

27 April 2015

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

Re: Monitoring Well Abandonment Report
J.E.D. Solid Waste Management Facility, Osceola County, Florida
Permit No. SO49-0199726-024
WACS Facility ID #89544

Dear Mr. Lubozynski:

On behalf of Omni Waste of Osceola County, LLC (Omni) for the J.E.D. Solid Waste Management Facility (JED facility), Geosyntec Consultants (Geosyntec) is pleased to provide the Florida Department of Environmental Protection (FDEP) this report documenting the monitoring well abandonment activities at the above referenced site. The abandonment work was completed by a Florida licensed drilling contractor under the supervision of Geosyntec personnel.

PROJECT BACKGROUND

The J.E.D. Solid Waste Management (JED) facility is located in eastern Osceola County, Florida, west of highway U.S. 441, and approximately 6.5 miles south of Holopaw. The facility includes a Class I landfill which is linked to highway U.S. 441 by a 2.86-mile access road. The JED facility comprises a total of approximately 2,179 acres. The landfill footprint at build-out will be approximately 360 acres and consist of 23 landfill cells that will provide available waste capacity for a period of approximately 30 years. Prior to issuance of a landfill permit, a hydrological study was conducted to observe groundwater site conditions. Piezometers DP-14 and DP-15 were installed in November 2001 for purposes of the hydrological study.

Construction of the Cell 11 disposal area began in January 2015. The DP-14 and DP-15 piezometers were located within the footprint of Cell 11, therefore the abandonment of these piezometers was necessary to complete the construction of Cell 11. Piezometers DP-14 and DP-15 are currently used for groundwater elevations, but future groundwater elevations will be collected from proposed Cell 11 detection monitoring well MW-27, MW-28, and MW-29 clusters.

ABANDONMENT PROCEDURE

Geosyntec personnel met with Cascade Drilling, Inc., (Cascade) a Florida licensed drilling subcontractor, at the site on 2 March 2015 for the abandonment of monitoring wells DP-14 and DP-15. The wells were abandoned due to their interference with facility construction activities that were occurring to expand Cell 11. A map with the locations of the abandoned monitoring wells is provided as **Figure 1**. Photographs documenting the abandonment activities are included in **Attachment A** and a copy of the regulatory permits is included as **Attachment B**. Abandonment of the monitoring wells was completed by filling the well casing with bentonite grout (Portland Type I/II cement with approximately 3% to 5% bentonite clay by volume) from the bottom up to land surface using a tremie pipe. Prior to abandonment PWS personnel verified the total depth at monitoring wells DP-14 and DP-15 to be approximately 19 feet below land surface (ft bls) and 53 ft bls, respectively, using a weighted measuring tape.

Theoretical grout 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} = grout volume required to backplug the well including the well-screen filter pack;

W_c = well capacity gallons-per-ft (gal/ft) (0.16 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 (annulus between casing and hole) [1.78 gal/ft (5 5/8" borehole)];

The theoretical grout volume required to backplug the 2 inch wells was estimated at approximately 5.6 gallons for DP-14 and 11 gallons for DP-15. Approximately 4 gallons of bentonite grout was used to abandon DP-14 and approximately 9 gallons for DP-15.

Following placement of the grout, the concrete pads and protective aluminum casings were removed. The well riser casing was removed to just below grade and then additional grout was added to make the borehole flush with grade. Plugging and abandonment activities were completed in general conformance with construction and

abandonment guidelines provided in the Water Well Construction Standards detailed in Florida Administrative Code Chapter 62-532.500(4).

CLOSURE

Should you have any questions regarding the information presented in this report, please contact Mr. Michael Kaiser at (904) 673-0446 or Matthew Wissler at (727) 330-9954.

Sincerely,

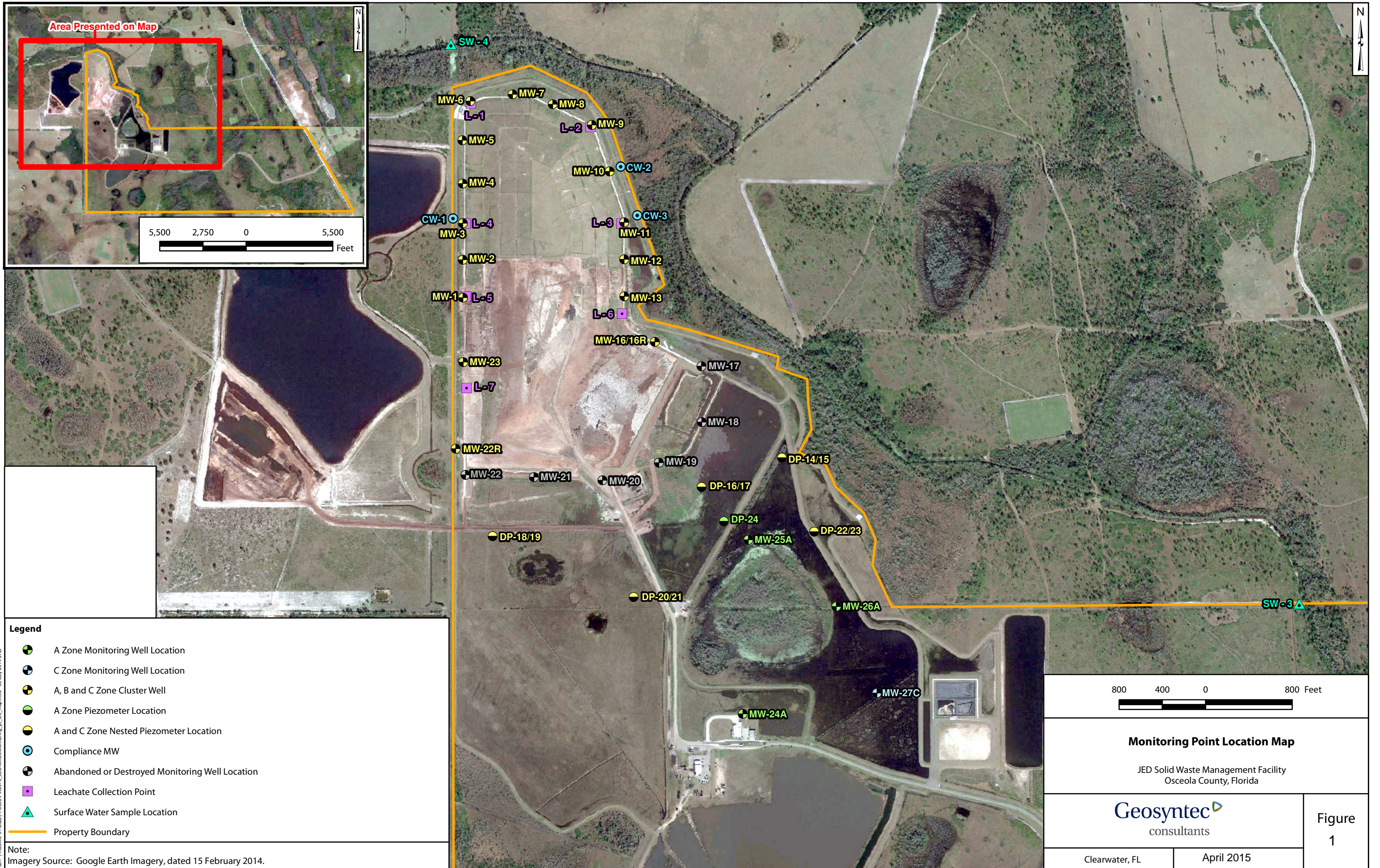


Matthew P. Wissler
Senior Hydrogeologist
State of Florida Professional Geologist #2521

Attachments

Copy: Michael Kaiser, PWS

FIGURE



- Legend**
- A Zone Monitoring Well Location
 - C Zone Monitoring Well Location
 - A, B and C Zone Cluster Well
 - A Zone Piezometer Location
 - A and C Zone Nested Piezometer Location
 - Compliance MW
 - Abandoned or Destroyed Monitoring Well Location
 - Leachate Collection Point
 - ▲ Surface Water Sample Location
 - Property Boundary

Note:
Imagery Source: Google Earth Imagery, dated 15 February 2014.

800 400 0 800 Feet

Monitoring Point Location Map

JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec
consultants

Clearwater, FL

April 2015

Figure
1

ATTACHMENT A

Photographs

Client: Progressive Waste Solutions of Florida

Geosyntec Project Number: FR2220A

Site Name: J.E.D Solid Waste Management Facility

Location: 1501 Omni Way
St Cloud, FL 34773

Photograph 1

Date: 3/2/15

Direction: Down

Comments: A view of monitoring wells DP-14 and DP-15 after filling with bentonite grout.



Photograph 2

Date: 3/2/15

Direction: East

Comments: A view after DP-14 and DP-15 were abandoned. Well casings and concrete pads above ground were removed.



ATTACHMENT B

Monitoring Well Abandonment Permit



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) Osceola County Health Dept.

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. 49
Florida Unique ID
Permit Stipulations Required (See Attached)
62-524 Qued No
Definition No
CUP/WUP Application No.

ABOVE THIS LINE - FOR OFFICIAL USE ONLY

1. Omni Waste of Osceola CNTY LLC 2301 Eagle Parkway #200 Fort Worth TX 76177 (407) 891-3720
2. 1501 Omni Way Saint Cloud, FL 34773 (JED Solid Waste Management Facility)
3. 14-28-32-0000-0010-0000
4. 14 28s 32e Osceola
5. Brian Gose 2697 (206) 396-1561 BGose@Cascadedrilling.com
6. 6424 Pinecastle Blvd. Suite D Orlando FL 32809
7. Type of Work: Construction Repair Modification Abandonment No Longer in Service
8. Number of Proposed Wells 2
9. Specify Intended Use(s) of Well(s):
10. Distance from Septic System if >200 ft. 11. Facility Description Landfill / Solid Waste Facility 12. Estimated Start Date 04/15/15
13. Estimated Well Depth 40' ft. Estimated Casing Depth 35' ft. Primary Casing Diameter 2 in. Open Hole: From To ft.
14. Estimated Screen Interval: From 35 To 40 ft.
15. Primary Casing Material: Black Steel Galvanized PVC Stainless Steel
16. Secondary Casing: Telescope Casing Liner Surface Casing Diameter in.
17. Secondary Casing Material: Black Steel Galvanized PVC Stainless Steel Other
18. Method of Construction, Repair, or Abandonment: Auger Cable Tool Jetted Rotary Sonic
19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:
20. Indicate total number of existing wells on site NA List number of existing unused wells on site NA
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

Signature of Contractor License No. 2697 Signature of Owner or Agent Date 04/07/15

Approval Granted By Issue Date 4/13/15 Expiration Date Hydrologist Approval

Fee Received \$ 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.



Osceola County Health Department
 1 Courthouse Sq Kissimmee, FL 34741

PAYING ON: PERMIT #: 49-WP-1599551 BILL DOC #: 49-BID-2748190
 RECEIVED FROM: Omni Waste of Osceola CNTY LLC AMOUNT PAID: \$ 100.00
 PAYMENT FORM: CREDIT CARD 511547-MC PAYMENT DATE: 04/13/2015

MAIL TO: **Omni Waste of Osceola CNTY LLC**
 2301 Eagle Pkwy
 200
 Fort Worth, TX 76177

FACILITY NAME : Abandonment - Omni Waste of Osceola CNTY LLC

PROPERTY LOCATION:

1501 Omni Way
 Saint Cloud, FL 34773

Lot: _____ Block: _____

Property ID: _____

EXPLANATION or DESCRIPTION:	QUANTITY	FEE
-1 - Well Abandonment	2	\$ 100.00

RECEIVED BY: ValderramosMC

AUDIT CONTROL NO. 49-PID-2634844