



FEDEX: 7728 5396 6105

February 6, 2015

Ms Natalie Hendricks
District Department of the Environment
Underground Storage Tank Branch
1200 First Street, NE 5th Floor
Washington, DC 20002

RE Additional Site Assessment Work Plan
Former Sunoco Service Station
3335 Georgia Avenue NW
Washington, DC 20010
LUST Case #2013008

Dear Ms Hendricks,

Kleinfelder, on behalf of Retail/Service Station Operations, a Series of Evergreen Resources Group, LLC (Evergreen), has prepared this work plan to complete additional site assessment activities at 3335 Georgia Avenue NW, Washington, DC (Site) The Site formerly operated as a Sunoco Service Station, and is now occupied by a parking lot and commercial strip mall building consisting of four vacant units and a United States Postal Service (USPS) office The property owner is contemplating redevelopment of the Site with an anticipated excavation depth of approximately 23-27 feet below grade (fbg).

BACKGROUND

In a directive letter dated June 7, 2013, the District Department of the Environment (DDOE) opened leaking underground storage tank (LUST) case number 2013008 after reviewing a Phase II environmental site assessment (ESA) completed by others for the Site The DDOE determined the Site was formerly owned and operated by Sun Oil Company (Sunoco), and assigned Sunoco as the responsible party and required the completion of a Comprehensive Site Assessment (CSA). Kleinfelder, on behalf of Sunoco Inc , submitted a CSA report to DDOE on December 30, 2013 detailing the installation of five monitoring wells and advancement of three soil borings completed in October 2013 Five additional soil borings were advanced in April 2014 and a CSA Addendum report was submitted to DDOE on June 13, 2014 The DDOE directive letter dated August 12, 2014 (**Appendix A**) requested soil and groundwater samples be collected from beneath the building to assess the horizontal and vertical extent of contaminant impact Kleinfelder has been retained by Evergreen as the environmental consultant to complete the additional investigation

STRIP MALL BUILDING SUBSURFACE INVESTIGATION

Kleinfelder, on behalf of Evergreen, proposes to advance eight soil borings inside the existing strip mall building, as depicted on **Figure 1**. Soil and groundwater samples will be collected from the borings (SB-17 through SB-24) to evaluate subsurface conditions under the building to provide additional vertical and horizontal delineation of petroleum hydrocarbon impact at the Site. One of the four vacant units is not accessible by drilling equipment capable of completing the proposed borings, and the USPS office building is an active business. Therefore, subsurface investigation activities are not proposed in these two areas. The proposed scope of work for the subsurface investigation beneath the strip mall building is provided below:

- Following subsurface clearance activities, the soil borings will be advanced using a decontaminated direct push rig to approximately 30 fbg. Continuous soil samples will be collected using a macrocore sampler from five fbg to the boring termination depths. The soil samples will be field screened with a photoionization detector (PID), and characterized according to the Unified Soil Classification System (USCS) on boring logs.
- Soil samples with the highest PID readings above the groundwater interface (approximately 20-22 fbg) will be submitted for laboratory analysis. Two soil samples will be submitted for each boring location. If PID readings are not detected, soil samples from directly above the apparent groundwater interface and from approximately 14-15 fbg will be submitted for laboratory analysis. Soil samples will be analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), and tertiary butyl alcohol (TBA) using Environmental Protection Agency (EPA) Method 8260, polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270, and total petroleum hydrocarbons – gasoline range organics (TPH-GRO) and total petroleum hydrocarbons – diesel range organics (TPH-DRO) using EPA Method 8015.
- Following the collection of soil samples, dedicated 1-inch diameter temporary wells will be installed in the boreholes for the collection of groundwater samples. The groundwater samples will be submitted for laboratory analysis of BTEX, MTBE, EDC, and TBA using EPA Method 8260, EDB using EPA Method 8011, and TPH-GRO and TPH-DRO using EPA Method 8015B. As previously approved by the DDOE in the letter dated August 20, 2013 (**Appendix A**), analysis for PAHs will not be completed due to potential interference with sediment in the grab water samples.

VAPOR INTRUSION INVESTIGATION

To evaluate the potential soil vapor indoor inhalation exposure for future residents and commercial workers, soil vapor samples are proposed to be collected from four soil borings completed within the apparent "source area" at the Site (area with highest PID readings and concentration of petroleum hydrocarbons in soil/groundwater analytical data). The soil borings will be advanced in two nested sets within the vadose zone, one shallow (S) and one deep (D) boring at two different locations, as depicted on **Figure 1**. The shallow borings will be advanced to 14 fbg to evaluate the natural attenuation by the thickness of soil above the water table. The deep borings will be advanced to approximately 20 fbg, corresponding to the depth just above the groundwater interface. The proposed scope of work for the vapor intrusion investigation is provided below.

- Following subsurface clearance activities, the soil borings will be advanced using a decontaminated direct push rig and soil vapor samples will be collected using Geoprobe Systems® Post Run Tubing (PRT) system. The shallow borings (SV-1S and SV-2S) will be advanced to 14 fbg and the probe rods will be retracted approximately six inches to allow a vapor sample to be collected from the exposed soil interval ~13.5-14 fbg. The deep borings (SV-1D and SV-2D) will be advanced to approximately 20 fbg and the probe rods will be retracted approximately six inches to allow a vapor sample to be collected from the exposed soil interval ~19.5-20 fbg. A leak test of the PRT tubing system will be completed by applying vacuum to the tubing prior to retracting the probe rods and starting the sampling procedures.
- Soil vapor sampling will be performed utilizing the following procedural steps:
 - 1 The PRT tubing system will be connected to a 'T' connector three-way valve assembly, with one end of the 'T' connector leading to a vacuum pump and the other end leading to a pre-evacuated certified clean summa canister.
 - 2 A shroud will be placed over the location where the PRT tubing system connects with the 'T' connector and fittings, and a tracer gas (helium) will be used to fill the shroud. The helium concentration within the shroud will be measured with a calibrated helium detector and recorded. The helium tracer system tests the seals and verifies ambient air is not inadvertently drawn into the sample.
 - 3 Approximately three volumes of the PRT tubing system and open cylinder of soil exposed in the boring (~0.5 foot) will be purged using a vacuum pump set at an approximate rate of 200 milliliters (mL) per minute. A sample of the purged air will be captured in a Tedlar™ bag and the helium concentration from within the bag will be compared to the measured concentration of helium within the shroud. The sample will also be screened for oxygen and carbon monoxide with a multi-gas meter to assist in determining soil vapor conditions.

- 4 Following the purging and tracer gas verification steps, the valve leading to the vacuum pump will be closed, the pump will be turned off, and the soil vapor will be directed to a summa canister with laboratory-calibrated flow controller set to collect vapor samples at a rate of approximately 200 mL/min
 - 5 One ambient air sample will also be collected at the site during the sampling event to assess the background atmospheric concentrations of contaminants of concern (COC) against which the soil vapor sampling results can be compared.
- The soil vapor and ambient air samples will be submitted to the laboratory for analysis of BTEX, MTBE, EDB, EDC, TBA, and naphthalene using EPA Method TO-15. Analysis of PAHs cannot be completed by the laboratory via summa canister sample collection. Collecting additional vapor samples using alternate sample collection and laboratory analysis methods is not considered warranted since PAHs have either not been detected or have been detected significantly below their respective risk based screening levels with the exception of naphthalene (which will be analyzed using EPA Method TO-15)

ADDITIONAL SUBSURFACE INVESTIGATION

Kleinfelder, on behalf of Evergreen, proposes to advance two additional soil borings (SB-25 and SB-26) on Site and complete slug testing at select monitoring wells to obtain site specific data that will be used to complete DC Risk Based Corrective Action (RCRBCA) Tier 2 analysis in the future. Details are provided below:

- Following subsurface clearance activities, the soil borings will be advanced using a decontaminated direct push rig to approximately 25 fbg. An undisturbed soil sample will be attempted to be collected from the vadose zone and saturated zone at each boring using Shelby tube samplers. The soil samples will be analyzed for soil characteristic data, water content, bulk density, porosity, and organic carbon content. The locations of the proposed borings for soil characteristic data are depicted on **Figure 1**.
- The undisturbed soil samples are planned to be collected at approximately 13-15 fbg (vadose zone) and 23-25 fbg (saturated zone).
- During the advancement of the soil borings, continuous soil samples will be collected and field screened with a PID. Soil samples will be characterized according to the Unified USCS and recorded on boring logs.
- Slug testing is proposed to be completed at MW-2, MW-3, and MW-4 to obtain hydraulic conductivity data. Depending on the success of slug testing at these wells, slug testing of wells MW-1 and MW-5 may also be completed if necessary.

PERMITTING, SUBSURFACE CLEARANCE, ABANDONMENT, AND WASTE DISPOSAL

The following activities will be completed for each of the investigations detailed above

- A Department of Consumer and Regulatory Affairs (DCRA) construction permit will be obtained for the proposed soil borings, including DDOE Water Quality Division's approval of the proposed borings and temporary monitoring wells
- Public utility mark-outs will be completed before starting drilling activities
- The proposed soil boring locations will be cleared to depths of approximately five feet below grade using air knife/vacuum excavation and hand clearing, as necessary, to verify the proposed borehole locations are clear of subsurface utilities
- Upon completion of the subsurface investigations, the temporary wells will be removed (where applicable) and the borings will be abandoned using a bentonite slurry (one gallon of water for every two pounds of bentonite powder) per DDOE Water Quality Division requirements. The slurry will be introduced from the bottom of borehole and placed progressively upwards using a tremie pipe
- The laboratory analysis of the soil, groundwater, and vapor samples will be completed by Lancaster Laboratories of Lancaster, Pennsylvania (Laboratory certification # 36-00037)
- Soil, development water, and purge water generated during the subsurface activities will be temporarily stored on-Site in 55-gallon DOT drums and subsequently transported off-Site and properly/legally disposed of as non-hazardous waste after waste characterization is completed

SCHEDULE

These investigation activities will be initiated upon receipt of the DDOE approval of this work plan. The results of the investigations will be submitted to the DDOE in an updated CSA report within 45 days of field work completion.

LIMITATIONS

This work plan was prepared in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

CLOSING

Evergreen and Kleinfelder appreciate the cooperation and assistance of the DDOE in the successful completion of this project. Please contact the undersigned at (410) 850-0404 if you have questions.

FIGURE

1 Site Plan

APPENDIX

A DDOE Correspondences

Sincerely,

KLEINFELDER



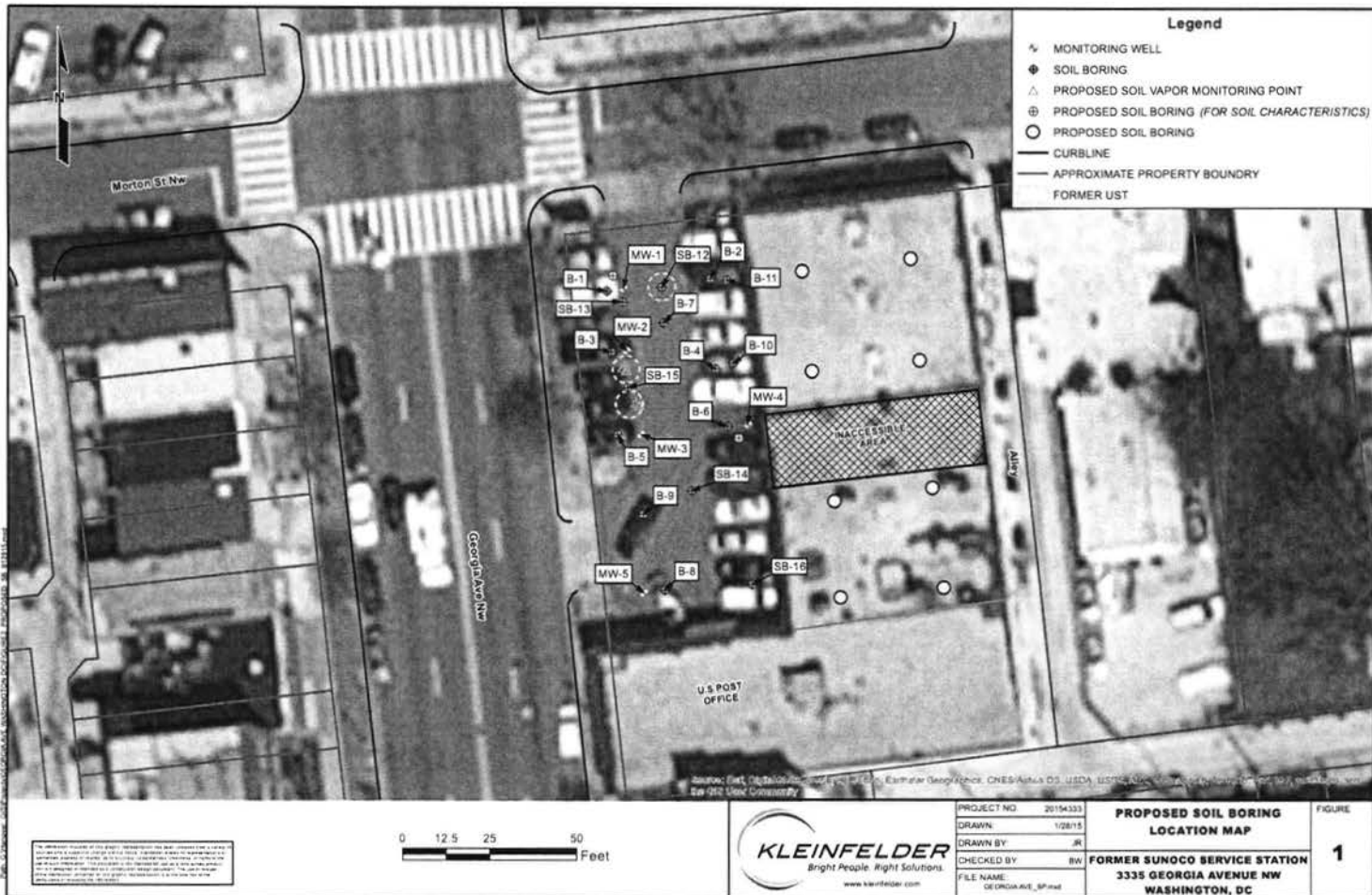
Brianne Witman
Environmental Engineer



Sean Rochford
Project Manager

cc Ms Fianna Phill - DDOE
Mr Eric Zuckerman – Zuckerman Partners LLC (electronic mail)
Mr Michael Davis – Venable, LLP (electronic mail)
Ms Devon Watts – Evergreen c/o Sunoco, Inc (Enfos)

FIGURE

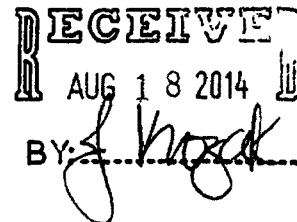


APPENDIX A

DDOE Correspondences

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment
Environmental Services Administration



Underground Storage Tank Branch

Toxic Substances Division

Comprehensive Site Assessment Addendum Report Comments

VIA USPS First Class Mail

August 12, 2014

Mr. Mark Steele
Kleinfelder East, Inc.
1340 Charwood Road, Suite I
Hanover, MD 21076

RE: FACILITY NAME: Former Sunoco Service Station
FACILITY ADDRESS: 3335 Georgia Avenue, NW, Washington DC 20010
LUST CASE #: 2013008

Dear Mr. Steele,

The District Department of the Environment (DDOE), Underground Storage Tank Branch ("UST Branch"), is issuing this letter in reference to the property located at 3335 Georgia Avenue NW, Washington, D.C. (the "Site"), for which Sun Oil Company (Sunoco) is listed as the Responsible Party (the "RP"), pursuant to the Underground Storage Tank Management Act of 1990 (D.C. Code § 8-113.01 *et seq.*) (the "Act"), and the District of Columbia Underground Storage Tank Regulations, as set forth at Title 20 of the District of Columbia Municipal Regulations (DCMR), Chapters 55-70 (20 DCMR §§ 5500-7099).

The DDOE has received and reviewed the *Comprehensive Site Assessment Addendum Report* submitted by Kleinfelder, Inc. (Kleinfelder) dated June 13, 2014. This report documents the installation of five soil borings (SB-12 through SB-16), soil sampling, groundwater sampling, and includes a DC Risk Based Corrective Action (DCRBCA) Tier 1 and Tier 2 Evaluation.

Based on our review of the report, DDOE has the following comments regarding soil sampling results, exposure pathway evaluation, and Tier 1 Risk Based Screening Levels (RBSLs) as presented in the report:

1. The onsite receptors evaluation is incomplete. Indoor air inhalation for onsite residents (child and adult) was not considered as complete in Kleinfelder's exposure pathway evaluation. DDOE understands the current site owner intends to redevelop the Site as a mixed use building for commercial and residential use, including an underground parking



garage. DDOE understands plans are to excavate a portion of the site to construct underground parking and install vapor intrusion engineering controls to the building. Because vapor intrusion into a building can occur through various conduits including utility lines and elevator shafts¹ (complete exposure pathway), DDOE requires the indoor air inhalation exposure scenario should be evaluated for onsite residents (child and adult) in addition to the commercial receptors.

2. Before DDOE can issue a Case Closure or No Further Action Letter, the Department must be satisfied that a Site does not pose a threat to human health or the environment. If engineering controls, such as a vapor barrier, are utilized to eliminate the indoor inhalation pathway for both onsite commercial receptors and residents (vapor migration via elevator shaft), DDOE is requesting assurances of the integrity, reliability and longevity of the installed engineering controls. Therefore, DDOE recommends that the RP performs the following upon completion of construction:
 - Submit the final design and as-built specifications of all engineering controls installed at the Site, including manufacturer's specifications for the installed vapor barrier, degassing system, and testing results;
 - Develop an institutional control, such as a deed restriction, indicating that permanent engineering controls (i.e., vapor barrier and degassing system) will be installed in all onsite buildings for future residential or mixed use; and
 - Submit and present to DDOE a monitoring program (frequency of 3 years is acceptable) to test and report on the integrity of the engineering controls.
3. DCRBCA Tier 1 Risk Based Screening Level (RBSL) exceedances are noted for the calculated representative soil concentrations for several contaminants of concern, including ethylbenzene, total xylenes, naphthalene, and Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO). DCRBCA Tier 2 analyses should be conducted to develop site specific target levels (SSTLs) for these compounds.
4. The average of DCRBA Tier 1 RBSL exceedances for the representative groundwater concentration includes SB-16. SB-16 is located downgradient of the identified source area (also identified as point of demonstration (POD)) and should not be included in the representative groundwater concentration calculation.
5. DDOE notes that Tier 1 RBSLs for groundwater are calculated assuming biodegradation. Please note that under DC RBCA, Tier 1 analysis assumes no biodegradation is occurring². Biodegradation may be taken into account in a Tier 2 analysis instead.
6. Kleinfelder has provided Tier 2 analysis input and output forms. However, all supporting Tier 2 analysis software forms are required for review by DDOE.

¹ ITRC Technical and Regulatory Guidance "Vapor Intrusion Pathway: A Practical Guideline," p 8

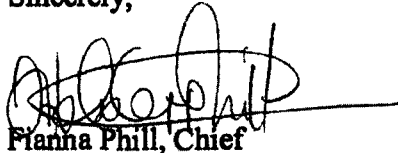
² DCRBCA Technical Guidance, 2011, Section 4.6.4 "Indicators of Biodegradation"; Section 5.4.4 "Calculation of Acceptable Concentrations Protective of Groundwater", and Table 5-7.

7. DDOE concurs with Kleinfelder that the reported naphthalene concentration in the groundwater sample collected at SB-16 (530 µg/L) may be largely attributable to turbidity in the grab sample. DDOE requests additional groundwater monitoring of monitoring well locations to confirm groundwater concentrations.
8. DDOE notes that chlorinated volatile organic compounds (cVOCs) have been detected in onsite soil and groundwater samples. DDOE notes Sunoco's statement that because cVOCs are detected at greater concentrations in groundwater (dissolved phase) and not detected in unsaturated soils, offsite source(s) are likely responsible for remediation of cVOCs.
9. DDOE understands that construction of the Site as planned will provide a better opportunity to assess subsurface conditions beneath the existing strip mall building. Currently, only approximately one-third of the Site has been investigated (the parking lot). DDOE requests an updated Comprehensive Site Assessment Report including a site conceptual model once additional soil and groundwater samples are collected from the remaining area of the Site to fully assess or confirm the horizontal and vertical extent of contaminant impact.

Based on our review of the report and previously submitted documents, DDOE requires the aforementioned corrections and requests be incorporated into an updated Comprehensive Site Assessment Report by November 3, 2014.

Should you have any question about this directive, please call Natalie Hendricks at 202-535-1944 or send an email to Natalie.hendricks@dc.gov.

Sincerely,



Fianna Phill, Chief
Underground Storage Tank Branch

cc: Ms. Devon Watts – Sunoco
Ms. Diarra M^cKinney, 3321 Georgia LLC (via email)
Ms. Bonni Kaufman, Holland & Knight (via email)
Mr. James Sweeney, Land Remediation Branch, DDOE (via email)
Mr. Collin Burrell, Water Quality Division, DDOE (via email).

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment
Environmental Protection Administration

Underground Storage Tank Branch



Toxic Substance Division

August 20, 2013

Mr John Steel, Manager RPM Divestments
Marketing Headquarters SR – CSB – 2E102
10 Industrial Highway
Building G, MS 4
Lester, PA 19029

RE: COMMENTS ON COMPREHENSIVE SITE ASSESSMENT WORKPLAN
FACILITY NAME: Former Sunoco Service Station (the Strip Mall)
FACILITY ADDRESS: 3335 Georgia Avenue, NW, Washington DC 20010
LUST ID: 2013008

Dear Mr Steel

The Underground Storage Tank (UST) Branch, is issuing this directive pursuant to the District of Columbia Underground Storage Tank Management Act of 1990 (UST Act), as amended, D C Law 8-242 D C. Code Section 6-995, and the District of Columbia Underground Storage Tank (UST) Regulations, 20 DCMR Chapters 55-70, effective October 1, 1999 (46 DCR 7699)

This office has completed review of the Comprehensive Site Assessment Workplan (CSA Workplan) for 3335 Georgia Ave , NW, Washington, DC 20010, submitted by Kleinfelder on behalf of Sun Oil Company (Sunoco), dated August 8, 2013, and our comments are included below

1. All of the locations for the proposed soil borings (5) and monitoring wells (3) per the original CSA Workplan dated August 8, 2013 are approved.
- 2 In addition to the three (3) proposed monitoring wells, we recommend two (2) additional wells, one further up-gradient of groundwater flow to assess any offsite impacts and another at or near B-3 and B5, due to the exceedances of GRO in soil above Tier I at B-3 and B-5 locations
- 3 As was indicated in our previous directive dated June 7, 2013, you are required to analyze both soil and groundwater for full list VOCs, TPH-GRO, TPH-DRO, and PAHs using appropriate US EPA Methods Additionally, TCLP-metals analysis shall be conducted for soil samples



4 Due to potential interference with sediments in grab water samples, we agree to ONLY waive the PAHs analysis. You are therefore required to complete TPH-DRO analysis.

5. More extensive delineation to include additional monitoring wells and soil borings beyond the current investigation area may be required, in the near future, if the CSA shows significant adsorbed and dissolved phase concentrations and unstable or increasing trends.

6 Please maintain property access for parking/pedestrians from Georgia Avenue NW and/or Morton Avenue NW during on-site investigations, e.g. center of the curb-cut, as much as possible and comply with the signed access agreement with the property owner.

7 We have considered your request for an extension to complete and **submit the Comprehensive Site Assessment (CSA) report**, the new deadline is **October 7, 2013**. This deadline is achievable for the scope of work proposed. You may proceed with the CSA Workplan as amended by the comments provided herein.

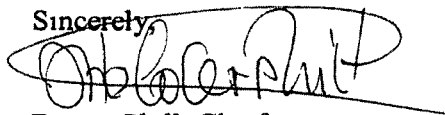
8 If the CSA confirms soil/or groundwater contamination, **submit a Corrective Action Plan (CAP) to address contamination on the property by November 25, 2013**.

Please be reminded that a permit is required for well installation from the DDOE Water Quality Division and a Department of Consumer and Regulatory Affairs (DCRA) construction permit is required for any site operations.

Failure to comply with this directive constitutes a violation of the District of Columbia Underground Storage Tank Management Act and Underground Storage Tank Regulations.

Should you have any questions concerning this directive, please do not hesitate to contact me or Mr. Timothy J. Byrd (LUST Case Manager) via telephone at (202) 481-3836 or via e-mail at timothy.byrd@dc.gov.

Sincerely,



Fianna Phill, Chief
Underground Storage Tank Branch

cc Diarra McKinney, 3321 Georgia LLC
Bonni Kaufman, Holland & Knight (via e-mail)
Devon Watts, Sunoco – Southeast and Mid-Atlantic Region (via e-mail)
Mark Steel, Kleinfelder Inc (via e-mail)
E-File U. 2013008 CSA Workplan-DDOE Comments 08 20 13 docx