12310 Vera Avenue
Tampa, Florida 33618

July 30, 2014

Mr. F. Thomas Lubozynski, P.E.
Waste & Air Resource Programs Administrator
Florida Department of Environmental Protection, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Subject: J.E.D. Solid Waste Management Facility
Abandonment and Installation Water Quality Monitoring Wells MW-17R, 24, 25, 26
Omni Waste of Osceola County, LLC.
1501 Omni Way
St. Cloud, Florida
WACS Facility ID 89544

Dear Mr. Lubozynski:

Weibu, LLC (Weibu) was retained by Omni Waste of Osceola County, LLC (Omni) to prepare a summary report to document well plugging, abandonment and installation activities at the above referenced site. Omni is currently constructing an additional disposal area within the Phase IV and Cell 10 disposal areas. Abandonment of the MW-17, 18, 19 & 21 well clusters was necessary to facilitate the construction of Cell 10 and installation of MW-17R, MW-24, MW-25 & MW-26 was necessary to accommodate development of the Phase IV area.

Abandonment and subsequent construction of replacement wells including, monitor wells noted in the Monitoring Plan Implementation Schedule (MPIS) was overseen by Weibu, LLC. All construction and abandonment tasks were completed by National Environmental Technology, Inc. (NET) a Florida licensed drilling contractor.

I certify that the information contained in the accompanying Plugging/Abandonment Well Construction Report is accurate and provide pertinent information as it relates to activities completed at the facility. Furthermore, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Should you have any questions or comments regarding activities completed as part of the plugging, abandonment and installation of select monitor well clusters, please contact Mr. Mike Kaiser at (904) 673-0446, michael.kaiser@progressivewaste.com or me at (813) 412-0003.

Sincerely,

Weibu, LLC
Donald Thompson, PG (1946)

Attachment
cc: Mike Kaiser, Progressive Waste Solutions
Joe Terry, Progressive Waste Solutions

Prepared for:

1099 Miller Drive
Altamonte Springs, Florida 32701

Well Abandonment and Installation
Phase IV & Cell 10 Development

Monitor Well Clusters MW-17, 18, 19, and 21 (abandonment)
Monitor Well Clusters MW-17R, 24, 25, and 26 (installation)

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

Prepared by:

12310 Vera Avenue
Tampa, Florida, 33618

July 2014

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1. INTRODUCTION

Weibu, LLC (Weibu) has prepared this Abandonment and Installation Report on behalf of Omni Waste of Osceola County, LLC (Omni) to provide a summary of recent work to support planned construction activities as part of the planned Phase IV and Cell 10 disposal area of the facility. Plugging, abandonment and installation of select monitor well clusters site(s) were completed in general conformance with a permit modification issued by Florida Department of Environmental Protection (FDEP) Central District-Solid Waste Permitting (Department) January 23, 2014. Locations, designations and the proposed monitoring schedule is included in the revised Monitoring Plan Implementation Schedule (MPIS) dated January 23, 2014.

Section 1.0 of this report presents background information relative to the facility and objectives of the well plugging, abandonment and installation program. Section 2.0 provides a description of the plugging and abandonment methodology and regulatory requirements. Section 3.0 presents a summary of all well drilling and installation activities. Section 4.0 provides an overall description of initial well development and Section 5.0 provides a listing of select references.

1.1 Background

Omni has initiated construction as part of the permitted development activities for the Phase IV & Cell 10 areas of the landfill as noted in the modified permit. As with previous construction efforts within the Cell 9 disposal area, well site abandonment and eventual replacement wells were installed in temporary locations along the general alignment of the Phase 4 stormwater berm. Planned activities for the Phase IV and Cell 10 development included removal of the previous Phase III stormwater berm followed by the construction of a new Phase IV berm to control stormwater along the southern edge of the expansion area. As with the previous construction activities (i.e., Cells 8 and 9) the MW-17 cluster was determined to have been installed in an area that is impeding construction activities along the eastern boundary of the Cell 10 disposal area. The monitor well cluster was abandoned and eventually replaced as part of the construction/installation activities for the Phase IV area. The replacement well cluster was constructed to be consistent with previous efforts and as such, the wells were placed at the mandated horizontal spacing. The only deviation from previous work efforts was the elimination of the deep zone "C" designated monitor well as authorized by current permit conditions.

This report summarizes field activities associated with plugging, abandonment (i.e., MW-17, 18, 19, and 21 ABC wells) and installation for monitor well clusters MW-17R, MW-24, MW-25, and MW-26. **Figure 1** presents a site map showing the locations and designations of site monitor well clusters.

2. PLUGGING AND ABANDONMENT

Monitoring well clusters MW-17, 18, 19, and 21 (Zones A, B, and C) were plugged and abandoned on March 5, 2014. All plugging and abandonment (PA) work activities conformed to specific permitting and well construction guidelines noted in Chapter 62-532 and 40E-3.512 Florida Administrative Codes (FAC). Specific guidelines include;

40D-3.531 Abandoned Well Plugging.

(1) The form entitled "State of Florida Permit Application to Construct, Repair, Modify or Abandon a Well," adopted by reference in Rule 40D-3.101, F.A.C., shall be submitted to the District and a Well Construction Permit shall be issued prior to the abandonment of any well, including an incomplete well.
(2) All abandoned wells as defined by subsection 373.303(1), F.S., and subsection 40D-3.021(1), F.A.C., abandoned artesian wells as defined by subsection 373.203(1), F.S., and incomplete wells as defined by subsection 40D-3.021(17), F.A.C., shall be plugged in accordance with subsection (3) of this rule and Rule 40D-3.517, F.A.C., unless they can be repaired in accordance with this chapter.
(3) All abandoned and incomplete wells shall be plugged by filling them from bottom to top with grout. The work shall be performed by a licensed water well contractor except for wells exempted under subsection 40D-3.051(1) and wells permitted to be constructed or abandoned pursuant to paragraph 40D-3.301(1)(a), F.A.C.

(a) Use of clean aggregate to bridge cavernous or lost circulation zones shall be allowed if measurements indicate loss of grout and the borehole or screened portion does not connect two (2) or more aquifers of differing water quality. Prior approval to use aggregate or other material must be obtained from the District.
(b) Obstructions shall be cleared from all wells prior to plugging.

(4) The contractor must notify the District at least 24 hours in advance of a well abandonment. A District representative must be on site to observe the abandonment procedure unless the following criteria are met and the District authorizes the contractor to proceed without a District representative on site:

(a) The contractor is currently in compliance with all other District rules;
(b) The contractor has not violated any conditions of his license or any District rule within the past two years;
(c) The District has observed the abandonment of at least ten prior wells by the requesting contractor; and
(d) A District representative cannot be at the well site at the time of abandonment.

(5) The "Well Grouting/Abandonment Form," Form No. LEG-R.041.00 (4/09) incorporated herein by reference, will be used to document the well abandonment. Copies of this form can be obtained at the District's website at www.watermatters.org or from District offices.

Permits and supporting documentation are presented in **Appendix A**.

Monitoring well clusters MW-17, MW-18, MW-19, and MW-21 were abandoned to accommodate construction activities within the vicinity of the Cell 10 disposal area and

along the interim Phase III stormwater berm. The overall physical location of the well clusters (installed during prior construction and landfill phasing activities) conflicted with either planned expansion of stormwater management systems or encroached within the perimeter service road.

2.1 Well Plugging Clusters MW-17, 18, 19, and 21

Initial well plugging activities at the facility included the removal of the above ground protective covers and individual concrete well pads. Once the polyvinyl-chloride (PVC) casing was exposed, the well casing was cut-off to extend approximately 1.5-feet above land surface (als). NET was then directed to prepare for cementing operations to seal the well, screen and filter pack using neat Type I/II portland cement. No additives or cement modifiers were utilized during any of the plugging operations.

Theoretical cement volumes were calculated based on the total internal volume of the PVC well and screen. In addition, a theoretical fill-volume was estimated based on the filter pack/well screen interval. Cement volumes were estimated based on;

$$C_{vol} = (W_c * W_{Total}) + (n_{Filt} * L_{Filt} * B_c)$$

where;

C_{vol} = cement volume required to backplug the well including the well-screen filter pack;
W_c = well capacity gallons-per-ft (gal/ft) (0.1632 gal/ft [2" PVC casing]);
W_{Total} = well length total includes casing and screen (ft);
n_{Filt} = porosity of the filter pack (0.20);
L_{Filt} = length of the well filter pack (ft);
B_c = borehole capacity gallons-per-ft (gal/ft) (1.02 gal/ft [5" borehole]);

A summary of theoretical cement volumes required to backplug the wells is shown on **Table 1**.

2.2 Wellhead/Casing Removal

Subsequent to the completion of all cementing and back-plugging operations, Progressive personal excavated and removed approximately 6-ft of the cemented well casing. The final step of the abandonment program was implemented to ensure that any potential obstructions (i.e., the abandoned well casing) would not interfere with remaining grading and liner operations. Excavation of the upper section of the abandoned well casing completed June 26, 2013 using a tracked excavator. The excavation and surrounding area was restored as part of ongoing construction operations.

3. MW-17 R WELL CLUSTER REPLACEMENT DRILLING

Several drilling methods are available for use in creating a borehole for well installation. These methods include hollow stem, air rotary, mud rotary, and cable tool, among others. The drilling method selected will be based on the physical properties of the subsurface materials and as a result, it is not uncommon to adapt a hybridized approach to constructing wells. Based on previous drilling operations and experience, water was introduced into the borehole while advancing auger flights to the targeted monitoring zone depths.

Both monitor well zones A & B were constructed using hollow-stem-auger (HSA). HSA uses continuous flight hollow stem auger with a bit on the bottom to drill and maintain an open borehole. The continuous flight auger drives the drill cuttings to the surface as drilling progresses. The walls of the auger minimize the amount of unconsolidated materials entering into the space inside the casing. Intact soil samples are collected by pounding a sampler ahead of the auger. The well casing, filter pack and seal are installed inside the auger. The auger is removed slightly ahead of backfilling as filter pack and grout are added.

Initial well construction activities for the MW-17 AR well was completed using standard HSA drilling techniques. A hybridized approach was adopted to complete well construction activities for the MW-17 BR monitor well. Water was added to the HSA flights while advancing drill tooling within the borehole. The intent of hydraulically loading the HSA flights was to increase the hydrostatic pressure within the annulus to exclude silty fine materials from sloughing into the annulus and borehole. A continuous drilling log describing lithologic materials encountered during drilling for the A&B zone wells are presented in **Appendix B**.

3.1 MW-17 R Well Construction Specifications and Details

All drilling and well completion activities were completed to ensure as well as maintain conformance with the existing disposal cell monitoring network. The wells were constructed to monitor zones that are consistent with the distribution of monitoring intervals both horizontally and vertically. MW-17 R monitoring intervals included:

- A-Zone – the discrete interval for the surficial-aquifer-system (SAS) at a depth of approximately 10 to 20-ft below land surface; and,
- B-Zone – SAS water column depth of approximately 34 to 44-ft bls.

Well completion forms and specific construction details are presented in **Appendix C**.

A specific purpose survey was completed July, 2014. Replacement well information is summarized on **Table 2** and the survey is provided in **Appendix D**.

Monitor well components consisted of factory-sealed commercially available PVC. Well riser and casing connections consisted of flush-threaded joints with a secondary

rubberized o-ring seal. PVC materials (packing) were clearly marked with American Society for Testing Materials (ASTM) Standard F-480-94 standards and National Science Foundation (NSF) International Standard Number 14-1990.

3.2 MW-17 R Surface Completions

Surface completions for the replacement cluster were constructed to be consistent with the current monitoring network. Individual wellheads received a 6-in anodized aluminum cover with a vented and locking protective cap. In addition a common monolithic concrete pad was placed around all well locations and then a concrete bulkhead was placed adjacent to the edge of the perimeter berm and elevated roadway. Typical construction details for the protective headwall/bulkhead assemblies have been provided in previous submittals.

3.3 MW-24, 25, and 26 Well Construction Specifications and Details

All drilling and well completion activities were completed to ensure as well as maintain conformance with the existing disposal cell monitoring network. The wells were constructed to monitor zones that are consistent with the distribution of monitoring intervals both horizontally and vertically. Monitoring intervals included:

- A-Zone – the discrete interval for the surficial-aquifer-system (SAS) at a depth of approximately 10 to 20-ft below land surface; and,
- B-Zone – SAS water column depth of approximately 34 to 44-ft bls.

Well completion forms and specific construction details are presented in **Appendix C**.

As with the MW-17 R A&B survey specific elevation data is shown on **Table 2** and is provided in **Appendix D**.

3.4 MW-24, 25, and 26 Surface Completions

Individual wellheads received a 6-in anodized aluminum cover with a vented and locking protective cap. Typical construction details for the protective wellhead assemblies have been provided in previous submittals.

4. MW-17 R, MW-24, 25, 26 (CLUSTER), WELL DEVELOPMENT

Well development of the MW-17 R replacement well and newly completed clusters was conducted June 19 and July 1 and 7, 2014. As with previous well development activities, an initial over-pumping effort was completed as a means of pre-conditioning individual well filter packs. Over-pumping mechanical surging and multiple development events will likely be required due to the presence of a significant percentage of silt sized particles within formation materials.

Development activities began with slowly advancing a submersible electric pump into the screen interval. The pump was advanced downhole to the sediment trap/sump to remove any sand particles introduced during initial well construction. Mechanical surging of the screen interval was repeated within all of the well screens; however, the results of the development program vary considerably with final turbidity readings ranging from 2 Nephelometric Turbidity Units (NTU) to 402 NTU. The variability in turbidity is consistent with previous monitoring well installation activities and as such, turbidity levels will likely decrease during subsequent well sampling and monitoring events. **Appendix E** contains well development records subsequent to construction activities.

5. REFERENCES

ASTM F480-12 Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR), SCH 40 and SCH 80

Florida Department of Environmental Protection (FDEP) Standard Operating Procedures FS 2200 Ground Water Sampling (2008)

National Sanitation Foundation NSF Standard 14 (1990)

St. Johns River Water Management District (SJRWMD) Chapter 40C-3

TABLES

Table 1. Type I/II Portland Cement Calculation Results.

Location	Well Length[/a] (feet)	Filter Pack Length[/b] (feet)	Theoretical Volume[/c] (gallons)	Type I/II Portland Cement[/d] (94 pounds-per-sack)
MW-17 A	20	10	5.30	1.06
MW-17 B	40	10	8.57	1.71
MW-17 C	70	10	13.46	2.69
MW-18 A	20	10	5.30	1.06
MW-18 B	40	10	8.57	1.71
MW-18 C	70	10	13.46	2.69
MW-19 A	20	10	5.30	1.06
MW-19 B	40	10	8.57	1.71
MW-19 C	70	10	13.46	2.69
MW-21 A	20	10	5.30	1.06
MW-21 B	40	10	8.57	1.71
MW-21 C	70	10	13.46	2.69

notes:

a. Total casing and screen length.

b. Approximate assume a nominal Length of the screen interval.

c. Portland cement volume required to backplug/abandon the well casing, screen interval, and filter pack.

d. Total number sacks required Type I/II Portland Cement. Assume an ideal mix ratio of 6:1 to yield 10 gallons cement slurry.

Cement Volume = (0.1632 gallons/ft * Well Length) + (0.3 * Filter Pack Length * 1.47 gallons/ft)

assumptions:

0.1632 capacity of 2" pipe

1.02 capacity of 5-in borehole

0.2 porosity of filter pack

Table 2. Survey Elevation Data MW-17R, MW-24, MW-25, AND MW-26 Clusters.

Designation	Latitude	Longitude	Northing	Easting	Protective Casing Elevation	TOC (PVC) NGVD1929	Ground Elevation
MW-17 AR	28° 03'42.3"	81° 05'35.2"	1355161.64	626134.43	95.09	94.84	91.9
X-Mark (MW-17 AR)	28° 03'42.3"	81° 05'35.2"	1355161.92	626134.73			91.97
MW-17 BR	28° 03'42.2"	81° 05'35.2"	1355159.94	626137.50	94.93	94.78	91.9
X-Mark (MW-17 BR)	28° 03'42.3"	81° 05'35.2"	1355160.34	626138.07			91.97
MW-24A	28° 03'26.5"	81° 05'58.5"	1353576.17	624060.36	87.29	86.99	83.9
X-Mark (MW-24A)	28° 03'26.5"	81° 05'58.4"	1353575.67	624061.00			84.34
MW-24B	28° 03'26.5"	81° 05'58.5"	1353575.75	624053.53	87.27	87.05	84
X-Mark (MW-24B)	28° 03'26.5"	81° 05'58.4"	1353575.23	624054.04			84.24
MW-25A	28° 03'26.6"	81° 05'42.6"	1353578.36	625469.63	87.14	86.99	84
X-Mark (MW-25A)	28° 03'26.6"	81° 05'42.6"	1353577.85	625470.41			84.34
MW-25B	28° 03'26.6"	81° 05'42.7"	1353576.16	625463.45	86.87	86.67	84
X-Mark (MW-25B)	28° 03'26.6"	81° 05'42.7"	1353575.67	625464.29			84.34
MW-26A	28° 03'26.9"	81° 05'25.9"	1353614.23	626973.10	87.21	87.06	83.9
X-Mark (MW-26A)	28° 03'26.9"	81° 05'25.9"	1353614.09	626972.40			84.27
MW-26B	28° 03'27.0"	81° 05'25.9"	1353615.78	626967.44	87.21	86.83	83.8
X-Mark (MW-26B)	28° 03'27.0"	81° 05'25.9"	1353615.51	626966.79			84.27

FIGURES

Legend

- Plugged and Abandoned Monitor Well Clusters (A,B,C Zones)
- Monitor Well Cluster Locations/Phase IV Construction
- Monitor Well Cluster Locations

250 125 0 250 500 750 1,000 Feet

1 in = 500 ft

Site Well Locations and Designations

PROGRESSIVE WASTE SOLUTIONS
J.E.D. SOLID WASTE DISPOSAL FACILITY
1501 OMNI WAY
ST. CLOUD, FLORIDA

Notes:
Aerial Images Acquired from LABINS (2011)
WACS FACILITY ID 89544
Monitoring well clusters MW-16 and MW-20 were abandoned; however, a replacement cluster MW-16 was re-installed approximately 8-ft north and east from the previous location.

Weibu LLC

Tampa, Florida

Figure 1

Appendix A. Permits Supporting Documentation

STATE OF FLORIDA WELL COMPLETION REPORT

☐Southwest
☐Northwest
☐St. Johns River
☐South Florida
☐Suwannee River
☐DEP
☐Delegated Authority (If Applicable) MW-17RA, MW-24R, 25A, 26R (4 wells)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Official Use Only

1.*Permit Number 1541571 (49WP) *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2.*Number of permitted wells constructed, repaired, or abandoned 4 *Number of permitted wells not constructed, repaired, or abandoned 0

3.*Owner's Name Omni Waste Of Osceola County *Completion Date 6-30-2014 5. Florida Unique ID _____

6. JED Solid Waste Facility 1501 Omni Way, St. Cloud, FL
*Well Location - Address, Road Name or Number, City, ZIP

7.*County Osceola *Section 11 Land Grant _____ *Township 28S *Range 32E

8. Latitude _____ Longitude _____

9. Data Obtained From: ____GPS ✓Map ____Survey Datum: ____NAD 27 ____NAD 83 ____WGS 84

10.*Type of Work: ✓Construction ____Repair ____Modification ____Abandonment

11.*Specify Intended Use(s) of Well(s):
____Domestic
____Bottled Water Supply
____Public Water Supply (Limited Use/DOH)
____Public Water Supply (Community or Non-Community/DEP)
____Class I Injection
____Landscape Irrigation
____Recreation Area Irrigation
____Agricultural Irrigation
____Livestock
____Nursery Irrigation
____Commercial/Industrial
____Golf Course Irrigation
____Site Investigation
✓Monitoring
____Test
____Earth-Coupled Geothermal
____HVAC Supply
____HVAC Return
Class V Injection: ____Recharge ____ Commercial/Industrial Disposal ____Aquifer Storage and Recovery ____Drainage
Remediation: ____Recovery ____Air Sparge ____Other (Describe) _____
____Other (Describe) _____

12.*Drill Method: ✓Auger ____Cable Tool ____Rotary ____Combination (Two or More Methods) ____Jetted ____Sonic
____Horizontal Drilling ____Hydraulic Point (Direct Push) ____Other _____

13.*Measured Static Water Level 5 ft. Measured Pumping Water Level 10 ft. After 0.5 Hours at 3 GPM

14.*Measuring Point (Describe) Ground Surface Which is 0 ft. ____Above ✓Below Land Surface *Flowing: ____Yes ✓No

15.*Casing Material: ____Black Steel ____Galvanized ✓PVC ____Stainless Steel ____Not Cased ____Other _____

16.*Total Well Depth 20 ft. Cased Depth 10 ft. *Open Hole: From N/A To ____ ft. *Screen: From 10 To 20 ft. Slot Size .006

17.*Abandonment: ____Other (Explain) _____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

18.*Surface Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

19.*Primary Casing Diameter and Depth:
Dia 2 in. From 0 ft. To 10 ft. No. of Bags 2 Seal Material (Check One): ✓Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

20.*Liner Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

21.*~~Telescope~~ Screen Casing Diameter and Depth:
Dia 2 in. From 10 ft. To 20 ft. No. of Bags 7 Seal Material (Check One): ____Neat Cement ____Bentonite ____Other Sand
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

22. Pump Type (If Known): NONE
____Centrifugal ____Jet ____Submersible ____Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ft. Intake Depth _____ft.

23. Chemical Analysis (When Required): N/A
Iron _____ppm Sulfate _____ppm Chloride _____ppm
____Laboratory Test _____Field Test Kit

24. Water Well Contractor:
*Contractor Name Ross Chmarder *License Number 11093 E-mail Address netrosse@tampabay.rr.com

*Contractor's Signature _____ (I certify that the information provided in this report is accurate and true.) *Driller's Name (Print or Type) William Tennant

*Permit No. 49 WP 154157 1

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE: (352) 796-7211 or (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1429
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
(U.S. Highway 90, 10 miles west of Tallahassee)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
WWW.MYSUWANNEERIVER.COM

***DRILL CUTTINGS LOG** (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From (ft.)	To (ft.)	Color	Grain Size (F, M, C)	Material
0	20	Dark Brown	F (circled)	Silty Sand

Comments: Installation of 4 2" monitoring wells to 20' with 10' of .006 slotted screen MW-17RA, 24R, 25A, 26A

***Detailed Site Map of Well Location**

N

49WP154571

STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☐ Delegated Authority (If Applicable) MW-5RA, 24A, 25A, 26A (4 wells)

PLEASE FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

The water well contractor is responsible for completing this form and forwarding the permit application to the appropriate delegated authority where applicable.

Permit No. ______
Florida Unique ID ______
Permit Stipulations Required (See Attached)

62-524 Quad No. ______ Delineation No. ______
CUP/WUP Application No. ______

1. Omni Waste of Osceola County — 3703 Bellair Blvd — Houston — TX — 77025 — 713-412-0003
*Owner, Legal Name if Corporation *Address *City *State *ZIP *Telephone Number

2. JED Solid Waste Facility 1501 Omni Way, St. Cloud, FL
*Well Location - Address, Road Name or Number, City

3. 11 28 32 000 000 100 008
*Parcel ID No. (PIN) or Alternate Key (Circle One) Lot Block Unit

4. 11 28S 32E Osceola
*Section or Land Grant *Township *Range *County Subdivision Check if 62-524: ___ Yes ✓ No

5. Ross Chinander 11093 (813) 655-3612 nctross@tampabayrr.com
*Water Well Contractor *License Number *Telephone Number E-mail Address

6. 12435 Jess Walden Road Dover FL 33527
*Water Well Contractor's Address City State ZIP

7. *Type of Work: ✓ Construction ___ Repair ___ Modification ___ Abandonment ______
Reason for Repair, Modification, or Abandonment

8. *Number of Proposed Wells 4

9. *Specify Intended Use(s) of Well(s):

___ Domestic ___ Landscape Irrigation ___ Agricultural Irrigation ___ Site Investigation
___ Bottled Water Supply ___ Recreation Area Irrigation ___ Livestock ✓ Monitoring
___ Public Water Supply (Limited Use/DOH) ___ Nursery Irrigation ___ Test
___ Public Water Supply (Community or Non-Community/DEP) ___ Commercial/Industrial ___ Earth-Coupled Geothermal
___ Class I Injection ___ Golf Course Irrigation ___ HVAC Supply ___ HVAC Return

Class V Injection: ___ Recharge ___ Commercial/Industrial Disposal ___ Aquifer Storage and Recovery ___ Drainage

Remediation: ___ Recovery ___ Air Sparge ___ Other (Describe) ______

___ Other (Describe) ______ (Note: Not all types of wells are permitted by a given permitting authority)

Date Stamp

Official Use Only

10. *Distance from Septic System if ≤200 ft. N/A 11. Facility Description Landfill 12. Estimated Start Date 6-4-2014

13. *Estimated Well Depth 20 ft. *Estimated Casing Depth 10 ft. *Primary Casing Diameter 2 in. Open Hole: From N/A To ___ ft.

14. Estimated Screen Interval: From 10' To 20' ft.

15. *Primary Casing Material: ___ Black Steel ___ Galvanized ✓ PVC ___ Stainless Steel ___ Not Cased ___ Other: ______

16. Secondary Casing: N/A Telescope Casing ___ Liner ___ Surface Casing Diameter ___ in.

17. Secondary Casing Material: ___ Black Steel ___ Galvanized N/A PVC ___ Stainless Steel ___ Other ______

18. *Method of Construction, Repair, or Abandonment: ✓ Auger ___ Cable Tool ___ Jetted ___ Rotary ___ Sonic
___ Combination (Two or More Methods) ___ Hand Driven (Well Point, Sand Point) ___ Hydraulic Point (Direct Push)
___ Horizontal Drilling ___ Plugged by Approved Method ___ Other (Describe) ______

19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:
From 0 To 7' Seal Material (___ Bentonite ✓ Neat Cement ___ Other ______)
From ___ To ___ Seal Material (___ Bentonite ___ Neat Cement ___ Other ______)
From ___ To ___ Seal Material (___ Bentonite ___ Neat Cement ___ Other ______)
From ___ To ___ Seal Material (___ Bentonite ___ Neat Cement ___ Other ______)

20. Indicate total number of existing wells on site 58 List number of existing unused wells on site 0

21. *Is this well or any existing well or water withdrawal on the owner's contiguous property covered under a Consumptive/Water Use Permit (CUP/WUP) or CUP/WUP Application? ___ Yes ✓ No If yes, complete the following: CUP/WUP No. ______ District Well ID No. ______

22. Latitude ______ Longitude ______

23. Data Obtained From: ✓ GPS ✓ Map ___ Survey Datum: ___ NAD 27 ___ NAD 83 ___ WGS 84

I hereby certify that I will comply with the applicable rules of Title 40, Florida Administrative Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided in this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after completion of the construction, repair, modification, or abandonment authorized by this permit, or the permit expiration, whichever occurs first.

I certify that I am the owner of the property, that the information provided is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well; or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of their responsibilities as stated above. Owner consents to allowing personnel of the WMD or Delegated Authority access to the well site during the construction, repair, modification, or abandonment authorized by this permit.

[signature] 11093 [signature] For IESI 5-29-2014
*Signature of Contractor *License No. *Signature of Owner or Agent *Date

Approval Granted By [signature] Issue Date 6/2/14 Expiration Date ______ Hydrologist Approval ______ Initials

Fee Received $ 300 Receipt No. ______ Check No. ______

THIS PERMIT IS NOT VALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF THE WMD OR DELEGATED AUTHORITY. THE PERMIT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL CONSTRUCTION, REPAIR, MODIFICATION, OR ABANDONMENT ACTIVITIES.

Permit No. _____

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE: (352) 796-7211 or (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1429
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
(U.S. Highway 90, 10 miles west of Tallahassee)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

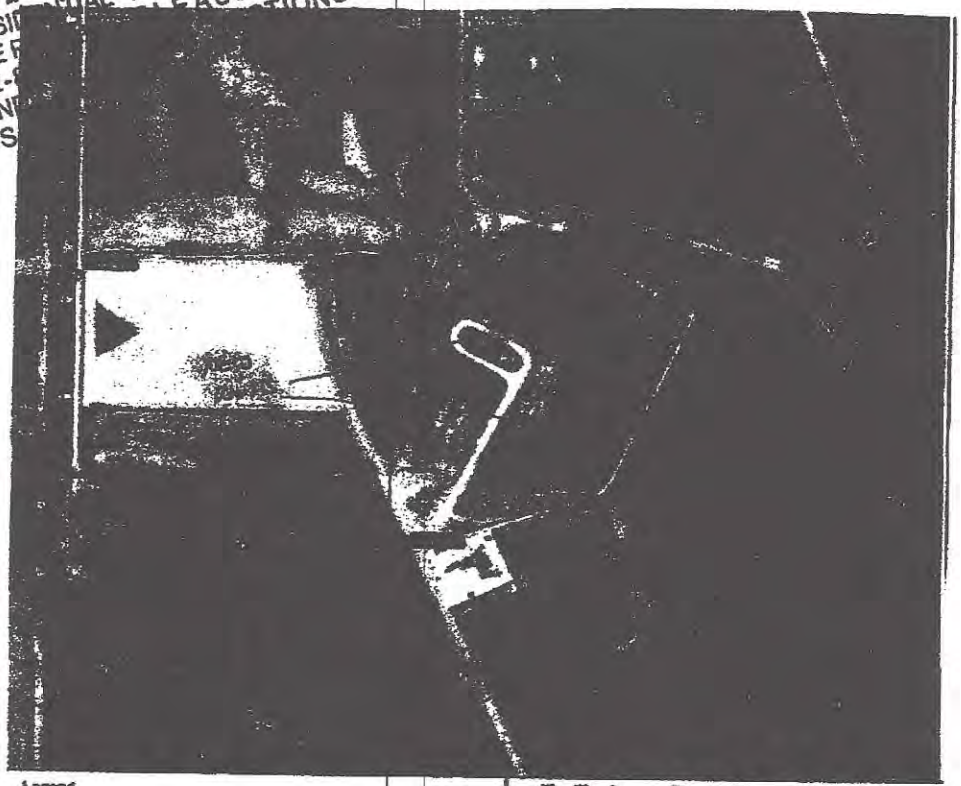
SUWANNEE RIVER WATER MANAGEMENT DISTRICT
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
WWW.MYSUWANNEERIVER.COM

Comments:

Installation of MW-17RA, 24A, 25A, 26A
(4 wells) 2" Dia wells To 20' w/ 10' of .006 Screen.

WELL DRILLER MUST CALL THE OFFICE WHEN DRILLING, ABANDONING, OR REPAIRING A WELL. YOU MUST CALL AT LEAST 2 HOURS PRIOR TO GROUT FOR RESI[illegible] / 24 HOURS ON COMMER[illegible] 407-742-[illegible] WEEKEN[illegible] PLEAS[illegible] CALL [illegible]TIONS.

General Site Map of Proposed Well Location



Identify known roads and landmarks. Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources, if applicable.

STATE OF FLORIDA WELL COMPLETION REPORT

☐Southwest
☐Northwest
☐St. Johns River
☐South Florida
☐Suwannee River
☐DEP
☐Delegated Authority (If Applicable) MW-17RB (1 well)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Official Use Only

1.*Permit Number 49WP 154157 2 *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2.*Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3.*Owner's Name Omni Waste Of Osceola County *Completion Date 6-30-2014 5. Florida Unique ID _____

6. JED Solid Waste Facility 1501 Omni Way, St. Cloud, FL
*Well Location - Address, Road Name or Number, City, ZIP

7.*County Osceola *Section 11 Land Grant _____ *Township 28S *Range 32E

8. Latitude _____ Longitude _____

9. Data Obtained From: ____GPS ✓Map ____Survey Datum: ____NAD 27 ____NAD 83 ____WGS 84

10.*Type of Work: ✓Construction ____Repair ____Modification ____Abandonment

11.*Specify Intended Use(s) of Well(s):
____Domestic
____Bottled Water Supply
____Public Water Supply (Limited Use/DOH)
____Public Water Supply (Community or Non-Community/DEP)
____Class I Injection
____Landscape Irrigation
____Recreation Area Irrigation
____Agricultural Irrigation
____Livestock
____Nursery Irrigation
____Commercial/Industrial
____Golf Course Irrigation
____Site Investigation
✓Monitoring
____Test
____Earth-Coupled Geothermal
____HVAC Supply
____HVAC Return
Class V Injection: ____Recharge ____ Commercial/Industrial Disposal ____Aquifer Storage and Recovery ____Drainage
Remediation: ____Recovery ____Air Sparge ____Other (Describe) _____
____Other (Describe) _____

12.*Drill Method: ✓Auger ____Cable Tool ____Rotary ____Combination (Two or More Methods) ____Jetted ____Sonic
____Horizontal Drilling ____Hydraulic Point (Direct Push) ____Other _____

13.*Measured Static Water Level 10 ft. Measured Pumping Water Level 15 ft. After 0.5 Hours at 3 GPM

14.*Measuring Point (Describe) Ground Surface Which is 0 ft. ____Above ✓Below Land Surface *Flowing: ____Yes ✓No

15.*Casing Material: ____Black Steel ____Galvanized ✓PVC ____Stainless Steel ____Not Cased ____Other _____

16.*Total Well Depth 44 ft. Cased Depth 34 ft. *Open Hole: From N/A To ____ ft. *Screen: From 34 To 44 ft. Slot Size 006

17.*Abandonment: ____Other (Explain) _____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

18.*Surface Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

19.*Primary Casing Diameter and Depth:
Dia 2 in. From 0 ft. To 34 ft. No. of Bags 8 Seal Material (Check One): ✓Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

20.*Liner Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

21.*~~Telescope~~ Screen Casing Diameter and Depth:
Dia 2 in. From 34 ft. To 44 ft. No. of Bags 7 Seal Material (Check One): ____Neat Cement ____Bentonite ____Other Sand
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

22. Pump Type (If Known): NONE
____Centrifugal ____Jet ____Submersible ____Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ft. Intake Depth _____ft.

23. Chemical Analysis (When Required): N/A
Iron _____ppm Sulfate _____ppm Chloride _____ppm
____Laboratory Test ____Field Test Kit

24. Water Well Contractor:

*Contractor Name Ross Chevalier *License Number 11093 E-mail Address netrosse@tampabay.rr.com

*Contractor's Signature _____ (I verify that the information provided in this report is accurate and true.) *Driller's Name (Print or Type) William Tennant

*Permit No. 49WP 154572

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE: (352) 796-7211 or (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1429
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
(U.S. Highway 90, 10 miles west of Tallahassee)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
WWW.MYSUWANNEERIVER.COM

***DRILL CUTTINGS LOG** (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From (ft.)	To (ft.)	Color	Grain Size (F, M, C)	Material
0	20	Dark Brown	F	Silty Sand
20	44'	Tan	F	Silty Sand

Comments: Installation of 1 - 2" monitoring wells to 44 with 10' of .006 slotted screen MW-17RB

*Detailed Site Map of Well Location

STATE OF FLORIDA WELL COMPLETION REPORT

☐Southwest
☐Northwest
☐St. Johns River
☐South Florida
☐Suwannee River
☐DEP
☐Delegated Authority (If Applicable) (3 wells) MW-34R, 35B+26B

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Official Use Only

1.*Permit Number 1541572 (4WUP) *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2.*Number of permitted wells constructed, repaired, or abandoned 3 *Number of permitted wells not constructed, repaired, or abandoned 0

3.*Owner's Name Omni Waste Of Osceola County *Completion Date 6-30-2014 5. Florida Unique ID _____

6. JED Solid Waste Facility 1501 Omni Way, St. Cloud, FL
*Well Location - Address, Road Name or Number, City, ZIP

7.*County Osceola *Section 11 Land Grant _____ *Township 28S *Range 32E

8. Latitude _____ Longitude _____

9. Data Obtained From: ____GPS ✓Map ____Survey Datum: ____NAD 27 ____NAD 83 ____WGS 84

10.*Type of Work: ✓Construction ____Repair ____Modification ____Abandonment

11.*Specify Intended Use(s) of Well(s):
____Domestic
____Bottled Water Supply
____Public Water Supply (Limited Use/DOH)
____Public Water Supply (Community or Non-Community/DEP)
____Class I Injection
____Landscape Irrigation
____Recreation Area Irrigation
____Agricultural Irrigation
____Livestock
____Nursery Irrigation
____Commercial/Industrial
____Golf Course Irrigation
____Site Investigation
✓Monitoring
____Test
____Earth-Coupled Geothermal
____HVAC Supply
____HVAC Return
Class V Injection: ____Recharge ____Commercial/Industrial Disposal ____Aquifer Storage and Recovery ____Drainage
Remediation: ____Recovery ____Air Sparge ____Other (Describe) _____
____Other (Describe) _____

12.*Drill Method: ✓Auger ____Cable Tool ____Rotary ____Combination (Two or More Methods) ____Jetted ____Sonic
____Horizontal Drilling ____Hydraulic Point (Direct Push) ____Other _____

13.*Measured Static Water Level 5 ft. Measured Pumping Water Level 10 ft. After 0.5 Hours at 3 GPM

14.*Measuring Point (Describe) Ground Surface Which is 0 ft. ____Above ✓Below Land Surface *Flowing: ____Yes ✓No

15.*Casing Material: ____Black Steel ____Galvanized ✓PVC ____Stainless Steel ____Not Cased ____Other _____

16.*Total Well Depth 40 ft. Cased Depth 30 ft. *Open Hole: From N/A To ____ ft. *Screen: From 30' To 40' ft. Slot Size .006

17.*Abandonment: ____Other (Explain) _____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

18.*Surface Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

19.*Primary Casing Diameter and Depth:
Dia 2 in. From 0 ft. To 30 ft. No. of Bags 6 Seal Material (Check One): ✓Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

20.*Liner Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

21.*~~Telescope~~ Screen Casing Diameter and Depth:
Dia 2 in. From 30 ft. To 40 ft. No. of Bags 7 Seal Material (Check One): ____Neat Cement ____Bentonite ____Other Sand
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

22. Pump Type (If Known): NONE
____Centrifugal ____Jet ____Submersible ____Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ft. Intake Depth _____ft.

23. Chemical Analysis (When Required): N/R
Iron _____ppm Sulfate _____ppm Chloride _____ppm
____Laboratory Test ____Field Test Kit

24. Water Well Contractor:
*Contractor Name Ross Chmarder *License Number 11093 E-mail Address rossb@tampabay.rr.com

*Contractor's Signature _____ (I certify that the information provided in this report is accurate and true.) *Driller's Name (Print or Type) William Tennant

*Permit No. 49WP1541572

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE: (352) 796-7211 or (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1429
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
(U.S. Highway 90, 10 miles west of Tallahassee)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

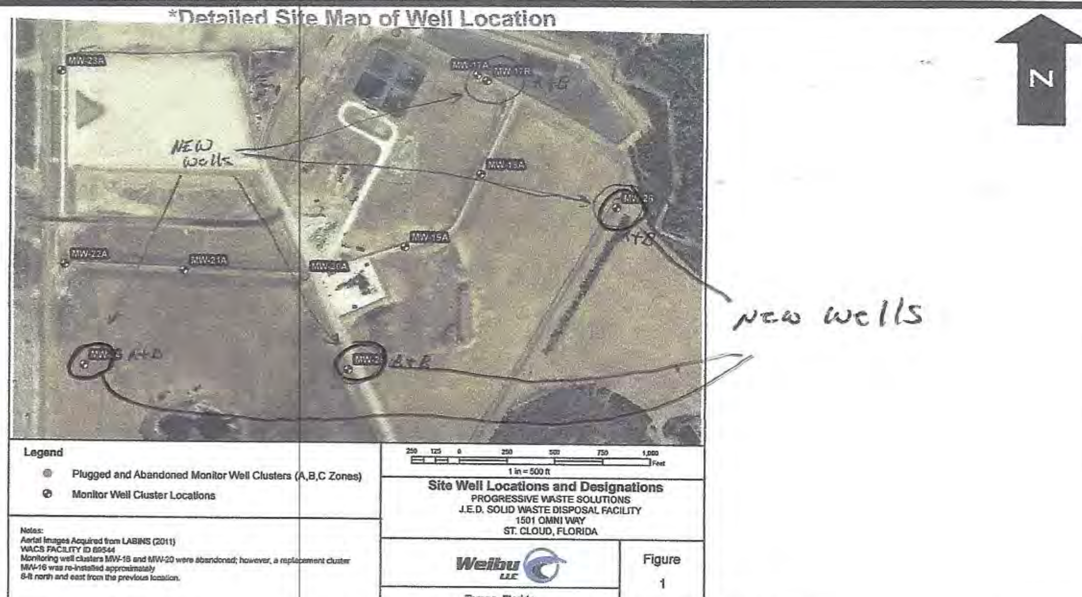
SUWANNEE RIVER WATER MANAGEMENT DISTRICT
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
WWW.MYSUWANNEERIVER.COM

***DRILL CUTTINGS LOG** (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From (ft.)	To (ft.)	Color	Grain Size (F, M, C)	Material
0	20	Dark Brown	F	Silty Sand
20	40	Tan	F	Silty Sand

Comments: Installation of 3- 2" monitoring wells to 40' with 10' of .006 slotted screen MW-24B, 25B + 26B

*Detailed Site Map of Well Location



496P154 1572

STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☐ Delegated Authority (If Applicable) MW-17RB, 24B, 25B, 26B (4 wells)

PLEASE FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

The water well contractor is responsible for completing this form and forwarding the permit application to the appropriate delegated authority where applicable.

Permit No.
Florida Unique ID
Permit Stipulations Required (See Attached)
62-524 Quad No. ____ Delineation No. ____
CUP/WUP Application No. ____

1. Omni Waste of Osceola County | 3703 Bellair Blvd | Houston | Tx | 77025 | 813 413-0003
*Owner, Legal Name if Corporation | *Address | *City | *State | *ZIP | *Telephone Number

2. JED Solid Waste Facility 1501 Omni Way, St. Cloud, FL
*Well Location – Address, Road Name or Number, City

3. 11 28 32 000 000 100 003
*Parcel ID No. (PIN) or Alternate Key (Circle One) | Lot | Block | Unit

4. 11 | 28S | 32E | Osceola
*Section or Land Grant | *Township | *Range | *County | Subdivision | Check if 62-524: ___ Yes ✓ No

5. Ross Chwander | 11093 | (813) 655-3612 | netross@tampabay.rr.com
*Water Well Contractor | *License Number | *Telephone Number | E-mail Address

6. 12435 Jess Walden Road | Dover | FL | 33527
*Water Well Contractor's Address | City | State | ZIP

7. *Type of Work: ✓ Construction ___ Repair ___ Modification ___ Abandonment ____
*Reason for Repair, Modification, or Abandonment

8. *Number of Proposed Wells 4

9. *Specify Intended Use(s) of Well(s):

___ Domestic ___ Landscape Irrigation ___ Agricultural Irrigation ___ Site Investigation
___ Bottled Water Supply ___ Recreation Area Irrigation ___ Livestock ✓ Monitoring
___ Public Water Supply (Limited Use/DOH) ___ Nursery Irrigation ___ Test
___ Public Water Supply (Community or Non-Community/DEP) ___ Commercial/Industrial ___ Earth-Coupled Geothermal
___ Class I Injection ___ Golf Course Irrigation ___ HVAC Supply ___ HVAC Return

Class V Injection: ___ Recharge ___ Commercial/Industrial Disposal ___ Aquifer Storage and Recovery ___ Drainage

Remediation: ___ Recovery ___ Air Sparge ___ Other (Describe) ____

___ Other (Describe) ____ (Note: Not all types of wells are permitted by a given permitting authority)

Date Stamp

Official Use Only

10. *Distance from Septic System if ≤200 ft. N/A 11. Facility Description Landfill 12. Estimated Start Date 6-4-2014

13. *Estimated Well Depth 44 ft. *Estimated Casing Depth 34 ft. *Primary Casing Diameter 2 in. Open Hole: From N/A To ___ ft.

14. Estimated Screen Interval: From 34 To 44 ft.

15. *Primary Casing Material: ___ Black Steel ___ Galvanized ✓ PVC ___ Stainless Steel ___ Not Cased ___ Other: ____

16. Secondary Casing: N/A Telescope Casing ___ Liner ___ Surface Casing Diameter ___ in.

17. Secondary Casing Material: ___ Black Steel ___ Galvanized N/A PVC ___ Stainless Steel ___ Other ____

18. *Method of Construction, Repair, or Abandonment: ✓ Auger ___ Cable Tool ___ Jetted ___ Rotary ___ Sonic
___ Combination (Two or More Methods) ___ Hand Driven (Well Point, Sand Point) ___ Hydraulic Point (Direct Push)
___ Horizontal Drilling ___ Plugged by Approved Method ___ Other (Describe) ____

19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:
From 0 To 30 Seal Material (___ Bentonite ✓ Neat Cement ___ Other ____)
From ___ To ___ Seal Material (___ Bentonite ___ Neat Cement ___ Other ____)
From ___ To ___ Seal Material (___ Bentonite ___ Neat Cement ___ Other ____)
From ___ To ___ Seal Material (___ Bentonite ___ Neat Cement ___ Other ____)

20. Indicate total number of existing wells on site 58 List number of existing unused wells on site 0

21. *Is this well or any existing well or water withdrawal on the owner's contiguous property covered under a Consumptive/Water Use Permit (CUP/WUP) or CUP/WUP Application? ___ Yes ✓ No If yes, complete the following: CUP/WUP No. ____ District Well ID No. ____

22. Latitude ____ Longitude ____

23. Data Obtained From: ___ GPS ✓ Map ___ Survey Datum: ___ NAD 27 ___ NAD 83 ___ WGS 84

I hereby certify that I will comply with the applicable rules of Title 40, Florida Administrative Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided in this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after completion of the construction, repair, modification, or abandonment authorized by this permit, or the permit expiration, whichever occurs first.

I certify that I am the owner of the property, that the information provided is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well; or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of their responsibilities as stated above. Owner consents to allowing personnel of this WMD or Delegated Authority access to the well site during the construction, repair, modification, or abandonment authorized by this permit.

[signature] 11093 | [signature] For IESI | 5-29-2014
*Signature of Contractor | *License No. | *Signature of Owner or Agent | *Date

Approval Granted By [signature] Issue Date 6/2/14 Expiration Date ____ Hydrologist Approval ____ Initials

Fee Received $ 500 Receipt No. ____ Check No. CC

THIS PERMIT IS NOT VALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF THE WMD OR DELEGATED AUTHORITY. THE PERMIT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL CONSTRUCTION, REPAIR, MODIFICATION, OR ABANDONMENT ACTIVITIES.

Permit No. _____

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE: (352) 796-7211 or (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1429
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
(U.S. Highway 90, 10 miles west of Tallahassee)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

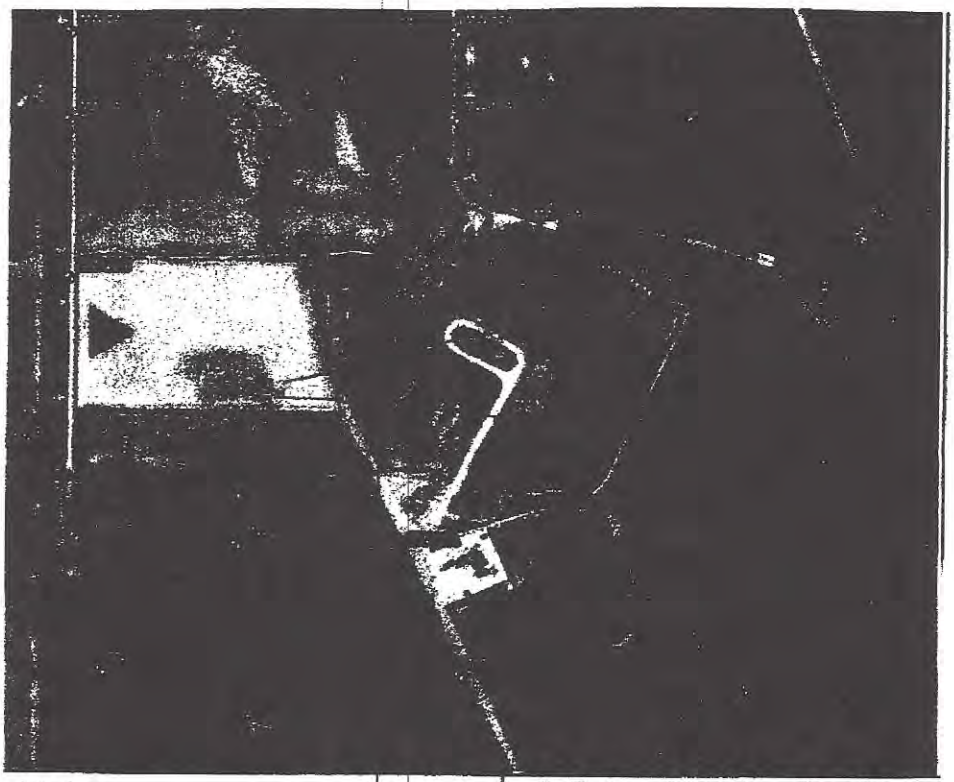
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
WWW.MYSUWANNEERIVER.COM

Comments:

Installation of MW-17RB, 24B, 25B, 26B (4 wells) 2" Dia. wells to 44' w/ 10' of .006 screen.

*General Site Map of Proposed Well Location



Identify known roads and landmarks. Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources, if applicable.

Appendix B. Soil Boring Logs MW-17 R, 24, 25, 26 (A, B)

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number: MW-17 R A (replacement)	Permit Number: 49WP1541571		FDEP Facility Identification Number: 89544
Site Name: J.E.D. Solid Waste Disposal Facility	Borehole Start Date: 06/19/14	Borehole Start Time: 1240 ☐ AM ☑ PM	
	End Date: 06/19/14	End Time: 1340 ☐ AM ☑ PM	
Environmental Contractor: WEIBU, LLC	Geologist/Engineer Name: Thompson		Environmental Technician's Name: NA
Drilling Company: National Environmental Technologies	Pavement Thickness (inches): NA	Borehole Diameter (inches): 6	Borehole Depth (feet): 20
Drilling Method(s): Hollow Stem Auger	Apparent Borehole DTW (in feet from soil moisture content): 12.5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): ☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Drilling on perimeter berm, roadway soil materials to ~12-ft below land surface	SM	D	
DC							2	were placed as backfill.	SM	D	
DC							3	Sand; fine to medium, dark brown to tan, silty non-plastic	SM	D	
DC							4	some iron staining (backfill material to 12 ft)	SM	D	
DC							5	as-above	SM	D	
DC							6	as-above	SM	D	
DC							7	as-above	SM	D	
DC							8	as-above	SM	D	
DC							9	as-above	SM	D	
DC							10	as-above	SM	D	
DC							11	as-above	SM	D	
DC							12	as-above	SM	M	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-17 R A	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	Sand; fine to medium grained, silty	SM	M	
DC							14	trace organics noted within cuttings samples	SM	W	
DC							15	silt increasing with depth.	SM	W	
DC							16	as-above	SM	W	
DC							17	as-above, silty fine	SM SL	W	
DC							18	as-above, silty fine	SM SL	W	
DC							19	as-above, silty fine	SM SL	W	
DC							20	as-above, silty fine	SM SL	W	
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-17 R B (replacement)	49WP1541572	89544

Site Name:	Borehole Start Date:	Borehole Start Time:	
J.E.D. Solid Waste Disposal Facility	06/19/14	1029	☑ AM ☐ PM
	End Date: 06/19/14	End Time: 1240	☐ AM ☑ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Pavement Thickness (inches):	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	NA	6	40

Drilling Method(s):	Apparent Borehole DTW (in feet	Measured Well DTW (in feet after	OVA (list model and check type):
Hollow Stem Auger	from soil moisture content): 12.5	water recharges in well): NA	☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Drilling on perimeter berm, roadway soil materials to ~12-ft below land surface	SM	D	
DC							2	were placed as backfill.	SM	D	
DC							3	Sand; fine to medium, dark brown to tan, silty non-plastic	SM	D	
DC							4	some iron staining (backfill material to 12 ft)	SM	D	
DC							5	as-above	SM	D	
DC							6	as-above	SM	D	
DC							7	as-above	SM	D	
DC							8	as-above	SM	D	
DC							9	as-above	SM	D	
DC							10	as-above	SM	D	
DC							11	as-above	SM	D	
DC							12	as-above	SM	M	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-17 R B	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	Sand; fine to medium grained, silty	SM	M	
DC							14	trace organics noted within cuttings samples	SM	W	
DC							15	silt increasing with depth.	SM	W	
DC							16	as-above	SM	W	
DC							17	as-above, silty fine	SM SL	W	
DC							18	as-above, silty fine	SM SL	W	
DC							19	as-above, silty fine	SM SL	W	
DC							20	as-above, silty fine	SM SL	W	
DC							21	Sand; fine to medium, dk. Brown, silty	SM SL	W	
DC							22	as-above, silty fine	SM SL	W	
DC							23	as-above, silty fine	SM SL	W	
DC							24	as-above, silty fine	SM SL	W	
DC							25	as-above, silty fine	SM SL	W	
DC							26	as-above, silty fine	SM SL	W	
DC							27	as-above, silty fine	SM SL	W	
DC							28	as-above, silty fine	SM SL	W	
DC							29	as-above, silty fine	SM SL	W	
DC							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-17 R B	89544	J.E.D. Soild Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							31	as-above, silty-fine	SM SL	W	
							32	as-above, silty-fine	SM SL	W	
							33	as-above, silty-fine	SM SL	W	
							34	as-above, silty-fine	SM SL	W	
							35	as-above, silty-fine	SM SL	W	
							36	as-above, silty-fine	SM SL	W	
							37	as-above, silty-fine	SM SL	W	
							38	as-above, silty-fine	SM SL	W	
							39	as-above, silty-fine	SM SL	W	
							40	as-above, silty-fine	SM SL	W	
							41				
							42				
							43				
							44				
							45				
							46				
							47				
							48				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number: MW-24 A	Permit Number: 49WP1541571		FDEP Facility Identification Number: 89544
Site Name: J.E.D. Solid Waste Disposal Facility	Borehole Start Date: 06/18/14	Borehole Start Time: 1254 ☐ AM ☑ PM	
	End Date: 06/18/14	End Time: 1354 ☐ AM ☑ PM	
Environmental Contractor: WEIBU, LLC	Geologist/Engineer Name: Thompson		Environmental Technician's Name: NA
Drilling Company: National Environmental Technologies	Pavement Thickness (inches): NA	Borehole Diameter (inches): 6	Borehole Depth (feet): 20
Drilling Method(s): Hollow Stem Auger	Apparent Borehole DTW (in feet from soil moisture content): 6.5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): ☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other
(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Sand; fine to medium, dark brown	SM	D	
DC							2	as-above	SM	D	
DC							3	as-above	SM	D	
DC							4	as-above	SM	D	
DC							5	as-above	SM	M	
DC							6	as-above	SM	W	
DC							7	Sand; fine to medium, brown, silty	SM SL	W	
DC							8	as-above	SM SL	W	
DC							9	as-above	SM SL	W	
DC							10	as-above	SM SL	W	
DC							11	as-above	SM SL	W	
DC							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/18/14
MW-24 A	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/18/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	as-above	SM SL	W	
DC							14	as-above	SM SL	W	
DC							15	as-above	SM SL	W	
DC							16	Sand; fine to medium, brown, silty, trace organics	SM SL	W	
DC							17	as-above	SM SL	W	
DC							18	as-above	SM SL	W	
DC							19	as-above	SM SL	W	
DC							20	as-above	SM SL	W	
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-24 B	49WP1541572	89544

Site Name:	Borehole Start Date: 06/18/14	Borehole Start Time: 1131 ☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date: 06/18/14	End Time: 1245 ☐ AM ☑ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Pavement Thickness (inches):	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	NA	6	40

Drilling Method(s):	Apparent Borehole DTW (in feet from soil moisture content):	Measured Well DTW (in feet after water recharges in well):	OVA (list model and check type):
Hollow Stem Auger	6.5	NA	☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Sand; fine to medium, dark brown	SM	D	
DC							2	as-above	SM	D	
DC							3	as-above	SM	D	
DC							4	as-above	SM	D	
DC							5	as-above	SM	M	
DC							6	as-above	SM	W	
DC							7	Sand; fine to medium, brown, silty	SM SL	W	
DC							8	as-above	SM SL	W	
DC							9	as-above	SM SL	W	
DC							10	as-above	SM SL	W	
DC							11	as-above	SM SL	W	
DC							12	as-above	SM SL	W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/18/14
MW-24 B	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/18/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	as-above	SM SL	W	
DC							14	as-above	SM SL	W	
DC							15	as-above	SM SL	W	
DC							16	Sand; fine to medium, brown, silty, trace organics	SM SL	W	
DC							17	as-above	SM SL	W	
DC							18	as-above	SM SL	W	
DC							19	as-above	SM SL	W	
DC							20	as-above	SM SL	W	
							21	as-above	SM SL	W	
							22	as-above	SM SL	W	
							23	as-above	SM SL	W	
							24	as-above	SM SL	W	
							25	as-above	SM SL	W	
							26	Sand; fine to medium, tan-brown, silty	SM SL	W	
							27	as-above	SM SL	W	
							28	as-above	SM SL	W	
							29	as-above	SM SL	W	
							30	as-above	SM SL	W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/18/14
MW-24 B	89544	J.E.D. Soild Waste Disposal Facility	End Date: 06/18/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							31	as-above, silty-fine	SM SL	W	
							32	as-above, silty-fine	SM SL	W	
							33	as-above, silty-fine	SM SL	W	
							34	as-above, silty-fine	SM SL	W	
							35	as-above, silty-fine	SM SL	W	
							36	as-above, silty-fine	SM SL	W	
							37	as-above, silty-fine	SM SL	W	
							38	as-above, silty-fine	SM SL	W	
							39	as-above, silty-fine	SM SL	W	
							40	as-above, silty-fine	SM SL	W	
							41				
							42				
							43				
							44				
							45				
							46				
							47				
							48				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number: MW-25 A	Permit Number: 49WP1541571		FDEP Facility Identification Number: 89544
Site Name: J.E.D. Solid Waste Disposal Facility	Borehole Start Date: 06/19/14	Borehole Start Time: 0650 ☑ AM ☐ PM	
	End Date: 06/19/14	End Time: 0729 ☑ AM ☐ PM	
Environmental Contractor: WEIBU, LLC	Geologist/Engineer Name: Thompson		Environmental Technician's Name: NA
Drilling Company: National Environmental Technologies	Pavement Thickness (inches): NA	Borehole Diameter (inches): 6	Borehole Depth (feet): 20
Drilling Method(s): Hollow Stem Auger	Apparent Borehole DTW (in feet from soil moisture content): 6.0	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): ☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other
(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Sand; fine to medium, dark brown	SM	D	
DC							2	as-above	SM	D	
DC							3	as-above	SM	D	
DC							4	as-above	SM	D	
DC							5	as-above	SM	M	
DC							6	as-above	SM	W	
DC							7	Sand; fine to medium, dark brown, silty	SM SL	W	
DC							8	as-above	SM SL	W	
DC							9	as-above	SM SL	W	
DC							10	as-above	SM SL	W	
DC							11	as-above	SM SL	W	
DC							12	as-above	SM SL	W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-25 A	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	as-above	SM SL	W	
DC							14	as-above	SM SL	W	
DC							15	as-above	SM SL	W	
DC							16	Sand; fine to medium, tan brown, silty, trace organics	SM SL	W	
DC							17	as-above	SM SL	W	
DC							18	as-above	SM SL	W	
DC							19	as-above	SM SL	W	
DC							20	as-above	SM SL	W	
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-25 B	49WP1541572	89544

Site Name:	Borehole Start Date:	Borehole Start Time:	End Time:
J.E.D. Solid Waste Disposal Facility	06/19/14	0729 ☑ AM ☐ PM	0936 ☑ AM ☐ PM
	End Date: 06/19/14		

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Pavement Thickness (inches):	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	NA	6	40

Drilling Method(s):	Apparent Borehole DTW (in feet from soil moisture content):	Measured Well DTW (in feet after water recharges in well):	OVA (list model and check type):
Hollow Stem Auger	6.5	NA	☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Sand; fine to medium, dark brown	SM	D	
DC							2	as-above	SM	D	
DC							3	as-above	SM	D	
DC							4	as-above	SM	D	
DC							5	as-above	SM	M	
DC							6	as-above	SM	W	
DC							7	Sand; fine to medium, dark brown, silty	SM SL	W	
DC							8	as-above	SM SL	W	
DC							9	as-above	SM SL	W	
DC							10	as-above	SM SL	W	
DC							11	as-above	SM SL	W	
DC							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-25 B	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	as-above	SM SL	W	
DC							14	as-above	SM SL	W	
DC							15	as-above	SM SL	W	
DC							16	Sand; fine to medium, tan brown, silty, trace organics	SM SL	W	
DC							17	as-above	SM SL	W	
DC							18	as-above	SM SL	W	
DC							19	as-above	SM SL	W	
DC							20	as-above	SM SL	W	
DC							21	Sand; fine to medium, brown, silty, trace organics	SM SL	W	
DC							22	as-above	SM SL	W	
DC							23	as-above	SM SL	W	
DC							24	as-above	SM SL	W	
DC							25	as-above	SM SL	W	
DC							26	as-above	SM SL	W	
DC							27	as-above	SM SL	W	
DC							28	as-above	SM SL	W	
DC							29	as-above	SM SL	W	
DC							30	as-above	SM SL	W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-25 B	89544	J.E.D. Soild Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							31	as-above, silty-fine	SM SL	W	
							32	as-above, silty-fine	SM SL	W	
							33	as-above, silty-fine	SM SL	W	
							34	as-above, silty-fine	SM SL	W	
							35	as-above, silty-fine	SM SL	W	
							36	as-above, silty-fine	SM SL	W	
							37	as-above, silty-fine	SM SL	W	
							38	as-above, silty-fine	SM SL	W	
							39	as-above, silty-fine	SM SL	W	
							40	as-above, silty-fine	SM SL	W	
							41				
							42				
							43				
							44				
							45				
							46				
							47				
							48				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number: MW-26 A	Permit Number: 49WP1541571		FDEP Facility Identification Number: 89544
Site Name: J.E.D. Solid Waste Disposal Facility	Borehole Start Date: 06/19/14	Borehole Start Time: 0936 ☑ AM ☐ PM	
	End Date: 06/19/14	End Time: 1029 ☑ AM ☐ PM	
Environmental Contractor: WEIBU, LLC	Geologist/Engineer Name: Thompson		Environmental Technician's Name: NA
Drilling Company: National Environmental Technologies	Pavement Thickness (inches): NA	Borehole Diameter (inches): 6	Borehole Depth (feet): 20
Drilling Method(s): Hollow Stem Auger	Apparent Borehole DTW (in feet from soil moisture content): 6.0	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): ☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other
(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Sand; fine to medium, dark brown	SM	D	
DC							2	as-above	SM	D	
DC							3	as-above	SM	D	
DC							4	as-above	SM	D	
DC							5	as-above	SM	M	
DC							6	as-above	SM	W	
DC							7	Sand; fine to medium, dark brown, silty	SM SL	W	
DC							8	as-above	SM SL	W	
DC							9	as-above	SM SL	W	
DC							10	as-above	SM SL	W	
DC							11	as-above	SM SL	W	
DC							12	as-above	SM SL	W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-26 A	89544	J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	as-above	SM SL	W	
DC							14	as-above	SM SL	W	
DC							15	as-above	SM SL	W	
DC							16	Sand; fine to medium, tan brown, silty, trace organics	SM SL	W	
DC							17	as-above	SM SL	W	
DC							18	as-above	SM SL	W	
DC							19	as-above	SM SL	W	
DC							20	as-above	SM SL	W	
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-26 B	49WP1541572	89544

Site Name:	Borehole Start Date: 06/19/14	Borehole Start Time: 1029 ☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14	End Time: 1140 ☑ AM ☐ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Pavement Thickness (inches):	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	NA	6	40

Drilling Method(s):	Apparent Borehole DTW (in feet from soil moisture content):	Measured Well DTW (in feet after water recharges in well):	OVA (list model and check type):
Hollow Stem Auger	6.5	NA	☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☑ Spread ☐ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☑ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							1	Sand; fine to medium, dark brown	SM	D	
DC							2	as-above	SM	D	
DC							3	as-above	SM	D	
DC							4	as-above	SM	D	
DC							5	as-above	SM	M	
DC							6	as-above	SM	W	
DC							7	Sand; fine to medium, dark brown, silty	SM SL	W	
DC							8	as-above	SM SL	W	
DC							9	as-above	SM SL	W	
DC							10	as-above	SM SL	W	
DC							11	as-above	SM SL	W	
DC							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date:	06/19/14
MW-26 B	89544	J.E.D. Solid Waste Disposal Facility	End Date:	06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC							13	as-above	SM SL	W	
DC							14	as-above	SM SL	W	
DC							15	as-above	SM SL	W	
DC							16	Sand; fine to medium, tan brown, silty, trace organics	SM SL	W	
DC							17	as-above	SM SL	W	
DC							18	as-above	SM SL	W	
DC							19	as-above	SM SL	W	
DC							20	as-above	SM SL	W	
DC							21	Sand; fine to medium, tan to grey, silty, organics	SM SL	W	
DC							22	as-above	SM SL	W	
DC							23	as-above	SM SL	W	
DC							24	as-above	SM SL	W	
DC							25	as-above	SM SL	W	
DC							26	as-above	SM SL	W	
DC							27	as-above	SM SL	W	
DC							28	as-above	SM SL	W	
DC							29	as-above	SM SL	W	
DC							30	as-above	SM SL	W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

J.E.D. Solid Waste Disposal Facility
Well Abandonment/Replacement

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date: 06/19/14
MW-26 B	89544	J.E.D. Soild Waste Disposal Facility	End Date: 06/19/14

Sample Type	Sample Depth Interval (feet)	Lithologic Symbol	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							31	Sand; fine to medium, tan to grey, silty, organics	SM SL	W	
							32	as-above, silty-fine	SM SL	W	
							33	as-above, silty-fine	SM SL	W	
							34	as-above, silty-fine	SM SL	W	
							35	as-above, silty-fine	SM SL	W	
							36	as-above, silty-fine	SM SL	W	
							37	as-above, silty-fine	SM SL	W	
							38	as-above, silty-fine	SM SL	W	
							39	as-above, silty-fine	SM SL	W	
							40	as-above, silty-fine	SM SL	W	
							41				
							42				
							43				
							44				
							45				
							46				
							47				
							48				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

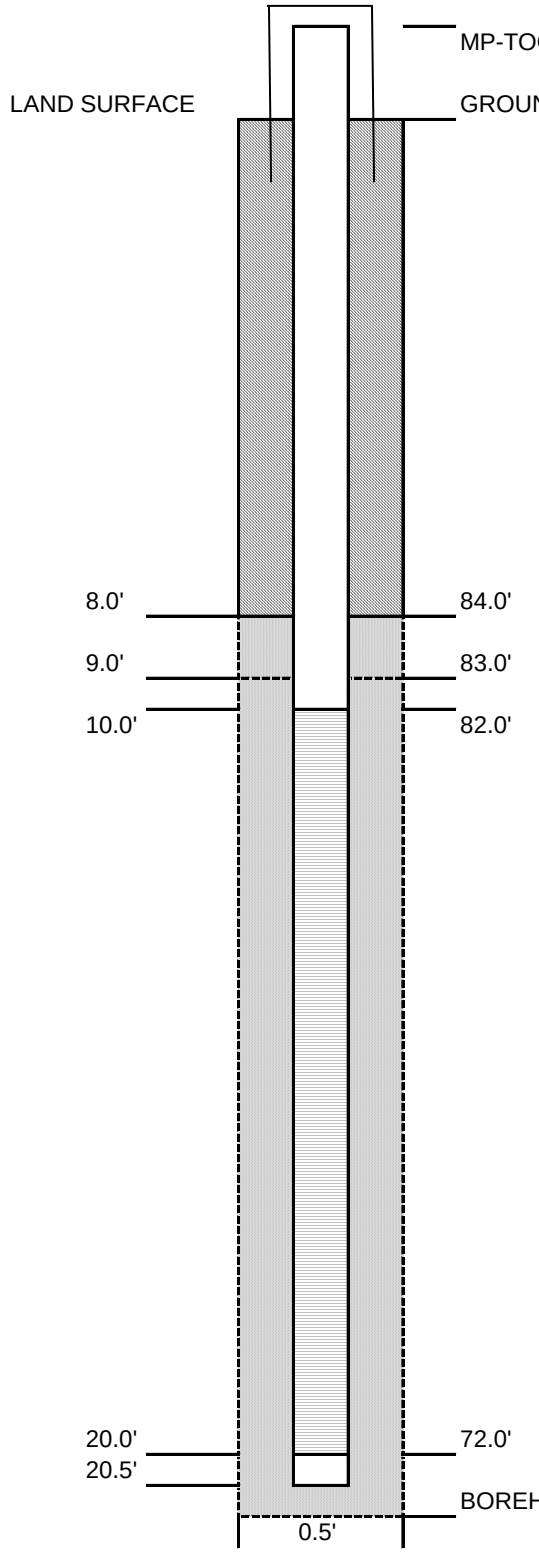
Appendix C. Well Completion Forms/Details

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-17 R A (replacement)	49WP1541571	89544

Site Name:	Borehole Start Date:	06/19/14	Borehole Start Time:	1240	☐ AM ☑ PM
J.E.D. Solid Waste Disposal Facility	End Date:	06/19/14	End Time:	1340	☐ AM ☑ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	20



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 4.5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

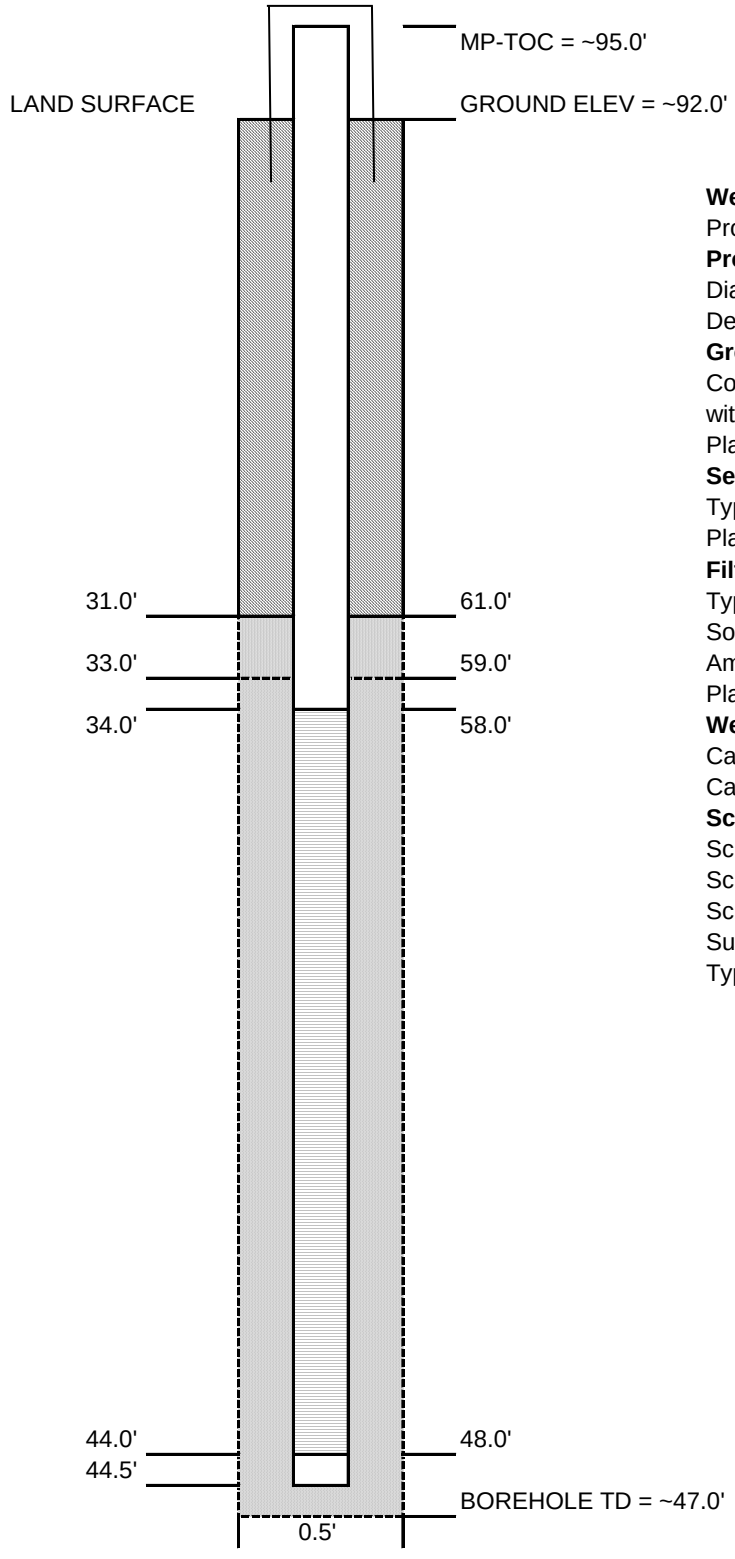
Notes:
Not to scale.
Dimensions as noted.

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-17 R B (replacement)	49WP1541572	89544

Site Name:	Borehole Start Date: 06/19/14	Borehole Start Time: 1029 ☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date: 06/19/14	End Time: 1240 ☐ AM ☑ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	44



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

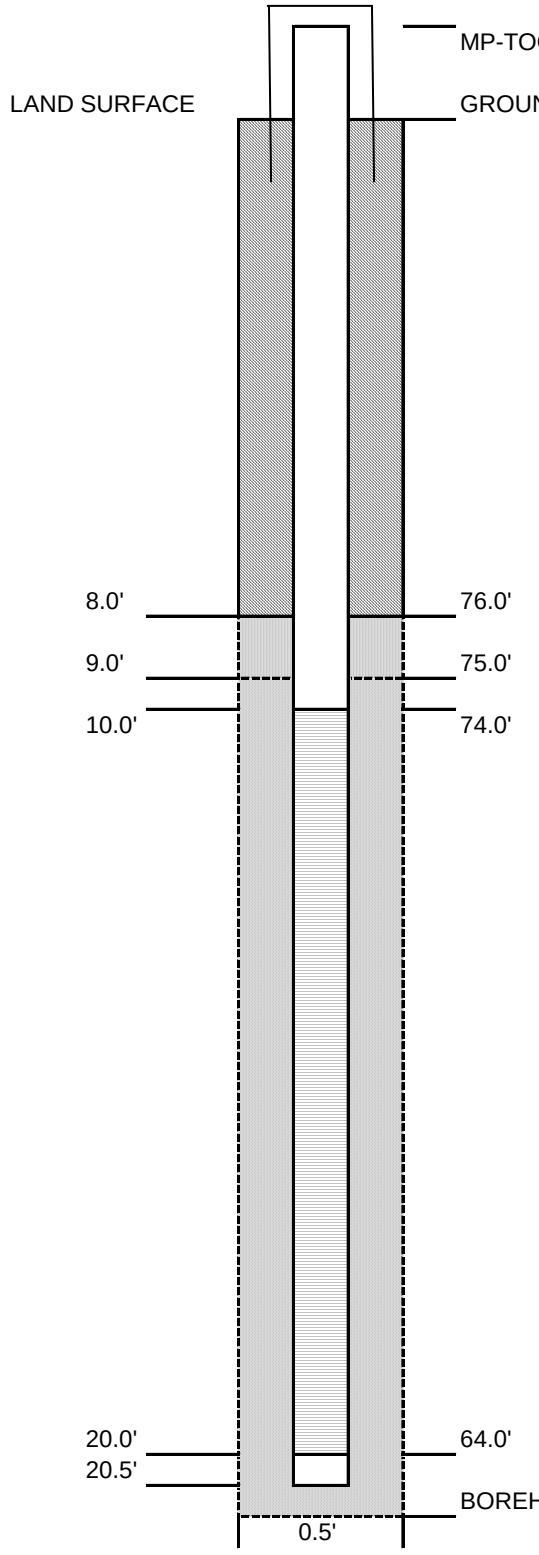
Notes:
Not to scale.
Dimensions as noted.

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-24 A	49WP1541571	89544

Site Name:	Borehole Start Date:	06/18/14	Borehole Start Time:	1254	☐ AM ☑ PM
J.E.D. Solid Waste Disposal Facility	End Date:	06/18/14	End Time:	1354	☐ AM ☑ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	20



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 4.5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

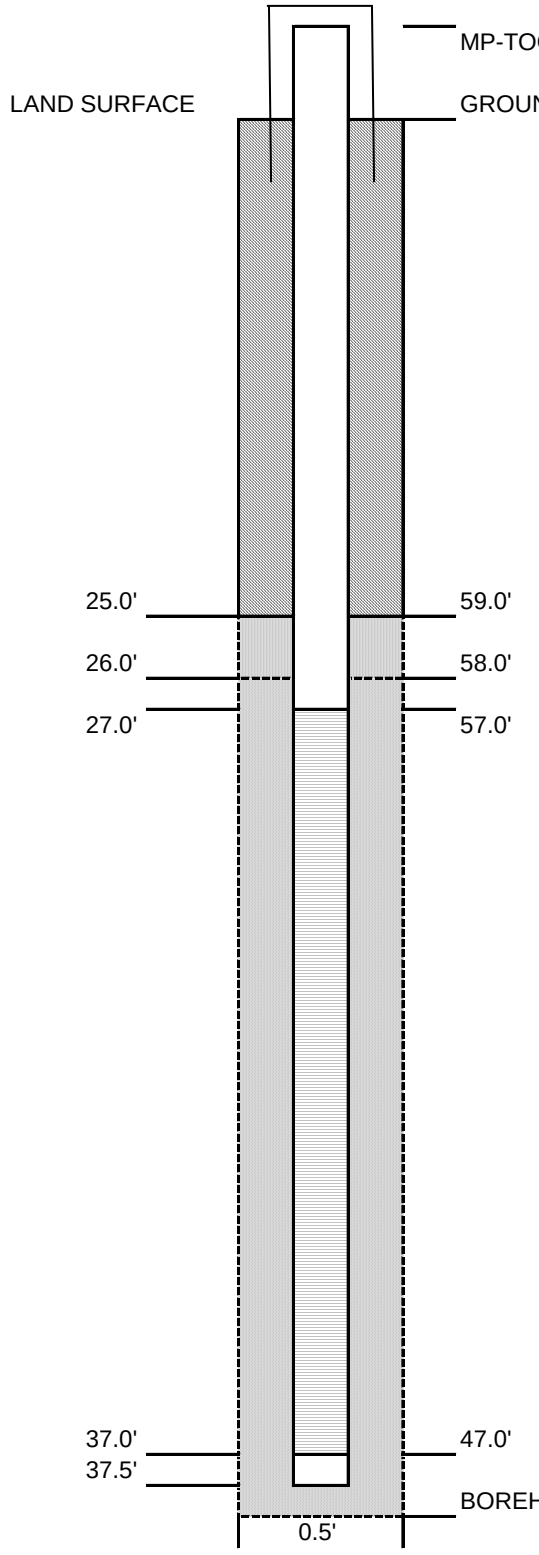
Notes:
Not to scale.
Dimensions as noted.

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-24 B	49WP1541572	89544

Site Name:	Borehole Start Date: 06/18/14	Borehole Start Time: 1131 ☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date: 06/18/14	End Time: 1245 ☐ AM ☑ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	38



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

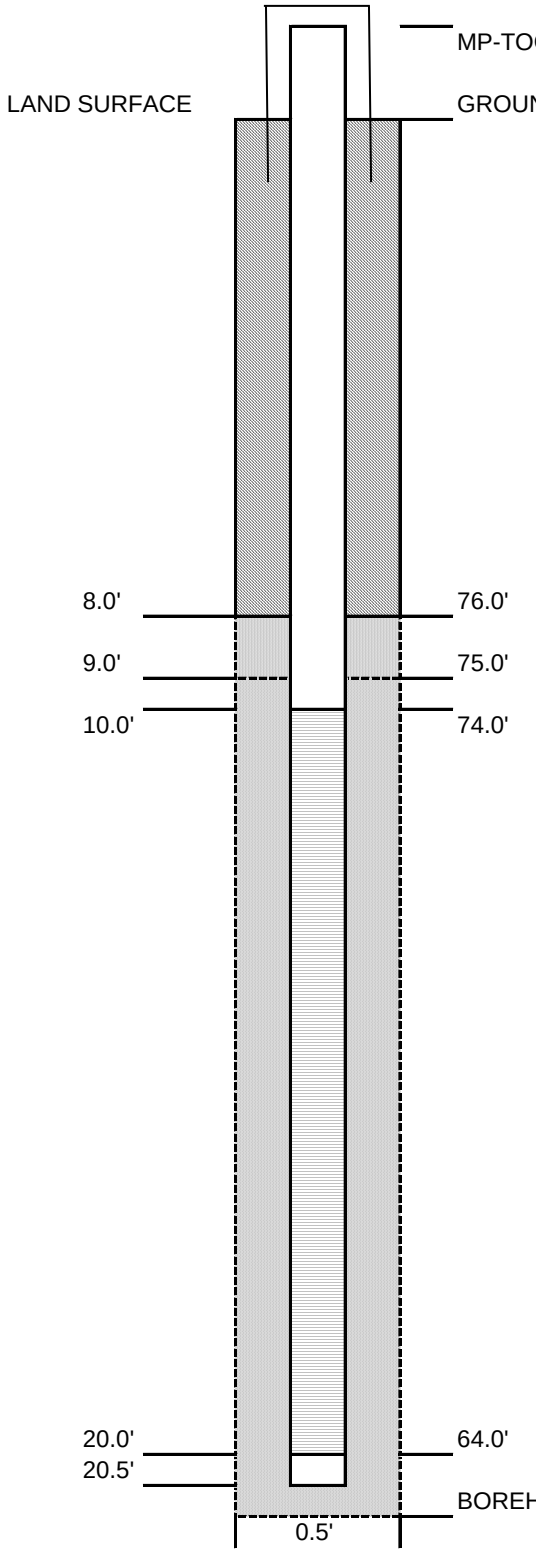
Notes:
Not to scale.
Dimensions as noted.

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-25 A	49WP1541571	89544

Site Name:	Borehole Start Date:	06/19/14	Borehole Start Time:	0650	☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date:	06/19/14	End Time:	0729	☑ AM ☐ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	20



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 4.5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

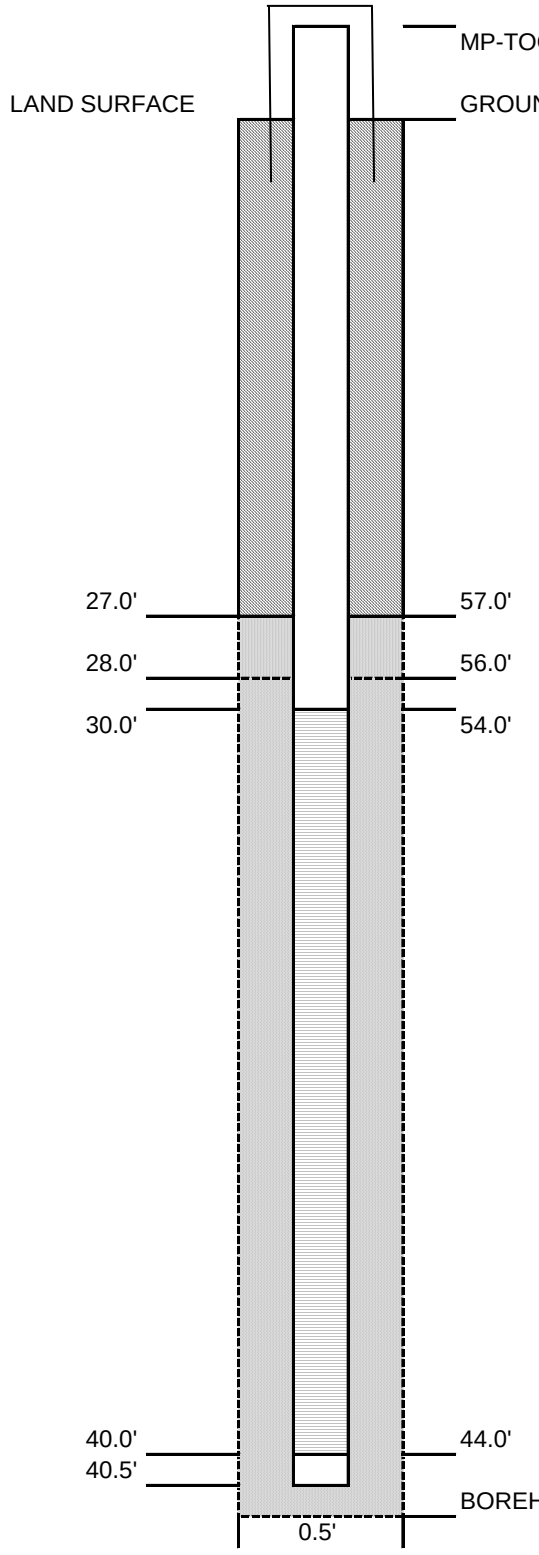
Notes:
Not to scale.
Dimensions as noted.

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-25 B	49WP1541572	89544

Site Name:	Borehole Start Date:	06/19/14	Borehole Start Time:	0729	☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date:	06/19/14	End Time:	1136	☑ AM ☐ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	40



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

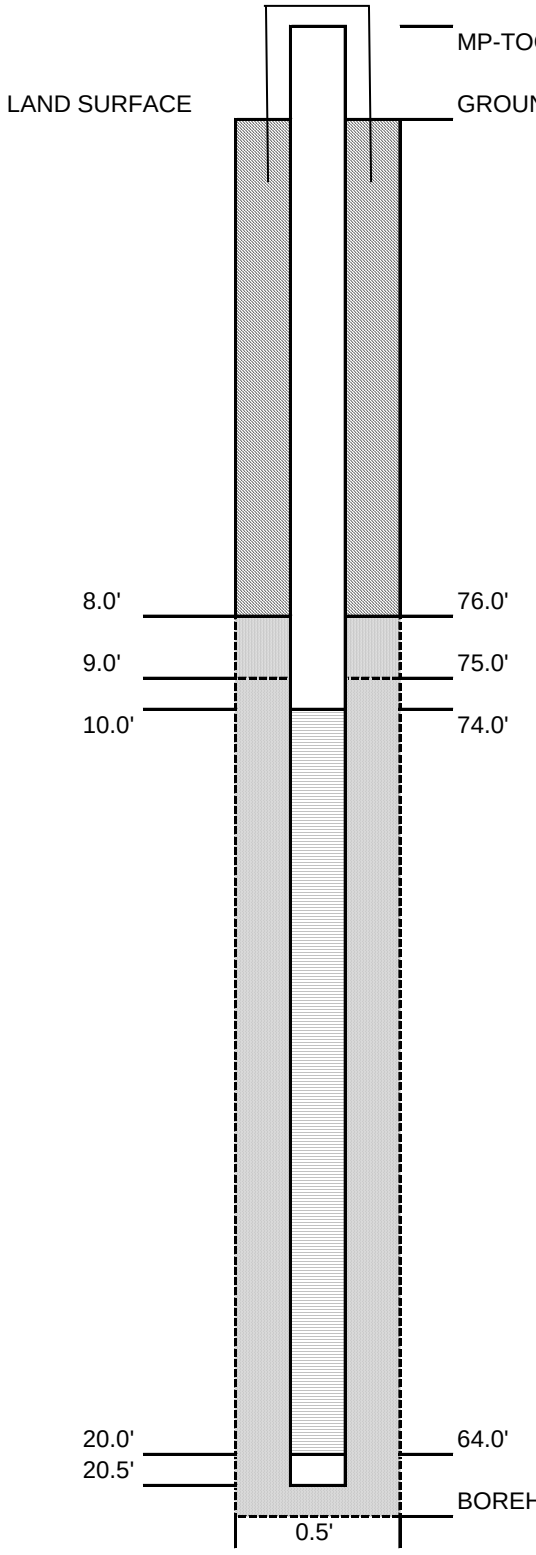
Notes:
Not to scale.
Dimensions as noted.

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-26 A	49WP1541571	89544

Site Name:	Borehole Start Date:	06/19/14	Borehole Start Time:	0936	☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date:	06/19/14	End Time:	1029	☑ AM ☐ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	20



Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 4.5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

Notes:
Not to scale.
Dimensions as noted.

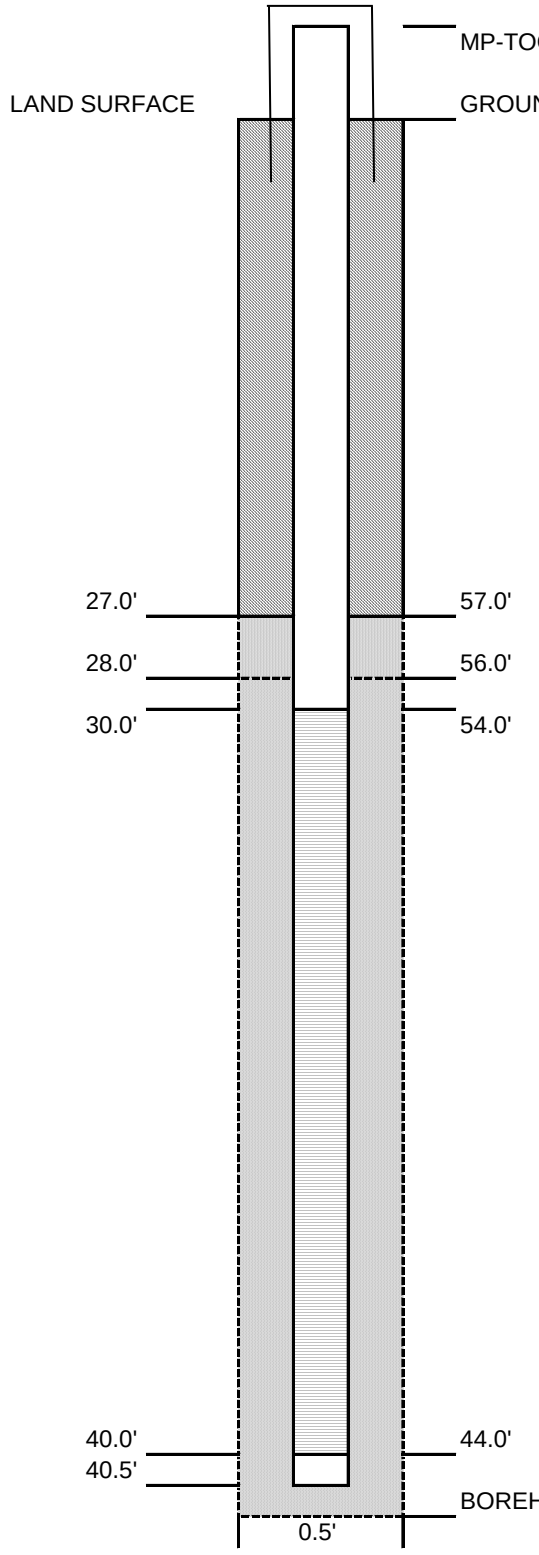
Weibu LLC

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
MW-26 B	49WP1541572	89544

Site Name:	Borehole Start Date:	06/19/14	Borehole Start Time:	1029	☑ AM ☐ PM
J.E.D. Solid Waste Disposal Facility	End Date:	06/19/14	End Time:	1140	☑ AM ☐ PM

Environmental Contractor:	Geologist/Engineer Name:	Environmental Technician's Name:
WEIBU, LLC	Thompson	NA

Drilling Company:	Drilling Method	Borehole Diameter (inches):	Borehole Depth (feet):
National Environmental Technologies	Hollow Stem Auger	6	40

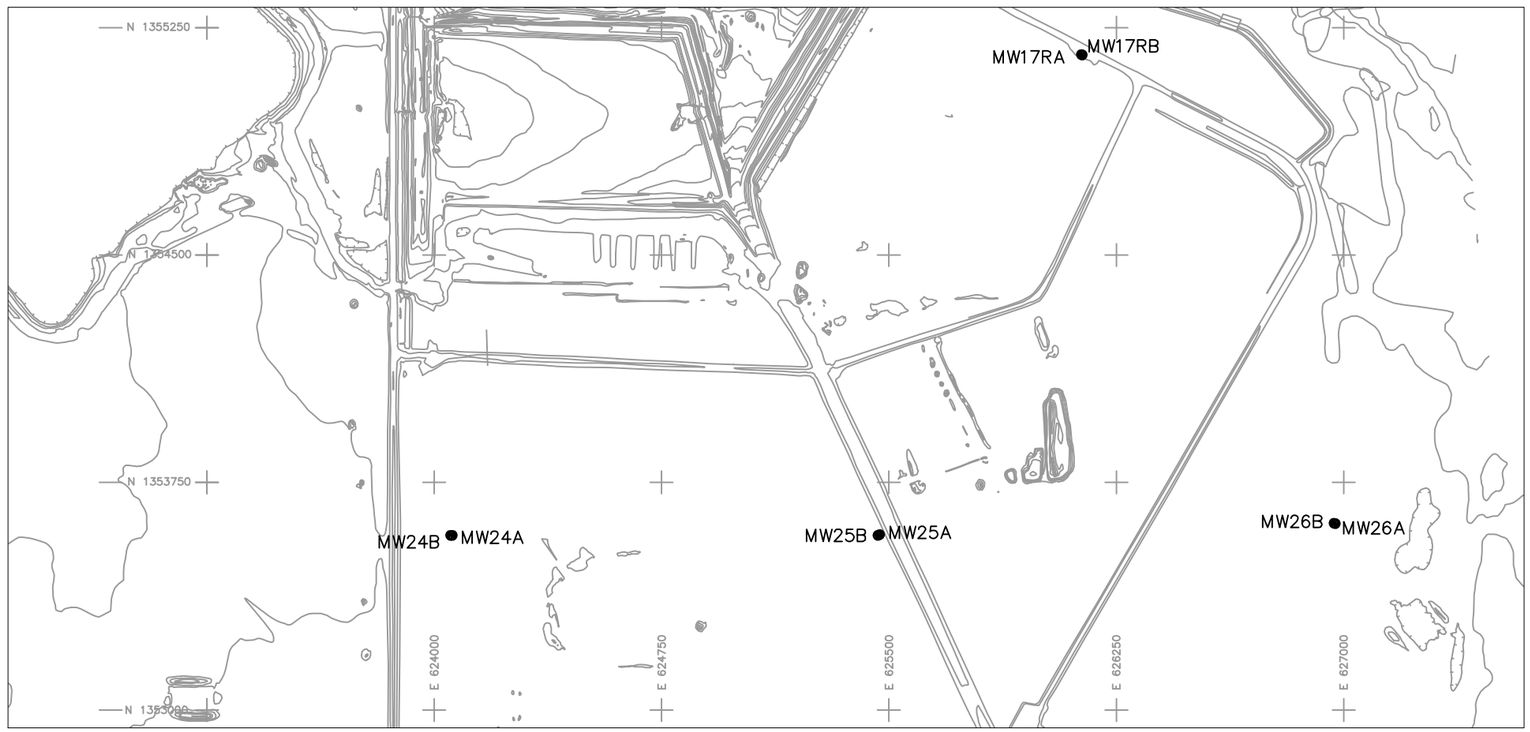


Well Completion
Protective Structure, Typical
Protective Casing or Cover
Diameter/Type - 6" Anodized Aluminum
Depth BGS: ~2.0 ft
Grout
Composition/Proportion: Portland Type I/II with 3% bentonite by dry weight
Placement Method: poured from land surface
Seal
Type: fine sand 30/65
Placement Method: poured from land surface
Filter Pack
Type: 30/45 Silica Sand
Source: 50# bag
Amount Used: 5 bags
Placement Method; Poured into augers.
Well Riser Pipe
Casing Material: SCH 40 PVC flush threaded
Casing Diameter (inside): 2-in
Screen
Screen Material: SCH 40 PVC
Screen Inside Diameter: 2-in
Screen Slot Size: 0.006 in
Sump/Bottom Cap
Type/Length: 0.5 ft

Notes:
Not to scale.
Dimensions as noted.

Appendix D. Specific Purpose Survey

MONITOR WELL NO.	POINT NO	NORTHING	EASTING	LATITUDE	LONGITUDE	TOP OF PROTECTIVE CASING ELEVATION	2" PVC ELEVATION NGVD1929	GROUND ELEVATION NGVD1929	PK NAIL ELEVATION NGVD1929	TOP OF CASING ELEVATION NAVD1988	2" PVC ELEVATION NAVD1988	GROUND ELEVATION NAVD1988	PK NAIL ELEVATION NAVD1988
MW17RB	151046	1355159.94	626137.50	28°03'42.2"	-81°05'35.2"	94.93	94.78	91.9		93.97	93.82	90.942	
PK & DISC	151045	1355160.34	626138.07	28°03'42.3"	-81°05'35.2"				91.97				91.01
MW17RA	151047	1355161.64	626134.43	28°03'42.3"	-81°05'35.2"	95.09	94.84	91.9		94.13	93.88	90.942	
PK & DISC	151040	1355161.92	626134.73	28°03'42.3"	-81°05'35.2"				91.97				91.01
MW26A	151055	1353614.23	626973.10	28°03'26.9"	-81°05'25.9"	87.21	87.06	83.9		86.25	86.10	82.942	
PK & DISC	151049	1353614.09	626972.40	28°03'26.9"	-81°05'25.9"				84.37				83.41
MW26B	151056	1353615.78	626967.44	28°03'27.0"	-81°05'25.9"	87.21	86.83	83.8		86.25	85.87	82.842	
PK & DISC	8039	1353615.51	626966.79	28°03'27.0"	-81°05'25.9"				84.27				83.31
MW25B	151064	1353576.16	625463.45	28°03'26.6"	-81°05'42.7"	86.87	86.67	83.9		85.91	85.71	82.942	
PK & DISC	151062	1353575.67	625464.29	28°03'26.6"	-81°05'42.7"				84.34				83.38
MW25A	151065	1353578.36	625469.63	28°03'26.6"	-81°05'42.6"	87.14	86.99	84.0		86.18	86.03	83.042	
PK & DISC	151076	1353577.85	625470.41	28°03'26.6"	-81°05'42.6"				84.36				83.40
MW24A	151095	1353576.17	624060.36	28°03'26.5"	-81°05'58.4"	87.29	87.06	83.9		86.33	86.10	82.942	
PK & DISC	151081	1353575.67	624061.00	28°03'26.5"	-81°05'58.4"				84.34				83.38
MW24B	151096	1353575.75	624053.53	28°03'26.5"	-81°05'58.5	87.27	87.05	84.0		86.31	86.09	83.042	
PK & DISC	151097	1353575.23	624054.04	28°03'26.5"	-81°05'58.4"				84.24				83.28



GRAPHIC SCALE

500 0 250 500

(IN FEET)

1 inch = 500 ft.

LEGEND:

NO.	NUMBER
ELEV.	ELEVATION
CONC.	CONCRETE
MW	MONITORING WELL
Ⓦ	MW17A

SURVEYOR's NOTES:

1.) North and coordinate basis is the East Zone of the Florida State Plane NAD83 Coordinate System.

2.) Vertical information depicted on this report are GPS derived elevations based on the National Geodetic Vertical Datum of 1929 (NGVD29) utilizing site control as provided PK13 with an elevation of 92.92 and OC1406 with an elevation of 80.91.

DATE	REVISION

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

FILE NAME: 217-JED-osb-MONITOR WELLS 7-2014.dwg

Peavey & Associates
SURVEYING & MAPPING P.A
9396 NORTH LAKE BUFFUM ROAD
FORT MEADE, FL 33841
PHONE: 863-738-4960
FLORIDA BUSINESS NO.7779

CLIENT:
Omni Waste of Osceola County, LLC
Waste Services, Inc.
1501 Omni Way
St. Cloud, Fl 34773

SPECIFIC PURPOSE SURVEY
PHASE 4 & MW-17 REPLACEMENT
MW-17RA/B, 24A/B, 25A/B, 26A/B
JED SOLID WASTE MANGEMENT FACILITY
1501 OMNI WAY ST. CLOUD, FLORIDA

DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7779

7/17/2014
SURVEY DATES

PROJECT	DRAWING NO.	SHEET
617	262	1

Appendix E. Well Construction and Development Logs

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-17 R A	J.E.D. Solid Waste Disposal Facility	89544	06/19/14

Well Location and Type (check appropriate boxes):	Well Purpose:	Well Install Method:
☑ On-Site ☐ Right-of-Way ☐ Off-Site Private Property ☐ Above Grade (AG) ☐ Flush-to-Grade If AG, list feet of riser above land surface:	☐ Perched Monitoring ☑ Shallow (Water-Table) Monitoring ☐ Intermediate or Deep Monitoring ☐ Remediation or Other (describe)	Hollow Stem Auger Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
21	20	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	☑ Flush-Threaded ☐ Other (describe)	3 feet from LS feet to 10 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 10 feet to 20 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
NA also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	☐ Yes ☑ No	11 feet from 9 feet to 21 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 8 feet to 9 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	8 feet from LS feet to 8 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
07/07/14	☑ Surge/Pump ☐ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☐ Centrifugal ☐ Peristaltic ☑ Submersible ☐ Other (describe)	15.19' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.2	18.52' btoc	☐ Yes ☑ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☑ Continuous ☑ Intermittent	60	90	☑ Yes ☑ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Combination of purge/development techniques, continuous and surge. Attempted to surge/block with pump. Still turbid after development phase and is consistent with previous well construction and purging activities noted at the site.

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-17 R B	J.E.D. Solid Waste Disposal Facility	89544	06/19/14

Well Location and Type (check appropriate boxes):
- [x] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [ ] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [x] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
41	40	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	[x] Flush-Threaded [ ] Other (describe)	3 feet from LS feet to 34 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 34 feet to 44 feet

1st Surface Casing Material: NA also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches):	1st Surface Casing Length: ____ feet from 0 feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length: ____ feet from 0 feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length: ____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	[ ] Yes [x] No	11 feet from 33 feet to 45 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	2 feet from 31 feet to 33 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	31 feet from LS feet to 31 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
07/07/14	[x] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[ ] Centrifugal [ ] Peristaltic [x] Submersible [ ] Other (describe)	14.84' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.2	32.10' btoc	[ ] Yes [x] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[x] Continuous [ ] Intermittent	138	115	[ ] Yes [x] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Initial turbidity as measured with Lamotte >3,000 ntu. Attempted to develop with a combination of techniques, continuous pumping as well as surging/block with submerisible pump. Final turbidity noted was 95 ntu after 115 minutes of development.

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-24 A	J.E.D. Solid Waste Disposal Facility	89544	06/18/14

Well Location and Type (check appropriate boxes):	Well Purpose:	Well Install Method:
☑ On-Site ☐ Right-of-Way ☐ Off-Site Private Property ☐ Above Grade (AG) ☑ Flush-to-Grade If AG, list feet of riser above land surface:	☐ Perched Monitoring ☑ Shallow (Water-Table) Monitoring ☐ Intermediate or Deep Monitoring ☐ Remediation or Other (describe)	Hollow Stem Auger Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
21	20	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	☑ Flush-Threaded ☐ Other (describe)	3 feet from LS feet to 10 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 10 feet to 20 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
NA also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	☐ Yes ☑ No	11 feet from 9 feet to 21 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 8 feet to 9 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	8 feet from LS feet to 8 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
06/19/14	☑ Surge/Pump ☑ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☑ Submersible ☐ Centrifugal ☐ Peristaltic ☐ Other (describe)	6.10' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.7	8.40' btoc	☐ Yes ☑ No

Pumping Condition:	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☑ Continuous ☐ Intermittent	246.5	145	☑ Yes ☑ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Initial turbidity reading with Lamotte 2,007 ntu. Purged ~247 gallons of water using Pro-Active Water Spout submersible pump. Final turbidity reading noted 15 ntu. As with previous well construction and development activities, turbidity levels vary significantly between well locations.

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-24 B	J.E.D. Solid Waste Disposal Facility	89544	06/18/14

Well Location and Type (check appropriate boxes):	Well Purpose:	Well Install Method:
☑ On-Site ☐ Right-of-Way ☐ Off-Site Private Property ☐ Above Grade (AG) ☐ Flush-to-Grade If AG, list feet of riser above land surface:	☐ Perched Monitoring ☑ Shallow (Water-Table) Monitoring ☐ Intermediate or Deep Monitoring ☐ Remediation or Other (describe)	Hollow Stem Auger Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
37.5	37.5	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	☑ Flush-Threaded ☑ Other (describe)	3 feet from LS feet to 27 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 27 feet to 37 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
NA also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	☐ Yes ☑ No	11 feet from 26 feet to 37 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 25 feet to 26 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	25 feet from LS feet to 25 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
06/19/14	☑ Surge/Pump ☑ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☑ Submersible ☐ Other (describe) ☐ Centrifugal ☐ Peristaltic	6.4' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.7	13.20' btoc	☐ Yes ☑ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☑ Continuous ☐ Intermittent	289	170	☐ Yes ☑ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Initial turbidity reading with Lamotte . 3,000 ntu. Pumped and surged to develop well location final turbidity reading 165 ntu.

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-25 A	J.E.D. Solid Waste Disposal Facility	89544	06/19/14

Well Location and Type (check appropriate boxes):
- [x] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [x] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [x] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
21	20	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	[x] Flush-Threaded [ ] Other (describe)	3 feet from LS feet to 10 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 10 feet to 20 feet

1st Surface Casing Material: NA also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches):	1st Surface Casing Length: ____ feet from 0 feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length: ____ feet from 0 feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length: ____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	[ ] Yes [x] No	11 feet from 9 feet to 21 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 8 feet to 9 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	8 feet from LS feet to 8 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
07/01/14	[x] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[x] Submersible [ ] Centrifugal [ ] Peristaltic [ ] Other (describe)	6.8' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.5-6.0	8.45' btoc	[ ] Yes [x] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[x] Continuous [x] Intermittent	427.5	85	[x] Yes [x] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Well location purged at varying rates between 1.5-6.0 gpm. Turbidity measurnents varied significantly with high levels exceeding 3,000 ntu and dropping to a low of 14 ntu at the end of the development cycle.

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-25 B	J.E.D. Solid Waste Disposal Facility	89544	06/19/14

Well Location and Type (check appropriate boxes):
- [x] On-Site
- [x] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [ ] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [x] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
40	40	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	[x] Flush-Threaded [x] Other (describe)	3 feet from LS feet to 30 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 30 feet to 40 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
NA also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	[ ] Yes [x] No	12 feet from 28 feet to 40 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 27 feet to 28 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	27 feet from LS feet to 27 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
06/19/2014,07/01/2014	[x] Surge/Pump [x] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[x] Submersible [ ] Other (describe) [ ] Centrifugal [ ] Peristaltic	6.51' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.4 to 5.0	25.03' btoc	[ ] Yes [x] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[x] Continuous [x] Intermittent	546	200	[ ] Yes [x] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Well location developed in two (2) discrete phases. Well discharge is turbid and exceeded 3,000 ntu. Attempted to reduce tu rbidity by surging and overpumping during mutltiple site visits. Final turbidity reading was 331 ntu.

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-26 A	J.E.D. Solid Waste Disposal Facility	89544	06/19/14

Well Location and Type (check appropriate boxes):
- ☑ On-Site ☐ Right-of-Way
- ☐ Off-Site Private Property
- ☐ Above Grade (AG) ☑ Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- ☐ Perched Monitoring
- ☑ Shallow (Water-Table) Monitoring
- ☐ Intermediate or Deep Monitoring
- ☐ Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
21	20	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	☑ Flush-Threaded ☐ Other (describe)	3 feet from LS feet to 10 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 10 feet to 20 feet

1st Surface Casing Material: NA also check: ☐ Permanent ☐ Temporary	1st Surface Casing I.D. (inches):	1st Surface Casing Length: ____ feet from 0 feet to ____ feet
2nd Surface Casing Material: also check: ☐ Permanent ☐ Temporary	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length: ____ feet from 0 feet to ____ feet
3rd Surface Casing Material: also check: ☐ Permanent ☐ Temporary	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length: ____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	☐ Yes ☑ No	11 feet from 9 feet to 21 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 8 feet to 9 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	8 feet from LS feet to 8 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
07/01/14	☑ Surge/Pump ☐ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☑ Submersible ☐ Other (describe) ☐ Centrifugal ☐ Peristaltic	7.61' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.6	10.52' btoc	☐ Yes ☑ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☑ Continuous ☑ Intermittent	328	210	☑ Yes ☑ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

J.E.D. Solid Waste Disposal Facility
Osceola County, Florida

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-25 B	J.E.D. Solid Waste Disposal Facility	89544	06/19/14

Well Location and Type (check appropriate boxes):	Well Purpose:	Well Install Method:
☑ On-Site ☑ Right-of-Way ☐ Off-Site Private Property ☐ Above Grade (AG) ☐ Flush-to-Grade If AG, list feet of riser above land surface:	☐ Perched Monitoring ☑ Shallow (Water-Table) Monitoring ☐ Intermediate or Deep Monitoring ☐ Remediation or Other (describe)	Hollow Stem Auger Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
40	40	4.25	NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2-in PVC	☑ Flush-Threaded ☑ Other (describe)	3 feet from LS feet to 30 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2-in PVC	0.006	10 feet from 30 feet to 40 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
NA also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
30/45 Silica Sand	☐ Yes ☑ No	12 feet from 28 feet to 40 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Silca Sand	1 feet from 27 feet to 28 feet

Surface Seal Material:	Surface Seal Length:
Type I/II Portland Cement	27 feet from LS feet to 27 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
07/01/14	☑ Surge/Pump ☐ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☐ Centrifugal ☐ Peristaltic ☑ Submersible ☐ Other (describe)	7.60' btoc

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1.7 to 3.5	24.89' btoc	☐ Yes ☑ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☑ Continuous ☑ Intermittent	461	200	☐ Yes ☑ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Turbid brown, no-odor	Turbid, no-odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Utilized two pumps to stress the well during the development cycle. Initial turbidity reading with Lamotte > 3,000 ntu.
Final turbidity reading at the end of development 408 ntu.