

# LIMITED SITE ASSESSMENT

**WP Properties Clemson, LLC -  
Clemson Finishing Plant  
Clemson, SC**

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**Pointe West, Inc.  
391 College Avenue, Suite 406  
Clemson, SC 29631**

**August 28, 2007**

***GOLDIE & ASSOCIATES***

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*engineering, environmental and laboratory services*

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**LIMITED SITE ASSESSMENT**  
**WestPoint Home Facility – Clemson, SC**

prepared for:

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**Water Monitoring, Assessment &  
Protection Division**

**G&A Project No. 964.6.1**



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## **SECTION 1: ASSESSMENT BACKGROUND**

### **1.1 PURPOSE AND ACTIVITIES**

The purpose of this report is to present environmental due diligence information collected from the WestPoint Home, Inc. (WPH), Clemson Facility, Clemson, South Carolina during the period of December 2006 through mid July 2007. This site is legally listed under WP Properties Clemson, LLC - Clemson Finishing Plant, Clemson, SC. This effort was conducted on behalf of a property development firm, Pointe West, Inc., by Goldie and Associates, Inc. to ascertain the potential environmental issues associated with the subject property.

The due diligence effort consisted of the following activities: multiple site reconnaissance events, historical document reviews, and/or installation and sampling of temporary groundwater wells, and soil mechanical and hand borings. The site visits encompassed visual observations of internal and external above ground features including the main manufacturing facility, most out-buildings, landfill and material storage sites, former surficial features now built or covered over, and most site geography. Historical information has been provided by WPH, either from on-site document storage areas or engineering offices located at 1050 Fairview Ave. Valley, AL 36854. A list of the preponderance of these documents and drawings is provided in Appendix A - Reference Documents. Fifty-one samples were analyzed from nearly 60 locations; some being composited. The logic for and sampling point locations, associated logged information, and analyzed constituents for each sample point are discussed more fully below.

### **1.2 PROPERTY DESCRIPTION**

The target site is an approximate 332.6 acre tract located along West Cherry Road, otherwise known as State Road 37, along the shores of Lake Hartwell, a man-made lake originating from the Seneca River, between Clemson and Seneca, SC just inside Oconee County (see Figures 1.2.1 and 1.2.2). The target site is the location of a former WestPoint Stevens textile manufacturing facility focusing on cotton bedding manufacturing; activities ceased circa June 2006. The site is comprised of two parcels; approximately 223 acres located south of West Cherry Road, housing all the manufacturing facilities; and a smaller 110 acre northern parcel, mostly wooded and containing only a fly ash landfill and fire protection pond.

### **1.3 ON SITE STRUCTURES AND FACILITIES**

The site consists of a number of buildings, structures, environmental aspects both above and below ground, and areas that currently are not in existence due to being built over or deconstructed. Below is a listing of these characteristics, which are generally depicted in Figure No. 1.3.

Aboveground Storage Tanks	Lagoon
Asbestos	Landfill No. 1
Boneyard	Landfill No. 2
Coal Storage Pile	Landfill No. 3
Equalizing Basin	Maintenance Shop

Fire Pond	Manufacturing Process Areas
Hazardous Waste Storage Area	Material Releases
Incinerator	Material Storage Area No. 4
Material Storage Area No. 5	Under Ground Storage Tanks
Polychlorinated Biphenyl Release	Waste Pilot Plant
Polyvinyl Alcohol Basin	Wastewater Discharge Ditch
Septic Tank – External	Wastewater Pond
Septic Tank – Internal	Wastewater Treatment Plant
Septic Tank – Warehouse	Water Treatment Plan

**1.4 ADJACENT PROPERTIES**

As reported in historic and recent Phase I Assessments<sup>1</sup> the area around the target site is a mix of rural undeveloped wooded lands and areas of small single family residences, especially along the shores of Lake Hartwell as summarized below. Clemson University is located approximately 1.5 miles northeast of the site across Lake Hartwell.

**TABLE 1.4: ADJACENT PROPERTIES**

Area	Property Type	Relative Elevation to Target
North	Vacant woodlands then small residential	Separated by intermediate ridgeline
East	Lake Hartwell	Lower
South	Lake Hartwell	Lower
West	Small cove of Lake Hartwell, then small residential	Lower

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<sup>1</sup> Phase I Environmental Site Assessment (ESA), Clemson Complex, March 2005; Phase I Environmental Site Assessment, WestPoint Home Facility – Clemson, SC, July 2006.



## **SECTION 2: SITE SELECTION AND VALIDATION**

### **2.1 BACKGROUND**

Goldie and Associates, Inc. (G&A) was contracted by Pointe West, Inc., a potential purchaser of the property, in December 2006 to evaluate existing data and conduct necessary additional work in order to provide a level of due diligence for the site satisfactory for converting the site from industrial to mixed residential use. G&A was provided access to WestPoint Home, Inc. (WPH) reports and assessments of the site, and based on these, developed a sampling and analysis plan. G&A conducted this plan at numerous site features, including additional and/or more extensive sampling of several previously evaluated sites as well as subsurface sampling of significant building interior areas.

### **2.2 SELECTION CRITERIA**

Sample location selection was based on the historic and recent use of site features as extracted from documentation, drawings, and anecdotal information provided by WPH and its personnel. Preliminary site features listings were down-selected based on general industry use and anticipated environmental issues there from, and G&A staff experience with similar processes. Thus, for example, interior process areas slated for below-surface sampling were limited to those expected to experience processing incorporating the use of industrial chemicals, such as laboratories and dyeing areas. Areas not sampled included dry process areas, such as sewing and product storage locations.

Locations external to the main manufacturing building were selected based on information discovered in historical documents and availability of previous data. For example, previous sampling of the Coal Pile had been performed and was deemed satisfactory to preclude additional sampling; whereas, previous sampling of Material Storage Area No. 5 was limited to a surficial sample, indicating a need for additional feature assessment.

### **2.3 VALIDATION**

WestPoint Home, Inc., through their consultant Philip Environmental Services Corporation (PSC), split samples with G&A throughout the due diligence sampling activities. Their results, as received by G&A, are provided in Appendix C - Owner Provided Due Diligence Split Sample Analyses. As appropriate, results of the Owner's analyses are compared with G&A results. Both firms utilized the Environmental Protection Agency (EPA), Office of Solid Waste, Test Methods for Evaluating Solid Waste (SW-846) as the source document for analysis of applicable liquid, soil, and solid samples. Standard Methods for the Examination of Water and Wastewater, and EPA's Methods for Chemical Analysis of Water and Wastes, were the source documents for assessing certain liquid constituents.

Generally constituents, such as volatiles, semi-volatiles, were analyzed by both PSC and G&A utilizing the same methods. G&A utilized contract laboratories for these constituents, whereas, PSC employed the services of the same laboratory for all split sample analyses.

## SECTION 3: SAMPLING METHODOLOGY AND PROTOCOL

### 3.1 CONSTITUENT SELECTION

The WestPoint Home, Inc. (WPH), Clemson Facility, was a textile manufacturing plant from approximately 1951 to June 2006, with no other use of the property prior to, or after, it was idled. Although exact chemical listings for the manufacturing processes at the site were not part of the historical documentation provided by WPH, textile operations use similar classes of chemicals, allowing for a refined analytical parameter selection for given process areas. Also, since drawings covering the full history of the site were available, it was possible to monitor uses of geographic areas over time. Therefore, analyses at each site feature could be tailored to its specific use. For example, analyses could be limited at the water treatment plant (WTP) since historically this feature was always used as such and typical water treatment chemicals are known.

The Clemson Facility incorporated the following processes utilizing materials of interest: bleaching, dyeing, printing, and finishing. Each of these areas use particular classes of chemicals general to the industry. Since this facility traditionally initiated processing with raw cotton, the pre-bleaching steps, including spinning and weaving, utilized polyvinyl alcohol (PVA) to protect the yarn from damage via processing. Bleaching uses generally, as confirmed via aboveground storage tank (AST) historical data, sodium hydroxide and hydrogen peroxide, with cleaners, lubricants, and wetting/scouring agents in minor quantities. Dyeing operations use organometallic dyes and pigments, along with enzymes, binders, peroxide, lubricants, and sodium hydrosulfite. Using dyes similar to the Dyeing operation, the Printing process uses reactive dyes containing metals and starches. Finishing chemistry includes polymers, formaldehyde resins, wetting/scouring agents, brighteners, softeners, and fluorochemicals; the latter likely not at this location.

#### 3.1.1 Components of Interest

Thus, selection of constituents for analyses was based on the general process chemistry boundaries identified above. These boundaries, developed through process knowledge, allowed for the narrowing of traditional analytical lists, such as the Target Analyte and Target Compound List<sup>2</sup> to suit the site specifics. At sample points where metals might be anticipated, such as building interior process areas, landfills, material storage locations, and certain other outdoor features, the following were analyzed for:

arsenic,	nickel,	chromium,	mercury,
barium,	zinc,	chromium (hexavalent),	cadmium, and
selenium,	silver,	lead,	copper.

Additionally, thallium was checked in all landfills and material storage areas thought to contain fly ash.

Samples from these same locations were also analyzed for full lists of volatile organic carbon (VOC) and semi-volatile organic carbon compounds (sVOCs). Building interior sample points were also checked for ammonia to assess the presence of urea.

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<sup>2</sup> Created by the Environmental Protection Agency, Contract Laboratory Program, to support the Superfund program, under the 1980 Comprehensive Environmental Response, Compensation, and Liability Act, and currently under the 1986 Superfund Amendments and Reauthorization Act.

Polyaromatic hydrocarbon (PAH) analyses was limited to locations where the full sVOC list was not considered necessary, such as the Boneyard groundwater samples and Landfill Nos. 1 and 2 composite soil borings.

Certain site features had limited or specific additional analyses due to the nature of the location. For example, all areas thought to contain fly ash were analyzed for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). The WTP area was only checked for total trihalomethanes (TTHMs) and sulfate, the former to identify chlorination residuals, the latter aluminum sulfate. The wastewater treatment plant (WWTP) AST farm area was analyzed for chlorides, sodium, and sulfate to identify residual acids and bases.

### **3.1.2 Further Analysis**

In certain limited instances metals analysis was conducted in the dissolved state or by the toxic characteristic leaching procedure (TCLP) method. The reasoning for such is as follows. Particular groundwater samples may indicate the presence of a metal in total form approaching, or exceeding, a regulatory limit. Analysis in the dissolved form indicates the concentration of the constituent in the water itself, and precludes the constituent concentration bound to the suspended sediment often found in, and associated with, drilled wells that have not been developed as potable water supplies.

The dissolved concentration thus indicates potential levels of that constituent available for biochemical uptake if groundwater was to be extracted and filtered by traditional means. It is noted that certain historical data collected under the auspices of the Owner and its predecessors also periodically filtered field samples. Filtered and dissolved analytical procedures are similar, except the latter uses a set micron filter size and is done in the analyzing laboratory, whereas the former is conducted in the field and the filter size is variable.

The TCLP method was applied to particular samples to ascertain two issues: whether the material sampled would be considered hazardous based on prevailing regulatory criteria, and whether contact with a slightly acidic liquid media would dissolve the constituent of interest. Soil pH results collected during the due diligence sampling ranged generally below neutral. Thus, a qualitative assessment of the potential for certain metals in the soil matrix to be solubilized in surrounding groundwater can be evaluated using this test method.

### **3.1.3 Media Relevance**

The media selected for sampling was typically determined by the constituent(s) of interest and the specific sampling location. Thus, all in-building samples were solids in nature to determine any environmental impact on the matrix immediately below the flooring. Media within landfills and material storage areas were generally sampled over the entire estimated depth of the feature to ascertain the material's constituents and compliment WPH historic sampling of groundwater surrounding the feature. Most remaining features were denoted by groundwater sampling due to a lack of previous analyses for comparison.

**3.2 ANALYTICAL METHODOLOGY**

Prescribed analytical methodologies used to determine the constituent concentrations are as given below.

**TABLE 3.2: ANALYTICAL METHODS**

<b>Constituent</b>	<b>Method</b>
<b>Base Neutral Acid</b>	8270C in soil
<b>Dioxin</b>	
2,3,7,8--TCDD	8290
<b>Metals</b>	
preparation	3050B
Arsenic	7060A/6010B
Arsenic, TCLP ICP	1311/ 3010A
Arsenic, TCLP ICP, solid	3010/6010B
Barium	7080A
Cadmium	SM 3113B
Chromium	7190
Chromium, hexavalent	7196A
	3060A (preparation in soil)
Copper	SM 3111B
Lead	SM 3113B
Mercury	7471A (preparation soil)
	7471 (cold vapor in solid)
Nickel	7520
Selenium	7740
Silver	7760A
Thallium	3050S/6020
Zinc	7950
<b>Other</b>	
Ammonia, nitrogen	350.2
Chloride	325.3
Sodium	7770
Sulfate	375.4
Total Solids	160.3
pH	9045C pH
<b>Polychlorinated Biphenyls</b>	8082/3550B (in soil)
<b>Semi Volatiles</b>	3550/8270C PAH extend list in soil
	8270C BNA in soil
<b>TCLP, Other</b>	
TCLP Leaching	1311
TCLP ICP, trace	3010A
<b>Volatiles</b>	8260B (organics in soil)
	5030 (preparation)

### **3.3 SAMPLING PROTOCOL**

Sampling protocols followed industry standard procedures as described herein. Temporary groundwater wells were installed using direct push technology incorporating one inch polyvinyl chloride (PVC) screens and riser, the screened interval being five foot long of pre-pack design with a tenth of an inch openings. Annular spaces were completed with sand and a bentonite plug to the ground surface. Wells were securely capped. Soil samples were extracted by hand auger or direct push technology utilizing disposable plastic sleeving, depending on sampling depth.

Groundwater samples were extracted following typically three well volumes of purging using either 0.75-inch diameter Teflon<sup>®</sup> bailers and nylon rope or a peristaltic pump fitted with Teflon<sup>®</sup> coated tubing. Requisite liquid samples were split for validation with PSC representatives using an alternating container filling method. That is, Goldie and Associates, Inc. would fill a container, followed by PSC, repeating as necessary. Dedicated bailers were used at each well, or tubing was replaced between wells as appropriate.

Extracted soil samples were mixed using stainless steel equipment. Split samples were taken by compositing sufficient soil in a stainless bowl from which both sets of samples were collected. Mixing equipment was decontaminated between sample points using laboratory detergent, isopropyl alcohol, and distilled water. Drilling equipment was decontaminated at a segregated concrete pad provided by WPH at the site wastewater treatment plant, with collected wash water treated in the facility under the Owner's National Pollutant Discharge Elimination System permit. Decontamination was not conducted between composited soil samples from the same site feature.

### **3.4 TEMPORARY GROUNDWATER WELL LOCATIONS AND DATA**

Figure 1.3 indicates the general location of the groundwater sampling sites. The attached Table 3.4, entitled Temporary Well Installation Log, presents the pertinent installation data for each well point, along with a Temporary Saproliite Monitoring Well Diagram.

### **3.5 SOIL SAMPLING LOCATIONS AND DATA**

Figure 1.3 indicates the general location of the soil sampling locations. The attached Table 3.5, entitled Soil Sample Log, presents the pertinent data for each soil sampling location.



## SECTION 4: HISTORICAL DATA RESOURCES

### 4.1 SOURCE DOCUMENTS

There are three primary streams of source documentation utilized to compare and evaluate information applicable to environmental features at the WestPoint Home Inc. (WPH) Clemson Facility: investigative and assessment reports; ongoing environmentally-related company memoranda, records, and files; and drawings and figures associated with the manufacturing building complex and associated supporting site features. Each of these document groups is briefly discussed below. Further information was provided verbally by WPH personnel, as summarized below.

#### 4.1.1 Investigative/Assessment Reports

The four primary information sources used for defining former site environmental issues are as follows:

- *Phase I Environmental Site Assessment (ESA) – Clemson Complex*, RMT, Inc., March 2005;
- *Phase II Site Investigation*, Philip Environmental Services Corporation (PSC), January 5, 2006;
- *Site Investigation Report*, PSC, December 1, 2006; and
- *Phase I Environmental Site Assessment*, Goldie and Associates, Inc. (G&A), August 2007.

Each of these documents identifies key information about critical environmental features. The Phase I report generated by RMT, Inc. is especially notable for providing resource documentation addressing multiple issues including polychlorinated biphenyls, underground storage tanks, site assessments by the state regulatory agency, landfills, and material storage areas. The Phase II and Site Investigation reports focus on nine features which are of particular interest to ongoing remedial responses. The primary goal of the G&A Phase I Assessment was to provide updated Phase I-related information appropriate for the developer, Pointe West, Inc., to consider its use as a Brownfields application document under the *Small Business Liability Relief and Brownfields Revitalization Act*, Public Law 107-118.

#### 4.1.2 Owner Documents

WPH has provided significant quantities of documentation, both from files at the Clemson Facility and their Environmental Department in Valley, Alabama. These data generally covered the following categories:

- biosolids management and off-site land application;
- landfill monitoring and material storage area historical data;
- asbestos monitoring and removal activities; and
- site inspections, focused sampling, and material handling activities.

#### 4.1.3 Drawings And Figures

Construction drawings, maps, and figures covering multiple time periods and site features were provided by WPH both from files at the site and Environmental Department. These

illustrations can be summarized by:

- figures and drawings from the initial site manufacturing complex construction in the early 1950's,
- site expansion figures from the 1970's and 1980's,
- landfill construction drawings,
- wastewater treatment system drawings from the late 1950's through the 2000's,
- site stormwater management generally from the 1950's and 1960's,
- surrounding geographic area taxation maps,
- United States Geological Survey maps, and
- survey and insurance maps.

These visual documents have been especially helpful in locating site environmental features which have been abandoned and/or built over in ensuing years.

#### **4.2 OWNER PERSONNEL INFORMATION SOURCES**

Three WPH personnel were queried regarding the Clemson Facility's environmental history. This verbal anecdotal information was used to supplement previously reviewed documentation, as summarized above, or to fill in data gaps. These three individuals and their titles are as listed.

- Mr. Eddie Lanier, Director – Environmental Department;
- Mr. Eric Norman, Interim Plant Manager/Engineer, Clemson Facility; and
- Mr. Jim O'Kelley, Maintenance Manager, Clemson Facility.

Each of these personnel provided information over the period of January through July 2007. Together they provided written answers, documentation, anecdotal reflections, and miscellaneous documentation on a variety of site specific issues. These issues included feature locations both current and historical, raw materials, process operations, chronologies of site support activities, byproduct material management methods, plant tours and guidance, historical water and wastewater use and disposal, air quality management, and solids handling information.

## **SECTION 5: DATA REVIEW AND INTERPRETATION**

### **5.1 COMPARISON LIMITATION**

This site assessment report addresses environmentally-related features evaluated either through historical documentation analyses, site reconnaissance, interviews with WestPoint Home, Inc. personnel, or via actual groundwater and soil sampling during a due diligence effort by Goldie and Associates, Inc. (G&A) on behalf of Pointe West, Inc. (PWI). The due diligence effort was initiated in December 2006 and continued through mid July 2007. It included installation of 20 temporary wells, and collection of 34 soil borings. This report compares the due diligence analytical data with historical information reported by South Carolina Department of Health and Environmental Control, Law Engineering, Inc., Philip Environmental Services Corp. (PSC), Atlanta Environmental Management, Inc., and WestPoint Home, Inc. (WPH) and its predecessors.

Although information relating to remedial activities being conducted by WPH was reviewed, no due diligence sampling of four specific features was conducted since WPH is managing their remediation separate from any potential property purchaser. These four features consist of: two solvent plumes, notably tetrachloroethylene, also known as perchloroethylene (PCE), emanating from near the southeastern portion of the main building and migrating east towards Lake Hartwell; and two smaller petroleum plumes in the locations of former tanks near the southeast and southwest corners of the building. The reader is directed to the PSC January 5, 2006 Phase II Site Investigation and their December 1, 2006 Site Investigation Report for complete details of these four remedial actions.

### **5.2 DUE DILIGENCE GOAL**

The goal of the G&A effort was to provide a level of due diligence for the site satisfactory for considering the implication of converting the property from industrial to mixed residential use. G&A performed various additional Phase II type sampling and analyses at a number of the site's features, including additional and/or more extensive sampling of several previously-evaluated sites as well as subsurface sampling of specific building interior areas.

### **5.3 DUE DILIGENCE SUMMARY**

WestPoint Home, Inc., through their consultant Philip Environmental Services Corporation (PSC), split samples with G&A throughout the due diligence sampling activities. As appropriate, results of the Owner's analyses, conducted by Rogers and Callcott Engineers, Inc. are compared with G&A results, partially performed by others. Both firms utilized the Environmental Protection Agency (EPA), Office of Solid Waste, Test Methods for Evaluating Solid Waste (SW-846) as the source document for analysis of applicable liquid and solid matrix constituents. Standard Methods for the Examination of Water and Wastewater, edition 18, and EPA's Methods for Chemical Analysis of Water and Wastes, latest individual method version, was the source document for assessing certain liquid components.

Metals analytical methods differed between the two firms; further details are provided in the narrative below. Generally other constituents, such as volatiles, semi-volatiles, and petroleum aromatic hydrocarbons, were analyzed by both consultancies utilizing the same methods. G&A utilized contract laboratories for these other constituents, whereas, PSC employed the services of the same laboratory for all split sample analyses.

#### *Metals*

G&A identified soil matrix arsenic in multiple former process locations under the main manufacturing facility, three landfills, and one material storage area at levels above the Environmental Protection Agency Region IX preliminary remediation goal. PSC values were lower than those reported by G&A; in some cases by an order of magnitude. The arsenic, as reported by G&A, is detected in total form, but not always in the dissolved matrix or after analyses by the TCLP<sup>3</sup> method.

Remaining liquid and soil matrix arsenic analyses site-wide showed general agreement between the two methods, although, noteworthy differences at some other features did occur. For example, in Material Storage Area No. 5 PSC reported arsenic non-detect for two liquid samples, identified as A1 and A2, that G&A determined as 42 and 24-micrograms per liter ( $\mu\text{g/L}$ ) total arsenic, respectively. Although, for both of these samples G&A did report each as less than 3- $\mu\text{g/L}$  in the dissolved form.

Comparison of site-specific and published background averages and ranges with the generated data generally indicates that all arsenic values are well within background quantities.

Other metals observed by G&A were: chromium and lead in Material Storage Area No. 5; cadmium, chromium, and lead in Material Storage Area No. 4; and cadmium and lead in the lagoon associated with Landfill No. 2. All observed metals, when compared with regulatory limits and goals, or site-specific background data, are well below these thresholds.

#### *Organics*

Volatiles were found present by G&A above regulatory limits only at the former incinerator site, this being tetrachloroethylene, which is likely associated with the aforementioned PCE plumes. Semi-volatiles slightly above the applicable limits were identified at two locations: Landfill No. 2 with benzo(a)pyrene and benzo(b)fluoranthene, and Material Storage Area No. 5 with naphthalene. These particular volatile and semi-volatile constituents, typically associated with incompletely combusted organic material, are likely outlier results considering 10 borings of similar materials were collected with dissimilar results.

#### *Other*

Evaluation of historical information denotes a release of polychlorinated biphenyl (PCB) in 1983. There is no indication; however, that the prescribed cleaning of a penthouse

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<sup>3</sup> Environmental Protection Agency, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW846, method 1311/3010/6010B

area was ever conducted. PCB was also found via the due diligence sampling at one location in the southwest corner of the primary structure. PCB reported during recent sampling is well below one in a million risk levels.

Chloroform was identified at multiple locations, including: Material Storage Area No. 4, Water Treatment, Boneyard, Incinerator, and the Temporary Septic Tank areas. The presence of chloroform is considered to be likely due to typical laboratory chemicals. Secondary drinking water standards were slightly exceeded at the wastewater treatment plant for chloride, and at the water treatment plant for sulfate. Because the potential developer is not intending to use site groundwater the presence of the chlorides and sulfate is not a significant issue.

#### 5.4 DATA EVALUATION

Each of the 30 features investigated during the due diligence effort are considered in the following paragraphs. Historic data is assessed and compared, when available, with any due diligence evaluations conducted, whether site reconnaissance or actual sampling and analyses, and background data as applicable. The tabulated data incorporates applicable regulatory limits and goals, source documents, sample point identifier, and depth, if known. The cited Environmental Protection Agency Region IX Preliminary Remediation Goals (PRGs) are the 2004 update. Residential PRG soil goals are utilized for soil sample review, and tap water goals are used for groundwater sample comparison.

When historical data reported multiple values for a particular sample point the highest value is presented, unless a range is shown. Only those values above detection limits or estimated by the reporting laboratory are generally shown in these tables for both the historical data and that from the due diligence effort by G&A. Readings below detection limits are; however, periodically included as a comparison. For example, if a total metals analysis indicates a regulatory exceedance, a dissolved or toxic characteristic leaching procedure (TCLP) method analyses may be provided for comparison purposes. Bore or well depths are shown for the due diligence data and provided for historical data when available.

Split sampling with PSC identified a discrepancy in arsenic analyses. PSC utilized a laboratory employing the inductively coupled plasma spectroscopy method 6010B<sup>4</sup>, while G&A used method 7060A, which incorporates graphite furnace atomic adsorption spectroscopy, for arsenic and selenium. Both laboratories initiated analyses with preparation method 3050B. Table 5.4: Arsenic Analyses Comparison summarizes the due diligence split sample results for arsenic, both in the liquid and soil samples. Comparative, third party analyses was performed on a limited number of samples using both methods, albeit two of the three third party testing regimes used method 6010B. These comparisons are also included in Table 5.4.

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<sup>4</sup> Environmental Protection Agency, publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, method 6010B.



Background data, both site-specific and regional, is listed in Table 5.4.21, with the sources listed. The Canova reported data<sup>5</sup> utilized in this comparison exercise is primarily State Piedmont region soil averages and/or concentration ranges, with use of the Statewide region when Piedmont is not reported. It is noted that periodically these Canova reported data will be used in discussion of groundwater issues. This is not to infer there is a direct correlation between soil and groundwater concentration data, but to provide numerical perspective.

A full compilation of all the G&A due diligence analytical data is provided in Appendix B - Developer Due Diligence Analyses, preceded by four summary tables labeled WestPoint Home Potential Purchase Due Diligence Sampling:

- Landfill – Debris Storage, for soil;
- Landfill – Debris Storage, for groundwater;
- Site Areas; and
- Building Underlayment.

These summary tables present all the due diligence soil and groundwater sampling results above detection limits, estimated by the reporting laboratory, or below detection limits but used for comparison purposes. The data are compared with prevailing regulatory limits or goals as described above. Available PSC split sample results are reported as received in Appendix C – Owner Provided Due Diligence Split Sample Analyses.

The Due Diligence sampling locations are provided in Figure 5.1. It is noted that all Due Diligence sampling was split with representatives of Philip Environmental Services Corporation, who in turn represented the current owner WestPoint Home, Inc.

#### **5.4.1 Landfill No. 1**

Constructed in 1976 and used until 1993, this landfill, registered under the South Carolina Department of Health and Environmental Control (DHEC) Industrial Waste Program (IWP) No. 135, received primarily coal ash from on-site boilers. Originally the landfill was envisioned to receive both biosolids from the on-site combined sanitary and industrial wastewater treatment plant (WWTP), but neighboring community odor complaints were received during the first approximate two weeks of this operation and it was immediately halted. Thereafter only ash was placed therein. Since 1994 WestPoint Home has monitored the site under a DHEC approved post-closure plan.

The 5.6-acre site has an approximate two foot soil cap, with eight to 10-foot deep stored material. Historical reporting indicates that neither metals nor nitrate regulatory limits have been exceeded in groundwater monitoring wells or soils surrounding the landfill on a consistent basis. The paragraphs below discuss these historical and recent efforts.

##### *Groundwater Data*

Table 5.4.1.1 presents the groundwater sampling data for Landfill No. 1. Reporting over the period 1994 through 1998 indicates only one nitrate regulatory exceedance, and that

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<sup>5</sup> Canova, J.L., *Elements in South Carolina Inferred Background Soil and Stream Sediment Samples*, South Carolina Geology, 1999, volume 41, page 11 through 25.

in June 1998, of 22,000-micrograms per liter (22,000- $\mu\text{g/L}$ ). With only one reported nitrate exceedance this constituent does not appear to be an issue associated with this feature.

Over the same period the following total metals exceedances were reported for cadmium: two samples in two different wells of 9- $\mu\text{g/L}$  in the first quarter of 1994 and 12- $\mu\text{g/L}$  in fourth quarter 1997. Both are slightly above the background monitoring well MW-1 high of 3- $\mu\text{g/L}$ , but well below the Canova reported data average of 1,000-parts per billion (ppb).

Three lead samples in well MW-2 exceeded the Environmental Protection Agency drinking water maximum contaminant limit (MCL) in 1996, 1997, and 1998, reporting 130, 56, and 65- $\mu\text{g/L}$  respectively. Well MW-5 also had a lead exceedance in the fourth quarter of 1997 of 20- $\mu\text{g/L}$ . These values are above the site-specific background in MW-1 of 2- $\mu\text{g/L}$ , but well below the Canova reported data average of 16,000-ppb.

Mercury exceeded the MCL, both in total and dissolved form, in MW-4 in the one 1998 sample, with results of 3 and 6- $\mu\text{g/L}$ , respectively; however, resampling in January 1999 reported both forms to be below detection limits. A mercury average of 6- $\mu\text{g/L}$  is above MW-1 results, but below the Canova reported data average of 180-ppb.

Further historical sampling during the period 1999 through 2004 reported the following metals exceedances. Cadmium was identified in the fourth quarter, 2003, sample of MW-6 at 6.68- $\mu\text{g/L}$ ; however this is essentially at the MCL of 5- $\mu\text{g/L}$ . The fourth quarter of 2000 identified both lead and mercury slightly above the MCL in MW-4. Both of these metals reported below detection limits when analyzed in the dissolved form.

Due diligence groundwater analyses was not conducted due to the substantial amount of data generated by others.

#### *Soil Data*

Historical and due diligence soil sampling data is shown in Table 5.4.1.2. The historical information indicates six arsenic analyses above the PRG at borings completed in 2002 within the landfill proper. The reported values range from 6,500 to 11,000-micrograms per kilogram ( $\mu\text{g/kg}$ ). Above background, using the Expanded Site Investigation (ESI) report by DHEC in 1996 of 3,400- $\mu\text{g/kg}$  in boring 002-SS, these are at the Canova reported data average in the Piedmont region of 11,000-ppb.

A cobalt analysis in 1996 by DHEC of 1,700- $\mu\text{g/kg}$  exceeded the PRG; however, it is below both the ESI background points at 001-SS and 002-SS, and the Canova reported data.

The Due Diligence soil sampling within the landfill by the perspective buyer, including analyses for volatiles, semi-volatiles, metals, petroleum aromatic hydrocarbons (PAH), and dioxin, indicates only total arsenic above the PRG with a value of 24,200- $\mu\text{g/kg}$ . The Due Diligence soil sample was a composite of three locations within the landfill proper to the depths shown. This result is well within the Canova reported data range of non-detect (ND) to 210,000-ppb.

### 5.4.2 Landfill No. 2

Constructed in phases and in non-contiguous cells, Landfill No. 2, assigned IWP No. 104 by DHEC, was used between approximately 1978 and 1982. Both portions of the landfill are on the southern part of the property, the western area about one acre and the eastern on the order of 3.7 acres in size. Both areas were used during this period for the placement of coal ash layered with WWTP biosolids. Since closure WPH has monitored the site under a DHEC approved post-closure plan conducting a variety of groundwater monitoring analyses.

#### *Groundwater Data*

Historical groundwater monitoring has indicated five minor exceedances due to metals; see Table 5.4.2.1 for values and well locations. Manganese was reported by both DHEC, in the Screening Site Assessment Report (SSI), and Law Environmental, with split samples, there from, up to 2,000- $\mu\text{g/L}$ . This value is above groundwater well MW-1, north of Landfill No. 1, and an off-site water well, but below soil values for both site-specific and Canova reported data.

Chromium was identified above the MCL by DHEC in the 1990 SSI report, at 120- $\mu\text{g/L}$ , but the split sample with Law Environmental reported 69- $\mu\text{g/L}$ , below the MCL of 100- $\mu\text{g/L}$ . Law Environmental reported lead in 1990 above the MCL at 51- $\mu\text{g/L}$ , above background groundwater but well below background soil, both site-specific and Canova reported data.

WPH indicated mercury above the MCL in 2003, as reported in the Groundwater Monitoring Semi Annual Report to DHEC, at 5- $\mu\text{g/L}$  in groundwater well LF2-8. Although slightly above the MCL, it is below the PRG. A 1990 sample by DHEC at well designator JPSC-MW-02 indicated 1,1,1-trichloroethylene at 5.4- $\mu\text{g/L}$ , although split analyses by Law Environmental reported below detection limit.

Only nitrates typically exceed regulatory standards in several of the Landfill No. 2 monitoring wells, although the results are generally within two to three times the MCL. The table below summarizes DHEC Groundwater Monitoring reporting data presented in Table 5.4.2.1 and the source documents.

Well Designator	No. of Exceedances	Range, $\mu\text{g/L}$	Range, Year
LF2-1	3	19,600 - 24,700	2003
LF2-2	18	12,800 - 41,300	2000 - 2006
LF2-3	2	15,200 - 15,300	2000
LF2-4	5	11,100 - 16,100	2004 - 2006
LF2-5	19	10,700 - 28,700	2000 - 2006
LF2-6	3	10,300 - 12,000	2005 - 2006
LF2-7	none	--	--
LF2-8	11	34,200 - 130,000	2000 - 2006
LF2-8A	1	17,300	2006

Well LF2-2 is located to the southeast, and LF2-5 is on the northwestern edge of the eastern portion of the landfill. LF2-8 is located to the southwest of the landfill's western portion. It is noted that well LF2-8A was installed in 2006 to compliment and compare

with LF2-8, which varies historically from dry to non-compliant. Although the new well has only been sampled minimally the results to-date are in range of the MCL.

To summarize the nitrate constituent appearance, the values tend to be somewhat higher in three of the nine groundwater wells associated with Landfill No. 2: LF2-2, -5, and -8. LF2-8 has been supplemented by LF2-8A. Results to date in the latter appear to attenuate those associated with LF2-8. Of the remaining two wells, the range from sampling during the period 2000 to 2006 range from 10,700 to 41,300- $\mu\text{g/L}$ . Background nitrate in MW-1 reports up to 2,900- $\mu\text{g/L}$ . Although over the MCL, natural attenuation has been shown to mitigate this artifact. Due diligence sampling was not conducted for this feature based on the substantial body of data available.

#### *Soil Data*

Historic soil sampling has reported arsenic values by both DHEC, in an Expanded Site Inspection Report (ESI) from 1996, and the 2006 Phase II Site Investigation (Phase II report), with the metal concentration ranging from 2,100 to 11,000- $\mu\text{g/kg}$ . The due diligence work reported arsenic at 10,800 and 12,800- $\mu\text{g/kg}$  by G&A, with PSC reporting below reportable detection limits (RDLs). Additional analyses of this due diligence sample were conducted by third party laboratories for comparison purposes. These three results, two using SW-846<sup>6</sup> method 6010B, one via 7060A, ranged from 5,200 to 6,900- $\mu\text{g/kg}$ ; see Table 5.4. All these values are at or slightly above the site-specific background of 3,400- $\mu\text{g/kg}$ , with the higher concentrations approximated by the Canova reported average regional background value of 11,000-ppb.

Cobalt was identified in the ESI at two locations; 2,000 to 3,900- $\mu\text{g/kg}$ , both of which are at or below that report's background of 3,400- $\mu\text{g/kg}$ . See Table 5.4.2.2 for further information.

Two composite samples were taken by G&A during the due diligence effort, with analysis for semi-volatiles, metals, PAH, and dioxin. One composite was composed of a sample boring in each of the eastern acreage's three areas; these are as follows. A 0.8-acre tract incorporates a two foot soil cover, with one foot of WWTP biosolids underlain with one foot of ash. A 1.7-acre area has approximately 1.75 feet of cover and 3.25 feet of ash underlain with 1.5 feet of mixed ash and biosolids. The remaining 1.15 acres has 1.25 feet of ash under the ground cover root system. This composite sample reported benzo(a)pyrene at 375- $\mu\text{g/kg}$  and benzo(b)fluoranthene at 713- $\mu\text{g/kg}$ . The latter is in the range of the PRG of 620- $\mu\text{g/kg}$ , the former is slightly above the goal of 62- $\mu\text{g/kg}$ . Both are thought to be residue from former coal-fired boiler operations at the site.

PAHs of this type only show up in one other composite soil bore location, Landfill No. 3, where reported PAHs were below prevailing goals. Considering the number of ash related soil samples generated, based on 10 borings at similar site features, these constituents in Landfill No. 2, slightly above PRG, are considered outliers.

The second due diligence composite sample was from the western section of Landfill No. 2, which has 1.75 to 2.0 feet of soil cover over ash in a layer varying from 1.0 to 1.4 feet

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<sup>6</sup> Environmental Protection Agency, Office of Solid Waste, *Test Methods for Evaluating Solid Waste*

in thickness underlain with biosolids of the same thickness range. A portion of this western section has a second layer of ash underneath the biosolids of about 0.5 feet in thickness. One of the aforementioned arsenic analyses, reporting at background levels, was the only constituent near a PRG value.

### 5.4.3 Landfill No. 3

Constructed in 1982 for the placement of WWTP biosolids, this landfill was assigned IWP No. 186A by DHEC. The landfill is located to the west and at a higher elevation than the WWTP. According to WPH this feature was never formally used as a landfill, with no material placed for permanent storage. Rather, it was used as a biosolids drainage and staging area, allowing material to dewater prior to transport to off-site land application areas. In later years a concrete pad was installed to provide protection from potential groundwater impacts. The Owner has recently filed a request with DHEC for withdrawal of the permit due to it not being used as a permanent landfill.

#### *Groundwater Data*

Historical reporting in the Phase II report has shown lead at 16.1- $\mu\text{g/L}$ , total, and filtered at 8.4- $\mu\text{g/L}$ . Background totals in MW-1 range up to 2- $\mu\text{g/L}$ , with the MCL level at 15- $\mu\text{g/L}$ . With historic reporting essentially at or below MCL no issue is considered for this constituent. Law Engineering, in the 1990 SSI field effort detected nickel at 1,600- $\mu\text{g/L}$ . Although slightly above the PRG at 730- $\mu\text{g/L}$  it is well below the Canova reported data average of 9,000-ppb.

As with Landfill No. 2, this landfill reports nominal nitrate exceedances generally in two of the five monitoring wells; LF3-2 and -6. Over the period of 2000 to 2006 nitrate in these two wells ranged from 10,500 to 35,400- $\mu\text{g/L}$ ; see the summary of this constituent provided below, as extracted from Table 5.4.3.1.

Well Designator	No. of Exceedances	Range, $\mu\text{g/L}$	Range, Year
LF3-2	17	12,500 - 35,400	2000 - 2006
LF3-3	1	12,700	2006
LF3-4	none	--	--
LF3-5	none	--	--
LF3-6	14	10,500 - 60,300	2000 - 2004

Background nitrate in MW-1 reports up to 2,900- $\mu\text{g/L}$ . Monitoring well LF3-2 is directly south of the settling pond associated with runoff from the concrete pad area and LF3-6 is just south of this concrete pad. It is noted that the last two years of results report nitrate exceedances in LF3-2 and LF3-3 only, with values reaching 15,500- $\mu\text{g/L}$ . This concentration approaches the MCL of 10,000- $\mu\text{g/L}$ .

No due diligence groundwater sampling was conducted at this feature due to the substantial information available.

#### *Soil Data*

Historic soil sampling has reported only a cobalt exceedance of 9,800- $\mu\text{g/kg}$  during the ESI field effort. This value is well within the site-specific background value at 001-SS of 11,000- $\mu\text{g/kg}$ . Arsenic was indicated at 12,700- $\mu\text{g/kg}$  during the due diligence composite



sampling which included analyses for semi-volatiles, metals, and dioxin. This value approximating the Canova reported value of 11,000-ppb. See Table 5.4.3.1 for further information.

#### **5.4.4 Material Storage Area No. 4**

Used over an approximate 10 to 15 year period, this estimated 1.5-acre feature was utilized up to circa 1967 as a storage area for various byproducts including structural rubble from a 1967 facility explosion according to previous reports, including the March 2005 Phase I Environmental Site Assessment (March 2005 Phase I). However, a May 18, 1990 WestPoint Pepperell internal memo mentions that placement of explosion rubble herein is not correct and was rather placed in Material Storage Area No. 5. Other materials mentioned as being placed therein are: paste, pigment, transformer oil, construction material, cardboard, and metal drums. The storage area, at various times called Trash Fill Area No. 2 and Landfill No. 4, is located to the east of Landfill No. 2 and southeast of the manufacturing complex.

##### *Groundwater Data*

Historical reporting for metals has indicated only lead in two wells, as identified in the Phase II report, above the MCL of 15- $\mu\text{g/L}$ , reporting at 15.4 and 23.5- $\mu\text{g/L}$ . Filtering these samples resulted in values below regulatory limits. The due diligence effort, as shown in Table 5.4.4.1, reported total arsenic in one well at 25- $\mu\text{g/L}$ , with a dissolved reading below the detection limit; the MCL is 10- $\mu\text{g/L}$ . Similarly cadmium was found in one well with a total of 5.6 and dissolved of 2- $\mu\text{g/L}$ ; the cadmium MCL is 5- $\mu\text{g/L}$ .

Due diligence also reported lead in one well at 31- $\mu\text{g/L}$  and below detection for total and dissolved, respectively. Chromium showed up in two wells, at 170 and 140- $\mu\text{g/L}$ , with less than detection and 110- $\mu\text{g/L}$  dissolved readings, respectively. With these metals at or below respective MCLs in either total, dissolved, or filtered matrices their presence denotes no undue regulatory issue.

Chloroform was reported in both the Phase II report and due diligence sampling ranging from 1.9 to 9.5- $\mu\text{g/L}$ ; these values are well below the TTHM limit of 80- $\mu\text{g/L}$ .

##### *Soil Data*

Historic soil sampling has reported a cobalt exceedance of 9,800- $\mu\text{g/kg}$  during the 1996 ESI; this is below the ESI background sample point 001-SS of 11,000- $\mu\text{g/kg}$ . The only other exceedance reported has been arsenic by DHEC in 1990, 1996, and in the 2006 Phase II report. The 1990 SSI arsenic exceedance was from the top of the area at a four inch depth; DHEC reported 49,000- $\mu\text{g/kg}$  and Law Engineering less than 500- $\mu\text{g/kg}$ .

The 1996 ESI report showed 3,300, and the 2006 Phase II 3,900- $\mu\text{g/kg}$ . Background arsenic at the ESI 002-SS boring reported 3,400- $\mu\text{g/kg}$ . Higher values, as reported by the 1990 DHEC report, are not unusual for background as indicated by the Canova reported data ranging up to 210,000-ppb in the Piedmont region.

PCB, Aroclor 1260, identified in boring SS-08 by DHEC during the SSI activities, reported at 30.5- $\mu\text{g/kg}$ . A calculated risk based on Environmental Protection Agency

guidance<sup>7</sup> is  $5.87 \times 10^{-7}$  for children up to six years old and  $8.7 \times 10^{-8}$  for the 7 through 30 age bracket.

No due diligence soils data was gathered from Material Storage Area No. 4 since available historic data was deemed satisfactory and the objective of the due diligence work was to assess as wide an area as possible, to which groundwater sampling is more appropriate in this instance.

#### 5.4.5 Material Storage Area No. 5

Used from the 1960's to the 1970's, the feature has been sized at between 1.5 and 4.5 acres. Various called Dump Area 1, Landfill No. 5, and Old Trash Disposal Site and Ravine, documented source information regarding use and contents of this site are unavailable. Anecdotal information provided by WPH, as also mentioned in previous site reports, indicates that construction debris and possibly rubble from a natural gas heated process system 1967 explosion were placed herein. References confirm placement of the rubble herein, and places the explosion in 1968. During the potential buyer due diligence effort the storage area was circumscribed several times by personnel. There is evidence for the placement of drums and equipment in and around the area; see photographs contained in the July 2007 Phase I Environmental Site Assessment by G&A. It is suspected that coal ash was placed here also due to qualitative observance of soils unearthed during due diligence sampling efforts.

##### *Groundwater Data*

No historic data was reviewed that clearly indicated groundwater sampling had been conducted at this feature. Due diligence sampling consisted of multiple groundwater samples comprised of three perimeter borings ranging from 15 to 55 feet in depth; see Table 5.4.5.1. Analytical testing was performed for volatiles, metals, semi-volatiles, PCBs, and dioxin; the latter by G&A only. Two groundwater samples exhibited both total arsenic and lead over the PRG and/or MCL limits at 42 and 24- $\mu\text{g}/\text{kg}$  for the arsenic, 19 and 35- $\mu\text{g}/\text{kg}$  for the lead. One well showed total chromium over both these limits, according to G&A data, at 120- $\mu\text{g}/\text{kg}$ . However, all dissolved metals were below their respective MCL. No other constituents were detected above regulatory limits and goals, and/or analytical method detection limits.

The PSC split sample results from the due diligence effort were variable in their reporting of arsenic. All three groundwater samples were below their laboratory RDLs, yet two of the three soil samples indicated arsenic comparable to the G&A data; see Appendix C information. A summary of G&A groundwater sampling results are summarized below:

Storage Area No. 5 Well Designation	Constituent With Regulatory Impact	Concentration, $\mu\text{g}/\text{L}$	
		Sample	MCL
A1	arsenic, total	42	-
A1	arsenic, dissolved	<3	10
A2	arsenic, total	24	-
A2	arsenic, dissolved	<3	10

<sup>7</sup> as referenced by Argonne National Laboratory, [www.ead.anl.gov](http://www.ead.anl.gov)

A1	chromium, total	120	-
A1	chromium, dissolved	<100	100
A1	lead, total	19	-
A1	lead, dissolved	<2	15
A2	lead, total	35	-
A2	lead, dissolved	<2	15

To summarize the groundwater information, although total results are nominally above MCL values, dissolved results are all less than detection limits indicating that metals presence at Material Storage Area No. 5 is not an issue.

#### *Soil Data*

The March 2005 Phase I mentions and includes another report, *Report of Soil and Ground Water Sampling*, November 6, 1990, by Law Engineering, indicating eight soil samples for PCBs were taken from the Material Storage Area No. 5 in 1981. The May 25, 1981 J.P. Stevens & Company source interoffice correspondence as provided by WPH does not provide a map of the sample locations, however. Yet, all the sample results are less than detection limits, so it can be presumed that however many samples were taken from this feature there were no PCBs detected within their sphere of influence.

The ESI report in late 1995 sampled in the area of this feature. It is unclear from the report if the samples were of soil or groundwater, although the former is likely due to the singular date of the effort. However, according to WPH personnel both matrices were sampled. It also is not clear the depth of the sampling; see Table 5.4.5.2. Metals analyses associated with Material Storage Area No. 5 exceeded the PRG for arsenic and cobalt, presuming the samples were a soil matrix; 2,700- $\mu\text{g}/\text{kg}$  for the former, and 2,600 and 8,200- $\mu\text{g}/\text{kg}$  for the latter. It is noted, though, that all three are below site-specific background data from ESI borings 001- and/or 002-SS.

The Phase II Site Investigation, January 5, 2006 by PSC, incorporated one surficial sample, four to six inches deep, that showed arsenic exceeding the PRG at 6,800- $\mu\text{g}/\text{kg}$ ; this information was repeated in the December 1, 2006 Site Investigation Report. This value is also below the above sited site-specific background data; however.

Due diligence sampling at this area consisted of multiple soil samples consisting of one perimeter and two in-feature borings spanning from 26 to 35 feet below the surface. Analytical testing was performed for volatiles, metals, semi-volatiles, PCBs, and dioxin, the latter only by G&A. All three soil samples exhibited arsenic over the PRG limit via G&As analyses. The PSC split sample results reported two of the three soil samples comparable to the G&A data with regard to arsenic. G&As analyses ranged from 19,600 to 29,400- $\mu\text{g}/\text{kg}$ . Although the values exceed site-specific background and the Canova reported Piedmont average, they are all well within the Canova reported concentration range for this region, comparing at or below 14 percent of that range.

#### **5.4.6 Lagoon**

During the usage of Landfill No. 2 a Settling Pond or Sludge Drainage Impoundment was

utilized on the southern-most side of the eastern landfill area. This lagoon was utilized for an indeterminate duration; however it is suspected that operation ceased when Landfill No. 2 was placed in post-closure status.

*Groundwater Data*

No historic data was reviewed that specifically relates to the Lagoon; however, Landfill No. 2 groundwater well LF2-2 is approximately 40 feet to the southeast of this feature. Nitrate data for this well was summarized in Paragraph 5.4.2 above. A review of the reported nitrate data for this well indicates that over half the results are at or below, twice the MCL.

Due diligence sampling consisted of two temporary groundwater wells installed on the southern perimeter of the feature. Analyses for metals, volatiles, PCBs, and semi-volatiles indicates only the presence of three metals in concentrations above regulatory limits, as shown in Table 5.4.6. Total arsenic was identified above the PRG in both wells, and in dissolved form above the PRG in one well. All values were less than half the MCL; however.

Total cadmium was found slightly above the MCL, at 5.3-µg/L versus 5.0-µg/L, in one well, but below detection limit as dissolved. Total lead was discovered above the MCL in one well; however, in dissolved form it was less than the MCL. Background cadmium and lead have reported at 3 and 2-µg/L, respectively. Canova reported data, although for soil, indicates average backgrounds of 11,000, 1,000, and 16,000-ppb for arsenic, cadmium, and lead, respectively. The table below summarizes these groundwater due diligence data.

<b>Lagoon Well Designation</b>	<b>Constituent With Regulatory Impact</b>	<b>Concentration, µg/L Sample</b>	<b>MCL</b>
L-A	arsenic, total	3	-
L-A	arsenic, dissolved	4	10
L-B	arsenic, total	3	-
L-B	arsenic, dissolved	<3*	10
L-B	cadmium, total	5.3	-
L-B	cadmium, dissolved	<0.12	5
L-B	lead, total	30	-
L-B	lead, dissolved	<2	15

*Soil Data*

Neither historical nor due diligence data is available for this feature. The objective regarding the Lagoon due diligence sampling was to determine to the maximum degree the horizontal and vertical extent of any potential environmental issue. Groundwater sampling was deemed more appropriate to meet this objective since it characteristically gathers a sample representing a far wider below ground volume than a soil boring.

**5.4.7 Equalizing Basin**

Operated from approximately 1961 through 1976, the Equalizing Basin was used to mix industrial wastewater from the manufacturing complex and combine it with dilution water from Lake Hartwell with discharge through a four-nozzle diffuser system at the

bottom of the lake. No information evaluated mentions additional treatment besides this dilution. The basin, sized approximately 200 by 200 feet, was located on the south side of the property, east of the eastern portion of Landfill No. 2 and south of Material Storage Area No. 4. According to previous reports the basin was filled in with construction debris over time after use was discontinued.

#### *Groundwater Data*

No historic groundwater data was reviewed that specifically relates to this feature. Due diligence efforts, as summarized with detected constituents in Table 5.4.7, consisted of installing two temporary groundwater wells within the suspected perimeter of the basin to a depth of approximately 20 feet, with analyses for volatiles, semi-volatiles, and metals. No constituents were identified exceeding any regulatory limit.

#### *Soil Data*

Neither historical nor due diligence data is available for this feature. As with the Lagoon feature, the objective regarding the Equalizing Basin due diligence sampling was to determine to the maximum degree the horizontal and vertical extent of any potential environmental impacts below the designed bottom of the basin. Groundwater sampling was deemed more appropriate to meet this objective since it characteristically gathers a sample representing a far wider below ground volume than a soil boring.

### **5.4.8 Water Treatment Plant**

Located north of the eastern portion of Landfill No: 2 and south of the manufacturing complex, the Water Treatment Plant operated generally over the life of the manufacturing complex and consists of a building, and treatment and holding basins. The two basins are labeled Water Reservoir and Back Wash Basin; the former contiguous to the treatment building, the latter added later and located to the southwest of the Water Reservoir. Originally used to treat Seneca River and thence Hartwell Lake water for both potable and process use, it switched in later years to supplying only non-potable, process water. Sized at approximately 300 by 180 feet, the treatment process, based on anecdotal information provided by WPH, incorporated aluminum sulfate (alum) coagulant treatment for many years. The plant later switched from alum to polymers.

#### *Groundwater Data*

No historic groundwater data was reviewed that specifically relates to this feature. Due diligence efforts consisted of two temporary groundwater wells, set at approximately 28 feet deep, placed on the southern side of the Water Treatment Plant. Analyses focused on TTHMs and sulfate, both of which are specific to water treatment systems. Both samples indicated TTHMs well below the MCL but above the PRG for chloroform at 1.5 and 8.3- $\mu\text{g/L}$ ; this constituent is a common laboratory solvent. For this reason chloroform is not considered an issue at this feature.

One well showed sulfate below the secondary drinking water limit (2<sup>nd</sup>DWL) and one above at 384,000- $\mu\text{g/L}$  versus the 250,000- $\mu\text{g/L}$  limit; see Table 5.4.8. Since the developer is intending to use municipal-supplied potable water for the site the presence of sulfate at a slightly elevated level is not of concern.

*Soil Data*

Neither historical nor due diligence soil data is available for this feature. As noted above, the objective regarding the Water Treatment Plant due diligence sampling was to determine to the maximum degree the horizontal and vertical extent of any potential environmental impacts below the designed bottom of the basins. Groundwater sampling was deemed more appropriate to meet this objective since it characteristically gathers a sample representing a far wider below ground volume than a soil boring.

**5.4.9 Boneyard**

A fenced area, approximately 140 by 100 feet in size, delineates a storage area for disused production equipment. Located north of the Water Treatment Plant and south of the manufacturing complex the period of this feature's use is unknown. WPH personnel have noted that an earlier boneyard area was located east of this current feature and north of Material Storage Area No. 4.

*Groundwater Data*

Two temporary groundwater wells, set within the fenced-in Boneyard area, at approximately 23 feet deep, were used during due diligence activities to collect samples for volatiles, PAHs, PCBs, and metals. The only constituents found at levels above any regulatory limit were total arsenic in one well below the MCL but above the PRG at 4- $\mu\text{g/L}$ , and chloroform in one well at 1.9- $\mu\text{g/L}$ , which is above the PRG. Regarding the arsenic, in the dissolved state this same well was below all regulatory standards. Although based on soil, site-specific background data ranges up to 3,400-ppb. It is noted that chloroform is a common laboratory solvent. No historic data was available for this feature.

*Soil Data*

Neither historical nor due diligence soil data has been generated for this feature. As noted previously, the objective regarding the Boneyard feature due diligence sampling was to determine to the maximum degree the horizontal and vertical extent of any potential environmental impacts below the area. Groundwater sampling was deemed more appropriate to meet this objective since it characteristically gathers a sample representing a far wider below ground volume than a soil boring.

**5.4.10 Hazardous Waste Storage Area**

Located just southwest of the current Boneyard an area was historically established for storage of waste materials deemed hazardous. Concrete containment is provided. Another area has been identified from other documentation next to the southwest corner of the main manufacturing building; it is thought this second area is a more recent addition. This site is also contained to minimize releases. A review of WPH files, including DHEC site reviews and internal memoranda, did not indicate any major releases or associated issues with the use of either area. Site reconnaissance did not indicate any significant containment degradation or contaminant evidence above de minimis.

#### *Groundwater Data*

No historical or due diligence groundwater sampling has been conducted on either Hazardous Waste Storage Area. As a consequence of historical documentation review, and site reconnaissance during the due diligence effort, there was no indication of an environmental impact that was deemed sufficient to merit sampling.

#### *Soil Data*

Neither historical nor due diligence soil data has been generated for this feature. As with groundwater, after historical documentation review, and site reconnaissance during the due diligence effort, there was no indication of an environmental impact that was deemed sufficient to merit sampling.

#### **5.4.11 Incinerator**

An Incinerator was located to the east of an outlying warehouse building and a rail spur in an area now supporting a power transformer; the rail spur servicing the Coal Storage Pile has since been removed. Shown on drawings in the mid to late 1980's, the area it occupied was shown as approximately seven by twelve feet.

#### *Groundwater Data*

Two temporary groundwater wells were placed in locations thought to bracket the estimated location during the due diligence effort. Analyzed for volatiles, semi-volatiles, metals, PCBs, and dioxin, one of the wells indicated tetrachloroethylene and chloroform; the former above the MCL and PRG, the latter above the PRG but well below MCL with a 2.3- $\mu\text{g/L}$  analysis; see Table 5.4.11 for further information. The other well showed no constituents above regulatory levels. WPH personnel indicated anecdotally that the unit was not in place for an extended time and was thought to never have been used. It was also mentioned that no facility personnel remember it operating.

The presence of tetrachloroethylene is thought to be associated with the aforementioned solvent plumes, Section 5.1 Comparison Limitations, and not related to the Incinerator. The chloroform is considered a likely outlier due to being commonly used as a laboratory solvent.

#### *Soil Data*

Neither historical nor due diligence soil data has been generated for this feature. As noted previously, the objective regarding the Incinerator due diligence sampling was to determine to the maximum degree the horizontal and vertical extent of any potential environmental impacts below the estimated feature location. Groundwater sampling was deemed more appropriate to meet this objective since it characteristically gathers a sample representing a far wider below ground volume than a soil boring.

#### **5.4.12 Coal Storage Pile**

Hot process water and steam were generated on site since inception of the manufacturing activities using up to five coal-fired boilers. There were two storage areas associated with this site. The earlier pile was located east of the main manufacturing building, just south of the wetlands and east of where the Varsol Tank was located. The second, and more recent coal pile, was located east of the Maintenance Shop, southeast of the

Incinerator, and north-northeast of Material Storage Area No. 4. It is estimated that use of this more recent location, now paved with a parking lot, was discontinued and cleared of remaining coal circa 1994.

#### *Groundwater Data*

The Phase II Site Investigation, January 5, 2006, activities included one in-feature groundwater sample for analysis of total petroleum hydrocarbon – diesel range organics (TPH-DRO), nitrates, volatiles, semi-volatiles, and metals at a total well depth of 19.7 feet. The results indicated tetrachloroethylene, at 199- $\mu\text{g/L}$ , which is likely associated with the solvent plumes mentioned previously. Also reported as an estimated value was chloroform at 0.68- $\mu\text{g/L}$ . See Table 5.4.12 for these results.

Due diligence sampling was not conducted for this feature based on this Phase II information and the added confirmatory results identified by soil analyses, below. Based on the document copy reviewed, it does not appear that dissolved metals were analyzed for these samples. However, after review of other sampling conducted at the site during due diligence activities, dissolved concentrations for metals would generally be below MCL limits.

#### *Soil Data*

The Phase II Site Investigation, January 5, 2006, activities included soil sampling and analysis for TPH-DRO, nitrates, volatiles, semi-volatiles, and metals within the boundary of the latest Coal Storage Pile. Four samples, ranging from one to 13 feet in depth, were extracted. Of the constituents tested only arsenic exceeded the PRG in all three shallow, one to three foot deep, borings; the deeper boring had none detected. This reading, at 2,600- $\mu\text{g/kg}$ , is below at least two site-specific background soil values at the site.

Mercury, at 160- $\mu\text{g/kg}$ , was reported in one shallow well; although above the PRG it is below the Canova reported background of 380-ppb. Barium, was detected in the deep and one shallow boring, both below the PRG. Chromium was identified in all four borings but below the PRG level. Lead was detected in one shallow boring, and mercury in two shallow borings; all below the PRG levels. Due diligence sampling was not conducted at this feature due to the adequate available information.

#### **5.4.13 Septic Tank – Temporary for Warehouse**

Located to the east of the manufacturing complex, north of the wetlands, this Septic Tank was anecdotally identified as a temporary system for construction activities associated with installation of the warehouse, estimated to be constructed in the 1980's. Not evaluated prior to due diligence activities, the rationale for the analyses of groundwater volatiles, semi-volatiles, and metals was the knowledge that the Petroleum Underground Storage Tank was also referred to as a 'septic tank'.

#### *Groundwater Data*

The only regulatory exceedances found during due diligence sampling were trichloroethylene and chloroform above their respective PRG limits, with both well below the relevant MCL; chloroform compared with the TTHM limit. The former is suspected



to be associated with the aforementioned solvent plumes, the latter an laboratory artifact. No historical data was discovered for this feature except it's location on a drawing.

*Soil Data*

Neither historical nor due diligence soil data has been generated for this feature. As with previous features, the objective regarding the this Septic Tank due diligence sampling was to determine to the maximum degree the horizontal and vertical extent of any potential environmental impacts below the estimated feature location. Groundwater sampling was deemed more appropriate to meet this objective since it characteristically gathers a sample representing a far wider below ground volume than a soil boring.

**Septic Tank – External**

Thought to be located to the east of the manufacturing complex, south of the southwest corner of the boiler building, is a Septic Tank shown on an historical drawing. No further data has been reviewed that refers to this feature and none of the interviewed WPH personnel had knowledge of it.

*Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for this Septic Tank. The due diligence effort did not include sampling of this area since at the time the facility was still serviced with full utilities and the estimated location is impacted by various service lines.

*Soil Data*

Neither historical nor due diligence soil data has been generated for this feature. Sampling during the due diligence field effort was not conducted due to the utility obstruction issue described above. Albeit, it is likely that only groundwater analysis would be appropriate for this feature since it is external to structures, soils would be less compacted, and access to wider vertical and horizontal extents are achievable with groundwater sampling.

**Septic Tank – Internal**

Thought to be located to the south of the original main manufacturing structure, and built over during the mid 1980's building addition, this Septic Tank is located under what was the main process area of the building. Shown on a historical drawing, no further data has been reviewed that refers to this feature and none of the interviewed WPH personnel had knowledge of it.

*Groundwater Data*

No historical groundwater sampling has been conducted for this Septic Tank. The due diligence effort did not include sampling of this area since the location cannot be exactly coordinated with current conditions and there was concern that utility service lines could be detrimentally impacted by core drilling through the building concrete floor. It is also likely that only soil sampling would be appropriate for this feature for those reasons given under Paragraph 5.4.14, below.

*Soil Data*

Neither historical nor due diligence soil data has been generated for this feature. Sampling during the due diligence field effort was not conducted due to the utility obstruction issue described above.

**5.4.14 Manufacturing Process Areas**

The main textile manufacturing process areas for this site that would be associated with the use of water and chemicals occurred in designated sections labeled: Bleaching, Dyeing, Finishing, and Printing. A Basement area is associated with, and generally below, the Bleaching process area. No data was available addressing the condition of the concrete underlayment of these processes, nor whether environmental impacts could have occurred. Historical drawings do show that these process areas are generally serviced by gravity drain trenches which direct flows to external water conveyance and treatment structures.

*Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for the Manufacturing Process Areas. In this instance it was determined that groundwater sampling under the due diligence effort would not capture sufficiently the presence of any contaminants. The reasoning behind this decision is three-fold. One, with no impact from stormwater, groundwater movement under the structure, covering some 27.5-acres and exhibiting compaction from construction, would be limited and thus movement and therefore concentrations, of constituents would not be representative. Second, releases of liquids containing constituents of concern would not migrate readily to the groundwater layer, which is in the approximate 15 foot depth range, due to the lack of surface water and the presence of compressed soils. Finally, multiple sample points, as enumerated below, were utilized in each major area to determine potential pooling of liquids. These sample locations bracketed the key manufacturing area approximately every 100 square feet.

*Soil Data*

No historical soil data was discovered regarding soils below the main manufacturing building associated with wet chemical processes; approximately 190,000 square feet. Due diligence efforts focused on ascertaining the viability of the concrete underlayment for each process area, with nearly all samples taken from the zero to three foot depth layer below the concrete floor. At least one sample, located in the Printing area, was within four feet horizontally from a floor drain catchment vault. Multiple soil samples were taken for volatiles, semi-volatiles, pH, ammonia, and metals from each of the areas, as summarized below and further expanded in Tables 5.4.14.1 through 5.14.14.6.

No. of Sample Points	<u>Bleaching</u>	<u>Dyeing</u>	<u>Printing</u>	<u>Finishing</u>	<u>Lab</u>	<u>Dye Vault</u>	<u>Basement</u>
	3	5	3	1		1	3

No volatile or semi-volatile constituent was reported at a level above 20 percent of the PRG; generally any above detection limit were within one percent of the PRG.

The only constituent to show an exceedance, based on G&A analyses, was total arsenic, will all sample locations above the PRG. However, nearly all locations showed non-

detect for arsenic when analyzed by the TCLP; a Basement sample registered 62.1- $\mu\text{g}/\text{kg}$ , well below the limit. As dissolved metals analysis is used to assess the availability of the constituent in soluble form, so TCLP was used to consider the mobility of the constituent in groundwater under slightly acidic soil conditions which were delineated in the due diligence work.

Analyses by PSC was significantly different with regard to the arsenic. Of the 16 sample locations they reported only four above RDLs, the highest being 3,200- $\mu\text{g}/\text{kg}$ . When these four are compared with G&A data they range up to an order of magnitude less in their values. Additional analyses of two Manufacturing Process Area soil samples for arsenic were conducted by third party laboratories for comparison purposes. These three results for each of the two samples, two using SW-846 method 6010B, one via 7060A, ranged from 3,700 to 11,000- $\mu\text{g}/\text{kg}$ ; see Table 5.4. This anomaly continues to be addressed by third party analyses, as mentioned previously. Although higher than site-specific background arsenic data, the G&A values range from six to 25 percent of the Canova reported background data range for the Piedmont region.

#### **5.4.15 Waste Pilot Plant**

Indicated on drawings from the period of the 1960's to early 1970's, the Waste Pilot Plant was located under what is now the 1989 main building warehouse addition, in the southeast corner. It is theorized that this feature, of approximate 100 by 100 foot size, was used to pilot industrial/sanitary wastewater treatment alternatives prior to the construction of the full-size site wastewater treatment plant circa 1976. No further data has been reviewed that refers to this feature and none of the interviewed WPH personnel had knowledge of it.

##### *Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for the Waste Pilot Plant. The rationale for not performing groundwater sampling at this location during the due diligence effort are as provided in Paragraph 5.4.14 above.

##### *Soil Data*

No historical soil data was discovered regarding soils below this feature. Due diligence efforts consisted of two soil samples, ranging from 10 to 15 feet below current floor level, to the northwest and southeast of the estimated Waste Pilot Plant location. Given that the current ground elevation is approximately five feet below the building floor level in this location it is considered that the actual soil samples would account for the area below the feature.

Analyses was conducted for volatiles, semi-volatiles, PCBs, pH, metals, sulfate, and ammonia. G&A due diligence analyses reported only arsenic in total form was present above the PRG, but non-detect versus the TCLP limit. Both results were less than 13.5 percent of the Canova reported background data range for the Piedmont region. PSC split sample analyses indicated no arsenic above their RDLs. All other constituents were well below PRGs, if detected. One G&A sample reported Aroclor 1260 at 4.4- $\mu\text{g}/\text{kg}$ . A calculated risk based on the guidance footnoted in Paragraph 5.4.4 is  $8.46 \times 10^{-8}$  for children up to six years old and  $1.257 \times 10^{-8}$  for the 7 through 30 age bracket.

#### **5.4.16 Maintenance Shop**

Located east of the southeast corner of the main manufacturing building and west of the most recent Coal Storage Pile, the Maintenance Shop appears to have been in use throughout most of the history of the site. Sized at approximately 150 by 150 feet in area, the floor of the shop is six to eight inches thick based on the one due diligence sample point inserted. No other data has been reviewed that refers to this feature and none of the interviewed WPH personnel had additional knowledge of it.

##### *Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for this feature. The rationale for not performing groundwater sampling at this location during the due diligence effort are as provided in Paragraph 5.4.14 above. Also, reconnaissance of the building indicated no significant breaches of the concrete floor, nor telltale staining which might indicate potential subsurface impacts.

##### *Soil Data*

No historical information was found regarding subsurface conditions. The soil sample analysis, under due diligence activities, analyzed the material from the below-slab layer one to two feet in depth for volatiles, semi-volatiles, pH, ammonia, and metals at one location. This location was in the main work area of the building, representing the most heavily used portion. Three volatiles all less than one percent of the PRG were detected. One semi-volatile, similarly insignificant, and several metals below the PRG also reported. The only constituent above the PRG was total arsenic, reported at 25,300- $\mu\text{g}/\text{kg}$  by G&A and 3,600- $\mu\text{g}/\text{kg}$  by PSC; the G&A TCLP was non-detect. The PSC value is comparable to the site-specific background at 002-SS, while the G&A value is only 12 percent of the Canova reported background data range for the Piedmont region.

#### **5.4.17 Aboveground Storage Tanks**

There are four Aboveground Storage Tank (AST) areas of significance: Wastewater Treatment Plant, 110,000-Gallon Fuel Oil AST, process chemical storage, and polyvinyl alcohol (PVA). The first area will be discussed in a separate section below.

##### 110,000-Gallon Fuel Oil AST

This AST is located east of the main manufacturing facility and north of the Incinerator location.

##### *Groundwater Data*

No due diligence groundwater sampling has been conducted for this feature due to the satisfactory amount and breadth of historic efforts. Phase II activities incorporated two groundwater samples, with analyses for volatiles, semi-volatiles, TPH-DRO, metals, and nitrates. Cadmium reported at slightly above the MCL in one groundwater well at 5.4- $\mu\text{g}/\text{L}$ . Trichloroethylene, likely associated with the solvent plumes, was found in both wells below the MCL but above the PRG; see Table 5.4.17.1. Neither of these constituents are considered an environmental issue at these low levels.

##### *Soil Data*

No due diligence sampling was conducted at this location due again to the satisfactory.

amount and breadth of historic efforts. Phase II sampling included two soil, with analyses for volatiles, semi-volatiles, TPH-DRO, metals, and nitrates. Arsenic was present in one boring slightly above the PRG value at 670- $\mu\text{g}/\text{kg}$ . This compares with the lowest reported site-specific background arsenic, Law Engineering, boring SS-5, 1990, of 690- $\mu\text{g}/\text{kg}$ .

#### Process Chemical Storage / Polyvinyl Alcohol

There are two areas incorporating stored process liquids, a larger area, approximately 160 by 100 feet in size, located in an alcove on the south side of the manufacturing building, and a smaller, 40 by 20 foot sized area, approximately 50 feet south of the same building. Both areas are concrete floored and incorporate containment structures. The larger area was used to store materials such as: caustic soda, brine, hydrogen peroxide, resins, acetic acid, sodium hydrosulfite, kerosene, catalyst, softener, sodium silicate, and dye bath emulsified oil lubricant. The smaller area housed essentially reclaimed and virgin material, and desizing water associated with PVA usage. Tote and drums were reported to be stored on a temporary basis in the larger AST area.

#### *Groundwater Data*

No due diligence groundwater sampling has been conducted for this feature due to the availability of historical data, the condition of the tanks and containment areas at the time of the due diligence field activities, and the dearth of historical documentation indicating any release. Phase II efforts extracted a groundwater sample from the larger area, with analyses as identified for the Fuel Oil AST above. The TPH-DRO reported at 14,000- $\mu\text{g}/\text{L}$ .

Three metals, chromium, lead, and selenium, were all above their respective MCL limit but below the applicable PRGs. Both filtered chromium and lead were well below limits; selenium was not analyzed filtered. Chloroform reported above the PRG, at 0.91- $\mu\text{g}/\text{L}$ , but well below the MCL for THHM. It is likely the chloroform is a laboratory artifact.

#### *Soil Data*

Soil arsenic was found at low levels, 1,300 and 1,000- $\mu\text{g}/\text{kg}$  at the surficial and subsurface levels, respectively, during the Phase II sampling activities. Both of these values are below site-specific background data. No due diligence sampling was conducted at this larger AST area owing to potential utility impacts, and the historic data and site reconnaissance, as mentioned above.

From a review of documentation the PVA AST area has neither been investigated nor has any substantial impacts to the environment been sourced to this contained area. PVA is not listed by the Environmental Protection Agency within the Emergency Planning and Community Right-to-Know Act, Superfund Amendments and Reauthorization Act of 1986, Clean Air Act, Resource Conservation and Recovery Act, or the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. It has neither a MCL nor PRG value assigned.

#### Other Tanks

There are other ASTs located on the west side of the manufacturing building, in the

general area of the air handling and compressor equipment. During site visits it appears these tanks were generally used for storage of petroleum products for various emergency generators or equipment. Other tanks contain refrigerant, lubricant, oils, virgin PVA, or used oils. All of the tanks are generally smaller than the aforementioned areas, approximating three thousand gallons or less and are contained within concrete walled or curbed areas as appropriate. Historical documents indicate concerns with containment of tanks in this area but no mention is made of actual discharges.

#### *Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for these Other Tanks. Due diligence sampling was not conducted based on the availability of historical documentation of evaluations by WPH and DHEC personnel indicating only minor issues, not involving releases to the environment, associated with them.

#### *Soil Data*

No historical or due diligence soil sampling has been conducted for these Other Tanks. Due diligence sampling was not conducted based on the availability of historical documentation of evaluations by WPH and DHEC personnel indicating only minor issues, not involving releases to the environment, associated with them.

### **5.4.18 Polyvinyl Alcohol Basin**

The PVA Basin, approximately 200 by 160-foot in size, is located to the west-northwest of the Water Treatment Plant and southwest of the manufacturing facility. Constructed in the 1980's, it is used to equalize wastewater from PVA in-plant recovery systems prior to pumping to the WWTP. The Basin has contiguous walls on the northeast side with Printing and Industrial Wastewater Basins.

#### *Groundwater Data*

Two groundwater samples gathered during the Phase II activities for volatiles, semi-volatiles, TPH-DRO, metals, and nitrates reported only lead in one sample at 15,400- $\mu\text{g/L}$ , comparing with the MCL at 15,000- $\mu\text{g/L}$ ; when filtered the metal was undetected. No additional due diligence sampling was conducted for this feature since adequate historic data was available and the material itself is of low concern, as mentioned in Section 5.4.17.

#### *Soil Data*

As part of the Phase II activities the Basin was sampled for volatiles, semi-volatiles, TPH-DRO, metals, and nitrates. The two soil samples reported an exceedance only for arsenic; slightly above the PRG of 390- $\mu\text{g/kg}$  with values of 770 and 1,200- $\mu\text{g/kg}$ . Both of these results compare well with site-specific background data of 690- $\mu\text{g/kg}$  at SS-5 and 2,800- $\mu\text{g/kg}$  at 001-SS. No due diligence sampling was conducted for this feature due to the low levels of constituents identified in the Phase II effort and information regarding the material itself.

### **5.4.19 Wastewater Pond**

A 1.28-million gallon wastewater treatment reservoir is located to the east of the PVA Basin. Installed in the time frame of late 2001 to early 2002, the Pond incorporates

aeration and a 60 millimeter thick bottom liner. The Pond was installed to supplement the Industrial Wastewater Basin co-located with the PVA Basin. Wastewater is equalized and pumped to the existing Wastewater Treatment Plant.

*Groundwater Data*

No historical sampling has been conducted for this feature. Due to the outcome of the site reconnaissance, and the recent installation of the Wastewater Pond liner and equipment, no due diligence groundwater sampling was deemed necessary.

*Soil Data*

No historical sampling has been conducted for this feature. Due to the outcome of the site reconnaissance, and the recent installation of the Wastewater Pond liner and equipment, no due diligence soil sampling was deemed necessary.

**5.4.20 Wastewater Treatment Plant**

This feature is located west of the main manufacturing complex and southeast of Landfill No. 3. There are two components to the facility from an environmental impact focus, the treatment plant and the AST area. Constructed circa 1976 the facility is approximately 300 by 200 feet in size. Treatment of sanitary and process wastewater consists generally of solids removal, extended air aerobic digestion, clarification, and solids concentration, lime contact and, in the latter years, off-site disposal of biosolids under DHEC monitoring. The plant discharge is under a DHEC permit for directing the flow into Lake Hartwell.

Aeration Basins / Secondary Clarifiers

The WWTP incorporates two Aeration Basins, each of approximately two million gallons capacity. Southeast of these Basins lie three Secondary Clarifiers, each of 300,000-gal capacity.

*Groundwater Data*

The Phase II report included one groundwater sample for volatiles, semi-volatiles, TPH-DRO, metals, and nitrates taken from an existing well, LF3-4, associated with Landfill No. 3 monitoring. This well is downgradient of the Aeration Basins and the Secondary Clarifiers, thus generally representing that portion of the treatment system. Only nitrate nitrogen was present at 6,300- $\mu\text{g/L}$ , below the 10,000- $\mu\text{g/L}$  MCL.

No due diligence sampling was conducted for the WWTP for several reasons. Any leakage from treatment vessels would be pronounced due to the hydraulic pressure of full tankage. No stressed vegetation has been reported or observed downgradient of the facility. The location of well LF3-4, and its use for sampling not only in the Phase II, but also as a Landfill No. 3 groundwater monitoring point for at least six years, negates the need for further sampling.

*Soil Data*

Two borings were made during the Phase II activities to either side of the groundwater well sampled above for analyses of the same constituents. Arsenic at 1,100- $\mu\text{g/kg}$  was the only constituent identified exceeding regulatory limits or goals. This value is well

within site-specific background levels. No due diligence sampling has been conducted for the WWTP system for the same reasons as given above.

#### Above Ground Storage Tanks

Supplying bulk and tote packaging storage of treatment chemicals this part of the WWTP recently or historically stored sodium hydroxide, sodium hypochlorite, ferric chloride, calcium hydroxide, sodium bisulfite, and sulfuric acid among other materials.

#### *Groundwater Data*

No historical monitoring of subsurface conditions was discovered for this area. Due diligence included two temporary groundwater monitoring wells. Analyses was limited to sulfates, chlorides, and sodium to bracket the stored materials. Groundwater between 44.3 and 54.8 feet was sampled. One well reported 358,000- $\mu\text{g/L}$  of chlorides, versus an MCL of 250,000- $\mu\text{g/L}$ , the remaining constituents were below regulatory limits or goals. One chloride site-specific background, at MW-1, has reported 5,600- $\mu\text{g/L}$ . Although this one result is above this background and the MCL, the intention of the developer is use municipal potable water supplies for residences. Thus, groundwater at the site will not be brought to the surface. This detail, plus the fact the result was not significantly above the MCL leads to the conclusion that chloride does not present an environmental issue at this feature.

#### *Soil Data*

The SSI and Law Engineering effort in 1990 sampled soil at one boring in the area of these storage vessels, with the only constituent from metals, volatiles, and semi-volatiles sampling above an exceedance value to be lead at 6,000 and 12,000- $\mu\text{g/kg}$ , respectively. This same reporting effort included boring SS-05/SS-5 as background, with lead reporting at 11,000 and 9,500- $\mu\text{g/kg}$ , DHEC and Law Engineering, respectively. Thus, site-specific background and feature borings were comparable. Due diligence soil sampling was not conducted at this feature since sufficient historical data was available and the objective of the due diligence work was more appropriately fulfilled using groundwater analysis.

#### **5.4.21 Underground Storage Tanks**

It has been reported in the Phase I document that six finishing process underground storage tanks (USTs) were removed by 1986. The contents of two of these tanks were reported in that document to contain petroleum products, the stored materials in the remaining four are not defined. WPH personnel mentioned a 1984 WPH document indicating the 1,000-gallon tank contained gasoline and a 550-gallon unit stored diesel. All were removed prior to 1984, the 1,000-gallon tank removed prior to 1986. The location of any of the tanks is unknown. Installation information, as given in the Phase I document is repeated below for these USTs.

<u>Size, gallons</u>	<u>Date Installed</u>
550	1959
1,000	1959
550	1964
550	1973



12,000	1971
12,000	1974

There are no records available as to the content and use, location, removal date, condition of surrounding environment upon removal, or subjective analysis of tank and appurtenance condition upon removal. Interviews for the July 2007 Phase I also addressed this issue, as did records, documents, and drawing assessments. No further data has been identified.

*Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for these tanks, the latter since no information as to their location is available.

*Soil Data*

No historical or due diligence soil sampling has been conducted for these tanks, the latter since no information as to their location is available.

**5.4.22 Fire Pond**

Located to the northwest of Landfill No. 1 a pond was constructed to supply water in case of fire at the main complex building. This pond is fed, and stores water from, an intake on Lake Hartwell to the north of the main building. No historical data was found contrary to the supposition that this Pond has held only lake water throughout its history.

*Groundwater Data*

No historical or due diligence groundwater sampling has been conducted for this feature, the latter since no information contrary to its use as described was discovered.

*Soil Data*

No historical or due diligence soil sampling has been conducted for the Fire Pond, the latter since no information contrary to its use as described was discovered.

**5.4.23 Wastewater Discharge Ditch**

Prior to activation of the Equalization Basin, industrial wastewater was directed to the Seneca River, and later to Lake Hartwell, via an unlined series of ditches. Generally, the Wastewater Discharge Ditch (Ditch) headwaters initiated at the end of the tunnel which is connected to the Basement. Stormwater from the southern portion of the property, close to the southern wall of the main manufacturing building, plus the Storehouse, Maintenance Shop, and Boiler House, were also directed to this Ditch. An undated drawing, circa the 1970's, additionally shows this outfall conveyance used for discharge of treated industrial wastewater from the Waste Pilot Plant. This same drawing shows stormwater all along the western side of the main building being collected and combining with the Ditch prior to the river/lake discharge.

The general direction of the main industrial wastewater ditches is in the form of a wye, with the upper left arm initiating from the Basement tunnel, located approximately midway along the southern wall of the main manufacturing building. The upper right arm of the wye commenced at the Waste Pilot Plant, located where the southeastern-most corner of the main building now exists. The leg of the Ditch travels in a southwest

direction towards a finger of the river/lake. The western stormwater confluence occurred approximately 270 feet prior to the river/lake discharge.

There is no historical information regarding any sampling performed on the conveyed water or underlying soils. Due diligence regarding this feature was not conducted due to the potential impact on utility services in the area, the inexact location of the Ditch, the lack of any stressed vegetation, the availability of historic applicable sample data, and the lack of a defined surface depression. Soil and groundwater data collected during Phase II activities would capture potential issues, if any, associated with the Wastewater Discharge Ditch in its southwestern portions. The specific sample points, MW-301 and -302, and their reported constituents, are discussed below.

#### *Groundwater Data*

No historical or due diligence groundwater sampling has been conducted specifically for this Wastewater Discharge Ditch, the latter for the reasons given above. However, two sample points utilized during Phase II activities circumscribe the southwestern portion of the ditch in the area nearest the estimated lake discharge. Analytical results from these locations, designated MW-301 and -302, are discussed in Paragraph 5.4.18.

#### *Soil Data*

No historical or due diligence soil sampling has been conducted specifically for this feature, the latter for the reasons given above. However, as with the groundwater, the aforementioned sample points used during the Phase II effort for the PVA Basin also demarcate the estimated southwestern reach of this ditch; see Paragraph 5.4.18 for a summary results of their analyses.

#### **5.4.24 Polychlorinated Biphenyl Release**

In May 1983 a PCB transformer emitted Aroclor 1254 as a consequence of equipment failure. Details of the release, including sampling, disposal, communications, and documentation is included in the 2005 Phase I report. Of specific interest are two documents that discuss the impact of the incident on the Penthouse area within the Greige Plant. This plant is located on the west side of the Finishing Plant where the Manufacturing Process Areas discussed above in Section 5.4.14 are located. This Penthouse area is insufficiently defined in historical documents to specifically locate.

A Materials Evaluation Department Report, indicates PCB concentrations in the 'Pent House' and associated stairwell ranging from 25 to 350-parts per million. A Transformer Incident Meeting report states "The Penthouse will be cleaned and residue disposed of as required." There is no further recorded information that indicates whether or not this cleanup occurred.

No further sampling, historically or recently, has been done to determine if the mentioned cleanup occurred, the latter due to the issue of locating the feature.

#### *Groundwater Data*

Groundwater sampling is not applicable to this feature.

*Soil Data*

Wipe, rather than soil sampling is applicable to this feature. Historical sampling in the 'Pent House' and associated stairwell ranging from 25 to 350-parts per million. However, no consequential remediation or sampling is indicated historically. As stated, no due diligence sampling was conducted.

**5.4.25 Various Releases**

The 2005 Phase I report, page 22, mentions historical spill events that were gleaned from interviews and records review. The August 2007 Phase I update has no further information of note to add. The reader is referred to the March 2005 Phase I for information. The WPH historical records indicate that released materials were remediated to the satisfaction of governmental authorities as applicable.

*Groundwater Data*

No specific historical sampling was done; however, analytical data describing the material in question was known to be available on file. For example, a spill of biosolids on April 24, 1998, was reported in the 2005 Phase I report. Because biosolids were land applied by the facility Owner, records of material analyses would be on file. Due diligence sampling would not be possible for these Various Releases.

*Soil Data*

No historical soil sampling appeared to be conducted for Various Releases. However, because from the records the source material of the release was typically known, clean up could be conducted without specific sampling. Again, due diligence sampling would not be possible for these Various Releases.

**5.4.26 Asbestos**

The presence of expected asbestos within the structures at the site was addressed during the due diligence effort to ensure capture of all potential environmental issues. Two asbestos surveys have been conducted in recent history: Limited Asbestos Survey Report, PSC, March 9, 2006, and Asbestos Survey And Inspection Report, Dean Hunter & Company, February 16, 2007. Based on the latest work the amount of estimated friable and non-friable materials present within the structures are as given below.

	Material	Amount Estimated
Non-Friable:	flooring	45,625-ft <sup>2</sup>
	roof	237,000-ft <sup>2</sup>
	felt paper; heating, ventilating, air conditioning; ceiling tiles	24,910-ft <sup>2</sup>
	transite panels, vapor barrier	4,500-ft <sup>2</sup>
Friable:	thermal surface insulation	9,702 linear feet
	various surfaces	3,840-ft <sup>2</sup>

Since the developer intends to deconstruct the buildings to prepare the site for residential structures these asbestos materials will be removed and disposed of according to prevailing DHEC regulations.

*Groundwater Data*

Groundwater sampling is not applicable to this feature.

*Soil Data*

Visual observation and limited solids sampling is applicable to this feature. Two Asbestos surveys have been conducted, one by WPH in 2006, the other as part of due diligence activities in 2007. The more recent results indicate approximately 312,000-square feet (ft<sup>2</sup>) of asbestos non-friable surfaces and 3,840-ft<sup>2</sup> friable surfaces and approximately 9,700 linear feet of friable pipe and ducting insulation.

# Tables

Table 3.4  
Temporary Well Installation Log

**Reporting Information:**

Facility/Owner: WestPoint Home  
500 Cherry Road  
Clemson, SC  
Oconee County

Driller: Landprobe  
6004 Ponders Court  
Greenville, SC

SC Certification No. 01866

Approval No.: 2961

Well: one inch, polyvinyl chloride

details in 'Temporary Saprolite Monitoring Well Diagram'

Well Information & Diagram Identifiers			A	B	C	D	E	B + C	D + E + F	
Well ID	Date	Start Time	Location; deg, min, sec	Total Bore Depth, ft	Screen Pack Length, ft	Solid Pipe, approx. length, ft	Riser, ft	Bentonite Seal Depth, ft	Total Well Depth, ft	Initial Water Depth, ft
EB-B	3/20/2007	0948	34° 38' 36"N; 82° 51' 37"W	20	5	15	1.67	0.33	22	13.16
EB-A	3/20/2007	1114	34° 38' 37"N; 82° 51' 36"W	19.5	5	15	1.16	1	19.8	11.61
L-A	3/20/2007	1315	34° 38' 34"N; 82° 51' 39"W	23	5	20	2.16	1	24.83	17.55
L-B	3/20/2007	1412	34° 38' 34"N; 82° 51' 38"W	23.5	5	20	1.75	0.83	24.8	19.16
LF4-B	3/20/2007	1540	34° 38' 40"N; 82° 51' 38"W	32.2	5	30	2.16	3.5	34.59	23.02
LF4-C	3/20/2007	1710	34° 38' 40"N; 82° 51' 38"W	28	5	30	1.83	4	29.82	26.81
LF4-A	3/21/2007	0910	34° 38' 41"N; 82° 51' 34"W	27.5	5	25	2.00	2	29.78	28.1
WT-B	3/21/2007	1040	34° 38' 43"N; 82° 51' 43"W	28	5	25	1.91	4	29.8	26.8
WT-A	3/21/2007	1148	34° 38' 42"N; 82° 51' 45"W	27	5	25	2.75	2	29.5	21.87



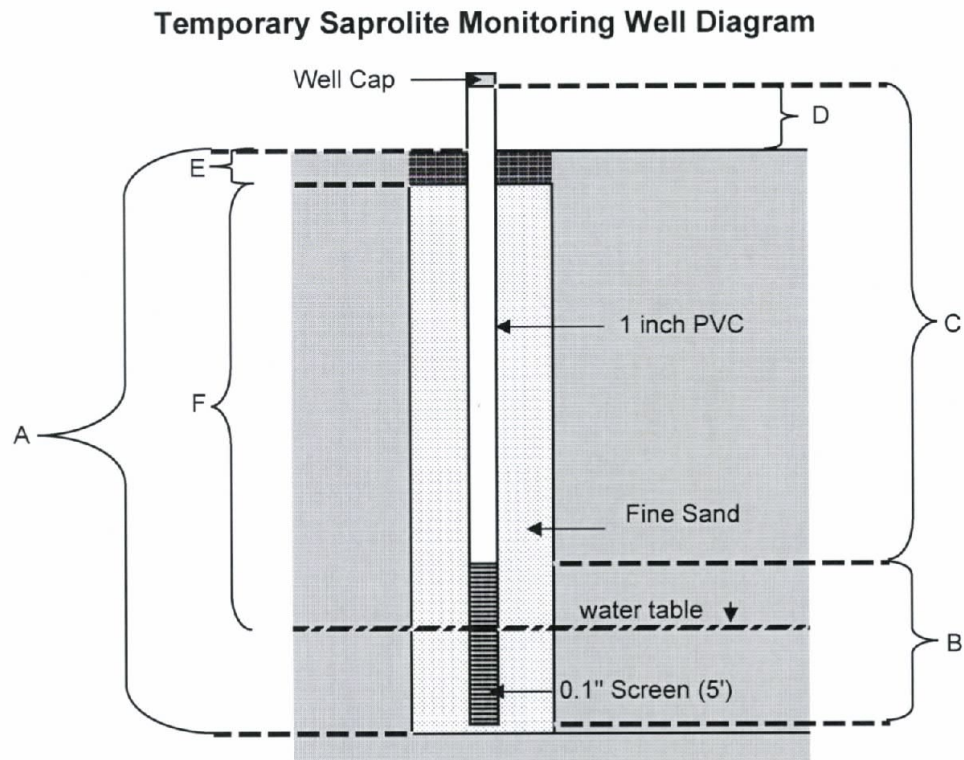
Table 3.4  
Temporary Well Installation Log

Section 3.4: Temporary Groundwater  
Well Locations & Data

Well Information & Diagram Identifiers			A	B	C	D	E	B + C	D + E + F	
Well ID	Date	Start Time	Location; deg, min, sec	Total Bore Depth, ft	Screen Pack Length, ft	Solid Pipe, approx. length, ft	Riser, ft	Bentonite Seal Depth, ft	Total Well Depth, ft	Initial Water Depth, ft
BY-B	3/22/2007	1128	34° 38' 47"N; 82° 51' 43"W	23	5	20	2.08	1.5	24.45	20.48
BY-A	3/22/2007	1305	34° 38' 46"N; 82° 51' 43"W	23	5	20	2.08	3	24.73	16.18
I-A	3/22/2007	1356	34° 38' 47"N; 82° 51' 38"W	23	5	20	1.87	1.5	24.76	18.95
I-B	3/22/2007	1440	34° 38' 47"N; 82° 51' 38"W	23	5	20	1.58	0.83	24.71	18.18
TST-A1	3/22/2007	1554	34° 38' 55"N; 82° 51' 35"W	23	5	20	2.00	4	24.93	10.51
TST-C3	3/23/2007	0945	34° 38' 55"N; 82° 51' 35"W	23	5	20	1.75	2	24.7	10.05
WWT-B	3/23/2007	1123	34° 38' 51"N; 82° 51' 57"W	52	5	35	2.83	2	52.31	44.59
WWT-A	3/26/2007	1023	34° 38' 51"N; 82° 51' 56"W	55	5	50	2.43	3.5	54.8	42.55
LF5-A1	3/27/2007	1635	34° 38' 59"N; 82° 52' 10"W	15	5	20	4.33	2	14.94	14.51
LF5-B	4/3/2007	1025	34° 39' 02"N; 82° 52' 07"W	23	5	25	4.00	1.5	29.95	19.41
LF5-A2	3/27/2007	1057	34° 38' 59"N; 82° 52' 09"W	26	5	25	3.83	1.5	30.02	27.37

Legend:

- EB Equalizing Basin
- L Lagoon
- LF4, 5 Waste Material Storage Area
- TST Temporary Septic Tank
- WT Water Treatment
- BY Boneyard
- I Incinerator
- WWT Wastewater Treatment



- A - Total Bore Depth
- B - Screen Pack Length
- C - Solid Pipe, approximate length
- D - Riser
- E - Bentonite Seal Depth
- B + C - Total Well Depth
- D + E + F - Initial Water Depth



**Table 3.5**  
**Soil Sampling Log**

Soil Boring Information				
Boring ID	Date	Sample position	Location; deg, min, sec	Total Bore Depth, ft
B-1	3/21/2007		unavailable	2.5
B-CR	3/21/2007		unavailable	2.5
BA-1	3/7/2007		unavailable	2.5
BA-2	3/7/2007		unavailable	2.5
BA-3	3/7/2007		unavailable	2.5
BT-1	3/21/2007		unavailable	SURFACE
DA-1	3/7/2007		unavailable	2
DA-2	3/8/2007		unavailable	2
DA-3	3/7/2007		unavailable	2
DA-4	3/8/2007		unavailable	2
DA-5	3/7/2007		unavailable	2
DV-1	3/8/2007		unavailable	SURFACE
FL-1	3/7/2007		unavailable	2.5
LF1-CB	4/9/2007	1A	34° 39' 02"N; 82° 52' 07"W	5.5
		1B	34° 39' 19"N; 82° 51' 43"W	9.5
		1C	34° 39' 19"N; 82° 51' 46"W	10
LF2-EXT	4/10/2007	2A	34° 38' 40"N 34° 51' 48"W	4.8
	4/10/2007	2Be	34° 38' 41N 34° 51' 50W	5.8
LF2-SCB	4/9/2007	2Ae	34° 38' 36N 34° 51' 41W	4
		2B	34° 38' 37N 34° 51' 43W	6.5
		2C	34° 38' 64N 34° 51' 69W	2.5
LF3-ACB	4/13/2007	3A	34° 38' 53"N 34° 52' 04"W	3
		3B	34° 38' 54"N 34° 52' 04"W	1.2
LF5-CB	4/3/2007		34° 39' 02"N; 82° 52' 07"W	35
LF5-D	4/3/2007			24.5
LF5-D-15	4/3/2007		34° 39' 02"N; 82° 51' 34"W	15
LF5-D-35	4/3/2007			35
LF5-E	4/3/2007			24.5
LF5-E-10	4/3/2007		34° 39' 01"N; 82° 52' 05"W	10
LF5-E-25	4/3/2007			25
MA-1	3/8/2007		unavailable	2
PA-1	3/8/2007		unavailable	2
PA-2	3/7/2007		unavailable	2
PA-3	3/7/2007		unavailable	2
WPPSE-1	3/21/2007		unavailable	10
WPPNW-2	3/21/2007		unavailable	8.5

**Reporting Information:**

**Facility/  
Owner:**

WestPoint Home  
500 Cherry Road  
Clemson, SC

Oconee County

**Driller:**

Landprobe  
6004 Ponders Court  
Greenville, SC  
SC Certification No. 01866

**Legend:**

- B Basement
- BA Bleach Area
- B-CR Chemical Room, Basement
- BT Basement Tunnel
- DA Dye Area
- DV-1 Dye Vault, Screen Printing
- FL Finishing / Lab
- LF1,2,3 Landfill
- LF4,5 Waste Material Storage Area
- MA Maintenance Area
- PA Print Area
- WPPSE Waste Pilot Plant - southeast area
- WPPNW Waste Pilot Plant - northwest area

Table 5.4  
Arsenic Analyses Comparison

Location	Rogers & Callcott Engineers, Inc.			Goldie & Associates, Inc.			Test America, Inc.			Davis & Floyd
	Arsenic			Arsenic, Dry			Arsenic, Dry			Arsenic, Wet
	Dry <sup>1</sup> , µg/kg	Wet <sup>1</sup> , µg/kg	Arsenic <sup>1</sup> , µg/L	Dry, µg/kg <sup>2</sup>	µg/L <sup>2</sup>	TCLP <sup>3</sup> , µg/kg	µg/kg <sup>1,4</sup>	µg/kg <sup>2,4</sup>	µg/kg <sup>1,5</sup>	µg/kg <sup>1</sup>
Bleach Area-1	3,100	2,600		15,600		ND				
Bleach Area-2	<3,000	<2,500		19,300		ND				
Bleach Area-3	<2,800	<2,500		14,100		ND				
Bsmnt 1	<2,900	<2,500		26,200		ND				
Bsmnt Chem Rm	<6,400	<5,000		33,200		ND				
Bsmnt Tunnel 1	<2,600	<2,500		<3,400		62.1				
Boneyard-A			<5.0		<3,000					
Boneyard-A, dissolved			<5.0		<3,000					
Boneyard-B			<5.0		4,000					
Boneyard-B, dissolved			<5.0		<3,000					
Dye Area-1	<3,000	<2,500		28,500		ND				
Dye Area-2	<2,900	<2,500		30,000		ND				
DyeArea-3	<3,100	<2,500		39,700		ND	3,700	3,600	11,000	
Dye Area-4	3,100	2,500		37,200		ND				
Dye Area-5	3,200	2,630		44,400		ND				
Dye Vault-1	<2,500	<2,500		22,500		ND				
Equalizing Basin-A			<5.0		<3,000					
Equalizing Basin-A, dissolved			<5.0		<3,000					
Equalizing Basin-B			<5.0		<3,000					
Equalizing Basin-B, dissolved			<5.0		<3,000					
Finishing Lab-1	<2,900	<2,500		38,900		ND				
Incinerator-A			<5.0		<3,000					
Incinerator-A, dissolved			<5.0		<3,000					
Incinerator-B			<5.0		<3,000					
Incinerator-B, dissolved			<5.0		<3,000					
Lagoon-A			<5.0		3,000					
Lagoon-A, dissolved			<5.0		4,000					
Lagoon-B			<5.0		3,000					
Lagoon-B, dissolved			<5.0		<3,000					
Landfill 1CB	9,900	7,520		24,200						
Landfill 2-2 Ext.	<6,800	<5,000		12,800						
Landfill 2SCB	<6,800	<5,000		10,800			6,200	5,200	6,900	3,900
Landfill 3-ACB	<5,900	<5,000		12,700						
Maintenance Area-1	3,600	2,950		25,300		ND				
Matl Stg Area 4-A			<5.0		25,000					
Matl Stg Area 4-A, dissolved			<5.0		<3,000					
Matl Stg Area 4B			<5.0		<3,000					
Matl Stg Area 4B, dissolved			<5.0		<3,000					
Matl Stg Area 4-C			<5.0		<3,000					
Matl Stg Area 4-C, dissolved			<5.0		<3,000					
Matl Stg Area 5-A1			ND		42,000					
Matl Stg Area 5-A1, dissolved					<3,000					
Matl Stg Area 5-A2			ND		24,000					
Matl Stg Area 5-A2, dissolved					<3,000					
Matl Stg Area 5-B			ND		<3,000					
Matl Stg Area 5-B, dissolved					<3,000					
Matl Stg Area 5-C	<2,900	<2,500		19,600		ND				

**Table 5.4**  
**Arsenic Analyses Comparison**

Location	Rogers & Callcott Engineers, Inc.			Goldie & Associates, Inc.			Test America, Inc.			Davis & Floyd
	Arsenic			Arsenic, Dry			Arsenic, Dry			Arsenic, Wet
	Dry <sup>1</sup> , µg/kg	Wet <sup>1</sup> , µg/kg	Arsenic <sup>1</sup> , µg/L	Dry, µg/kg <sup>2</sup>	µg/L <sup>2</sup>	TCLP <sup>3</sup> , µg/kg	µg/kg <sup>1,4</sup>	µg/kg <sup>2,4</sup>	µg/kg <sup>1,5</sup>	µg/kg <sup>1</sup>
Matl Stg Area 5-D	16,000	11,800		26,200		ND				
Matl Stg Area 5-E	22,000	15,600		29,400		ND				
Print Area-1	<2,900	<2,500		38,100		ND				
Print Area-2	<3,100	<2,500		53,000		ND	4,600	4,100	6,500	
Print Area-3	<3,000	<2,500		29,300		ND				
Temp Septic Tank-A			<5.0	<3,000						
Temp Septic Tank-A, dissolved			<5.0	<3,000						
Temp Septic Tank-C			<5.0		<3,000					
Temp Septic Tank-C, dissolved			<5.0		<3,000					
Waste Pilot Plant-1	<3,000	<2,500		28,500		ND				
Waste Pilot Plant-2	<3,000	<2,500		23,800		ND				

**Notes:**

~ all labs used sample preparation method 3050B (Environmental Protection Agency *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*), except as noted

~ Philip Environmental Service Corp. utilized Rogers & Callcott, Inc. for sample analyses services

1 - analytical method SW-846 6010B

2 - analytical method SW-846 7060A

3 - analytical method SW-846 1311 preparation, 3010A analysis

4 - Chicago laboratory

5 - Savannah laboratory

**Environmental Protection Agency Regulatory Limits or Goals, Arsenic:**

Region IX, Preliminary Remediation Goal; 390 µg/kg

Region IX, Preliminary Remediation Goal; 0.045 µg/L

Maximum Contaminant Limit; 10 µg/L

Toxic Characteristic Leaching Procedure; 5,000 µg/L





Table 5.4.1.2  
Landfill No.1 - Soil

Limited Site Assessment  
WestPoint Home Facility

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg (SPLP, µg/L)												Due Diligence, µg/kg			
		SS-05 (4")	Law Engrg. SS-5 (4")	ESI 003-SS	RGMP						FA-SB-6 (2 - 10 ft)		Sample Point LF1-CB (1'-9.5')				
					FA-SB-1 (3 - 4.5 ft)	FA-SB-2 (3 - 4.5 ft)	FA-SB-3 (4 - 9.5 ft)	FA-SB-4 (4 - 6 ft)	FA-SB-5 (1 - 10 ft)	FA-SB-6 (2 - 10 ft)	Total	SPLP		Total	SPLP		
<b>Semivolatiles</b>																	
1-Methylnaphthalene																	27.5
2-Methylnaphthalene																	33.1
Naphthalene	56,000																27.6
Phenanthrene																	13.8
<b>Metals</b>																	
Arsenic	390																24,200
Barium	5,400,000	24,000	690	5,000	<RL	8,600	<16	11,000	<16	130,000	6	140,000	1	6,500	<16	10,000	107,000
Cobalt	900																
Cadmium	37,000																1,870
Chromium	210,000	17,000	20,000	3,100	<2	690	<2	740	<2	1,700	<2	6,600	<18	7	<2	810	13,900
Chromium (hex)	30,000																31.9
Copper	3,100,000	3,700	8,100	13,000	<12	30,000	<12	31,000	<12	39,000	<12	31,000	<12	39,000	<12	32,000	52,700
Lead	400,000	11,000	9,500	13,000	<48	8,000	<48	5,600	<48	8,000	<48	5,600	<48	<5,000	<48	5,700	33,700
Manganese	1,800,000	370,000	360,000	22,000													
Mercury	23,000																28.1
Nickel	1,600,000	2,000	4,600	13,000	<20	<500	<20	<500	<20	<500	<20	13,000	<12	11,000	<12	18,000	19,500
Selenium	390,000																
Silver	390,000																
Thallium	5,200																485
Zinc	2,300,000																59,300
<b>Other</b>																	
2,3,7,8-TCDD	0.0039																0.000278

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
MCL/MCLG/PRG exceedance  
Estimated Value  
RL  
SPLP  
TCDD  
required detection limit  
synthetic precipitation leaching procedure, (Environmental Protection Agency Test Methods for Evaluating Solid Waste, Physical/Chemical Methods), methods 6010B / 7470A / 7471A  
tetrachlorodibenzodioxin

SSI - Screening Site Assessment Report, South Carolina Department of Health and Environmental Control, January 23, 1991  
Law Engineering - Report of Soil and Ground Water Sampling - West Point Pepperell, Law Engineering, November 6, 1990  
ESI - Expanded Site Inspection Report, South Carolina Department of Health and Environmental Control, January 18, 1996  
RGMP - Technical Demonstration for a Reduction in the Groundwater Monitoring Program, Fly Ash Landfill, West Point Stevens, Atlanta Environmental Management, Inc., July 25, 2002  
Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007



Table 5.4.2.1  
Landfill No.2 - Groundwater

Parameter	Regulatory Data, µg/L			SS1 JPSC-MW-02	Law Enging MW-2	P11 MW-801 (21.0' - 32.46')	P11 LF2-8R (23.15' - 37.68')	Historical Data, µg/L										
	MCL	MCLG	2ND DW					PRG	LF2 - 1	LF2 - 2	LF2 - 3	LF2 - 4	LF2 - 5	LF2 - 6	LF2 - 7	LF2 - 8	LF2 - 8A	
<b>Volatiles</b>																		
111-Trichloroethane	200	200		3,200	5.39													
<b>Semi-Volatiles</b>																		
Butylbenzyl-phthalate				7,300	197													
Di-N-butyl-phthalate				3,600	118													
<b>Metals</b>																		
Barium	2,000	2,000		2,600	680		225											
Chromium	100	100		55,000	120		69											
Copper	1,300	1,300		1,500	70		190											
Manganese				880	1,300		2,000											
Magnesium				27,000														
Nickel				730	130		100											
Lead	15	0					51											
Mercury	2	2		11			1.2											
Mercury (filtered)	2	2		11			ND											
Selenium	50																	
Silver																		
<b>Other</b>																		
Chloroform	80			0.17			1											
Nitrate	10,000	10,000		10,000			3,600											
Ammonia Nitrogen																		
pH																		
TKN																		
TOC																		

Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance  
 Environmental Protection Agency, Secondary Drinking Water Limit (2ND DW) exceedance  
 MCL / MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 2ND DW / PRG exceedance  
 MCL / MCLG / PRG exceedance  
 ND  
 non detect  
 TOC  
 Total Organic Carbon  
 TKN  
 Total Kjeldahl Nitrogen

SSI - Screening Site Assessment Report, South Carolina  
 Department of Health and Environmental Control, January 23, 1991  
 Law Engineering - Report of Soil and Ground Water Sampling -  
 West Point Pepperell, Law Engineering, November 6, 1990  
 P11 - Phase II Site Investigation - WestPoint Home, Philip Environmental  
 Services, January 5, 2006  
 WestPoint Home, Inc., Groundwater Monitoring Data, provided February 28, 2007

Table 5.4.2.2  
Landfill No.2 - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg			PII	Due Diligence, µg/kg	
		007-SS	008-SS	009-SS		LF2-SCB (0" - 6.5')	LF2-EXT (2' - 6')
<b>Semi volatiles</b>							
Anthracene	22,000					190	
Benzo(a)anthracene	620					504	
Benzo(a)pyrene	62					375	
Benzo(b)fluoranthene	620					713	
Benzo(ghi)perylene						254	
Chrysene	62,000					467	
Fluoranthene	2,300,000					918	
Indeno(1,2,3-cd)pyrene						212	
Phenanthrene						711	
Pyrene	2,300,000					779	
<b>Metals</b>							
Arsenic	390	3,600	5,100	11,000	2,100	10,800	12,800
Barium	5,400,000				32,700	49,900	108,000
Cobalt	900	2,000		3,900			
Cadmium	37,000					4,130	6,090
Chromium	210,000				28,400	26,100	36,000
Chromium (hex)	30,000					4,450	4,730
Copper	3,100,000	67,000	14,000	250,000		92,200	260,000
Manganese	1,080,000	160,000	66,000	360,000			
Nickel	1,600,000						
Lead	400,000						
Silver	390,000	3,900		8,700		10,100	15,600
Thallium	5,200					61,400	26,900
Mercury	23,000	190	160	220		7,690	3,070
Zinc	2,300,000			670,000		244	218
<b>Other</b>						156	129
2,3,7,8-TCDD	0.0039					535,000	1,072,000
						0.000873	0.0007

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance

Estimated Value

Estimated Value / PRG exceedance

tetrachlorodibenzodioxin

ESI - Expanded Site Inspection Report, South Carolina Department of Health and Environmental Control, January 18, 1996

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services, January 5, 2006

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007







Table 5.4.3.2  
Landfill No 3 - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg	Due Diligence, µg/kg
	PRG	ESI 006-SS	Sample Point LF3-ACB(3'- 3")
<b>Semivolatiles</b>			
Anthracene	22,000		42.6
Benzo(a)anthracene	620		239
Benzo(b)fluoranthene	620		408
Chrysene	62,000		251
Fluoranthene	2,300,000		351
1-Methylnaphthalene			548
2-Methylnaphthalene			635
Naphthalene	55,000		465
Phenanthrene			348
Pyrene	2,300,000		295
<b>Metals</b>			
Arsenic	390		12,700
Barium	5,400,000		57,300
Cobalt	900	9,800	
Cadmium	37,000		870
Chromium	210,000		26,500
Chromium (hex)	30,000		26.8
Copper	3,100,000	48,000	870
Manganese	1,080,000	390,000	
Nickel	1,600,000		9,470
Lead	400,000		17,000
Mercury	23,000		70.9
Selenium	390,000		70
Silver	390,000		1,910
Thallium	5,200		253
Zinc	2,300,000	68,000	46,300
<b>Other</b>			
2,3,7,8-TCDD	0.0039		0.00115

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance

Estimated Value

Estimated Value / PRG exceedance

tetrachlorodibenzodioxin

TCDD

ESI - Expanded Site Inspection Report, South Carolina Department of Health and Environmental Control, January 18, 1996

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007





Table 5.4.4.2  
Material Storage Area No. 4 - Soil

Parameter (µg/kg)	Regulatory Data, µg/kg	Historical Data, µg/kg						PII
		SSI		Law Engineering		ESI	MW-501 (1'-3')	
		SS-07 (4")	SS-08 (2.5')	SS-7 (1')	SS-8 (1')	010-SS		
<b>PRG</b>								
<u>Volatiles</u>								
Acetone	14,000,000			900				
Benzene	640			7				
2-Butanone	22,000,000			240				
TCE	53			5				
<u>Metals</u>								
Arsenic	390	49,000				3,300		3,900
Barium	5,400,000	50,000	22,000	72,000	44,000			24,100
Cadmium	37,000	1,300	1,300	800	2,200			
Chromium	210,000	30,000	28,000	26,000	14,000			23,300
Cobalt	900					2,100		
Copper	3,100,000	36,000	15,000	42,000	28,000	11,000		
Manganese	1,080,000	240,000	240,000	220,000	310,000	120,000		
Mercury	23,000				130	160		440
Nickel	1,600,000	3,500	2,900	6,200	8,800			
Lead	400,000	42,000	14,000	36,000	18,000			14,100
Selenium	390,000	800						
<u>Other</u>								
PCB	Risk Based		30.5					

Environmental Protection Agency, Region IX, Preliminary Remediation Goals (PRG) violation

Estimated Value

Estimated Value / PRG exceedance

polychlorinated biphenyl

trichloroethylene

SSI - Screening Site Assessment Report, South Carolina Department of Health and Environmental Control, January 23, 1991

Law Engineering - Report of Soil and Ground Water Sampling - West Point Pepperell, Law Engineering, November 6, 1990

ESI - Expanded Site Inspection Report, South Carolina Department of Health and Environmental Control, January 18, 1996

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services, January 5, 2006

Table 5.4.5.1  
Material Storage Area No. 5  
Groundwater

Parameter	Regulatory Data, µg/L			Due Diligence, µg/L		
	MCL	MCLG	2ND DW	PRG	LF5-A1 (12.9' - 15')	LF5-A2 (25.15' - 30') LF5-B (19.41' - 29.95')
<b>Semivolatiles</b>						
Diethyl phthalate				29,000		2.3
<b>Metals</b>						
Arsenic	10	0		0.045	42	24
Arsenic, dissolved	10	0		0.045	<3	<3
Barium	2,000	2,000		2,600	280	200
Barium, dissolved	2,000	2,000		2,600	200	200
Cadmium					<0.1	<0.1
Cadmium, dissolved	5	5		18	<0.1	<0.1
Chromium	100	100		55,000	120	
Chromium, dissolved	100	100		55,000	<100	
Copper	1,300	1,300	1,000	1,500	60	60
Copper, dissolved	1,300	1,300		1,500	<10	<10
Lead	15	0			19	35
Lead, dissolved	15	0			<2	<2
Nickel				730	40	30
Nickel, dissolved				730	<30	<30
Zinc				11,000	20	50
Zinc, dissolved				11,000	<10	<10



Environmental Protection Agency, Maximum Containment Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Containment Limit Goal (MCLG) exceedance  
 Environmental Protection Agency, Secondary Drinking Water Limit (2ND DW) exceedance  
 MCL / MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL / MCLG / PRG exceedance  
 Estimated Value

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007



Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg			Due Diligence, µg/kg							
		ESI 004-SS	005-SS	SS-601 (0-1')	PII	LF5-C (0" - 26")	LF5-D (7.5' - 24.5')	LF5-D-15 (0" - 15')	LF5-D-35 (0" - 35')	LF5-E (10' - 24.5')	LF5-E-10 (0' - 10')	LF5-E-25 (0" - 25')
<b>Volatiles</b>												
Acetone	14,000,000			686								101
2-Butanone	22,000,000											21.3
1,4-Dichlorobenzene	3,400							0.752	0.565		0.887	
<b>Semi volatiles</b>												
1-Methylnaphthalene						57.5						
2-Methylnaphthalene						73						
Naphthalene	56,000					69.7						
<b>Metals</b>												
Arsenic	390											
Barium	5,400,000											
Chromium	210,000											
Chromium (hex)	30,000											
Cobalt	900											
Copper	3,100,000											
Lead	400,000											
Manganese	1,080,000											
Mercury	23,000											
Nickel	1,600,000											
Zinc	2,300,000											
<b>Other</b>												
pH												

Environmental Protection Agency, Region IX, Preliminary Remediation Goals (PRG) exceedance

Estimated Value

Estimated Value / PRG exceedance

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services, January 5, 2006

ESI - Expanded Site Inspection Report, South Carolina Department of Health and Environmental Control, January 18, 1996

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.6  
Lagoon - Groundwater

Parameter	Regulatory Data, µg/L			Due Diligence, µg/L	
	MCL	MCLG	PRG	L-A (19.1' - 24.83')	L-B (17.3' - 24.8')
<b>Metals</b>					
Arsenic	10	0	0.045	3	3
Arsenic, dissolved	10	0	0.045	4	< 3
Barium	2,000	2,000	2,600	880	< 200
Barium, dissolved	2,000	2,000	2,600	520	200
Cadmium	5	5	18	0.16	5.3
Cadmium, dissolved	5	5	18	0.16	< 0.1
Copper	1,300	1,300	1,500	10	10
Lead	15	0		2.7	30
Lead, dissolved	15	0		2.7	< 2
Mercury	2	2	11	0.61	0.37
Mercury, dissolved	2	2	11	0.33	0.3
Nickel			730	40	70
Selenium	50	50	180	<3	4
Zinc			11,000	70	
Zinc, dissolved			11,000	110	

Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance  
 MCL/MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL/MCLG/PRG exceedance  
 Estimated Value  
 MCL or MCLG / PRG exceedance

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007



Table 5.4.7  
Equalizing Basin - Groundwater

Parameter	Regulatory Data, µg/L			Due Diligence, µg/L	
	MCL	MCLG	PRG	EB-A (11.35' - 19.8')	EB-B (13.0' - 22.0')
<u>Volatiles</u>					
Acetone			5,500	7.6	4.2
Carbon Disulfide			1,000	6.4	16
<u>Metals</u>					
Barium	2,000	2,000	2,600	<200	<200
Barium, dissolved	2,000	2,000	2,600	200	<200
Nickel			730	60	80
Nickel, dissolved			730	<30	30

Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 MCL/MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL/MCLG/PRG exceedance  
 Estimated Value

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.8  
Water Treatment Plant -  
Groundwater

Parameter	Regulatory Data, µg/L		Due Diligence, µg/L	
	MCL	2ND DW	WT-A (21.9' - 29.5')	WT-B (25.8' - 29.8')
Other				
Chloroform	80		1.5	8.3
Sulfate		250,000	93,000	384,000

Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance  
 MCL/MCLG) exceedance  
 Environmental Protection Agency, Secondary Drinking Water Limit (2ND DW) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL/MCLG/PRG exceedance  
 Estimated Value

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007



Table 5.4.9  
Boneyard - Groundwater

Parameter	Regulatory Data, µg/L				Due Diligence, µg/L	
	MCL	MCLG	2ND DW	PRG	Sample Points	
					BY-A (16' - 25')	BY-B (16' - 24.45')
<b>Volatiles</b>						
1,2-Dichlorobenzene	600	600		370	15	
1,4-Dichlorobenzene	75	75		0.5	1.3	
1,2-Dichloroethylene total	170	170		120	22	
Tetrachloroethylene	5			0.1	2.1	
Trichlorofluoromethane				1,300	5.3	
<b>Metals</b>						
Arsenic	10	0		0.045		4
Arsenic, dissolved	10	0		0.045		<3
Barium, dissolved	2,000	2,000		2,600	200	200
Copper	1,300	1,300	1,000	1,500	10	10
Mercury	2	2		11	0.06	0.22
Nickel				730	40	70
Nickel, dissolved				730		60
<b>Other</b>						
Chloroform	80			0.17	1.9	

Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance  
 MCL/MCLG exceedance  
 Environmental Protection Agency, Secondary Drinking Water Limit (2ND DW) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL/MCLG/PRG exceedance  
 Estimated Value  
 MCL or MCLG/PRG exceedance

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc., by Goldie & Associates, Inc., December - June, 2007

Parameter	Regulatory Data, µg/L			Due Diligence, µg/L	
	MCL	MCLG	PRG	Sample Points	
				I-A (18.37' - 24.76')	I-B (18.14' - 24.71')
<b>Volatiles</b>					
Tetrachloroethylene	5	0	0.1	43	
<b>Metals</b>					
Barium	2,000	2,000	2,600	<200	<200
Barium, dissolved	2,000	2,000	2,600	200	200
Cadmium	5	5	18	0.1	0.17
Cadmium, dissolved	5	5	18	0.13	0.14
Mercury	2	2	11	0.05	
Zinc			11,000	<10	300
Zinc, dissolved			11,000	<10	290
<b>Other</b>					
Chloroform	80		0.17	2.3	
Octachlorodibenzo-4-dioxin				0.000059	0.000339

- Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance
- Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance
- MCL/MCLG exceedance
- Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance
- MCL/MCLG/PRG exceedance
- Estimated Value

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.12.1  
Coal Storage Pile - Groundwater

Parameter	Regulatory Data, µg/L			Historical Data, µg/L	
	MCL	MCLG	PRG	PII	MW-901 (19.7')
<u>Volatiles</u>					
Tetrachloroethylene	5	0	0.1		199
<u>Other</u>					
Chloroform	80	0	0.17		0.68

Environmental Protection Agency, Maximum Containment Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Containment Limit Goal (MCLG) exceedance  
 MCL/MCLG exceedance  
 Environmental Protection Agency, Region (X Preliminary Remediation Goal (PRG) exceedance  
 MCL/MCLG/PRG exceedance  
 Estimated Value  
 MCL or MCLG / PRG exceedance

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services, January 5, 2006



Table 5.4.12.2  
Coal Storage Pile - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg		
		P11		
	PRG	MW-901(1-3')	MW-901(12-13')	MW-902 (1-3') MW-903 (1-3')
<b>Metals</b>				
Arsenic	390	1,300		2,600 1,300
Barium	5,400,000		97,300	21,200
Chromium	210,000	17,500	1,200	22,400 28,600
Lead	400,000			11,100
Mercury	23,000			100 160

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

P11 - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006

Table 5.4.13

Septic Tank; Temporary  
for Warehouse - Groundwater

Parameter	Regulatory Data, µg/L			Due Diligence, µg/L	
	MCL	MCLG	PRG	TST-A (9.28' - 24.93')	TST-C (9.1' - 24.7')
<u>Volatiles</u>					
Trichloroethylene	5	0	0.028	1.5	
<u>Metals</u>					
Barium	2,000	2,000	2,600	<200	<200
Barium, dissolved	2,000	2,000	2,600	200	200
Cadmium	5	5	18	<0.1	<0.1
Cadmium, dissolved	5	5	18	<0.1	0.1
Nickel			730		40
<u>Other</u>					
Chloroform	80		0.17	2	



Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance  
 MCL/MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL/MCLG/PRG exceedance  
 Estimated Value  
 MCL or MCLG / PRG exceedance

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc., by Goldie & Associates, Inc., December - June, 2007

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg		
	TCLP	PRG	Sample Points		
			Bleach Area 1 (1'-2.5')	Bleach Area 2 (1'-2.5')	Bleach Area 3 (1'-2.5')
<b>Volatiles</b>					
Acetone		14,000,000	25.7		5.26
2-Butanone		22,000,000	2.76		
1,2-Dichloroethylene total		112,000	12.4		
cis-1,2-Dichloroethylene		4,300,000	11.9		
trans-1,2, Dichloroethylene		69,000	0.511		
Tetrachloroethylene		480	1.6		
Trichloroethylene		53	0.466		
1,2,4-Trimethylbenzene		52,000	0.234		
<b>Semi volatiles</b>					
Benzo(a)anthracene		620	29.4	39.2	
Benzo(a)pyrene		62	21.3	31	
Benzo(b)fluoranthene		620	38.7	60.2	
Benzo(ghi)perylene			17.3	37.2	
Chrysene		62,000	26	26.1	
Fluoranthene		2,300,000	45.8	50.1	
Indeno(1,2,3-cd)pyrene		620	105	118	
Naphthalene		56,000	0.549		
Phenanthrene			18.6	15.1	
Pyrene		2,300,000	32.6	39.4	
<b>Metals</b>					
Arsenic		390	15,600	19,300	14,100
Arsenic, TCLP	5,000		ND	ND	ND
Barium		5,400,000	21,900	24,500	22,200
Barium, TCLP	100,000		135	298	235
Chromium		210,000	27,900	26,900	23,000
Chromium, TCLP	5,000		ND	ND	ND
Chromium, hex		30,000		220	
Copper		3,100,000	11,500	12,800	9,310
Lead		400,000	17,500		21,100
Lead, TCLP	5,000		ND	ND	28.6
Mercury		23,000	77.5	85.3	127
Nickel		1,600,000	16,500	11,200	8,830
Silver		390,000		1,440	1,800
Silver, TCLP	5,000		ND	ND	ND
Zinc		2,300,000	29,400	30,600	20,600
<b>Other</b>					
Ammonia, Nitrogen			45,000		
pH			7.01	7.28	7.51

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value by analyzing (number range) depth of sample, inches and/or feet  
 ND non detect

Due Dilligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007



Table 5.4.14.2  
Dye Area - Soil

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg					
	TCLP	PRG	Sample Points					
			Dye Area 1 (1'-2')	Dye Area 2 (1'-2')	Dye Area 3 (1'-2')	Dye Area 4 (1'-2')	Dye Area 5 (1'-2')	
<b>Volatiles</b>								
Acetone		14,000,000		5.14	4.72		4.26	3.61
Carbon Disulfide		360,000	2.08					
1,1-Dichloroethylene		120,000		0.502				
Tetrachloroethylene		480			0.309			12.7
<b>Metals</b>								
Arsenic		390	28,500	30,000	39,700	37,200	44,400	
Arsenic, TCLP	5,000		ND	ND	ND	ND	ND	ND
Barium		5,400,000	14,300	13,400	13,400	16,200		
Barium, TCLP	100,000		302	273	228	103	74.1	
Chromium		210,000	25,500	26,600	27,600	49,200	48,900	
Chromium, TCLP	5,000		ND	ND	ND	ND	ND	ND
Chromium, hex		30,000		72.8	159	138	292	
Copper		3,100,000	10,800	11,600	13,600	27,900	22,500	
Lead		400,000	15,600			27,700	22,500	
Lead, TCLP	5,000		ND	ND	30.1	ND	ND	ND
Mercury		23,000	44.6	53.9	63.9	50.6	88.7	
Nickel		1,600,000	11,900	12,800	14,700	24,900	23,900	
Silver		390,000	2,260	1,300	2,530	1,590	3,440	
Silver, TCLP	5,000		ND	ND	ND	ND	ND	ND
Zinc		2,300,000	22,800	26,900	30,600	50,000	42,300	
<b>Other</b>								
pH			5.46	4.69	4.67	5.01	5.25	

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value  
 ND - non detect

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.14.3  
Printing Area - Soil

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg		
	TCLP	PRG	Sample Points		
			Print 1 (1'-2')	Print 2 (1'-2')	Print 3 (1'-2')
<b>Volatiles</b>					
Acetone		14,000,000	17.8	3.83	9.55
n,-Butylbenzene		240,000	3.42		2.89
Ethylbenzene		400,000	0.368		0.261
4-Isopropyltoluene			1.38		1.06
n-Propylbenzene		240,000	0.576		0.476
Tetrachloroethylene		480	22.5	3.14	4.24
1,2,4-Trimethylbenzene		52,000	5.8		5.13
1,3,5-Trimethylbenzene		21,000	1.21		1.08
Xylenes(total)		270,000	2.36		1.48
m,p-Xylenes			1.56		0.998
o-Xylene			0.799		0.483
<b>Semi volatiles</b>					
Naphthalene		56,000	19.4		28.3
<b>Metals</b>					
Arsenic		390	38,100	53,000	29,300
Arsenic, TCLP	5,000		ND	ND	ND
Barium		5,400,000	23,600	17,400	15,700
Barium, TCLP	100,000		117	60.3	75.1
Cadmium		37,000		570	
Cadmium, TCLP	1,000			ND	
Chromium		210,000	31,200	38,700	43,700
Chromium, TCLP	5,000		ND	ND	ND
Chromium, hex		30,000	235	180	201
Copper		3,100,000	17,500	22,300	21,900
Lead		400,000	23,200	23,000	20,900
Lead, TCLP	5,000		ND	ND	ND
Mercury		23,000	97.1	125	101
Nickel		1,600,000	18,500	26,500	21,300
Silver		390,000	1,040	1,380	1,620
Silver, TCLP	5,000		ND	ND	ND
Zinc		2,300,000	32,800	43,400	37,100
<b>Other</b>					
Ammonia, Nitrogen			12,200		
pH			6.43	5.19	5.04

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value  
 ND Non Detect

Due Dilligence - Field sampling and site reconaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007



Table 5.4.14.4  
Finishing Lab Area - Soil

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg Sample Point Finishing (Chem) Lab (1'-2.5')
	TCLP	PRG	
<u>Volatiles</u>			
Acetone		14,000,000	4.04
<u>Metals</u>			
Arsenic		390	38,900
Arsenic, TCLP	5,000		ND
Barium		5,400,000	81,800
Barium, TCLP	100,000		784
Chromium		210,000	74,300
Chromium, TCLP	5,000		ND
Chromium, (hex)		30,000	479
Copper		3,100,000	46,200
Lead		400,000	43,700
Lead, TCLP	5,000		26.4
Mercury		23,000	32.1
Nickel		1,600,000	43,000
Silver		390,000	5,530
Silver, TCLP	5,000		ND
Zinc		2,300,000	87,800
<u>Other</u>			
pH			5.24

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value  
 non detect

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.14.5  
Screen Printing Dye Vault - Solid

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg Sample Points Dye Vault (1" -6")
	TCLP	PRG	
<b>Metals</b>			
Arsenic		390	22,500
Arsenic, TCLP	5,000		ND
Barium		5,400,000	<7,270
Barium, TCLP	100,000		42.6
Cadmium		37,000	<360
Chromium		210,000	<3,630
Chromium, hex		30,000	65.7
Copper		3,100,000	296,000
Lead		400,000	<7,270
Mercury		23,000	3.24
Nickel		1,600,000	5,030
Selenium		390,000	<1,400
Silver		390,000	1,430
Silver, TCLP	5,000		ND
Zinc		2,300,000	15,300

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value  
 TCLP / PRG exceedance  
 ND non detect

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.14.6  
Basement - Soil, Floor

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg		
	TCLP	PRG	Basement-1 (1'-2.5')	Basement - 1 CR Chem. Room (1'-2.5')	Basement Tunnel (Surficial Concrete)
<b>Volatiles</b>					
Acetone			9.75		
Tetrachloroethylene			15.4	1.25	
<b>Semi Volatiles</b>					
Naphthalene				0.336	
<b>Metals</b>					
Arsenic	5,000	390	26,200	33,200	<3400
Arsenic, TCLP	5,000		ND	ND	62.1
Barium		5,400,000	<15,400	<17,100	109,000
Cadmium		37,000	<770	<850	<12,300
Chromium		210,000	10,200	13,100	12,000
Chromium (hex)		30,000			2,670
Copper		3,100,000	7,820	18,600	6,460
Lead		400,000	19,100	22,400	<12,300
Mercury		23,000	18.5	20.7	
Nickel		1,600,000	4,940	6,140	12,300
Selenium		390,000	1,400	3,000	<500
Silver		390,000	<1,620	<1,920	2,310
Zinc		2,300,000	7,820	15,400	12,300

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value  
 TCLP / PRG exceedance  
 ND non detect

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December -



Table 5.4.15  
Waste Pilot Plant - Soil

Parameter	Regulatory Data, µg/kg PRG	Due Diligence, µg/kg Sample Points	
		WPPSE-1 (5' - 10')	WPPNW-2 (4' - 8.5')
<b>Volatiles</b>			
Acetone	14,000,000		58.8
2-Butanone	22,000,000		6
1,1-Dichloroethylene	120,000		0.972
1,2-Dichloroethylene, total	112,000		0.454
Ethylbenzene	400,000		1.28
Isopropylbenzene			0.282
Tetrachloroethylene	480	0.396	
<b>Semi volatiles</b>			
Naphthlene	56,000		1.3
<b>Metals</b>			
Arsenic	390	28,500	23,800
Barium	5,400,000	31,900	44,600
Chromium	210,000	28,900	145,000
Chromium, hex	30,000	109	
Copper	3,100,000	15,100	34,400
Lead	400,000	24,300	26,000
Mercury	23,000	50.9	30.5
Nickel	1,600,000	14,300	46,700
Selenium	390,000	1,700	2,160
Zinc	2,300,000	26,500	48,200
<b>Other</b>			
PCB (A-1260)	risk based		4.4
pH		4.81	5.49
Sulfate		5,870	113,000

TCLP? →

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.16  
Maintenance Shop - Soil

Parameter	Regulatory Data, µg/kg		Due Diligence, µg/kg Sample Points Maint. Area 1 (1' - 2')
	TCLP	PRG	
<b>Volatiles</b>			
Acetone		14,000,000	3.66
1,1-Dichloroethylene		120,000	0.633
Tetrachloroethylene		480	0.315
<b>Semi volatiles</b>			
Naphthalene		56,000	0.53
<b>Metals</b>			
Arsenic		390	25,300
Arsenic, TCLP	5,000		ND
Barium		5,400,000	15,500
Barium, TCLP	100,000		96.1
Chromium		210,000	57,000
Chromium, TCLP	5,000		ND
Chromium, hex		30,000	288
Copper		3,100,000	26,000
Lead		400,000	37,500
Lead, TCLP	5,000		42.6
Mercury		2,300	96.5
Nickel		1,600,000	22,000
Silver		390,000	2,300
Silver, TCLP	5,000		ND
Zinc		2,300,000	46,400
<b>Other</b>			
pH			5.31

Environmental Protection Agency, Toxic Characteristic Leaching Procedure (TCLP) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 Estimated Value  
 ND non detect

Due Diligence - Field sampling and site reconnaissance conducted on behalf of  
 Pointe West, Inc. by Goldie & Associates, Inc., December - June, 2007

Table 5.4.17.1  
110,000 Gallon Fuel Oil  
Above Ground Storage Tank - Groundwater

Parameter	Regulatory Data, µg/L			Historical Data, µg/L	
	MCL	MCLG	PRG	MW-401 (12'-13')	P11 MW-402 (12'-13')
<b>Volatiles</b>					
cis -1,2-Dichloroethane	5	0	0.12	1.3	
Trichloroethylene	5	0	0.028	3.2	2.5
<b>Metals</b>					
Cadmium	5	5	18		5.4
Cadmium, filtered	5	5	18		5.4

Environmental Protection Agency, Maximum Containment Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Containment Limit Goal (MCLG) exceedance  
 MCL / MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL / MCLG / PRG exceedance  
 Estimated Value  
 MCL or MCLG / PRG exceedance

P11 - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006

Table 5.4.17.2  
110,000 Gallon Fuel Oil  
Above Ground Storage Tank - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg
	PRG	PII MW-401(12'-13' )   MW-402 (12'-13' )
<u>Metals</u>		
Arsenic	390	670
Barium	5,400,000	25,700
Chromium	210,000	4,600
		8,200

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006



Above Ground Storage Tanks  
Process Chemical Storage; Large Area - Groundwater

Parameter	Regulatory Data, µg/L			Historical Data, µg/L	
	MCL	MCLG	PRG	MW-101 (2'-3')	PII
<b>Volatiles</b>					
Acetone			5,500		361
Carbon Disulfide			1,000		11.9
Chlorobenzene	100	100	110		1.9
Chloroform	80		0.17		0.91
1,2-Dichloroethane	5	0	0.12		1.4
Methyl Ethyl Ketone			7000		559
4-Methyl-2-Pentanone					3.3
Toluene	1,000	1,000	720		0.7
<b>Semi volatiles</b>					
Naphthalene					3.7
<b>Metals</b>					
Barium	2,000	2,000	2,600		662
Chromium	100	100	55,000		187
Chromium, filtered	100	100	55,000		11.8
Lead	15	0			125
Lead, filtered					ND
Selenium	50	50	180		87.9
<b>Other</b>					
TPH-DRO			10,000		14,000

Environmental Protection Agency, Maximum Containment Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Containment Limit Goal (MCLG) exceedance  
 MCL / MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL / MCLG / PRG exceedance  
 Estimated Value  
 Estimated Value/PRG exceedance  
 MCL or MCLG / PRG exceedance  
 total petroleum hydrocarbons, diesel range organics  
 non detect

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services, January 5, 2006

Above Ground Storage Tanks  
Process Chemical Storage: Large Area - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg	
	PRG	MW-101 (2'-3')	PII MW-101 (13'-15')
<b>Volatiles</b>			
Acetone	14,000,000	52.2	
Carbon Disulfide	360,000		16
<b>Metals</b>			
Arsenic	390	1,300	1,000
Barium	5,400,000	25,900	28,700
Chromium	210,000	15,300	10,000
Lead	400,000	17,600	
Mercury	23,000	110	150

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006

Table 5.4.18.1  
Polyvinyl Alcohol Basin - Groundwater

Parameter	Regulatory Data, µg/L			Historical Data, µg/L	
	MCL	MCLG	PRG	PII	PII
<b>Volatiles</b>				MW-301 (13.91')	MW-302 (15.91')
Benzene	5	0	0.35	1.7	
Tetrachloroethylene	5	0	0.1		0.73
Trichloroethylene	5	0	0.028		0.68
<b>Metals</b>					
Chromium	100	100	55,000	48.8	
Chromium, filtered				ND	
Lead	15	0		15.4	
Lead, filtered				ND	

Environmental Protection Agency, Maximum Containment Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Containment Limit Goal (MCLG) exceedance  
 MCL / MCLG exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL / MCLG / PRG exceedance  
 Estimated Value  
 MCL or MCLG / PRG exceedance  
 non detect  
 ND

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006

Table 5.4.18.2  
Polyvinyl Alcohol Basin - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg	
	PRG	MW-301 (9'-10')	PII MW-302 (12'-13')
<b>Metals</b>			
Arsenic	390	770	1,200
Chromium	210,000	11,800	11,300
Mercury	23,000	110	

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006



Table 5.4.20.1  
Wastewater Treatment Plant  
Aeration Basins - Groundwater

Parameter	Regulatory Data, µg/L		Historical Data, µg/kg
	MCL	MCLG	PII LF3-4 (34.65')
Other			
Nitrate Nitrogen	10,000	10,000	10,000 6,300

Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance  
 Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance  
 MCL / MCLG exceedance  
 Environmental Protection Agency, Secondary Drinking Water Limit (2ND DW) exceedance  
 Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
 MCL / MCLG / PRG exceedance  
 Estimated Value

PII - Phase II Site Investigation - WestPoint Home, Philip Environmental Services,  
January 5, 2006



Table 5.4.20.2  
Wastewater Treatment Plant  
Aeration Basins - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg	
	PRG	MW-201(15-16')	P11 MW-202 (15-16')
<b>Volatiles</b>			
Acetone	14,000,000	70,100	
<b>Metals</b>			
Arsenic	390	1,100	
Chromium	210,000	20,300	2,400
Lead	400,000		18,500
Mercury	23,000	120	

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

P11 - Phase II Site Investigation - WestPoint Home, Philip Environmental Services, January 5, 2006

Wastewater Treatment Plant  
Above Ground Storage Tank Area - Groundwater

Parameter	Regulatory Data, µg/L	Due Diligence, µg/L	
		Sample Points	
	2ND DW	WWT-A (42.3' - 54.8')	WWT-B (44.5' - 52.3')
Other			
Chloride	250,000	2,500	358,000
Sodium		5,840	48,200
Sulfate	250,000	124,000	36,000

- Environmental Protection Agency, Maximum Contaminant Limit (MCL) exceedance
- Environmental Protection Agency, Maximum Contaminant Limit Goal (MCLG) exceedance
- MCL / MCLG exceedance
- Environmental Protection Agency, Secondary Drinking Water Limit (2ND DW) exceedance
- Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance
- MCL / MCLG / PRG exceedance
- Estimated Value

Due Diligence - Field sampling and site reconnaissance conducted on behalf of Pointe West, Inc., by Goldie & Associates, Inc., December - June, 2007

Table 5.4.20.4  
Wastewater Treatment Plant  
Above Ground Storage Tank Area - Soil

Parameter	Regulatory Data, µg/kg	Historical Data, µg/kg	
		SSI SS-12 (6")	Law Engineering SS-12 (6")
<b>Metals</b>			
Barium	5,400,000	18,000	30,000
Chromium	210,000	27,000	27,000
Copper	3,100,000	8,200	25,000
Lead	400	6,000	12,000
Manganese	1,080,000	160,000	210,000
Nickel	1,600,000		5,100

Environmental Protection Agency, Region IX Preliminary Remediation Goal (PRG) exceedance  
Estimated Value

SSI - Screening Site Assessment Report, South Carolina Department of Health and Environmental Control, January 23, 1991

Law Engineering - Report of Soil and Ground Water Sampling - West Point Pepperell, Law Engineering, November 6, 1990

Table 5.4.21  
Background Data

Parameter	Regulatory Data			Soil µg/kg PRG	Law Engineering			Historical Data			Canova, ppb	
	MCL	MCLG	PRG		PW-1, µg/L	SS-5, µg/L	PW-1, µg/L	SS-5, µg/L	ESI	001-SS, µg/L	002-SS, µg/L	Average
<b>Metals</b>												
Arsenic (Dissolved)	10	0	0.045	390	<50	<500	<5	690	2,800	3,400	11,000	ND-210,000
Barium (Dissolved)	2,000	2,000	2,600	5,400,000	<50	24,000	<100	24,000			59,000	ND-370,000
Cadmium (Dissolved)	5	5	18	37,000			<2	<200			1,000	ND-17,000
Chromium (Dissolved)	100	100	55,000	210,000	10		<5	20,000				ND-140,000
Cobalt				900							4,000	ND-34,000
Copper (Dissolved)	1,300	1,300	1,500	3,100,000			20	8,100	11,000	6,600	13,000	ND-92,000
Cyanide	15	0		400,000		11,000	NT	<500			16,000	ND-200,000
Lead (Dissolved)	15	0					<5	9,500				
Magnesium							NT					
Manganese	2	2	11	1,080,000	10		<30	360,000	380,000	1,400,000	1,916,000	7,400-17,000,000
Mercury (Dissolved)	2	2	11	23,000			<5	<100	130U	120U	235,000	ND-2,400,000
Nickel (Dissolved)				1,600,000	<20	2,000	<40	4,600			9,000	ND-47,000
Selenium (Dissolved)	50	50	180	390,000			<5	<500			900	ND-2,400
Silver (Dissolved)	50	50	180	390,000			<10	<1,000	2,000U	2,000U	4,000	ND-61,000
Sodium												ND-1,250,000
Thallium				5,200							4,500	ND-270,000
Zinc (Dissolved)				2,300,000							34,000	ND-170,000
<b>Volatiles</b>												
1,1,1-Trichloroethane	200	200	3,200		<2		<25	<5				
1,2-Benzene dicarboxylic Acid, Butylcyclohexylester					ND							
Cyclohexene				22,000,000	ND			<100				
2-Butanone												
4,4'-Butylenediene 2-(1,1-dimethylethyl) 5-Methylphenol												
4-hydroxy-3-methoxybenzaldehyde												
Acetone				14,000,000	ND			<100				
Benzene	5	0	0.35	640				<5				
Methylene Chloride								<5				
PCB (EPA Meth 8080)								<80				
Toluene	1,000	1,000	720					<5				
2-9-Octadecen-1-OL					ND							
<b>Semi-Volatiles</b>												
1-Hexadecene					ND							
2-4-Hexadiene					ND							



Table 5.4.21  
Background Data

Parameter	Regulatory Data			Soil µg/kg	Law Engineering	Historical Data			Canova, ppb	
	MCL	MCLG	PRG			SSI	ESI	GDMR 1994-2004		Average
2-Chlorophenol										
Cyclohexane (ACN)										
Cyclotetradecane										
2-Methylnaphthalene										
Anthracene										
Benzo (a) Anthracene										
Benzo (a) Pyrene										
Benzo (b) Fluoranthene										
Benzo (g,h,i) Perylene										
Benzo (k) Fluoranthene										
Benzoic Acid										
Bis (2-Ethylhexyl) Phthalate										
Butylbenzyl Phthalate										
Chrysene										
Di-N-butylphthalate										
Fluoranthene										
Indeno (1,2,3-cd) Pyrene										
4-Methyl Phenol										
Naphthalene										
PCB (EPA Meth 608)										
Phenanthrene										
Phenol										
Phenols (Total)										
Pyrene										
<b>Other</b>										
Alkalinity										
COD										
Nitrate-Nitrite										
PCB 1260										
pH										
Specific Conductivity										
TDS										
TOC										
Trimethylsilanol (Tent ID Command)										

MCL - Environmental Protection Agency, Maximum Contaminant Limit  
MCLG - Environmental Protection Agency, Maximum Contaminant Limit Goal  
PRG - Environmental Protection Agency, Region IX, Preliminary Remediation Goal

pH - potential of hydrogen  
TCDD - tetrachlorodibenzodioxin  
COD - chemical oxygen demand  
PCB - polychlorinated biphenyl  
TDS - total dissolved solids  
TOC - total organic carbon

SSI - Screening Site Assessment Report, South Carolina Department of Health and Environmental Control, January 23, 1991  
Law Engineering - Report of Soil and Ground Water Sampling - West Point Pepperell, Law Engineering, November 6, 1990  
ESI - Expanded Site Inspection Report, South Carolina Department of Health and Environmental Control, January 18, 1996  
GDMR - Annual 2004 Groundwater Detection Monitoring Report for the Fly Ash Landfill, West Point Stevens, Atlanta Environmental Management, Inc., January 14, 2005  
Canova - Elements in South Carolina Inferred Background Soil And Stream Sediment Samples, South Carolina Geology, 1999, volume 41, pages 11 through 25



# Figures



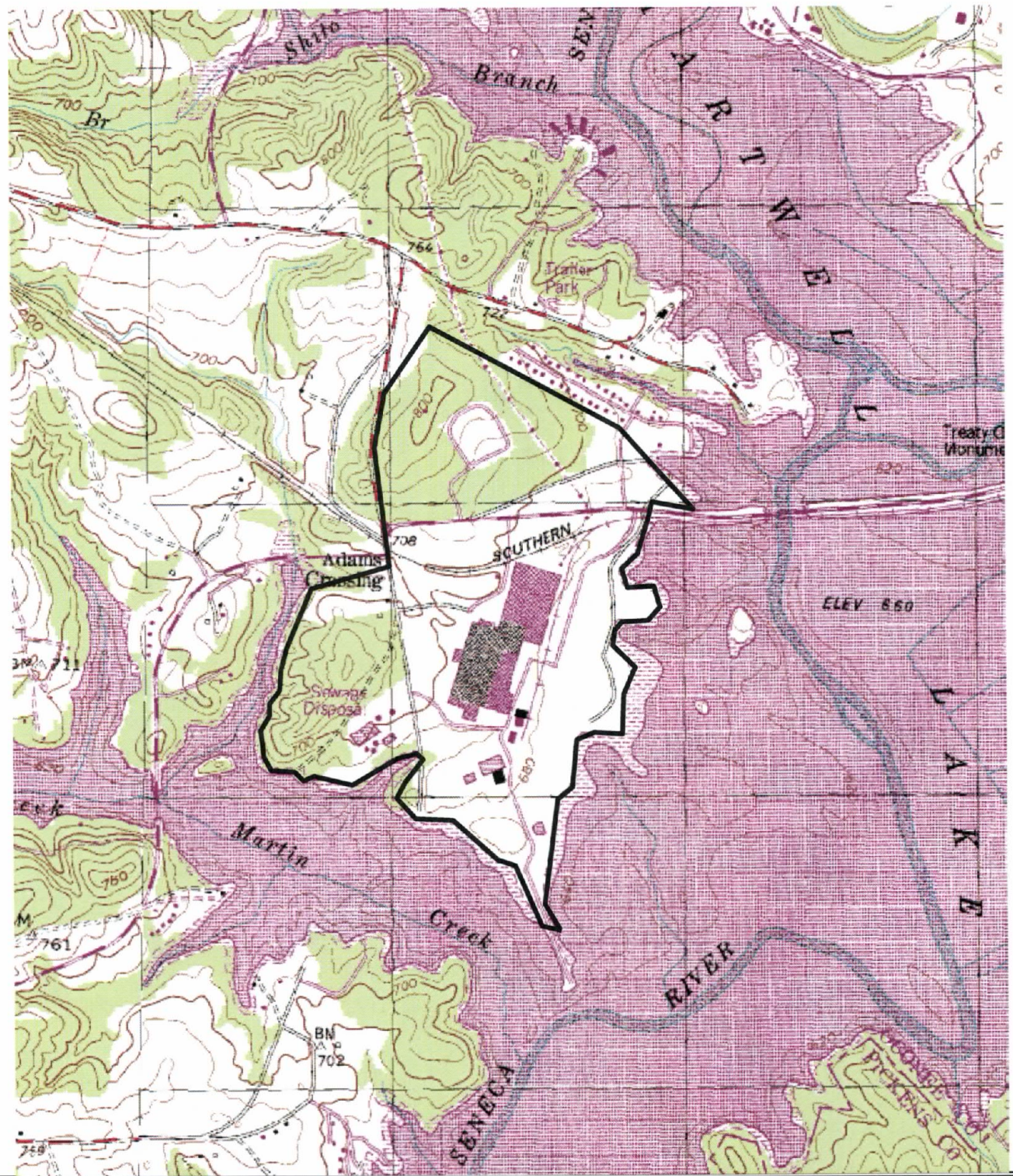
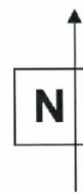


Figure 1.2.1: Topographic Site Setting  
 USGS (1:50 Series) Clemson Quad  
 WestPoint Stevens Facility

0 0.2 0.4 0.6 0.8 1 mi

Goldie & Associates  
 August 2007

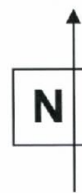






**Figure 1.2.2: Aerial Site Setting  
WestPoint Stevens Facility – Clemson**

0 0.2 0.4 0.6 0.8 1 mi

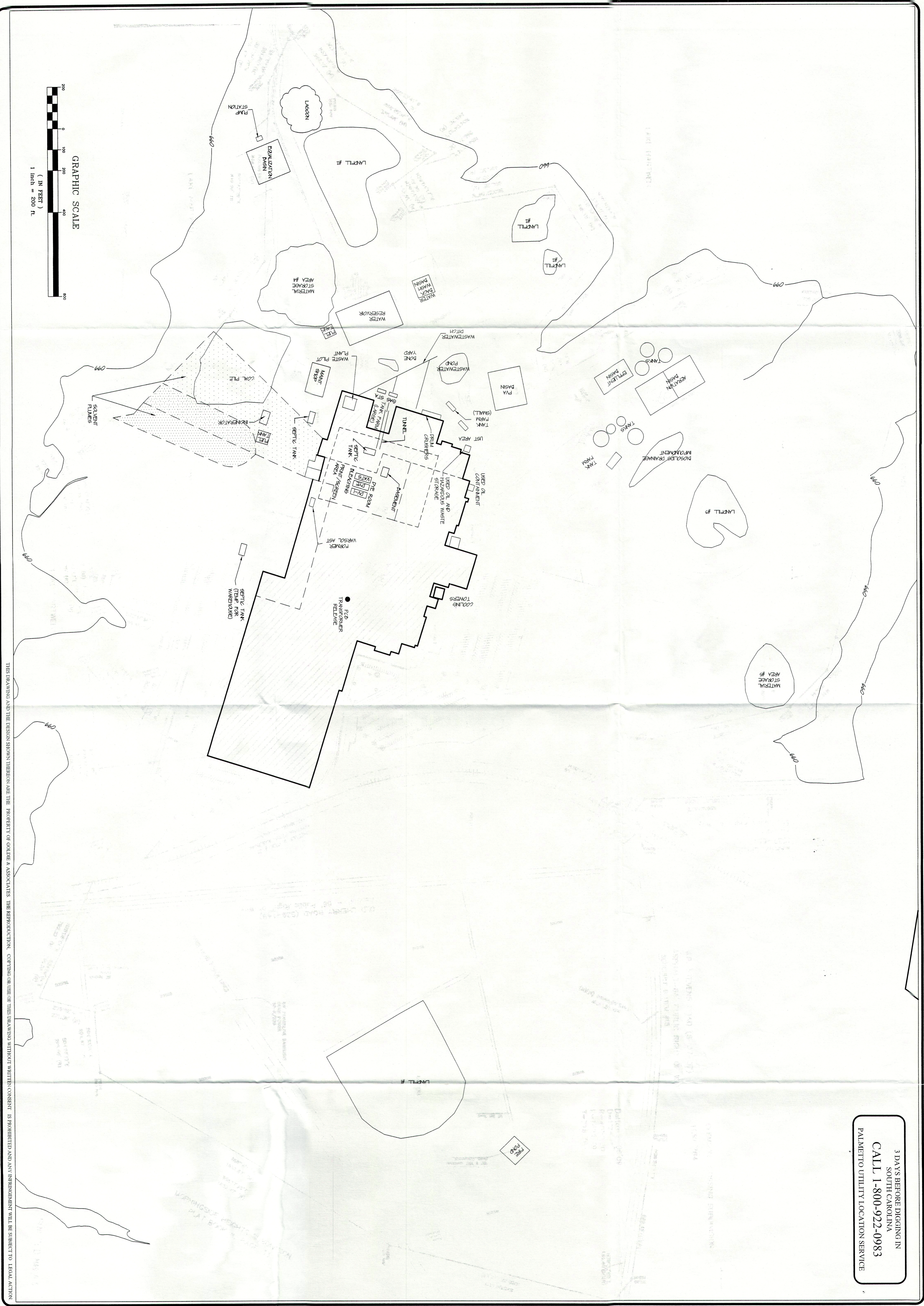
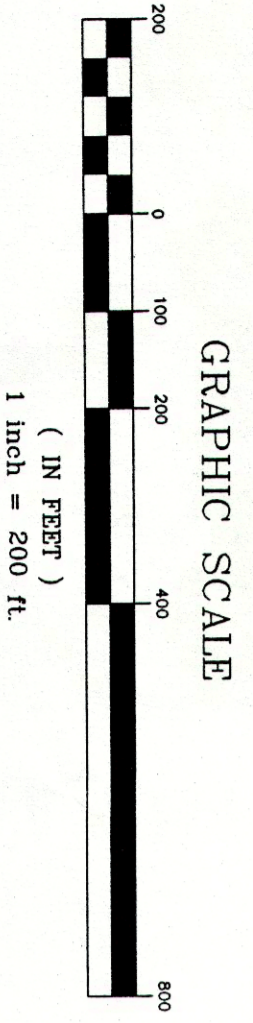


**Goldie & Associates  
June 2007**









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9646

CLIENT  
**POINTE WEST, INC.**  
PROJECT  
**WEST POINT HOME**  
SHEET TITLE  
**FIGURE 1.3 SITE FEATURES**

NO.	DATE	DESCRIPTION	BY:
A	12/15/06	RELEASE FOR PLANNING	AP
B	3/1/07	RELEASE FOR REVIEW	BM
C	5/21/07	RELEASE FOR DHEC SUBMISSION	BM
D	6/8/07	RELEASE FOR SUBMISSION	BM
E	8/10/07	RELEASE FOR LIMITED SITE ASSESSMENT	BM

ENGINEER'S STAMP

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**Appendix A**  
**Reference Documents**

## West Point Stevens - INDEX

	<b>Title/Description</b>
<b>Communications</b>	
Various emails	
Ms. Lee Hancock – Request removal of Power Substation Schedule 1 (Selected deliveries)	
Clemson Removal Update	
Oconee County Court Action for WPS Site Lease by JP Stevens to Duke Power Company	
Dept of Army Easement for right-of-way	
DHEC Consent Agreement 06-163-W	
Groundwater Data	
Scope of Work for Proposed Add'l Testing, Pilot testing and Registrat'n for Well Installation Approval	
App. 2 – Site Location Figures for Environmental Sampling	
App 3. Data Tables	
Report of Preliminary Geotech Exploration	
Response to Document Request	
<b>PSC Drawings/Figures</b>	
Area 3 – PVA Basin;	
Area 8 – Landfill #2;	
Area 9 – Former Coal Pile	
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Figure 6: Area 2 – WWT	
Figure 7: Area 4 – 110,000 gallon fuel oil AST	
Figure 8: Area 5 – Landfill #4	
Figure 9: Geotechnical Borehole locations	
<b>Martin Creek Pump Station and WestPoint Stevens WWTP Evaluation Report (Draft Copy)</b>	
<b>Engineering Report South Landfill Site Sludge and Ash Disposal Area</b>	
<b>Closure Plan and Post-Closure Plan Fly Ash Landfill</b>	
<b>Phase II Site Investigation, WestPoint Home, Clemson, South Carolina, January 5, 2006</b>	



**Site Investigation Report, WestPoint Home, Clemson, South Carolina, December 1, 2006**  
**Phase 1 Environmental Site Assessment, Clemson Complex, March 2005**

Appendix A – E

Appendix F – Other Reports (see listing for Appendix F - separate manual)

Appendix G – Site Photographs

Appendix H – Interview Documentation

**Limited Asbestos Survey Report, West Point Stevens Facility, Clemson, South Carolina, March 9, 2006**  
**Asbestos Survey And Inspection Report, WestPoint Home Facility, January 2007**

## **DRAWINGS**

**Changes made to sewer system when plant was expanded in 1989**

Finishing Plant Expansions p1

Finishing Plant Expansions p2

Finishing Plant Expansions p4

### **WWTP PVA Basin**

SP-1 Treatment Facilities Site Plan

SP-3 Equalization Basin and Yard Site Plan

SP-4 Equalization Basin and Yard Grading Plan

### **Original Sewer Plans (March 1975)**

Collection system p1

Collection system p2

Collection system p3

Collection system p4

Collection system p5

### **Fly Ash Closure Plan**

1 Cover Sheet / Site Location Map

2 Existing Conditions

3 Erosion Control and Subgrade Preparation

4 Landfill Cover Design

5 Detail Sheet  
WPS Preliminary Site Plan  
Engineering Report South Sludge Landfill #2 Closure Plan  
Piedmont – South Landfill – Location Map 1 of 3  
Piedmont – South Land Disposal Area – 1082 Partial Closure Plan 2 of 3  
Piedmont – South Land Disposal Area – Future Final Closure Plan 3 of 3

### **WPS Wetlands Delineation**

(letter) Eddie Lanier--Wetlands Delineation  
WP Home Clemson Complex --Wetland Delineation  
1 Story Masonry Plant (WPS Oconee Resurvey)  
2 Fly Ash Landfill Map (WPS Oconee Resurvey)  
3 Story Masonry Plant Map (WPS Oconee Resurvey)  
4 Lake Hartwell/Diffusion Pipe Map (WPS Oconee Resurvey)

### **Appendix F – Other Reports (2005 Phase I)**

Current Inventory of 64 Above-Ground Bulk Tanks  
Former Bulk Chemicals  
Analytical Results from Soil Borings  
Development of Landfills for Disposal of Boiler Plant Fly Ash and Wastewater  
Engineering Report – South Landfill Site  
Engineering Report – South Sludge Landfill #2  
IWP 104 Closure Letter  
EPA Notification of Hazardous Waste Site  
Landfill Permit Letter – To Gorman, From Harris  
Landfill Permit Letter – To Lanier, From Gill  
Industrial Waste Permit  
Letter Pertaining to Incorporation of Non-Stabilized Sludge, Fly Ash and Clay as a Final Cap Material  
Sampling Analysis Plan  
Monitoring Well installation Approval Letter



Cover Material for Fly Ash Landfill Approval Letter  
Sludge Stabilizing Cap Material Approval Letter  
Fly Ash Landfill Memo  
RMT, Inc. Sampling and Analysis  
Sludge Storage Area Groundwater Nitrate/pH Levels Letter  
Landfill Closure Extension Approval Letter  
Landfill Closure Verification Letter  
Water Level Elevations of the Shallow Aquifer Drawing  
Request for Alternate Nitrate MCL  
Letter – Re: Groundwater Plan Received by DHEC  
Groundwater Detection Monitoring Report Introduction  
Screening Site Inspection  
Addendum to Report of Soil and Groundwater Sampling  
Screening Site Inspection Response Letter  
Site Inspection Prioritization  
Expanded Site Inspection Letter  
Location Map  
Written Account of Sludge Runoff Incident DRAFT  
Written Account of Sludge Runoff Incident FAX with drawings  
Proposed Consent Order  
Corrective Action Plan Sludge Staging Area  
Consent Order  
Memo from Joyce Peterson  
Report of Soil and Ground Water Sampling  
DHEC Expanded Site Investigation Report  
Spill History – 2003 update  
Transformer Incident Telephone Notes  
Bio Solids Truck Accident Telephone Notes  
Transformer Incident Meeting Notes  
Disposal of PCB Materials

Food Examination Reports  
Questions Concerning Food Service Area Letter  
PCB Analysis on Sump Water from Air Washer  
PCB Analysis – Air Samplings  
Notice Regarding Transformer Malfunction  
Shipping Manifest  
Press Release of Transformer Explosion  
Plant Evacuation Report



**Appendix B**  
**Developer Due Diligence**  
**Analyses**





WestPoint Home  
Potential Purchase Due Diligence Sampling  
Building Underdevelopment

Constituents	Feature, soil ug/kg															Reg Limit, ug/L or /kg							
	Print Area #1	Print Area #2	Print Area #3	Dye Area #1	Dye Area #2	Dye Area #3	Dye Area #4	Dye Area #5	Bleach Area #1	Bleach Area #2	Bleach Area #3	Finishing (Chem) Lab	Maintenance Area #1 (detached bldg)	Dye Vault	Basement-1	CR Basement-1 (chem rm.)	Basement Tunnel	WPPSE-1	WPPNW-2	TCLP	PRG	Comments	
Selenium	<1500	<1600	<1600	<1700	<2100	<1800	<1500	<1300	<1400	<1700	<1500	<1800	<1900	<1400	1400	3000	<500	1700	2160		390,000		
Selenium, TCLP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1620	<1920	2310	<2300	<1600		390,000		
Silver	1040	1380	1620	2260	1300	2530	1590	3440	<1660	1440	1800	5530	2300	1430	<1620	<1920	2310	<2300	<1600		390,000		
Silver, TCLP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1620	<1920	2310	<2300	<1600		390,000		
Zinc	32800	43400	37100	22800	26900	30600	50000	42300	29400	30600	20500	87800	46400	15300	7820	15400	12300	26500	48200		2,300,000		
<b>Other</b>																							
Ammonia, Nitrogen	12200	<5000	<5000	<5000	<5000	<5000	<5000	<5000	45000	<5000	<5000	<5000	<5000		<8500	<11000	<11800	<7000	<9000		risk based	Not Listed	
PCB's	6.43	5.19	5.04	5.46	4.69	4.67	5.01	5.25	7.01	7.28	7.51	5.24	5.31	9.91	5.21	5.21	12	4.81	4.4 (A-1260)			EPA-based risk calc	
pH															1400000	743000	804000	5870	5.49				<2.0, ≥12.5 hazardous
Sulfite																		5870	113000				Not Listed

TCLP - toxic characteristic leaching procedure: 40CFR261.24  
 PRG - Preliminary Remediation Goals: EPA Region IX, Technical Support Section, October 2004, Version 9  
 PCB - Aroclor 1254 associated with explosion  
 ND or [ ] - not present at detection limit

WestPoint Home  
Potential Purchase Due Diligence Sampling  
Landfill - Debris Storage

Constituents	Feature, soil ug/kg											Reg Limit, µg/L or/kg		Comments		
	LF1-CB	LF2-SCB	LF5-CB	LF2-EXT	LF3-ACB	LF5-C	LF5-D	LF5-D-15	LF5-D-35	LF5-E	LF5-E-10	LF5-E-25	TCLP		PRG	
<b>Volatiles</b>																
Acetone												101		14,000,000		
2-Butanone												21.3		22,000,000		
1,4-Dichlorobenzene							0.752	0.565			0.887			3,400		
<b>Semivolatiles</b>																
Anthracene		190			42.6									22,000		
Benzo(a)anthracene		504			239									620		
Benzo(a)pyrene		375												62		
Benzo(b)fluoranthene		713			408									620		
Benzo(ghi)perylene		254													Not Listed	
Chrysene		467			251									62,000		
Fluoranthene		918			351									2,300,000		
Indeno(1,2,3-cd)pyrene		212													Not Listed	
1-Methylnaphthalene	27.5				548	57.5									Not Listed	
2-Methylnaphthalene	33.1				635	73									Not Listed	
Naphthalene	27.6				465	69.7									Not Listed	
Phenanthrene	13.8	711			348									56,000		
Pyrene		779			295									2,300,000		
<b>Metals</b>																
Arsenic	24200	10800		12800	12700	19600	26200				29400			5,000	390	
Arsenic, TCLP						ND	ND				ND			5,000	390	
Barium	107000	49900		108000	57300	44700	153000				261000			100,000	5,400,000	
Cadmium	1870	4130		6090	870	<26100	<1140				<880			1,000	37,000	
Chromium	13900	26100		36000	26500	104000	16100				13900			5,000	210,000	
Chromium, hex	31.9	4450		4730	26.8	54.7					88.4				30,000	
Copper	52700	92200		260000	870	52000	23900				18600				3,100,000	
Lead	33700	61400		26900	17000	<26100	23600				23200			5,000	400,000	
Mercury	28.1	156		129	70.9	24.9	81.7				64.2			200	23,000	
Nickel	19500	10100		15600	9470	26100	15400				15700				1,600,000	
Selenium	<1300	<1100		<1000	70	<800	<900				<1100			1,000	390,000	
Silver	<1600	7690		3070	1910	<3040	<2390				<3480			5,000	390,000	
Thallium	485	244		218	253										5,200	
Zinc	59300	535000		1072000	46300	26100	9030				11400				2,300,000	
<b>Other</b>																
pH																≤2.0, ≥12.5 hazardous
2,3,7,8-TCDD	0.000278	0.000873	ND	0.000704	0.00115						5.65				0.0039	

TCLP - toxic characteristic leaching procedure; 40CFR261.24  
 PRG - Preliminary Remediation Goals; EPA Region IX, Technical Support Section, October 2004, Version 9  
 ND or  - not present at detection limit



WestPoint Home  
Potential Purchase Due Diligence Sampling  
Site Areas

Constituents	Feature, groundwater ug/L														Reg. Limit, ug/L				Comments						
	LUST #1	LUST #2	LUST #3	EB-B	EB-A	L-A	L-B	LF4-C	LF4-B	LF4-A	WT-B	WT-A	BY-A	BY-B	WWT-A	WWT-B	I-A	I-B		IST-A	IST-C	MCL	MCLG	TCLP	PRG
<b>Volatiles</b>																									
Acetone				7.6	4.2				68																5,500
Carbon Disulfide				6.4	16									15											1,000
1,2-Dichlorobenzene														1.3											7,500
1,4-Dichlorobenzene																									0.5
1,1-Dichloroethane	15																								810
1,1-Dichloroethylene	7.4																								340
1,1,2-Dichloroethylene total																									120
Tetrachloroethylene	16													2.1						1.5					500
Trichloroethylene																									0.028
1,1,1-Trichloroethane	14																								3,200
Trichloroethane																									1,300
<b>Semivolatiles</b>																									
<b>Metals</b>																									
Arsenic				<3	<3	3	3	<3	<3	25	<3			<3	4					<3	<3	10	0	5,000	0.045
Barium	60	70	20	<3	<3	4	<3	<3	<3	<3	<3			<3	<3					<3	<3	10	0	5,000	0.045
Barium, dissolved	80	70		<200	<200	880	<200	<200	<200	<200	<200			<200	<200					<200	<200	2,000	2,000	100,000	2,600
Cadmium				<0.1	<0.1	0.16	0.16	5.3	5.6	0.45	<0.1			<0.1	<0.1					<0.1	<0.1	5	5	1,000	18
Cadmium, dissolved				<0.1	<0.1	0.16	0.16	2	0.45	<0.1	<0.1			<0.1	<0.1					<0.1	<0.1	5	5	1,000	18
Chromium				<100	<100	<100	<100	170	140	<100	<100			<100	<100					<100	<100	100	100	5,000	55,000
Chromium, dissolved				<100	<100	<100	<100	110	<100	<100	<100			<100	<100					<100	<100	100	100	5,000	55,000
Chromium, dissolved, TCLP								157														100	100	5,000	55,000
Chromium, hex				<10	<10	<10	<10	21	<10	<10	<10			<10	<10					<10	<10	1,300	1,300	5,000	1,500
Copper				<10	<10	10	10	30	<10	10	<10			<10	<10					<10	<10	1,300	1,300	5,000	1,500
Copper, dissolved				<2	<2	2.7	30	31	<2	8	<2			<2	<2					<2	<2	15	0	5,000	
Lead				<2	<2	2.7	<2	<2	<2	4.6	<2			<2	<2					<2	<2	15	0	5,000	
Lead, dissolved				<2	<2	2.7	<2	<2	<2	0.08	<2			0.06	0.22					<2	<2	2	2	200	11
Mercury						0.61	0.37															2	2	200	11
Mercury, dissolved						0.33	0.3															2	2	200	11
Nickel				60	80	40	70	40	40	60	40			40	70					<30	<30	730	730	soluble salts	
Nickel, dissolved				<30	<30	<30	<30	<30	<30	<30	<30			<30	<30					<30	<30	50	50	1,000	180
Selenium				<3	<3	<3	4	4	<3	<3	<3			<3	<3					<3	<3	50	50	1,000	180
Selenium, dissolved				<3	<3	<3	<3	4	<3	<3	<3			<3	<3					<3	<3	50	50	1,000	180
Silver				<20	<20	<20	<20	<20	<20	<20	<20			<20	<20					<20	<20	5,000	5,000	100 2ndDW	
Silver, dissolved				<20	<20	<20	<20	<20	<20	<20	<20			<20	<20					<20	<20	5,000	5,000	100 2ndDW	
Zinc	90			<10	<10	110	110	150	<10	<10	<10			<10	<10					<10	<10	11,000	11,000	5,000 2ndDW	
Zinc, dissolved	90			<10	<10	110	110	150	<10	<10	<10			<10	<10					<10	<10	11,000	11,000	5,000 2ndDW	
<b>Other</b>																									
Ammonia, Nitrogen																									Not Listed
Chloride																									250,000 2ndDW
Chloroform																									MCL as TTHM
Octachlorodibenz-p-dioxin																									Not Listed
Sodium																									Not Listed
Sulfate																									250,000 2ndDW

MCL - maximum contaminant limit; <http://www.epa.gov/safewater/contaminants/index.html#8>  
MCLG - maximum contaminant limit goal; <http://www.epa.gov/safewater/contaminants/index.html#8>  
PRG - Preliminary Remediation Goals; EPA Region IX, Technical Support Section, October 2004, Version 9

TCLP - toxic characteristic leaching procedure; 40CFR261.24  
2ndDW - secondary drinking water standard; <http://www.epa.gov/safewater/contaminants/index.html#8>  
ND or [ ] - not present at detection limit

Goldie Associates Project No. 964.6.1 052107.rjm



WestPoint Home  
Potential Purchase Due Diligence Sampling  
Landfill - Debris Storage

Constituents	Feature, groundwater ug/L					Reg Limit, µg/L				Comments
	LF5-A1	LF5-A2	LF5-B	MCL	MCLG	TCLP	PRG			
<b>Volatiles</b>										
<b>Semivolatiles</b>										
Diethyl phthalate			2.3				29,000			
<b>Metals</b>										
Arsenic	42	24	<3	10	0	5,000	0.045			
Arsenic, dissolved	<3	<3	<3	10	0	5,000	0.045			
Barium	280	200	<200	2,000	2,000	100,000	2,600			
barium, dissolved	200	200	<200	2,000	2,000	100,000	2,600			
Cadmium	<0.1	<0.1	<0.1	5	5	1,000	18			
Cadmium, dissolved	<0.1	<0.1	0.1	5	5	1,000	18			
Chromium	120	<100	<100	100	100	5,000	55,000			
Chromium, dissolved	<100	<100	<100	100	100	5,000	55,000			
Copper	60	60	<10	1,300	1,300		1,500			1,000 2ndDW
Copper, dissolved	<10	<10	<10	1,300	1,300		1,500			1,000 2ndDW
Lead	19	35	<2	15	0	5,000				
Lead, dissolved	<2	<2	<2	15	0	5,000				
Nickel	40	30	<30				730			soluble salts
Nickel, dissolved	<30	<30	<30				730			Not Listed
Selenium	<3	<3	<3	50	50	1,000	180			
Selenium, dissolved	<3	<3	<3	50	50	1,000	180			
Silver	<20	20	<1			5,000	180			100 2ndDW
Silver, dissolved	<20	<20	<1			5,000	180			100 2ndDW
Zinc	20	50	<10				11,000			5,000 2ndDW
Zinc, dissolved	<10	<10	<10				11,000			5,000 2ndDW
<b>Other</b>										

MCL - maximum contaminant limit; <http://www.epa.gov/safewater/contaminants/index.html#8>  
MCLG - maximum contaminant limit goal; <http://www.epa.gov/safewater/contaminants/index.html#8>  
PRG - Preliminary Remediation Goals; EPA Region IX, Technical Support Section, October 2004, Version 2ndDW - toxic characteristic leaching procedure; 40CFR261.24  
TCLP - secondary drinking water standard; <http://www.epa.gov/safewater/contaminants/index.html#8>  
ND or  - not present at detection limit



**Appendix C**  
**Owner Provided Due**  
**Diligence Split Sample**  
**Analyses**