Tar Removal Work Plan
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Prepared for
Cabot Corporation
Two Seaport Lane
Suite 1300
Boston, MA 02210

Prepared by
Gradient
20 University Road
Cambridge, MA 02138

&

Weston Solutions
94072 Summer Breeze Drive
Fernandina Beach, FL 32034

October 19, 2009

Table of Contents

Page

1 Introduction

A number of investigations have been undertaken to evaluate sediment quality in Springstead and Hogtown Creeks in the last approximately 30 years. Recently, a comprehensive field reconnaissance survey and follow-up, focused sediment chemical characterization program was undertaken by the Alachua County Environmental Protection Department (ACEPD) to further characterize sediment quality in the creeks (ACEPD, 2009). Springstead and Hogtown Creeks are urbanized creeks located downstream of the Cabot Carbon/Koppers Superfund Site in Gainesville, Florida ("Site"; Figure 1). Although operations at the Cabot Carbon facility ceased in 1966, historical inputs, including storm and waste water discharges and a breach of former pine products lagoon by a developer, may have contributed Cabot-related contamination to Springstead and Hogtown Creeks. The Koppers wood treating facility is believed to have discharged storm water from 1916 onwards to these creeks.

The field reconnaissance portion of the recent ACEPD sediment investigation was extremely thorough and included advancement of a sediment probe at hundreds of locations in Springstead and Hogtown Creeks. The field reconnaissance identified the presence of tar-like material, typically at a depth of 18 to 24 inches below the creek bed (*i.e.*, relatively inaccessible), in about 10 areas. Due to the relatively low contaminant concentrations found in the sediments and their inaccessibility, the tar-affected sediments are not expected to pose a risk to human health and the environment. In addition, due to the viscous nature of the tar and the presence of a top layer of "clean" sediment, the likelihood of mobilization of tar-affected sediments is also relatively low. Nonetheless, Cabot Corporation (Cabot) has decided to excavate and remove the tar affected sediment from these 10 areas. Removal of the identified tar deposits is the most expeditious means to address the nuisance concern associated with these deposits and negates the need for complicated and time consuming assessment efforts. This work plan presents the approach to be used for the removal and off-Site disposal of tar-affected sediments.

2 Tar Remediation Approach

2.1 Setting

Springstead Creek lies in the northern part of Gainesville in the Hogtown Creek Watershed. It is approximately 9,500 feet long and flows in a westerly direction from North Main Street and NE 34 Place and under US 441, where it joins Hogtown Creek (Figure 1). Springstead Creek is a sand-bottomed stream, averaging 2.75 meters wide and about 0.2 meters deep. The water in the creek reportedly rises up to 1 meter during storms. Land use in the creek basin is industrial and commercial in the upstream reaches and residential in the downstream portion before the confluence with Hogtown Creek (WAR, 2004).

The North Main Street Terrace Ditch runs north of the former Cabot property and intercepts flow from the North Main Street Ditch (Figure 1). After its confluence with North Main Street Ditch, the North Main Street Terrace Ditch flows through the undeveloped wooded area before it discharges into Springstead Creek (Figure 1). Stormwater runoff from the Koppers wood treating operations and runoff from NW 23rd Avenue combine in a drainage ditch that traverses the Koppers property from south to north and discharges to Springstead Creek just downstream of its confluence with the North Main Street Terrace Ditch (Figure 1).

Hogtown Creek flows in a southwesterly direction for several miles after the confluence with Springstead Creek near US 441 (Figure 1). Hogtown Creek is sand-bottom and is an average of 2.5 meters wide and 0.1 meters deep immediately downstream of the confluence with Springstead Creek. Water reportedly rises up to 1.6 meters above the base flow during storms. Banks are high and steep with evidence of erosion and clay outcroppings in places. Land use is primarily residential and commercial with some natural forest and industrial use (WAR, 2004).

As discussed in the ACEPD (2007) report, "…most of the Hogtown [and Springstead] Creek watershed is urbanized. In many areas, residential development has encroached on the creek. In several areas, the floodplain has been filled for development and the stream channelized. Sand smothering is very severe in the main channel between NW 45th Avenue to the forested wetland south of SW 2nd Avenue. In this area, the creek is devoid of aquatic vegetation, and contains large amounts of accumulated sediment (primarily sand) that is eroded and transported downstream during storm events" (ACEPD, 2007).

2.2 Sediment Characterization Studies

A series of studies have been conducted to characterize sediment and surface water quality within Springstead and Hogtown Creeks (EPA, 1980; IT, 1987; Hunter/ESE, 1990; ACEPD, 1994; ACEPD, 2006; ACEPD, 2007, ACEPD, 2009). While the objective of some of these studies was general characterization of conditions, others were undertaken in response to citizen observations of tar within the creek(s), *i.e.*, were biased towards areas believed to be affected by tar. The findings of these prior studies have been fairly consistent – noting the presence of low levels of volatile organics and semi-volatile organics, with the highest concentrations being detected in the same general areas. However, the recent ACEPD (2009) study is the most comprehensive in scope, the best indicator of current sediment conditions, and a relatively accurate locator and delineator of tar deposits. Consequently, the discussion presented in the following paragraphs and sub-sections, and the proposed sediment remediation plan, relies heavily on the findings of the ACEPD (2009) study.

The ACEPD (2009) study consisted of two components:

- First, a streambed reconnaissance survey was undertaken by Alachua County personnel by "walking the creeks and [North Main Terrace] ditch noting any areas of observable "tar-like" materials or heavy soil staining" (ACEPD, 2009). In addition, "a soil probe was used to evaluate the deeper sediments at all (emphasis added) sand bars and depositional areas within the stream and ditch to look for and document areas of buried contamination" (ACEPD, 2009). Based on discussions with the Alachua County field team, we understand that on the order of hundreds, and possibly more, locations in depositional areas were probed to identify tarry materials and/or visually stained soil/sediments. Since the tar is viscous and has a distinct color and odor, the use of a probe together with visual and olfactory observations proved to be an effective approach for delineating tar affected areas. Using this approach, the study identified approximately 10, relatively small, areas of tar-impacted sediments (Figure 2).
- Second, a total of 25 sediment samples from 13 locations (a surficial and a deeper sediment sample at 12 of 13 locations) were collected for chemical analysis. The sampling locations were: based on the field observations (*i.e.*, biased to characterize tar impacts), located downstream of point sources (*e.g.*, Koppers), and also included two background locations.

Overall, the ACEPD study was well designed/implemented and has successfully defined the tar impacted areas within the creeks. The sediment chemical characterization results indicate the presence of dioxins and polynuclear aromatic hydrocarbons (PAHs), although at relatively low concentrations. The results also indicate that the highest dioxin concentrations were found at sampling locations with low

PAH concentrations. Given that PAHs generally appear to be associated with the tar deposits in the creek, the ACEPD report concluded that "the observed dioxin levels may not be linked to tarry contamination observed in other samples but could be due to other sources."

In general, concentrations in the surficial sediments (*i.e.*, materials potentially accessible to receptors) were lower than concentrations in the deeper sediment samples. An examination of the detected concentrations indicates that the tar-affected sediments are not likely to pose significant human health and ecological risks, as discussed in Section 2.3. Given the relatively low sediment concentrations (even though samples were biased to tar affected areas), the low risk to human health, the setting (*i.e.*, heavily urbanized with numerous sources of contamination, particularly PAHs), the presence of the tar is primarily a nuisance condition in the creeks. Therefore, the proposed sediment remediation is aimed at addressing the approximately 10 areas, where tar was delineated by ACEPD based on visual and olfactory observations. The remedial objectives are further discussed in Section 2.4.

2.3 Potential Human Health and Ecological Risks

2.3.1 Human Health Risks

Human health risks associated with potential exposures to sediments in Springstead and/or Hogtown Creeks have been assessed as part of two prior evaluations (Hunter/ESE, 1990; FDHRS/ATSDR, 1995). The Hunter/ESE risk assessment evaluated potential surface water and sediment exposure to adolescent recreators, whereas the FDHRS/ATSDR risk assessment evaluated chronic and continuous children exposure to sediments. Both these risk assessments concluded that sediments in Springstead and Hogtown Creeks did not pose significant risks to human health.

We understand that the Florida Department of Health (FDOH) is conducting a risk assessment utilizing the sediment data collected as part of the ACEPD (2009) study. Although the current data set is much more robust than the data utilized in the Hunte/ESE and FDHRS/ATSDR risk assessments, it is anticipated that the overall conclusions of the risk assessment will remain unchanged (*i.e.*, reach a conclusion of no significant risk to human health) for the following reasons:

- In general, the creeks are not readily accessible due to heavy vegetation and have limited access points (large portions abut private property). Although occasional visits to the creeks have been reported, potential receptors (recreators and/or trespassers) are expected to be exposed to sediments on an infrequent basis.

- Tar and impacted sediments were found at depths in the creeks that are generally inaccessible to receptors.
- Concentrations in surficial sediments, the depth horizon that receptors are most likely to contact, are relatively low, further minimizing potential human health risks.
- Finally, FDOH recently assessed off-site health risks for dioxins and PAHs associated with the Koppers facility (FDOH, 2009). This risk assessment also helps place the creek sediment related risks in perspective.
    - For the easement west of Koppers, the risk assessment evaluated potential soil exposures to carcinogenic PAHs, expressed as a benzo(a)pyrene (BaP) toxicity equivalence quotient (TEQ) of up to 6.4 mg/kg, using conservative residential exposure assumptions. This evaluation concluded that incidental ingestion of small amounts of surface soil in this area would result in a "very low" incremental cancer risk. Since PAH concentrations in the creeks are much lower (maximum BaP TEQ of 1.66 and 3.17 mg/kg in shallow and deep sediments, respectively) and the exposure frequency for the creeks is also expected to be lower than the values used in the FDOH risk assessment, it is concluded that sediment exposures in the creeks will not pose significant risk to human health.
    - Although dioxins are not associated with the former Cabot Carbon operations, exposure to the dioxin levels in the creek sediments are not expected to pose a significant risk to human health. The maximum dioxin concentration detected in the creek sediments, expressed as a 2,3,7,8-TCDD TEQ, is 20 ng/kg compared to a maximum concentration of 58 ng/kg in soils in the residential neighborhoods north and west of the Koppers facility. Since the FDOH concluded that the incidental exposure to dioxin impacted soils in these neighborhoods is "not likely to cause harm", dioxin related sediment risks in the creek are also not expected to be significant, given the lower concentrations and the lower exposure frequency.

Overall, based on the multiple lines of evidence presented above, no significant human health risks are expected to be associated with the potential exposures to creek sediments.

2.3.2 Ecological Risks

The ACEPD field reconnaissance observations, the sediment chemistry data, the site visit on September 1, 2009, and other hydrologic studies (*e.g.*, ACEPD, 2007) provide a good indication of the potential ecological risks posed by the tar affected sediments to benthic invertebrates and other aquatic organisms. In general, the tar affected sediments are not expected to pose significant risks to environmental receptors for the following reasons:

- *Contamination Depth:* Tar was found in sediments typically at depths greater than 8 inches below the creek bed, except at location H4, where tar was found at a depth of approximately 4 inches. Benthic invertebrates and other organisms are generally found in the top six inches of sediments – referred to as the Biologically Active Zone – where tar was not found.

- *Comparison to Screening Benchmarks:* The State of Florida uses conservative sediment screening benchmarks, referred to as Threshold Effects Concentrations (TEC) and Probable Effect Concentrations (PEC), to assess potential risks posed to sediment dwelling organisms. A comparison of the measured sediment concentrations in the ACEPD study against these benchmarks indicates that PECs for PAHs were only exceeded in two shallow sediment samples (H4 and SS2). Although the sediment benchmarks are not applicable to deep sediment samples (because benthic organisms are only present in shallow sediments), a comparison of the sediment concentrations against these benchmarks indicates that the PECs for PAHs were exceeded at 9 locations (SS5, SS2, S9, SC, SD, HB, H4, HA and SA)[1].
- *Site Visit Observations:* The Site visit on September 1, 2009 indicated Springstead and Hogtown Creeks to be relatively natural and thriving streams, despite the urban setting. Small fish and benthic organisms were observed in the sediment, even in areas where tar was present (*i.e.*, the presence of tar did not appear to be having an impact on aquatic/ benthic organisms). Stream bank erosion and evidence of storm water-mobilized sediments (sand) were clearly visible in the streams. These stream conditions are a result of the rapid development and urbanization of the Gainesville area, which poses the greatest threat to the creeks.
- *Benthic Invertebrate Surveys:* Habitat assessment and biological reconnaissance of Springstead and Hogtown Creeks has been conducted by the ACEPD (ACEPD, 2007). Although the scope of these studies is limited, these evaluations indicate that the benthic community within Hogtown Creek to be acceptable, and to be slightly impaired within Springstead Creek (ACEPD, 2007; EPA, 2009). However, the impairment in Springstead Creek appears to be associated with hydrological issues and is not contamination related (EPA, 2009).

Overall, since the tar impacted sediments are present at depth, current risks to environmental receptors are not expected to be significant. Although the tar-affected sediments are currently present at depth, we considered the likelihood of whether such sediments could be mobilized and brought to the surface, where environmental receptors could be exposed. The mobilization risk of sediments is low for the following reasons:

- The tar present in the Creeks is believed to have been released in 1966, *i.e.*, more than 40 years ago, when a developer demolished the former Cabot pine tar lagoons and released the contents to the North Main Street drainage ditch *via* a trench. The developer was reportedly fined by the authorities and asked to remediate the impacted sediments. News articles and other anecdotal information, immediately after the release, noted tar sightings in Springstead and Hogtown Creeks. A tar collection area is reported to have been setup near sampling location H4. This collection area, or remnants thereof, has not been found in the current creeks or drainage ditches. In addition, tar sightings in the Creeks in subsequent years by residents (ACEPD, 1994; ACEPD, 2006) were spatially consistent with the initial observations. Overall, the general areas where tar has been observed over

[1] Note, in addition to the PAH exceedances, the PEC for Di-n-butylphthalate was exceeded in the deep sediment sample collected at location S10; however, this exceedance is insignificant given the depth of the sample and because phthalates are a common laboratory contaminant.

time is consistent with the areas where tar was observed in the recent ACEPD study – indicating that the tar is relatively immobile.

- Tar was generally observed at depths greater than 8 inches in depositional areas of the creeks, with clean sediments overlying the tar. Given that the tar was found in depositional areas, with the passage of time additional "clean" sediments are expected to be deposited in these areas, leading to further occlusion (or isolation) of the tar-affected sediments. This deeper occlusion of the tar-affected sediments by clean sediments with time and the resulting need to conduct a deeper sediment investigation was discussed in the ACEPD (2006) report. Thus, the 2009 investigation conducted by ACEPD included a survey of the deep sediments and confirmed that the tar remained buried at depth.
- Finally, pine tars have a high viscosity (approximately 3000 cp, Gradient, 2005), resulting in their "sticky" consistency, another factor that limits their mobility.

To summarize, the tar-affected sediments are not expected to be mobilized and brought to the surface, given that they have been found in the same general area for almost 40 years, their presence in depositional areas that are less prone to mobilization, and the presence of a relatively thick layer of clean overlying sediments. Consequently, both under current and future conditions, the tar affected sediments are not expected to pose significant risks to human health and to the environment.

2.4 Tar Removal Objectives and Approach

2.4.1 Removal Objectives

As discussed in the previous section, the tar-affected sediments are not expected to pose significant risks to both human health and the environment under current and future conditions. However, given that the tar has a distinct odor, is visually discernable, and is "sticky", the presence of tar presents a nuisance condition in the creeks. Consequently, Cabot is proposing to remove the tar-affected sediments in the 10 areas defined in the ACEPD study (Figure 2). The proposed removal will:

- Address the nuisance condition associated with the tar;
- Eliminate any risk of tar-affected sediment mobilization, although that risk is relatively low (Section 2.3);
- Address the PEC exceedances associated with the presence of tar, although the tar-affected sediments are not expected to pose significant risks to environmental receptors (Section 2.3); and
- Address any potential human health risks associated with exposures to the tar-affected sediments, although such risks are not expected to be significant (section 2.2).

Overall, the proposed removal of tar affected sediments will address all community related concerns associated with the presence of tar in the creek sediments.

2.4.2 Removal Approach

The primary objective for the proposed sediment removal is to address nuisance conditions posed by the presence of tar. Tar affected sediment is readily identifiable in the field using visual and olfactory means; therefore, contaminant sampling for delineation or confirmation is not warranted or necessary. Thus, a field reconnaissance approach that relies on visual and olfactory observations (rather than contaminant concentrations) will be used to define the extent of the proposed sediment removal. In addition to the tar impacts being clearly discernible in the field, the presence of Hawthorn clay deposits at the base of the stream bed is extremely useful, and will be utilized to define the vertical extent of impacts. Conceptually, the following steps will be undertaken to conduct the sediment removal:

1. In each of the 10 areas identified by the ACEPD (2009) study, additional field delineation will be undertaken using a stainless steel sediment probe. Visual and olfactory data will be used to accurately define the lateral and vertical extent of tar-affected sediments requiring removal.
2. In each area, the thickness of "clean" sediments that overlie the tar-affected sediments will be defined for potential segregation/reuse during sediment removal.
3. Once the tar-affected sediments have been delineated in each of the 10 areas, sediments will be removed using either manual or mechanical techniques (see Chapter 4). Clean, surficial sediment, may be segregated, staged and reused.
4. The excavated affected sediments will be transported to a central staging area and spread out to reduce the moisture content. The water will be collected and disposed at the Cabot lift station.
5. Once the sediments have dried, they will be transported to an authorized waste disposal facility (see Chapter 4 for details).
6. Either segregated clean sediments, available sediments in the creek, or clean soils will be used to fill-in the sediment removal areas.
7. No confirmation samples will be collected since the removal action is driven by nuisance issues and not to address potential risks associated with chemical exposures.

The next section of the report provides additional details of the means and methods to be used to conduct the proposed sediment removal work.

3 Detailed Tar Remediation Plan

This section describes the planned approach for removal and disposal of the impacted sediments identified in Springstead and Hogtown Creeks. Adjustments to the proposed methodology may be necessary during sediment removal based on factors such as site conditions, access issues and regulatory requirements.

3.1 Pre-mobilization Activities

Pre-mobilization activities for the stream restoration efforts will include waste characterization, development of the site specific health and safety plan, as well as establishment and preparation of the site staging area. A description of these activities is provided below.

3.1.1 Waste Characterization

Representative samples of the tar deposits targeted for removal have been collected and characterized for disposal. The results of this analysis are included in Appendix A. Based on this characterization, the material is a non-hazardous waste and will be thermally treated at the Clark Environmental's high temperature thermal treatment facility located in Mulberry, Florida.

3.1.2 Health & Safety Plan

A site specific health and safety plan (HASP) in accordance with OSHA requirements will be prepared prior to mobilization for field activities. This document will include a summary of relevant site history, a task by task hazard assessment of physical, chemical, radiological, and biological hazards. The HASP will also include a description of the planned air monitoring program, including instruments to be used and action levels. Additionally, the HASP will contain a description of health and safety equipment requirements, a decontamination plan, a traffic control plan and an emergency response plan.

The anticipated level of protection for the workers excavating and handling the soil is modified Level D. Modified Level D is used where there is the potential for skin contact with contamination but respiratory protection is not required. Pine tar is an extremely thick, viscous and sticky material, and thus, workers removing and handling the tar deposits will be wearing disposable tyvek suits, rubber

boots/waders and gloves. Those in the immediate excavation areas may also wear respirators as a precautionary measure, depending upon results of air monitoring conducted at the site. Supervisors and other workers outside the immediate excavation zones will not need protective clothing or respiratory protection.

3.1.3 Odor Control

Pine tars have compounds called terpenes, which have exceptionally low odor thresholds. The levels of terpenes in pine tar are especially strong, as anyone who has handled freshly cut pine logs or Christmas trees will recognize. The concentrations of terpene odors from pine tar are not toxic and do not pose a health concern. Nevertheless, extra effort will be taken to keep odors to a minimum and air quality will be monitored. These efforts will include keeping stockpiled tar covered with plastic sheeting as much as possible and using other odor control measures (e.g. kiln dust and/or activated carbon containing fabric). However, given that these tars are very odorous, people may occasionally smell something. Thus, a local contact name and number will be provided to the agencies during the pre-mobilization activities, and Cabot representatives will work closely with ACEPD to manage this issue, if it arises.

3.1.4 Work Staging Area

Completion of the tar removal will require establishment of excavation exclusion zones and a work staging area. An exclusion zone will be set up immediately around the excavation area using barrier tape. Only workers who have appropriate training and certifications and are wearing the required personal protective equipment (PPE) will be allowed in the exclusion zone. A second zone will be set up for the removal of PPE and cleaning of equipment.

Approximately half to one acre of land is needed for the work staging area. The staging area should be generally secure and flat with a minimal amount of surface obstructions (e.g., trees, roots, large rocks, debris). The staging area will be used to store the excavated sediments prior to transportation to the disposal facility. It will also be used for equipment and work materials storage, as well as a central meeting location for the work team. WESTON will work closely with the City of Gainesville to determine appropriate access points to the staging areas.

3.1.5 Site Preparation

Prior to mobilization, WESTON and its subcontractors will conduct a site walk to designate a work staging area and to clearly designate the sediment removal locations and exclusion zones. During site preparation, the staging area will be secured and prepared for delivery of equipment. Once the staging area is prepared, arrangements will be made to schedule and coordinate delivery of equipment and mobilization of personnel to the site. Underground and overhead utility location searches will also be conducted during site preparation. WESTON will work closely with the City of Gainesville to determine appropriate access points to the creeks.

3.2 Stream Restoration Activities

A discussion of the means and methods to be used for the stream restoration activities is provided below. The work to be performed includes mobilization of personnel and equipment, sediment removal, accumulation of sediment at the staging area, transportation and disposal of the sediments and water (if accumulated), restoration of the excavated area, and demobilization of personnel and equipment.

3.2.1 Mobilization

Once sufficient site preparations have been made, necessary personnel and equipment will be mobilized to the site. Mobilization will be conducted in an efficient and orderly fashion. A daily health and safety related briefing will be held with the work team to communicate key topics of the health and safety plan and to allow the work team time to review the plan and ask questions. Daily work activates and special precautions or instructions will be reviewed.

3.2.2 Sediment Removal

Tar impacted sediment will be removed from 10 locations in the North Main Terrace ditch, and Springstead and Hogtown creeks (Figure 2). Table 1 below contains the location designation, and expected dimensions and sediment removal volume of each tar impacted sediment location. Based on the ACEPD investigation, shallow sediments at a few locations are not expected to be impacted with tar deposits. To the extent practical, clean shallow sediments will be set aside and used for backfill. Work will be planned so that the excavations are not left open overnight.

Prior to excavation, an insulated soil probe rod will be inserted into the sediment to delineate the area containing tar. Previous investigations at the Site conducted by ACEPD have shown that the tar adheres to the shaft of the probe, making this method effective in locating tar impacted sediments. Additionally, the creek bed will be cleared of obstructions (e.g. logs, debris, etc.) to allow all terrain vehicles to utilize the creek bed to access the excavation sites. Debris cleared from the work area will be accumulated in roll-off containers for off-Site disposal.

As previously discussed, confirmatory sampling is not planned since visual and olfactory observations are sufficient to clearly delineate the extent of tar impacted areas, and thus, ensure that the nuisance conditions posed by the presence of tar are effectively addressed.

Locations designated as SSA/S2, S4/SC, and H4 are in close proximity to roads, and thus, the sediment will be removed using a vacuum truck. Sediment from the remaining seven locations are not easily accessible and will be hand excavated. The hand excavated sediments will be placed on the back of an ATV equipped with a lined bed. The sediment will be covered with plastic sheeting and transported down the creek bed via all terrain vehicles (ATV) (e.g., John Deere Gator or equivalent) to the closest road intersection. A vacuum truck will be used to remove the sediment from the ATV. This process will be repeated until tar impacted sediments are removed from the 10 locations listed in Table 1.

During sediment excavation, silt fencing and absorbent booms will be placed downstream of the excavation zone to reduce downstream turbidity and potential contaminant migration. Additionally, sediments will remain covered after excavation to help facilitate odor control. Water in the excavation will be controlled by either pumping the upstream water around the excavation or construction of berms upstream of the excavation area. The berms will be situated to prevent water from entering the work area but still allow the stream flow to continue outside of the excavation zone. Work will continue during rain events as long as the water can be kept away from the excavation zone and the safety of the workers is not compromised.

The sediment will either be transported directly to the disposal facility in the vac truck or transported to the staging area where it will be placed on plastic sheeting and allowed to dry before transport to the disposal facility. The sediment staging area will be arranged in such a way as to allow collection of any residual water that drains from the sediment. When the sediment has dried enough for truck transport and a sufficient volume of sediment has been accumulated at the staging area, it will be loaded onto trucks for delivery to the designated disposal facility. A representative sample of sediment

will be placed in a clear container and shaken to simulate transport. If no significant amount of free water is observed, the sediment will be considered ready for transport. If necessary, kiln dust may be added to the sediment to decrease water content. Water accumulated during the sediment excavation or storage will be placed in appropriate storage containers at the staging area. An industrial waste water hauler will be contracted to pick-up the water from the staging area for transport to an industrial waste water disposal facility. It is anticipated that approximately 1000 gallons of waste water will be generated from the residual water from the sediment and equipment decontamination.

3.2.3 Transportation and Disposal of Sediments

Transportation manifests will be prepared for the contaminated soils prior to disposal. The excavated sediments will be transported via truck from Gainesville, Florida to Clark Environmental's thermal treatment facility that is located in Mulberry, Florida. The sediments will be thermally treated to destroy the contaminants. Clark's Mulberry facility is permitted under F.A.C. 762-613 (Soil Treatment Facilities). Any residuals from the thermal treatment will be disposed at Clark's waste processing facility permitted under F.A.C. 16-701 (Solid Waste Management Facilities) or used as clean fill in accordance with F.A.C. 62-713. Certificates of Treatment and Certificates of Disposal will be obtained.

3.2.4 Restoration of Excavated Area

The excavated area will be restored by placing clean sand backfill into the holes. To the extent possible, available sediment located in the general vicinity of the excavation may also be used to complete the backfilling of the excavated area.

3.2.5 Demobilization

Once sediment removal has been completed at the 10 designated locations, equipment and the personnel will be demobilized from the site. The work staging area will be dismantled once the accumulated sediment has been removed. All materials and equipment will be removed from the work sites and staging area. The staging area will be returned to pre-mobilization condition to the extent practicable.

3.3 Documentation

3.3.1 Field Documentation

The field activities will be documented in a site specific field log book. This logbook will be maintained by the WESTON site manager. Information to be recorded in the log book will include time, date and description of the daily activities performed during the implementation of the stream restoration efforts. Other documentation will include photographs of the work performed, GPS coordinates for the excavated areas, waste transportation manifests, as well as health and safety related forms and reports, including air monitoring reports, instrument calibration, and documentation of daily tailgate safety briefings

3.3.2 Restoration Report

WESTON will prepare a report documenting the restoration activities. This report will include a description of the work performed, maps showing the locations and volume of sediments removed at each location, photographs documenting the work performed, and supporting documents, including disposal certificates. A draft Restoration Report will be submitted for review and comment. Upon receipt of comments, WESTON will modify the document as appropriate and submit a final Restoration Report.

4 Schedule

It is anticipated that approximately 20 work days will be necessary to implement the remediation plan. The optimum time to perform this work is during the winter months when foliage is minimal and precipitation is low. Based on National Oceanic and Atmospheric Administration (NOAA), 30 year precipitation data from the Gainesville area, this period is during the month of December. Consequently, the proposed work will be implemented in December 2009.

5 References

ACEPD. 1994. "Letter to P.Goldberg re: Cabot Carbon/Koppers Superfund Site sediment sampling results, Springstead Creek, Gainesville, Florida." October 25.

ACEPD. 2006. "Letter to A. McLaughlin re:Screening Results of Sediment and Water Quality Sampling of Springstead Creek and Ditched Tributaries North of Cabot-Koppers Superfund Site, Gainesville, Fl." December 13.

ACEPD. 2007. "A Status Report on Baseflow Water Quality, Stormwater and Ecosystem Health for the Orange Creek Basin 1998-2003." June.

FDHRS; ACEPD. 1995. "Health Consultation Cabot Carbon/Koppers Superfund Site, Gainesville, Alachua County, Florida. Cerclis No. FLD980709356." November 15.

FDOH. 2009. "Off-Site Surface Soil Koppers Hazardous Waste Site, Gainesville, Alachua County, Florida. EPA Facility ID: FLD980709356." July 17.

Gradient. 2005. "Pine Tar DNAPL Mobility Cabot Carbon/Koppers Superfund site. Gainesville, Florida." March.

Hunter/ESE, Inc. 1990. "Remedial Investigation/Risk Assessment at the Cabot Carbon/Koppers Site, Gainesville, Florida. Volume II: Risk Assessment." Report to Cabot Corp., Beazer Materials and Services, Inc. February.

IT Corp. 1987. "Remedial investigation report, Cabot Carbon/Koppers Company Site, Gainesville, Florida. Volumes 1 and 2." Report to Florida, Dept. of Environmental Regulation. May.

Mousa J. 2009. "Letter to S. Miller re: ACEPD Study Report on Sediment Quality in Springstead and Hogtown Creeks Near the Cabot-Koppers Superfund Site." May.

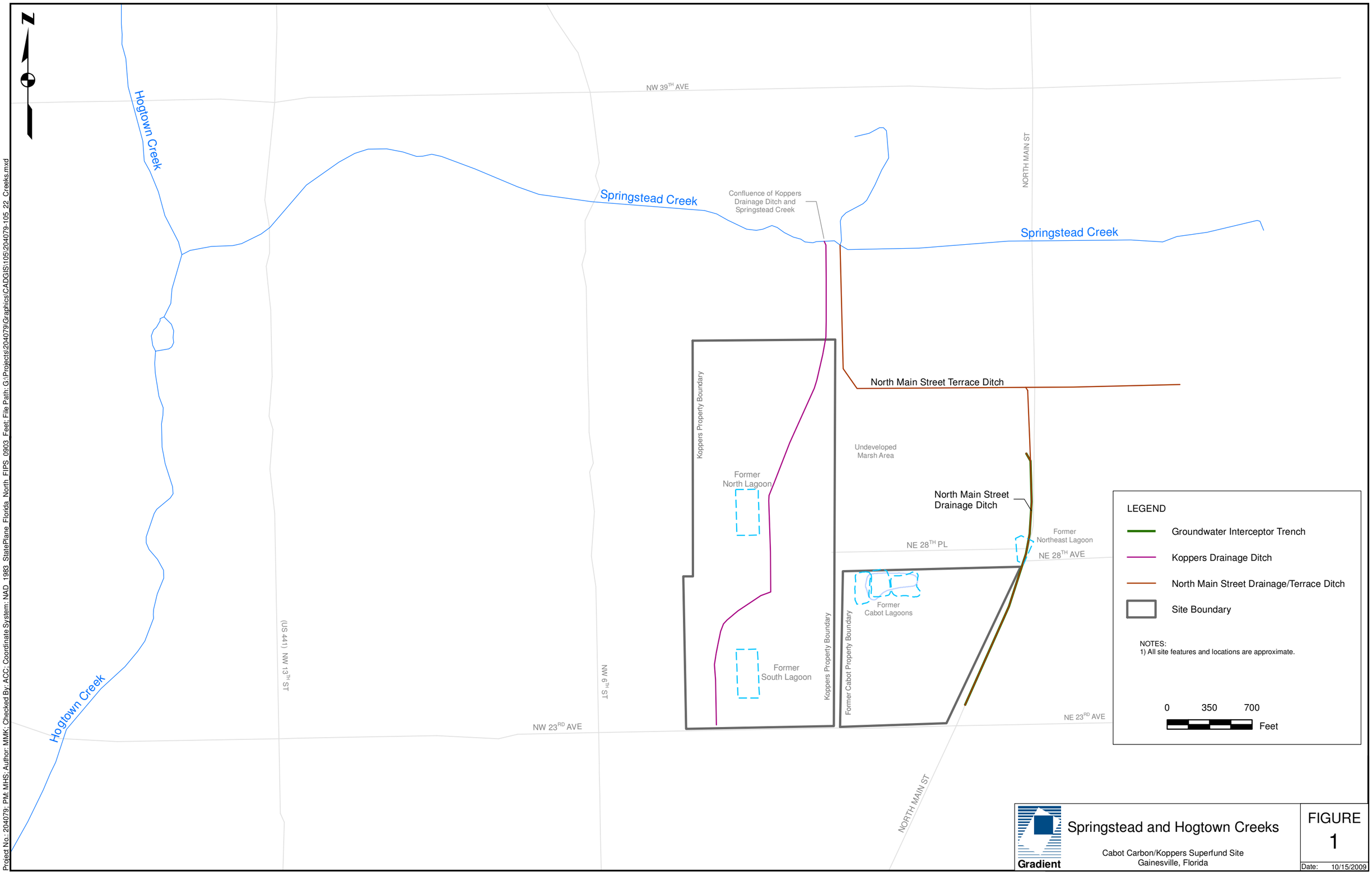
US EPA. 1980. "Hazardous Waste Site Investigation, Phase 1, Cabot Carbon Site. Gainesville, Florida." November.

US EPA. 2009. "Memo to S. Miller re: Review of the Alachua County Environmental Protection Department Report on Sediment Quality in Springstead and Hogtown Creeks Downstream of the Capot/Koppers Facilities in Gainesville, Florida and the AMEC Report on Potential Ecological Risks in Creek Sediments Near the Cabot/Koppers Site in Gainesville, Florida." September.

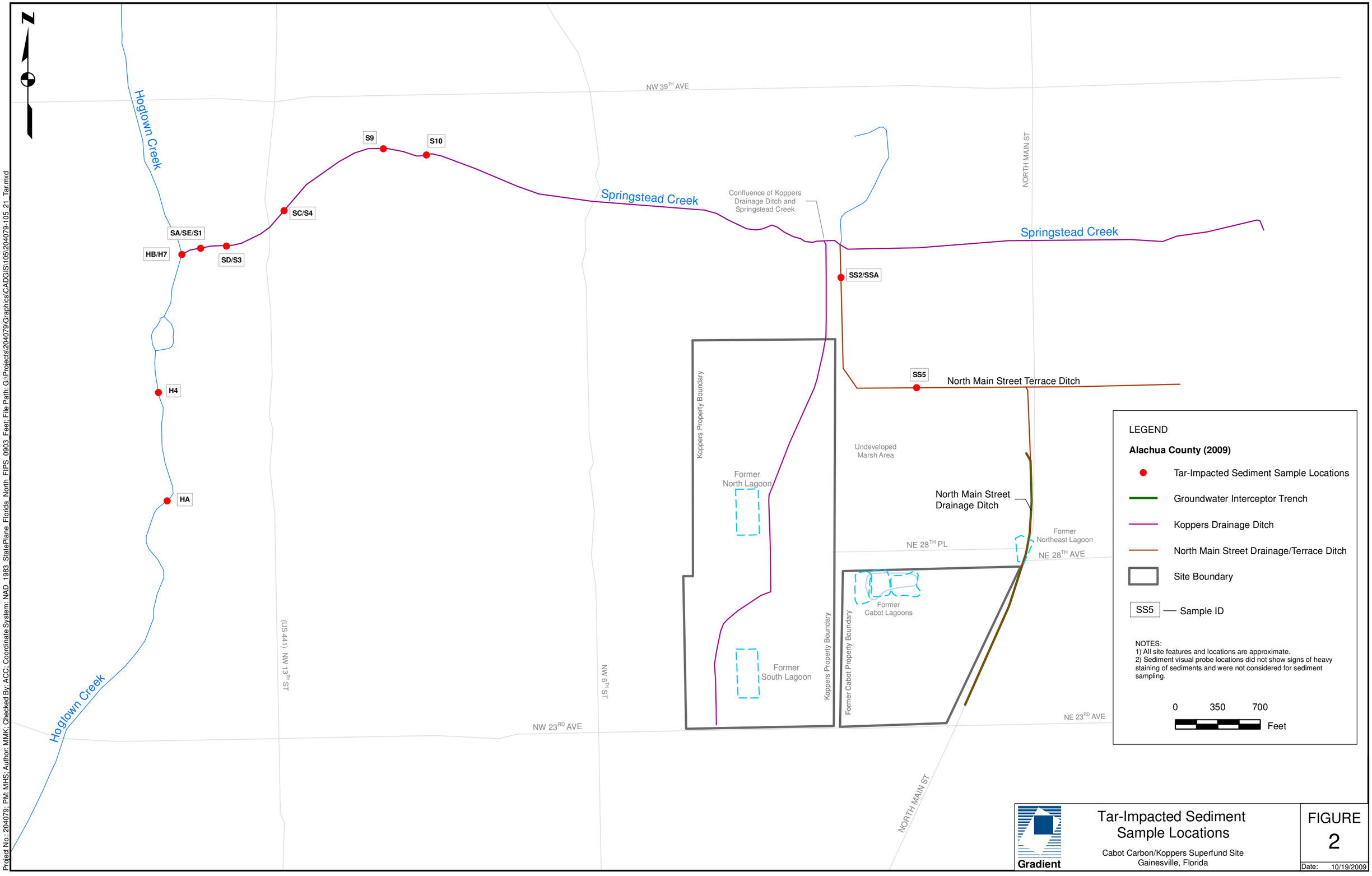
Water & Air Research Inc. 2004. "Stream Bioreconnaisance Data Report. Alachua County, Florida. 2000 – 2003." November.

Table 1
Summary of Sediment Removal Locations
Cabot Carbon/Koppers Superfund Site, Gainesville, FL

Location ID	Stream Name	Presumptive Dimensions (Feet)	Estimated Volume (Cubic Yards)
SS5	N. Main Terrace Ditch	10 x 20 x 4	30
SS2/SSA	N. Main Terrace Ditch	10 x 20 x 4	30
S10	Springstead	20 x 30 x 4	90
S9	Springstead	20 x 30 x 4	90
S4/SC	Springstead	21 x 30 x 4	90
SD/S3	Springstead	22 x 30 x 4	90
SA/S1/SE	Springstead	23 x 30 x 4	90
HB/H7	Hogtown	24 x 30 x 4	90
H4	Hogtown	25 x 30 x 4	90
HA	Hogtown	26 x 30 x 4	90
		Total Volume	**750**



Project No.: 204079; PM: MHS; Author: MMK; Checked By: ACC; Coordinate System: NAD_1983_StatePlane_Florida_North_FIPS_0903_Feet; File Path: G:\Projects\204079\Graphics\CADGIS\105\204079-105_22_Creeks.mxd



Project No.: 204079; PM: MHS; Author: MMK; Checked By: ACC; Coordinate System: NAD_1983_StatePlane_Florida_North_FIPS_0903_Feet; File Path: G:\Projects\204079\Graphics\CADGIS\105\204079-105_21_Tar.mxd

Gradient

Tar-Impacted Sediment Sample Locations

Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

FIGURE 2

Date: 10/19/2009

Appendix A

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-50824-1

Job Description: Cabot (Springstead/Hogtown Creek)

For:
Weston Solutions, Inc.
5430 Metric Place
Suite 100
Norcross, GA 30092

Attention: Mr. Ralph McKeen

Approved for release.
Abbie G Yant
Project Manager I
9/24/2009 2:46 PM

Abbie G Yant
Project Manager I
abbie.yant@testamericainc.com
09/24/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

Job Narrative
680-J50824-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method(s) 8260B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported PB2 (680-50824-2).

No other analytical or quality issues were noted.

GC Semi VOA
Method(s) 8081A_8082: Due to the level of dilution required for the following sample(s), surrogate recoveries are not reported: PB2 (680-50824-2), PB3 (680-50824-3).

Method(s) 8081A_8082: The following sample(s) was diluted due to the nature of the sample matrix: PB2 (680-50824-2), PB3 (680-50824-3). Elevated reporting limits (RLs) are provided.

Method(s) FL-PRO: Due to the level of dilution required for the following sample(s), surrogate recoveries are not reported: PB1, PB4.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030A
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Ultrasonic Extraction	TAL SAV		SW846 3550B
Florida - Petroleum Range Organics (GC)	TAL TAL	FL-DEP FL-PRO	
Ultrasonic Extraction	TAL TAL		SW846 3550B
Metals (ICP)	TAL SAV	SW846 6010B	
Preparation, Metals	TAL SAV		SW846 3050B
Total Halogens(Bomb Calorimeter followed by IC)	TAL SAV	SW846 9056	
Bomb Preparation Method for Solid Waste	TAL SAV		SW846 5050

Lab References:

TAL SAV = TestAmerica Savannah

TAL TAL = TestAmerica Tallahassee

Method References:

FL-DEP = State Of Florida Department Of Environmental Protection, Florida Administrative Code.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-50824-1	PB1	Solid	09/16/2009 1145	09/17/2009 1057
680-50824-2	PB2	Solid	09/16/2009 1245	09/17/2009 1057
680-50824-3	PB3	Solid	09/16/2009 1340	09/17/2009 1057
680-50824-4	PB4	Solid	09/16/2009 1500	09/17/2009 1057

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB1**

Lab Sample ID: 680-50824-1 Date Sampled: 09/16/2009 1145
Client Matrix: Solid % Moisture: 24.1 Date Received: 09/17/2009 1057

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-148293	Instrument ID: MSM
Preparation:	5030A		Lab File ID: m0236.d
Dilution:	1.0		Initial Weight/Volume: 5.2 g
Date Analyzed:	09/18/2009 1227		Final Weight/Volume: 5 mL
Date Prepared:	09/18/2009 1227		

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Acetone		<63		63
Benzene		<6.3		6.3
Bromoform		<6.3		6.3
Bromomethane		<6.3		6.3
2-Butanone (MEK)		<32		32
Carbon disulfide		<6.3		6.3
Carbon tetrachloride		<6.3		6.3
Chlorobenzene		<6.3		6.3
Chlorodibromomethane		<6.3		6.3
Chloroethane		<6.3		6.3
Chloroform		<6.3		6.3
Chloromethane		<6.3		6.3
cis-1,2-Dichloroethene		<6.3		6.3
cis-1,3-Dichloropropene		<6.3		6.3
Dichlorobromomethane		<6.3		6.3
1,1-Dichloroethane		<6.3		6.3
1,2-Dichloroethane		<6.3		6.3
1,1-Dichloroethene		<6.3		6.3
1,2-Dichloropropane		<6.3		6.3
Ethylbenzene		<6.3		6.3
2-Hexanone		<32		32
Methylene Chloride		<6.3		6.3
4-Methyl-2-pentanone (MIBK)		<32		32
Styrene		<6.3		6.3
1,1,2,2-Tetrachloroethane		<6.3		6.3
Tetrachloroethene		<6.3		6.3
Toluene		<6.3		6.3
trans-1,2-Dichloroethene		<6.3		6.3
trans-1,3-Dichloropropene		<6.3		6.3
1,1,1-Trichloroethane		<6.3		6.3
1,1,2-Trichloroethane		<6.3		6.3
Trichloroethene		<6.3		6.3
Vinyl chloride		<6.3		6.3
Xylenes, Total		<13		13

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	83		65 - 124
Dibromofluoromethane	96		65 - 124
Toluene-d8 (Surr)	97		65 - 132

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB2**

Lab Sample ID: 680-50824-2 Date Sampled: 09/16/2009 1245
Client Matrix: Solid % Moisture: 18.4 Date Received: 09/17/2009 1057

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-148291		Instrument ID:	MSM
Preparation:	5030A			Lab File ID:	m0243.d
Dilution:	400			Initial Weight/Volume:	5 g
Date Analyzed:	09/18/2009 1538			Final Weight/Volume:	5 mL
Date Prepared:	09/18/2009 1538				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Acetone		<25000		25000
Benzene		<2500		2500
Bromoform		<2500		2500
Bromomethane		<2500		2500
2-Butanone (MEK)		<12000		12000
Carbon disulfide		<2500		2500
Carbon tetrachloride		<2500		2500
Chlorobenzene		<2500		2500
Chlorodibromomethane		<2500		2500
Chloroethane		<2500		2500
Chloroform		<2500		2500
Chloromethane		<2500		2500
cis-1,2-Dichloroethene		<2500		2500
cis-1,3-Dichloropropene		<2500		2500
Dichlorobromomethane		<2500		2500
1,1-Dichloroethane		<2500		2500
1,2-Dichloroethane		<2500		2500
1,1-Dichloroethene		<2500		2500
1,2-Dichloropropane		<2500		2500
Ethylbenzene		12000		2500
2-Hexanone		<12000		12000
Methylene Chloride		<2500		2500
4-Methyl-2-pentanone (MIBK)		<12000		12000
Styrene		<2500		2500
1,1,2,2-Tetrachloroethane		<2500		2500
Tetrachloroethene		<2500		2500
Toluene		2700		2500
trans-1,2-Dichloroethene		<2500		2500
trans-1,3-Dichloropropene		<2500		2500
1,1,1-Trichloroethane		<2500		2500
1,1,2-Trichloroethane		<2500		2500
Trichloroethene		<2500		2500
Vinyl chloride		<2500		2500
Xylenes, Total		33000		4900

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	0	D	65 - 124
Dibromofluoromethane	0	D	65 - 124
Toluene-d8 (Surr)	0	D	65 - 132

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB3**

Lab Sample ID: 680-50824-3 Date Sampled: 09/16/2009 1340
Client Matrix: Solid % Moisture: 19.4 Date Received: 09/17/2009 1057

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-148293		Instrument ID:	MSM
Preparation:	5030A			Lab File ID:	m0244.d
Dilution:	1.0			Initial Weight/Volume:	5.5 g
Date Analyzed:	09/18/2009 1602			Final Weight/Volume:	5 mL
Date Prepared:	09/18/2009 1602				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Acetone		<56		56
Benzene		<5.6		5.6
Bromoform		<5.6		5.6
Bromomethane		<5.6		5.6
2-Butanone (MEK)		<28		28
Carbon disulfide		<5.6		5.6
Carbon tetrachloride		<5.6		5.6
Chlorobenzene		<5.6		5.6
Chlorodibromomethane		<5.6		5.6
Chloroethane		<5.6		5.6
Chloroform		<5.6		5.6
Chloromethane		<5.6		5.6
cis-1,2-Dichloroethene		<5.6		5.6
cis-1,3-Dichloropropene		<5.6		5.6
Dichlorobromomethane		<5.6		5.6
1,1-Dichloroethane		<5.6		5.6
1,2-Dichloroethane		<5.6		5.6
1,1-Dichloroethene		<5.6		5.6
1,2-Dichloropropane		<5.6		5.6
Ethylbenzene		<5.6		5.6
2-Hexanone		<28		28
Methylene Chloride		<5.6		5.6
4-Methyl-2-pentanone (MIBK)		<28		28
Styrene		<5.6		5.6
1,1,2,2-Tetrachloroethane		<5.6		5.6
Tetrachloroethene		<5.6		5.6
Toluene		<5.6		5.6
trans-1,2-Dichloroethene		<5.6		5.6
trans-1,3-Dichloropropene		<5.6		5.6
1,1,1-Trichloroethane		<5.6		5.6
1,1,2-Trichloroethane		<5.6		5.6
Trichloroethene		<5.6		5.6
Vinyl chloride		<5.6		5.6
Xylenes, Total		<11		11

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		65 - 124
Dibromofluoromethane	101		65 - 124
Toluene-d8 (Surr)	101		65 - 132

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB4**

Lab Sample ID: 680-50824-4 Date Sampled: 09/16/2009 1500
Client Matrix: Solid % Moisture: 15.4 Date Received: 09/17/2009 1057

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-148293		Instrument ID:	MSM
Preparation:	5030A			Lab File ID:	m0245.d
Dilution:	1.0			Initial Weight/Volume:	5.1 g
Date Analyzed:	09/18/2009 1627			Final Weight/Volume:	5 mL
Date Prepared:	09/18/2009 1627				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Acetone		<58		58
Benzene		<5.8		5.8
Bromoform		<5.8		5.8
Bromomethane		<5.8		5.8
2-Butanone (MEK)		<29		29
Carbon disulfide		<5.8		5.8
Carbon tetrachloride		<5.8		5.8
Chlorobenzene		<5.8		5.8
Chlorodibromomethane		<5.8		5.8
Chloroethane		<5.8		5.8
Chloroform		<5.8		5.8
Chloromethane		<5.8		5.8
cis-1,2-Dichloroethene		<5.8		5.8
cis-1,3-Dichloropropene		<5.8		5.8
Dichlorobromomethane		<5.8		5.8
1,1-Dichloroethane		<5.8		5.8
1,2-Dichloroethane		<5.8		5.8
1,1-Dichloroethene		<5.8		5.8
1,2-Dichloropropane		<5.8		5.8
Ethylbenzene		8.4		5.8
2-Hexanone		<29		29
Methylene Chloride		<5.8		5.8
4-Methyl-2-pentanone (MIBK)		<29		29
Styrene		<5.8		5.8
1,1,2,2-Tetrachloroethane		<5.8		5.8
Tetrachloroethene		<5.8		5.8
Toluene		<5.8		5.8
trans-1,2-Dichloroethene		<5.8		5.8
trans-1,3-Dichloropropene		<5.8		5.8
1,1,1-Trichloroethane		<5.8		5.8
1,1,2-Trichloroethane		<5.8		5.8
Trichloroethene		<5.8		5.8
Vinyl chloride		<5.8		5.8
Xylenes, Total		17		12

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		65 - 124
Dibromofluoromethane	98		65 - 124
Toluene-d8 (Surr)	97		65 - 132

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB1**

Lab Sample ID: 680-50824-1 Date Sampled: 09/16/2009 1145
Client Matrix: Solid % Moisture: 24.1 Date Received: 09/17/2009 1057

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-148409		Instrument ID:	SGM
Preparation:	3550B	Prep Batch: 680-148129		Initial Weight/Volume:	15.09 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Date Analyzed:	09/19/2009 2138			Injection Volume:	1.0 uL
Date Prepared:	09/17/2009 1959			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		<43		43
PCB-1221		<88		88
PCB-1232		<43		43
PCB-1242		<43		43
PCB-1248		<43		43
PCB-1254		<43		43
PCB-1260		<43		43

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	59		26 - 140
DCB Decachlorobiphenyl	106		50 - 129

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB2**

Lab Sample ID: 680-50824-2 Date Sampled: 09/16/2009 1245
Client Matrix: Solid % Moisture: 18.4 Date Received: 09/17/2009 1057

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-148409		Instrument ID:	SGM
Preparation:	3550B	Prep Batch: 680-148129		Initial Weight/Volume:	15.03 g
Dilution:	10			Final Weight/Volume:	5 mL
Date Analyzed:	09/19/2009 2218			Injection Volume:	1.0 uL
Date Prepared:	09/17/2009 1959			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		<400		400
PCB-1221		<820		820
PCB-1232		<400		400
PCB-1242		<400		400
PCB-1248		<400		400
PCB-1254		<400		400
PCB-1260		<400		400

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	D	26 - 140
DCB Decachlorobiphenyl	0	D	50 - 129

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB3**

Lab Sample ID: 680-50824-3 Date Sampled: 09/16/2009 1340
Client Matrix: Solid % Moisture: 19.4 Date Received: 09/17/2009 1057

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-148409		Instrument ID:	SGM
Preparation:	3550B	Prep Batch: 680-148129		Initial Weight/Volume:	15.16 g
Dilution:	10			Final Weight/Volume:	5 mL
Date Analyzed:	09/19/2009 2257			Injection Volume:	1.0 uL
Date Prepared:	09/17/2009 1959			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		<410		410
PCB-1221		<820		820
PCB-1232		<410		410
PCB-1242		<410		410
PCB-1248		<410		410
PCB-1254		<410		410
PCB-1260		<410		410

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	D	26 - 140
DCB Decachlorobiphenyl	0	D	50 - 129

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB4**

Lab Sample ID: 680-50824-4 Date Sampled: 09/16/2009 1500
Client Matrix: Solid % Moisture: 15.4 Date Received: 09/17/2009 1057

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-148409		Instrument ID:	SGM
Preparation:	3550B	Prep Batch: 680-148129		Initial Weight/Volume:	15.18 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Date Analyzed:	09/19/2009 2316			Injection Volume:	1.0 uL
Date Prepared:	09/17/2009 1959			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		<39		39
PCB-1221		<78		78
PCB-1232		<39		39
PCB-1242		<39		39
PCB-1248		<39		39
PCB-1254		<39		39
PCB-1260		<39		39

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	62		26 - 140
DCB Decachlorobiphenyl	80		50 - 129

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB1**

Lab Sample ID: 680-50824-1 Date Sampled: 09/16/2009 1145
Client Matrix: Solid % Moisture: 24.1 Date Received: 09/17/2009 1057

FL-PRO Florida - Petroleum Range Organics (GC)

Method:	FL-PRO	Analysis Batch: 640-61116		Instrument ID:	SGH
Preparation:	3550B	Prep Batch: 640-60927		Lab File ID:	1I23H20.d
Dilution:	50			Initial Weight/Volume:	00030.07 g
Date Analyzed:	09/23/2009 1436			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Total Petroleum Hydrocarbons (C8-C40)		880		660

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	0	X	62 - 109
n-C39	0	X	60 - 118

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB2**

Lab Sample ID: 680-50824-2 Date Sampled: 09/16/2009 1245
Client Matrix: Solid % Moisture: 18.4 Date Received: 09/17/2009 1057

FL-PRO Florida - Petroleum Range Organics (GC)

Method:	FL-PRO	Analysis Batch: 640-61116		Instrument ID:	SGH
Preparation:	3550B	Prep Batch: 640-60927		Lab File ID:	1I23H24.d
Dilution:	5.0			Initial Weight/Volume:	00030.50 g
Date Analyzed:	09/23/2009 1515			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Total Petroleum Hydrocarbons (C8-C40)		190		60

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	98		62 - 109
n-C39	93		60 - 118

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB3**

Lab Sample ID: 680-50824-3 Date Sampled: 09/16/2009 1340
Client Matrix: Solid % Moisture: 19.4 Date Received: 09/17/2009 1057

FL-PRO Florida - Petroleum Range Organics (GC)

Method:	FL-PRO	Analysis Batch: 640-61116		Instrument ID:	SGH
Preparation:	3550B	Prep Batch: 640-60927		Lab File ID:	1I23H25.d
Dilution:	5.0			Initial Weight/Volume:	00030.40 g
Date Analyzed:	09/23/2009 1520			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Total Petroleum Hydrocarbons (C8-C40)		390		61

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	107		62 - 109
n-C39	92		60 - 118

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB4**

Lab Sample ID: 680-50824-4 Date Sampled: 09/16/2009 1500
Client Matrix: Solid % Moisture: 15.4 Date Received: 09/17/2009 1057

FL-PRO Florida - Petroleum Range Organics (GC)

Method:	FL-PRO	Analysis Batch: 640-61116		Instrument ID:	SGH
Preparation:	3550B	Prep Batch: 640-60927		Lab File ID:	1I23H21.d
Dilution:	50			Initial Weight/Volume:	00030.52 g
Date Analyzed:	09/23/2009 1441			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Total Petroleum Hydrocarbons (C8-C40)		3900		580

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	0	X	62 - 109
n-C39	0	X	60 - 118

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB1**

Lab Sample ID: 680-50824-1 Date Sampled: 09/16/2009 1145
Client Matrix: Solid % Moisture: 24.1 Date Received: 09/17/2009 1057

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 680-148697		Instrument ID:	ICPD
Preparation:	3050B	Prep Batch: 680-148397		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Date Analyzed:	09/23/2009 1215			Final Weight/Volume:	100 mL
Date Prepared:	09/21/2009 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		<2.4		2.4
Cadmium		<0.59		0.59
Chromium		7.6		1.2
Lead		4.7		1.2

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB2**

Lab Sample ID: 680-50824-2 Date Sampled: 09/16/2009 1245
Client Matrix: Solid % Moisture: 18.4 Date Received: 09/17/2009 1057

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 680-148697		Instrument ID:	ICPD
Preparation:	3050B	Prep Batch: 680-148397		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Date Analyzed:	09/23/2009 1220			Final Weight/Volume:	100 mL
Date Prepared:	09/21/2009 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		<2.3		2.3
Cadmium		<0.57		0.57
Chromium		3.1		1.1
Lead		8.6		1.1

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB3**

Lab Sample ID: 680-50824-3 Date Sampled: 09/16/2009 1340
Client Matrix: Solid % Moisture: 19.4 Date Received: 09/17/2009 1057

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 680-148697		Instrument ID:	ICPD
Preparation:	3050B	Prep Batch: 680-148397		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Date Analyzed:	09/23/2009 1225			Final Weight/Volume:	100 mL
Date Prepared:	09/21/2009 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		<2.2		2.2
Cadmium		<0.55		0.55
Chromium		3.6		1.1
Lead		13		1.1

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Client Sample ID: **PB4**

Lab Sample ID: 680-50824-4 Date Sampled: 09/16/2009 1500
Client Matrix: Solid % Moisture: 15.4 Date Received: 09/17/2009 1057

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 680-148697		Instrument ID:	ICPD
Preparation:	3050B	Prep Batch: 680-148397		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Date Analyzed:	09/23/2009 1240			Final Weight/Volume:	100 mL
Date Prepared:	09/21/2009 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		<2.2		2.2
Cadmium		<0.54		0.54
Chromium		4.4		1.1
Lead		8.2		1.1

General Chemistry

Client Sample ID: **PB1**

Lab Sample ID: 680-50824-1 Date Sampled: 09/16/2009 1145

Client Matrix: Solid % Moisture: 24.1 Date Received: 09/17/2009 1057

Analyte	Result	Qual	Units	RL	Dil	Method
Total Halogens	<260		mg/Kg	260	1.0	9056

Analysis Batch: 680-148635 Date Analyzed: 09/23/2009 1308 DryWt Corrected: Y

Prep Batch: 680-148485 Date Prepared: 09/22/2009 1110

General Chemistry

Client Sample ID: **PB2**

Lab Sample ID: 680-50824-2 Date Sampled: 09/16/2009 1245

Client Matrix: Solid % Moisture: 18.4 Date Received: 09/17/2009 1057

Analyte	Result	Qual	Units	RL	Dil	Method
Total Halogens	280		mg/Kg	240	1.0	9056

Analysis Batch: 680-148635 Date Analyzed: 09/23/2009 1337 DryWt Corrected: Y

Prep Batch: 680-148485 Date Prepared: 09/22/2009 1110

General Chemistry

Client Sample ID: **PB3**

Lab Sample ID: 680-50824-3 Date Sampled: 09/16/2009 1340

Client Matrix: Solid % Moisture: 19.4 Date Received: 09/17/2009 1057

Analyte	Result	Qual	Units	RL	Dil	Method
Total Halogens	<240		mg/Kg	240	1.0	9056

Analysis Batch: 680-148635 Date Analyzed: 09/23/2009 1351 DryWt Corrected: Y

Prep Batch: 680-148485 Date Prepared: 09/22/2009 1110

General Chemistry

Client Sample ID: **PB4**

Lab Sample ID: 680-50824-4 Date Sampled: 09/16/2009 1500

Client Matrix: Solid % Moisture: 15.4 Date Received: 09/17/2009 1057

Analyte	Result	Qual	Units	RL	Dil	Method
Total Halogens	<230		mg/Kg	230	1.0	9056

Analysis Batch: 680-148635 Date Analyzed: 09/23/2009 1405 DryWt Corrected: Y

Prep Batch: 680-148485 Date Prepared: 09/22/2009 1110

DATA REPORTING QUALIFIERS

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Lab Section	Qualifier	Description
GC/MS VOA		
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
GC Semi VOA		
	X	Surrogate exceeds the control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Method Blank - Batch: 680-148291

Method: 8260B
Preparation: 5030A

Lab Sample ID: MB 680-148291/5
Client Matrix: Solid
Dilution: 40
Date Analyzed: 09/18/2009 1128
Date Prepared: 09/18/2009 1128

Analysis Batch: 680-148291
Prep Batch: N/A
Units: ug/Kg

Instrument ID: GC/MS Volatiles - M
Lab File ID: mq138.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	RL
Acetone	<2000		2000
Benzene	<200		200
Bromoform	<200		200
Bromomethane	<200		200
2-Butanone (MEK)	<1000		1000
Carbon disulfide	<200		200
Carbon tetrachloride	<200		200
Chlorobenzene	<200		200
Chlorodibromomethane	<200		200
Chloroethane	<200		200
Chloroform	<200		200
Chloromethane	<200		200
cis-1,2-Dichloroethene	<200		200
cis-1,3-Dichloropropene	<200		200
Dichlorobromomethane	<200		200
1,1-Dichloroethane	<200		200
1,2-Dichloroethane	<200		200
1,1-Dichloroethene	<200		200
1,2-Dichloropropane	<200		200
Ethylbenzene	<200		200
2-Hexanone	<1000		1000
Methylene Chloride	<200		200
4-Methyl-2-pentanone (MIBK)	<1000		1000
Styrene	<200		200
1,1,2,2-Tetrachloroethane	<200		200
Tetrachloroethene	<200		200
Toluene	<200		200
trans-1,2-Dichloroethene	<200		200
trans-1,3-Dichloropropene	<200		200
1,1,1-Trichloroethane	<200		200
1,1,2-Trichloroethane	<200		200
Trichloroethene	<200		200
Vinyl chloride	<200		200
Xylenes, Total	<400		400

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	96	65 - 124
Dibromofluoromethane	120	65 - 124
Toluene-d8 (Surr)	97	65 - 132

Calculations are performed before rounding to avoid round-off errors in calculated results.

Lab Control Sample - Batch: 680-148291

Method: 8260B
Preparation: 5030A

Lab Sample ID: LCS 680-148291/4
Client Matrix: Solid
Dilution: 40
Date Analyzed: 09/18/2009 0953
Date Prepared: 09/18/2009 0953

Analysis Batch: 680-148291
Prep Batch: N/A
Units: ug/Kg

Instrument ID: GC/MS Volatiles - M
Lab File ID: mq136.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	5000	5010	100	16 - 202	
Benzene	2500	1970	79	63 - 130	
Bromoform	2500	2210	89	66 - 127	
Bromomethane	2500	2500	100	54 - 146	
2-Butanone (MEK)	5000	5240	105	19 - 192	
Carbon disulfide	2500	2420	97	46 - 134	
Carbon tetrachloride	2500	2140	86	60 - 136	
Chlorobenzene	2500	2200	88	77 - 120	
Chlorodibromomethane	2500	2280	91	70 - 126	
Chloroethane	2500	2440	98	26 - 166	
Chloroform	2500	2730	109	68 - 127	
Chloromethane	2500	2000	80	46 - 137	
cis-1,2-Dichloroethene	2500	2690	108	58 - 143	
cis-1,3-Dichloropropene	2500	2170	87	66 - 137	
Dichlorobromomethane	2500	2150	86	64 - 137	
1,1-Dichloroethane	2500	2670	107	65 - 130	
1,2-Dichloroethane	2500	1740	70	62 - 140	
1,1-Dichloroethene	2500	2740	109	59 - 137	
1,2-Dichloropropane	2500	2090	84	66 - 135	
Ethylbenzene	2500	2180	87	77 - 121	
2-Hexanone	5000	4160	83	47 - 151	
Methylene Chloride	2500	2760	111	65 - 126	
4-Methyl-2-pentanone (MIBK)	5000	4060	81	50 - 148	
Styrene	2500	2200	88	75 - 123	
1,1,2,2-Tetrachloroethane	2500	1990	80	65 - 130	
Tetrachloroethene	2500	2370	95	76 - 120	
Toluene	2500	2100	84	67 - 132	
trans-1,2-Dichloroethene	2500	2670	107	66 - 127	
trans-1,3-Dichloropropene	2500	2190	88	64 - 138	
1,1,1-Trichloroethane	2500	2110	84	56 - 140	
1,1,2-Trichloroethane	2500	2070	83	62 - 138	
Trichloroethene	2500	2130	85	68 - 133	
Vinyl chloride	2500	2290	92	56 - 139	
Xylenes, Total	7500	6510	87	76 - 122	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	86	65 - 124
Dibromofluoromethane	108	65 - 124
Toluene-d8 (Surr)	85	65 - 132

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Method Blank - Batch: 680-148293

Method: 8260B
Preparation: 5030A

Lab Sample ID: MB 680-148293/7
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/18/2009 1104
Date Prepared: 09/18/2009 1104

Analysis Batch: 680-148293
Prep Batch: N/A
Units: ug/Kg

Instrument ID: GC/MS Volatiles - M
Lab File ID: mq137.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	RL
Acetone	<50		50
Benzene	<5.0		5.0
Bromoform	<5.0		5.0
Bromomethane	<5.0		5.0
2-Butanone (MEK)	<25		25
Carbon disulfide	<5.0		5.0
Carbon tetrachloride	<5.0		5.0
Chlorobenzene	<5.0		5.0
Chlorodibromomethane	<5.0		5.0
Chloroethane	<5.0		5.0
Chloroform	<5.0		5.0
Chloromethane	<5.0		5.0
cis-1,2-Dichloroethene	<5.0		5.0
cis-1,3-Dichloropropene	<5.0		5.0
Dichlorobromomethane	<5.0		5.0
1,1-Dichloroethane	<5.0		5.0
1,2-Dichloroethane	<5.0		5.0
1,1-Dichloroethene	<5.0		5.0
1,2-Dichloropropane	<5.0		5.0
Ethylbenzene	<5.0		5.0
2-Hexanone	<25		25
Methylene Chloride	<5.0		5.0
4-Methyl-2-pentanone (MIBK)	<25		25
Styrene	<5.0		5.0
1,1,2,2-Tetrachloroethane	<5.0		5.0
Tetrachloroethene	<5.0		5.0
Toluene	<5.0		5.0
trans-1,2-Dichloroethene	<5.0		5.0
trans-1,3-Dichloropropene	<5.0		5.0
1,1,1-Trichloroethane	<5.0		5.0
1,1,2-Trichloroethane	<5.0		5.0
Trichloroethene	<5.0		5.0
Vinyl chloride	<5.0		5.0
Xylenes, Total	<10		10

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	95	65 - 124
Dibromofluoromethane	100	65 - 124
Toluene-d8 (Surr)	101	65 - 132

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Lab Control Sample - Batch: 680-148293

Method: 8260B
Preparation: 5030A

Lab Sample ID: LCS 680-148293/6
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/18/2009 0927
Date Prepared: 09/18/2009 0927

Analysis Batch: 680-148293
Prep Batch: N/A
Units: ug/Kg

Instrument ID: GC/MS Volatiles - M
Lab File ID: mq135.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	100	74.6	75	16 - 202	
Benzene	50.0	42.2	84	63 - 130	
Bromoform	50.0	41.7	83	66 - 127	
Bromomethane	50.0	39.8	80	54 - 146	
2-Butanone (MEK)	100	75.4	75	19 - 192	
Carbon disulfide	50.0	38.9	78	46 - 134	
Carbon tetrachloride	50.0	42.5	85	60 - 136	
Chlorobenzene	50.0	41.0	82	77 - 120	
Chlorodibromomethane	50.0	43.8	88	70 - 126	
Chloroethane	50.0	40.1	80	26 - 166	
Chloroform	50.0	42.5	85	68 - 127	
Chloromethane	50.0	30.7	61	46 - 137	
cis-1,2-Dichloroethene	50.0	42.3	85	58 - 143	
cis-1,3-Dichloropropene	50.0	42.7	85	66 - 137	
Dichlorobromomethane	50.0	43.1	86	64 - 137	
1,1-Dichloroethane	50.0	41.9	84	65 - 130	
1,2-Dichloroethane	50.0	41.8	84	62 - 140	
1,1-Dichloroethene	50.0	42.0	84	59 - 137	
1,2-Dichloropropane	50.0	41.8	84	66 - 135	
Ethylbenzene	50.0	41.0	82	77 - 121	
2-Hexanone	100	78.3	78	47 - 151	
Methylene Chloride	50.0	43.2	86	65 - 126	
4-Methyl-2-pentanone (MIBK)	100	79.9	80	50 - 148	
Styrene	50.0	41.7	83	75 - 123	
1,1,2,2-Tetrachloroethane	50.0	39.0	78	65 - 130	
Tetrachloroethene	50.0	40.5	81	76 - 120	
Toluene	50.0	42.2	84	67 - 132	
trans-1,2-Dichloroethene	50.0	42.1	84	66 - 127	
trans-1,3-Dichloropropene	50.0	41.8	84	64 - 138	
1,1,1-Trichloroethane	50.0	41.8	84	56 - 140	
1,1,2-Trichloroethane	50.0	40.3	81	62 - 138	
Trichloroethene	50.0	41.4	83	68 - 133	
Vinyl chloride	50.0	34.6	69	56 - 139	
Xylenes, Total	150	124	83	76 - 122	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	84	65 - 124
Dibromofluoromethane	87	65 - 124
Toluene-d8 (Surr)	85	65 - 132

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Method Blank - Batch: 680-148129

Method: 8081A_8082
Preparation: 3550B

Lab Sample ID: MB 680-148129/6-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/19/2009 2059
Date Prepared: 09/17/2009 1959

Analysis Batch: 680-148409
Prep Batch: 680-148129
Units: ug/Kg

Instrument ID: GC SemiVolatiles - M
Lab File ID: mi18077.d
Initial Weight/Volume: 15.05 g
Final Weight/Volume: 5 mL
Injection Volume: 1.0 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	<33		33
PCB-1221	<67		67
PCB-1232	<33		33
PCB-1242	<33		33
PCB-1248	<33		33
PCB-1254	<33		33
PCB-1260	<33		33

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	44	26 - 140
Tetrachloro-m-xylene	45	26 - 140
DCB Decachlorobiphenyl	91	50 - 129
DCB Decachlorobiphenyl	115	50 - 129

Lab Control Sample - Batch: 680-148129

Method: 8081A_8082
Preparation: 3550B

Lab Sample ID: LCS 680-148129/7-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/19/2009 2119
Date Prepared: 09/17/2009 1959

Analysis Batch: 680-148409
Prep Batch: 680-148129
Units: ug/Kg

Instrument ID: GC SemiVolatiles - M
Lab File ID: mi18078.d
Initial Weight/Volume: 15.06 g
Final Weight/Volume: 5 mL
Injection Volume: 1.0 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	332	277	83	43 - 136	
PCB-1260	332	342	103	53 - 133	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	56	26 - 140
DCB Decachlorobiphenyl	106	50 - 129

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-148129

Method: 8081A_8082
Preparation: 3550B

MS Lab Sample ID:	680-50824-1	Analysis Batch:	680-148409	Instrument ID:	GC SemiVolatiles - M
Client Matrix:	Solid	Prep Batch:	680-148129	Lab File ID:	mi18086.d
Dilution:	1.0			Initial Weight/Volume:	15.07 g
Date Analyzed:	09/19/2009 2355			Final Weight/Volume:	5 mL
Date Prepared:	09/17/2009 1959			Injection Volume:	1.0 uL
				Column ID:	PRIMARY
MSD Lab Sample ID:	680-50824-1	Analysis Batch:	680-148409	Instrument ID:	GC SemiVolatiles - M
Client Matrix:	Solid	Prep Batch:	680-148129	Lab File ID:	mi18087.d
Dilution:	1.0			Initial Weight/Volume:	15.12 g
Date Analyzed:	09/20/2009 0015			Final Weight/Volume:	5 mL
Date Prepared:	09/17/2009 1959			Injection Volume:	1.0 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
PCB-1016	86	100	43 - 136	14	50		
PCB-1260	112	115	53 - 133	3	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	55	59	26 - 140
DCB Decachlorobiphenyl	102	95	50 - 129

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Method Blank - Batch: 640-60927

Method: FL-PRO
Preparation: 3550B

Lab Sample ID:	MB 640-60927/1-A	Analysis Batch:	640-61067	Instrument ID:	SGJ Varian 3400
Client Matrix:	Solid	Prep Batch:	640-60927	Lab File ID:	1I22J8.d
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	00030.28 g
Date Analyzed:	09/22/2009 1449			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

Analyte	Result	Qual	RL
Total Petroleum Hydrocarbons (C8-C40)	<9.9		9.9

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	104	62 - 109
n-C39	94	60 - 118

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 640-60927

Method: FL-PRO
Preparation: 3550B

LCS Lab Sample ID:	LCS 640-60927/2-A	Analysis Batch:	640-61067	Instrument ID:	SGJ Varian 3400
Client Matrix:	Solid	Prep Batch:	640-60927	Lab File ID:	1I22J9.d
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	00030.47 g
Date Analyzed:	09/22/2009 1454			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

LCSD Lab Sample ID:	LCSD 640-60927/3-A	Analysis Batch:	640-61067	Instrument ID:	SGJ Varian 3400
Client Matrix:	Solid	Prep Batch:	640-60927	Lab File ID:	1I22J10.d
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	00030.19 g
Date Analyzed:	09/22/2009 1458			Final Weight/Volume:	2.0 mL
Date Prepared:	09/18/2009 0916			Injection Volume:	1 uL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Petroleum Hydrocarbons (C8-C40)	101	91	63 - 153	10	25		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
o-Terphenyl	92	83	62 - 109
n-C39	89	80	60 - 118

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Method Blank - Batch: 680-148397

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 680-148397/23-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/23/2009 1143
Date Prepared: 09/21/2009 1600

Analysis Batch: 680-148697
Prep Batch: 680-148397
Units: mg/Kg

Instrument ID: ICP/AES - D
Lab File ID: N/A
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	RL
Arsenic	<2.0		2.0
Cadmium	<0.50		0.50
Chromium	<1.0		1.0
Lead	<1.0		1.0

Lab Control Sample - Batch: 680-148397

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 680-148397/24-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/23/2009 1147
Date Prepared: 09/21/2009 1600

Analysis Batch: 680-148697
Prep Batch: 680-148397
Units: mg/Kg

Instrument ID: ICP/AES - D
Lab File ID: N/A
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	200	187	93	75 - 125	
Cadmium	5.00	4.82	96	75 - 125	
Chromium	20.0	19.6	98	75 - 125	
Lead	50.0	47.8	96	75 - 125	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Weston Solutions, Inc. Job Number: 680-50824-1

Method Blank - Batch: 680-148485

Method: 9056
Preparation: 5050

Lab Sample ID: MB 680-148485/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/23/2009 1241
Date Prepared: 09/22/2009 1110

Analysis Batch: 680-148635
Prep Batch: 680-148485
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: .5017 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	RL
Total Halogens	<200		200

Lab Control Sample - Batch: 680-148485

Method: 9056
Preparation: 5050

Lab Sample ID: LCS 680-148485/2-A
Client Matrix: Solid
Dilution: 25
Date Analyzed: 09/23/2009 1254
Date Prepared: 09/22/2009 1110

Analysis Batch: 680-148635
Prep Batch: 680-148485
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Halogens	10000	10000	100	70 - 130	

Duplicate - Batch: 680-148485

Method: 9056
Preparation: 5050

Lab Sample ID: 680-50824-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/23/2009 1322
Date Prepared: 09/22/2009 1110

Analysis Batch: 680-148635
Prep Batch: 680-148485
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: .5034 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Halogens	<260	<260	NC	30	

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone (912) 354-7858 Fax (912) 352-0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Mark Taylor	Lab PM: Page, Abbie	Carrier Tracking No(s):	COC No: 680-23360.1
Client Contact: Mr. Ralph McKeen	Phone: 904 261 3085	E-Mail: abbie.page@testamericainc.com		Page: Page 1 of 1
Company: Weston Solutions, Inc.				Job #:
Address: 5430 Metric Place Suite 100	Due Date Requested: 9-24-09			
City: Norcross	TAT Requested (days): 5 day			
State, Zip: GA, 30092				
Phone: 904.261.3085(Tel)	PO #: 62999			
Email: ralph.mckeen@westonsolutions.com	WO #: ~~05791.008.001~~ 0004 05791-004.004.013			
Project Name: Cabot	Project #: 68000815			
Site: Springstead/Hogtown Creek	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B - As, Cd, Cr, ~~Pb~~	8081A_8082 - Routine PCBs	8260B - TCL Sublist	FL_PRO - FL PRO (TRPH)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
~~8~~ PB1	9-16-09	11:45	C	Solid			X	X	X	X		NO COPPER
PB2	9-16-09	12:45	C	Solid			X	X	X	X		No Copper
PB3	9-16-09	1:40	C	Solid			X	X	X	X		NO COPPER
PB4	9-16-09	1500	G	Solid			X	X	X	X		No Copper
PB4A	9-16-09	1500	G	Solid			X	X	X	X		Hold For Call
				Solid								

680-50824

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by: Mark Taylor	Date/Time: 9-16-2009/1716	Company: Weston	Received by: Cathy Daughtry	Date/Time: 9-17-09 1057	Company: TA SAV		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.4

Page 35 of 35

09/24/2009