September 24, 2014

Mr. Tom Higginbotham
Environmental Health
Florida Department of Health in Sarasota County
2200 Ringling Boulevard
Sarasota, Florida 34237

Re: Former Foxfire Golf Course

Dear Mr. Higginbotham:

As you requested, the Florida Department of Health (DOH), Public Health Toxicology section reviewed environmental test data collected in 2013 at the former Foxfire Golf Course site in Sarasota. This assessment evaluates the public health risk for future resident living on portions of the golf course not over former landfill areas. Because municipal water is available, this assessment did not consider future ground water use.

Florida DOH found the number of surface soil samples tested for arsenic was adequate and that the highest arsenic levels are not likely to cause illness in future residents. The increased cancer risk is very low. The highest arsenic levels are, however, above state residential soil cleanup target levels. The site owner tested too few surface soil samples for polycyclic aromatic hydrocarbons (PAHs) and chlorinated pesticides to evaluate the health risk. Therefore, Florida DOH recommends additional soil testing for PAHs and chlorinated pesticides, either before or after site building preparation.

This assessment requires the use of assumptions, judgments, and incomplete data. These factors contribute to uncertainty in evaluating the health threat. Assumptions and judgments in this assessment err on the side of protecting public health and may therefore overestimate the risk.

The following paragraphs explain how we arrived at these conclusions and recommendations.

Site Description

The former 100-acre, 27-hole Foxfire Golf Course site is at 7200 Proctor Road in Sarasota, Sarasota County, Florida, 34241 (Figure 1). In the 1960s and early 1970s Sarasota County operated landfills in this area: Proctor Road, Sugar Bowl, Foxfire, and Sommers Landfills. The Foxfire Golf Course opened in 1975 and expanded in 1989. The owners built some portions of the golf course over former landfill areas. In 1991 the owners removed two underground petroleum storage tanks. In 2005 the Florida Department of Environmental Protection (DEP) determined there was little residual petroleum contamination left [DEP 2005]. In 2006 the golf course closed.

Previously, Florida DOH and the US Agency for Toxic Substances and Disease Registry (ATSDR) evaluated 2005 and 2007 soil tests from the former golf course and adjacent Ashley neighborhood.

They concluded the site was "no apparent public health hazard." Florida DOH and ATSDR found the levels of arsenic and PAHs in on- and off-site soil were not likely to cause illness. They did, however, recommend more testing to better characterize the extent of contamination [ATSDR 2008].

On August 19, 2014, Florida DOH and Florida DOH–Sarasota visited the site. The area around the site is mostly residential. They observed the site overgrown with dense vegetation. They toured the east side of the site near Proctor Road, south of Wildhorse Circle. They observed the former underground storage tank area and the area around the former maintenance building. They also observed the pesticide/herbicide mixing area south of the driving range. The vegetation, however, was too dense in these areas to observe any soil staining. There was little evidence of site trespass.

Demographics

In 2010, 790 people lived within 0.5 mile of the site. Ninety-five percent (95%) were white and 41% were over 65. Ten to 20 percent had college degrees. Ninety-four percent (94%) of the households were owner occupied. The annual per capita income was between $41,000 and $72,000 [EPA 2014].

Land Use

Vegetation has overgrown the site. The owner plans to build houses on the site except for the former landfill areas. Most of the surrounding land use is residential.

Environmental Data

In January 2013, consultants collected three deep subsurface soil samples near the former golf course maintenance building and six around the former golf course (7 to 9 feet below land surface). They analyzed these deep subsurface soil samples for volatile organic chemicals [LET 2013]. We did not evaluate these test results, however, because the samples were so deep that people are not likely to be exposed.

In July 2013, different consultants collected surface soil samples (0-6 inches deep) from 42 random locations around the former golf course and analyzed for arsenic (Table 1 and Figure 2) [Ardaman 2014]. For purposes of this assessment, the sample size adequately characterizes the extent of arsenic contamination in surface soil around the former golf course.

These same consultants also collected surface soil samples from three random areas around the former golf course and analyzed for organochlorine and organophosphate pesticides (Figure 2) [Ardaman 2014]. For purposes of this assessment, however, three samples in a 100-acre area is too few to adequately characterize the extent of pesticide contamination. Golf courses used pesticides extensively in the past. Many chlorinated pesticides resist degradation and persist for many years in the environment.

At least 15 additional surface soil samples (0-6 inches deep) collected from random areas around the former golf course would be necessary to characterize the extent of pesticide contamination. Sample collection either before or after site building preparation is acceptable. These samples, however, would only require analysis for organochlorine pesticides since organophosphate pesticides breakdown rapidly in the environment and are rarely found years after application.

These same consultants then collected three surface soil samples from the area around the former maintenance building (GCM-1, GCM-2, and GCM-3) and analyzed for organochlorine pesticides, organophosphate pesticides, and polycyclic aromatic hydrocarbons (PAHs) (Table 1and Figure 2) [Ardaman 2014]. For purposes of this assessment, the sample size is too small to adequately characterize the extent of contamination around the former maintenance building. Because the golf course stored and transferred pesticides and fuel at the maintenance building, contamination is likely concentrated in this area. At least 10 additional surface soil samples (0-6 inches deep) collected

around the former maintenance building and analyzed for organochlorine pesticides and PAHs would be necessary to determine the extent of contamination. Sample collection either before or after site building preparation is acceptable. These samples would not require analysis for organophosphate pesticides since they breakdown rapidly in the environment and are rarely found years after application.

In addition to the above soil samples, these consultants collected three sediment samples from the ditch on the west side of the site (Figure 2: SED-1, SED-2, and SED-3). They analyzed these samples for metals, organochlorine pesticides, organophosphate pesticides, herbicides, volatile organic chemicals (VOCs), semi-volatile organic chemicals, and total petroleum hydrocarbons. They also analyzed one of these sediment samples for dioxins (Table 2) [Ardaman 2014]. For purposes of this assessment, these samples adequately characterize contamination in the ditch sediments.

These consultants also tested 11 monitor wells and found low levels of arsenic and chlorinated pesticides. They tested one surface water sample from a nearby ditch and found low levels of arsenic.

Potential Exposure Pathways
For the soil ingestion pathway, golf course operations were the source of contamination, surface soil (0-6 inches deep) is the environmental medium, and future residential yards would be the point of exposure. Ingestion (swallowing) would be the route of exposure and 500 to 750 new residents would be the exposed population. This would happen in the future if the site owners develop the site as proposed (Table 3).

For the sediment ingestion pathway, golf course operations were the source of contamination, sediments are the environmental medium, and nearby ditches would be the point of exposure. Ingestion (swallowing) would be the route of exposure and 5 to 10 new residents would be the exposed population. This would happen in the future if the site owners develop the site as proposed (Table 3).

Eliminated Exposure Pathways
Because municipal water is available in this area, future use of ground water under the site as a drinking or irrigation water sources is unlikely. Therefore this assessment did not evaluate ground water as an exposure pathway.

Test of one surface water sample from the ditch on the west side of the site in 2014 found little contamination. This is not unexpected since many of the contaminants associated with golf course operation are only slightly soluble in water. Although there is some site stormwater runoff, most rain infiltrates into the sandy soil of this relatively flat site. Therefore, this assessment did not evaluate surface water as an exposure pathway. If the owner converts this site to residential use, stormwater runoff will likely be contained on site.

Public Health Implications

Florida DOH provides site-specific public health recommendations based on levels of environmental contaminants, evaluation of potential exposure pathways, duration of exposure, toxicological literature, and characteristics of the exposed population. Whether a person will be harmed depends on the type/amount of contaminant, how they are exposed, how long they are exposed, how much contaminant is absorbed, genetics, and individual lifestyle.

Dose
After identifying contaminants of concern, Florida DOH evaluates exposures by estimating daily doses for children and adults. The amount of contaminant per body weight is the *dose*. Toxicology uses dose to compare toxicity of different chemicals in different animals. Florida DOH uses the units of milligrams

(mg) of contaminant per kilogram (kg) of body weight per day (mg/kg/day) to express doses in this assessment[1].

To calculate the daily doses of each contaminant, the Florida DOH uses standard factors for dose calculation [ATSDR 2005; EPA 2011]. Florida DOH assumes that people are exposed daily to the maximum concentration measured and for the PAHs, makes the health protective assumption that 100% of the ingested chemical is absorbed into the body. The percent actually absorbed into the body is likely less. For arsenic Florida DOH assumes 33% of the ingested amount is absorbed. The general formula for estimating a dose is:

$$D = (C \times IR \times EF \times CF) / BW$$

Where:
D = exposure dose (mg/kg/day)
C = contaminant concentration (various units)
IR = intake rate (amount per day)
EF = exposure factor (unit-less)
CF = conversion factor (10^{-6} kg/mg)
BW = body weight (kilograms or kg)

$$EF = F \times ED / AT$$

Where:
EF = exposure factor (unit-less)
F = frequency of exposure (days/year)
ED = exposure duration (years)
AT = averaging time (days) (ED × 365 days/year for non-carcinogens; 78 years × 365 days/year for carcinogens)

Florida DOH compares estimated soil doses to ATSDR chemical specific minimal risk levels (MRLs). MRLs are comparison values that establish exposure levels many times lower than levels where scientists observed no effects in animals or human studies. ATSDR designed the MRL to protect the most sensitive, vulnerable individuals in a population. The MRL is an exposure level below which non-cancerous harmful effects are unlikely, even after daily exposure over a lifetime. Although ATSDR considers concentrations at or below the relevant comparison value reasonably safe, exceeding a comparison value does not imply adverse health effects are likely. If contaminant concentrations are above comparison values, Florida DOH further analyzes exposure variables (for example, duration and frequency), toxicology of the contaminants, past epidemiology studies, and the weight of evidence for health effects. Florida DOH uses chronic MRLs where possible because exposures are usually longer than a year. If chronic MRLs are not available they use intermediate length MRLs [ATSDR 2005].

For non-cancer illnesses, Florida DOH first estimates the health risk for children. Because children are smaller and swallow more soil than adults, their exposure is higher. Therefore, if children are not at risk, then adults are not either.

For cancer, Florida DOH quantifies the estimated increased risk by using the general formula:

$$Risk = D \times SF \times ADAF$$

[1] A milligram is 1/1,000 of a gram; a kilogram is approximately 2 pounds.

Risk = Cancer risk
D = Age specific dose (mg/kg/day)
SF = Slope factor $(mg/kg\text{-}day)^{-1}$
ADAF = Age Dependent Adjustment Factor, for those chemicals which are known to increase cancer risks due to early life exposures

This results in a high estimate of the increased cancer risk. The actual increased cancer risk is likely lower. Because of large uncertainties in the way scientists estimate cancer risks, the actual increased cancer risk may be as low as zero. To put the cancer risk into perspective, we use the following descriptors for the different numeric cancer risks:

1 in	10 (10^{-1})	"very high" increased risk
1 in	100 (10^{-2})	"high" increased risk
1 in	1,000 (10^{-3})	"moderate" increased risk
1 in	10,000 (10^{-4})	"low" increased risk
1 in	100,000 (10^{-5})	"very low" increased risk
1 in	1,000,000 (10^{-6})	"extremely low" increased risk

Identifying Contaminants of Concern
We select contaminants with maximum concentrations above ATSDR comparison values for further evaluation. Comparison values, however, are not thresholds of toxicity. We do not use them to predict health effects or to establish clean-up levels. A concentration above a comparison value does not necessarily mean harm will occur. It does indicate, however, the need for further evaluation. We do not evaluate further contaminants with maximum concentrations below comparison value. It is unlikely these lower contaminant concentrations would cause illness.

Comparing the highest measured concentrations in surface soil and sediments to ATSDR screening guidelines, Florida DOH selected arsenic and all 15 carcinogenic polycyclic aromatic hydrocarbons (PAHs) as contaminants of concern. To evaluate the increased cancer risk of all 15 carcinogenic PAHs, Florida DOH expressed their concentrations as an equivalent concentration of benzo(a)pyrene, or benzo(a)pyrene toxicity equivalent (BaP-TEQ). Because the highest concentration of the non-carcinogenic PAHs was over 30,000 times below the ATSDR screening guideline, Florida DOH did not select non-carcinogenic PAHs as contaminants of concern.

Arsenic
Arsenic is a naturally occurring metal widely distributed in soil. Scientists usually find it combined with oxygen, chlorine, and sulfur. Most arsenic compounds have no smell or special taste [ATSDR 2007]. The Foxfire Golf Course likely used arsenic-containing pesticides.

Surface Soil
Although concentrations slightly above state soil cleanup target levels may not necessarily cause harm, Florida DOH recommends the responsible party meet these target levels.

Non-cancer risk – Children who incidentally ingest (swallow very small amounts of) surface soil on the site with the highest arsenic levels (26 milligrams per kilogram or mg/kg) are not likely to suffer any non-cancer illnesses. The maximum arsenic dose for children 1 to <2 years old playing in this soil (0.00003 mg/kg/day) is ten times less than the ATSDR chronic oral MRL of 0.0003 mg/kg/day (Table 4) and thus is not likely to cause any non-cancer illnesses [ATSDR 2007].

Cancer risk – People who incidentally ingest surface soil on the site with the highest arsenic levels (26 mg/kg) are at a "very low" increased risk of cancer. Using the highest surface soil arsenic

concentration and a cancer slope factor of 1.5 mg/kg/day^{-1}, the mean increased cancer risk is 1 in 100,000 or 1 x 10^{-5} (Table 4).

Sediment

Non-cancer risk – Children and adolescents who incidentally ingest (swallow very small amounts of) sediment from the nearby ditch with the highest arsenic levels (5.6 mg/kg) are not likely to suffer any non-cancer illnesses. The maximum arsenic dose for children 1 to <2 years old playing in this soil (0.00002 mg/kg/day) is 15 times less than the ATSDR chronic oral MRL of 0.0003 mg/kg/day (Table 5) and thus is not likely to cause any non-cancer illnesses [ATSDR 2007].

Cancer risk – People who incidentally ingest sediments from the nearby ditch with the highest arsenic levels (5.6 mg/kg) are at a "very low" increased risk of cancer. Using the highest sediment arsenic concentration and a cancer slope factor of 1.5 mg/kg/day^{-1}, the mean increased cancer risk is 1 in 100,000, or 1 x 10^{-5} (Table 5).

Polycyclic Aromatic Hydrocarbons (PAHs)

PAHs are a group of over 100 different chemicals formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. Health scientists usually find PAHs as a mixture containing two or more of these compounds [ATSDR 1995]. PAHs found in soil around the former maintenance building may have come from spilled diesel fuel.

Surface Soil

Consultants only tested three surface soil samples around the former maintenance building. Three samples are too few samples to adequately characterize the extent of PAH contamination or to adequately evaluate the public health threat.

Non-cancer risk – Based on analysis of just three surface soil samples around the former maintenance building, children who incidentally ingest (swallow very small amounts of) surface soil with the highest levels of non-carcinogenic PAHs are not likely to suffer any non-cancer illnesses. The highest concentration of 1-methylnapthalene (0.116 mg/kg), the only non-carcinogenic PAH detected, was over 30,000 times less than the ATSDR screening level (3,500 mg/kg). Therefore, non-cancer illness is unlikely.

Cancer risk - Based on analysis of just three surface soil samples around the former maintenance building, people who over an entire lifetime incidentally ingest (swallow very small amounts of) surface soil with the highest levels (0.52 mg/kg) of carcinogenic PAHs (summarized as benzo(a)pyrene toxicity equivalents or BaP-TEQ) are at an "extremely low" increased risk of cancer. Because BaP has a mutagenic mode of action but lacks chemical-specific data on early life exposures, we used the following age-dependent adjustment factors:

Children 0-2 years - 10
Children 2-16 years - 3
Children and adults 16 and older - 1

Using the highest surface soil concentration of BaP-TEQ (0.52 mg/kg) and a cancer slope factor of 7.3 mg/kg/day^{-1}, the mean increased lifetime cancer risk is one in a million, or 1 x 10^{-6} (Table 6).

Sediment

The concentrations of PAHs in the three sediment samples from the nearby ditch were all below detection limits.

Child Health Considerations

In communities faced with air, water, soil, or food contamination, the many physical differences between children and adults demand special emphasis. Children could be at greater risk than adults for certain kinds of exposure to hazardous substances. Children play outdoors and sometime engage in hand-to-mouth behaviors that increase their exposure potential. Children are shorter than adults; this means they breathe dust, soil, and vapors closer to the ground. A child's lower body weight and higher intake rate results in a greater dose of hazardous substance per unit of body weight. If toxic exposure levels are high enough during critical growth stages, the developing body system of children can sustain permanent damage. Finally, children are dependent on adults for access to housing, for access to medical care, and for risk identification. Thus, adults need as much information as possible to make informed decisions regarding their children's health.

This assessment specifically evaluates the future risk to children living on this former golf course from exposure to both surface soil and ditch sediments.

Community Health Concerns Evaluation

Nearby residents are concerned about future residential use of the former golf course. Florida DOH found the highest arsenic levels in surface soil are not likely to cause illness in future residents and the increased cancer risk is very low. The highest arsenic levels are, however, above state soil cleanup target levels for residential use. The site owner analyzed too few soil samples to evaluate the future health threat from PAHs and chlorinated pesticides.

Conclusions

1. The highest arsenic levels in surface soil are not likely to cause illness in future residents and the increased cancer risk is very low. The highest arsenic levels are, however, above state soil cleanup target levels for residential use.

2. For purposes of this assessment, three random samples around the former golf course are too few to adequately characterize the extent of pesticide contamination.

3. For purposes of this assessment, three samples are too few to adequately characterize the extent of contamination around the former maintenance building.

Recommendations

1. Florida DOH recommends arsenic levels in surface soil meet state residential soil cleanup target levels before people live on the site.

2. Florida DOH recommends the site owner collect at least 15 additional surface soil samples (0-6 inches deep) from random areas around the former golf course and analyze for organochlorine pesticides. Testing either before or after site building preparation is acceptable.

3. Florida DOH recommends the site owner collect at least 10 additional surface soil samples (0-6 inches deep) around the former maintenance building and analyze for organochlorine pesticides and PAHs. Testing either before or after site building preparation is acceptable.

Please contact me if I can answer any questions about this assessment at 850-245-4401.

Sincerely,

Randy Merchant

Randy Merchant
Environmental Administrator

ERM/erm
Attachments

References

[Ardaman 2014] Ardaman and Associates, Inc. Site Assessment Report for Waverly (formerly Foxfire), 7800 Proctor Road, Sarasota, Sarasota County, Florida. June 13, 2014.

[ATSDR 1995] Agency for Toxic Substances and Disease Registry. Toxicological Profile for Polycyclic Aromatic Hydrocarbons (PAHs) (Update). Atlanta: US Department of Health and Human Services; August 1995.

[ATSDR 2005] Agency for Toxic Substances and Disease Registry. Public Health Assessment Guidance Manual (Update).Atlanta: US Department of Health and Human Services; January 2005.

[ATSDR 2007] Agency for Toxic Substances and Disease Registry. Toxicological Profile for Arsenic (Update). Atlanta: US Department of Health and Human Services; August 2007.

[ATSDR 2008] Agency for Toxic Substances and Disease Registry. Health Consultation. On- and Off-Site Surface Soil. Former Proctor Road Landfill. Sarasota County, Florida. EPA Facility ID: FLN000409986. September 30, 2008.

[DEP 2005] Florida Department of Environmental Protection. Letter from Michael E. Ashey, Florida DEP to D. Gary Alvey, Foxfire Golf Course of Sarasota, LLC regarding Site Rehabilitation Completion Order. February 2005.

[EPA 2011] US Environmental Protection Agency, Office of Research and Development. Exposure Factors Handbook: 2011 Edition. EPA/600/ R-090/052F.

[EPA 2014] US Environmental Protection Agency. Environmental Justice "EJView" web site: http://epamap14.epa.gov/ejmap/entry.html. Accessed August 6, 2014.

[LET 2013] Lomski Engineering and Testing. Phase II Environmental Site Assessment. Certain Parcels at 7200 Proctor Rd in Sarasota County, fka: the Foxfire Golf Course. February 25, 2013.

Table 1. Contaminants of Concern in Surface Soil (0-6 inches deep) on the Former Foxfire Golf Course Site.

Contaminants of Concern	Concentration Range (mg/kg)	ATSDR Screening Guideline* (mg/kg)	Source of Screening Guideline	# Above Screening Guideline/Total #
Arsenic	<0.35 to 26	0.47	CREG	40/42
BaP – TEQ	< 0.09 to 0.52	0.1	CREG	2/3

BaP – TEQ = benzo(a)pyrene toxicity equivalence mg/kg = milligrams per kilogram
CREG = ATSDR cancer risk evaluation guide for 10^{-6} excess cancer risk
* Guidelines only used to select chemicals for further scrutiny, not to the judge the risk of illness.
Source of data: [Ardaman 2014]

Table 2. Contaminants of Concern in Ditch Sediment near the Former Foxfire Golf Course Site

Contaminants of Concern	Concentration Range (mg/kg)	ATSDR Screening Guideline* (mg/kg)	Source of Screening Guideline	# Above Screening Guideline/Total #
Arsenic	0.9 to 5.6	0.47	CREG	3/3
BaP – TEQ	< 0.1	0.1	CREG	0/3

BaP – TEQ = benzo(a)pyrene toxicity equivalence mg/kg = milligrams per kilogram
CREG = ATSDR cancer risk evaluation guide for 10^{-6} excess cancer risk
* Guidelines only used to select chemicals for further scrutiny, not to the judge the risk of illness.
Source of data: [Ardaman 2014]

Table 3. Potential Human Exposure Pathway at the Former Foxfire Golf Course Site

POTENTIAL PATHWAY NAME	POTENTIAL EXPOSURE PATHWAY ELEMENTS					TIME
	SOURCE	ENVIRONMENTAL MEDIA	POINT OF EXPOSURE	ROUTE OF EXPOSURE	EXPOSED POPULATION	
New resident soil ingestion	Golf course operation	Surface soil	On-site yards	Incidental ingestion	500 to 750 new residents	Future
New resident sediment ingestion	Golf course operation	Sediment	Nearby ditch	Incidental ingestion	5 to 10 new residents	Future

Table 4. Estimated Future Residential Exposure and Increased Cancer Risk from Maximum Arsenic Levels in Surface Soil (0-6 inches deep) on the Former Foxfire Golf Course Site

Age Group (years)	Body Weigh t (kg)	Maximum Arsenic Level in Surface Soil (mg/kg)	Estimated Mean Ingestion Dose (mg/kg/day)	ATSDR MRL (mg/kg/day)	Oral Cancer Slope Factor $(mg/kg/d)^{-1}$	Estimated Mean Increased Cancer Risk
0.5 to <1	9.2	26	5×10^{-5}	3×10^{-4}	1.5	---
1 to <2	11.4		7×10^{-5}			---
2 to <6	17.4		5×10^{-5}			---
6 to <11	31.8		3×10^{-5}			---
11 to <21	64.2		1×10^{-5}			---
21 to <65	80		5×10^{-6}			1×10^{-5}

MRL = Minimal Risk Level. mg/kg = milligrams per kilogram mg/kg/day = milligrams per kilogram per day

Table 5. Estimated Future Exposure and Increased Cancer Risk from Maximum Arsenic Levels in Ditch Sediments near the Former Foxfire Golf Course Site

Age Group (years)	Body Weigh t (kg)	Maximum Arsenic Level in Sediment (mg/kg)	Estimated Mean Ingestion Dose (mg/kg/day)	ATSDR MRL (mg/kg/day)	Oral Cancer Slope Factor $(mg/kg/d)^{-1}$	Estimated Mean Increased Cancer Risk
0.5 to <1	9.2	5.6	1×10^{-5}	3×10^{-4}	1.5	---
1 to <2	11.4		2×10^{-5}			---
2 to <6	17.4		1×10^{-5}			---
6 to <11	31.8		5×10^{-6}			---
11 to <21	64.2		3×10^{-6}			---
21 to <65	80		1×10^{-6}			1×10^{-5}

MRL = Minimal Risk Level. mg/kg = milligrams per kilogram mg/kg/day = milligrams per kilogram per day

Table 6. Estimated Residential Exposure and Increased Cancer Risk from Maximum BaP-TEQ Levels in Surface Soil (0-6 inches deep) at the Former Foxfire Golf Course Site

Age Group (years)	Body Weigh t (kg)	Maximum BaP-TEQ Level in Surface Soil (mg/kg)	Estimated Mean Ingestion Dose (mg/kg/day)	ATSDR MRL (mg/kg/day)	Oral Cancer Slope Factor $(mg/kg/d)^{-1}$	Estimated Mean Increased Cancer Risk*
0.5 to <1	9.2	0.52	3×10^{-6}	none	7.3	2×10^{-6}
1 to <2	11.4		4×10^{-6}			4×10^{-6}
2 to <6	17.4		3×10^{-6}			3×10^{-6}
6 to <11	31.8		2×10^{-6}			2×10^{-6}
11 to <21	64.2		8×10^{-7}			2×10^{-6}
21 to <65	80		3×10^{-7}			1×10^{-6}

MRL = Minimal Risk Level. mg/kg = milligrams per kilogram mg/kg/day = milligrams per kilogram per day *Assumes mutagenic mode of action.

Figure 1. Former Foxfire Golf Course Area and Planned Residential Development

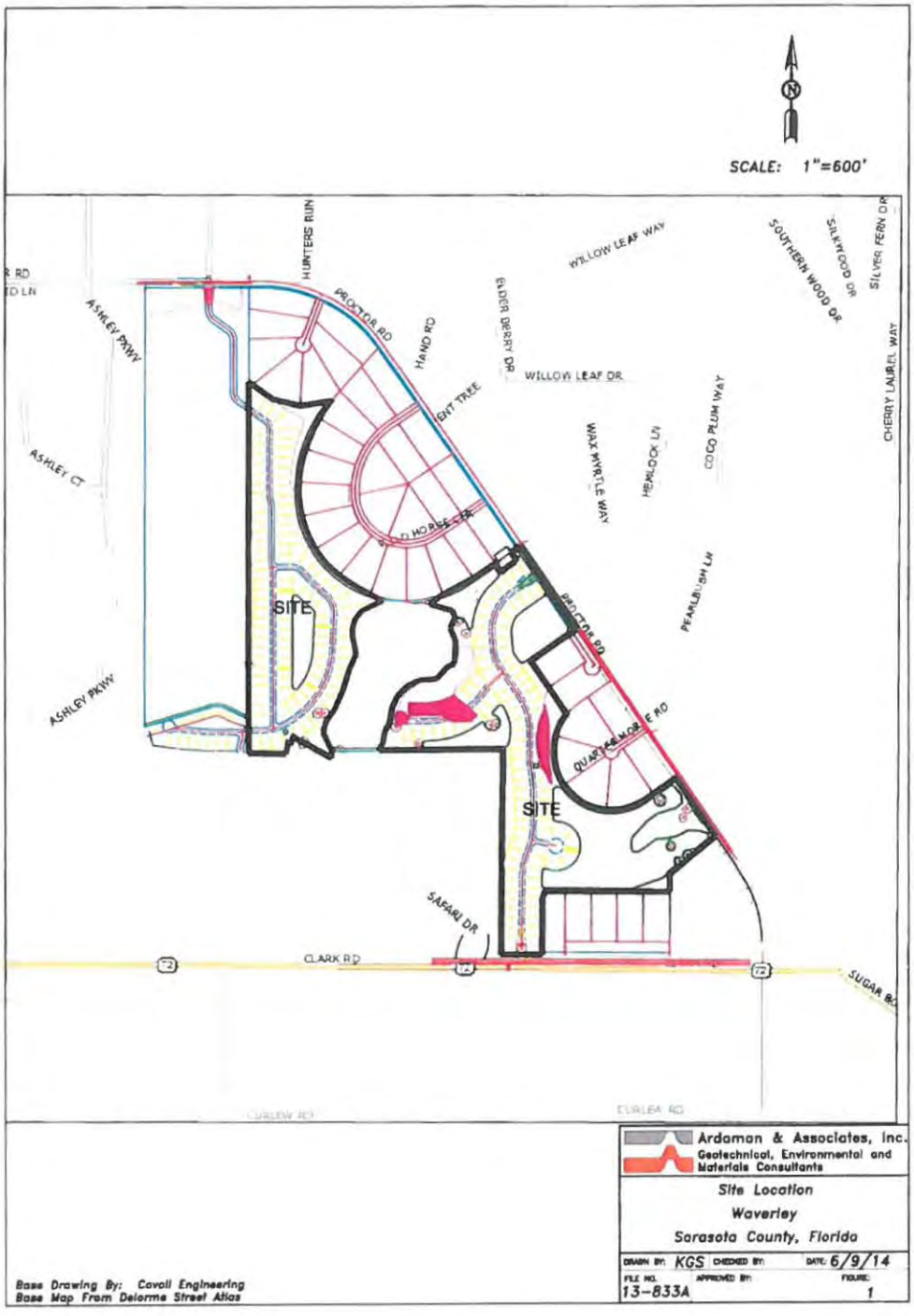

Figure 2. Surface Soil and Sediment Sample Locations, Former Foxfire Golf