

27 January 2009

Ms. Mary Yeargan, P.G.  
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Hillsborough County Environmental Protection Commission  
Roger P. Stewart Center  
3629 Queen Palm Drive  
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**Subject: Technical Memorandum: Phase II Soil Characterization Analytical Data  
Westshore Landings, Hillsborough County, Tampa, Florida**

Dear Ms. Yeargan:

Geosyntec Consultants (Geosyntec) is pleased to provide Hillsborough County Environmental Protection Commission (HCEPC) with this technical memorandum regarding Phase II soil characterization analytical data for Westshore Landings development located near the intersection of Spruce and Clark Streets in Tampa, Florida.

## **FIELD ACTIVITIES**

On behalf of the Westshore Community Development Corporation (WCDC), from October to November 2008, Geosyntec conducted two soil sampling events within the limits of the Westshore Landings parcel in accordance with the Westshore Landings Quality Assurance Project Plan (QAPP) dated 17 October 2008. The first of the two sampling events was conducted from 20 October 2008 to 22 October 2008. During this event, Mr. James Griffin (Senior Staff Hydrogeologist) and Mr. Joe Greaves (Staff Geologist) of Geosyntec collected 56 soil samples from 25 locations (SS1 through SS25) (Figure 1), including three quality assurance (QA) samples using a stainless steel hand auger in accordance with procedures referenced in the Florida Department of Environmental Protection (FDEP) standard operating procedures. Thirty-four of the soil samples were collected within the footprint of the proposed buildings. In general, at each location, Geosyntec collected two samples from 0 to 6 inches below land surface (BLS) and from 6 to 24 inches BLS. In the proposed location of the surface-water management pond (SWMP), ten soil samples were collected from three locations. The first two samples at each location were collected from 0 to 6 inches BLS and 6 to 24 inches BLS and at 2-ft intervals until the water table was encountered. Additionally, there were two sample locations that were located in common

areas outside the building footprints. These two locations were sampled in the same manner as those locations within the building footprints. Soil sampling forms are presented as Appendix A. All soil samples were analyzed for polycyclic aromatic hydrocarbons (PAHs) by United States Environmental Protection Agency (USEPA) Method 8270C and priority pollutant metals by USEPA Methods 6010B and 7471.

Based on the results from the first sampling event, Geosyntec collected six additional soil samples (Figure 1) and one QA sample on 18 November 2008. The additional soil samples were collected using stainless steel bowls and spoons from the three locations (SS1, SS3, and SS6) under proposed building footprints where there were no previous residential SCTL exceedences. Within the three proposed building footprints, Geosyntec collected two samples, each from 0 to 6 inches BLS. Soil samples were analyzed for PAHs and priority pollutant metals.

## **RESULTS**

Analytical laboratory report cover sheets are included as Appendix B. Soil sampling results of the first and second sampling events are summarized in Tables 1 and 2, respectively. During the first sampling event (October 2008), 22 of the 25 sampling locations had one or more constituents that exceeded residential soil cleanup target levels (SCTLs) including arsenic, copper, and benzo(a)pyrene toxicity equivalent (TEQ). Three sample locations (SS1, SS3, and SS6) had no residential SCTL exceedences.

In the second sampling event (November 2008), four of the six locations had detections of benzo(a)pyrene TEQ that exceeded the residential SCTL. Soil samples collected in the vicinity of SS3 did not contain constituent levels exceeding SCTLs shown on Figure 1 as the green shaded area at the southwest corner of the site. An estimated area of clean soil has been estimated as shown on Figure 1. This boundary was established as the median distance between the “clean” (below residential SCTLs) and contaminated (above residential SCTLs) samples.

## **CONCLUSIONS**

- In October 2008, 22 of the 25 soil sampling locations (except SS1, SS3, and SS6) had one or more detections of arsenic, copper, and benzo(a)pyrene TEQ greater than respective SCTLs;
- In November 2008 four of the six soil sampling locations had detections of benzo(a)pyrene TEQ that exceeded the residential SCTL; and

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- Soil samples in the vicinity of SS3 had no SCTL exceedences.

## **RECOMMENDATIONS**

Geosyntec recommends that no existing site soils above residential SCTLs be relocated to the area where clean soils are present (i.e., the area shaded in green where contaminant levels in soil samples are below residential SCTLs).

## **CLOSURE**

Should you have any questions or comments regarding this correspondence, please do not hesitate to contact the undersigned.

Sincerely,



Nandra D. Weeks, P.E.  
Principal

Copies to:

Laurel Lockett, Carlton Fields  
Ron Rotella, WCDC

# **TABLES**

**Table 1.**  
**Soil Exceedences October 2008**  
**Westshore Landings One**  
**Hillsborough County, Tampa, Florida**

Parameter	Method	Residential SCTL <sup>(3)</sup>	SS2-10-08 (0-6)	SS4-10-08 (0-6)	SS5-10-08 (0-6)	SS7-10-08 (0-6)	SS8-10-08 (0-6)	SS9-10-08 (0-6)	SS10-10-08 (0-6)	SS11-10-08 (0-6)	SS12-10-08 (0-6)	SS13-10-08 (0-6)	SS13-10-08 (6-24)	SS14-10-08 (0-6)	SS150-10-08 (0-6)	SS15-10-08 (0-6)	SS16-10-08 (6-24)	SS17-10-08 (0-6)
Arsenic	6010B	2.1	1.2	0.82 U	1.5	0.33	0.26	0.28	0.21 U	0.19 U	0.53	0.23	0.21 U	0.2	0.23 U	0.4	0.3	0.56
Copper	6010B	150	4.3	3.2	7.4	2.1	3.6	4.9	1.2	3.7	20	0.81	2.7	3.5	4.8	5.4	2.2	29.9
Benzo(a)pyrene TEQ <sup>(4)</sup>	8270C	0.1	0.330	0.159	0.358	0.717	0.971	1.185	0.548	0.239	0.796	2.948	2.947	0.600	1.100	1.243	0.150	1.511

Parameter	Method	Residential SCTL <sup>(3)</sup>	SS17-10-08 (6-24)	SS18-10-08 (0-6)	SS18-10-08 (6-24)	SS19-10-08 (0-6)	SS19-10-08 (0-6)	SS19-10-08 (6-24)	SS20-10-08 (0-6)	SS20-10-08 (6-24)	SS20-10-08 (2-4)	SS21-10-08 (0-6)	SS21-10-08 (6-24)	SS22-10-08 (6-24)	SS23-10-08 (0-6)	SS23-10-08 (6-24)	SS24-10-08 (0-6)	SS25-10-08 (0-6)
Arsenic	6010B	2.1	2	1.4	0.25	1.8	0.76	0.22 U	0.93	0.74	0.56	0.75 U	0.35	2.7	0.54	0.26	1	2.4
Copper	6010B	150	537	14.9	9	21.6	7.8	14	6.7	14	17.9	3.9	3.8	0.13 U	3.2	1.5	5.8	6.5
Benzo(a)pyrene TEQ <sup>(4)</sup>	8270C	0.1	2.137	9.567	2.715	1.153	0.163	0.194	22.969	0.412	0.812	0.478	0.247	0.020	0.687	1.975	2.265	1.678

Notes:

1. All values are in mg/kg.
2. Shaded cells indicate constituents detected above regulatory criteria.
3. SCTL = Soil Cleanup target Level as defined in 62-777, Florida Administrative Code.
4. Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs) were converted to Benzo(a)pyrene toxicity equivalents (TEQ) before comparison with the SCTL for Benzo(a)pyrene using the approach described in the December 14, 2004 *Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.*
5. NC = No criteria.
6. U = Constituent not detected above laboratory method detection limit.

**Table 2.**  
**Soil Exceedences November 2008**  
**Westshore Landings One**  
**Hillsborough County, Tampa, Florida**

Parameter	Method	Residential SCTL <sup>(3)</sup>	SS1-11-08 (0-6) N	SS1-11-08 (0-6) S	SS3-11-08 (0-6) N	SS3-11-08 (0-6) S	SS6-11-08 (0-6) N	SS6-11-08 (0-6) S	SS11-11-08 (0-6) N
Benzo(a)pyrene TEQ <sup>(4)</sup>	8270C	0.1	0.191	0.282	0.105	0.029	0.687	0.145	0.232

Notes:

1. All values are in mg/kg.
2. Shaded cells indicate constituents detected above regulatory criteria.
3. SCTL = Soil Cleanup target Level as defined in 62-777, Florida Administrative Code.
4. Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs) were converted to Benzo(a)pyrene toxicity equivalents (TEQ) before comparison with the SCTL for Benzo(a)pyrene using the approach described in the December 14, 2004 *Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.*

**FIGURE**





## **APPENDIX A**

# **SOIL SAMPLING FIELD FORMS**

## **APPENDIX B**

### **LABORATORY ANALYTICAL DATA**