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**Limited Phase II Environmental Site Assessment
Additional Testing
Countryside Executive Golf Course - 44 (+/-) Acres
2506 Countryside Boulevard
Clearwater, Pinellas County, Florida**

October 20, 2004



**An Affiliate of Mortensen Engineering, Inc.
TAMPA, FLORIDA**



October 20, 2004
Project No. 04-463-00556

TO: Beazer Homes
2630 South Faulkenburg Road
Riverview, Florida 33569

Attention: Mr. Steve Gamm

SUBJECT: Limited Phase II Environmental Site Assessment
Additional Testing
Countryside Executive Golf Course—44 ± Acres
2506 Countryside Boulevard
Clearwater, Pinellas County, Florida

Dear Mr. Gamm:

Land Assessment Services, Inc. (LAS) completed its limited "Phase II" environmental site assessment (ESA) of the above referenced property on September 14, 2004, as proposed in our letter dated August 24, 2004. See Figure 1 for a Site Vicinity map, and Figures 2 and 3 for aerial photographs of the property and the golf course maintenance facility area, respectively.

Results of that limited assessment warranted more testing to further define the concentrations and lateral and/or vertical extent of the *arsenic* shallow soil and/or shallow groundwater contamination discovered on-site.

The additional scope of services to further evaluate these findings was outlined in our proposal dated September 21, 2004, and specifically included the following tasks:

- Task I:** Collected twelve (12) representative shallow soil samples from six (6) locations generally in the northwest area of the site. Two (2) soil samples were collected at 2 ± foot intervals to a depth of 4 ± feet below land surface (BLS) at the six (6) locations. LAS arranged for an independent state-certified laboratory to chemically test the soil samples for *arsenic*.
- Task II:** Collected fifty (50) representative shallow soil samples from the golf course maintenance facility area (previous TW-1/CSS-7 area), the previous CSS-4 soil sample area (east-central), and representative locations across the remainder of the golf course, to depths of 4 ± feet BLS. Soil samples were collected within that interval and composited into two (2) samples from each location. LAS arranged for an independent state-certified laboratory to chemically test the soil samples for *arsenic*.

ENVIRONMENTAL/CONTAMINATION ASSESSMENTS

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- Task III: Collected forty-eight (48) shallow soil samples from six (6) proposed stormwater pond/excavation areas across the site. Eight (8) soil samples were collected at $2 \pm$ foot intervals to a depth of $16 \pm$ feet BLS at the six (6) locations. LAS arranged for an independent state-certified laboratory to chemically test the soil samples for *arsenic*.
- Task IV: LAS installed four (4) additional temporary shallow groundwater monitoring wells on-site with truck-mounted drill rig (TW-4 through TW-7), each to $12 \pm$ feet BLS: one (1) in the northwest area (general previous CSS-5 soil sample location); one (1) in the east-central area (general previous CSS-4 soil sample location), and two (2) more wells in the golf course maintenance facility area (one east and one south of the facility). LAS collected a shallow groundwater sample from each *new* well, and each of the *existing* wells TW-1 through TW-3. LAS arranged for an independent state-certified laboratory to chemically test the groundwater samples for *arsenic*.
- Task V: Prepared a brief letter report summarizing our field activities, chemical testing results, and conclusions.

Soil and water quality chemical testing was performed by ELAB, an independent state-certified chemical testing laboratory. All of our fieldwork was performed in general accordance with FDEP rules.

Soil Sampling and Chemical Testing

See Figures 4 through 6 for soil sampling locations.

LAS collected soil samples CSS-11a through CSS-41b within $4 \pm$ feet of land surface across the site to check for arsenic in the shallow soils. Samples CSS-11a through CSS-41b were composited from two (2) soil samples collected from 0 to $2 \pm$ feet BLS ("a") or 2 to $4 \pm$ feet BLS ("b"), respectively. Samples taken from locations CSS-11 through CSS-41 were submitted to ELAB for arsenic testing only (EPA Method 6010). See attached for actual chemical testing results and the attached Table 1 for a summary of LAS' arsenic soil testing results.

Twenty-five (25) of the sixty-two (62) soil samples collected from CSS-11 to CSS-41 were in excess of the *proposed* residential soil cleanup target level (SCTL) of 2.1 milligrams per kilogram (mg/kg) or parts per million (ppm) for arsenic in soils. Soils 2 to 4 feet BLS were impacted with arsenic above the residential SCTL at CSS-17 and CSS-25 in the general east-central area, and at CSS-32, CSS-34 and CSS-35 (see Figure 5), off the general northeast corner of the concrete pad east of the golf course maintenance facility. With the exception of the east side of the maintenance facility, arsenic soil impacts across the site (above *proposed* residential SCTL) were generally 0 to $2 \pm$ feet BLS, based on LAS' chemical testing results in October 2004.

LAS also sampled soils at six (6) proposed *pond* locations to $16 \pm$ feet deep. See Figure 4 for the locations of pond borings P1 through P6. Eight (8) soil samples were collected at each location, one (1) every $2 \pm$ feet (a through h). The forty-eight (48) soil samples taken from locations P1 through P6 were submitted to ELAB for arsenic testing only (EPA Method 6010). All chemical testing results for the samples collected in the proposed pond areas were below laboratory method detection limits, or in three (3) instances, at levels between the laboratory method detection limit and the laboratory *practical quantitation limit*. Only 2 of the 48 pond location samples collected slightly exceeded the *current* residential SCTL; however, both values were below the laboratory's practical quantitation limit.

It is important to note that the soil testing results LAS obtained at CSS-11a through CSS-41b during our additional testing were compared to the *proposed* STCL for arsenic currently under consideration by the FDEP. It is important to note that this proposed change remains subject to political pressures and public perceptions until formulated as a rule. However, it is LAS' impression that an arsenic SCTL change is imminent, as the remaining points of contention appear to concern the appropriate levels to adopt (the 2.1 mg/kg residential level is based on the *current FDEP staff recommendation*), rather than whether a change should be made.

Shallow Groundwater Water Sampling and Chemical Testing

On October 6, 2004, LAS was on-site to install four (4) additional temporary monitoring wells (TW-4 through TW-7) with a truck-mounted drill rig using hollow-stem augering techniques on the south and east sides of the golf course maintenance facility (TW-4 and TW-5, respectively—see Figures 3-5 attached); in the general area of the previous soil sampling location CSS-5 (TW-6—see Figure 4 attached); and in the general area of the previous soil sampling location CSS-4 (TW-7—see Figures 4 and 6 attached). Well construction details for TW-4 through TW-7 are provided on Figure 7. All well drilling equipment and tools were decontaminated prior to or during our fieldwork.

On October 6-7, 2004, LAS was on-site to purge and sample new and existing wells (TW-1 through TW-7) using a low-volume variable speed peristaltic pump (see attachments for well sampling logs). After a proper amount of groundwater was purged from each well, a water sample was collected, iced and subsequently delivered to ELAB for chemical testing using the following EPA Method 6010 (arsenic only).

The attached Table 2 shows a summary of the results of LAS' shallow groundwater testing, which indicated arsenic levels in the groundwater in excess of the state's *current* groundwater cleanup target level (GWCTL) of 50 micrograms/liter (ug/l) or parts per billion (ppb), at TW-1, and TW-3 through TW-5, all in the general vicinity of the golf course maintenance facility. See attached for the actual chemical testing results. It is important to note that the arsenic levels in the groundwater samples collected from TW-2 and TW-7 exceeded the pending EPA maximum contaminant level (MCL) and future GWCTL of 10 ug/l, set to change from 50 ug/l on January 1, 2005.

Summary and Conclusions

- The *current* residential SCTL for arsenic was exceeded in 37 of 62 shallow soil samples collected at 28 of the 31 locations checked. The *proposed* residential SCTL for arsenic was exceeded in 25 of 62 shallow soil samples collected at 20 of the 31 locations checked.
- Only 11 of the 31 shallow soil samples collected from 2 to 4 feet BLS across the subject site (not including the pond locations) were in excess of the *current* residential SCTL; only 5 of the 31 shallow soil samples collected from 2 to 4 feet BLS across the subject site (not including the pond locations) were in excess of the *proposed* residential SCTL.
- Only 2 of the 48 pond location samples collected slightly exceeded the *current* residential SCTL; however, the two (2) results were too low for the laboratory to quantify. None of the soil sampling results detected at the pond locations exceeded the *proposed* residential SCTL. 45 of the 48 samples tested were “below detection limits.”
- The *current* GWCTL for arsenic of 50 ug/l was exceeded in groundwater samples collected from 4 of 7 shallow groundwater monitoring wells (TW-1 and TW-3 through TW-5), all in the general location of the golf course maintenance facility area. The pending GWCTL/MCL for arsenic of 10 ug/l was *slightly* exceeded in shallow groundwater samples collected from 2 additional wells (TW-2 in the golf course maintenance facility area, and TW-7 in the east-central area).
- The pending change in the arsenic GWCTL/MCL will occur in Florida on January 1, 2005. The proposed change in the arsenic residential SCTL is delayed in the state’s rulemaking process. The next FDEP workshop on the proposed change will be held October 28, 2004.
- The use of a “proposed” SCTL for decision-making purposes is a business decision, as extenuating external circumstances are involved, as discussed above. It is important to understand that the *current* residential SCTL has been exceeded based on LAS’ limited testing. You should immediately involve your environmental attorney in this matter with regard to the results discussed herein, the need for regulatory agency notification, and various associated business risks.

Limitations

It is important to note that the Phase II ESA work discussed herein was preliminary and limited in scope and not intended to fully determine or evaluate the lateral or vertical extent of any contamination discovered or detected, nor areas of greater or lesser contamination, in the event of the discovery of some evidence of shallow soil or shallow groundwater contamination during this limited testing. These issues were to be addressed in a supplemental study, if necessary.

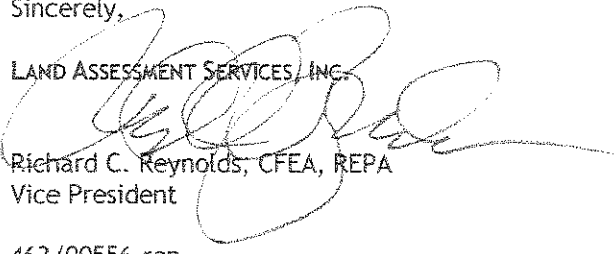
It is important for all parties relying on this limited Phase II ESA to understand that our failure to discover other detectable or significant contamination in the tested areas, through appropriate, reasonable and agreed upon engineering techniques, except as qualified herein, does not guarantee that such contamination does not exist at different depths or locations in the tested areas, or in other non-tested areas on-site.

In addition, it is important to realize that the subject site may later become contaminated due to natural phenomena, current or future on-site operations, human intervention, or adjacent site impacts. These possibilities are beyond our control.

If you have any questions concerning this letter report, please do not hesitate to give us a call.

Sincerely,

LAND ASSESSMENT SERVICES, INC.



Richard C. Reynolds, CFEA, REPA
Vice President

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Tables 1 and 2
Figures 1 through 7
Chemical Testing Results
Groundwater Sampling Logs