



Via Email & FEDEX: 796424494682

August 8, 2013

Mr Timothy J. Byrd  
District Department of the Environment  
Underground Storage Tank Branch  
1200 First Street, NE 5th Floor  
Washington, DC 20002

**RE: Comprehensive Site Assessment Work Plan  
Former Sunoco Service Station (the Strip Mall)  
3335 Georgia Avenue, NW  
Washington, DC 20010  
LUST ID #2013008**

Dear Mr. Byrd,

Kleinfelder, on behalf of Sunoco Inc. (Sunoco), has prepared this work plan to complete the Comprehensive Site Assessment (CSA) at the Former Sunoco Service Station located at 3335 Georgia Avenue, NW, Washington, DC (Site). In a directive letter dated June 7, 2013, the District Department of the Environment (DDOE) upon review of the Phase II Environmental Site Assessment (ESA) completed by others for the Site opened a leaking underground storage tank (LUST) case and required the submission of a CSA. On July 19, 2013, Kleinfelder, on behalf of Sunoco, responded to the DDOE directive and stated that Sunoco would not be conducting a CSA and CAP. In an email from the DDOE on July 24, 2013, the DDOE reiterated its stance on the need for Sunoco to complete the CSA and CAP and offered to meet with Sunoco to discuss the case. After discussions between the DDOE and Sunoco on July 26, 2013, Sunoco offered to proceed with the CSA for the LUST chemicals of concern and to provide the DDOE with a CSA work plan by August 9, 2013. The above mentioned correspondence with the DDOE is attached for reference.

#### **SCOPE OF WORK**

The results of the Phase II ESA indicate that petroleum related hydrocarbons were detected in soil and groundwater above Tier 0 action levels. Kleinfelder, on behalf of Sunoco, proposes to install five soil borings and three monitoring wells to further assess adsorbed and dissolved phase concentrations, assess the groundwater flow direction, and complete the CSA. The locations of the proposed borings and monitoring wells are depicted on **Figure 1**. The proposed scope of work for the CSA activities is provided below:



- Upon approval of the CSA Work Plan, Kleinfelder will obtain a Department of Consumer and Regulatory Affairs (DCRA) construction permit for the proposed monitoring wells.
- Public markouts will be completed before starting the drilling activities.
- According to records, gasoline and heating oil has been stored in the USTs associated with the Site and the laboratory analysis will include gasoline and diesel/light fuel oil related compounds.
- The proposed soil borings/monitoring well locations will be cleared to depths of approximately five feet below grade using air knife/vacuum excavation and hand clearing, as necessary, to verify that the proposed borehole locations are clear of subsurface utilities
- Following subsurface clearance activities, the soil borings will be advanced using a decontaminated hollow stem auger drill rig to approximately 32 feet below grade. Soil samples will be collected using a split spoon sampler at five foot intervals from five feet below grade to the boring termination depths. The soil samples will be field screened with a photoionization detector (PID). Soil samples will be described in the field according to the Unified Soil Classification System (USCS) and recorded on boring logs.
- Soil samples with the highest PID reading above the apparent groundwater interface will be submitted for laboratory analysis. If PID readings are not detected a soil sample from directly above the apparent groundwater interface 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), tertiary butyl alcohol (TBA), and ethanol using Environmental Protection Agency (EPA) Method 8260; total petroleum hydrocarbons – gasoline range organics (TPH-GRO), total petroleum hydrocarbons – diesel range organics (TPH-DRO), using EPA Method 8015B; and polycyclic aromatic hydrocarbons (PAHs) including acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorine, naphthalene, phenanthrene, and pyrene using EPA Method 8270C.
- Following the collection of soil samples, groundwater samples will be collected from near the top of the groundwater interface using either temporary wells or the Geoprobe® water sampler. Each boring will be purged until the purge water is of minimal turbidity using a decontaminated submersible pump.
- The groundwater samples will be analyzed for BTEX, MTBE, EDC, TBA, and ethanol using EPA Method 8260; EDB using EPA Method 8011; and TPH-GRO, using EPA Method 8015B. Due to potential interference with sediments in grab water samples, TPH-DRO and PAHs will not be analyzed.
- Upon completion of sampling, bentonite slurry (one gallon of water for every two pounds of bentonite powder) will be used to abandon the boreholes. The slurry will be introduced from the bottom of borehole and placed progressively upwards using a tremie pipe.



- Following the collection of soil samples, 2-inch diameter monitoring wells will be constructed in three of the boreholes as depicted on **Figure 1**. Based on information provided by others in the Phase II ESA, the depth to groundwater at the Site is approximately 25 feet below grade. The monitoring wells will be constructed using 10 feet of 0.020 inch slot PVC screen and 22 feet of schedule 40 PVC riser. The depth and 10-foot screen interval of the monitoring wells may be adjusted depending on conditions encountered in the field. The monitoring wells will be completed with flush-mounted manholes set in two-foot by two-foot concrete pads.
- Following monitoring well installation activities, the wells will be surveyed with standard surveying equipment and developed to restore the hydraulic properties of the formation surrounding the monitoring wells.
- Approximately two weeks following well development, groundwater samples will be collected from the monitoring wells. Prior to sampling, the depth to groundwater and total well depth will be measured to calculate the volume of water in each well. Depth measurements will be made using an audible oil/water interface probe with 0.01-foot accuracy. Each well will be purged of at least three volumes of well water using a decontaminated submersible pump. The wells will then be allowed to recharge to at least 90 percent of the original static depth to groundwater before sampling.
- The groundwater samples from the monitoring wells will be analyzed for BTEX, MTBE, EDC, TBA, and ethanol using EPA Method 8260; EDB using EPA Method 8011; TPH-GRO and TPH-DRO, and using EPA Method 8015B; and PAHs using EPA Method 8270C.
- Soil, development water, and purge water generated during the installation, development, and sampling of the monitoring well will be temporarily stored on-Site in 55-gallon DOT drums, characterized and subsequently transported off-Site and properly and legally disposed of as non-hazardous waste.
- Upon receipt of the laboratory analytical results, Kleinfelder, on behalf of Sunoco, will prepare a CSA Report documenting the investigation and findings in general accordance with the DDOE CSA Protocol dated July 2010.

The laboratory analysis will be completed by Lancaster Laboratories of Lancaster, Pennsylvania (Laboratory certification # 36-00037).

## **SCHEDULE**

In the Directive Letter, the DDOE set a due date of August 9, 2013 for the submission of the CSA. As per email correspondence with Ms. Fianna Phil of the DDOE, Kleinfelder, on behalf of Sunoco, requests an extension for the submission of the CSA until October 31, 2013 (attached). This date will allow time for Sunoco to acquire access to the Site from the property owner and for the DDOE to review and approve this work plan which is required to obtain the permits and completion of the field work proposed herein.



## **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**

Sunoco 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.

Sincerely,  
Kleinfelder East, Inc.

Donald A. Trego, QEP  
Program Manager

Mark C. Steele  
Principal Professional

## **Attachments**

cc: Ms. Fianna Phill - DDOE  
Ms. Diarra McKinney - 3321 Georgia LLC  
Ms. Bonni Kaufman - Holland & Knight  
Ms. Devon Watts - Sunoco  
Mr. John Steel - Sunoco  
Ms. Margaret Desimone - Sunoco