

## PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

Former Hanesbrands Site  
700 South Stratford Road  
Winston-Salem, Forsyth County, North Carolina

Delta Project 5E0703189P

November 2007



SUSTAINABLE STRATEGIES FOR GLOBAL LEADERS

*a member of:*



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This report was prepared for:

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**HANESBRANDS PRODUCTS FACILITY  
700 SOUTH STRATFORD ROAD  
WINSTON-SALEM, NORTH CAROLINA  
DELTA PROJECT NO. 5E0703-189P**

**1.0 INTRODUCTION**

**1.1 Purpose and Background Information**

Delta Consultants (Delta) was engaged by Hanesbrands, Inc. (Hanesbrands) to conduct a Phase II Environmental Site Assessment (Phase II ESA) of the property located at 700 Stratford Road, in Winston-Salem, North Carolina (the Site). The Site's center coordinates are 36° 58' 7.8" N latitude and 80° 17' 39.8" W longitude. A Subject Property Location Map and Site Map are included as **Figure 1** and **Figure 2**, respectively. Hanesbrands, Inc. of North Carolina is listed as the owner of the subject property. The Hanesbrands facility was recently closed and formerly produced textiles. The facility commenced operations at the site in the early 1900s.

The tasks executed and described herein were developed on the basis of identified recognized environmental conditions (RECs) associated with the existing and historical aspects of the Site and recommendations provided from a Phase I Environmental Site Assessment (Phase I ESA) recently completed by Delta. The RECs identified in the Phase I ESA and addressed in this investigation are as follows:

- **550-Gallon Fuel Oil UST Release – NCDENR Incident No. 5080**  
A release of petroleum product was discovered in 1989 during removal of a 550-gallon fuel oil underground storage tank (UST) located adjacent to personnel building in the southwest portion of the property. Groundwater remediation and monitoring was performed until approximately 1996. Free product was detected in 1995 and 1997 in a well located adjacent to former tank basin. Remediation was discontinued, the system decommissioned and an NPDES discharge permit rescinded in 1997, reportedly based on a 1996 low-priority site classification and temporary suspension of cleanup requirements. There is no regulatory documented closure of release incident. According to regulatory database records, the incident is open. There are two existing groundwater monitoring wells adjacent to former UST basin and one additional monitoring well at the north side of the personnel building.
- **20,000-Gallon Fuel Oil UST Release – NCDENR Incident No. 5640**  
There was documented evidence of a release of petroleum in 1989 during in-place closure of a 20,000-gallon fuel oil UST located at railroad spur Y-intersection/former water tower site, adjacent to northwest portion of dye house building. During assessment activities associated with in-place closure of the

UST in 1990, petroleum-impacted soils were detected. Based on the initial findings, tank removal and excavation of impacted soils was performed; however, soil excavation was discontinued due to Building Number 3 foundation structural integrity issues. Post-excavation soil sample analyses indicated the presence of soils containing petroleum hydrocarbon concentrations exceeding target cleanup levels in effect at that time. Three groundwater monitoring wells were subsequently installed to evaluate potential adverse impact to groundwater. Analytical testing of groundwater samples obtained from the wells did not detect dissolved petroleum constituent concentrations exceeding regulatory standards. There is no regulatory documented closure of the release incident.

- **10,000-Gallon Fuel Oil UST Abandoned in Place**  
Sodium silicate was inadvertently pumped into 10,000-gallon fuel oil storage tank located adjacent to the north side of the dye house building in 1988. The UST was reportedly closed in place by filling with concrete. No documentation was found in Hanesbrands or regulatory files relative to assessment for potential historical release(s) from the fuel oil UST at the time of closure.
- **Former Gasoline and Diesel Fuel UST Release Locations**  
A UST closure report in Hanesbrands files indicated 1987 removal and disposal of about 324 cubic yards of petroleum impacted soils associated with a 3,000-gallon gasoline UST and/or an 8,000-gallon diesel fuel UST (cumulative at both locations or individually was not specified). No substantiating data (i.e. tables or laboratory reports) was included documenting the reported efficacy of removal of petroleum impacted soils. NCDENR has no files pertaining to the release or cleanup.
- **Suspect Buried Materials in North and East Portions of Site and Documented Location of Drums and Contaminated Soil Removal (NCDENR Incident No. 14448)**  
Buried drums and contaminated soils were discovered during construction in the north-northeast portion of the property in 1993. Drums/materials and contaminated soils were removed and documented to the regulatory agency. There was no documentation of subsequent assessment or remediation. The release incident remains open, but Hanesbrands has received no contact from NCDENR since September 15, 1993.
- **Potential On-Site Historical Materials Burial Areas**  
Long-term site employees believed the potential existence of historical areas of buried materials in the eastern and northern portions of the property. There is no documented evidence of materials burial or adverse impact in these areas other than the 1993 discovery and remediation of buried drums and petroleum product impacted soils at a new construction area in the northeast portion of the site (NCDENR Incident No. 14448 previously described).
- **Reported Former Electroplating Area at Building No. 5**  
Electroplating activities were reported to have been historically performed in a building located adjacent to the east of the knitting/cutting/outlet store building

(present shop building). There has been no assessment for potential adverse environmental impact from the former electroplating operations.

## **1.2 Scope of Work**

On the basis of the above-described identified RECs, Delta developed a scope of work for a Phase II ESA to evaluate potential adverse environmental conditions at the site. The scope of Delta's work activities was performed consistent with Delta's *Work Plan for Phase II Environmental Assessment* dated July 13, 2007. An Asbestos Survey of the site was not a part of Delta's scope of work for this Phase II ESA. An Asbestos Survey Report for this site dated August 4, 2007, was prepared by Workplace Group of Greensboro, North Carolina. The scope of services provided by Delta for completion of the Phase II ESA included the following:

### **Task 1 – Geophysical Survey**

A geophysical survey was preliminarily conducted at selected areas of the property, specifically in the northern truck trailer parking lot and surrounding the Quonset Hut (chemical storage - Building Number 7), where reported buried materials may be located, in order to assist in locating of soil borings and temporary groundwater monitoring wells utilized in the assessment phase of this investigation.

### **Task 2 – Existing Monitoring Well Sampling**

Existing groundwater monitoring wells associated with documented former underground storage tank releases on site were also sampled as part of the initial investigation activities. Three existing on-site monitoring wells were located near the 550-gallon fuel oil UST near the office building in the southwestern portion of the site. Three additional monitoring wells were also located in the driveway between Building Number 3 and Building 5 on the southern portion of the site associated with a former 20,000-gallon fuel oil UST.

### **Task 3 – Private On-Site Utility Locating**

This task consisted of hiring a professional utility locator to provide subsurface utility clearance at each proposed soil boring and temporary monitoring well installation location. Utilities were marked with paint in the proposed installation locations and recommended offsets were followed.

### **Task 4 – Drilling and Sampling of Soil Borings and Installation Temporary Groundwater Monitoring Wells**

Soil borings were drilled and temporary groundwater monitoring wells installed at the locations of the RECs identified in the Phase I ESA and described in Section 1.1. The borings were advanced to evaluate potential chemical constituents in soils associated with the RECs. Groundwater samples were also collected for laboratory analyses to

evaluate potential impact from dissolved phase chemical constituents. A North Carolina Department of Environment and Natural Resources (NCDENR) licensed driller from South Atlantic Environmental Drilling and Construction Co. Inc. (SAEDACCO) was retained to drill the borings for soil and groundwater collection utilizing either an AMS Powerprobe 9500-VTP or Geoprobe Model 54-DT direct push machine.

### **Task 5 – Phase II ESA Report**

Following the completion of the field work, laboratory testing and data analysis, Delta prepared this Phase II ESA report. An environmental professional performed the review and interpretation of information upon which the report is based and the conclusions and recommendations derived from the findings. This report contains the following items:

- A summary of the background information that effected the conduct of this Phase II ESA, including the Phase I ESA findings and conclusions.
- A discussion of the tasks performed to complete the Phase II ESA.
- The findings of the assessment activities including field work and laboratory analyses.
- Conclusions and recommendations developed from the findings obtained and with respect to regulatory requirements.

## **2.0 ACTIVITIES PERFORMED**

The following investigation and assessment activities were completed at the site from June 5, 2007 to July 26, 2007. **Table 1** outlines each area of investigation on the subject property and details the number of soil borings, groundwater monitoring wells, and laboratory analyses performed during the course of this investigation. The assessment activities associated with former on-site USTs were conducted in general accordance with 15A NCAC 2L .0115 as summarized in the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management (DWM), Underground Storage Tank (UST) Section *Guidelines for Assessment and Corrective Action* dated April 2001. The assessment activities associated with the possible buried materials and past electroplating processes performed on-site were performed in general accordance with the Standard Operating Procedures (SOP) contained within the United States Environmental Protection Agency (USEPA) Region 4 *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual*, dated November 2001 (SOP Manual) and the NCDENR Division of Solid Waste, Inactive Hazardous Sites Program *Guidelines for Assessment and Cleanup*, dated August 2001. This report addresses the areas of investigation on the basis of the individual RECs identified in The Phase I ESA.

## **2.1 550-Gallon Fuel Oil UST Release Investigation (Area A)**

A 550-gallon fuel oil UST was formerly located on the southwestern portion of the subject property near the Ricks Drive entrance to the facility and adjacent to the southern side of the personnel office building (see **Figure 2**). Three existing groundwater monitoring wells (FO-1, FO-6 and MW-3), as shown on **Figure 3**, are present associated with prior assessment and remediation activities conducted relative to a release discovered from the tank.

### **2.1.1 Groundwater Assessment**

On June 5, 2007, wells FO-1 and FO-6 were gauged for the potential presence of free product and the depth to groundwater using an ORS electronic oil/water interface probe. The interface probe was capable of measurement accuracy of increments of 0.01 feet. No free product was detected in either well; however, a noticeable petroleum odor was present in groundwater extracted from both wells. The depth to groundwater was measured in the wells to be about 26 feet below top of casing. The presence of well MW-3 had not been discovered at the time of sampling activities for wells FO-1 and FO-6. Well MW-3 was sampled on July 24, 2007 after Hanesbrands personnel made Delta aware of its presence. The groundwater level measured in well MW-3 at the time of sampling was about 25.6 ft below top of casing. No petroleum odor was observed in the groundwater removed from well MW-3.

The monitoring wells were purged of approximately three well volumes of water prior to sampling. The purged groundwater was discharged to the ground surface adjacent to each well. An initial set of pH, temperature, specific conductance, dissolved oxygen, pH, oxidation-reduction potential (ORP), and turbidity readings were obtained at the initiation of purging. Field water quality measurements were recorded for each volume of water removed. Sampling was performed after recovery of the groundwater following completion of purging and securing water quality measurements. The water quality parameters were generally stabilized after removal of the third volume. Field data sheets with the recorded field water quality measurement results are included in **Appendix A**.

The groundwater samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace Analytical Laboratories, Inc. (Pace) in Huntersville, North Carolina for analysis.

### **2.1.2 Soil Assessment**

On July 26, 2007, Delta advanced one soil boring (A-1 shown on **Figure 3**) adjacent to the former UST basin utilizing AMS Powerprobe<sup>®</sup> direct-push techniques. Delta collected continuous soil samples from the boring to approximately twelve feet below ground surface (BGS) and scanned each 4-ft interval for the presence of volatile organic vapors using a photoionization detector (PID). The PID readings recorded in the soil samples obtained in boring A-1 ranged from 0 to 1.2 parts per million (ppm). The subsurface soils to a depth of about 12 ft consisted of red micaceous silt. The log for soil boring A-1 is included in **Appendix B**.

Three soil samples were collected from the boring for laboratory analyses [A-1 (0-4 ft), A-1 (4-8 ft), and A-1 (8-12 ft)]. The soil samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody.

The minimal amount of soil cuttings generated during advancement of the boring were spread on-site. The boring was abandoned after completion of soil sampling by filling with bentonite pellets to the land surface.

### **2.1.3 Analytical Results**

Each soil and groundwater sample was analyzed for volatile organic compounds (VOCs), according to SW-846 Method 8260, semi-volatile organic compounds (SVOCs) according to SW-846 Method 8270, and extractable petroleum hydrocarbons (EPH), and volatile petroleum hydrocarbons (VPH) according to the Massachusetts Department of Environmental Protection (MADEP) analytical methods. **Table 2** lists the samples collected and summarizes the respective analytical results. The laboratory analytical reports and chain-of-custody record for the groundwater and soil samples are provided in **Appendix C**.

SVOC and EPH compounds were detected in groundwater sample FO-1. No dissolved petroleum hydrocarbon compounds were detected in groundwater sample obtained from wells FO-6 or MW-3.

No VOCs, SVOCs, EPH, or VPH were detected in the soil samples collected from soil boring A-1 in concentrations that exceed their respective NCDENR soil-to-groundwater maximum soil contaminant concentrations (MSCCs) (see **Table 2**).

## **2.2 20,000-Gallon Fuel Oil UST Release Investigation (Area B)**

A 20,000-gallon fuel oil UST was formerly located on the southern portion of the subject property in the driveway between Building Number 3 and Building Number 4 where two former rail line spurs merged (see **Figure 2**). Three existing groundwater monitoring are present in a triangular pattern surrounding the former UST basin area (see **Figure 4**).

### **2.2.1 Groundwater Assessment**

On June 5, 2007 Delta gauged the groundwater levels and sampled the three existing groundwater monitoring wells MW-01, MW-02, and MW-03. The groundwater levels were measured using an electronic oil/water interface probe. No free product was detected in the wells. The depth to groundwater below top of casing measured in the wells ranged from about 30.38 ft in well MW-01 to 31.43 ft in well MW-03.

The monitoring wells were purged of approximately three well volumes of water prior to sampling. The purged groundwater was discharged to the ground surface adjacent to each well. An initial set of pH, temperature, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity readings were obtained at the initiation of purging. Field water quality measurements were recorded for each volume of water removed. If the well went dry during purging, no additional readings were obtained and the well was marked as such in the field sheets and then sampled. Well MW-01 was bailed to dryness. Sampling was performed after recovery of the groundwater following completion of purging and securing water quality measurements. The water quality parameters were generally stabilized after removal of the third volume. Field data sheets with the recorded field water quality measurement results are included in **Appendix A**. The groundwater samples were collected into pre-labeled, laboratory-

supplied containers, placed on ice in a cooler, and transported to Pace in Huntersville, North Carolina for analysis.

### **2.2.2 Soil Assessment**

On July 26, 2007, Delta drilled one soil boring (B-1) adjacent to the Building Number 3 northern wall where the previous highest residual petroleum constituent concentrations were detected in 1990 during petroleum-impacted soils excavation. The boring was advanced using AMS Powerprobe<sup>®</sup> direct-push techniques. Delta collected continuous column soil samples from the boring to approximately twelve feet BGS and scanned each four-foot interval for the presence of volatile organic vapors using a PID. The PID readings ranged from 0 to 3.5 ppm in boring B-1. Three soil samples were collected from the boring for laboratory analysis [B-1 (0-4 ft), B-1 (4-8 ft), and B-1 (8-12 ft)]. The log for soil boring B-1 is included in **Appendix B** and the boring location is shown on **Figure 4**. The soil samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody for laboratory analyses.

The minimal amount of soil cuttings generated during advancement of the boring were spread on-site. The boring was abandoned after completion of soil sampling by filling with bentonite pellets to the land surface.

### **2.2.3 Analytical Results**

Each soil and groundwater sample was analyzed for VOCs, SVOCs, and EPH, and VPH according to the MADEP analytical methods. **Table 3** lists the samples collected and the respective analytical results. The laboratory analytical report and chain-of-custody record for the groundwater and soil samples are provided in **Appendix D**.

No dissolved petroleum constituents were detected in groundwater samples obtained from wells MW-01, MW-02, or MW-03 at concentrations that exceed the 15A NCAC 2L .0115 regulatory standards for groundwater quality.

According to the laboratory analytical results, EPH Aromatics (C11-C22) were detected in the soil sample collected from soil boring B-1 at a depth between 8 and 12 feet BGS.

### **2.3 10,000-Gallon Fuel Oil UST (Area C)**

On June 5, 2007 Delta engaged a geophysical subcontractor, The Hutchinson Group, Ltd., to conduct a geophysical electromagnetic survey of the area reported by Hanesbrands personnel to contain an abandoned-in-place UST at the north side of the dye house building. The results of the survey identified the UST location. The geophysical survey report, including a portion of the work pertaining to the 10,000-gallon fuel oil UST and associated figures, is included in **Appendix E**.

#### **2.3.1 Soil Assessment**

On July 26, 2007, Delta's subcontractor drilled six soil borings (C-1 through C-6) adjacent to the outline area of the UST indicated by the geophysical survey along the Building Number 3 northern wall utilizing AMS Powerprobe<sup>®</sup> direct-push techniques. The soil samples were obtained on the east, north and west sides of the UST basin. The presence of the building precluded collecting soil samples on the south side of the UST basin. The soil boring locations are shown on **Figure 4**. Delta collected continuous soil column samples from each of the six borings to approximately twelve feet BGS and scanned each four-foot interval for the presence of volatile organic vapors using a PID. No PID readings were above 0.0 ppm in the soil samples obtained from the six soil borings.

Six soil samples were collected from the bottom (8-12 foot interval) of each boring (samples C-1 through C-6) for laboratory analysis. The soil boring logs describing the general subsurface soil conditions and PID readings are included in **Appendix B**. The soil samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody for laboratory analyses.

The minimal amount of soil cuttings generated during advancement of the borings were spread on-site. The borings were abandoned after completion of soil sampling by filling the boreholes with bentonite pellets to the land surface.

### **2.3.2 Analytical Results**

The soil samples were analyzed for VOCs, SVOCs, EPH and VPH. **Table 4** lists the samples collected and the respective analytical results. The laboratory analytical report and chain-of-custody record for the soil samples are provided in **Appendix F**.

According to the laboratory analytical results, acetone was detected in the soil samples collected from soil boring C-3 (8-12 ft). The presence of the acetone is likely a laboratory introduced constituent and not indicative of a constituent in the soils at the site. No petroleum hydrocarbon compounds were detected above laboratory method detection limits.

## **2.4 8,000-Gallon Diesel Fuel UST Investigation (Area D)**

The former location of the diesel fuel UST was identified on a site plan included the 1987 remediation report and generally designated by Hanesbrands personnel. The UST was indicated to be to the east-northeast of Building Number 3 in the present area of the natural gas tank farm (see **Figure 5**). Because there was no information available pertaining to the magnitude and extent of impact from the detected release and no regulatory documentation of incident closure, soil and groundwater assessment was conducted as described below.

### **2.4.1 Soil Assessment**

On July 26, 2007, Delta's subcontractor drilled two soil borings (D-1 and D-2) at the generally identified former location of the diesel fuel UST basin utilizing Geoprobe<sup>®</sup> direct-push techniques. The soil boring locations are shown on **Figure 5**. Delta collected continuous soil samples from each of the soil borings, which were advanced to approximately sixteen feet BGS in D-1 and approximately forty feet BGS in D-2. A temporary groundwater sampling well was installed in borehole D-2 after completion of drilling. The soil samples obtained in each boring were scanned at four-foot intervals for the presence of volatile organic vapors using a PID. PID readings ranged from above 0.0 ppm to 6.8 ppm in boring D-1 and from 0.0 ppm to 80.1 ppm in boring D-2.

The soil sample exhibiting the highest PID reading (the 8-to-12 foot interval in soil boring D-1 and the 0-to-4 foot interval in soil boring D-2) was collected for laboratory testing. The boring logs including the generalized subsurface conditions and PID readings are included in **Appendix B**. The soil samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody for laboratory analyses.

The minimal amount of soil cuttings generated during advancement of the two borings was spread on-site. Temporary monitoring well construction materials were removed from the boring and disposed in an on-site solid waste dumpster. The borings were then abandoned by filling with bentonite pellets to the land surface.

#### **2.4.2 Groundwater Assessment**

On July 26, 2007, a temporary groundwater monitoring well was installed in boring D-2 after completion of drilling and soil sampling. The groundwater level was measured using an electronic oil/water interface probe. No free product was detected in the well. The depth to groundwater below top of casing measured in the well was 37.6 ft.

Due to a lack of sufficient groundwater in the temporary monitoring well, no recordings of pH, temperature, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity readings were obtained. No water was purged from the well prior to sampling. The sampling record for well D-2 is included in **Appendix A**. The groundwater sample was collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace in Huntersville, North Carolina for analysis.

#### **2.4.3 Analytical Results**

The soil and groundwater samples were analyzed for VOCs, SVOCs, EPH, and VPH. The laboratory analytical data reports and chain-of-custody records for the groundwater and soil samples are provided in **Appendix G**. The analytical results are summarized in **Table 5**.

No dissolved petroleum constituents were detected above the laboratory method detection limits in the groundwater sample collected from temporary well D-2. A low

concentration of chloroform was detected, and is suspected to be an introduced constituent from field sampling or laboratory testing procedures.

No VOCs, SVOCs, EPH, VPH were detected in the soil samples collected from soil borings D-1 and D-2 at concentrations exceeding their respective soil-to-groundwater MSCCs.

## **2.5 3,000-Gallon Gasoline Fuel UST Investigation (Area G)**

The former location of the gasoline UST was identified on a site plan included the 1987 remediation report and generally designated by Hanesbrands personnel. The UST was indicated to be to the east-northeast of Building Number 3 in the present area of the natural gas tank farm (see **Figure 5**), comparable to the above described former diesel fuel UST location. Because there was no information available pertaining to the magnitude and extent of impact from the detected release and no regulatory documentation of incident closure, soil and groundwater assessment was conducted as described below.

### **2.5.1 Soil Assessment**

On July 26, 2007, Delta's contractor advanced two soil borings (G-1 and G-2) at the generally identified former gasoline UST location utilizing Geoprobe® direct-push techniques. The soil boring locations are shown on **Figure 5**. Delta collected continuous soil samples from each of the soil borings, which were advanced to approximately sixteen feet BGS in boring G-1 and approximately forty feet BGS in boring G-2. A temporary groundwater sampling well was installed in borehole G-2 after completion of drilling. The soil samples obtained in each boring were scanned at four-foot intervals for the presence of volatile organic vapors using a PID. PID readings ranged from 0.0 ppm to 6.8 ppm in boring G-1 and from 0.0 ppm to 80.1 ppm in boring G-2.

The soil boring interval exhibiting the highest PID reading (the 8-12 ft interval in soil boring G-1 and the 0-4 ft interval in soil boring G-2) was collected for laboratory analyses. The boring logs including the generalized subsurface conditions and PID readings are included in **Appendix B**. The soil samples were collected into pre-labeled,

laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody for laboratory analyses.

The minimal amount of soil cuttings generated during advancement of the two borings was spread on-site. Temporary monitoring well construction materials were removed from the boring and disposed of in a solid waste dumpster on-site. The borings were then abandoned with bentonite pellets to the land surface.

### **2.5.2 Groundwater Assessment**

A temporary groundwater sampling well was installed in soil boring G-2 after completion of drilling. The groundwater level was measured using an electronic oil/water interface probe. No free product was detected in the well. The depth to groundwater below top of casing measured in the well was 32.35 ft.

Due to a lack of sufficient groundwater in the temporary monitoring well, no recordings of pH, temperature, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity readings were obtained. No water was purged from the well prior to sampling. The sampling record for well G-2 is included in **Appendix A**. The groundwater sample was collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace in Huntersville, North Carolina for analysis.

### **2.5.3 Analytical Results**

Each soil and groundwater sample was analyzed for VOCs and VPH. The groundwater sample collected from temporary well G-2 was also analyzed for lead by EPA Method 610. The analytical results are summarized in **Table 6**. The laboratory analytical data reports and chain-of-custody record for the groundwater and soil samples are provided in **Appendix H**.

No VOCs or SVOCs were detected at concentrations that exceed the 15A NCAC 2L .0115 regulatory levels in the groundwater sample collected from temporary well G-2. The detected lead concentration in the groundwater sample obtained from well G-2 was 0.095 mg/l.

No VOCs or VPH concentrations were detected in the soil samples collected from soil borings D-1 and D-2 that exceeded their respective soil-to-groundwater MSCCs.

## **2.6 Suspect Buried Materials in North and East Portions of Site and Documented Location of Drums and Contaminated Soil Removal (Area QH)**

The location of the buried drums and petroleum-impacted materials discovered at the site in 1993 was reportedly in the vicinity of the Quonset Hut which, according to long-term employees of the facility, may be also underlain by buried materials. Based on this information, Delta contracted for an electromagnetic geophysical survey to evaluate the potential presence of buried materials in the northeast portion of the property, with particular emphasis on the Quonset Hut area. The findings of the geophysical survey are describe below.

### **2.6.1 Geophysical Survey**

On June 5, 2007 Delta mobilized to the subject property with The Hutchinson Group, Ltd. in order to conduct a geophysical assessment at the subject area of the site (see **Figure 6**). The geophysical survey report indicates the presence of buried metal materials extending from beneath the west and east sides of the Quonset Hut. No other areas of buried metal items was indicated in the northeast portion of the property. Utilizing this data as a guide and information provided by Hanesbrands personnel, Delta developed a soil and groundwater assessment plan that would aid in evaluating potential adverse environmental conditions attributable to releases from buried materials.

### **2.6.2 Soil Assessment**

On July 25 and 26, 2007, Delta's subcontractor advanced nine soil borings (QH-1 through QH-9) surrounding the Quonset Hut area utilizing Geoprobe® direct-push techniques. The boring locations are illustrated on **Figure 6**. Two of the soil borings (QH-1 and QH-2) on the downgradient side of the building were converted into temporary groundwater sampling wells. Delta collected continuous soil samples from each of the soil borings to approximately twenty-eight feet BGS in QH-1 and QH-2 and to approximately sixteen feet BGS in soil borings QH-3 through QH-9. Soils obtained from each four-foot depth interval were scanned for the presence of volatile organic vapors using a PID. PID readings ranged from 0.0 ppm to 46.5 ppm.

The interval exhibiting the highest PID reading in each soil boring was collected and submitted for laboratory analyses. The individual soil boring PID readings are located on the soil boring logs contained in **Appendix B**. The soil samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody for laboratory analyses

The soil cuttings generated during advancement of the nine borings was containerized in a 55-gallon drum on-site.

### **2.6.3 Groundwater Assessment**

Temporary groundwater sampling wells were installed in borings QH-1 and QH-2 after completion of drilling and soil sampling. The groundwater levels were measured using an electronic oil/water interface probe. No free product was detected in the wells. The depth to groundwater below top of casing measured in the wells ranged from about 19.75 ft in well QH-1 to 20.85 ft in well QH-2.

Due to a lack of sufficient groundwater in both of the temporary monitoring wells, an initial round and a post sampling round of recordings for pH, temperature, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity readings were obtained. The small amount of development and purge waters generated during the installation and sampling of the two temporary monitoring wells were containerized in a 55-gallon drum on-site. Field data sheets with the recorded field water quality measurement results are included in **Appendix A**. The groundwater samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace in Huntersville, North Carolina for analysis.

Temporary monitoring well construction materials were removed from the boring after completion of sampling and disposed in a solid waste dumpster on-site. All borings were then abandoned by filling with bentonite pellets to the land surface.

#### **2.6.4 Analytical Results**

The soil and groundwater samples were analyzed for selected metals according to SW-846 Extraction Methods 6010, VOCs according to SW-846 Method 8260, SVOCs according to SW-846 Method 8270, and polychlorinated biphenyls (PCBs) according to SW-846 Method 8082. The analytical results are summarized on **Table 7**. The laboratory analytical report and chain-of-custody record for the groundwater and soil samples are provided in **Appendix I**.

No metals, VOCs, SVOCs, or PCBs were detected in the soil samples collected from soil borings QH-1 through QH-9 in concentrations that exceed the respective NCDENR Inactive Hazardous Sites Branch Soil Remediation Goals (SRGs). Selected organic compounds were detected at concentrations exceeding laboratory method detection limits, including acetone (borings QH-1, QH-7 and QH-9), cis-1,2-dichloroethene (boring QH-9), naphthalene (borings QH-4 and QH-9), tetrachloroethene (borings QH-7 and QH-9), 1,2,4-trimethylbenzene (boring QH-9), benz(b)fluoranthene (boring QH-4), fluoranthene (boring QH-4) and pyrene (boring QH-4). ?????

No VOCs, SVOCs, or PCB compounds were detected in groundwater samples at concentrations that exceed the 15A NCAC 2L .0115 regulatory levels. Selected total metals concentrations were detected in the groundwater samples obtained from temporary wells QH-1 and QH-2. The concentration of lead detected in the groundwater sample obtained from well QH-2 (0.02 mg/l) slightly exceeded the 15A NCAC 2L .0115 regulatory level of 0.015 mg/l.

### **2.7 Reported Former Electroplating Area (Area EP) and Background Soil Sample (Area BK)**

Based on the reported historical electroplating activities performed in Building Number 6 located adjacent to the east of Building Number 4 (see **Figure 4**), soil and groundwater assessment was conducted to evaluate potential adverse environmental conditions.

#### **2.7.1 Soil Assessment**

On July 26, 2007, Delta's subcontractor advanced one soil boring (EP-1) in a grassed area beside the west side of Building Number 5 adjacent to a small concrete culvert. The

boring location is illustrated on **Figure 4**. A background soil boring (BK-1) was advanced in the extreme southeastern corner of the site in an area not historically known to have industrial activity (see **Figure 2**). Each of the two soil borings were advanced utilizing Powerprobe® direct-push techniques. Delta collected continuous soil samples from soil boring EP-1 to approximately forty feet BGS and to approximately thirty-one feet BGS for soil boring BK-1. Soils obtained from each four-foot depth interval were scanned for the presence of volatile organic vapors using a PID. PID readings ranged from 0.0 ppm to 0.7 ppm in boring EP-1 and 4.6 ppm to 25.2 ppm in boring BK-1. The soil boring interval that exhibited the highest PID reading from the 8-12 foot interval in soil boring EP-1 was collected and submitted for laboratory analyses. Soil samples were collected from soil boring BK-1 at the 8-to-12 foot interval and 12-to-16 foot interval for laboratory testing. The soil boring logs, including PID readings, are included in **Appendix B**.

Soil samples obtained from borings EP-1 and BK-1 were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace under chain-of-custody for laboratory analyses.

The minimal amount of soil cuttings generated during advancement of the soil borings was spread on-site. Temporary monitoring well construction materials were removed from boring EP-1 and disposed of in a solid waste dumpster on-site. All borings were then abandoned with bentonite pellets to the land surface.

### **2.7.2 Groundwater Assessment**

On July 26, 2007 Delta mobilized to the subject property and installed one soil boring, EP-1, adjacent to Building Number 6 onsite. Upon completion of the required soil sampling, a temporary groundwater monitoring well was constructed. An interface probe with increments of 0.01 feet was used to screen for the potential presence of free product and record static water levels. No indications of free product were observed; therefore, none were recorded on the groundwater sampling record forms. Sampling of the monitoring well also involved attempting to purge the well of approximately three well volumes of water and recording field water quality measurements for each volume prior to sampling. Due to a lack of sufficient groundwater in the temporary monitoring well no

recordings of pH, temperature, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity readings were obtained. Instead, the well was immediately sampled. Field data sheets with the recorded results are included in **Appendix A**.

The groundwater samples were collected into pre-labeled, laboratory-supplied containers, placed on ice in a cooler, and transported to Pace in Huntersville, North Carolina for analysis. Each sample was analyzed for metals, VOCs, and SVOCs. **Table 8** lists the samples collected and the respective analytical results.

### **2.7.3 Analytical Results**

The soil and groundwater sample collected from boring and temporary well EP-1 were analyzed for metals according to EPA SW-846 Extraction Methods 6010 (RCRA metals) and 7471 (mercury), VOCs according to SW-846 Method 8260, SVOCs according to SW-846 Method 8270. Soil samples BK-1 (8-12 ft) and BK-1 (12-16 ft) were analyzed for metals according to SW-846 Extraction Methods 6010 (RCRA metals) and 7471 (mercury). The analytical results for the soil and groundwater samples are summarized in **Table 8**. The laboratory analytical report and chain-of-custody record for the groundwater and soil samples are provided in **Appendix G**.

Chloroform was the only VOC detected in the groundwater sample obtained from temporary well EP-1. The chloroform detected is suspected to be attributable to sampling or laboratory procedures. The concentration of chloroform detected (0.0024 mg/l) does not exceed the NCDENR groundwater quality standard of 0.07 mg/l. No SVOCs were detected above laboratory method detection limits. Several RCRA-listed metals concentrations were detected in the groundwater sample; however, did not exceed State groundwater quality standards.

No VOCs or SVOCs were detected above laboratory method detection limits in the soil samples collected from soil boring EP-1. Background metals concentrations indicated by the analytical results of soil samples collected in boring BK-1 were as follows:

• Arsenic	0.81 to 2.3 mg/kg
• Barium	260 to 320 mg/kg
• Cadmium	0.33 to 0.59 mg/kg
• Chromium	38 to 52 mg/kg
• Lead	11 to 15 mg/kg

No mercury, selenium or silver was detected above laboratory detection limits in the background boring (BK-1) soil samples.

The metals concentrations detected in the soil sample analyzed from boring EP-1 were generally below the background concentrations indicated by soil samples obtained in boring BK-1, with the exception of lead and mercury. Both the lead and mercury concentrations detected were not significantly higher than the background levels indicated in the BK-1 soil samples.

### **3.0 CONCLUSIONS AND COMMENTS**

Based on the findings of this Phase II ESA, the following conclusions have been derived relative to each of the identified areas of concern.

#### **3.1 550-Gallon Fuel Oil UST Release Investigation (Area A)**

Dissolved petroleum constituents are present in groundwater at the immediate former UST basin area in concentrations that exceed the NCDENR groundwater quality standards. No evidence of petroleum constituents was detected in unsaturated soils adjacent and immediately down gradient to the former UST basin. Qualifying criteria for risk classification indicates that the release incident will be classified with a low risk designation.

Since no petroleum-impacted soils were detected at the former UST basin, no soils cleanup will be required. It will be necessary to address dissolved petroleum constituent concentrations in groundwater that are above State groundwater quality standards in order to attain closure for the release incident.

### **3.2 20,000-Gallon Fuel Oil UST Release Investigation (Area B)**

Analytical testing of soil samples in the area of the former UST basin and the adjacent building indicate the presence of residual petroleum constituents from the release and impact to soils documented in 1989. Historical and recent groundwater analyses did not detect adverse impact from the release, thus contributing to the resulting low risk designation. The petroleum constituent concentrations detected in the soils do not exceed the industrial/commercial MSCCs, which is a provision for requiring cleanup at a low risk site of the subject property nature. Based on this information no further action is required in order to attain regulatory closure of this release incident.

### **3.3 10,000-Gallon Fuel Oil UST (Area C)**

Analytical testing of soil samples obtained adjacent to and below the base level of the UST did not detect petroleum constituents. Based on the assessment work performed, there is no evidence that the closed-in-place former fuel oil UST has been the source of a release of petroleum constituents to the environment.

### **3.4 8,000-Gallon Diesel Fuel UST Investigation (Area D)**

No petroleum constituents were detected in soils or groundwater at the former area of the diesel fuel UST. No existing adverse environmental impact is indicated from the release and remediation efforts described in historical reports associated with the UST.

### **3.5 3,000-Gallon Gasoline Fuel UST Investigation (Area G)**

No petroleum constituents were detected in soils at the former location of the gasoline UST at the site. Dissolved petroleum constituents were not detected in a groundwater sample collected at the former UST location; however, total lead was detected. No information is readily available regarding the naturally occurring concentrations of lead in groundwater resulting from in the aquifer containing geological materials.

### **3.6 Suspect Buried Materials in North and East Portions of Site and Documented Location of Drums and Contaminated Soil Removal (Area QH)**

Geophysical survey results provided evidence of buried metal materials at least along the east and west sides and possibly the south side of the Quonset Hut building, indicating a high likelihood of the materials extending under the building. No invasive

testing was performed to evaluate the nature, characteristics and conditions of the buried metal materials. The apparent location of the 1993 former drums burial discovery and petroleum-impacted materials excavation was also indicated by the results of the geophysical survey.

The presence of organic compounds was detected in soil samples obtained in borings drilled in the area of the Quonset Hut.

No dissolved organic compounds or PCBs were detected in groundwater samples collected down gradient to the Quonset Hut. Selected metals were detected in groundwater at concentrations exceeding State groundwater quality standards. The metals detected in groundwater could be indicative of naturally occurring concentration in the aquifer-containing geologic materials at the site.

### **3.7 Reported Former Electroplating Area (Area EP)**

Selected metals were detected in soils obtained from the boring drilled adjacent to the historical electroplating operations area. The majority of the metals concentrations detected were below the indicated background naturally occurring concentrations in geological materials at the site. The lead level detected was slightly above the indicated background naturally occurring concentration and is not considered to be indicative of contamination. Although mercury was not detected in background soils samples, a low level was detected in a soil sample obtained at the historical electroplating area. Based on the low concentration of mercury detected, Delta considers it to be reflective of variations in natural occurrence concentrations.

Selected metals were detected in a groundwater sample collected from a temporary well at the historical electroplating area. The presence of elevated metals concentrations is not necessarily considered to be reflective of impact to groundwater from a contaminant source. The metals detected in groundwater could be indicative of naturally occurring concentrations in the aquifer-containing geologic materials at the site.

#### 4.0 REMARKS

The conclusions and recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. The assessment activities summarized in this report were conducted in general accordance with the North Carolina Inactive Hazardous Response Act of 1987, also known as NCGS 130A-310.9, as summarized in the NCDENR, Division of Waste Management, Inactive Hazardous Sites Branch *Inactive Hazardous Sites Program – Guidelines for Assessment and Cleanup* (Guidelines) dated August 2006. The tasks executed and described herein were developed on the basis of identified recognized environmental conditions (RECs) associated with the existing and historical aspects of the Site and recommendations provided from a Phase I Environmental Site Assessment (Phase I ESA) recently completed by Delta. This report is intended only for the use and benefit of, and may be relied upon by Hanesbrands, Inc. and any purchaser or potential purchaser of the subject property from Hanesbrands, Inc. Delta cannot and will not be liable for unauthorized reliance by any other third party.

This report was prepared by **DELTA CONSULTANTS**



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Date: 11-16-07

## TABLES

Table 1  
Analytical Data Summary Table  
Hanesbrand Products Facility - Winston-Salem, North Carolina

Area	Soil Samples			Ground Water Samples				Cross Reference for Tables of Analytical Results
	Sample ID	Date Collected	Laboratory Analysis	Sample ID		Date Collected	Laboratory Analysis	
				Permanent Well	Temporary Well			
A: Former 550 gal. Fuel Oil UST	A-1 (0-4)	07/26/07	VOCs, SVOCs, VPH, EPH	FO-1	N/A	06/05/07	VOCs SVOCs, VPH, EPH	Table 2
	A-1 (4-8)							
	A-1 (8-12)							
B: Former 20,000 gal. Fuel Oil UST	B-1 (0-4)	07/26/07	VOCs, SVOCs, EPH, VPH	MW-1	N/A	06/05/07	VOCs SVOCs, VPH, EPH	Table 3
	B-1 (4-8)							
	B-1 (8-12)							
C: 10,000 gal. Fuel Oil UST - Abandoned in Place	C-1 (8-12)	07/26/07	VOCs, SVOCs, EPH, VPH	N/A	N/A	N/A		Table 4
	C-2 (8-12)							
	C-3 (8-12)							
	C-4 (8-12)							
	C-5 (8-12)							
	C-6 (8-12)							
D: Former 8,000 gal. Diesel UST	D-1	07/26/07	VOCs, SVOCs, VPH, EPH	N/A	D-2	07/26/07	VOCs, SVOCs, EPH, VPH	Table 5
	D-2							
G: Former 3,000 gal. Gasoline UST	G-1	07/26/07	VOCs, VPH	N/A	G-2	07/26/07	VOCs, VPH, Total Lead	Table 6
	G-2							
QH: Suspect Buried Materials	QH-1	07/25/07	VOCs, SVOCs, PCBs, Metals	N/A	QH-1 QH-2	07/25/07	VOCs, SVOCs, PCBs, Metals	Table 7
	QH-2							
	QH-3							
	QH-4							
	QH-5							
	QH-6							
	QH-7							
	QH-8							
	QH-9							
EP: Reported Former Electroplating Area	EP-1	07/26/07	VOCs, SVOCs, Metals	N/A	EP-1	07/26/07	VOCs, SVOCs, Metals	Table 8
BK: Background Metals	BK-1 (4-8)	07/25/07	Metals	N/A	N/A	N/A	VOCs, SVOCs, Metals	Table 8
	BK-1 (12-16)							

-- Only compounds/analytes detected in one or more samples are shown on this table

Legend:  
gal Gallon  
N/A Not Applicable

TABLE 2  
Analytical Results- Area A  
Former 550 Gallon Fuel Oil UST  
Hanesbrand Products Facility- Winston-Salem, North Carolina

	Soil-to-Groundwater Maximum Contaminant Concentrations (mg/kg)*	ANALYTICAL RESULTS								North Carolina 2L Standards** for Ground Water (mg/l)
		Soils (mg/kg)		Ground Water (mg/l)						
		A-1 (0-4) 7/26/07	A-1 (4-8) 7/26/07	A-1 (8-12) 7/26/07	FO-1 7/26/07	FO-6 7/26/07	MW-3 7/24/2007			
<b>Volatle Organic Compounds</b>										
Isopropylbenzene (Cumene)	1.7	ND	ND	ND	0.0048	ND	ND	ND	0.07	
p-Isopropyltoluene	NE	ND	ND	ND	0.015	ND	ND	ND	NE	
Naphthalene	0.58	ND	ND	ND	<b>0.096</b>	ND	ND	ND	0.021	
1,2,4-Trimethylbenzene	7.5	ND	ND	ND	0.057	ND	ND	ND	0.35	
1,3,5-Trimethylbenzene	7.3	ND	ND	ND	0.042	ND	ND	ND	0.35	
Total Xylene	5	ND	ND	ND	0.033	ND	ND	ND	0.53	
<b>Semi-Volatile Organic Compounds</b>										
bis (2-ethylhexyl)phthalate	5.6	ND	ND	ND	0.012	ND	ND	ND	NE	
Fluorene	44	ND	ND	ND	0.023	ND	ND	ND	0.28	
1-methylnaphthalene	NE	ND	ND	ND	0.22	ND	ND	ND	NE	
2-methylnaphthalene	1.7	ND	ND	ND	<b>0.29</b>	ND	ND	ND	0.014	
Naphthalene	0.58	ND	ND	ND	<b>0.082</b>	ND	ND	ND	0.021	
Phenanthrene	60	ND	ND	ND	0.031	ND	ND	ND	0.21	
<b>EPH</b>										
Aliphatic (C9-C18)	3300	ND	ND	ND	<b>16</b>	ND	ND	ND	4.2	
Aliphatic (C19-C36)	##	ND	ND	ND	1.4	ND	ND	ND	42	
Aromatic (C11-C22)	34	ND	ND	ND	<b>8.9</b>	ND	ND	ND	0.210	
<b>VPH</b>										
Aliphatic (C9-12)	3300	ND	ND	ND	3.1	ND	ND	ND	4.2	

-- Only compounds/analytes detected in one or more samples are shown on this table

**Legend:**

mg/kg Milligrams per Kilogram

mg/l Milligrams per Liter

## Considered Immoblie

**Bold** Concentration Above Applicable NC DENR Standard

\* Taken from Guidelines for Assessment and Corrective Action - North Carolina Underground Storage Tank Section, April 2001

\*\* Standard 15A NCAC 2L.0202

ND Compound or analytes not detected

NE Not Established

**TABLE 3**  
**Analytical Results - Area B**  
**Former 20,000-Gallon Fuel Oil UST**  
**Hanesbrand Products Facility- Winston-Salem, North Carolina**

	Soil-to-Groundwater Maximum Contaminant Concentrations* (mg/kg)	ANALYTICAL RESULTS								North Carolina 2L Standards** for Ground Water (mg/l)
		Soils (mg/kg)		Ground Water (mg/l)				MW-3 6/5/2007		
		B-1 (0-4) 7/26/07	B-1 (4-8) 7/26/07	B-1 (8-12) 7/26/07	MW-1 6/5/07	MW-2 6/5/07	MW-3 6/5/2007			
<b>Volatile Organic Compounds</b>										
All VOCs	Various	ND	ND	ND	ND	ND	ND	ND	ND	Various
<b>Semi-Volatile Organic Compounds</b>										
All SVOCs	Various	ND	ND	ND	ND	ND	ND	ND	ND	Various
<b>EPH</b>										
Aliphatic (C9-C18)	3300	ND	ND	100	ND	ND	ND	ND	ND	4.2
Aliphatic (C19-C36)	##	ND	ND	16	ND	ND	ND	ND	ND	42
Aromatic (C11-C22)	34	ND	ND	43	ND	ND	ND	ND	ND	0.21
<b>VPH</b>										
Aliphatic (C9-12)	3300	ND	ND	ND	ND	ND	ND	ND	ND	4.2

-- Only compounds/analytes detected in one or more samples are shown on this table

**Legend:**

- mg/kg Milligrams per Kilogram
- mg/l Milligrams per Liter
- ## Considered Immoblie

**Bold** Concentration Above Applicable NCDENR Standard

\* Taken from *Guidelines for Assessment and Corrective Action - North Carolina Underground Storage Tank Section, April 2001*

\*\* Standard 15A NCAC 2L.0202

TABLE 4  
 Analytical Results - Area C  
 10,000-Gallon Fuel Oil UST  
 Hanesbrand Products Facility- Winston-Salem, North Carolina

	Soil-to-Groundwater Maximum Contaminant Concentrations* (mg/kg)	ANALYTICAL RESULTS							
		Soils (mg/kg)							
		C-1(8-12) 7/26/07	C-2(8-12) 7/26/07	C-3(8-12) 7/26/07	C-4(8-12) 7/26/07	C-5(8-12) 7/26/07	C-6(8-12) 7/26/07	C-7(8-12) 7/26/07	C-8(8-12) 7/26/2007
<b>Volatile Organic Compounds</b>									
Acetone	2.8	0.15	ND	0.1	ND	ND	ND	ND	0.16
<b>Semi-Volatile Organic Compounds</b>									
All SVOCs	Various	ND							
<b>EPH</b>									
ALL EPH	Various	ND							
VPH									
Aliphatic (C9-12)	3300	ND							

-- Only compounds/analytes detected in one or more samples are shown on this table

Legend:

mg/kg Milligrams per Kilogram

**Bold** Concentration Above Applicable NCDENR Standard

\* Taken from *Guidelines for Assessment and Corrective Action - North Carolina Underground Storage Tank Section, April 2001*

ND Compound or analytes not detected

TABLE 5  
 Analytical Results - Area D  
 Former 8,000-Gallon Diesel UST  
 Hanesbrand Products Facility- Winston-Salem, North Carolina

	Soil-to-Groundwater Maximum Contaminant Concentrations* (mg/kg)	ANALYTICAL RESULTS				North Carolina 2L Standards** for Ground Water (mg/l)
		Soils (mg/kg)		Ground Water (mg/l)		
		D-1 7/26/07	D-2 7/26/07	D-2 7/26/07	D-2 7/26/07	
<b>Volatile Organic Compounds</b>						
Acetone	2.8	ND	0.13	ND	0.7	
Chloroform	0.4	ND	ND	0.0032	0.07	
<b>Semi-Volatile Organic Compounds</b>						
All SVOCs	Various	ND	ND	ND	Various	
<b>EPH</b>						
ALL EPH	Various	ND	ND	ND	Various	
<b>VPH</b>						
Aliphatic (C9-12)	3300	ND	ND	ND	4.2	

-- Only compounds/analytes detected in one or more samples are shown on this table

Legend:

- mg/kg Milligrams per Kilogram
- Bold** Concentration Above Applicable NCDENR Standard
- \* Taken from *Guidelines for Assessment and Corrective Action - North Carolina Underground Storage Tank Section, April 2001*
- \*\* Standard 15A NCAC 2L.0202
- ND Compound or analytes not detected
- NE Not Established

TABLE 6  
 Analytical Results - Area G  
 Former 3,000-Gallon Gasoline UST  
 Hanesbrand Products Facility- Winston-Salem, North Carolina

	Soil-to-Groundwater Maximum Contaminant Concentrations* (mg/kg)	ANALYTICAL RESULTS				North Carolina 2L Standards** for Ground Water (mg/l)
		Soils (mg/kg)		Ground Water (mg/l)		
		G-1 7/26/07	G-2 7/26/07	G-1 7/26/07	G-2 7/26/07	
Total Lead						
Lead	270	Not Analyzed		<b>0.095</b>		0.015
Volatile Organic Compounds						
Chloroform	0.4	ND	ND	0.0052		0.07
NPH						
Aliphatic (C9-12)	3300	ND	ND	ND		4.2

-- Only compounds/analytes detected in one or more samples are shown On this table

Legend:

mg/kg Milligrams per Kilogram  
 mg/l Milligrams per Liter

**Bold** Concentration Above Applicable NCDENR Standard

\* Taken from *Guidelines for Assessment and Corrective Action - North Carolina Underground Storage Tank Section, April 2001*  
 \*\* Standard 15A NCAC 2L.0202

ND Compound or analytes not detected

TABLE 7  
Analytical Results - Area QH  
Suspect Buried Materials  
Hanesbrand Products Facility- Winston-Salem, North Carolina

	NCDENR Inactive Hazardous Sites Branch Soil Remediation Goals ppm (mg/kg)	ANALYTICAL RESULTS										North Carolina 2L Standards* for Ground Water (mg/l)	
		Soils (mg/kg)									Ground Water (mg/l)		
		QH-1 7/25/07	QH-2 7/25/07	QH-3 7/25/07	QH-4 7/26/07	QH-5 7/26/07	QH-6 7/26/07	QH-7 7/26/07	QH-8 7/26/07	QH-9 7/26/07	QH-1 7/25/07		QH-2 7/25/07
<b>Metals</b>													
Arsenic	4.4	1.8	0.59	ND	1.8	1.3	ND	1.7	1	1.5	0.0099	ND	0.05
Barium	NE	65	71	20	60	19	120	45	120	24	0.66	0.27	2
Cadmium	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00175
Chromium	44	24	15	15	19	21	38	15	1.7	19	0.069	0.025	0.05
Lead	400	68	6.5	2.6	27	12	24	16	17	20	0.042	0.02	0.015
Mercury	4.6	0.066	ND	0.012	0.048	0.017	0.077	0.034	ND	0.048	0.0017	0.00042	0.00105
Selenium	78	ND	1.6	1.2	1.5	ND	ND	2.3	3.0	1.7	ND	ND	0.05
Silver	78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0175
<b>Volatile Organic Compounds</b>													
Acetone	2800	0.17	ND	ND	ND	ND	ND	0.160	ND	0.24	ND	ND	0.7
cis-1,2-Dichloroethene	8.6	ND	ND	ND	ND	ND	ND	ND	ND	0.04	ND	ND	0.07
Naphthalene	11.2	ND	ND	ND	0.016	ND	ND	ND	ND	0.44	ND	ND	0.021
Tetrachloroethene	0.48	ND	ND	ND	ND	ND	ND	0.016	ND	0.023	ND	ND	0.0007
1,2,4-Trimethylbenzene	NE	ND	ND	ND	ND	ND	ND	ND	ND	0.014	ND	ND	0.35
<b>Semi-Volatile Organic Compounds</b>													
Benzo(b)fluoranthene	0.62	0.45	ND	ND	0.46	ND	ND	ND	ND	ND	ND	ND	4.79 x 10 <sup>-5</sup>
Fluoranthene	460	0.64	ND	ND	0.52	ND	ND	ND	ND	ND	ND	ND	0.28
Pyrene	460	0.50	ND	ND	0.44	ND	ND	ND	ND	ND	ND	ND	0.21
<b>PCBs</b>													
ALL PCBs	Various	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Various

-- Only compounds/analytes detected in one or more samples are shown on this table

**Legend:**

mg/kg Milligrams per Kilogram

mg/l Milligrams per Liter

**Bold** Concentration Above Applicable NCDENR Standard

\* Standard 15A NCAC 2L.0202

ND Compound or analytes not detected

NE Not Established

TABLE 8  
 Analytical Results - Areas EP and BK  
 Reported Former Electroplating Area Background Metals  
 Hanesbrand Products Facility- Winston-Salem, North Carolina

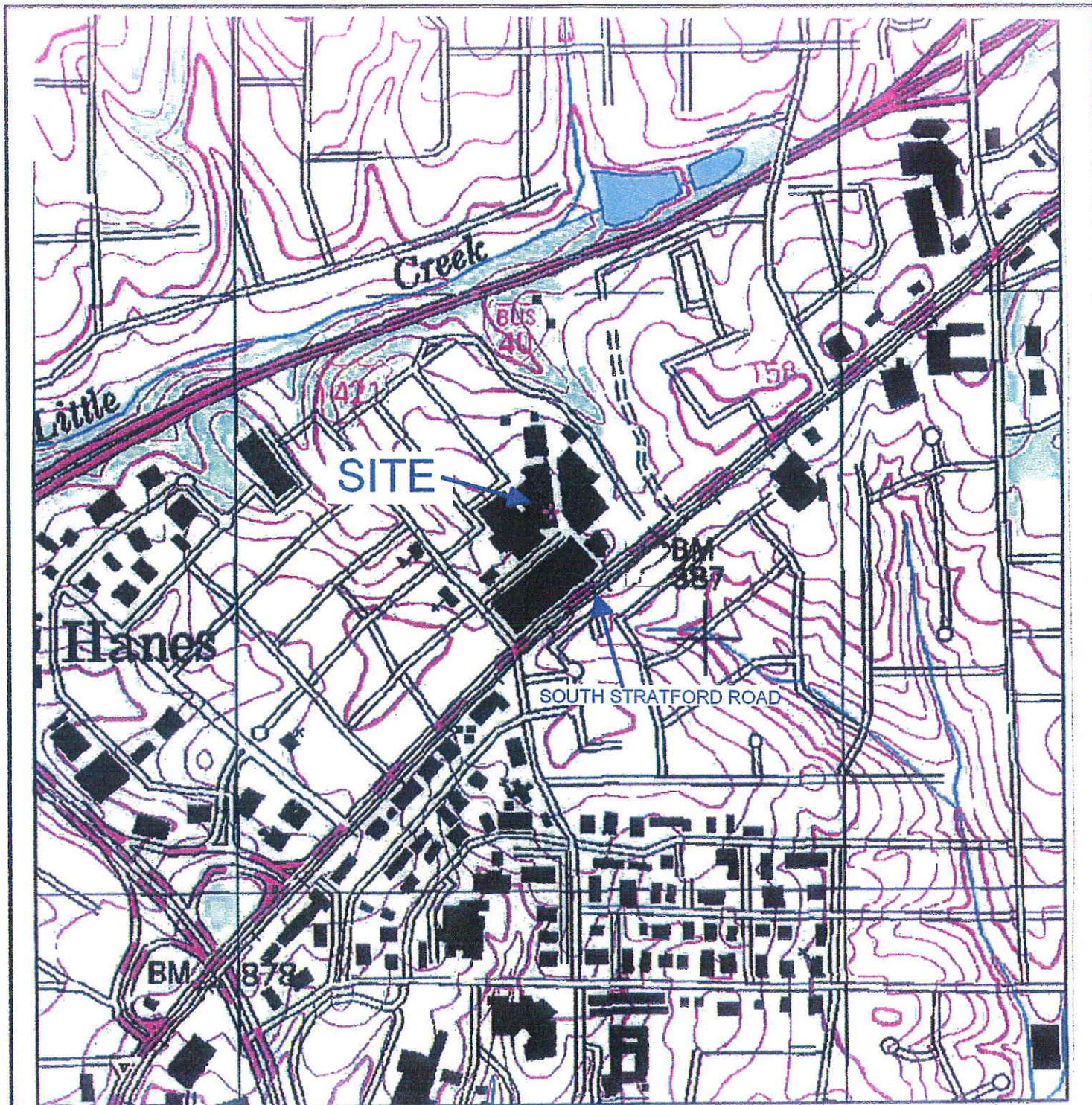
Reported Former Electroplating Area	NCDENR Inactive Hazardous Sites Branch Soil Remediation Goals ppm (mg/kg)	ANALYTICAL RESULTS		North Carolina 2L Standards* for Ground Water (mg/l)
		Soils (mg/kg)		
		EP-1	Ground Water (mg/l)	
<b>Metals</b>				
Arsenic	4.4	ND	0.066	0.05
Barium	NE	41	2.1	2
Cadmium	NE	ND	ND	0.00175
Chromium	44	25	0.098	0.05
Lead	400	22	0.099	0.015
Mercury	4.6	0.033	ND	0.00105
Selenium	78	ND	0.018	0.05
Silver	78	ND	ND	0.0175
<b>Volatile Organic Compounds</b>				
Chloroform	0.22	ND	0.0024	0.07
<b>Semi-Volatile Organic Compounds</b>				
All SVOCs	Various	ND	ND	Various

Background Metals	ANALYTICAL RESULTS	
	Soils (mg/kg)	
	BK-1 (4-8)	BK-1 (12-16)
	7/25/07	7/25/07
<b>Metals</b>		
Arsenic	2.3	0.81
Barium	320	260
Cadmium	0.59	0.33
Chromium	52	38
Lead	15	11
Mercury	ND	ND
Selenium	ND	ND
Silver	ND	ND

-- Only compounds/analytes detected in one or more samples are shown on this table

Legend:  
 mg/kg Milligrams per Kilogram  
 mg/l Milligrams per Liter  
**Bold** Concentration Above Applicable NCDENR Standard  
 Standard 15A NCAC 2L.0202

## FIGURES



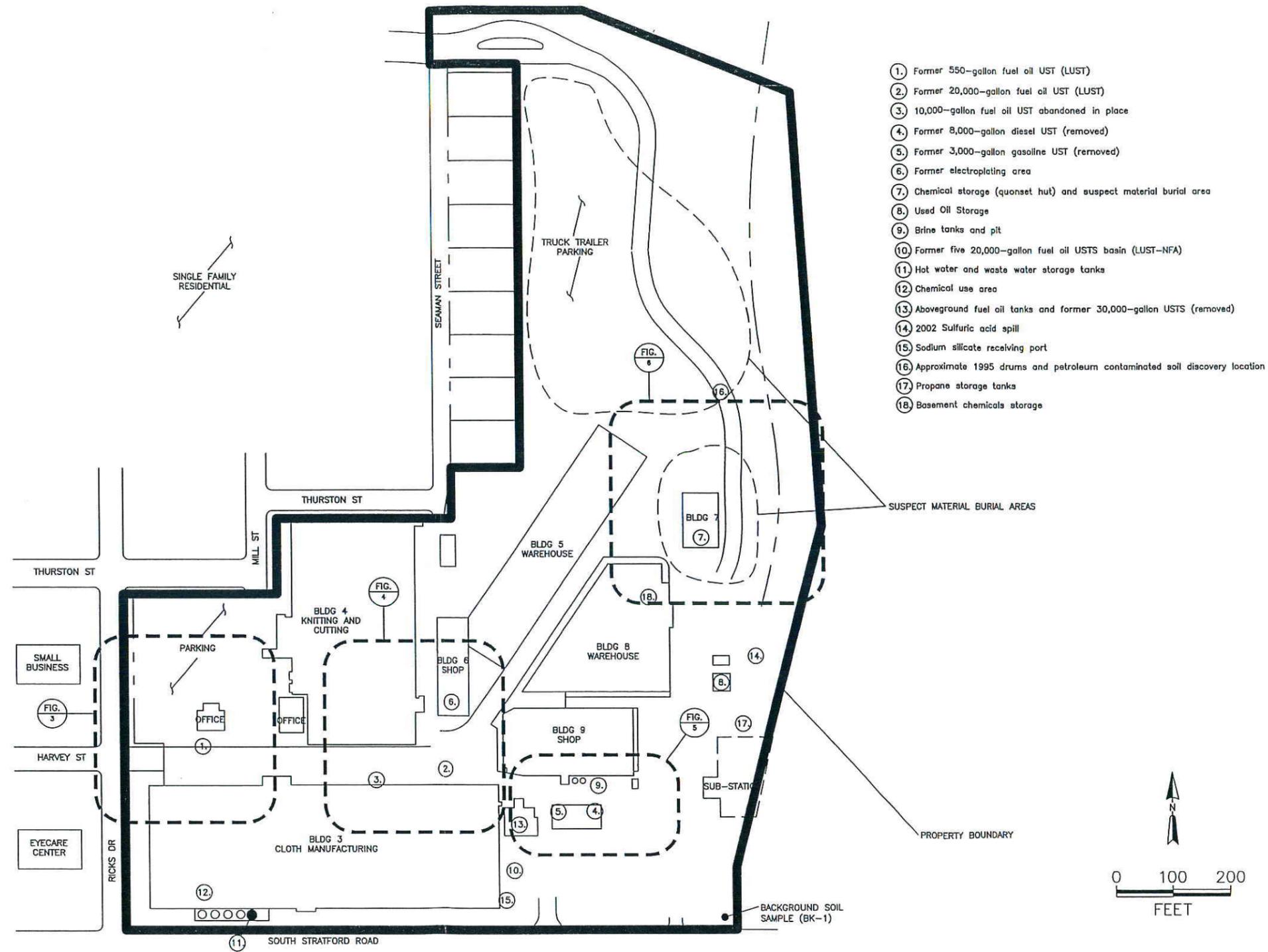
0 0.1 0.2 0.3 0.4 0.5 km  
 0 0.09 0.18 0.27 0.36 0.45 mi  
 36° 05' 06"N, 80° 17' 41"W (NAD27)  
**USGS Winston-Salem West (NC) Quadrangle**  
 Projection is UTM Zone 17 NAD83 Datum

M=7.726  
 G=0.415

**FIGURE 1**  
**SITE LOCATION MAP**  
 Hanesbrands Facility  
 700 South Stratford Road  
 Winston-Salem, North Carolina

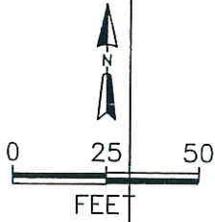
PROJECT NO: 5E070-3189-P  
 DATE: 9/24/2007  
 SCALE: ON MAP  
 DRAWN BY: RPC

**DELTA**  
 8008 Corporate Center Drive, Suite 100  
 Charlotte, North Carolina 28226



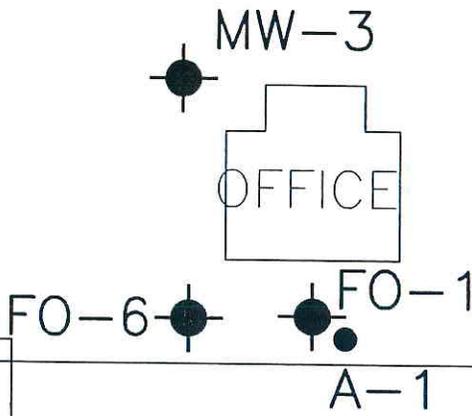
TITLE:  
 SITE MAP  
 HANESBRANDS PRODUCTS FACILITY  
 700 SOUTH STRATFORD ROAD - WINSTON-SALEM, NC

DWN: PM	DES.:	PROJECT NO.:
CHKD: RC	APPD.:	5E 0703-189P
DATE: 09-23-07	REV.:	FIGURE NO.:
		2



ST

KS DR



LEGEND

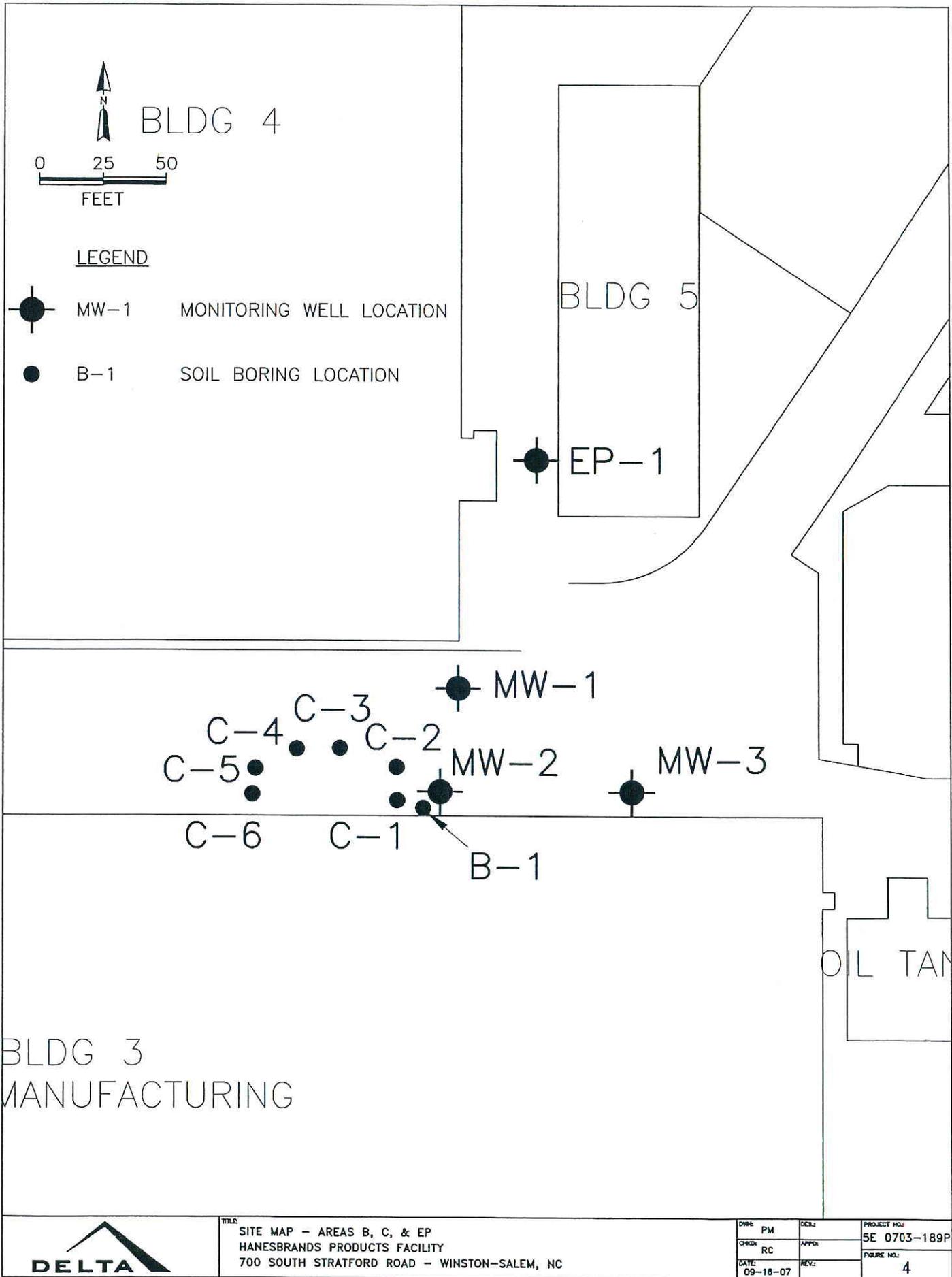
-  MW-3 MONITORING WELL LOCATION
-  A-1 SOIL BORING LOCATION

CLOT



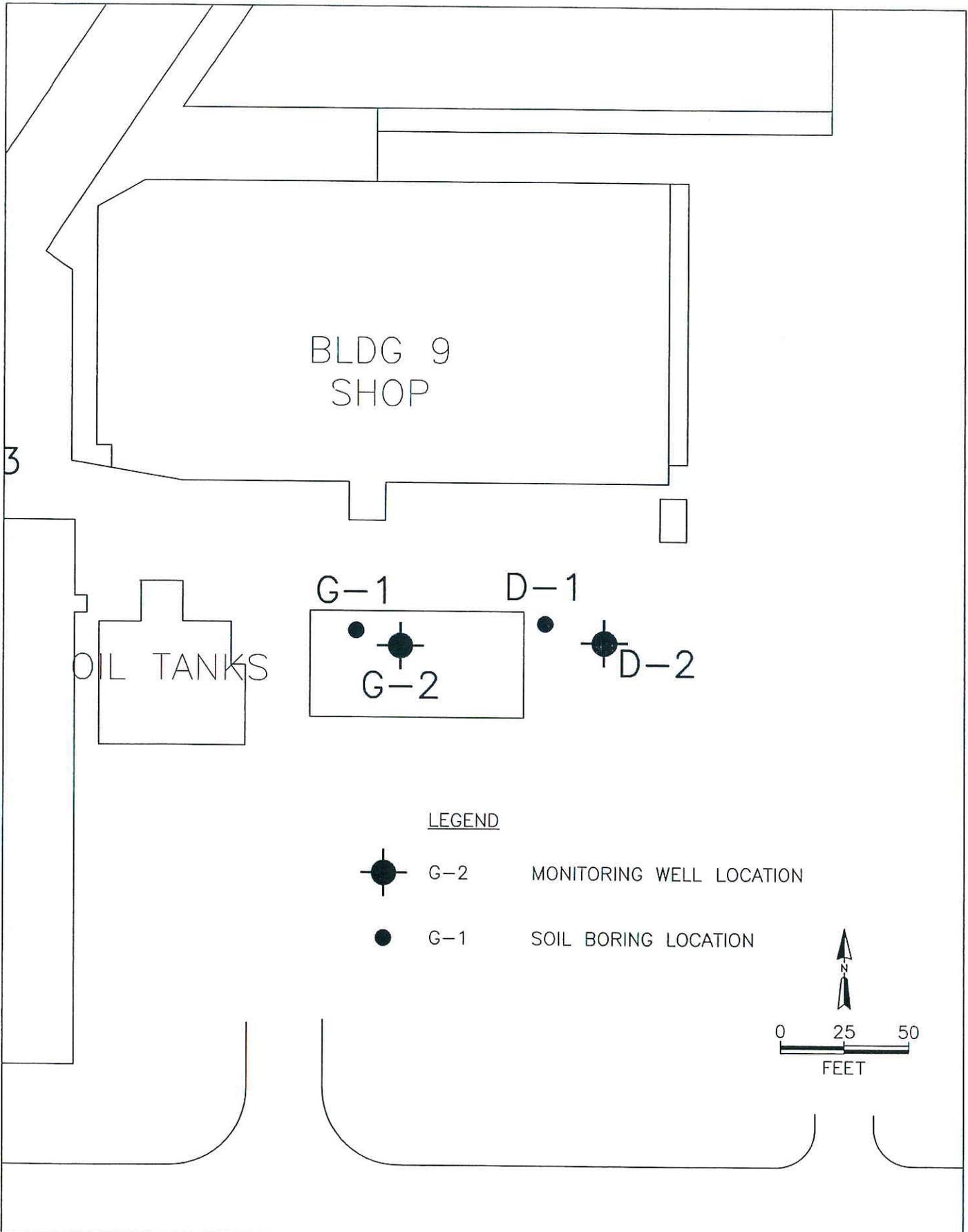
TITLE  
SITE MAP - AREA A  
HANESBRANDS PRODUCTS FACILITY  
700 SOUTH STRATFORD ROAD - WINSTON-SALEM, NC

DIR: PM	DES: RC	PROJECT NO: SE 0703-189P
CHKD: RC	APPD: RC	FIGURE NO: 3
DATE: 09-23-07	REV: RC	



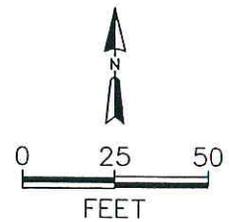
TITLE  
 SITE MAP - AREAS B, C, & EP  
 HANESBRANDS PRODUCTS FACILITY  
 700 SOUTH STRATFORD ROAD - WINSTON-SALEM, NC

DATE 09-18-07	DRW: PM	SCALE:	PROJECT NO.:
	CHKD: RC	APPR:	SE 0703-189P
	REV:	FIGURE NO.:	4



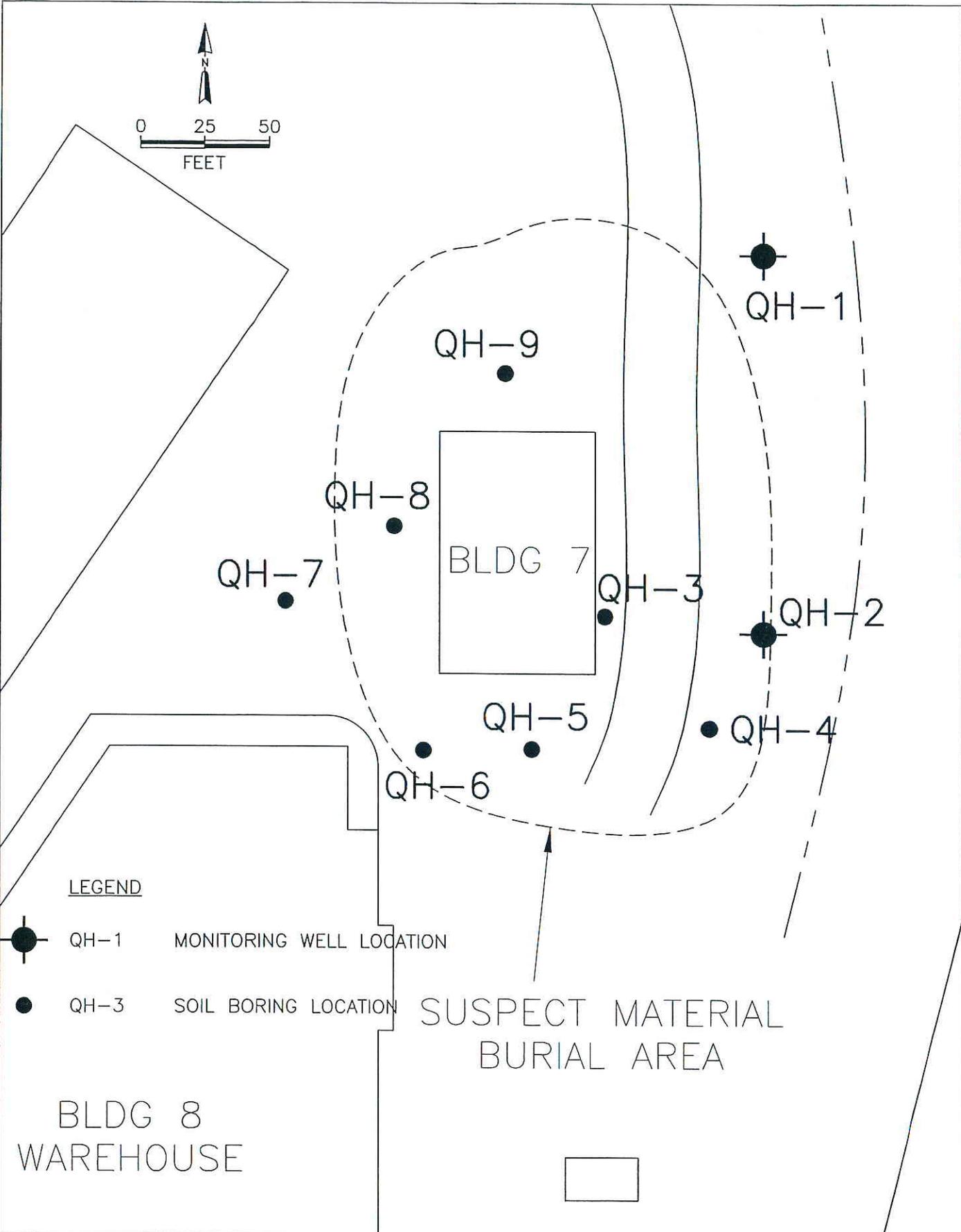
LEGEND

- 
G-2
MONITORING WELL LOCATION
- 
G-1
SOIL BORING LOCATION



TITLE  
 SITE MAP - AREAS D & G  
 HANESBRANDS PRODUCTS FACILITY  
 700 SOUTH STRATFORD ROAD - WINSTON-SALEM, NC

DRW: PM	DESL:	PROJECT NO.:
CHKD: RC	APPD:	SE 0703-189P
DATE: 09-23-07	REV:	FIGURE NO.:
		5



LEGEND

- 
 QH-1 MONITORING WELL LOCATION
- 
 QH-3 SOIL BORING LOCATION

SUSPECT MATERIAL  
BURIAL AREA

BLDG 8  
WAREHOUSE



SITE MAP - AREA QH  
HANESBRANDS PRODUCTS FACILITY  
700 SOUTH STRATFORD ROAD - WINSTON-SALEM, NC

DRW: PM	DES:	PROJECT NO.: SE 0703-189P
CHKD: RC	APPD:	FIGURE NO.: 6
DATE: 09-23-07	REV:	

## APPENDICES

**APPENDIX A**  
**FIELD DATA SHEETS**

**DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD**

<b>Sampled By</b> <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	<b>Facility</b> <i>Hansstrands</i>	<b>Site ID</b> <i>FO-1</i>
Other:	<b>Project No.</b>	<b>Date (m/d/y)</b> <i>6/5/07</i>

**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp: *75*  °C  °F Weather: *Clear, Sunny*

Well Locked?  yes  no Damaged/Repairs Needed: *Needs new lock*

TOC  MP Description:

TOC/MP Stickup: *18"*  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) *SSOgal Fuel Oil UST*

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: *32.7*

<input checked="" type="checkbox"/> E-Tape, # <i>Heron</i> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<i>26.62</i>						
Tape Correction	<i>—</i>						
Water Level (WL)	<i>26.62</i>						
Product Thickness	<i>—</i>						
Product Recovery	<i>N/A</i>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description:

Casing Volume:  $[32.7 (TD) - 26.62 (WL)] \cdot [2 (Well ID)]^2 \cdot [0.0408 (Conversion Factor)] = .99$  gal  liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	Initial	1	2	3	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>10:00</i>	<i>10:10</i>	<i>10:25</i>	<i>10:30</i>			
pH (Temperature Corrected? <input type="checkbox"/> )	<i>4.77</i>	<i>4.65</i>	<i>4.63</i>	<i>4.63</i>			
Temperature °C °F	<i>19.70</i>	<i>19.4</i>	<i>19.4</i>	<i>19.4</i>			
Dissolved Oxygen mg/L	<i>1.79</i>	<i>1.32</i>	<i>1.83</i>	<i>1.77</i>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC μS/cm	<i>.573</i>	<i>.608</i>	<i>.602</i>	<i>.549</i>			
Turbidity <input type="checkbox"/> NTU	<i>64.2</i>	<i>90.0</i>	<i>169</i>	<i>90.5</i>			
Color/Tint	<i>cloudy</i>	<i>cloudy</i>	<i>cloudy</i>	<i>cloudy</i>			
Odor	<i>strong petrol</i>	<i>strong petrol</i>	<i>strong petrol</i>	<i>strong petrol</i>			
<i>ORP mV</i>	<i>296</i>	<i>317</i>	<i>328</i>	<i>334</i>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<i>FO-1</i>	<i>P0</i>	<i>6/5/07</i>	<i>10:30</i>	<i>10</i>	<i>No</i>	<i>Pace</i>			<i>8260, 8270, UPH, E</i>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <i>RYAN CATE</i>	Signature
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# DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Homesbrands</u> Project No.	Site ID <u>FD-6</u> Date (m/d/y) <u>6/5/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp: 70  °C  °F Weather:

Well Locked?  yes  no Damaged/Repairs Needed: New lock needed

TOC  MP Description:

TOC/MP Stickup: 15.5"  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) SSO gal Fuel Oil UST

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: 59.70

<input checked="" type="checkbox"/> E-Tape, # <u>Heron</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>26.04</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>26.04</u>						
Product Thickness	<u>—</u>						
Product Recovery <input checked="" type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description:

Casing Volume:  $[59.7 \text{ (TD)} - 26.04 \text{ (WL)}] \cdot [\text{Well ID}]^2 \cdot [0.0408 \text{ (Conversion Factor)}] = 5.49 \text{ gal}$   liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	Initial	25.5	16.5	16.5	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>0910</u>	<u>0925</u>	<u>0940</u>	<u>0950</u>			
pH (Temperature Corrected? <input type="checkbox"/> )	<u>5.53</u>	<u>6.14</u>	<u>5.28</u>	<u>5.14</u>			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>19.3</u>	<u>19.0</u>	<u>18.8</u>	<u>18.8</u>			
Dissolved Oxygen mg/L	<u>5.36</u>	<u>4.53</u>	<u>4.99</u>	<u>5.15</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>.539</u>	<u>.340</u>	<u>.577</u>	<u>.597</u>			
Turbidity <input type="checkbox"/> NTU	<u>5.5</u>	<u>32.6</u>	<u>25.3</u>	<u>18.1</u>			
Color/Tint	<u>Clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>			
Odor	<u>petrol</u>	<u>petrol</u>	<u>petrol</u>	<u>petrol</u>			
<u>ORP mV</u>	<u>224</u>	<u>232</u>	<u>261</u>	<u>285</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>FD-6</u>	<u>P0</u>	<u>6/5/07</u>	<u>0950</u>	<u>10</u>	<u>No</u>	<u>Roc</u>			<u>8260, 8270, VPH, EP1</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mrmddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>RYAN CATE</u>	Signature
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# DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD

<b>Sampled By</b> <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	<b>Facility</b> <i>Hanesbrands</i>	<b>Site ID</b> <i>MW-3</i>
<b>Project No.</b> <i>SE070-3189P</i>		<b>Date (m/d/y)</b> <i>7/24/07</i>

**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp:  °C  °F Weather: *Clear to partly cloudy 90°*

Well Locked?  yes  no Damaged/Repairs Needed: *Needs lock.*

TOC  MP Description:

TOC/MP Stickup:  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) *SSO gel. Fuel Oil UST*

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: *25.60*

<input checked="" type="checkbox"/> E-Tape, # <i>Heron</i> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<i>1320</i>						
Depth to Water	<i>19.30</i>						
Tape Correction	<i>—</i>						
Water Level (WL)	<i>19.30</i>						
Product Thickness	<i>—</i>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<i>—</i>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description:

Casing Volume:  $[25.6 \text{ (TD)} - 19.3 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.0408 \text{ (Conversion Factor)}] = 1.02 \text{ gal}$   liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

	Initial	1 gal	2 gal	3 gal	(Final)	Meter Type	Remarks
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate							
Time (hh:mm; 24-hr clock)	<i>1320</i>	<i>1325</i>	<i>1330</i>	<i>1335</i>			
pH (Temperature Corrected? <input type="checkbox"/> )	<i>5.73</i>	<i>5.47</i>	<i>5.25</i>	<i>5.15</i>			
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<i>19.6</i>	<i>19.2</i>	<i>18.9</i>	<i>19.0</i>			
Dissolved Oxygen mg/L	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<i>424.9</i>	<i>440.4</i>	<i>453.4</i>	<i>454.8</i>			
Turbidity <input type="checkbox"/> NTU							
Color/Tint	<i>red/cloudy</i>	<i>red/cloudy</i>	<i>red/cloudy</i>	<i>red/cloudy</i>			
Odor	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<i>MW-3</i>	<i>P0</i>	<i>7/24/07</i>	<i>1345</i>	<i>13</i>	<i>No</i>	<i>Pace</i>	<i>—</i>		<i>8260, 8270, APH and EPH</i>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <i>Ryan Cate</i>	Signature <i>Ryan Cate</i>
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# DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Hanestands</u> Project No.	Site ID <u>MW-01</u> Date (m/d/y) <u>6/5/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp: 80 °C  °F Weather: Clear

Well Locked?  yes  no Damaged/Repairs Needed: —

TOC  MP Description:

TOC/MP Stickup: — ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) 20K gal FD. VST

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: 34.5

<input checked="" type="checkbox"/> E-Tape, # <u>Hanestands</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1131</u>						
Depth to Water	<u>30.38</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>30.38</u>						
Product Thickness	<u>—</u>						
Product Recovery	<u>—</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailer  Pump Description: @ 3.5 gal

Casing Volume:  $[34.5 \text{ (TD)} - 30.38 \text{ (WL)}] \cdot [4 \text{ (Well ID)}]^2 \cdot [0.0408 \text{ (Conversion Factor)}] = 2.71 \text{ gal}$   liters

Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

<input checked="" type="checkbox"/> Cum. Vol. Purged	Initial	2.5	5.0	7.5	(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate							
Time (hh:mm; 24-hr clock)	<u>1500</u>	<u>1511</u>					
pH (Temperature Corrected? <input type="checkbox"/> )	<u>4.72</u>	<u>4.69</u>					
Temperature °C <input type="checkbox"/> °F	<u>21.2</u>	<u>21.0</u>					
Dissolved Oxygen mg/L	<u>6.51</u>	<u>6.67</u>					
<input type="checkbox"/> SC or <input type="checkbox"/> EC μS/cm	<u>1.65</u>	<u>1.59</u>					
Turbidity <input type="checkbox"/> NTU	<u>261</u>	<u>660</u>					
Color/Tint	<u>cloudy</u>	<u>cloudy</u>					
Odor	<u>—</u>	<u>—</u>					
<u>OLP</u> mV	<u>384</u>	<u>372</u>					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailer  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-01</u>	<u>P0</u>	<u>6/5/07</u>	<u>1515</u>	<u>10</u>	<u>NO</u>	<u>Pace</u>			<u>8260, 8270</u> <u>VPH, EPH</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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**DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD**

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Hanesbrands</u> Project No.	Site ID <u>MW-02</u> Date (m/d/y) <u>6/8/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp: 80 °C  °F  Weather:

Well Locked?  yes  no Damaged/Repairs Needed:

TOC  MP Description:

TOC/MP Stickup: — ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) 20K gal. PD. UST

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: 34.7

<input checked="" type="checkbox"/> E-Tape, # <u>Herban</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>31.01</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>31.01</u>						
Product Thickness	<u>—</u>						
Product Recovery	<u>—</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description: Dry 5 gal.

Casing Volume:  $[31.7 (TD) - 31.01 (WL)] \cdot [4 (Well ID)]^2 \cdot [0.0408 (Conversion Factor)] = 2.41$  gal  liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

	Initial	2.5	5.0	7.5	(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> Cum. Vol. Purged							
<input type="checkbox"/> Pumping Rate	<u>Initial</u>						
Time (hh:mm; 24-hr clock)	<u>14:28</u>	<u>14:35</u>	<u>14:44</u>				
pH (Temperature Corrected? <input type="checkbox"/> )	<u>4.17</u>	<u>4.04</u>	<u>4.10</u>				
Temperature °C <input type="checkbox"/> °F	<u>23.2</u>	<u>22.3</u>	<u>22.1</u>				
Dissolved Oxygen mg/L	<u>8.04</u>	<u>7.96</u>	<u>3.25</u>				
<input type="checkbox"/> SC or <input type="checkbox"/> EC μS/cm	<u>258</u>	<u>3.41</u>	<u>3.38</u>				
Turbidity <input type="checkbox"/> NTU	<u>280</u>	<u>223</u>	<u>223</u>				
Color/Tint	<u>cloudy</u>	<u>cloudy</u>	<u>cloudy</u>				
Odor	<u>sl. petrol.</u>	<u>sl. petrol.</u>	<u>sl. petrol.</u>				
<u>ORP mV</u>	<u>392</u>	<u>419</u>	<u>422</u>				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-02</u>	<u>P0</u>	<u>6/5/07</u>	<u>1430</u>	<u>10</u>	<u>NO</u>	<u>Page</u>			<u>8260, 8270 VPH, EPH</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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# DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility Project No.	Site ID <u>D-2</u> Date (m/d/y)
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe  Other:

Air Temp:  °C  °F      Weather:

Well Locked?  yes  no      Damaged/Repairs Needed:

TOC  MP Description:

TOC/MP Stickup:  ft  m above/below ground      Well Inside Diameter (ID):  2-inch  4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) SK diesel UST

**Water Level Data**      Measurement Units:  ft  m      Well or Borehole Total Depth (TD) from MP or TOC: 40'

	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
<input checked="" type="checkbox"/> E-Tape, # <u>Axon</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other							
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>37.6</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>37.6</u>						
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>—</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data**      Purge Depth:  Grab  Bailer  Pump      Description:

Casing Volume: [ 70 (TD) - 37.6 (WL) ] • [ 1 (Well ID) ]<sup>2</sup> • [ 0.0408 Conversion Factor ] = 2.2 gal  liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

	(Final)	Meter Type	Remarks
<input type="checkbox"/> Cum. Vol. Purged			
<input type="checkbox"/> Pumping Rate			
Time (hh:mm; 24-hr clock)			
pH (Temperature Corrected? <input type="checkbox"/> )			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F			
Dissolved Oxygen mg/L			
<input type="checkbox"/> SC or <input type="checkbox"/> EC    μS/cm			
Turbidity <input type="checkbox"/> NTU			
Color/Tint			
Odor			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data**      Sample Depth:  Grab  Bailer  Pump      Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>D-2</u>	<u>P0</u>	<u>7/28/07</u>	<u>1730</u>						<u>8260, 8270</u> <u>UPH DEPTH</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature	Page ___ of ___
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**DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD**

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Hansbrands</u> Project No.	Site ID <u>G-2</u> Date (m/d/y) <u>7/26/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp:  °C  °F Weather:

Well Locked?  yes  no Damaged/Repairs Needed:

TOC  MP Description:

TOC/MP Stickup: —  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other: 1-inch

Site Remarks (nearby wells pumping, tide, stream stage, etc.) 3K gel gas VST

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: 35'

SE-Tape, # <u>Acron</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	—						
Depth to Water	<u>32.35</u>						
Tape Correction	—						
Water Level (WL)	<u>32.35</u>						
Product Thickness	—						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	—						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailer  Pump Description:

Casing Volume: [ (TD) - (WL) ] • [ (Well ID) ]<sup>2</sup> • [ (Conversion Factor) ] =  gal  liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)							
pH (Temperature Corrected? <input type="checkbox"/> )							
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F							
Dissolved Oxygen mg/L							
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm							
Turbidity <input type="checkbox"/> NTU							
Color/Tint							
Odor							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailer  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>G-2</u>	<u>P0</u>	<u>7/26</u>	<u>1700</u>	<u>7</u>	<u>NO</u>	<u>Pace</u>			<u>8260 \$VP#</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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# DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Homeswands</u> Project No. <u>5E07031899</u>	Site ID <u>QH-1</u> Date (m/d/y) <u>7/25/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp:  °C  °F Weather: Sunny

Well Locked?  yes  no Damaged/Repairs Needed:

TOC  MP Description:

TOC/MP Stickup: 2.4  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other: 1 inch

Site Remarks (nearby wells pumping, tide, stream stage, etc.) Drum Search

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC:

E-Tape, # <u>Aeron</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>19.75</u>						
Tape Correction	<u>-</u>						
Water Level (WL)	<u>19.75</u>						
Product Thickness	<u>-</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Static Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description:

Casing Volume:  $[26.9 \text{ (TD)} - 19.75 \text{ (WL)}] \cdot [1 \text{ (Well ID)}]^2 \cdot [0.0408 \text{ (Conversion Factor)}] = 0.287 \text{ gal}$   liters  Well Goes Dry While Purging

Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; (Final) Meter Type Remarks

Casing Volume	Pre	Post	pH	Temperature	Dissolved Oxygen	SC or EC	Turbidity	Color/Tint	Odor
<input type="checkbox"/> Cum. Vol. Purged									
<input type="checkbox"/> Pumping Rate									
Time (hh:mm; 24-hr clock)									
pH (Temperature Corrected? <input type="checkbox"/> )	<u>5.92</u>	<u>4.60</u>							
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>17.7</u>	<u>17.9</u>							
Dissolved Oxygen mg/L									
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>222.7</u>	<u>180.5</u>							
Turbidity <input type="checkbox"/> NTU	<u>cloudy</u>	<u>cloudy</u>							
Color/Tint	<u>orange</u>	<u>orange</u>							
Odor	<u>none</u>	<u>none</u>							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>QH-1</u>	<u>P0</u>	<u>7/25/07</u>	<u>1800</u>	<u>8</u>	<u>-</u>	<u>Lab</u>			

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Ryan Gate Signature Ryan Gate By \_\_\_\_\_ Date Entered into Database \_\_\_\_\_ Page \_\_\_ of \_\_\_

**DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD**

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Hansbrants</u> Project No. <u>5E0703189P</u>	Site ID <u>QH-2</u> Date (m/d/y) <u>7/25/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe Other:

Air Temp:  °C  °F Weather: Sunny

Well Locked?  yes  no Damaged/Repairs Needed:

TOC  MP Description:

TOC/MP Stickup: 3.3  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other: 1 inch

Site Remarks (nearby wells pumping, tide, stream stage, etc.) Down search

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC:

E-Tape, # <u>Heron</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>20.85</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>20.85</u>						
Product Thickness	<u>—</u>						
Product Recovery	<u>—</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description:

Casing Volume:  $[26.7 (TD) - 20.85 (WL)] \cdot [1 (Well ID)]^2 \cdot [0.0408 (Conversion Factor)] = 0.25$   gal  liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

Cum. Vol. Purged	Pre	Post	(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate					
Time (hh:mm; 24-hr clock)					
pH (Temperature Corrected? <input type="checkbox"/> )	<u>5.13</u>	<u>4.78</u>			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>20.4</u>	<u>18.5</u>			
Dissolved Oxygen mg/L	<u>—</u>				
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	<u>279.6</u>	<u>317.1</u>			
Turbidity <input type="checkbox"/> NTU					
Color/Tint					
Odor					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>QH-2</u>	<u>P0</u>	<u>7/25/07</u>	<u>1900</u>	<u>3</u>	<u>—</u>	<u>face</u>			

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Ryan Cate</u>	Signature <u>Ryan Cate</u>
Date Entered into Database _____ By _____ Page ___ of ___	

**DELTA ENVIRONMENTAL CONSULTANTS, INC. GROUNDWATER SAMPLING RECORD**

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Harris brand</u> Project No.	Site ID <u>EP-1</u> Date (m/d/y) <u>7/24/07</u>
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**Site Description**  Monitoring Well  Extraction Well  Irrigation Well  Spring  Borehole  Probe  Other:

Air Temp:  °C  °F Weather: clear 95°

Well Locked?  yes  no Damaged/Repairs Needed:

TOC  MP Description: Temp well

TOC/MP Stickup:  ft  m above/below ground Well Inside Diameter (ID):  2-inch  4-inch Other: 1/2 inch

Site Remarks (nearby wells pumping, tide, stream stage, etc.) Electroplating Area?

**Water Level Data** Measurement Units:  ft  m Well or Borehole Total Depth (TD) from MP or TOC: 40'

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>37.4</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>37.4</u>						
Product Thickness							
Product Recovery	<u>—</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth:  Grab  Bailor  Pump Description:

Casing Volume:  $[40 \text{ (TD)} - 37.4 \text{ (WL)}] \cdot [ \text{ (Well ID)} ]^2 \cdot [ \text{ (Conversion Factor)} ] = \text{ } \square \text{ gal } \square \text{ liters}$   
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

					(Final)	Meter Type	Remarks
<input type="checkbox"/> Cum. Vol. Purged							
<input type="checkbox"/> Pumping Rate							
Time (hh:mm; 24-hr clock)							
pH (Temperature Corrected? <input type="checkbox"/> )							
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F							
Dissolved Oxygen mg/L							
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$							
Turbidity <input type="checkbox"/> NTU							
Color/Tint							
Odor							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth:  Grab  Bailor  Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>EP-1</u>	<u>P0</u>	<u>7/24/07</u>	<u>1800</u>	<u>8</u>	<u>No</u>	<u>Pace</u>			<u>8260, 8270, Metals</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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**APPENDIX B**  
**SOIL BORING LOGS**



Project Number: 5E070-3189-P  
 Project Name: Hanesbrands  
 Contractor: SEADAERCO

Boring Id: A-1  
 Location: Winston-Salem, NC  
 Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC. Elevation: N/A

Logged By: R. Cate Datum: N/A

Date(s): 07/26/07 Blank Casing: N/A  
 type: dia: fm: to:

Purpose: UST assessment Screens: N/A  
 type: size: dia: fm: to:

Drilling Method: Direct Push Annular Fill: N/A  
 type: fm: to:  
 type: fm: to:  
 type: fm: to:

Remarks:  
 Soil Boring. No monitoring well constructed.

Soil Sample collected at 16:10

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
		A-1 0-4	12		ML	SILT, Red, Micaceous, Dry.
		A-1 4-8	0			
	10	A-1 8-12	0			
						Boring terminated at 12'.







Project Number: 5E070-3189-P	Boring Id: C-2
Project Name: Honesbrands	Location: Winston-Salem, NC
Contractor: SEADAERCO	Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC. Elevation: N/A

Logged By: R. Cate Datum: N/A

Date(s): 07/26/07 Blank Casing: N/A  
 type: dia: fm: to:

Purpose: UST closure Screens: N/A  
 Drilling Method: Direct Push type: size: dia: fm: to:

Remarks: Annular Fill: N/A  
 Soil Boring. No monitoring well constructed. type: fm: to:  
 type: fm: to:  
 type: fm: to:  
 Soil Sample collected at 14:00

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			0	[Vertical Line Pattern]	ML	1.5' Topsoil, gravel, and 6" of concrete pieces, SILT, Micaceous, Tan, Dry.
			0			SILT, Red, Micaceous, Dry.
	10	C-2 8-12	0			Boring terminated at 12'.



Project Number: 5E070-3189-P	Boring Id: C-3
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADA/ECCO	Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC. Elevation: N/A

Logged By: R. Cate Datum: N/A

Date(s): 07/26/07  
 Blank Casing: N/A  
 type: dia: fm: to:

Purpose: UST closure  
 Screens: N/A  
 Drilling Method: Direct Push type: size: dia: fm: to:

Remarks:  
 Soil Boring. No monitoring well constructed.  
 Annular Fill: N/A  
 type: fm: to:  
 type: fm: to:  
 type: fm: to:  
 Soil Sample collected at 14:15

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			0		ML	1' Gravel, SILT, Red, Micaceous, Dry, 2" Gravel layer at 3' and concrete pieces at 3.5'.
			0			SILT, Red/tan, Micaceous, Dry.
	10	C-3 8-12	0			Boring terminated at 12'.









Project Number: 5E070-3189-P	Boring Id: D-1
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAERCO	Drill Rig: GeoProbe 54DT

Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
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Logged By: D Rothaupt	Datum: N/A
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Date(s): 07/26/07	Blank Casing: N/A
Purpose: UST assessment	type: dia: fm: to:

Drilling Method: Direct Push	Screens: N/A
	type: size: dia: fm: to:

Remarks: Soil Boring. No monitoring well constructed.	Annular Fill: N/A
	type: fm: to:
	type: fm: to:
	type: fm: to:
Soil Sample collected at 11:00	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			-			No recovery, Loose gravel fill.
			2.3		CL	Silty CLAY, Red/orange, Micaceous, Soft, Moist.
	10	D-1 8-12	6.8		ML	Slightly clayey SILT, Micaceous, Red/orange, Soft, Moist.
			1.9			SILT, Red/orange/white, Micaceous, Soft, Dry.
						Boring terminated at 12'.



Project Number: 5E070-3189-P	Well Id: D-2
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAECO	Drill Rig: GeoProbe 54DT

Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
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Logged By: D Rothaupt	Datum: N/A
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Date(s): 07/26/07	Blank Casing: Yes
Purpose: UST assessment	type: PVC dia: 1" fm: 0' to: 25'

Drilling Method: Direct Push	Screens: Yes
	type: PVC size: 0.010" dia: 1" fm: 25' to: 40'

Remarks: Temporary monitoring well constructed. Soil sample collected at 11:35 Groundwater sample collected at 17:30 Approximate water level at time of drilling.	Annular Fill: N/A type: fm: to: type: fm: to: type: fm: to:
---	--

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description	Monitoring Well
		D-2 Q-4	80.1		CL	Silty CLAY, Orange/brown Moist.	
			76.7			Silty CLAY, Red/orange, Moist.	
	10		-		ML	Poor recovery, SILT, Red/orange, With gravel.	
			21.6			Slightly Clayey SILT, Red/white/orange, Moist.	
			8.6			SILT, Red/orange/white/black/mottled, Dry.	
	20		3.2			SILT, Red/orange/white/mottled, Dry, Saprolitic.	
			0			SILT, Red/orange/white/mottled, Dry, Saprolitic.	
	30		0		ML	Slightly Sandy SILT, Red/orange/white, Moist to wet, Some gravel, Saprolitic.	
			0			Slightly Sandy SILT, Gray/white, Wet, Micaceous.	
	40		0			Boring terminated at 40'.	



Project Number: 5E070-3189-P	Boring Id: G-1
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAERCO	Drill Rig: GeoProbe 54DT
Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: D Rothaupt	Datum: N/A
Date(s): 07/26/07	Blank Casing: N/A
Purpose: UST assessment	type: dia: fm: to:
Drilling Method: Direct Push	Screens: N/A
	type: size: dia: fm: to:
Remarks: Soil Boring. No monitoring well constructed.	Annular Fill: N/A
	type: fm: to:
	type: fm: to:
Soil Sample collected at 14:30	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			-			No Recovery, Loose gravel.
			-			No Recovery, Loose gravel.
	10	G-1 B-12	3.9		CL	Silty CLAY, Red/orange, Moist.
			1.1		ML	Slightly clayey SILT, Red/black/white/mottled, Moist, Saprolitic.
						Boring terminated at 12'.



Project Number: SE070-3189-P	Well Id: G-2
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAERCO	Drill Rig: GeoProbe 54DT
Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: D Rothaupt	Datum: N/A
Date(s): 07/26/07	Blank Casing: Yes type: PVC dia: 1" fm: 0' to: 26'
Purpose: UST assessment	Screens: Yes type: PVC size: 0.010" dia: 1" fm: 26' to: 36'
Drilling Method: Direct Push	Annular Fill: N/A type: fm: to: type: fm: to: type: fm: to:
Remarks: Temporary monitoring well constructed. Soil sample collected at 13:50 Groundwater sample collected at 17:00 ▽ Approximate water level at time of drilling.	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description	Monitoring Well
▽		G-2 O-4	25.3		CL	Silty CLAY, Orange/brown, Moist, Dry, With gravel.	
			27.3			Silty CLAY, Red/orange, Dry.	
	10		7.9		ML	Slightly clayey SILT, Red/orange, Dry.	
			2.0				
	20		1.3			SILT, Red/orange, Dry, Micaceous.	
			0.0				
			0.0			SILT, Red/white/black, Moist, Saprolitic.	
	30		0.0				
			0.0			Clayey SILT, Red/white/black/mottled, Moist.	
						Refusal at 36'	
				Boring terminated at 36'.			



Project Number: 5E070-3189-P	Well Id: EP-1
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAECO	Drill Rig: AMS Powerprobe 9500-VTR
Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: D Rothaupt	Datum: N/A
Date(s): 07/26/07	Blank Casing: Yes type: PVC dia: 1" fm: 0' to: 25'
Purpose: Electroplanting Area Assessment	Screens: Yes type: PVC size: 0.010" dia: 1" fm: 25' to: 40'
Drilling Method: Direct Push	Annular Fill: N/A type: fm: to: type: fm: to: type: fm: to:
Remarks: Temporary monitoring well constructed. Soil sample collected at 17:30 Groundwater sample collected at 18:00 Approximate water level at time of drilling.	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description	Monitoring Well
	0 10 20 30 40		0.0		ML	Slightly Clayey SILT, Red, Moist.	
			0.2		CL	Silty CLAY, Red/orange, Moist.	
			0.7				
			0.0				
			0.0		ML	SILT, Red/white/brown/mottled, Moist, Saprolitic.	
			0.0				
			0.0				
			0.0				
			0.0				
			0.0				
						Boring terminated at 40'. Temporary well set at 40' with 15' screen.	



Project Number: 5E070-3189-P	Well Id: QH-1
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAECO	Drill Rig: AMS Powerprobe 9500-VTR
Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: R. Cate	Datum: N/A
Date(s): 07/25/07	Blank Casing: Yes type: PVC dia: 1' fm: 0' to: 18'
Purpose: Quonset hut assessment	Screens: Yes type: PVC size: 0.010" dia: 1" fm: 18' to: 28'
Drilling Method: Direct Push	Annular Fill: None type: fm: to: type: fm: to: type: fm: to:
Remarks: Temporary monitoring well constructed. Soil sample collected at 13:00 Groundwater sample collected at 18:00 Approximate water level at time of drilling.	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description	Monitoring Well
			4.5		ML	SILT, Tan/red, Dry.	
		QH-1 4-8	4.7			Clayey SILT, Red, Micaceous, Dry.	
	10		1.6			SILT, Brown, Micaceous, Moist.	
			0.6			Clayey SILT, Tan, Micaceous, Moist.	
			0.6		CL	Slightly sandy CLAY, Tan/orange, Micaceous, Moist, Sand stringer at 19'.	
	20		2.3		ML	SILT, Tan/gray, Micaceous, Moist to wet, Quartz fragments.	
			0.0			SILT, Micaceous, Tan/gray, Wet	





Project Number: 5E070-3189-P	Boring Id: QH-3
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAERCO	Drill Rig: AMS Powerprobe 9500-VTR
Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: R. Cate	Datum: N/A
Date(s): 07/25/07	Blank Casing: N/A
Purpose: Quonset hut assesement	type: dia: fm: to:
Drilling Method: Direct Push	Screens: N/A
	type: size: dia: fm: to:
Remarks: Soil Boring. No monitoring well constructed.	Annular Fill: N/A
	type: fm: to:
	type: fm: to:
Soil Sample collected at 17:00	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			0.5		ML	6" asphalt and gravel, SILT, Tan/orange, Dry.
			1.0		CL	Silty CLAY, Red, Dry.
	10	QH-3 8-12	1.8		CL	Silty CLAY, Red, Dry.
			0.0		ML	SILT, Gray/tan, Moist.
						Boring terminated at 16'.



Project Number: SE070-3189-P	Boring Id: QH-4
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAECO	Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: R. Cate	Datum: N/A
Date(s): 07/25/07	Blank Casing: N/A
Purpose: Quonset hut assesement	type: dia: fm: to:
Drilling Method: Direct Push	Screens: N/A
	type: size: dia: fm: to:
Remarks: Soil Boring. No monitoring well constructed.	Annular Fill: N/A
	type: fm: to:
	type: fm: to:
	type: fm: to:
Soil Sample collected at 7:45	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
		QH-4 O-4	26		ML	6" asphalt and gravel, SILT, Red, Moist.
			17.5			SILT, Red, Dry, Gravel layer at 6'
	10		9.0		CL	Silty CLAY, Red, Dry.
			18.3			Silty CLAY, Red/orange/gray mottled, Dry.
						Boring terminated at 16'.





Project Number: 5E070-3189-P

Boring Id: QH-6

Project Name: Hanesbrands

Location: Winston-Salem, NC

Contractor: SEADA/ECCO

Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC.

Elevation: N/A

Logged By: R. Cate

Datum: N/A

Date(s): 07/26/07

Blank Casing: N/A  
type: dia: fm: to:

Purpose: Quonset hut assesement

Screens: N/A  
type: size: dia: fm: to:

Drilling Method: Direct Push

Remarks:  
Soil Boring. No monitoring well constructed.

Annular Fill: N/A  
type: fm: to:  
type: fm: to:  
type: fm: to:

Soil Sample collected at 9:30

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			5.3		ML	3" asphalt, Clayey SILT, Red/brown, Dry.
		QH-6 4-B	6.7			Clayey SILT, Red, Dry.
	10		4.2			SILT, Red/brown, Dry.
			0.7			SILT, Tan, Dry.
						Boring terminated at 16'.



Project Number: 5E070-3189-P	Boring Id: QH-7
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAECO	Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
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Logged By: R. Cate	Datum: N/A
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Date(s): 07/26/07	Blank Casing: N/A
Purpose: Quonset hut assesement	type: dia: fm: to:

Drilling Method: Direct Push	Screens: N/A
	type: size: dia: fm: to:

Remarks: Soil Boring. No monitoring well constructed.	Annular Fill: N/A
	type: fm: to:
	type: fm: to:
	type: fm: to:
Soil Sample collected at 9:45	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
	10	QH-7 0-4	4.3		ML	3" asphalt, Clayey SILT, Red, Micaceous, Dry.
			1.1			
			0.0			SILT, Tan, Micaceous, Dry.
			0.0			
						Boring terminated at 16'.



Project Number: 5E070-3189-P

Boring Id: QH-8

Project Name: Hanesbrands

Location: Winston-Salem, NC

Contractor: SEADAERCO

Drill Rig: AMS Powerprobe 9500-VTR

Consulting Firm: DELTA CONSULTANTS, INC.

Elevation: N/A

Logged By: R. Cate

Datum: N/A

Date(s): 07/26/07

Blank Casing: N/A

type: dia: fm: to:

Purpose: Quonset hut assesment

Screens: N/A

type: size: dia: fm: to:

Drilling Method: Direct Push

Remarks:

Soil Boring. No monitoring well constructed.

Annular Fill: N/A

type: fm: to:

type: fm: to:

type: fm: to:

Soil Sample collected at 10:45

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			1.9		ML	3" asphalt, Clayey SILT, Red, Micaceous, Dry.
			1.4			
	10		0.0			SILT, Tan, Micaceous, Dry.
		QH-8 12-16	0.0			
						Boring terminated at 16'.



Project Number: 5E070-3189-P	Boring Id: QH-9
Project Name: Hanesbrands	Location: Winston-Salem, NC
Contractor: SEADAECO	Drill Rig: AMS Powerprobe 9500-VTR
Consulting Firm: DELTA CONSULTANTS, INC.	Elevation: N/A
Logged By: R. Cate	Datum: N/A
Date(s): 07/26/07	Blank Casing: N/A type:                                    dia:                                    fm:                                    to:
Purpose: Quonset hut assesement	Screens: N/A type:                                    size:                                    dia:                                    fm:                                    to:
Drilling Method: Direct Push	Annular Fill: N/A type:                                    fm:                                    to: type:                                    fm:                                    to: type:                                    fm:                                    to:
Remarks: Soil Boring. No monitoring well constructed.	
Soil Sample collected at 11:15	

Water Level	Depth (ft)	Sample ID No.	PID	Graphic Log	USCS Code	Material Description
			0.1		ML	Clayey SILT, Red, Dry, Concrete, asphalt, and gravel throughout sample interval.
		QH-9 4-8	46.5			Clayey SILT, Red, Micaceous, Dry.
	10		3.9			
			21.6			
						SILT, Tan, Micaceous, Moist. Boring terminated at 16'.

