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February 19, 2013

Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
Solid and Hazardous Waste Program
Florida Department of Environmental Protection, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Re: 17th Semi-Annual Water Quality Monitoring Report
J.E.D. Solid Waste Management Facility, Osceola County, Florida
Permit No. SO49-0199726-022
WACS Facility ID #89544

Dear Mr. Lubozynski:

Submitted herewith is the subject report documenting the 16th semi-annual water quality monitoring event conducted at the J.E.D. Solid Waste Management (JED) Facility located in Osceola County, Florida. This report is being submitted as required for compliance with the conditions contained within the Monitoring Plan Implementation Schedule (MPIS) for the above referenced permit. In accordance with the permit conditions, this semi-annual water quality monitoring event was performed in May 2012. This report is being submitted within the sixty day period after receipt of the final analytical data reports from the laboratory. This report satisfies the semi-annual water quality monitoring compliance requirements as described in the Permit.

As noted in the revised MPIS, two electronic copies of the water quality report are being submitted to FDEP. Each electronic copy contains a pdf of the entire water quality report and the required ADaPT compatible electronic data deliverable (EDD) saved on a compact disk (CD). One CD is attached to this transmittal letter. The second CD containing an electronic copy of this report, including the EDD compatible with the ADaPT software has been sent to the attention of Mr. Clark Moore in Tallahassee, Florida.

If you have any questions or need additional information, please do not hesitate to contact Matthew Wissler at (813) 379-4386.

Sincerely,

Matthew P. Wissler
Senior Hydrogeologist

Attachments

Copy: Mike Kaiser, WSI
Clark Moore, FDEP Tallahassee

Prepared For:

Omni Waste of Osceola County, LLC
1501 Omni Way
St. Cloud, Florida 34773

17th SEMI-ANNUAL WATER QUALITY MONITORING REPORT

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

Prepared by:

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Project No. FW2070

February 2013

Matthew Wissler, P.G.
Florida Registration No. 2521
Date: 02/19/13

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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 17th 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 on behalf of Waste Services, Incorporated (WSI), parent company of Omni Waste of Osceola County, LLC, owner and operator of the JED facility by Mr. Matthew Wissler of Geosyntec. A completed water quality 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 17th semi-annual water quality monitoring event was completed from 11 November through 19 November 2012. 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 are now 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 are 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 are 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.

Corresponding to the most recent 5-year permit renewal, the FDEP issued a permit to operate on 12 July 2012, authorizing disposal operations in Phases 1-4, Cells 1-13. The MPIS for the semi-annual water quality monitoring well network and sampling schedule was updated during the recent 5-year permit renewal and is provided as Appendix 3 of the current Permit.

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 A-zone [shallow] wells); (ii) within the lower limit of the upper surficial aquifer above the intermediate clay layer (identified as C-zone [deep] wells); and (iii) at an intermediate depth between the shallow and deep wells (identified as B-zone [intermediate] wells).

A layout depicting the location of groundwater monitoring wells installed for Phases 2 and 3, and the previously installed groundwater monitoring wells for Phase 1 are shown for the shallow zone ("A" wells) on **Figure 1**. As shown, groundwater monitoring well clusters MW-1 through MW-13, 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 at approximately Elevation 92 ft with respect to National Geodetic Vertical Datum of 1929 (NGVD, 1929). Groundwater monitoring well clusters MW-16 and MW-17 were installed along the outer edge of the landfill perimeter berm that serves as the initial storm water berm. The ground surface at these two well locations is at approximately Elevation 85 ft NGVD, 1929. Monitoring well clusters MW-18 through MW-21 were installed along the interim Phase 3 storm water berm at the southern limit of the Phase 3 development at approximately Elevation 84 ft 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 40 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 and thirteen (13) of the monitoring wells installed as part of the Phase 2 and 3 development were sampled. Monitoring wells sampled this monitoring event included A and C-zone monitoring wells MW-1 through MW-13, MW-16, MW-19 through MW-23 and B-Zone monitoring well MW-16B. 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, two equipment blanks were collected and analyzed.

Peristaltic pumps were used to purge and sample all A-zone (shallow) monitoring wells and the majority of the C-zone (deep) groundwater monitoring wells. Because of continued issues relative to turbidity levels, a stainless steel submersible pump was used to purge and sample B-zone monitoring well MW-16B and C-zone wells MW-19 through MW-23. A submersible pump is utilized in select monitoring wells where the pump rate of the peristaltic pump is not sufficient to adequately purge the wells. New tubing (silicone and/or polyethylene) was used at each monitoring well.

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. For wells where the turbidity was not less than 20 NTU, stability was established by purging at least 5 well volumes and observing variations in the measured turbidity. For problematic wells, once the turbidity had stabilized and all other parameters conformed to the guidance set forth in the FDEP SOP's, samples were collected. A non-filtered and field-filtered (1-micron) metals sample was collected from each monitoring well where turbidity measurements exceeded the 20 NTU level.

For monitoring wells where peristaltic pumps were used, volatile organic compound (VOC) sample vials were filled by removing the down well sample tubing, disconnecting the tubing from the water quality meter flow through cell, and reversing the flow direction on the peristaltic pump.

For the monitoring wells that were purged and sampled with the stainless steel submersible pump, all sample aliquots were filled directly from the down-well tubing.

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 (formerly Columbia Analytical Services) 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, total phenolic compounds and the 40 Code of Federal Regulations (CFR) Part 258 Appendix I parameters. Other required parameters (i.e., 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 selected water quality parameters utilized for determining sample stability for this semi-annual monitoring event.

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 applicable FDEP Groundwater Cleanup Target Level (GCTL). Any parameter exceeding the GCTL has been highlighted orange. 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 (Method 6020 and Method 7470 for Mercury)

Arsenic was reported above the GCTL of 10 µg/L in MW-13A (17.8 µg/L). Please note in the MPIS under item 5, the FDEP accepts as a background arsenic concentration 20 µg/L in MW-13A.

Iron was reported above the GCTL of 300 µg/L in seventeen (17) of the A-zone monitoring wells sampled with the concentrations ranging between 470 and 41,300 µg/L, with the highest concentration from MW-6A. Iron was reported above the GCTL in B-zone monitoring well MW-16B (870 µg/L). Iron was detected above the GCTL in all of the C-zone monitoring wells sampled this event with concentrations ranging between 400 and 4,800 µg/L, with the highest concentration from MW-22RC.

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 17th semi-annual event are consistent with period of record data.

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 concentrations ranging between 2.59 and

22.4 mg/L, with the highest concentration from MW-9A. The GCTL for Ammonia-N was not exceeded in any samples collected from B or C-zone monitoring wells. The ammonia-N concentrations reported for the 17th semi-annual event are consistent with period of record data.

As indicated in recent 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 Biennial Report, 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 shallow monitoring wells MW-1A (800 mg/L), MW-5A (684 mg/L), MW-8A (1,200 mg/L) and MW-20A (1,320 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 (358 mg/L). This detection represents an increase from the last sampling event. Further investigation activities are currently being performed by HDR to address other constituents detected in groundwater in this area.

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

Benzene was detected above the GCTL of 1.0 µg/L in eleven (11) A-zone monitoring wells at concentrations ranging from 1.3 to 8.6 µg/L, with the highest concentration from MW-11A.

As indicated in recent correspondence by HDR, (Class I Permit Renewal Request for Additional Information – January 2012) 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 4th Biennial Report, 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).

Total Phenolics (Method 420.4)

The GCTL for total phenolic compounds (0.01 mg/L) was exceeded in seventeen (17) of the A-zone monitoring wells, with the concentrations ranging between 0.012 and 0.044 mg/L, with the highest concentration from MW-6A. Total phenolic compounds were detected above the GCTL in B-zone monitoring well MW-16B (0.016 mg/L) and all of the C-zone monitoring wells with concentrations ranging between 0.011 and 0.041 mg/L, with the highest concentration from MW-23C. Please note that this is the first semi-annual water quality monitoring event that included total phenolic analysis; and consequently, the only basis for comparison are the initial sampling events conducted in 2003 for the Phase I monitoring well network (clusters MW-1 through MW-13) and 2007 for the Phases II & III network (clusters MW-16 through MW-23). The method used for the initial sampling event for phenols in 2007 was EPA Method 8270 whereas the event utilized for total phenolics for the November 2012 event was EPA method 420.4. The distribution of the phenolics detections does not suggest a point source adjacent to waste placement areas but rather equally distributed detections which could be naturally occurring or false positives related the analytical method.

Confirmation Samples

In accordance with Chapter 62-701.510(6)(a) F.A.C. and Paragraph 4 of the MPIS, the FDEP is to be notified within 14 days after the receipt of the laboratory data of any GCTL exceedances. The notification is to also inform the FDEP if any confirmational samples will be collected from any of the wells or if the data will be accepted as indicative of groundwater conditions. Omni notified Mr. Thomas Lubozynski (FDEP) in a letter dated 28 December 2012 of all the GCTL exceedances for which certified data was received by Omni. The letter notified the FDEP that no conformational samples will be collected and the results considered as representing current conditions.

4.3 Data Validation

All analyses were performed within the method specified holding times.

Two equipment blanks were collected during the 17th semi-annual monitoring event. One (1) equipment blank was collected using the peristaltic pump used for collection of the

groundwater sample from MW-11A. The second equipment blank was collected using the stainless steel submersible pump used for collection of the groundwater sample at MW-16B. De-ionized water supplied by ALS was pumped through the decontaminated submersible pump and new tubing and analyzed for the same parameters as the groundwater samples. The same procedure was also used for the peristaltic pump and associated tubing.

Analysis of the QC sample collected through the peristaltic pump (Equipment Blank -1) resulted in a detection of chloroform (1.2 μg/L) and methylene chloride (6.7 μg/L); however, these parameters were not detected in any of the monitoring wells sampled with the peristaltic pump indicating this is most likely a laboratory contaminant. Chromium, sodium, and nitrate were detected in the QC sample at a concentration below the Method Reporting Limit (MRL). Total phenolic compounds were detected in the QC sample at a concentration of 0.02 mg/L; however, this parameter was also detected in the laboratory method blank. All other constituents analyzed for were not detected in the QC sample collected through the peristaltic pump.

Analysis of the QC sample collected through the submersible pump (Equipment Blank -2) resulted in a detection of chloroform (1.2 μg/L); however, chloroform was not detected in any of the monitoring wells sampled with the submersible pump indicating this is most likely a laboratory contaminant. Copper, sodium, nitrate and ammonia were detected in the QC sample at a concentration below the MRL. Total phenolic compounds were detected in the QC sample at a concentration of 0.02 mg/L; however, this parameter was detected at a lower concentration in MW-16B (0.016 mg/L), indicating this is most likely an analytical resolution issue as both results were less than the MRL. All other constituents analyzed for were not detected in the QC sample collected through the submersible pump.

4.4 Impact of Turbidity on Metals Concentrations

Turbidity levels were less than the FDEP guidance of 20 NTUs in thirty seven (37) of the thirty nine (39) wells sampled. A review of the analytical results for MW-19C and MW-22RC (the only wells sampled with a final measured turbidity level > 20 NTUs) shows no significant difference between the dissolved and total metals concentration. Historical data shows that the turbidity levels for the monitoring well network has improved over the course of the semi-annual water quality monitoring events and the need to continue collection of dissolved metal samples may no longer be necessary.

5. GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

5.1 Field Measurements

Groundwater level measurements were obtained on 5 November 2012 from all Phases 1 through 3 groundwater monitoring wells and the remaining piezometers installed as part of the original site hydrogeological investigation. All groundwater level measurements were made within an approximate 5-hr period. The groundwater level measurements 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**. Water levels within the A-zone (shallow) indicate a radial horizontal groundwater flow direction from the groundwater high near MW-20A/DP-19 toward Bull Creek to the east-northeast and the borrow area to the west-northwest. Historically, the direction of the horizontal component of groundwater flow for all three zones is predominantly east-northeast towards 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 2012 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, and arsenic above the GCTLs in specific groundwater monitoring wells have been discussed in detail in the 1st, 2nd, 3rd and 4th Biennial Technical Reports on Water Quality (November 2006, September 2008, November 2010 and November 2011, respectively). As discussed in Section 4.2, it is likely that the iron, arsenic 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.

All of the monitoring wells sampled this event had total phenolic compound detections above the laboratory Method Detection Limit (MDL), with all but two (2) exceeding the GCTL. Please note however, that while the MDL was below the GCTL, all of the results were below the laboratory MRL of 0.05 mg/L, which results in concentrations that cannot be accurately quantified within the level of certainty established for these samples. Given that the JED facility is a double geosynthetically lined landfill, and the total phenolic compound detections were throughout the network, it is likely that the compounds are naturally occurring or a product of false positives and not a result of a leachate release. This is the first semi-annual water quality monitoring event that included total phenolic analysis; and, as mentioned above, the only basis for comparison are the initial sampling events. Our recommendation is to continue to monitor these constituents as part of the current MPIS.

As reported in the 4th Biennial Technical Report on Groundwater Quality it was originally thought that the prior detections of benzene were attributable to residual

contamination from the erosion caused by surface water run-off from the landfill in the vicinity of MW-9A, but as benzene has been detected in more wells around the Phase 1 area it appears that this is not the primary cause. As discussed in Section 4.2, it is more likely that the elevated benzene and other volatile organic compound (VOCs) detections may be attributable to landfill gas migration. As a result of this, Omni has initiated several investigations and corrective measures related to landfill gas migration. The most recent included augmentation of the existing methane gas recovery system with two "test" supplemental gas recovery wells which was documented in a correspondence dated June 2011. It is anticipated that the addition of these two supplemental gas recovery wells within the sump areas at Cells 2 and 5 will help mitigate the methane migration issues which will result in a reduction of VOCs in groundwater samples collected at MW-1A and MW-9A during subsequent semi-annual monitoring events. A Soil Vapor Extraction (SVE) Pilot Test Work Plan was submitted to the FDEP on 27 January 2012 and subsequently approved on 6 February 2012. In March 2012 the pilot vertical SVE wells were installed around the Cell 5 sump area. The vertical SVE system includes four (4) extraction wells and one (1) vadose zone aeration well. In April 2012 the horizontal SVE system was installed near monitoring well cluster MW-4, adjacent to Cell 1. The horizontal SVE system includes a 100-foot section of perforated pipe installed beneath the perimeter road. The vertical and horizontal pilot SVE systems are connected to the main gas collection system so that collected landfill gas is transmitted to the flare station for combustion. In May 2012 the pre-startup monitoring event of the pilot system was conducted including sampling of MW-1A and Cell 4 and Cell 5 leachate sumps for the parameters specified in the SVE Pilot Test Work Plan (please note that the SVE Pilot Test Work Plan specifies the sampling of MW-4A as well, however MW-4A was dry during this event). As per the SVE Pilot Test Work Plan, following initial startup of the pilot SVE system, monitoring of MW-1A and MW-4A will be performed on a quarterly basis with the results submitted in a status report to the FDEP.

Our recommendation is to continue semi-annual monitoring of these constituents as part of the current MPIS while the on-going gas migration investigation and SVE pilot study continues.

TABLES

Table 1 (1 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
17th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1A	28 03 48.55	81 05 59.88	19900	9-Dec-03	95.1	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	95.2	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	94.6	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	95.5	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	95.3	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	94.7	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	95.5	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	94.7	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	94.7	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	96.3	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	93.6	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	95.1	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	95.2	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	28 03 44.55	81 05 40.22	22342	21-Sep-07	88.7	18.6	8.1	18.1	80.6	70.6	6.1	5.1
MW-17A	28 03 42.38	81 05 35.42	22345	22-Sep-07	88.9	19.9	9.4	19.4	79.5	69.5	7.4	6.4
MW-18A	28 03 37.21	81 05 35.16	22348	11-Sep-07	87.6	17.7	7.2	17.2	80.4	70.4	5.2	4.2
MW-19A	28 03 33.40	81 05 39.60	22351	11-Sep-07	87.5	17.7	7.2	17.2	80.4	70.4	5.2	4.2
MW-20A	28 03 31.82	81 05 45.45	22354	19-Sep-07	87.1	17.9	7.4	17.4	79.7	69.7	5.4	4.4
MW-21A	28 03 32.10	81 05 52.48	22357	14-Sep-07	87.2	18.0	7.5	17.5	79.7	69.7	5.5	4.5
MW-22A	Monitoring Well Abandoned 11 November 2011											
MW-22RA	28 03 34.703	81 06 0.622	28685	14-Mar-12	95.0	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	97.9	27.8	17.3	27.3	80.7	70.7	15.3	14.3

Table 1 (2 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
17th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1B	28 03 48.59	81 05 59.89	19901	9-Dec-03	95.0	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	95.2	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	94.7	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	95.2	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	95.3	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	94.6	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	95.3	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	94.6	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	94.6	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	96.2	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	93.6	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	95.0	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	95.1	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	28 03 44.52	81 05 40.17	22343	21-Sep-07	88.7	38.1	27.6	37.6	61.1	51.1	25.6	24.6
MW-17B	28 03 42.35	81 05 35.36	22346	20-Sep-07	88.8	40.2	29.7	39.7	59.1	49.1	27.7	26.7
MW-18B	28 03 37.16	81 05 35.19	22349	11-Sep-07	87.4	37.8	27.3	37.3	60.1	50.1	25.3	24.3
MW-19B	28 03 33.38	81 05 39.66	22352	11-Sep-07	87.6	37.7	27.2	37.2	60.4	50.4	25.2	24.2
MW-20B	28 03 31.82	81 05 45.51	22355	19-Sep-07	87.3	37.8	27.3	37.3	60.0	50.0	25.3	24.3
MW-21B	28 03 32.09	81 05 52.55	22358	17-Sep-07	87.2	37.6	27.1	37.1	60.1	50.1	25.1	24.1
MW-22B	Monitoring Well Abandoned 11 November 2011											
MW-22RB	28 03 34.665	81 05 59.850	28686	15-Mar-12	94.9	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	97.9	42.75	32.3	42.3	65.7	55.7	30.3	29.3

Table 1 (3 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
17th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							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	28 03 44.50	81 05 40.11	22344	21-Sep-07	88.8	67.7	57.2	67.2	31.6	21.6	55.2	54.2
MW-17C	28 03 42.31	81 05 35.31	22347	20-Sep-07	88.9	67.3	56.8	66.8	32.0	22.0	54.8	53.8
MW-18C	28 03 37.10	81 05 35.22	22350	12-Sep-07	87.4	67.2	56.7	66.7	30.8	20.8	54.7	53.7
MW-19C	28 03 33.37	81 05 39.72	22353	10-Sep-07	87.4	66.7	56.2	66.2	31.2	21.2	54.2	53.2
MW-20C	28 03 31.82	81 05 45.57	22356	18-Sep-07	87.4	66.8	56.3	66.3	31.1	21.1	54.3	53.3
MW-21C	28 03 32.10	81 05 52.61	22359	17-Sep-07	87.1	62.6	52.1	62.1	35.1	25.1	50.1	49.1
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

Table 2

SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA
17th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Monitoring Well	Temperature (°C)[1]	pH (Standard Units)	Specific Conductance (uS/cm) [2]	Turbidity (NTUs) [3]	Oxidation-Reduction Potential (mV) [4]	DO (mg/L) [5]	Purging Method
MW-1A	25.54	4.75	1,887	0.0	9.3	0.46	Peristaltic Pump
MW-2A	24.42	5.01	228	0.3	-71.3	0.48	Peristaltic Pump
MW-3A	26.55	5.08	337	2.7	-100.5	0.36	Peristaltic Pump
MW-4A	28.10	4.73	376	0.4	-77.3	0.40	Peristaltic Pump
MW-5A	25.16	3.86	941	1.1	78.4	0.49	Peristaltic Pump
MW-6A	25.10	5.10	525	3.1	-112.4	0.42	Peristaltic Pump
MW-7A	25.43	5.28	502	0.4	-116.1	0.40	Peristaltic Pump
MW-8A	25.71	4.23	1,415	0.8	-12.1	0.29	Peristaltic Pump
MW-9A	27.14	4.16	814	4.9	-21.1	0.37	Peristaltic Pump
MW-10A	25.09	4.78	329	1.9	-113.3	0.34	Peristaltic Pump
MW-11A	28.09	5.33	432	5.0	-103.9	0.25	Peristaltic Pump
MW-12A	26.90	4.55	158	0.0	-16.5	0.61	Peristaltic Pump
MW-13A	26.97	5.31	317	0.0	-27.8	0.37	Peristaltic Pump
MW-16A	24.48	5.06	58	10.5	-9.6	0.51	Peristaltic Pump
MW-19A	25.24	5.53	170	17.0	-25.0	0.25	Peristaltic Pump
MW-20A	24.73	4.74	1,358	12.9	143.0	3.84	Peristaltic Pump
MW-21A	25.36	4.35	668	6.5	240.7	1.45	Peristaltic Pump
MW-22RA	23.69	5.62	434	0.0	-100.8	0.86	Peristaltic Pump
MW-23A	24.71	5.14	335	5.2	-70.3	0.36	Peristaltic Pump
MW-16B	24.58	4.94	42	9.3	-113.9	0.17	Submersible Pump
MW-1C	25.11	5.38	95	0.9	-56.6	0.68	Peristaltic Pump
MW-2C	23.48	4.77	52	0.1	-19.5	0.79	Peristaltic Pump
MW-3C	26.13	5.27	84	2.3	-62.6	0.53	Peristaltic Pump
MW-4C	26.84	5.93	210	0.6	-79.0	0.48	Peristaltic Pump
MW-5C	24.54	5.01	89	1.0	16.5	0.46	Peristaltic Pump
MW-6C	24.60	4.78	59	1.8	-12.2	0.53	Peristaltic Pump
MW-7C	24.56	5.15	79	0.8	-24.6	0.53	Peristaltic Pump
MW-8C	24.60	4.62	262	0.0	-77.4	0.45	Peristaltic Pump
MW-9C	25.04	5.57	182	1.8	-97.0	0.73	Peristaltic Pump
MW-10C	23.92	4.80	112	2.2	-23.4	0.63	Peristaltic Pump
MW-11C	26.07	5.31	126	1.1	-29.7	0.41	Peristaltic Pump
MW-12C	25.80	4.97	62	1.5	-8.9	0.97	Peristaltic Pump
MW-13C	25.48	4.97	90	1.6	-6.8	0.80	Peristaltic Pump
MW-16C	23.86	5.19	108	1.4	-32.1	0.61	Peristaltic Pump
MW-19C	24.68	5.41	112	72.1	-65.9	0.21	Submersible Pump
MW-20C	23.60	5.24	110	16.0	-53.9	0.18	Submersible Pump
MW-21C	23.64	5.26	111	19.2	-39.3	0.18	Submersible Pump
MW-22RC	23.32	5.32	88	208	-63.7	0.83	Submersible Pump
MW-23C	24.15	5.56	103	5.7	-67.3	0.40	Submersible Pump

Notes:

[1] °C = degrees Celsius

[2] uS/cm = micro Siemens per centimeter

[3] NTU = Nephelometric Turbidity Units

[4] mV = millivolts

[5] mg/L = milligrams per liter

Table 3

SUMMARY OF GROUNDWATER ANALYTICAL DATA
17th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well ID	Cis-1,2 Dichloroethene	1,4-Dichlorobenzene	Benzene	Ethylbenzene	Total Xylenes	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Nickel	Selenium	Sodium	Vanadium	Zinc	Ammonia	Chloride	Nitrate as N	Total Phenols*	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 (mg/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (mg/L)	GCTL (mg/L)	GCTL (mg/L)	GCTL(mg/L)	GCTL (mg/L)
	70	75	1.0	30	20	10	2,000	4	5	100	420	1,000	300	15	100	50	160	49	5,000	2.8	250	10	0.01	500
MW-1A	0.36 u	1.2	2.3	0.21 u	0.35 i	0.5 u	93.1	0.04 u	0.10 u	4.2	1.9	0.3 i	7,360	0.12 u	2.8	1.1 u	198	6.4	4.7 i	9.73	358	0.03 u	0.022 i	800
MW-1C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	8.2	0.04 u	0.10 u	0.9 i	0.03 u	0.3 u	400	0.12 u	0.5 u	1.1 u	5.01	0.5 i	1.7 i	0.084	7.53	0.03 u	0.030 iv	63
MW-2A	0.36 u	0.16 u	0.26 i	0.21 u	0.31 u	1.8	11.7	0.04 u	0.10 u	2.8	1.7	0.3 u	12,900	0.12 u	0.7 i	1.1 u	19.5	0.8 i	2.6 i	1.29	18.3	0.03 u	0.015 i	140
MW-2C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.7 i	12.7	0.08 i	0.10 u	0.6 i	0.03 u	0.3 u	470	0.12 u	0.5 u	1.1 u	4.84	0.3 u	2.5 i	0.099	6.29	0.03 u	0.011 i	31
MW-3A	0.72 i	3.4	7.7	1.5	0.26 i	1.0	29.9	0.04 u	0.10 u	0.8 i	1.1	1.1	6,310	0.22 i	0.5 u	1.1 u	26.4	1.4 i	1.6 u	6.41	60.2	0.03 u	0.023 i	151
MW-3C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	8.8	0.04 u	0.10 u	1.2	0.03 u	0.3 u	620	0.12 u	0.5 u	1.1 u	5.05	0.3 u	1.6 u	0.095	7.34	0.03 u	0.017 i	57
MW-4A	0.36 u	0.16 u	3.8	0.21 u	0.31 u	1.0	37.1	0.04 u	0.10 u	1.8	0.2 i	0.3 u	2,830	0.12 u	0.9 i	1.1 u	23.2	0.3 u	2.5 i	9.60	54.8	0.03 u	0.017 i	161
MW-4C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	8.3	0.04 u	0.10 u	1.2	0.03 u	0.3 u	430	0.12 u	0.5 u	1.1 u	6.76	1.2 i	1.6 u	0.108	9.99	0.03 u	0.021 i	123
MW-5A	0.36 u	0.16 u	1.3	0.21 u	0.31 u	0.5 u	47.4	0.04 u	0.10 u	1.2	1.0 i	0.4 i	1,670	1.25	1.3 i	1.1 u	30.9	4.5	2.4 i	3.66	42.2	0.03 u	0.04 iv	684
MW-5C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	18.5	0.04 u	0.10 u	0.8 i	0.03 u	0.3 u	830	0.12 u	0.5 u	1.1 u	8.06	0.5 i	6.7	0.087	12.1	0.03 u	0.022 iv	54
MW-6A	0.36 u	0.16 u	1.3	0.21 u	0.31 u	1.5	7.1	0.04 u	0.10 u	0.9 i	0.8 i	1.0 i	41,300	0.13 i	0.5 u	1.1 u	43.9	4.3	2.4 i	7.11	91.1	0.03 u	0.044 iv	250
MW-6C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	26.0	0.04 u	0.10 u	0.7 i	0.03 u	0.3 u	500	0.12 u	0.5 u	1.1 u	5.01	1.7 i	21.1	0.137	5.61	0.03 u	0.024 iv	41
MW-7A	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.7 i	33.9	0.04 u	0.10 u	1.1	2.0	0.3 u	15,100	0.12 u	0.8 i	1.1 u	20.2	4.0	1.9 i	6.18	30.9	0.03 u	0.029 i	309
MW-7C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	21.9	0.04 u	0.10 u	0.5 i	0.03 u	0.3 u	730	0.12 u	0.5 u	1.1 u	5.88	0.9 i	23.7	0.119	7.30	0.03 u	0.013 i	53
MW-8A	0.36 u	1.1	6.0	0.21 u	0.85 i	0.8 i	95.7	0.51	0.10 u	2.8	5.6	0.6 i	17,700	0.12 u	11.7	1.1 u	31.5	7.7	3.9 i	15.8	28.7	0.03 u	0.012 i	1,200
MW-8C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	62.5	0.08 i	0.10 u	0.4 i	0.03 u	0.3 u	5,730	0.12 u	0.5 u	1.1 u	16.5	0.6 i	7.4	0.308	62.9	0.03 u	0.015 i	134
MW-9A	0.36 u	0.16 u	1.4	0.21 u	0.31 u	1.8	75.0	0.04 u	0.10 u	1.4	1.9	1.5	9,090	0.12 u	5.2	1.1 u	33.6	2.6	5.0 i	22.4	23.6	0.03 u	0.018 iv	494
MW-9C	0.36 u	0.16 u	0.31 i	0.21 u	0.31 u	0.5 u	30.6	0.04 i	0.10 u	0.9 i	0.03 u	0.3 u	700	0.12 u	3.5	1.1 u	8.11	1.2 i	1.9 i	0.459	15.3	0.03 u	0.014 i	93
MW-10A	1.1	0.16 u	6.5	0.21 u	2.95	1.2	22.5	0.04 u	0.10 u	1.9	0.5 i	0.3 u	2,260	0.12 u	1.9 i	1.1 u	14.8	0.3 u	1.8 i	11.5	14.9	0.03 u	0.024 iv	212
MW-10C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	24.3	0.04 u	0.10 u	1.3	0.05 i	0.3 u	1020	0.12 u	0.5 u	1.1 u	9.79	0.3 u	1.9 i	0.175	16.9	0.03 u	0.021 iv	78
MW-11A	0.65 i	0.34 i	8.6	2.2	1.99	4.7	45.3	0.04 u	0.10 u	3.2	1.1	0.3 i	6,030	0.25 i	2.4	1.1 u	39.2	1.1 i	2.0 i	5.07	40.9	0.03 u	0.032 iv	259
MW-11C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	12.6	0.04 u	0.10 u	1.1	0.04 i	0.3 u	640	0.12 u	0.5 u	1.1 u	11.6	0.6 i	22.0	0.084	17.1	0.03 u	0.016 iv	75
MW-12A	0.39 i	0.16 u	4.7	0.21 u	0.18 i	0.9 i	16.7	0.05 i	0.10 u	1.9	1.2	0.3 u	2,070	0.12 u	2.2	1.1 u	11.0	0.8 i	2.4 i	0.660	15.3	0.03 u	0.021 iv	87
MW-12C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	20.1	0.14 i	0.10 u	1.2	0.03 u	0.3 u	640	0.12 u	0.5 u	1.1 u	5.86	0.3 u	19.8	0.109	7.73	0.03 u	0.014 iv	48
MW-13A	0.57 i	0.16 u	2.1	0.21 u	0.31 u	17.8	19.2	0.06 i	0.10 u	2.8	0.6 i	0.3 u	27,100	0.12 u	0.5 u	1.1 u	20.1	3.0	1.6 u	1.65	37.2	0.03 u	0.041 iv	181
MW-13C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	21.6	0.06 i	0.10 u	1.1	0.05 i	0.3 u	600	0.12 u	0.5 u	1.1 u	9.20	0.3 u	1.9 i	0.136	14.1	0.03 u	0.022 iv	53
MW-16A	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	13.6	0.04 u	0.10 i	1.7	0.05 i	0.3 u	80 i	0.50 i	0.5 u	1.1 u	2.16	7.0	1.9 i	0.191	3.09	0.19 i	0.008 i	45
MW-16B	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.6 i	13.4	0.04 u	0.10 u	1.6	0.2 i	0.3 u	870	0.57	0.5 u	1.1 u	4.82	0.3 u	1.6 u	0.160	5.13	0.03 u	0.016 i	42
MW-16C	0.36 u	0.16 u	0.21 u	0.22 i	0.31 u	0.5 u	13.1	0.04 u	0.10 u	1.1	0.03 u	0.3 u	810	0.12 u	0.6 i	1.1 u	11.8	0.3 u	2.1 i	0.150	19.8	0.03 u	0.012 i	78
MW-19A	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	2.1	36.0	0.04 u	0.10 u	5.4	0.3 i	0.5 i	2,390	1.89	0.8 i	1.1 u	7.06	7.0	1.9 i	2.59	8.21	0.03 u	0.043 i	175
MW-19C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	59.1	0.27 i	0.10 u	5.1	0.1 i	0.3 u	1,270	0.52	0.5 i	1.1 u	9.77	3.1	2.9 i	0.158	17.3	0.03 u	0.018 i	103
MW-20A	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.8 i	65.1	0.04 u	0.15 i	0.4 i	0.6 i	1.9	140	1.27	3.4	1.1 u	10.3	7.1	5.8	0.007 u	18.1	0.26	0.019 i	1320
MW-20C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.7 i	72.0	0.05 i	0.10 i	3.3	0.1 i	1.0	1,920	0.79	0.8 i	1.1 u	9.86	2.3	2.8 i	0.219	19.6	0.03 u	0.023 i	96
MW-21A	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	92.8	0.21 i	1.49	1.2	3.5	1.0	470	1.11	7.2	8.2	12.3	9.9	3.1 i	0.029	14.2	1.23	0.009 i	483
MW-21C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	69.6	0.09 i	0.10 u	3.2	0.1 i	0.8 i	2,370	1.01	0.5 i	1.1 u	9.99	2.6	3.3 i	0.245	20.0	0.03 u	0.034 i	98
MW-22RA	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	1.4	14.3	0.04 u	0.10 u	2.0	0.4 i	0.3 u	3,990	0.12 u	0.5 u	1.1 u	29.0	4.2	1.8 i	1.78	42.5	0.03 u	0.012 i	274
MW-22RC	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	1.5	159	0.71	0.11 i	21.0	1.9	2.5	4,800	8.68	4.0	2.0	8.29	20.8	11.3	0.124	8.52	0.03 u	0.039 i	188
MW-23A	0.36 u	0.16 u	0.33 i	0.21 u	0.31 u	0.5 u	9.7	0.04 u	0.10 u	2.4	0.3 i	0.5 i	1,100	0.12 u	0.5 u	1.1 u	17.2	2.0 i	2.3 i	6.09	19.6	0.03 u	0.033 i	219
MW-23C	0.36 u	0.16 u	0.21 u	0.21 u	0.31 u	0.5 u	8.7	0.04 u	0.10 u	1.2	0.03 u	0.3 u	440	0.12 u	0.5 u	1.1 u	5.08	1.0 i	2.4 i	0.117	7.34	0.03 u	0.041 i	68

NOTES: Only parameters with detections above the Method Reporting Limit are shown (with the exception of total phenols, see note below).

i The Reported Value is between the Laboratory Method Detection Limit (MDL) and the Laboratory Practical Quantitation Limit (PQL).

Detect

Exceeds GCTL

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

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

* = Total Phenol analysis by EPA Method 420.4. MDL (0.005 mg/L) is below GCTL; however the PQL (0.05 mg/L) is over the GCTL and therefore given an **i** qualifier.

Table 4

(1 of 3)

GROUNDWATER LEVEL MEASUREMENTS
15th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: JED Solid Waste Management Facility **Sampling Personnel:** Joe Terry

Location: Osceola County, Florida **Field Conditions:** clear, 65°F @07:45 to a high of 76°F @13:00

Date: 5-Nov-2012

Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	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	11:38	81.97	5.10	18.62	76.87	
DP-15	11:38	81.98	5.08	53.70	76.90	
DP-16	12:20	82.57	4.78	18.53	77.79	
DP-17	12:20	82.58	4.81	53.75	77.77	
DP-18	11:21	84.38	5.56	52.90	78.82	
DP-19	11:21	84.34	5.47	18.40	78.87	
DP-20	11:30	83.07	4.35	18.35	78.72	
DP-21	11:30	83.00	4.40	53.68	78.60	
DP-22	10:40	81.00	4.47	18.63	76.53	
DP-23	10:40	81.27	4.29	53.73	76.98	
DP-24	12:12	82.22	4.60	18.52	77.62	
SZ-1	Piezometer Abandoned 10 July 2007					
SZ-2	11:30	83.16	5.85	75.39	77.31	
SZ-3	10:40	81.27	4.78	78.85	76.49	
MW-1A	9:52	95.12	17.71	23.19	77.41	
MW-1B	9:52	95.00	17.36	48.11	77.64	
MW-1C	9:52	95.18	17.58	74.63	77.60	
MW-2A	9:47	95.21	17.66	22.89	77.55	
MW-2B	9:47	95.17	17.62	48.31	77.55	
MW-2C	9:47	95.32	17.80	68.59	77.52	
MW-3A	9:41	94.64	17.27	23.02	77.37	
MW-3B	9:41	94.68	17.17	47.89	77.51	
MW-3C	9:41	94.66	17.18	69.02	77.48	

Table 4

(2 of 3)

GROUNDWATER LEVEL MEASUREMENTS
15th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: JED Solid Waste Management Facility **Sampling Personnel:** Joe Terry

Location: Osceola County, Florida **Field Conditions:** clear, 65°F @07:45 to a high of 76°F @13:00

Date: 5-Nov-2012

Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-4A	9:34	95.48	17.94	23.33	77.54	
MW-4B	9:34	95.18	17.71	47.69	77.47	
MW-4C	9:34	95.39	17.89	72.73	77.50	
MW-5A	9:29	95.32	17.77	22.76	77.55	
MW-5B	9:29	95.30	17.81	47.36	77.49	
MW-5C	9:29	95.39	17.94	73.32	77.45	
MW-6A	9:24	94.72	17.30	22.88	77.42	
MW-6B	9:24	94.60	17.15	47.73	77.45	
MW-6C	9:24	94.58	17.20	73.28	77.38	
MW-7A	9:19	95.48	17.81	23.58	77.67	
MW-7B	9:19	95.27	17.59	48.18	77.68	
MW-7C	9:19	94.93	17.36	73.55	77.57	
MW-8A	9:14	94.67	16.86	22.76	77.81	
MW-8B	9:14	94.58	16.88	49.50	77.70	
MW-8C	9:14	94.50	16.93	73.99	77.57	
MW-9A	9:08	94.66	17.03	22.63	77.63	
MW-9B	9:08	94.63	17.00	49.33	77.63	
MW-9C	9:08	94.54	17.05	73.99	77.49	
MW-10A	9:00	96.25	18.53	22.43	77.72	
MW-10B	9:00	96.23	18.51	48.48	77.72	
MW-10C	9:00	96.36	18.78	73.83	77.58	
MW-11A	8:53	93.56	16.13	22.89	77.43	
MW-11B	8:53	93.59	15.98	48.03	77.61	
MW-11C	8:53	93.65	16.08	73.78	77.57	
MW-12A	8:45	95.10	17.28	23.27	77.82	
MW-12B	8:45	95.01	17.29	49.19	77.72	
MW-12C	8:45	95.10	17.42	73.79	77.68	
MW-13A	8:37	95.19	17.28	22.79	77.91	
MW-13B	8:37	95.12	17.20	47.46	77.92	
MW-13C	8:37	95.04	17.20	73.26	77.84	
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					

Table 4

(3 of 3)

GROUNDWATER LEVEL MEASUREMENTS
15th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

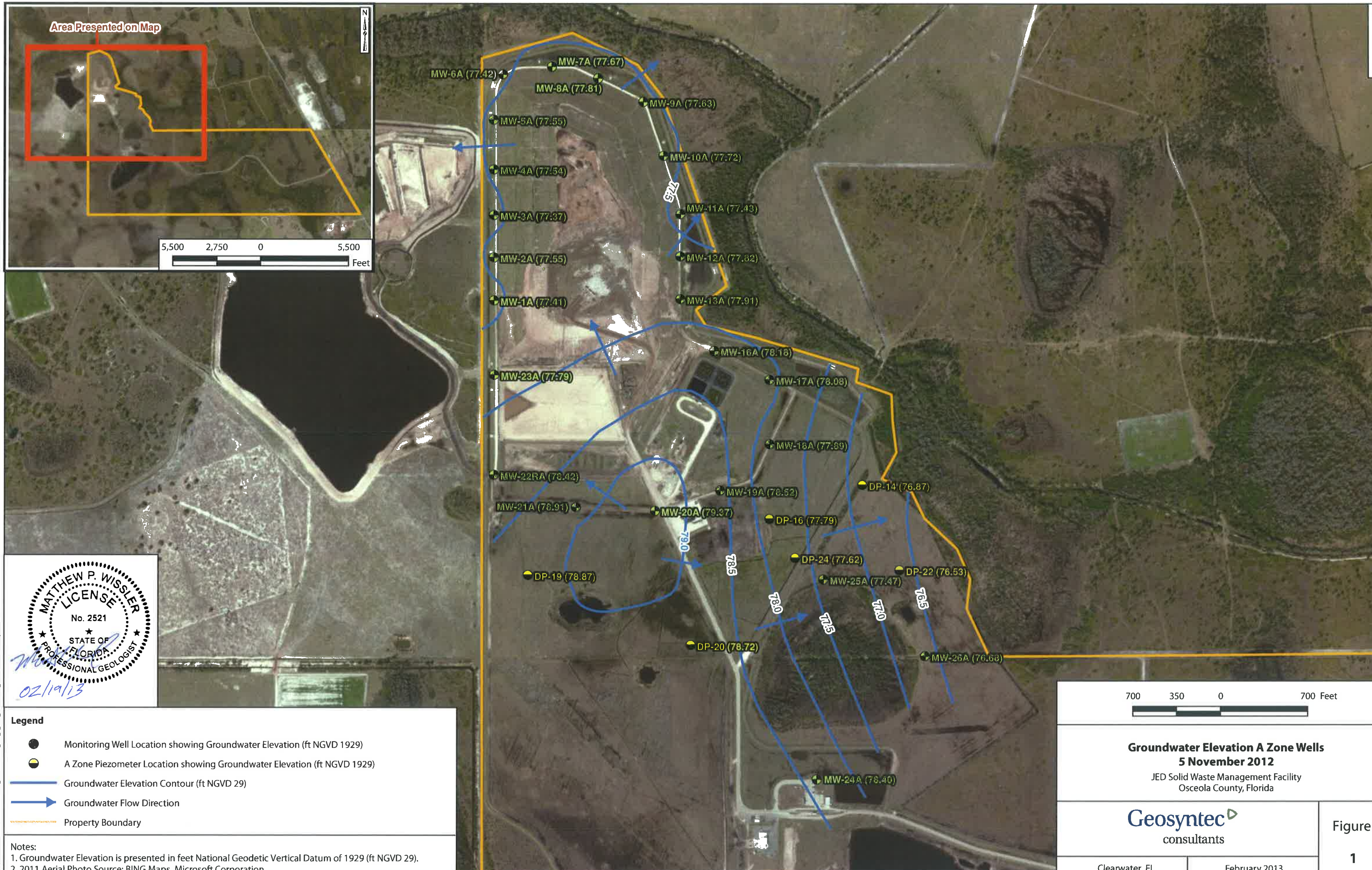
Site Name: JED Solid Waste Management Facility
Location: Osceola County, Florida
Date: 5-Nov-2012

Sampling Personnel: Joe Terry
Field Conditions: clear, 65°F @07:45 to a high of 76°F @13:00

Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-16A	8:20	88.69	10.51	18.89	78.18	
MW-16B	8:20	88.73	10.85	38.38	77.88	
MW-16C	8:20	88.77	10.98	67.94	77.79	
MW-17A	8:10	88.86	10.78	20.17	78.08	
MW-17B	8:10	88.79	11.33	40.47	77.46	
MW-17C	8:10	88.85	11.43	67.55	77.42	
MW-18A	8:00	87.56	9.67	17.98	77.89	
MW-18B	8:00	87.43	9.57	38.10	77.86	
MW-18C	8:00	87.42	9.58	67.38	77.84	
MW-19A	7:54	87.54	9.02	17.93	78.52	
MW-19B	7:54	87.64	9.15	37.97	78.49	
MW-19C	7:54	87.44	9.04	66.95	78.40	
MW-20A	7:45	87.12	7.75	18.21	79.37	
MW-20B	7:45	87.27	8.20	38.05	79.07	
MW-20C	7:45	87.35	8.50	67.03	78.85	
MW-21A	10:15	87.20	8.29	18.32	78.91	
MW-21B	10:15	87.23	8.31	37.92	78.92	
MW-21C	10:15	87.13	8.31	62.48	78.82	
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-22RA	10:05	95.00	16.58	23.66	78.42	
MW-22RB	10:05	94.86	16.44	46.13	78.42	
MW-22RC	10:05	95.13	16.67	66.58	78.46	
MW-23A	9:58	97.90	20.11	28.03	77.79	
MW-23B	9:58	97.91	20.10	43.00	77.81	
MW-23C	9:58	97.93	20.13	67.32	77.80	
MW-24A	10:30	86.97	8.57	24.21	78.40	
MW-25A	10:35	82.36	4.89	24.76	77.47	
MW-26A	11:45	82.01	5.33	24.03	76.68	
MW-27C	11:53	81.66	5.06	58.37	76.60	

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

FIGURE



Legend

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

Notes:
1. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
2. 2011 Aerial Photo Source: BING Maps, Microsoft Corporation.

Groundwater Elevation A Zone Wells
5 November 2012
JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec consultants

Figure 1

Clearwater, FL | February 2013

Path: (\\Titusville-01\DATA) P:\GIS\FW2070_JED\MXDs\GW_elev_A_zone_05NOV2012_700ft.mxd 07 February 2013 MAH

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) mkaiser@wsii.us

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.

1/11/13
(Date)

(Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Waste Services of Florida, Inc.

Analytical Lab NELAC / HRS Certification # E82502

Lab Name Columbia Analytical Services (dba ALS Environmental)

Address 9143 Philips Highway, Suite 200 Jacksonville, Florida 32256

Phone Number (904)739-2277

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

APPENDIX B

Monitoring Well Sampling Logs

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: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 17.81	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (23.19 feet – 17.81 feet) X 0.16 gallons/foot = 0.9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 1025	PURGING ENDED AT: 1125	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. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1115	2.5	2.5	0.05	18.00	4.74	25.54	1898	0.45	0	clear	6.7
1120	0.25	2.75	0.05	18.00	4.75	25.56	1888	0.47	0	clear	9.0
1125	0.25	3.0	0.05	18.00	4.75	25.54	1887	0.46	0	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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1130	SAMPLING ENDED AT: 1140
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-1A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	1000mL 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: overcast, 68°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-1C	SAMPLE ID: MW-1C	DATE: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 64 feet to 74 feet	STATIC DEPTH TO WATER (feet): 17.81	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (74.63 feet – 17.81 feet) X 0.16 gallons/foot = 9.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 80 feet) + 0.12 gallons = 0.4 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 69	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 69	PURGING INITIATED AT: 1020	PURGING ENDED AT: 1055	TOTAL VOLUME PURGED (gallons): 1.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1045	1.25	1.25	0.05	17.99	5.39	25.09	94	0.96	0.9	clear	-55.1
1050	0.25	1.50	0.05	17.99	5.37	25.10	94	0.70	0.9	clear	-56.7
1055	0.25	1.75	0.05	17.99	5.38	25.11	95	0.68	0.9	clear	-56.6

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1100	SAMPLING ENDED AT: 1110
PUMP OR TUBING DEPTH IN WELL (feet): 69	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-1C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000mL~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: overcast, 68°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 19, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 18.00	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.89 feet – 18 feet) X 0.16 gallons/foot = 0.8 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 0735	PURGING ENDED AT: 0835	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. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0825	2.5	2.5	0.05	18.19	5.02	24.44	228	0.47	0.1	clear	-77.8
0830	0.25	2.75	0.05	18.19	5.01	24.40	228	0.48	0.3	clear	-71.2
0835	0.25	3.0	0.05	18.19	5.01	24.42	228	0.48	0.3	clear	-71.3

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0835	SAMPLING ENDED AT: 0845
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-2A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: Overcast, 55°F, light breeze

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-2C	SAMPLE ID: MW-2C	DATE: Nov 19, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 58 feet to 68 feet	STATIC DEPTH TO WATER (feet): 18.11	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (68.59 feet – 18.11 feet) X 0.16 gallons/foot = 8.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 63	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 63	PURGING INITIATED AT: 0735	PURGING ENDED AT: 0810	TOTAL VOLUME PURGED (gallons): 1.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0800	1.25	1.25	0.05	18.26	4.79	23.52	52	0.89	0.1	clear	-21.5
0805	0.25	1.50	0.05	18.26	4.77	23.50	51	0.77	0.1	clear	-19.7
0810	0.25	1.75	0.05	18.26	4.77	23.48	52	0.79	0.1	clear	-19.5

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0810	SAMPLING ENDED AT: 0820
PUMP OR TUBING DEPTH IN WELL (feet): 63	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-2C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: Overcast, 55°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov. 19, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches):0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 17.58	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (23 feet – 17.58 feet) X 0.16 gallons/foot = 0.9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0900	PURGING ENDED AT: 0955	TOTAL VOLUME PURGED (gallons): 2.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0945	2.25	2.25	0.05	17.65	5.08	26.53	338	0.41	2.9	Clear	-101.2
0950	0.25	2.5	0.05	17.65	5.07	26.50	341	0.39	2.6	Clear	-101.7
0955	0.25	2.75	0.05	17.65	5.08	26.55	337	0.36	2.7	Clear	-100.5

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1000	SAMPLING ENDED AT: 1010
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			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-3A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: overcast, light breeze, 55°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-3C	SAMPLE ID: MW-3C	DATE: Nov 19, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 59 feet to 69 feet	STATIC DEPTH TO WATER (feet): 17.48	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (69 feet – 17.48 feet) X 0.16 gallons/foot = 8.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 64	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 64	PURGING INITIATED AT: 0900	PURGING ENDED AT: 0930	TOTAL VOLUME PURGED (gallons): 1.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0920	1.0	1.0	0.05	17.60	5.28	26.05	84	0.58	2	clear	-59.6
0925	0.25	1.25	0.05	17.60	5.27	26.12	85	0.53	2.3	clear	-61.4
0930	0.25	1.50	0.05	17.60	5.27	26.13	84	0.53	2.3	clear	-62.6

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 0940
PUMP OR TUBING DEPTH IN WELL (feet): 64	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-3C	3	CG	40mL	HCl	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: overcast, 55°F, light breeze

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 19, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 18.34	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (23.33 feet – 18.34 feet) X 0.16 gallons/foot = 0.8 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1125	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. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1115	3.6	3.6	0.08	18.48	4.73	28.11	384	0.4	0.1	clear	-73.5
1120	0.4	4.0	0.08	18.48	4.74	28.06	375	0.41	0.1	clear	-75.8
1125	0.4	4.4	0.08	18.48	4.73	28.10	376	0.4	0.3	clear	-77.3

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1125	SAMPLING ENDED AT: 1133
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-4A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: overcast, light breeze, 55°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-4C	SAMPLE ID: MW-4C	DATE: Nov 19, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 62.5 feet to 72.5 feet	STATIC DEPTH TO WATER (feet): 18.20	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (72.73 feet – 18.2 feet) X 0.16 gallons/foot = 8.7 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 80 feet) + 0.12 gallons = 0.33 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 68	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 68	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1100	TOTAL VOLUME PURGED (gallons): 2.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1050	1.4	1.4	0.07	18.37	5.94	26.83	213	0.54	0.4	clear	-77.3
1055	0.35	1.75	0.07	18.37	5.93	26.79	209	0.5	0.6	clear	-78.1
1100	0.35	2.1	0.07	18.37	5.93	26.84	210	0.48	0.6	clear	-79.0

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1100	SAMPLING ENDED AT: 1110
PUMP OR TUBING DEPTH IN WELL (feet): 68	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-4C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: overcast, light breeze, 55°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches):0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 18.03	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.76 feet – 18.03 feet) X 0.16 gallons/foot = 0.8 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 1410	PURGING ENDED AT: 1515	TOTAL VOLUME PURGED (gallons): 5.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1505	4.95	4.95	0.09	18.61	3.85	25.15	941	0.5	1.1	clear	93.5
1510	0.45	5.4	0.09	18.61	3.85	25.17	942	0.51	1.1	clear	85.6
1515	0.45	5.85	0.09	18.61	3.86	25.16	941	0.49	1.1	clear	78.4

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1520	SAMPLING ENDED AT: 1528
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-5A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	350
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	350
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	350
"	1	AG	~~1000mL~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	350

REMARKS:
weather: overcast, 68°F, gusting wind 3-5 mph
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-5C	SAMPLE ID: MW-5C	DATE: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63 feet to 73 feet	STATIC DEPTH TO WATER (feet): 18.20	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (73.32 feet – 18.2 feet) X 0.16 gallons/foot = 8.8 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 80 feet) + 0.12 gallons = 0.33 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 68	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 68	PURGING INITIATED AT: 1410	PURGING ENDED AT: 1452	TOTAL VOLUME PURGED (gallons): 3.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1435	2.0	2.0	0.09	18.37	4.68	24.54	93	0.48	1.0	clear	54.2
1440	0.4	2.4	0.08	18.37	5.00	24.54	90	0.49	1.0	clear	24.2
1445	0.4	2.8	0.08	18.37	5.01	24.55	90	0.49	1.0	clear	21.0
1450	0.4	3.2	0.08	18.37	5.01	24.54	89 pt	0.46	1.0	clear	16.5

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1450	SAMPLING ENDED AT: 1500
PUMP OR TUBING DEPTH IN WELL (feet): 68	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-5C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	~~1000mL~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: overcast, 68°F, gusting wind 3-5 mph
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 17.62	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.88 feet – 17.62 feet) X 0.16 gallons/foot = 0.9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 1235	PURGING ENDED AT: 1340	TOTAL VOLUME PURGED (gallons): 5.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1330	4.4	4.4	0.08	17.80	5.12	25.07	527	0.39	3	clear	-109.4
1335	0.4	4.8	0.08	17.80	5.09	25.07	527	0.39	3.1	clear	-117.2
1340	0.4	5.2	0.08	17.80	5.10	25.10	525	0.42	3.1	clear	-112.4

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1340	SAMPLING ENDED AT: 1347
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-6A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: Overcast, 70°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-6C	SAMPLE ID: MW-6C	DATE: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63 feet to 73 feet	STATIC DEPTH TO WATER (feet): 17.51	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (73.28 feet – 17.51 feet) X 0.16 gallons/foot = 9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 80 feet) + 0.12 gallons = 0.4 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 68	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 68	PURGING INITIATED AT: 1235	PURGING ENDED AT: 1310	TOTAL VOLUME PURGED (gallons): 2.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1300	1.75	1.75	0.07	17.61	4.73	24.62	59	0.63	1.3	clear	-16.5
1305	0.35	2.1	0.07	17.61	4.78	24.58	57	0.57	1.7	clear	-9.7
1310	0.35	2.45	0.07	17.61	4.78	24.60	59	0.53	1.8	clear	-12.2

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1315	SAMPLING ENDED AT: 1323
PUMP OR TUBING DEPTH IN WELL (feet): 68	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-6C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: Overcast, 70°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov. 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 18.20	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (23.58 feet – 18.2 feet) X 0.16 gallons/foot = 0.9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 1235	PURGING ENDED AT: 1335	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. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1325	3.5	3.5	0.07	18.27	5.27	25.44	503	0.85	0.4	clear	-111.7
1330	0.35	3.85	0.07	18.27	5.26	25.49	507	0.52	0.4	clear	-109.1
1335	0.35	4.2	0.07	18.27	5.28	25.43	502	0.4	0.4	clear	-116.1

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1340	SAMPLING ENDED AT: 1350
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-7A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: overcast, 82°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-7C	SAMPLE ID: MW-7C	DATE: Nov 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63 feet to 73 feet	STATIC DEPTH TO WATER (feet): 17.71	PURGE PUMP TYPE OR BAILER: peristaltic

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)
= 0.0 gallons + (0.0026 gallons/foot X 80 feet) + 0.12 gallons = 0.33 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 68	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 68	PURGING INITIATED AT: 1230	PURGING ENDED AT: 1300	TOTAL VOLUME PURGED (gallons): 2.4

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1250	1.6	1.6	0.08	17.80	5.17	24.59	79	0.62	0.9	clear	-15.9
1255	0.4	2.0	0.08	17.80	5.15	24.55	79	0.55	0.7	clear	-21.7
1300	0.4	2.4	0.08	17.80	5.15	24.56	79	0.53	0.8	clear	-24.6

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1305	SAMPLING ENDED AT: 1315
PUMP OR TUBING DEPTH IN WELL (feet): 68	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-7C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: Overcast, 82°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12 feet to 22 feet	STATIC DEPTH TO WATER (feet): 17.34	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.76 feet – 17.34 feet) X 0.16 gallons/foot = 0.9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 1020	PURGING ENDED AT: 1125	TOTAL VOLUME PURGED (gallons): 4.55

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1115	3.85	3.85	0.07	18.05	4.22	25.73	1415	0.28	0.8	clear	-13.0
1170	0.35	4.2	0.07	18.05	4.23	25.77	1417	0.28	0.8	clear	-9.1
1125	0.35	4.55	0.07	18.05	4.23	25.71	1415	0.29	0.8	clear	-12.1

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1130	SAMPLING ENDED AT: 1140
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			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-8A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: p. cloudy, 70°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-8C	SAMPLE ID: MW-8C	DATE: Nov 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63.5 feet to 73.5 feet	STATIC DEPTH TO WATER (feet): 17.32	PURGE PUMP TYPE OR BAILER: peristaltic

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)
= 0.0 gallons + (0.0026 gallons/foot X 72 feet) + 0.12 gallons = 0.31 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 69	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 69	PURGING INITIATED AT: 1015	PURGING ENDED AT: 1050	TOTAL VOLUME PURGED (gallons): 2.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1035	1.41	1.41	0.07	17.41	4.48	24.63	275	0.56	0.2	clear	-49.3
1040	0.35	1.75	0.07	17.41	4.61	24.59	269	0.5	0	clear	-57.7
1045	0.35	2.1	0.07	17.41	4.62	24.59	261	0.47	0	clear	-59.2
1050	0.35	2.45	0.07	17.41	4.62	24.60	262	0.415	0	clear	-77.4

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1055	SAMPLING ENDED AT: 1105
PUMP OR TUBING DEPTH IN WELL (feet): 69	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-8C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000mL~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: partly cloudy, 70°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-9A	SAMPLE ID: MW-9A	DATE: Nov 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12 feet to 22 feet	STATIC DEPTH TO WATER (feet): 17.41	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.63 feet – 17.41 feet) X 0.16 gallons/foot = 0.84 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0835	PURGING ENDED AT: 0930	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. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0920	3.6	3.6	0.08	17.71	4.16	27.18	815	0.42	5	clear	-15.5
0925	0.4	4.0	0.08	17.71	4.17	27.11	814	0.41	4.7	clear	-16.0
0930	0.4	4.4	0.08	17.71	4.16	27.14	8141	0.37	4.9	clear	-21.1

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0935	SAMPLING ENDED AT: 0945
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW9A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	250 ~~1000~~mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: p. cloudy, 67°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-9C	SAMPLE ID: MW-9C	DATE: Nov. 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63.5 feet to 73.5 feet	STATIC DEPTH TO WATER (feet): 17.41	PURGE PUMP TYPE OR BAILER: peristaltic

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)
= 0.0 gallons + (0.0026 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 69	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 69	PURGING INITIATED AT: 0835	PURGING ENDED AT: 0900	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. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0850	1.2	1.2	0.08	17.51	5.58	25.02	186	1.15	2.0	clear	-95.4
0855	0.4	1.6	0.08	17.51	5.58	25.01	181	0.89	1.4	clear	-102.2
0900	0.4	2.0	0.08	17.51	5.57	25.04	182	0.73	1.3	clear	-97.0

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0905	SAMPLING ENDED AT: 0915
PUMP OR TUBING DEPTH IN WELL (feet): 69	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-9C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	~~1000~~ 500mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: p. cloudy, 67°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12 feet to 22 feet	STATIC DEPTH TO WATER (feet): 18.90	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.43 feet – 18.9 feet) X 0.16 gallons/foot = 0.6 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 0700	PURGING ENDED AT: 0800	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. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0750	3.5	3.5	0.07	19.15	4.78	25.01	333	0.34	1.7	clear	-116.1
0755	0.35	3.85	0.07	19.15	4.79	25.01	328	0.35	1.9	clear	-115.2
0800	0.35	4.2	0.07	19.15	4.78	25.09	329	0.34	1.9	clear	-113.3

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0805	SAMPLING ENDED AT: 0815
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-10A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: p. cloudy, 67°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-10C	SAMPLE ID: MW-10C	DATE: Nov 13, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63.5 feet to 73.5 feet	STATIC DEPTH TO WATER (feet): 19.15	PURGE PUMP TYPE OR BAILER: peristaltic

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)
= 0.0 gallons + (0.0026 gallons/foot X 90 feet) + 0.12 gallons = 0.33 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 69	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 69	PURGING INITIATED AT: 0655	PURGING ENDED AT: 0725	TOTAL VOLUME PURGED (gallons): 1.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0715	1.0	1.0	0.05	19.23	4.80	23.91	113	0.77	2.0	clear	-22.2
0720	0.25	1.25	0.05	19.23	4.81	23.94	112	0.7	2.2	clear	-25.9
0725	0.25	1.5	0.05	19.23	4.80	23.92	112	0.63	2.2	clear	-23.41

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0730	SAMPLING ENDED AT: 0740
PUMP OR TUBING DEPTH IN WELL (feet): 69	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-10C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: p. cloudy, 67°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 12, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 16.31	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.94 feet – 16.31 feet) X 0.16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 1300	PURGING ENDED AT: 1357	TOTAL VOLUME PURGED (gallons): 2.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1348	2.4	2.4	0.05	17.2	5.31	28.14	432	0.27	5.1	clear	-104.3
1352	0.2	2.6	0.05	17.2	5.34	28.08	431	0.27	5.0	clear	-104.6
1357	0.25	2.85	0.05	17.2	5.33	28.09	432	0.25	5.0	clear	-103.9

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1400	SAMPLING ENDED AT: 1412
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: (Y) N	JT 11.12.12

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-11A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: cloudy, gusting wind, 78°F
odor: none
Equipment blank collected at 1435 w/lab supplied DI H_2O, Sample collected through new tubing. Sample ID: Equipment Blank-1

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-11C	SAMPLE ID: MW-11C	DATE: Nov 12, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches):0.25	WELL SCREEN INTERVAL DEPTH: 63.5 feet to 73.5 feet	STATIC DEPTH TO WATER (feet): 16.5	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (73.78 feet – 16.5 feet) X 0.16 gallons/foot = 9.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 69	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 69	PURGING INITIATED AT: 1255	PURGING ENDED AT: 1325	TOTAL VOLUME PURGED (gallons): 1.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1315	1.0	1.0	0.05	16.61	5.29	26.05	126	0.45	2	clear	-19.9
1320	0.25	1.25	0.05	16.61	5.30	26.08	127	0.45	1.1	clear	-21.2
1325	0.25	1.50	0.05	16.61	5.31	26.07	126	0.41	1.1	clear	-29.7

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1330	SAMPLING ENDED AT: 1340
PUMP OR TUBING DEPTH IN WELL (feet): 69	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-11C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: cloudy, gusting wind, 79°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-12A	SAMPLE ID: MW-12A	DATE: Nov 12, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches):0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 17.69	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (23.27 feet – 17.69 feet) X 0.16 gallons/foot = 0.9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 1100	PURGING ENDED AT: 1215	TOTAL VOLUME PURGED (gallons): 5.25

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1200	4.2	4.2	0.07	17.94	4.52	27.17	157	0.6	0	clear	0.5
1205	0.35	4.55	0.07	17.94	4.54	26.96	158	0.61	0	clear	-12.7
1210	0.35	4.9	0.07	17.94	4.54	26.94	159	0.6	0	clear	-14.3
1215	0.35	5.25	0.07	17.94	4.55	26.90	158	0.61	0	clear	-16.5

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1220	SAMPLING ENDED AT: 1230
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-12A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000mL~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: cloudy, 74°F, slight breeze
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-12C	SAMPLE ID: MW-12C	DATE: Nov 12, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63.5 feet to 73.5 feet	STATIC DEPTH TO WATER (feet): 17.85	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (73.8 feet – 17.85 feet) X 0.16 gallons/foot = 9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 69	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 69	PURGING INITIATED AT: 1055	PURGING ENDED AT: 1130	TOTAL VOLUME PURGED (gallons): 1.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) ~~mg/L~~ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1120	1.25	1.25	0.05	17.93	4.96	25.78	62	1.75	1.5	clear	3.3
1125	0.25	1.5	0.05	17.93	4.98	25.83	62	1.3	1.3	clear	-1.2
1130	0.25	1.75	0.05	17.93	4.97	25.80	62	0.97	1.5	clear	-8.9

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1135	SAMPLING ENDED AT: 1145
PUMP OR TUBING DEPTH IN WELL (feet): 69	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-12C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: Cloudy, 74-77, Slight breeze

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 12, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 17.68	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.8 feet – 17.68 feet) X 0.16 gallons/foot = 1.0 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0920	PURGING ENDED AT: 1020	TOTAL VOLUME PURGED (gallons): 4.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1010	4	4	0.08	17.90	5.30	26.93	318	0.41	0	clear	-141.9
1015	0.4	4.4	0.08	17.9	5.31	26.98	320	0.37	0	clear	-28.3
1020	0.4	4.8	0.09	17.9	5.31	26.97	317	0.37	0	clear	-27.8

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1025	SAMPLING ENDED AT: 1035
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-13A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
MW-13A	3	CG	40mL	None	None		8011	RFPP	<100
MW-13A	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
MW-13A	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
MW-13A	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
MW-13A	1	AG	~~1000mL~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: m. cloudy, 73°F, sl. breeze

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-13C	SAMPLE ID: MW-13C	DATE: Nov. 12, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 63 feet to 73 feet	STATIC DEPTH TO WATER (feet): 17.59	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (73.3 feet – 17.59 feet) X 0.16 gallons/foot = 9 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 68	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 68	PURGING INITIATED AT: 0915	PURGING ENDED AT: 0950	TOTAL VOLUME PURGED (gallons): 2.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0935	1.6	1.6	0.08	17.70	5.03	25.55	89	1.55	1.9	clear	-20.0
0945	0.8	2.4	0.09	17.70	5.00	25.48	92	0.79	2	clear	-4.2
0950	0.4	2.8	0.08	17.70	4.97	25.48	90	0.8	1.6	clear	-6.8

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0955	SAMPLING ENDED AT: 1005
PUMP OR TUBING DEPTH IN WELL (feet): 68	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-13C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
MW-13C	3	CG	40mL	None	None		8011	RFPP	<100
MW-13C	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
MW-13C	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
MW-13C	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
MW-13C	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: m. cloudy, 72°F, slight breeze ST
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-16A	SAMPLE ID:	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 8.5 feet to 18.5 feet	STATIC DEPTH TO WATER (feet): 11.19	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18.89 feet – 11.19 feet) X 0.16 gallons/foot = 1.3 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 0655	PURGING ENDED AT: 0815	TOTAL VOLUME PURGED (gallons): 4.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0805	4.2	4.2	0.06	11.90	5.06	24.45	58	0.54	9.6	clear	-7.0
0810	0.3	4.5	0.06	11.90	5.04	24.50	59	0.57	10	clear	-3.1
0815	0.3	4.8	0.06	11.90	5.06	24.48	58	0.51	10.5	clear	-9.6

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0820	SAMPLING ENDED AT: 0832
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW16A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	220
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	220
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	220
"	1	AG	~~1000mL~~ 250 gr	H_2SO_4	Prefilled by lab		Total Phenols	APP	220

REMARKS:
weather: overcast, 66°F

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-16B	SAMPLE ID: MW-16B	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 28 feet to 38 feet	STATIC DEPTH TO WATER (feet): 11.28	PURGE PUMP TYPE OR BAILER: electric submersible

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)
= 0.0 gallons + (0.006 gallons/foot X 50 feet) + 0.12 gallons = 0.42 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 33	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 33	PURGING INITIATED AT: 0640	PURGING ENDED AT: 0847	TOTAL VOLUME PURGED (gallons): 50.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0840	48	48	0.4	11.87	4.95	24.54	42	0.17	8.9	clear	-113.5
0843	1.2	49.2	0.4	11.87	4.94	24.60	42	0.17	9.2	clear	-113.6
0847	1.6	50.8	0.4	11.87	4.94	24.58	42	0.17	9.3	clear	-113.9

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0850	SAMPLING ENDED AT: 0858
PUMP OR TUBING DEPTH IN WELL (feet): 33	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP: Yes	TUBING: No (replaced)	DUPLICATE or EQUIPMENT BLANK: (Y) N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-16B	3	CG	40mL	HCL	Prefilled by lab		8260	ESP	<100
"	3	CG	40mL	None	None		8011	ESP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	ESP	350
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	ESP	350
"	1	PE	250mL	None	None		TDS, Cl, NO_3	ESP	350
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	ESP	350

REMARKS:
weather: overcast, 66°F Equipment Blank collected after decontamination of pump. Lab supplied
initial turbidity = 110 NTU DI H2O pumped through into sample bottles. Sample ID: Equipment Blank-2
odor: none Time: 0915

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-16C	SAMPLE ID: MW-16C	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 57 feet to 67 feet	STATIC DEPTH TO WATER (feet): 11.39	PURGE PUMP TYPE OR BAILER: peristaltic

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)
= 0.0 gallons + (0.0026 gallons/foot X 70 feet) + 0.12 gallons = 0.3 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 62	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 62	PURGING INITIATED AT: 0650	PURGING ENDED AT: 0748	TOTAL VOLUME PURGED (gallons): 4.64

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0740	4	4	0.08	11.65	5.19	23.85	108	0.72	2.1	clear	-30.2
0743	0.24	4.24	0.08	11.65	5.19	23.84	108	0.63	1.3	clear	-31.8
0748	0.4	4.64	0.08	11.65	5.19	23.86	108	0.61	1.41	clear	-32.1

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0750	SAMPLING ENDED AT: 0758
PUMP OR TUBING DEPTH IN WELL (feet): 62	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-16C	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	300
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	300

REMARKS:
weather: Overcast, 66°F
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-19A	SAMPLE ID: MW-19A	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 7.5 feet to 17.5 feet	STATIC DEPTH TO WATER (feet): 9.69	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (17.93 feet – 9.69 feet) X 0.16 gallons/foot = 1.3 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 0945	PURGING ENDED AT: 1025	TOTAL VOLUME PURGED (gallons): 2.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1010	1.75	1.75	0.07	10.05	5.51	25.25	162	0.25	14.2	clear	-28.2
1015	0.35	2.1	0.07	10.05	5.39	25.26	164	0.27	15.1	clear	-8.3
1018	0.21	2.31	0.07	10.05	5.28	25.20	165	0.26	15.7	clear	33.6
1020	0.14	2.415	0.07	10.05	5.51	25.19	168	0.23	16.4	clear	-22.8
1023	0.21	2.66	0.07	10.05	5.54	25.24	170	0.24	17.5	clear	-21.7
1025	0.14	2.8	0.07	10.05	5.53	25.24	170	0.25	17.0	clear	-25.0

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1030	SAMPLING ENDED AT: 1040
PUMP OR TUBING DEPTH IN WELL (feet): 14	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-19A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: overcast, 65°F, 3mph wind
Color: water is clear but has a slight brown tint
odor: none
Initial turbidity: 3.5 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-19C	SAMPLE ID: MW-19C	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: ~~56.5~~ feet to 66.5 feet	STATIC DEPTH TO WATER (feet): 9.63	PURGE PUMP TYPE OR BAILER: electric submersible

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (66.95 feet – 9.63 feet) X 0.16 gallons/foot = 9.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.006 gallons/foot X 75 feet) + 0.12 gallons = 0.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 62	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 62	PURGING INITIATED AT: 0440	PURGING ENDED AT: 1055	TOTAL VOLUME PURGED (gallons): 22.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1045	19.5	19.5	0.3	11.07	5.39	24.64	113	0.22	76.6	cloudy	-44.2
1050	1.5	21	0.3	11.07	5.39	24.65	113	0.21	73	" "	-47.8
1055	1.5	22.5	0.3	11.07	5.41	24.68	112	0.21	72.1	" "	-65.9

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1100	SAMPLING ENDED AT: 1110
PUMP OR TUBING DEPTH IN WELL (feet): 62	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: disposable in-line	FILTER SIZE: 1 µm
FIELD DECONTAMINATION: PUMP: Yes	TUBING: No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-19C	3	CG	40mL	HCL	Prefilled by lab		8260	ESP	<100
"	3	CG	40mL	None	None		8011	ESP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	ESP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	ESP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	ESP	300
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	ESP	300

REMARKS: MW-19C 1 PE 500mL HNO_3 preserved field filtered sample collected for dissolved metals analysis
weather: overcast, 65°F, 3mph wind
odor: none Digital turbidity: 88.4 NTU, Turbidity after filter: 1.4 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-20A	SAMPLE ID: MW-20A	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet	STATIC DEPTH TO WATER (feet): 8.62	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18.21 feet – 8.62 feet) X 0.16 gallons/foot = 1.54 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 1140	PURGING ENDED AT: 1300	TOTAL VOLUME PURGED (gallons): 5.6

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1240	4.2	4.2	0.07	9.21	4.72	24.78	1363	3.72	22	clear	94.4
1250	0.7	4.9	0.07	9.21	4.75	24.70	1358	3.94	17	clear	131.9
1255	0.35	5.25	0.07	9.21	4.74	24.72	1357	3.77	14.5	clear	140.4
1300	0.35	5.6	0.07	9.21	4.74	24.73	1358	3.84	12.9	clear	143.0

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1305	SAMPLING ENDED AT: 1315
PUMP OR TUBING DEPTH IN WELL (feet): 14	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-20A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	~~1000mL~~ 250 gT	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: overcast, 78°F, gusting 5 mph wind, light rain @ 1215
odor: none
Initial turbidity: 317 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-20C	SAMPLE ID: MW-20C	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 57 feet to 67 feet	STATIC DEPTH TO WATER (feet): 9.14	PURGE PUMP TYPE OR BAILER: electric submersible

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)
= 0.0 gallons + (0.006 gallons/foot X 80 feet) + 0.12 gallons = 0.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 62	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 62	PURGING INITIATED AT: 1135	PURGING ENDED AT: 1335	TOTAL VOLUME PURGED (gallons): 90

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1322	80.25	80.25	0.75	13.66	5.25	23.61	110	0.21	33.4	clear	-40.9
1330	6.00	86.25	0.75	13.66	5.24	23.59	109	0.2	23	clear	-48.2
1335	3.75	90	0.75	13.66	5.24	23.60	110	0.18	16	clear	-53.9

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1340	SAMPLING ENDED AT: 1348
PUMP OR TUBING DEPTH IN WELL (feet): 62	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-20C	3	CG	40mL	HCL	Prefilled by lab		8260	ESP	<100
"	3	CG	40mL	None	None		8011	ESP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	ESP	350
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	ESP	350
"	1	PE	250mL	None	None		TDS, Cl, NO_3	ESP	350
"	1	AG	~~1000mL~~ 250 ml	H_2SO_4	Prefilled by lab		Total Phenols	ESP	350

REMARKS:
weather: overcast, 78°F, gusting 5mph winds, light rain @ 1215 (rain stopped at 1315)
odor: none
Initial turbidity: 272 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-21A	SAMPLE ID: MW-21A	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet	STATIC DEPTH TO WATER (feet): 8.6	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18.32 feet – 8.6 feet) X 0.16 gallons/foot = 1.6 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 1415	PURGING ENDED AT: 1450	TOTAL VOLUME PURGED (gallons): 2.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1440	1.75	1.75	0.07	8.98	4.35	25.36	666	1.69	15	clear	249.9
1445	0.35	2.1	0.07	8.98	4.35	25.37	666	1.57	6.9	clear	240.3
1450	0.35	2.45	0.07	8.98	4.35	25.36	668	1.45	6.5	clear	240.7

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1455	SAMPLING ENDED AT: 1505
PUMP OR TUBING DEPTH IN WELL (feet): 14	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-21A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	250
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	250
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	250
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	250

REMARKS:
weather: Overcast, 65°F, 3-5mph gusts
odor: none
initial turbidity: 38.5 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-21C	SAMPLE ID: MW-21C	DATE: Nov 14, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 52 feet to 62 feet	STATIC DEPTH TO WATER (feet): 8.57	PURGE PUMP TYPE OR BAILER: electric submersible

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (62.48 feet – 8.57 feet) X 0.16 gallons/foot = 8.7 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.006 gallons/foot X 70 feet) + 0.12 gallons = 0.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 57	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 57	PURGING INITIATED AT: 1420	PURGING ENDED AT: 1540	TOTAL VOLUME PURGED (gallons): 72

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1512	46.8	46.8	0.9	14.83	5.27	23.67	112	0.21	70.3	hazy	-10.7
1517	4.5	51.3	0.9	14.83	5.28	23.66	112	0.19	50	hazy	-20.6
1530	11.7	63	0.9	14.83	5.25	23.64	111	0.17	31	clear	-41.3
1540	9	72	0.9	14.83	5.26	23.64	111	0.18	19.2	clear	-39.3

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1545	SAMPLING ENDED AT: 1557
PUMP OR TUBING DEPTH IN WELL (feet): 57	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP: Yes	TUBING: No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-21C	3	CG	40mL	HCL	Prefilled by lab		8260	ESP	<100
"	3	CG	40mL	None	None		8011	ESP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	ESP	375
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	ESP	375
"	1	PE	250mL	None	None		TDS, Cl, NO_3	ESP	375
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	ESP	375

REMARKS:
weather: overcast, 65°F, 3-5 mph gusts
odor: none
initial turbidity: 375 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-22RA	SAMPLE ID: MW-22RA
DATE: Nov 15, 2012	

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 16.91	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (23.66 feet – 16.91 feet) X 0.16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: **1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 0635	PURGING ENDED AT: 0710	TOTAL VOLUME PURGED (gallons): 1.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0700	1.25	1.25	0.05	17.06	5.61	23.70	435	0.98	0.5	Clear	-98.9
0705	0.25	1.50	0.05	17.06	5.62	23.69	434	0.92	0	Clear	-98.1
0710	0.25	1.75	0.05	17.06	5.62	23.69	434	0.86	0	Clear	-100.8

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0715	SAMPLING ENDED AT: 0725
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-22RA	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000~~ 250mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: overcast, 68°F, light misting rain

odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-22RC	SAMPLE ID: MW-22RC	DATE: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 56 feet to 66 feet	STATIC DEPTH TO WATER (feet): 17.00	PURGE PUMP TYPE OR BAILER: electric submersible

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)
= 0.0 gallons + (0.006 gallons/foot X 75 feet) + 0.12 gallons = 0.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 61	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 61	PURGING INITIATED AT: 0640	PURGING ENDED AT: 0830	TOTAL VOLUME PURGED (gallons): 132

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0820	120	120	1.2	21.83	5.32	23.38	89	1.98	210	cloudy	-61.7
0825	6	126	1.2	21.83	5.36	23.32	89	1.47	210	cloudy	-64.7
0830	6	132	1.2	21.83	5.32	23.37	88	0.83	208	cloudy	-63.7

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0830	SAMPLING ENDED AT: 0840
PUMP OR TUBING DEPTH IN WELL (feet): 61	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: in line disposable	FILTER SIZE: 1 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-22RC	3	CG	40mL	HCL	Prefilled by lab		8260	ESP	<100
"	3	CG	40mL	None	None		8011	ESP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	ESP	300
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	ESP	300
"	1	PE	250mL	None	None		TDS, Cl, NO_3	ESP	300
"	1	AG	1000mL	H_2SO_4	Prefilled by lab		Total Phenols	ESP	300
REMARKS: 1		PE	500mL	H_2SO_4	Prefilled by lab		dissolved metals	ESP	300

weather: Overcast, 68°F, light misting rain
odor: none
initial turbidity: 780 NTU, Turbidity after filter: 100 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 20.32	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (28.0 feet – 20.32 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 0755	PURGING ENDED AT: 0945	TOTAL VOLUME PURGED (gallons): 5.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0935	5	5	0.05	20.67	5.13	24.66	333	0.38	5.8	clear	-71.6
0940	0.25	5.25	0.05	20.67	5.14	24.70	334	0.38	5.6	clear	-73.0
0945	0.25	5.50	0.05	20.67	5.14	24.71	335	0.36	5.2	clear	-70.3

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 / WSI	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0950	SAMPLING ENDED AT: 1000
PUMP OR TUBING DEPTH IN WELL (feet): 24	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)		DUPLICATE or EQUIPMENT BLANK: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-23A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
"	3	CG	40mL	None	None		8011	RFPP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	200
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	200
"	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	200
"	1	AG	~~1000~~ 250 mL	H_2SO_4	Prefilled by lab		Total Phenols	APP	200

REMARKS:
weather: overcast, 68°F, misting rain
odor: none

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

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-23C	SAMPLE ID: MW-23C	DATE: Nov 15, 2012

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 57 feet to 67 feet	STATIC DEPTH TO WATER (feet): 20.34	PURGE PUMP TYPE OR BAILER: electric submersible

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)
= 0.0 gallons + (0.006 gallons/foot X 75 feet) + 0.12 gallons = 0.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 62	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 62	PURGING INITIATED AT: 0755	PURGING ENDED AT: 0915	TOTAL VOLUME PURGED (gallons): 72

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
0905	63	63	0.9	20.78	5.58	24.16	104	0.43	5.8	clear	-66.2
0910	4.5	67.5	0.9	20.78	5.56	24.17	103	0.39	5.9	clear	-66.7
0915	4.5	72	0.9	20.78	5.56	24.15	103	0.41	5.7	clear	-67.3

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 / WSI	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 0920	SAMPLING ENDED AT: 0927
PUMP OR TUBING DEPTH IN WELL (feet): 62	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP: Yes	TUBING: No (replaced)	DUPLICATE or EQUIPMENT BLANK: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-23C	3	CG	40mL	HCL	Prefilled by lab		8260	ESP	<100
"	3	CG	40mL	None	None		8011	ESP	<100
"	1	PE	500mL	HNO_3	Prefilled by lab		Metals	ESP	375
"	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	ESP	375
"	1	PE	250mL	None	None		TDS, Cl, NO_3	ESP	375
"	1	AG	250mL	H_2SO_4	Prefilled by lab		Total Phenols	ESP	375

REMARKS:
weather: Overcast, 68°F, misting rain
odor: none
initial turbidity: 23 NTU

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After 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:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

APPENDIX C

Field Instrument Calibration Logs

Field Instrument Calibration Record

Site: J.E.D. SWMF Date: Nov 11, 2012

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

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

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						
C252301	April 2014	pH = 4.00	4.00	0	0.2	Y	I	DT
C251987	March 2014	pH = 7.00	7.00	0	0.2	Y	I	DT
C150016	Jan 4, 2013	pH = 10.00	9.93	0.07	0.2	Y	I	DT
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	9.96	0.4	10%	Y	C	DT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	84	0	5%	Y	I	DT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	1006	0.6	5%	Y	C	DT
	Per Table →	D.O. = 8.54 mg/L @ 23.4 °C	8.60	0.09	0.2 mg/l	Y	C	DT

Date: Nov 12, 2012 Time: 1845

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						
C252301	April 2014	pH = 4.00	4.03	0.03	0.2	Y	C	DT
C251987	March 2014	pH = 7.00	7.00	0	0.2	Y	I	DT
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	10.07	0.7	10%	Y	C	DT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	85	1.2	5%	Y	C	DT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	1010	1.0	5%	Y	C	DT
	Per Table →	D.O. = 8.53 mg/L @ 23.3 °C	8.61	0.08	0.2 mg/l	Y	I	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: J.E.D. SWMF Date: Nov 13, 2012

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

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

Time: 1745

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						
C252301	April 2014	pH = 4.00	4.06	0.06	0.2	Y	C	JT
C251987	March 2014	pH = 7.00	7.04	0.04	0.2	Y	C	JT
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	10.12	1.2	10%	Y	C	JT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	84	0	5%	Y	C	JT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	991	0.9	5%	Y	C	JT
	Per Table →	D.O. = 8.53 mg/L @ 23.3 °C	8.60	0.07	0.2 mg/l	Y	I	JT

Date: Nov 14, 2012 Time: 1845

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						
C252301	April 2014	pH = 4.00	4.00	0	0.2	Y	I	JT
C251987	March 2014	pH = 7.00	7.00	0	0.2	Y	I	JT
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	10.01	0.1	10%	Y	C	JT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	86	2.4	5%	Y	C	JT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	994	0.6	5%	Y	C	JT
	Per Table →	D.O. = 8.403 mg/L @ 24.1 °C	8.44	0.037	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

Field Instrument Calibration Record

Site: J.E.D. SWMF Date: Nov 15, 2012

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

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

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						
C252301	April 2014	pH = 4.00	4.04	0.04	0.2	Y	C	JT
C251987	March 2014	pH = 7.00	6.98	0.02	0.2	Y	C	JT
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	10.05	0.5	10%	Y	C	JT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	85	1.2	5%	Y	C	JT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	991	0.9	5%	Y	C	JT
	Per Table →	D.O. = 8.693 mg/L @ 22.3 °C	8.74	0.05	0.2 mg/l	Y	C	JT

Date: Nov 18, 2012 Time: 1805

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						
C252301	April 2014	pH = 4.00	4.04	0.04	0.2	Y	C	JT
C251987	March 2014	pH = 7.00	6.44	0.01	0.2	Y	C	JT
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	10.01	0.1	10%	Y	C	JT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	85	1.2	5%	Y	C	JT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	1004	0.4	5%	Y	C	JT
	Per Table →	D.O. = 8.514 mg/L @ 23.4 °C	8.58	0.07	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: J.E.D. SWMF Date: Nov 20, 2012

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

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

Time: 0940

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						
C252301	April 2014	pH = 4.00	4.01	0.01	0.2	Y	C	JT
C251987	March 2014	pH = 7.00	6.99	0.01	0.2	Y	C	JT
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU	10.07	0.7	10%	Y	C	JT
C250574	Jan 24, 2013	Conductivity = 84 µS/cm	83	1.2	5%	Y	C	JT
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm	1008	0.8	5%	Y	C	JT
	Per Table →	D.O. = 8.418 mg/L @ 24.0 °C	8.45	0.03	0.2 mg/l	Y	C	JT

Date: _____ Time: _____

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						
C252301	April 2014	pH = 4.00			0.2			
C251987	March 2014	pH = 7.00			0.2			
C150016	Jan 4, 2013	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C251755	April 2013	Turbidity = 10 NTU			10%			
C250574	Jan 24, 2013	Conductivity = 84 µS/cm			5%			
C142041	March 2013	Conductivity = 500 µS/cm			5%			
C251430	March 2013	Conductivity = 1,000 µS/cm			5%			
	Per Table →	D.O. = mg/L @ °C			0.2 mg/l			

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR#

CAS Contract

Project Name: JED SWDF	Project Number:
Project Manager: Joe Terry	Email Address: jterry@wsii.us
Company/Address: WSI 11500 43rd St N. Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 0 3 0 3 2

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3	Cl, NO_3, TDS	Total Phenolics	Metals	REMARKS/ ALTERNATE DESCRIPTION
MW-13A		11-12-12	1025	GW	10	3	3	1	1	1	1	
MW-13C			0955									
MW-12A			1220									
MW-12C			1135									
MW-11A			1400									
MW-11C			1330	GW								
Equipment Blank-1		11-12-12	1435	DI H_2O	10	3	3	1	1	1	1	
Trip Blank		10-31-12	0900	DI H_2O	2	2						

SPECIAL I NSTRUCTIONS/COMMENTS

Cooler ID: 12317-JED

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11-12-12/1530	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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PAGE 1 OF 1

SR#

CAS Contract

Project Name: JED SWDF	Project Number:
Project Manager: Joe Terry	Email Address: jterry@wsii.us
Company/Address: WSI 11500 43rd St. N. Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 0 3 0 2 3

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3	Cl, TDS, Alk	Metals	Tot Phenolics	REMARKS/ ALTERNATE DESCRIPTION
MW-10A		11-13-12	0805	GW	10	3	3	1	1	1	1	
MW-10C			0730									
MW-9A			0935									
MW-9C			0905									
MW-8A			1130									
MW-8C			1055									
MW-7A			1340									
MW-7C		11-13-12	1305	GW	10	3	3	1	1	1	1	
Trip Blank		10-31-12	0830	DI H_2O	2	2						

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Cooler ID: 12318-JED

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____Yes _____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11-13-12/1430	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR#

CAS Contract

Project Name: JED SWDF	Project Number:
Project Manager: Joe Terry	Email Address: jterry@wsii.us
Company/Address: WSI	
11500 43rd St N	
Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 0 3 2 0 3 2

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3	Metals	TSS, Cl, NO_3	Tot-I Phenolics	Dissolved Metals	REMARKS/ ALTERNATE DESCRIPTION
MW-16A		11-14-12	0820	GW	10	3	3	1	1	1	1		
MW-16B			0950		10								
MW-16C			0750		10								
MW-19A			1030		10								
MW-19C		11-14-12	1100	GW	11	3	3	1	1	1	1	1	
Trip Blank		10-31-12	0900	DI H_2O	2	2							

NOT.

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Cooler ID: 12319-JED-1

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____Yes _____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11-14-12/1700	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR#

CAS Contract

Project Name: JED SWDF	Project Number:
Project Manager: Joe Terry	Email Address: jterry@wsiinc.us
Company/Address: WSI 11500 43rd St. N Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3	Metals	TDS, Cl, NO_3	Total Phenolics	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE					10	3	3	1	0	3	2	0	3	
MW-20A		11.14.12	1305	GW	10	3	3	1	1	1	1	
MW-20C			1340	GW								
MW-21A			1455	GW								
MW-21C			1545	GW								
Equipment Blank-2		11.14.12	0915	DI H_2O	10	3	3	1				
Trip Blank		10.31.12	0930	DI H_2O	2	2						

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Cooler ID: 12319-JED-2

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___Yes ___No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11.14.12/1700	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR#

CAS Contract

Project Name: JED SWDF	Project Number:
Project Manager: Joe Terry	Email Address: jterry@wsii.us
Company/Address: WSI 11500 43rd St. N. Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 0 3 2 0 3 2

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3	Metals	TDS, Cl, NO_3	Total phenolics	Dissolved Metals	REMARKS/ ALTERNATE DESCRIPTION
MW-22RA		11.15.12	0715	GW	10	3	3	1	1	1	1		
MW-22RC			0830		11	3	3	1	1	1	1	1	
MW-23A			0950		10								
MW-23C			0920		10								
MW-1A			1130		10								
MW-1C		11.15.12	1100	GW	10	3	3	1	1	1	1		
Trip Blank		10.31.12	1000	DI H_2O	2	2							

Preservative Key
0. NONE
1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL I NSTRUCTIONS/COMMENTS

Cooler ID: 12320-JED-1

See QAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
__X__ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
__X__ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11.15.12/1630	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR#

CAS Contract

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Project Name: JED SWDF	Project Number:
Project Manager: Joe Terry	Email Address: jterry@wsii.us
Company/Address: WSI 11500 43rd St. N. Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	1	0	3	2	0	3	REMARKS/ ALTERNATE DESCRIPTION
							8260	8011	NH3	Metals	TDS, Cl, NO3	Total Phenolics	
MW-6A		11.15.12	1340	GW	10	3	3	1	1	1	1		
MW-6C		11.15.12	1315	GW	10	3	3	1	1	1	1		
MW-5A		11.15.12	1520	GW	10	3	3	1	1	1	1		
MW-5C		11.15.12	1450	GW	10	3	3	1	1	1	1		
Trip Blank		10.31.12	1030	DI_{H_2O}	2	2							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL I NSTRUCTIONS/COMMENTS

Cooler ID: 12320-JED-2

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_X_ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
_X_ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11.15.12/1630	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR#

CAS Contract

Project Name: JEA SWSF	Project Number:
Project Manager: Joe Terry	Email Address: JTerry@wsiinc.us
Company/Address: WSI 11500 43rd St. N. Clearwater, FL 33762	
Phone #: 813-943-8633	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	8260	6011	NH_3	Metals	TDS, Cl, NO_3	Total Phenolics	REMARKS/ ALTERNATE DESCRIPTION
						1	0	3	2	0	3		
MW-2A		11-19-12	0835	GW	10	3	3	1	1	1	1		
MW-2C			0810										
MW-3A			1000										
MW-3C			0930										
MW-4A			1125										
MW-4C		11-19-12	1100	GW	10	3	3	1	1	1	1		
Tr. Blk		10-30-12	1100	DI H_2O	2	2							

Preservative Key
0. NONE
1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL I NSTRUCTIONS/COMMENTS

Cooler ID: 12324-JED

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: WSI	Firm	Firm	Firm	Firm	Firm
Date/Time: 11-19-12/1900	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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

APPENDIX E

CD Containing Analytical Laboratory Reports