and MW-1A. Omni has assessed the stormwater drainage issues in this area and has installed additional stormwater downpiping and an outfall structure in this area. These improvements are expected to correct stormwater drainage issues in the vicinity of MW-1A and therefore, the concentrations of sodium and chloride are expected to decrease in the well over time. Our recommendation is to continue to monitor these constituents as part of the current MPIS.

Compliance evaluation monitoring activities were initiated in November 2013 to further assess groundwater conditions adjacent to MW-3A, MW-10A and MW-11A. These activities included the installation of compliance assessment wells CW-1A, CW-2A and CW-3A at the locations indicated on **Figure 1**. The monitoring well installation details, sample analyses and reporting was provided under separate cover. Based on the results of the four quarterly sampling events for the compliance assessment wells, significant VOC levels were not detected and the evaluation monitoring program is complete.

Our recommendation is to continue semi-annual monitoring as stipulated in the current MPIS.

TABLES

Table 1 (1 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD83)	Longitude (NAD83)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet NGVD29)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation NGVD29)			
							Top	Bottom	Top	Bottom		
MW-1A	28 03 48.55	81 05 59.88	19900	9-Dec-03	95.12	23.0	13.0	23.0	82.1	72.1	10.6	8.2
MW-2A	28 03 51.99	81 05 59.90	19903	10-Dec-03	95.21	22.6	12.6	22.6	82.6	72.6	10.3	8.9
MW-3A	28 03 55.34	81 05 59.91	19906	11-Dec-03	94.64	22.8	12.8	22.8	81.9	71.9	10.4	9.0
MW-4A	28 03 58.97	81 05 59.92	19909	12-Dec-03	95.48	23.1	13.1	23.1	82.4	72.4	10.8	9.4
MW-5A	28 04 02.92	81 05 59.95	19912	24-Nov-03	95.32	22.5	12.5	22.5	82.8	72.8	10.1	9.1
MW-6A	28 04 06.50	81 05 59.15	19915	25-Nov-03	94.72	22.6	12.6	22.6	82.2	72.2	10.6	8.6
MW-7A	28 04 07.13	81 05 54.78	19918	26-Nov-03	95.48	23.3	13.3	23.3	82.2	72.2	10.3	9.3
MW-8A	28 04 06.20	81 05 50.64	19921	5-Dec-03	94.67	22.5	12.5	22.5	82.2	72.2	10.2	8.6
MW-9A	28 04 04.34	81 05 46.60	19924	4-Dec-03	94.66	22.4	12.4	22.4	82.3	72.3	10.0	8.6
MW-10A	28 04 00.07	81 05 44.77	19927	3-Dec-03	96.25	22.1	12.1	22.1	84.1	74.1	9.8	7.6
MW-11A	28 03 55.43	81 05 43.27	19930	3-Dec-03	93.56	22.8	12.8	22.8	80.7	70.7	10.5	9.1
MW-12A	28 03 52.08	81 05 43.26	19933	2-Dec-03	95.10	23.0	13.0	23.0	82.1	72.1	10.7	9.3
MW-13A	28 03 48.67	81 05 43.25	19936	8-Dec-03	95.19	22.5	12.5	22.5	82.7	72.7	10.2	7.7
MW-14A	Monitoring Well Abandoned 10 July 2007											
MW-15A	Monitoring Well Abandoned 10 July 2007											
MW-16A	Monitoring Well Abandoned 24 June 2013											
MW-16RA	28 03 44.56	81 05 40.18	22342	15-Oct-13	95.01	23.9	13.5	23.5	81.5	71.5	9.0	8.0
MW-17A	Monitoring Well Abandoned 5 March 2014											
MW-17AR	28 03 42.3	82 05 35.2	22345	19-Jun-14	94.84	24.1	12.0	24.0	82.8	70.8	11.0	10.0
MW-18A	Monitoring Well Abandoned 5 March 2014											
MW-19A	Monitoring Well Abandoned 5 March 2014											
MW-20A	Monitoring Well Abandoned 24 June 2013											
MW-21A	Monitoring Well Abandoned 5 March 2014											
MW-22A	Monitoring Well Abandoned 11 November 2011											
MW-22RA	28 03 34.703	81 06 0.622	28685	14-Mar-12	95.00	23.7	13.0	23.0	82.0	72.0	10.5	9.5
MW-23A	28 03 42.41	81 05 59.79	22363	25-Sep-07	97.90	27.8	17.3	27.3	80.7	70.7	15.3	14.3
MW-24A	28 03 26.9	82 05 25.9	29170	18-Jun-14	87.06	23.5	13	23	74.1	64.1	12.0	11.0
MW-25A	28 03 26.6	82 05 42.6	29173	19-Jun-14	86.99	23.4	13	23	74.0	64.0	12.0	11.0
MW-26A	28 03 26.5	82 05 58.4	29176	19-Jun-14	87.06	23.3	13.0	23.0	74.1	64.1	12.0	11.0
MW-24A Exp	28 03 10.54	81 05 30.92	27860	26-Aug-10	86.97	23.34	23.3	23.3	63.6	63.6	23.3	23.3
MW-25A Exp	28 03 26.45	81 05 30.47	27861	26-Aug-10	82.36	23.49	23.5	23.5	58.9	58.9	23.5	23.5
MW-26A Exp	28 03 20.38	81 05 21.22	27862	26-Aug-10	82.01	23.83	23.8	23.8	58.2	58.2	23.8	23.8

Notes:

NAD83 indicates the North American Datum of 1983

NGVD29 indicates the National Geodetic Vertical Datum of 1929

TOC indicates top of casing

BTOC indicates below top of casing

Table 1 (2 of 3)

**SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Well Designation	Latitude (NAD83)	Longitude (NAD83)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet NGVD29)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation NGVD29)			
							Top	Bottom	Top	Bottom		
MW-1B	28 03 48.59	81 05 59.89	19901	9-Dec-03	95.00	47.9	37.9	47.9	57.1	47.1	35.6	33.1
MW-2B	28 03 51.94	81 05 59.90	19904	10-Dec-03	95.17	48.3	38.3	48.3	56.9	46.9	36.0	34.6
MW-3B	28 03 55.31	81 05 59.91	19907	11-Dec-03	94.68	47.6	37.6	47.6	57.1	47.1	35.3	33.9
MW-4B	28 03 59.01	81 05 59.92	19910	12-Dec-03	95.18	47.4	37.4	47.4	57.8	47.8	35.1	33.5
MW-5B	28 04 02.88	81 05 59.95	19913	24-Nov-03	95.30	47.1	37.1	47.1	58.2	48.2	34.4	32.7
MW-6B	28 04 06.48	81 05 59.18	19916	25-Nov-03	94.60	47.4	37.4	47.4	57.2	47.2	34.9	33.5
MW-7B	28 04 07.13	81 05 54.81	19919	26-Nov-03	95.27	47.5	37.5	47.5	57.8	47.8	34.5	33.5
MW-8B	28 04 06.19	81 05 50.60	19922	5-Dec-03	94.58	49.6	39.6	49.6	55.0	45.0	37.1	35.6
MW-9B	28 04 04.31	81 05 46.56	19925	4-Dec-03	94.63	49.1	39.1	49.1	55.5	45.5	36.8	35.3
MW-10B	28 04 00.04	81 05 44.75	19928	3-Dec-03	96.23	48.3	38.3	48.3	58.0	48.0	35.9	33.9
MW-11B	28 03 55.40	81 05 43.27	19931	2-Dec-03	93.59	47.9	37.9	47.9	55.7	45.7	35.5	34.0
MW-12B	28 03 52.05	81 05 43.27	19934	1-Dec-03	95.01	49.0	39.0	49.0	56.1	46.1	36.6	35.1
MW-13B	28 03 48.64	81 05 43.24	19937	8-Dec-03	95.12	47.2	37.2	47.2	58.0	48.0	34.8	33.4
MW-14B	Monitoring Well Abandoned 10 July 2007											
MW-15B	Monitoring Well Abandoned 10 July 2007											
MW-16B	Monitoring Well Abandoned 24 June 2013											
MW-16RB	28 03 44.54	81 05 40.14	22343	15-Oct-13	94.97	46.6	36.5	46.5	58.5	48.5	33.0	31.0
MW-17B	Monitoring Well Abandoned 5 March 2014											
MW-17BR	28 03 42.2	82 05 35.2	22346	19-Jun-14	94.78	48.5	38.0	48.0	56.8	46.8	37.0	36.0
MW-18B	Monitoring Well Abandoned 5 March 2014											
MW-19B	Monitoring Well Abandoned 5 March 2014											
MW-20B	Monitoring Well Abandoned 24 June 2013											
MW-21B	Monitoring Well Abandoned 5 March 2014											
MW-22B	Monitoring Well Abandoned 11 November 2011											
MW-22RB	28 03 34.665	81 05 59.850	28686	15-Mar-12	94.86	46.1	35.5	45.5	59.4	49.4	33.0	28.0
MW-23B	28 03 42.46	81 05 59.79	22364	25-Sep-07	97.91	42.8	32.3	42.3	65.7	55.7	30.3	29.3
MW-24B	28 03 26.5	82 05 58.5	29171	18-Jun-14	87.05	43.1	33	43	54.1	44.1	32.0	31.0
MW-25B	28 03 26.6	82 05 42.7	29174	19-Jun-14	86.67	41.5	31	41	55.7	45.7	30.0	29.0
MW-26B	28 03 27.0	82 05 25.9	29177	19-Jun-14	86.83	42.9	32.5	42.5	54.3	44.3	31.5	30.5

Notes:

NAD83 indicates the North American Datum of 1983

NGVD29 indicates the National Geodetic Vertical Datum of 1929

TOC indicates top of casing

BTOC indicates below top of casing

Table 1 (3 of 3)

**SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Well Designation	Latitude (NAD83)	Longitude (NAD83)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet NGVD29)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation NGVD29)			
							Top	Bottom	Top	Bottom		
MW-1C	28 03 48.63	81 05 59.88	19902	9-Dec-03	95.2	75.2	65.2	75.2	30.0	20.0	62.9	61.4
MW-2C	28 03 51.90	81 05 59.89	19905	10-Dec-03	95.3	68.4	58.4	68.4	36.9	26.9	56.1	53.7
MW-3C	28 03 55.28	81 05 59.91	19908	11-Dec-03	94.7	68.7	58.7	68.7	36.0	26.0	56.3	54.8
MW-4C	28 03 59.04	81 05 59.92	19911	12-Dec-03	95.4	72.5	62.5	72.5	32.9	22.9	61.2	59.6
MW-5C	28 04 02.83	81 05 59.95	19914	24-Nov-03	95.4	73.0	63.0	73.0	32.4	22.4	60.7	58.7
MW-6C	28 04 06.46	81 05 59.22	19917	25-Nov-03	94.6	73.2	63.2	73.2	31.4	21.4	60.2	57.7
MW-7C	28 04 07.13	81 05 54.86	19920	25-Nov-03	94.9	73.3	63.3	73.3	31.6	21.6	60.3	59.3
MW-8C	28 04 06.17	81 05 50.55	19923	5-Dec-03	94.5	73.9	63.9	73.9	30.6	20.6	61.6	59.8
MW-9C	28 04 04.29	81 05 46.53	19926	4-Dec-03	94.5	73.8	63.8	73.8	30.8	20.8	61.4	59.4
MW-10C	28 04 00.01	81 05 44.74	19929	3-Dec-03	96.4	73.7	63.7	73.7	32.7	22.7	61.4	60.0
MW-11C	28 03 55.36	81 05 43.26	19932	2-Dec-03	93.7	73.4	63.4	73.4	30.3	20.3	61.0	59.6
MW-12C	28 03 52.01	81 05 43.26	19935	1-Dec-03	95.1	73.6	63.6	73.6	31.5	21.5	60.2	58.7
MW-13C	28 03 48.60	81 05 43.25	19938	8-Dec-03	95.0	73.0	63.0	73.0	32.1	22.1	60.7	58.2
MW-14C	Monitoring Well Abandoned 10 July 2007											
MW-15C	Monitoring Well Abandoned 10 July 2007											
MW-16C	Monitoring Well Abandoned 24 June 2013											
MW-16RC	28 03 44.52	81 05 40.11	22344	16-Oct-13	95.0	75.3	65.0	75.0	30.0	20.0	60.0	59.0
MW-17C	Monitoring Well Abandoned 5 March 2014											
MW-18C	Monitoring Well Abandoned 5 March 2014											
MW-19C	Monitoring Well Abandoned 5 March 2014											
MW-20C	Monitoring Well Abandoned 24 June 2013											
MW-21C	Monitoring Well Abandoned 5 March 2014											
MW-22C	Monitoring Well Abandoned 11 November 2011											
MW-22RC	28 03 34.629	81 05 59.854	28687	15-Mar-12	95.1	66.6	56.0	66.0	39.1	29.1	50.0	49.0
MW-23C	28 03 42.51	81 05 59.80	22365	24-Sep-07	97.9	67.1	56.6	66.6	41.4	31.4	54.6	53.6
MW-27C Exp	28 03 12.45	81 05 17.15	27863	27-Aug-10	81.66	58.3	48.3	58.3	33.4	23.4	46.3	45.3

Notes:

NAD83 indicates the North American Datum of 1983

NGVD29 indicates the National Geodetic Vertical Datum of 1929

TOC indicates top of casing

BTOC indicates below top of casing

Table 2

SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
NOVEMBER 2014

Monitoring Well	Temperature (°C)	pH (Standard Units)	Specific Conductance (µS/cm)	Turbidity (NTUs)	Oxidation-Reduction Potential (mV)	Dissolved Oxygen (mg/L)	Purging Method
MW-1A	27.33	4.51	2,278	9.0	35.7	0.39	Peristaltic Pump
MW-2A	26.50	3.88	542	0.9	87.8	0.63	Peristaltic Pump
MW-3A	26.34	5.39	842	1.4	9.3	0.42	Peristaltic Pump
MW-4A	26.06	5.21	909	4.2	-41.5	0.44	Peristaltic Pump
MW-5A	26.72	4.97	205	17.5	35.8	0.56	Peristaltic Pump
MW-6A	27.07	5.17	444	1.2	10.8	0.45	Peristaltic Pump
MW-7A	25.57	4.61	188	0.5	57.8	0.92	Peristaltic Pump
MW-8A	25.83	4.25	1,716	0.7	34.4	0.51	Peristaltic Pump
MW-9A	27.93	5.19	301	8.5	0.7	0.40	Peristaltic Pump
MW-10A	26.46	5.04	216	2.5	15.3	0.59	Peristaltic Pump
MW-11A	26.90	4.85	469	4.1	10.9	0.50	Peristaltic Pump
MW-12A	26.71	4.34	194	0.3	79.7	0.45	Peristaltic Pump
MW-13A	27.17	5.07	447	0.4	66.1	0.42	Peristaltic Pump
MW-16AR	26.19	4.69	232	3.5	65.5	0.59	Peristaltic Pump
MW-17AR	25.18	4.52	145	0.3	162.1	0.69	Peristaltic Pump
MW-22AR	24.17	5.76	1,222	0.8	-13.0	0.53	Peristaltic Pump
MW-23A	27.42	5.48	637	5.2	11.6	0.32	Peristaltic Pump
MW-24A	25.70	5.31	72	4.4	86.3	0.78	Peristaltic Pump
MW-25A	25.95	3.23	325	0.5	26.9	0.46	Peristaltic Pump
MW-26A	24.69	5.76	161	2.6	47.1	1.28	Peristaltic Pump
MW-1B	26.77	4.38	986	0.7	55.1	1.08	Peristaltic Pump
MW-2B	25.68	4.46	74	0.9	85.0	0.80	Peristaltic Pump
MW-3B	25.88	4.25	1,439	0.4	34.4	0.55	Peristaltic Pump
MW-4B	26.07	3.84	1,907	1.7	90.0	0.58	Peristaltic Pump
MW-5B	25.67	3.84	1,791	2.6	91.0	1.21	Peristaltic Pump
MW-6B	26.58	4.52	75	0.7	68.9	0.70	Peristaltic Pump
MW-7B	24.90	4.14	1,093	0.5	58.1	0.37	Peristaltic Pump
MW-8B	24.80	4.48	708	2.2	50.2	0.49	Peristaltic Pump
MW-9B	26.73	4.13	1,092	0.7	100.7	0.41	Peristaltic Pump
MW-10B	25.61	3.90	1,774	2.4	81.7	1.40	Peristaltic Pump
MW-11B	25.49	5.10	95	2.1	18.0	0.60	Peristaltic Pump
MW-12B	25.77	4.76	110	0.3	77.5	0.88	Peristaltic Pump
MW-13B	26.20	4.77	136	0.0	81.4	0.90	Peristaltic Pump
MW-16BR	24.87	4.98	73	4.0	39.7	0.69	Peristaltic Pump
MW-17BR	24.36	5.52	216	11.7	28.6	0.45	Submersible Pump
MW-22BR	23.28	4.77	104	1.3	34.9	0.80	Peristaltic Pump
MW-23B	27.10	4.11	479	0.8	91.9	0.43	Peristaltic Pump
MW-24B	23.88	4.85	43	16.4	95.1	0.44	Submersible Pump
MW-25B	24.51	5.53	125	270	51.0	0.44	Submersible Pump
MW-26B	23.67	5.78	120	332	53.9	0.64	Submersible Pump

Notes:

- °C indicates degrees Celsius
- µS/cm indicates micro Siemens per centimeter
- NTU indicates Nephelometric Turbidity Units
- mV indicates millivolts
- mg/L indicates milligram per liter

Table 3

SUMMARY OF GROUNDWATER ANALYTICAL DATA
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well ID	1,4-Dichlorobenzene	Benzene	Ethylbenzene	Toluene	Total Xylenes	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Mercury	Nickel	Selenium	Sodium	Vanadium	Zinc	Ammonia	Chloride	TDS
	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (mg/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (mg/L)	GCTL (mg/L)	GCTL (mg/L)
	75	1	700	40	20	10	2,000	4	5	100	420	1,000	300	15	2	100	50	160	49	5,000	2.8	250	500
MW-1A	0.95 i	2.8	0.21 u	0.19 u	0.31 u	0.9 i	88.3	0.06 i	0.10 u	3.6	2.1	0.7 i	7,610	0.16 i	0.05 i	9.1	1.1 u	289	12.1	4.1 i	12.8	513	1,260
MW-1A DUP	0.88 i	2.7	0.21 u	0.19 u	0.31 u	0.8 i	85.1	0.13 i	0.10 u	3.4	2.2	0.9 i	7,890	0.19 i	0.03 i	8.1	1.1 u	290	12.5	7.0	12.9	518	1,250
MW-1B	0.16 u	2.0	0.21 u	0.19 u	0.31 u	0.7 i	156	0.05 i	0.10 u	0.2 u	2.2	0.3 u	11,500	0.12 u	0.02 u	3.5	1.1 u	79.1	1.5 i	1.8 i	2.06	148	535
MW-2A	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	65.3	0.15 i	0.10 u	2.5	2.7	0.3 u	7,510	0.12 u	0.02 u	5.0	1.1 u	30.6	2.0	3.0 i	1.98	53.9	350
MW-2B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	11.1	0.04 u	0.10 u	0.3 i	0.3 i	0.3 u	920	0.12 u	0.02 u	0.5 u	1.1 u	6.73	0.3 u	1.6 u	0.113	12.8	38
MW-3A	0.87 i	5.2	0.21 u	0.19 u	0.31 u	2.0	46.7	0.04 u	0.10 u	3.8	1.2	0.8 i	4,790	0.14 i	0.02 u	2.6	1.1 u	62.6	18.2	3.8 i	8.79	51.4	518
MW-3B	0.16 u	2.4	0.21 u	0.19 u	0.31 u	0.7 i	76.1	0.97	0.10 u	0.2 u	10.5	0.5 i	37,400	0.12 u	0.02 i	4.8	1.1 u	32.6	1.3 i	3.2 i	1.31	25.3	1,170
MW-4A	0.16 u	2.9	0.21 u	0.19 u	0.31 u	2.8	55.3	0.04 u	0.10 u	1.6	2.0	0.6 i	6,440	0.19 i	0.02 i	4.1	1.1 u	34.2	3.2	1.6 u	10.8	36.1	639
MW-4B	0.16 u	0.45 i	0.21 u	0.19 u	0.31 u	1.1	51.4	0.73	0.10 u	0.8 i	0.6 i	0.8 i	2,600	0.12 u	0.02 u	5.4	1.1 u	30.4	5.8	1.6 u	1.92	33.0	1,670
MW-5A	0.16 u	0.86 i	0.21 u	0.94 i	0.31 u	1.5	5.3	0.04 u	0.10 u	4.3	0.2 i	2.7	1,000	1.35	0.06 i	1.1 i	1.1 u	14.3	1.8 i	1.6 u	7.40	15.5	218
MW-5B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	78.1	1.11	0.10 u	1.4	1.5	0.6 i	2,990	0.12 u	0.02 u	4.9	1.1 u	27.7	3.2	1.6 u	4.61	31.5	1,700
MW-6A	0.16 u	3.0	0.21 u	0.19 u	0.31 u	1.0	10.6	0.04 u	0.10 u	0.9 i	0.9 i	1.6	19,300	0.16 i	0.10 i	1.1 i	1.1 u	37.2	3.6	1.6 u	5.84	89.6	216
MW-6B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	19.0	0.09 i	0.10 u	0.9 i	0.2 i	0.3 u	790	1.12	0.02 u	0.5 u	1.1 u	7.64	2.0 i	1.6 u	0.150	13.2	49
MW-7A	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.8 i	9.1	0.04 u	0.10 u	2.8	0.9 i	0.3 u	4,590	0.12 u	0.02 u	1.3 i	1.1 u	16.9	2.2	1.6 u	5.63	29.5	106
MW-7B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.8 i	76.6	1.11	0.10 u	0.5 i	7.8	0.3 i	40,000	0.12 u	0.04 i	5.6	1.1 u	49.9	3.1	5.6	1.86	43.1	822
MW-8A	0.90 i	3.7	0.21 u	0.19 u	4.9	1.3	63.5	0.31 i	0.10 u	1.5	4.5	0.6 i	16,400	0.12 u	0.02 u	13.0	1.1 u	25.5	4.3	1.6 u	9.42	14.5	1,520
MW-8B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.8 i	106	4.54	0.10 u	0.2 u	4.3	0.3 u	20,700	0.20 i	0.02 u	2.9	1.1 u	36.7	3.8	3.0 i	0.438	56.3	476
MW-9A	0.65 i	8.5	0.21 u	0.19 u	5.0	2.4	3.6	0.04 u	0.10 u	2.5	0.2 i	1.6	570	0.35 i	0.05 i	0.9 i	1.1 u	47.6	1.6 i	1.6 u	4.60	17.8	227
MW-9B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	29.6	1.59	0.10 u	1.4	10.7	0.3 u	35,100	0.12 u	0.02 u	4.5	1.1 u	33.2	4.1	6.3	1.69	29.2	836
MW-10A	0.16 u	7.7	0.21 u	0.19 u	0.31 u	1.1	8.2	0.04 u	0.10 u	0.9 i	0.2 i	0.3 u	950	0.12 u	0.02 u	0.6 i	1.1 u	16.3	0.3 i	1.6 u	4.36	21.9	130
MW-10B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.6 i	60.7	3.21	0.10 u	1.0	24.2	0.4 i	37,000	0.12 u	0.02 u	6.1	1.1 u	33.9	3.4	3.0 i	18.8	32.5	1,600
MW-11A	2.6	10	0.22 i	0.19 u	0.31 u	1.3	63.5	0.27 i	0.10 u	1.0	1.2	0.3 u	2,200	0.12 u	0.02 u	3.1	1.1 u	27.0	3.9	1.6 u	3.74	16.7	273
MW-11B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	1.2	14.3	0.04 u	0.10 u	1.4	0.05 i	0.3 u	350	0.31 i	0.02 u	0.5 u	1.1 u	14.5	2.2	1.6 u	0.065	13.4	65
MW-12A	0.16 u	6.0	0.21 u	0.19 u	0.31 u	1.1	20.4	0.15 i	0.10 u	1.0	1.3	0.3 u	2,210	0.12 u	0.02 u	2.8	1.1 u	15.7	2.0 i	1.6 u	0.491	31.9	102
MW-12B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	29.3	0.04 u	0.10 u	0.9 i	0.2 i	0.3 u	1,130	0.12 u	0.02 u	0.5 u	1.1 u	9.31	0.5 i	1.6 u	0.108	22.0	60
MW-13A	0.16 u	3.4	0.21 u	0.19 u	0.31 u	7.5	36.9	0.07 i	0.10 u	1.5	0.7 i	0.3 u	12,300	0.12 u	0.07 i	1.4 i	1.1 u	35.6	3.3	1.6 u	1.59	67.4	243
MW-13B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	17.7	0.05 i	0.10 u	0.3 i	0.3 i	0.3 u	1,730	0.12 u	0.02 u	0.5 u	1.1 u	13.9	0.5 i	1.6 u	0.150	32.1	74
MW-16AR	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.6 i	27.2	0.06 i	0.22 i	0.7 i	0.2 i	0.8 i	540	0.12 u	0.02 u	0.7 i	1.1 u	14.2	6.2	1.6 u	0.354	16.4	140
MW-16BR	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	12.5	0.04 u	0.10 u	0.8 i	0.2 i	0.3 u	800	0.35 i	0.02 u	0.5 u	1.1 u	7.90	0.8 i	1.6 u	0.145	10.9	43
MW-17AR	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	53.3	0.07 i	0.59	0.8 i	0.3 i	0.3 u	920	0.12 u	0.02 u	1.2 i	1.1 u	10.9	5.6	1.6 u	0.331	7.9	69
MW-17BR	0.16 u	0.21 u	0.21 u	0.36 i	0.31 u	0.8 i	39.1	0.04 u	0.10 u	1.6	0.2 i	0.3 u	1,980	0.67	0.02 u	0.6 i	1.1 u	28.1	1.8 i	1.6 u	0.199	43.1	123
MW-22AR	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	1.2	68.4	0.04 u	0.10 u	2.2	0.3 i	0.3 i	1,620	0.12 u	0.02 u	2.3	1.1 u	29.4	3.5	1.6 u	7.02	20.5	1,010
MW-22BR	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.5 u	10.2	0.04 u	0.10 u	0.6 i	0.3 i	0.3 u	1,040	0.12 u	0.02 u	0.5 u	1.1 u	14.3	1.2 i	1.6 u	0.114	23.8	83 v
MW-23A	0.16 u	0.33 i	0.21 u	0.19 u	0.31 u	1.2	23.9	0.04 u	0.10 u	2.1	0.3 i	0.8 i	330	0.24 i	0.02 i	1.8 i	1.1 u	22.7	3.2	1.6 u	3.16	27.7	412
MW-23B	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	0.8 i	160	0.27 i	0.10 u	0.4 i	1.0 i	0.3 u	3,050	0.12 u	0.02 u	0.6 i	1.1 u	24.5	1.2 i	1.6 u	4.47	25.2	273
MW-24A	0.16 u	0.21 u	0.21 u	2.4	0.31 u	0.6 i	8.9	0.04 u	0.10 u	1.7	0.08 i	0.3 u	770	0.30 i	0.02 u	0.5 u	1.1 u	10.6	2.5	1.6 u	0.046	12.5	53
MW-24B	0.16 u	0.21 u	0.21 u	4.1	0.31 u	0.5 i	18.5	0.04 u	0.12 i	2.1	0.4 i	0.4 i	840	0.91	0.02 u	1.4 i	1.1 u	5.24	3.3	1.7 i	0.081	6.3	24
MW-25A	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	1.3	52.6	0.17 i	0.10 u	1.1	0.8 i	0.3 u	5,050	0.12 u	0.02 u	0.6 i	1.1 u	27.3	2.1	1.6 u	1.17	56.5	166
MW-25B (Total)	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	1.6	315	1.00	1.10	25.7	1.0 i	5.2	4,660	18.4	0.16	5.9	4.6	13.7	43.0	3.8 i	0.211	20.6	489
MW-25B (Dissolved)	NA	NA	NA	NA	NA	0.5 u	83.4	0.14 i	0.26 i	6.1	0.3 i	1.1	1,710	4.23	0.04 i	1.7 i	1.1 u	13.3	10.5	1.8 i	NA	NA	NA
MW-26A	0.16 u	0.21 u	0.21 u	0.19 u	0.31 u	1.1	21.7	0.04 u	0.10 u	1.8	0.2 i	0.3 u	2,790	0.16 i	0.02 u	0.5 u	1.1 u	16.4	1.7 i	1.6 u	0.660	24.2	91
MW-26B (Total)	0.16 u	0.21 u	0.21 u	0.31 i	0.31 u	1.1	301	0.94	0.33 i	29.7	1.5	2.7	5,670	34.7	0.15	4.2	3.9	15.8	38.9	3.3 i	0.341	16.6	531
MW-26B (Dissolved)	NA	NA	NA	NA	NA	0.5 u	57.6	0.06 i	0.10 u	5.5	0.4 i	0.6 i	1,720	4.97	0.03 i	1.2 i	1.1 u	15.4	7.0	5.4	NA	NA	NA

NOTES: Only parameters with detections above the Method Reporting Limit are shown.

i	The Reported Value is between the Laboratory Method Detection Limit (MDL) and the Laboratory Practical Quantitation Limit (PQL).
	Detect
	Exceeds GCTL
NA	Not Analyzed

u = indicates that the compound was analyzed for but not detected at or above the value shown

v = indicates the analyte was detected in both the sample and the associated method blank.

Table 4

GROUNDWATER LEVEL MEASUREMENTS - 5 NOVEMBER 2014
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Measuring Point Designation	Time	TOC Elevation (NGVD29)	Depth to Water (ft BTOC)	Well Depth (ft)	Groundwater Elevation (NGVD29)	Field Observations
DP-1						Piezometer Abandoned 3 October 2003
DP-2						Piezometer Abandoned 3 October 2003
DP-3						Piezometer Abandoned 16 January 2006
DP-4						Piezometer Abandoned 16 January 2006
DP-5						Piezometer Abandoned 10 July 2007
DP-6						Piezometer Abandoned 10 July 2007
DP-7						Piezometer Abandoned 10 July 2007
DP-8						Piezometer Abandoned 10 July 2007
DP-9						Piezometer Abandoned 10 July 2007
DP-10						Piezometer Abandoned 10 July 2007
DP-11						Piezometer Abandoned 10 July 2007
DP-12						Piezometer Abandoned 10 July 2007
DP-13						Piezometer Abandoned 11 July 2007
DP-14	NM	81.97	NM	18.62	NM	Not Measured, inaccessible, area flooded
DP-15	NM	81.98	NM	53.70	NM	Not Measured, inaccessible, area flooded
DP-16	NM	82.57	NM	18.53	NM	Not Measured, inaccessible, area flooded
DP-17	NM	82.58	NM	53.75	NM	Not Measured, inaccessible, area flooded
DP-18	15:25	84.38	4.46	52.90	79.92	
DP-19	15:25	84.34	4.37	18.40	79.97	
DP-20	NM	83.07	NM	18.35	NM	Not Measured, inaccessible, area flooded
DP-21	NM	83.00	NM	53.68	NM	Not Measured, inaccessible, area flooded
DP-22	NM	81.00	NM	18.63	NM	Not Measured, inaccessible, area flooded
DP-23	NM	81.27	NM	53.73	NM	Not Measured, inaccessible, area flooded
DP-24	NM	82.22	NM	18.52	NM	Not Measured, inaccessible, area flooded
SZ-1						Piezometer Abandoned 10 July 2007
SZ-2	NM	83.16	NM	75.39	NM	Not Measured, inaccessible, area flooded
SZ-3	NM	81.27	NM	78.85	NM	Not Measured, inaccessible, area flooded
MW-1A	15:05	95.12	15.40	23.19	79.72	
MW-1B	15:05	95.00	15.29	48.11	79.71	
MW-1C	15:05	95.18	15.55	74.63	79.63	
MW-2A	15:00	95.21	15.60	22.89	79.61	
MW-2B	15:00	95.17	15.59	48.31	79.58	
MW-2C	15:00	95.32	15.80	68.59	79.52	
MW-3A	14:55	94.64	14.99	23.02	79.65	
MW-3B	14:55	94.68	15.00	47.89	79.68	
MW-3C	14:55	94.66	15.04	69.02	79.62	
MW-4A	14:50	95.48	15.68	23.33	79.80	
MW-4B	14:50	95.18	15.47	47.69	79.71	
MW-4C	14:50	95.39	15.76	72.73	79.63	
MW-5A	14:45	95.32	15.97	22.76	79.35	
MW-5B	14:45	95.30	16.02	47.36	79.28	
MW-5C	14:45	95.39	16.39	73.32	79.00	
MW-6A	14:42	94.72	16.30	22.88	78.42	
MW-6B	14:42	94.60	16.17	47.73	78.43	
MW-6C	14:42	94.58	16.30	73.28	78.28	
MW-7A	14:35	95.48	16.51	23.58	78.97	
MW-7B	14:35	95.27	16.33	48.18	78.94	

Table 4

GROUNDWATER LEVEL MEASUREMENTS - 5 NOVEMBER 2014
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Measuring Point Designation	Time	TOC Elevation (NGVD29)	Depth to Water (ft BTOC)	Well Depth (ft)	Groundwater Elevation (NGVD29)	Field Observations
MW-7C	14:35	94.93	16.29	73.55	78.64	
MW-8A	14:15	94.67	15.27	22.76	79.40	
MW-8B	14:15	94.58	15.27	49.50	79.31	
MW-8C	14:15	94.50	15.69	73.99	78.81	
MW-9A	14:10	94.66	15.54	22.63	79.12	
MW-9B	14:10	94.63	15.63	49.33	79.00	
MW-9C	14:10	94.54	16.04	73.99	78.50	
MW-10A	14:05	96.25	17.50	22.43	78.75	
MW-10B	14:05	96.23	17.51	48.48	78.72	
MW-10C	14:05	96.36	17.99	73.83	78.37	
MW-11A	14:00	93.56	15.24	22.89	78.32	
MW-11B	14:00	93.59	15.43	48.03	78.16	
MW-11C	14:00	93.65	15.53	73.78	78.12	
MW-12A	13:55	95.10	16.57	23.27	78.53	
MW-12B	13:55	95.01	16.62	49.19	78.39	
MW-12C	13:55	95.10	16.77	73.79	78.33	
MW-13A	13:50	95.19	16.35	22.79	78.84	
MW-13B	13:50	95.12	16.29	47.46	78.83	
MW-13C	13:50	95.04	16.29	73.26	78.75	
MW-14A	Monitoring Well Abandoned 10 July 2007					
MW-14B	Monitoring Well Abandoned 10 July 2007					
MW-14C	Monitoring Well Abandoned 10 July 2007					
MW-15A	Monitoring Well Abandoned 10 July 2007					
MW-15B	Monitoring Well Abandoned 10 July 2007					
MW-15C	Monitoring Well Abandoned 10 July 2007					
MW-16A	Monitoring Well Abandoned 24 June 2013					
MW-16B	Monitoring Well Abandoned 24 June 2013					
MW-16C	Monitoring Well Abandoned 24 June 2013					
MW-16AR	13:45	95.01	14.84	21.00	80.17	
MW-16BR	13:45	94.97	15.29	44.00	79.68	
MW-16CR	13:45	95.03	15.57	73.00	79.46	
MW-17AR	13:40	94.84	14.59	24.07	80.25	
MW-17BR	13:40	94.78	14.62	48.45	80.16	
MW-17A	Monitoring Well Abandoned 5 March 2014					
MW-17B	Monitoring Well Abandoned 5 March 2014					
MW-17C	Monitoring Well Abandoned 5 March 2014					
MW-18A	Monitoring Well Abandoned 5 March 2014					
MW-18B	Monitoring Well Abandoned 5 March 2014					
MW-18C	Monitoring Well Abandoned 5 March 2014					
MW-19A	Monitoring Well Abandoned 5 March 2014					
MW-19B	Monitoring Well Abandoned 5 March 2014					
MW-19C	Monitoring Well Abandoned 5 March 2014					
MW-20A	Monitoring Well Abandoned 24 June 2013					
MW-20B	Monitoring Well Abandoned 24 June 2013					
MW-20C	Monitoring Well Abandoned 24 June 2013					
MW-21A	Monitoring Well Abandoned 5 March 2014					
MW-21B	Monitoring Well Abandoned 5 March 2014					

Table 4

**GROUNDWATER LEVEL MEASUREMENTS - 5 NOVEMBER 2014
21st SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Measuring Point Designation	Time	TOC Elevation (NGVD29)	Depth to Water (ft BTOC)	Well Depth (ft)	Groundwater Elevation (NGVD29)	Field Observations
MW-21C	Monitoring Well Abandoned 5 March 2014					
MW-22A	Monitoring Well Abandoned 11 November 2011					
MW-22B	Monitoring Well Abandoned 11 November 2011					
MW-22C	Monitoring Well Abandoned 11 November 2011					
MW-22AR	15:15	95.00	14.75	23.66	80.25	
MW-22BR	15:15	94.86	14.63	46.13	80.23	
MW-22CR	15:15	95.13	14.89	66.58	80.24	
MW-23A	15:10	97.90	17.55	28.03	80.35	
MW-23B	15:10	97.91	17.81	43.00	80.10	
MW-23C	15:10	97.93	17.88	67.32	80.05	
MW-24A	15:32	87.06	7.31	23.46	79.75	
MW-24B	15:32	87.05	7.31	43.10	79.74	
MW-25A	15:40	86.99	6.27	23.39	80.72	
MW-25B	15:40	86.67	5.97	41.48	80.70	
MW-26A	13:30	87.06	6.21	23.34	80.85	
MW-26B	13:30	86.83	6.55	42.87	80.28	
MW-24A Exp	15:50	86.97	6.35	24.21	80.62	
MW-25A Exp	NM	82.36	NM	24.76	NM	Not Measured, inaccessible, area flooded
MW-26A Exp	NM	82.01	NM	24.03	NM	Not Measured, inaccessible, area flooded
MW-27C Exp	NM	81.66	NM	58.37	NM	Not Measured, inaccessible, area flooded

Notes:

NAVD29 indicates the North American Vertical Datum of 1929

ft indicates feet

TOC indicates top of casing

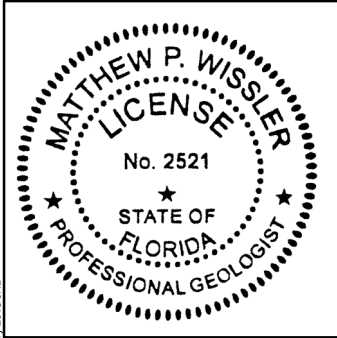
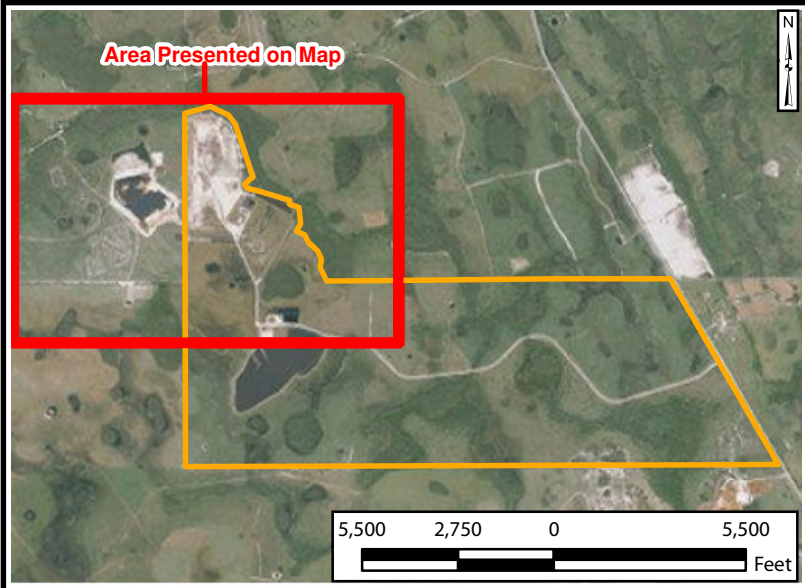
BTOC indicates below top of casing

Well caps removed site wide and wells allowed to stabilize prior to measurements.

Water Levels collected by Joe Terry

Weather conditions were clear, 72 degrees Fahrenheit

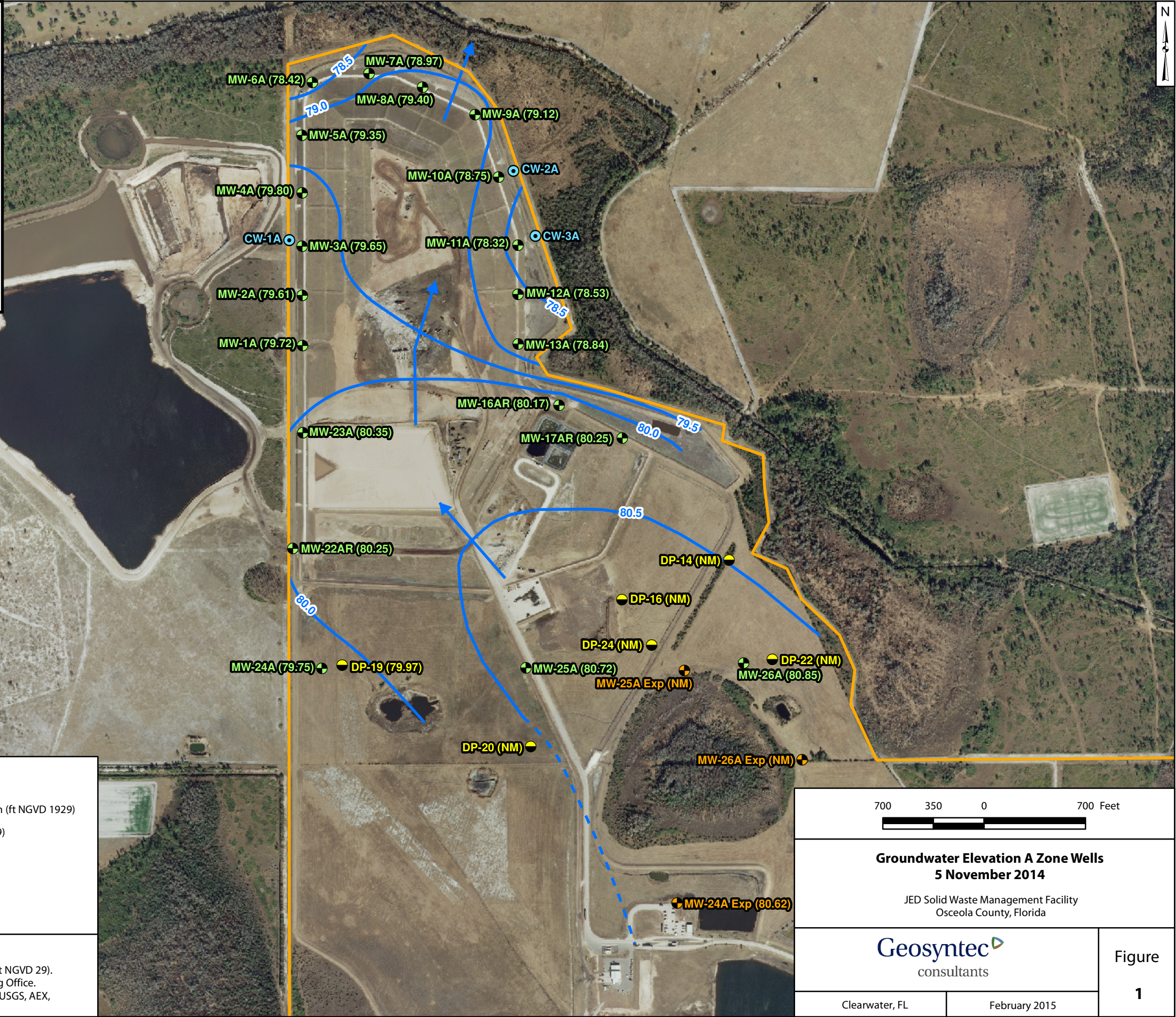
FIGURE



- Legend**
- Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
 - Expansion Permit Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
 - A Zone Piezometer Location showing Groundwater Elevation (ft NGVD 1929)
 - Compliance Monitoring Well Location
 - Groundwater Elevation Contour (ft NGVD 29)
 - Groundwater Flow Direction
 - Property Boundary

Notes:

1. NM indicates not measured.
2. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
3. Source of 2011 Imagery: Florida Department of Transportation, Surveying and Mapping Office.
4. Inset Imagery Source: World Imagery 1999 - Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community.



APPENDIX A

Water Quality Monitoring Certification FDEP Form 62-701.900(31)



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(31), F.A.C.

Form Title: Water Quality Monitoring Certification

Effective Date: January 6, 2010

Incorporated in Rule 62-701.510(9), F.A.C.

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

(1) Facility Name J.E.D. Soild Waste Management Facility

Address 1501 Omni Way

City Saint Cloud

Zip 34773

County Osceola

Telephone Number (407) 891-3720

(2) WACS Facility ID 89544

(3) DEP Permit Number SO49-0199726-022

(4) Authorized Representative's Name Mike Kaiser

Title Engineer

Address 1099 Miller Drive

City Altamonte Springs

Zip 32701

County Seminole

Telephone Number (904) 673-0446

Email address (if available) michael.kaiser@progressivewaste.com

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

1/12/15
(Date)

[Signature]

(Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Progressive Waste Solutions of FL, Inc.

Analytical Lab NELAC / HRS Certification # E82502

Lab Name ALS Environmental

Address 9143 Philips Highway, Suite 200 Jacksonville, Florida 32256

Phone Number (904) 739-2277

Email address (if available) Craig.Myers@ALSGlobal.com

Northwest District
160 Government Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Tempe Terrace, FL
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
239-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-8600

APPENDIX B

Monitoring Well Sampling Logs

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-1A		SAMPLE ID: MW-1A	
		DATE: 12 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet		STATIC DEPTH TO WATER (feet): 15.32		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (23 \text{ feet} - 15.32 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.2 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 19			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 19			PURGING INITIATED AT: 1225		PURGING ENDED AT: 1253		TOTAL VOLUME PURGED (gallons): 2.2	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1245	1.6	1.6	0.08	15.65	4.51	27.32	2258	0.419	8.9	clear	39.9
1250	0.4	2	0.08	15.65	4.51	27.33	2275	0.4	9	clear	36.8
1253	0.2	2.2	0.08	15.65	4.51	27.33	2278	0.39	9	clear	35.7
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>San Lake/PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>E. Terry</i>			SAMPLING INITIATED AT: <i>1255</i>		SAMPLING ENDED AT: <i>1305</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>19</i>				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y ☒ N ☐		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y ☒ N ☐ TUBING Y ☒ N (replaced) ☐							DUPLICATE: ☒ Y ☐ N <i>ST 11.12.14</i>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>MW-1A</i>	<i>3</i>	<i>CG</i>	<i>40 ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>8260</i>	<i>APP</i>	<i>300</i>	
<i>↓</i>	<i>3</i>	<i>CG</i>	<i>40 ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>	<i>APP</i>	<i>300</i>	
<i>↓</i>	<i>1</i>	<i>PE</i>	<i>500 ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>	<i>APP</i>	<i>300</i>	
<i>↓</i>	<i>1</i>	<i>PE</i>	<i>125 ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>	<i>APP</i>	<i>300</i>	
<i>MW-1A</i>	<i>1</i>	<i>PE</i>	<i>500 ml</i>	<i>None</i>	<i>None</i>		<i>TDS, Cl, NO3</i>	<i>APP</i>	<i>300</i>	
REMARKS: Weather: <i>Sunny, 76°F</i> Odor: <i>Sulfur-like</i> <i>Duplicate ID: MW-1A-Dup</i> <i>Dup sample Time: 1305 end: 1315</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; RFPF = Reverse Flow Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-2A		SAMPLE ID: MW-2A	
		DATE: 12 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jog Terry / PWSFL <i>Don Lake / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>Jog Terry</i>			SAMPLING INITIATED AT: <i>1155</i>		SAMPLING ENDED AT: <i>1205</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>19</i>				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y ☒ N		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y ☒ N				TUBING Y ☒ N (replaced)			DUPLICATE: Y ☒ N			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>MW-2A</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	
	3	CG	40 ml	None	None		8011		APP	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	
<i>MW-2A</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	
REMARKS: Weather: <i>Sunny, 75°F</i>										
Odor: <i>None</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-3A	SAMPLE ID: MW-3A	DATE: 12 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet		STATIC DEPTH TO WATER (feet): 14.97		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (22.5 \text{ feet} - 14.97 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.2 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 19			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 19			PURGING INITIATED AT: 0815		PURGING ENDED AT: 0900		TOTAL VOLUME PURGED (gallons): 3	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0845	2	2	0.07	15.11	5.10	26.00	1001	0.52	2.8	clear	9.5
0850	0.4	2.4	0.07	15.11	5.30	26.20	856	0.52	2.3	clear	8.5
0852	0.1	2.5	0.07	15.11	5.38	26.31	858	0.44	1.6	clear	9.2
0855	0.2	2.7	0.07	15.11	5.38	26.33	846	0.43	1.2	clear	9.3
0857	0.1	2.8	0.07	15.11	5.39	26.33	840	0.41	1.5	clear	9.2
0900	0.2	3	0.07	15.11	5.39	26.34	842	0.42	1.4	clear	9.3
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL San Luke/PWSFL				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 0900		SAMPLING ENDED AT: 0910	
PUMP OR TUBING DEPTH IN WELL (feet): 19				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW3A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP 175	
	3	CG	40 ml	None	None		8011		APP 175	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP 275	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP 275	
MW3A	1	PE	500 ml	None	None		TDS, Cl, NO3		APP 275	
REMARKS: Weather: Clear, 64°F										
Odor: none										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

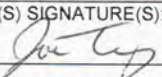
DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-4A	SAMPLE ID: MW-4A	DATE: 12 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet		STATIC DEPTH TO WATER (feet): 15.75		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (23 \text{ feet} - 15.75 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.2 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20			PURGING INITIATED AT: 0640		PURGING ENDED AT: 0735		TOTAL VOLUME PURGED (gallons): 4.4	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0725	3.6	3.6	0.08	16.18	5.17	26.10	897	0.419	5.3	clear	-36.2
0728	0.2	3.8	0.08	16.18	5.21	26.07	405	0.415	4.8	clear	-40.6
0730	0.2	4	0.08	16.18	5.22	26.08	907	0.44	4.2	clear	-41.1
0735	0.4	4.4	0.08	16.18	5.21	26.06	909	0.44	4.2	clear	-41.5
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): 			SAMPLING INITIATED AT: 0735		SAMPLING ENDED AT: 0745		
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
mw-4A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP		150
	3	CG	40 ml	None	None		8011		APP		150
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		300
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		300
mw-4A	1	PE	500 ml	None	None		TDS, Cl, NO3		APP		300
REMARKS: Weather: Clear, 57°F											
Odor: sulfur-like											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-5A		SAMPLE ID: MW-5A	
		DATE: 11/12/14	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet		STATIC DEPTH TO WATER (feet): 16.10		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (22.5 \text{ feet} - 16.10 \text{ feet}) \times 0.16 \text{ gallons/foot} = 20.38 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20			PURGING INITIATED AT: 935		PURGING ENDED AT: 1023		TOTAL VOLUME PURGED (gallons): 4.4	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1015	3.6	3.6	0.09	16.64	4.97	26.70	206	0.76	18.5	yellowish	38.0
1018	0.3	3.9	0.09	16.64	4.96	26.69	206	0.72	17.9	" "	39.2
1023	0.5	4.4	0.09	16.64	4.97	26.72	205	0.56	17.5	" "	35.8
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: 1025		SAMPLING ENDED AT: 1035	
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-5A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	350
	3	CG	40 ml	None	None		8011		APP	350
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	350
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	350
MW-5A	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	350
REMARKS: Weather: Mostly sunny, 71°F										
Odor: sulfur-like										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-6A		SAMPLE ID: MW-6A	
		DATE: 11 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 12.5 feet TO 22.5 feet		STATIC DEPTH TO WATER (feet): 16.18		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (22.5 \text{ feet} - 16.18 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.0 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20			PURGING INITIATED AT: 1405		PURGING ENDED AT: 1500		TOTAL VOLUME PURGED (gallons): 4.4	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1445	3.2	3.2	0.08	16.35	5.17	27.00	436	0.67	1.5	clear	14.9
1450	0.4	3.6	0.08	16.35	5.17	27.02	438	0.46	1.7	clear	11.2
1455	0.4	4	0.08	16.35	5.19	27.05	437	0.45	1.4	clear	11.4
1500	0.4	4.4	0.08	16.35	5.17	27.07	444	0.45	1.2	clear	10.8
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>San Lake / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: <i>1500</i>		SAMPLING ENDED AT: <i>1510</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:		FILTER SIZE: _____ µm			
FIELD DECONTAMINATION: PUMP Y <i>(N)</i>				TUBING Y <i>(N)</i> (replaced)		DUPLICATE: Y <i>(N)</i>					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>mw-6A</i>	<i>3</i>	<i>CG</i>	<i>40 ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>8260</i>		<i>APP</i>		<i>300</i>
<i>↓</i>	<i>3</i>	<i>CG</i>	<i>40 ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>		<i>APP</i>		<i>300</i>
<i>↓</i>	<i>1</i>	<i>PE</i>	<i>500 ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>		<i>APP</i>		<i>300</i>
<i>↓</i>	<i>1</i>	<i>PE</i>	<i>125 ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>		<i>APP</i>		<i>300</i>
<i>mw-6A</i>	<i>1</i>	<i>PE</i>	<i>500 ml</i>	<i>None</i>	<i>None</i>		<i>TDS, Cl, NO3</i>		<i>APP</i>		<i>300</i>
REMARKS: Weather: <i>Clear, 77°F</i>											
Odor: <i>none</i>											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-7A		SAMPLE ID: MW-7A	
		DATE: 11 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT:		SAMPLING ENDED AT:	
Joe Terry / PWSFL Jon Luke/PWSFL				Joe Terry			1315		1325	
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
mw-7A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP 300	
	3	CG	40 ml	None	None		8011		APP 300	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP 300	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP 300	
mw-7A	1	PE	500 ml	None	None		TDS, Cl, NO3		APP 300	
REMARKS: Weather: clear, 77°F, 3 mph wind										
Odor: none										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-8A	SAMPLE ID: MW-8A	DATE: 11 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 2.5 feet to 22.5 feet		STATIC DEPTH TO WATER (feet): 15.76		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (22.5 \text{ feet} - 15.76 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.1 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20			PURGING INITIATED AT: 1130		PURGING ENDED AT: 1210		TOTAL VOLUME PURGED (gallons): 2	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1200	1.5	1.5	0.05	16.20	4.25	25.85	1717	0.62	0.97	clear	35.3
1205	0.25	1.75	0.05	14.20	4.24	25.75	1716	0.58	0.80	clear	35.7
1210	0.25	2.00	0.05	16.20	4.25	25.83	1716	0.51	0.74	clear	34.4
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Joe Terry</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 1210		SAMPLING ENDED AT: 1220		
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>mw-B4</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP		<i>200</i>
	3	CG	40 ml	None	None		8011		APP		<i>200</i>
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		<i>200</i>
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		<i>200</i>
<i>mw-B4</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP		<i>200</i>
REMARKS: Weather: <i>clear, 74°F, 3-5 mph wind</i>											
Odor: <i>none</i>											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-9A	SAMPLE ID: MW-9A		DATE: 11 Nov 2014

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 12 feet to 22 feet		STATIC DEPTH TO WATER (feet): 15.98		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (22.4 \text{ feet} - 15.98 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 12.48 \text{ feet}) + 0.12 \text{ gallons} = 0.032 \text{ gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 19			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 19			PURGING INITIATED AT: 1000		PURGING ENDED AT: 1055		TOTAL VOLUME PURGED (gallons): 4.4	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1045	3.6	3.6	0.08	16.17	5.18	27.98	321	0.42	7.68	yellowish	4.5
1050	0.4	4.0	0.08	16.17	5.18	27.96	304	0.42	8.15	yellowish	0.2
1055	0.4	4.4	0.08	16.17	5.19	27.93	301	0.40	8.48	yellowish	0.7
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): 			SAMPLING INITIATED AT: 1055		SAMPLING ENDED AT: 1105	
PUMP OR TUBING DEPTH IN WELL (feet): 19				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y (N)		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N (replaced))		DUPLICATE: Y (N)				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
mw-9A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	300
	3	CG	40 ml	None	None		8011		APP	300
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	300
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	300
mw-9A	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	300
REMARKS: Weather: clear, 72°F, 3-5 mph wind										
Odor: none										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; RFPF = Reverse Flow Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-10A	SAMPLE ID: MW-10A	DATE: 11 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 12 feet to 22 feet		STATIC DEPTH TO WATER (feet): 17.49		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (22 \text{ feet} - 17.49 \text{ feet}) \times 0.16 \text{ gallons/foot} = 0.7 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20			PURGING INITIATED AT: 835		PURGING ENDED AT: 0925		TOTAL VOLUME PURGED (gallons): 3.5	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
915	2.8	2.8	0.07	17.62	5.04	26.51	226	0.56	3.23	clear	17.7
920	0.35	3.15	0.07	17.62	5.03	26.47	219	0.58	2.34	clear	16.1
925	0.35	3.5	0.07	17.62	5.04	26.46	216	0.59	2.53	clear	15.3
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>son lake / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: 925		SAMPLING ENDED AT: 935	
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
mw-10A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	250
	3	CG	40 ml	None	None		8011		APP	250
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	250
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	250
mw-10A	1	PE	500 ml	None	None		TDS, Cl, NO3		APP	250
REMARKS: Weather: Clear, 61° =										
Odor:										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

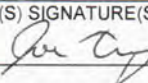
DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-11A	SAMPLE ID: MW-11A	DATE: 11 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): 			SAMPLING INITIATED AT: 0755		SAMPLING ENDED AT: 0805	
PUMP OR TUBING DEPTH IN WELL (feet): 19				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: (Y) (N) <i>QT 11-11-14</i>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>MW-11A</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	<i>250</i>
	3	CG	40 ml	None	None		8011		APP	<i>250</i>
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	<i>250</i>
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	<i>250</i>
<i>MW-11A</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	<i>250</i>
REMARKS: Weather: <i>Clear, 59°F</i>										
Odor: <i>Sulfur-like</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-124		SAMPLE ID: MW-124	
		DATE: 10 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Joe Terry / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: <i>1510</i>		SAMPLING ENDED AT: <i>1520</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y ☒ N ☐ Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y ☒ N ☐ TUBING Y ☒ N ☐ (replaced)						DUPLICATE: Y ☒ N ☐				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>MW-12A</i>	3	CG	40 ml	HCL	Prefilled by lab		8260	APP	<i>250</i>	
	3	CG	40 ml	None	None		8011	APP	<i>250</i>	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	<i>250</i>	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3	APP	<i>250</i>	
<i>MW-12A</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃	APP	<i>250</i>	
REMARKS: Weather: <i>overcast, 3-5 mph wind, 72°F</i>										
Odor: <i>none</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-13A		SAMPLE ID: MW-13A	
		DATE: 10 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 2.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 16.16	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

$$= (22.5 \text{ feet} - 16.16 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.00 \text{ gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 1305	PURGING ENDED AT: 1350	TOTAL VOLUME PURGED (gallons): 2.7
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[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1350	SAMPLING ENDED AT: 1400
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PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ μm
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FIELD DECONTAMINATION:	PUMP	Y	(N)	TUBING	Y	(N) (replaced)	DUPLICATE:	Y	(N)
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[illegible]

REMARKS: Weather: m. cloudy, 71°F

Odor: *ကောင်း*

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; Q = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-16 AR	SAMPLE ID: MW-16 AR	DATE: 10 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: <u>13.5</u> feet to <u>23.5</u> feet	STATIC DEPTH TO WATER (feet): <u>14.92</u>	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (\underline{23.93} \text{ feet} - \underline{14.92} \text{ feet}) \times 0.16 \text{ gallons/foot} = \underline{1.5} \text{ gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$				

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016									
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)									

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Joe Terry / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: <i>1225</i>		SAMPLING ENDED AT: <i>1235</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <i>(N)</i>				TUBING Y <i>(N)</i> (replaced)			DUPLICATE: Y <i>(N)</i>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>MW-16A</i>	<i>3</i>	<i>CG</i>	<i>40 ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>8260</i>		<i>APP</i>		<i>250</i>
<i>↓</i>	<i>3</i>	<i>CG</i>	<i>40 ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>		<i>APP</i>		<i>250</i>
<i>↓</i>	<i>1</i>	<i>PE</i>	<i>500 ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>		<i>APP</i>		<i>250</i>
<i>↓</i>	<i>1</i>	<i>PE</i>	<i>125 ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>		<i>APP</i>		<i>250</i>
<i>MW-16A</i>	<i>1</i>	<i>PE</i>	<i>500 ml</i>	<i>None</i>	<i>None</i>		<i>TDS, Cl, NO3</i>		<i>APP</i>		<i>250</i>
REMARKS: Weather: <i>overcast, light rain, 71°F</i>											
Odor: <i>none</i>											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-174R	SAMPLE ID: MW-174R	DATE: 6 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 13.5 feet to 23.5 feet		STATIC DEPTH TO WATER (feet): 14.63		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (24.07 \text{ feet} - 14.63 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.5 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 19			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 19			PURGING INITIATED AT: 0730		PURGING ENDED AT: 0840		TOTAL VOLUME PURGED (gallons): 4.2	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0830	3.6	3.6	0.06	14.98	4.53	25.17	145	0.75	0.1	clear	162.2
0835	0.3	3.9	0.06	14.98	4.52	25.19	145	0.70	0.1	clear	162.4
0840	0.3	4.2	0.06	14.98	4.52	25.18	145	0.69	0.3	clear	162.1
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 0845		SAMPLING ENDED AT: 0855	
PUMP OR TUBING DEPTH IN WELL (feet): 19				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-17AR	3	CG	40 ml	HCL	Prefilled by lab		8260		APP 200	
	3	CG	40 ml	None	None		8011		APP 200	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP 230	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP 230	
MW-17AR	1	PE	500 ml	None	None		TDS, Cl, NO3		APP 230	
REMARKS: Weather: clear, 64°F, light breeze										
Odor: initial turbidity: 1.2 NTU										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-22AR	SAMPLE ID: MW-22AR	DATE: 13 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 14.85	PURGE PUMP TYPE OR BAILER: PP
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$$= (23 \text{ feet} - 14.05 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.3 \text{ gallons}$$
$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 46 \text{ feet}) + 0.12 \text{ gallons} = 0.14 \text{ gallons}$$

TIME	VOLUME PURGED	CUMUL. VOLUME PURGED	PURGE RATE	DEPTH TO WATER	pH (standard units)	TEMP. (°C)	COND. (μS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0735	SAMPLING ENDED AT: 0745
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FIELD DECONTAMINATION:			PUMP	Y	(N)	TUBING	Y	(N) replaced	DUPLICATE:	Y	(N)	Collected
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION	ANALYSIS	RESULTS	REMARKS
				Cylindrical Disk

REMARKS: Weather: Clear, 54°F
Equipment Blank C 0800 Collected in equipment blank. Used pump & new tubing, and collected for same parameters as C60 sample w/ high suspended solids.
Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-23A	SAMPLE ID: MW-23A	DATE: 11/12/14	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: 1415		SAMPLING ENDED AT: 1425	
PUMP OR TUBING DEPTH IN WELL (feet): 22				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y <u>N</u> Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y <u>N</u>				TUBING Y <u>N</u> (replaced)			DUPLICATE: Y <u>N</u>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-23A	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	
	3	CG	40 ml	None	None		8011		APP	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	
MW-23A	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	
REMARKS: Weather: Mostly sunny, 77°F										
Odor: sulfur-like										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-24A	SAMPLE ID: MW-24A	DATE: 6 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 7.25	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (23 feet - 7.25 feet) X 0.16 gallons/foot = 2.5 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 28 \text{ feet}) + 0.12 \text{ gallons} = .2 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 11:35	PURGING ENDED AT: 12:10	TOTAL VOLUME PURGED (gallons): 3.5
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 12/15	SAMPLING ENDED AT: 12/35
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PUMP OR TUBING DEPTH IN WELL (feet): 18	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <u>N</u> Filtration Equipment Type:	FILTER SIZE: _____ μ m
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FIELD DECONTAMINATION:	PUMP	Y	N	TUBING	Y	N (replaced)	DUPLICATE:	Y	N
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REMARKS: Weather: clear, 92% -

Odor: none initial turbidity: 2.2 NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-254	SAMPLE ID: MW-254	DATE: 6 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 6.78	PURGE PUMP TYPE OR BAILER: PP
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$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \quad \text{gallons/foot} = \quad \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0026 gallons/foot X 25 feet) + 0.12 gallons = 0.2 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1105	PURGING ENDED AT: 1310	TOTAL VOLUME PURGED (gallons): 12.5
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Don Lake/PLSFL</i>	SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>	SAMPLING INITIATED AT: <i>1310</i>	SAMPLING ENDED AT: <i>1320</i>
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PUMP OR TUBING DEPTH IN WELL (feet): 18	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) FILTER SIZE: 150 µm
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FIELD DECONTAMINATION:	PUMP	Y	N	TUBING	Y	N (replaced)	DUPLICATE:	Y	N
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REMARKS: Weather: Clear, 82%

Odor: none Initial turbidity: 2.2 NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
 RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: <i>MW-26A</i>	SAMPLE ID: <i>MW-26A</i>	DATE: <i>6 Nov 2014</i>	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 6.241	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				
$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 25 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$				

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016									
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)									

[illegible]

Odor: none initial turbidity: 7.3 color: clear

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
 RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-1B		SAMPLE ID: MW-1B	DATE: 12 Nov 2014

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 37.5 feet TO 47.5 feet		STATIC DEPTH TO WATER (feet): 15.20		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (feet - feet) X 0.16 gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0 gallons + (0.0026 gallons/foot X 55 feet) + 0.12 gallons = 0.3 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43			PURGING INITIATED AT: 1225		PURGING ENDED AT: 1240		TOTAL VOLUME PURGED (gallons): 1.2	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1230	0.4	0.4	0.08	15.27	4.42	26.71	1001	1.63	0.58	clear	56.2
1235	0.4	0.8	0.08	15.27	4.39	26.67	994	1.20	0.44	clear	57.1
1240	0.4	1.2	0.08	15.27	4.38	26.77	986	1.08	0.74	clear	55.1
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Son Lake / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>K. P. Lake</i>			SAMPLING INITIATED AT: <i>1240</i>		SAMPLING ENDED AT: <i>1250</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>43</i>				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <i>(N)</i>				TUBING Y <i>(N)</i> (replaced)		DUPLICATE: Y <i>(N)</i>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>MW-1B</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	
	3	CG	40 ml	None	None		8011		APP	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	
<i>MW-1B</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	
REMARKS: Weather: <i>76°F, Sunny</i>										
Odor: <i>sulfur-like</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-2B	SAMPLE ID: MW-2B	DATE: 12 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 38 feet to 48 feet	STATIC DEPTH TO WATER (feet): 15.50	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				
$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 3 \text{ feet}) + 0.12 \text{ gallons} = 0.14 \text{ gallons}$				

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Joe Terry / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 1140		SAMPLING ENDED AT: 1150	
PUMP OR TUBING DEPTH IN WELL (feet): 43				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-2B	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	250
	3	CG	40 ml	None	None		8011		APP	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	
MW-2B	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	
REMARKS: Weather: Sunny, 75°F										
Odor: None										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-3B	SAMPLE ID: MW-3B	DATE: 12 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>For Lake/PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 845		SAMPLING ENDED AT: 855		
PUMP OR TUBING DEPTH IN WELL (feet): 43				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y ☒ N ☐ Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y ☒ N ☐				TUBING Y ☒ N ☐ (replaced)			DUPLICATE: Y ☒ N ☐				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
mw-3B	3	CG	40 ml	HCL	Prefilled by lab		8260		APP		200
	3	CG	40 ml	None	None		8011		APP		200
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		275
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		275
mw-3B	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP		275
REMARKS: Weather: Clear, 64°F											
Odor: none											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-4B	SAMPLE ID: MW-4B	DATE: 12 Nov 2014	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet		STATIC DEPTH TO WATER (feet): 15.51		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (feet – feet) X 0.16 gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0 gallons + (0.0026 gallons/foot X 56 feet) + 0.12 gallons = 0.3 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 42			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 42			PURGING INITIATED AT: 0640		PURGING ENDED AT: 0710		TOTAL VOLUME PURGED (gallons): 1.8	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0700	1.2	1.2	0.06	15.74	3.85	26.09	1915	0.62	0.6	clear	89.9
0703	0.2	1.4	0.06	15.74	3.84	26.09	1909	0.59	1	clear	90.5
0710	0.4	1.8	0.06	15.74	3.84	26.07	1907	0.58	1.7	clear	90.0
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 0710		SAMPLING ENDED AT: 0720	
PUMP OR TUBING DEPTH IN WELL (feet): 42				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-48	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	225
	3	CG	40 ml	None	None		8011		APP	225
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	225
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	225
MW-48	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	225
REMARKS: Weather: Clear, 57°F										
Odor: None										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-5B		SAMPLE ID: MW-5B	
		DATE: 11/12/14	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet	STATIC DEPTH TO WATER (feet): 16.12	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 60 \text{ feet}) + 0.12 \text{ gallons} = 0.15 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 42	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 935	PURGING ENDED AT: 0955	TOTAL VOLUME PURGED (gallons): 16
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>	SAMPLING INITIATED AT: 955	SAMPLING ENDED AT: 1005
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PUMP OR TUBING DEPTH IN WELL (feet): 42	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
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FIELD DECONTAMINATION:	PUMP	Y	(N)	TUBING	Y	(N)(replaced)	DUPLICATE:	Y	(N)
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REMARKS: Weather: Mostly sunny, 71° F
Odor: sulfur-like

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+5$ NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-6B	SAMPLE ID: MW-6B	DATE: 11 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet	STATIC DEPTH TO WATER (feet): 16.04	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (\text{feet} - \text{feet}) \times 0.16 \text{ gallons/foot} = \text{gallons}$$

	feet	feet	X	gallons/feet
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY			X	TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 52 \text{ feet}) + 0.12 \text{ gallons} = 0.3 \text{ gallons}$$

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 14105-

PURGING
ENDED AT: 1430

TOTAL VOLUME
PURGED (gallons): 1.75

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02: 1" = 0.04: 1.25" = 0.06: 2" = 0.16: 3" = 0.37: 4" = 0.65: 5" = 1.02: 6" = 1.47: 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>	SAMPLING INITIATED AT: 1430	SAMPLING ENDED AT: 1440
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PUMP OR TUBING
DEPTH IN WELL (feet): 42

TUBING
MATERIAL CODE: HDPE

SAMPLING
INITIATED AT: 1430

SAMPLING
ENDED AT: 1440

PUMP OR TUBING
DEPTH IN WELL (feet): 42

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: μm

FIELD DECONTAMINATION:

PUMP

1

TUBING Y (N) (replaced)

DUPLICATE:

N

SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION (including wet ice)

INTENDED
ANALYSIS AND/OR
METHOD

SAMPLING
EQUIPMENT
CODE

SAMPLE PUMP
FLOW RATE
(ml. per minute)

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE FLOW RATE (mL per minute)
NW-6B	3	CG	40 ml	HCL	Prefilled by lab		8260	APP	250
	3	CG	40 ml	None	None		8011	APP	250
	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	250
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3	APP	250
NW-6B	1	PE	500 ml	None	None		TDS, Cl, NO ₃	APP	250

REMARKS: Weather: clear, 77°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-7B		DATE: 11 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 37.5 feet to 47.5 feet	STATIC DEPTH TO WATER (feet): 16.69 ft	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \quad \text{gallons/foot} = \quad \text{gallons}$$

	feet	feet	X	gallons/foot
EQUIPMENT VOLUME PURGE:	1 EQUIPMENT VOL.	= PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME		

$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times \frac{52.5}{42.5} \text{ feet}) + 0.12 \text{ gallons} = 0.25 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 42.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 1250	PURGING ENDED AT: 1330	TOTAL VOLUME PURGED (gallons): 3.2
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Joe Terry / PWSFL</i>	SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>	SAMPLING INITIATED AT: 1330	SAMPLING ENDED AT: 1340
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PUMP OR TUBING DEPTH IN WELL (feet): 43	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
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FIELD DECONTAMINATION:	PUMP	Y	N	TUBING	Y	N(replaced)	DUPLICATE:	Y	N
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REMARKS: Weather: clear, 77°F, 3 mph wind

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-8R		SAMPLE ID: MW-8B	
		DATE: 11 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Don Lake/PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: <i>1150</i>		SAMPLING ENDED AT: <i>1200</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>45</i>				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y ☒ N			FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y ☒ TUBING Y ☒ (replaced)						DUPLICATE: Y ☒				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>mw-9B</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	<i>175</i>
	3	CG	40 ml	None	None		8011		APP	<i>175</i>
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	<i>300</i>
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	<i>300</i>
<i>mw-9B</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	<i>300</i>
REMARKS: Weather: <i>clear, 74°F, 3-5 mph wind</i>										
Odor: <i>none</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-9B	SAMPLE ID: MW-9B	DATE: 11 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Don Lake/PWSFL</i>				SAMPLER(S) / SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: <i>1030</i>		SAMPLING ENDED AT: <i>1040</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>44</i>				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <i>(N)</i>				TUBING Y <i>(N)</i> (replaced)			DUPLICATE: Y <i>(N)</i>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>mw-9B</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP		<i>300</i>
	3	CG	40 ml	None	None		8011		APP		<i>300</i>
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		<i>300</i>
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		<i>300</i>
<i>mw-9B</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP		<i>300</i>
REMARKS: Weather: <i>Clear, 72°F, 3-5 mph wind</i>											
Odor: <i>none</i>											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-10B		SAMPLE ID: MW-10B	
		DATE: 11 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Sanlake/PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>K. J. G. H.</i>			INITIATED AT: <i>855</i>		SAMPLING ENDED AT: <i>905</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>43</i>				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y <i>(N)</i>				TUBING Y <i>(N)</i> (replaced)			DUPLICATE: Y <i>(N)</i>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
<i>MW-108</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP	
	3	CG	40 ml	None	None		8011		APP	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP	
<i>MW-108</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP	
REMARKS: Weather: <i>Clear, 61°F</i>										
Odor: <i>none</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-11B		SAMPLE ID: MW-11B	
		DATE: 11/25/2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 37.5 feet to 47.5 feet	STATIC DEPTH TO WATER (feet): 15.11	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 55 \text{ feet}) + 0.12 \text{ gallons} = 0.3 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 0655	PURGING ENDED AT: 0725	TOTAL VOLUME PURGED (gallons): 1.5
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0725	SAMPLING ENDED AT: 0735
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PUMP OR TUBING DEPTH IN WELL (feet): 43	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y ☒ N Filtration Equipment Type: _____	FILTER SIZE: _____ μ m
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FIELD DECONTAMINATION:			PUMP	Y	(N)	TUBING	Y	(N/replaced)	DUPLICATE:	Y	(N)
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SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION (including wet ice)

INTENDED
ANALYSIS AND/OR
METHOD

SAMPLING
EQUIPMENT
CODE

SAMPLE PUMP
FLOW RATE
(mL per minute)

REMARKS: Weather: Clear 59°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-12B	SAMPLE ID: MW-12B		DATE: 10 Nov 2014

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 39 feet to 49 feet	STATIC DEPTH TO WATER (feet): 16.29	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				
$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 60 \text{ feet}) + 0.12 \text{ gallons} = 0.3 \text{ gallons}$				

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016									
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)									

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			PLACING INITIATED AT: 1450		SAMPLING ENDED AT: 1500	
PUMP OR TUBING DEPTH IN WELL (feet): 44				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N)		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N)(replaced)							DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
NW-12B	3	CG	40 ml	HCL	Prefilled by lab		8260	APP	175	
	3	CG	40 ml	None	None		8011	APP	175	
	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	300	
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3	APP	300	
NW-12B	1	PE	500 ml	None	None		TDS, Cl, NO ₃	APP	300	
REMARKS: Weather: overcast, 3-5 mph wind, 72°F										
Odor: none										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-13B	SAMPLE ID: MW-13B	DATE: 10 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>Jon Lake / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: 1325		SAMPLING ENDED AT: 1335		
PUMP OR TUBING DEPTH IN WELL (feet): 42				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y <u>(N)</u> Filtration Equipment Type:		FILTER SIZE: ____ µm		
FIELD DECONTAMINATION: PUMP Y <u>(N)</u>				TUBING Y <u>(N)</u> (replaced)			DUPLICATE: Y <u>(N)</u>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>MW-13B</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP		<i>200</i>
	3	CG	40 ml	None	None		8011		APP		<i>200</i>
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		<i>350</i>
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		<i>350</i>
<i>MW-13B</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP		<i>350</i>
REMARKS: Weather: <i>m. cloudy, 71°F</i>											
Odor: <i>none</i>											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-163R		SAMPLE ID: MW-163R	
		DATE: 10 Nov 2014	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL <i>304 Lnk / PWSFL</i>				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: <i>1200</i>		SAMPLING ENDED AT: <i>1210</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>42</i>				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <i>(N)</i>				TUBING Y <i>(N)</i> (replaced)			DUPLICATE: Y <i>(N)</i>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>MW-163R</i>	3	CG	40 ml	HCL	Prefilled by lab		8260		APP		<i>300</i>
<i>↓</i>	3	CG	40 ml	None	None		8011		APP		<i>300</i>
<i>↓</i>	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		<i>300</i>
<i>↓</i>	1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		<i>300</i>
<i>MW-163R</i>	1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP		<i>300</i>
REMARKS: Weather: <i>overcast, light rain, 71°F</i>											
Odor: <i>none</i>											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-22BR		SAMPLE ID: MW-22BR	
		DATE: 13 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 36 feet to 46 feet	STATIC DEPTH TO WATER (feet): 14.73	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.3 \text{ gallons}$$
[illegible]

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA	
SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S):
SAMPLING INITIATED AT: 0700	SAMPLING ENDED AT: 0710

FIELD DECONTAMINATION:		PUMP	Y	(N)	TUBING	Y	(N) (replaced)	DUPLICATE:	Y	(N)
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[illegible]

REMARKS: Weather: Clear, 59°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
 RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-23B		SAMPLE ID: MW-23B	
		DATE: 11/12/14	

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 0.25		WELL SCREEN INTERVAL DEPTH: 32 feet to 42 feet		STATIC DEPTH TO WATER (feet): 17.81		PURGE PUMP TYPE OR BAILER: PP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (feet - feet) X 0.16 gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0 gallons + (0.0026 gallons/foot X 47 feet) + 0.12 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 37			FINAL PUMP OR TUBING DEPTH IN WELL (feet): 37			PURGING INITIATED AT: 1335		PURGING ENDED AT: 1455		TOTAL VOLUME PURGED (gallons): 1.6	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1445	0.8	0.8	0.08	17.85	4.22	27.16	484	0.53	0.85	clear	87.7
1450	0.4	1.2	0.08	17.85	3.77	27.23	481	0.47	0.69	clear	94.4
1455	0.4	1.6	0.08	17.85	4.11	27.10	479	0.43	0.75	clear	91.9
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: 1455		SAMPLING ENDED AT: 1525			
PUMP OR TUBING DEPTH IN WELL (feet): 37				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y N Filtration Equipment Type:		FILTER SIZE: _____ µm			
FIELD DECONTAMINATION: PUMP Y ☒ TUBING Y ☒ (replaced)							DUPLICATE: ☒ ☒ DT 11-12-14					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE		# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
mw-23B		3	CG	40 ml	HCL	Prefilled by lab		8260		APP		150
		3	CG	40 ml	None	None		8011		APP		150
		1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		300
		1	PE	125 ml	H2SO4	Prefilled by lab		NH3		APP		300
mw-23B		1	PE	500 ml	None	None		TDS, Cl, NO ₃		APP		300
REMARKS: Weather: Mostly Sunny, 77°F												
Odor: Sulfur-like												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-24B	SAMPLE ID: MW-24B	DATE: 6 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 33 feet to 43 feet	STATIC DEPTH TO WATER (feet): 7.23	PURGE PUMP TYPE OR BAILER: ESP
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 38	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 38	PURGING INITIATED AT: 1130	PURGING ENDED AT: 1240	TOTAL VOLUME PURGED (gallons): 32.5
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PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

Revision Date: March 1, 2014

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-25B		SAMPLE ID: MW-25B	
		DATE: 6 Nov 2014	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 31 feet to 41 feet	STATIC DEPTH TO WATER (feet): 5.97	PURGE PUMP TYPE OR BAILER: ESP
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(only fill out if applicable)

$$= (\text{feet} - \text{feet}) \times 0.16 \text{ gallons/foot} = \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.006 \text{ gallons/foot} \times 570 \text{ feet}) + 0.12 \text{ gallons} = 0.45 \text{ gallons}$$

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 1105

PURGING
ENDED AT: 1350

TOTAL VOLUME
PURGED (gallons): 66

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1355	SAMPLING ENDED AT: 1410
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PUMP OR TUBING
DEPTH IN WELL (feet): 36

TUBING
MATERIAL CODE: HDPE

SAMPLING
INITIATED AT: 1355

SAMPLING
ENDED AT: 1410

PUMP OR TUBING
DEPTH IN WELL (feet): 36

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: 1 μm

FIELD DECONTAMINATION: PUMP Y N

TUBING Y (N) (replaced)

DUPLICATE: Y

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-25B	3	CG	40 ml	HCL	Prefilled by lab		8260	ESP	175
	3	CG	40 ml	None	None		8011	ESP	175
	1	PE	500 ml	HNO3	Prefilled by lab		Metals	ESP	350
	1	PE	125 ml	H2SO4	Prefilled by lab		NH3	ESP	350
MW-25B	1	PE	500 ml	None	None		TDS, Cl, NO ₃	ESP	350
MW-25B	1	PE	500 ml	HNO ₃	Prefilled by lab		Dissolved Metals	ESP	

REMARKS: Weather: Clear, 92°F

Odor: none

initial turbidity: $> 3,000 \text{ NTU}$

Turbidity after 4 liter: 103 NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

APPENDIX C

Field Instrument Calibration Logs

Field Instrument Calibration Record

Site: JED SWDF Date: 6 Nov 2014

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173A L

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 5:00

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
3AH355	Aug 2015	pH = 4.00	4.13	0.13	0.2	Y	C	JT
C358930	Feb 7, 2015	pH = 7.00	7.00	0	0.2	Y	C	JT
140820C	March 2016	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.12	10.12	10%	Y	C	JT
140717A	Jan 2015	Conductivity = 100 µS/cm	102	2	5%	Y	C	JT
4AA137	Jan 2015	Conductivity = 500 µS/cm	505	1	5%	Y	C	JT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = 8.55 mg/L @ 23.2°C	8.60	0.05	0.2 mg/l	Y	I	JT

Date: 11-9-2014 Time: 1830

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
C359207	Feb 15, 2015	pH = 4.00	4.00	0	0.2	Y	I	JT
C358930	Feb 7, 2015	pH = 7.00	7.00	0	0.2	Y	I	JT
140820C	March 2016	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.25	2.5	10%	Y	C	JT
140717A	Jan 2015	Conductivity = 100 µS/cm	103	3	5%	Y	C	JT
4AA137	Jan 2015	Conductivity = 500 µS/cm	513	2.6	5%	Y	C	JT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = 8.66 mg/L @ 22.5°C	8.65	0.01	0.2 mg/l	Y	I	JT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

Field Instrument Calibration Record

Site: JED Date: 10 Nov 2014

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 1940

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
3AH355	Aug 2015	pH = 4.00	4.11	0.11	0.2	y	C	DT
C358930	Feb 7, 2015	pH = 7.00	6.97	0.03	0.2	y	C	DT
140820C	March 2016	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.07	0.7	10%	y	C	DT
140717A	Jan 2015	Conductivity = 100 µS/cm	101	1	5%	y	C	DT
4AA137	Jan 2015	Conductivity = 500 µS/cm	496	0.8	5%	y	C	DT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = 8.6 mg/L @ 22.3°C	8.61	0	0.2 mg/l	y	I	DT

Date: 11 Nov 2014 Time: 2000

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
C359207	Feb 15, 2015	pH = 4.00	4.00	0	0.2	y	I	DT
C358930	Feb 7, 2015	pH = 7.00	7.00	0	0.2	y	I	DT
140820C	March 2016	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.21	2.1	10%	y	C	DT
140717A	Jan 2015	Conductivity = 100 µS/cm	102	2	5%	y	C	DT
4AA137	Jan 2015	Conductivity = 500 µS/cm	499	0.2	5%	y	C	DT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = 8.53 mg/L @ 23.3°C	8.53	0	0.2 mg/l	y	C	DT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

Field Instrument Calibration Record

Site: SED Date: 12 Nov 2014

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173A

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 1920

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
3AH355	Aug 2015	pH = 4.00	4.00	0	0.2	Y	I	JT
C358930	Feb 7, 2015	pH = 7.00	7.00	0	0.2	Y	I	JT
140820C	March 2016	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.17	1.7	10%	Y	C	JT
140717A	Jan 2015	Conductivity = 100 µS/cm	104	4	5%	Y	C	JT
4AA137	Jan 2015	Conductivity = 500 µS/cm	510	2	5%	Y	C	JT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = 8.22 mg/L @ 25.3°C	8.26	0.04	0.2 mg/l	Y	I	JT

Date: 13 Nov 2014 Time: 1730

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
C359207	Feb 15, 2015	pH = 4.00	4.02	0.02	0.2	Y	C	JT
C358930	Feb 7, 2015	pH = 7.00	7.06	0.06	0.2	Y	C	JT
140820C	March 2016	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.22	2.2	10%	Y	C	JT
140717A	Jan 2015	Conductivity = 100 µS/cm	103	3	5%	Y	C	JT
4AA137	Jan 2015	Conductivity = 500 µS/cm	515	3	5%	Y	C	JT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = 8.39 mg/L @ 24.2°C	8.41	0.02	0.2 mg/l	Y	C	JT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

APPENDIX D

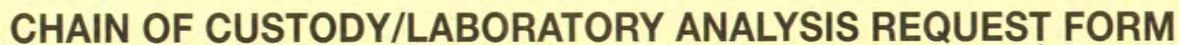
Chain-of-Custody Forms



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CAS Contract

Distribution: White - Return to Originator; Yellow - Retained by Client



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CAS Contract

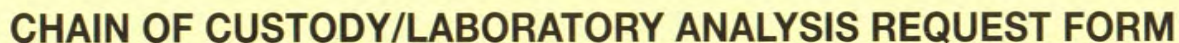
Distribution: White - Return to Originator; Yellow - Retained by Client



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CAS Contract

Distribution: White - Return to Originator; Yellow - Retained by Client



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CAS Contract

Distribution: White - Return to Originator; Yellow - Retained by Client

APPENDIX E

CD Containing Analytical Laboratory Reports