

DT CONSULTING SERVICES, INC.

**REMEDIAL INVESTIGATIVE WORK PLAN
FOR
LL FUEL STORAGE, LLC
SOUTH FALLSBURG, NEW YORK**

**BROWNFIELD CLEANUP PROGRAM (BCP)
SITE NUMBER C353017**

9/20/2022

DT CONSULTING SERVICES, INC.

September 20, 2022

Mr. Michael Kilmer
New York State Department of Environmental Conservation
Division of Environmental Remediation
21 South Putt Corners Road
New Paltz, New York 12561

RE: REMEDIAL INVESTIGATIVE WORK PLAN (RIWP)
LL Fuel Storage, LLC
Laurel Avenue & Griff Court
South Fallsburg, Sullivan County, New York
Site No.: C353017

Dear Mr. Kilmer:

DT Consulting Services, Inc. (DTCS) is pleased to present this Remedial Investigative Work Plan for the above referenced property for your review and approval. If you should have any questions or require additional information, please contact our office.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Deborah Thompson".

Deborah Thompson, Senior Geologist
DT Consulting Services, Inc.

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1.0 INTRODUCTION AND PURPOSE

This Remedial Investigation Work Plan (RIWP) has been prepared to satisfy the investigation requirements of the New York State Department of Environmental Conservation (NYSDEC or Department) Brownfield Cleanup Program (BCP). The Subject Property, identified as LL Fuel Storage, LLC, located at the intersection of Laurel Avenue and Griff Court (also referenced in historical reporting as 74 Griff Court), is located in the Town of South Fallsburg, Sullivan County, New York (heretofore referenced as the Site or Subject Property) has been accepted into the BCP (Site Number C353017). All the activities at the Site are being conducted in accordance with a Brownfield Cleanup Agreement, dated March 21, 2022.

Prior investigation activities have been conducted on the Site and the results of those investigations were submitted to the Department along with the BCP Application. As such, an approved RIWP is required prior to initiating remaining remedial investigation field activities. This RIWP is designed to focus on and address specific areas at the Site to gain current subsurface quality data, to document the environmental conditions at portions of the Site not previously investigated, and to evaluate the potential for migration of contaminants off-Site. Specifically, the purpose of this work is to document current soil conditions within the historical source area, to document current groundwater quality and direction of groundwater flow, provide current soil gas conditions along the periphery of the property boundaries, if any, and to provide guidance on the selection and implementation of a Remedial Action program for the Site. The Site is the location of past petroleum hydrocarbon spills, identified in several NYSDEC records. As more fully described in Sections 2 - 4 of this document, volatile and semi-volatile organic compounds (VOCs/SVOCs) have been detected in the subsurface of the property because of historical Site use dating back to the 1920s. All proposed work will be conducted according to a Site-specific Health

and Safety Plan (HASP) and a Community Air Monitoring Plan (CAMP), provided as Attachments A and B, respectively.

2.0 SITE INFORMATION

The subject 1.4-acre parcel is presently improved with ten aboveground storage tanks (ASTs), a fuel truck loading rack and an oil-water separator utilized to treat storm water run-off within the secondary containment area surrounding the ASTs prior to discharge. In addition, the property contains an unmanned operating booth. The Site is planned to maintain its current footprint and land use in the future. A property location map and Site Base map are presented as Figures 1 and 2, respectively.

Historic uses of the Site have been centered on commercial, petroleum bulk storage (PBS) enterprises dating back to the 1920s. Prior historical uses which have led to Site contamination include petroleum bulk storage for the purposes of operating a petroleum storage and distribution facility.

The Site is currently active, and maintains a 441 – Fuel Storage & Distribution property class by the Town of Fallsburg. The Subject Property maintains ten aboveground storage tanks (ASTs), a fuel truck loading rack and an oil-water separator utilized to treat storm water run-off within the secondary containment area surrounding the ASTs prior to discharge. The Site is bounded by commercial property to the north, south and west; while residential Site use is present to the east along Laurel Avenue. Based upon historical investigations of the Site, subsurface characteristics at the facility consist mixed fill (0 – 6' below grade surface or bgs), silty sand (6 – 10' bgs) underlain by native till (10 – 13' bgs). Slabs of concrete were also found within the southwestern quadrant of the excavation and are believed to be remnants of historical tank cradles which were employed during a former PBS event. Bedrock was not encountered during initial source removal procedures on-Site (July 2020). Groundwater was documented at

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approximately 10' bgs and contained free phase product and petroleum sheen while conducting initial remedial efforts in July 2020.

The elevation of the Site is approximately 1,200-feet above mean sea level with anticipated groundwater flow in an easterly direction towards the Sheldrake Stream. The Town of Fallsburg is reported to provide potable water and wastewater disposal services via municipal water and sewer to surrounding properties. No groundwater supply wells were observed by representatives of this office during Site inspections and no groundwater supply wells are known to be present or used on adjoining or nearby properties.

An ASTM Phase I/II Environmental Site Assessment were conducted at the Site in April 2019 by Continental Placer, Inc. (CPI). As a result, the following recognized environmental conditions (RECs) were identified at the Site:

- ✓ The presence of PBS aboveground storage tanks (ASTs);
- ✓ The presence of an oil-water separator; and
- ✓ Soil and groundwater contamination issues associated with historic site use as a PBS terminal dating back to the 1920's.

A subsequent subsurface investigation and initial remedial actions were conducted between 2019 and 2020 which indicated the following:

- ✓ Elevated sample concentrations for VOCs and to a lesser extent SVOCs were reported in post excavation soil samples collected during the initial remedial action event in July 2020. Petroleum impacted soils were found in the unsaturated and smear zones with the soil profile along the south, southwestern quadrant of the facility. DTCS also documented remnants of historical tank cradles within the remedial area which were employed

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during a former PBS event (reportedly gasoline PBS and distribution was historically performed within this quadrant of the Site by Griff Petroleum).

- ✓ Petroleum based hydrocarbons, within the south, southwestern quadrant of the Site, exceeding groundwater standards (typically 5 parts-per billion or ppb), with a maximum concentration of 10 ppb. The primary contaminants of concern are Benzene, Ethylbenzene, Naphthalene, Xylenes and n-Propylbenzene, which were reported within Site groundwater at concentrations of 510, 330, 270, 140 and 130ppb respectively.

3.0 OBJECTIVES

The purpose of the Remedial Investigation is to further define the nature and extent of on-Site contamination, to evaluate the potential for migration of contaminants off-Site, and develop sufficient data for the assessment, selection and design of a Remedial Action Work Plan. Site investigation activities at the LL Fuel Storage, LLC facility are aimed to accomplish the following:

- Document the presence or absence of targeted contaminants in the subsurface;
- Determine the direction of groundwater flow and document groundwater quality;
- Collection and analysis of specific media including soil gas, soil and groundwater;
- Identification of contaminants of concern;
- Identification of specific environmental media, characterization of exposure settings, potential migration pathways and affected receptors; and

- Evaluation of the potential for off-Site migration of contaminants, if any.

4.0 PREVIOUS INVESTIGATIONS AND EVALUATIONS

Two previous environmental investigations along with a Subsurface Investigative Work Plan, Remedial Action Summary Report, a Petroleum Contaminated Soil (PCS) Disposal Work Plan and a PCS Disposal Report have been conducted on the Subject Property. Each of the two investigations was performed to assess the environmental status of the Site by identifying existing or potential environmental conditions. These reports can be referenced in the LL Fuel Storage, LLC BCP Application, dated May 4, 2021 (note that the PCS Disposal Work Plan and Disposal Report were generated after the BCP application submittal).

4.1 Phase I & II Environmental Site Assessments by Continental Placer, Inc. April 15, 2019

Pending potential sale of the Site, Continental Placer, Inc. (CPI), on behalf of the potential purchaser, performed a Phase I & II Environmental Site Assessment (ESA) on the Subject Property. The purpose of the assessments was to identify any recognized environmental conditions (RECs) and to characterize any contamination that may exist in soil and/or groundwater because of historical Site use as a PBS facility.

4.1.1 Findings

RECs identified for the Subject Property as identified by CPI were the presence/utilization of PBS ASTs, the presence of an oil-water separator, and the observation of petroleum-impacted soil and groundwater identified during the limited Phase II ESA. For the limited Phase II ESA, four soil borings were advanced for the collection and analysis of soil and groundwater samples on March 27, 2019. Petroleum-impacted soil and groundwater (odors and photoionization detector screening) were noted in the field in three of the four borings. The laboratory analytical results demonstrated the presence of VOCs and

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SVOCs in soil and groundwater at those three locations. While conducting the Phase II ESA, petroleum contamination (i.e., soil and groundwater impacts) was encountered above applicable state standards, and thus Spill Number 19-00538 was generated for the Site on April 16, 2019.

4.2 Subsurface Investigative Work Plan by DT Consulting Services, Inc. July 19, 2019

Based upon the findings of a Limited Phase II ESA performed by CPI in March 2019, DT Consulting Services, Inc. (DTCS) was subsequently retained by LL Fuel Storage, LLC to generate a Subsurface Investigative Work Plan to delineate the extent of petroleum impacts on-Site as per the request of the Department. The Subsurface Investigative Work Plan (SIWP) outlined proposed investigative sampling locations, sample collection procedures, laboratory analysis and outlined the contents of the Remedial Investigative Report to be generated upon executing the plan.

4.3 Remedial Investigative Report by DT Consulting Services, Inc. December 23, 2019

DTCS received approval on the SIWP from the Department on August 13, 2019. The purpose of this investigation is to further delineate the extent of subsurface impacts identified during a recent Limited Phase II ESA performed on the Subject Facility. The investigation was concentrated in locations surrounding the AST operational areas, the historical soil boring which displayed petroleum impacts, and select background locations so as to quantify subsurface conditions within the area(s) of study. A total of eight soil borings and one groundwater monitoring location were utilized during the survey to characterize Site conditions.

4.3.1 Findings

Upon review of analytical testing, DTCS concluded that most all soil boring locations (with the exception of Soil Boring SB-6) were returned with VOC concentrations above NYSDEC CP-51 soil cleanup objectives or SCOs. The

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remaining testing parameters, namely the SVOCs, were recorded as either non-detect or with contaminant concentrations below state SCOs. Analysis of the temporary Site well installed during this investigation revealed concentrations of laboratory detectable dissolved phase VOCs and SVOCs. When compared to guidance, numerous VOCs were found to exceed their respective regulatory standards, while the reported SVOCs fell below standards. DTCS recommended excavation and proper disposal of source material from within the identified source areas. The NYSDEC concurred with the recommendation and requested a Remedial Action Work Plan (RAWP) to be generated and approved prior to proceeding with the remedial measure.

4.4 Remedial Action Work Plan by DT Consulting Services, Inc. February 19, 2020

A RAWP was generated by DTCS and submitted to NYSDEC Region III, Environmental Remediation Division for review and comment on February 19, 2020. The purpose of the RAWP was to detail procedures to excavate residual source materials identified during recent investigative activities and dewatering of the remedial area (as necessary) to execute the chosen method of Site remediation.

4.5 Remedial Action Summary Report/DT Consulting Services, Inc. September 11, 2020

After receipt of approval on the RAWP by the NYSDEC there was a pause in any remedial activities due to pandemic work restrictions. Ultimately, DTCS conducted remedial efforts (i.e., source removal) on the Subject Property between July 7 & 14, 2020. Soil excavation was performed with the use of heavy equipment to scoop overburden materials onto 6-mil polyethylene sheeting for temporary staging, which was covered with another layer of 6-mil sheeting at the conclusion of each work day. During the course of source removal, approximately 900 yards of petroleum impacted soils were staged on-Site for future disposal. DTCS documented more extensive soil and groundwater impacts

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during excavation procedures which appeared to warrant further excavation and/or remediation (see Figures 3-4 and Table 1 for a summary of detected VOCs and SVOCs reported during post excavation sampling procedures). As such, field work was temporarily postponed, pending the discussion and acceptance of the Subject Property into the NYSDEC BCP. LL Fuel Storage, LLC entered into a Brownfield Cleanup Agreement, dated March 21, 2022.

4.5.1 Findings

Elevated sample concentrations for VOCs and to a lesser extent SVOCs were reported in post excavation soil samples collected during the initial remedial action event in July 2020. Petroleum impacted soils were found in the unsaturated and smear zones with the soil profile along the south, southwestern quadrant of the facility. DTCS also documented remnants of historical tank cradles within the remedial area which were employed during a former PBS event (reportedly gasoline PBS and distribution was historically performed within this quadrant of the Site by Griff Petroleum).

Petroleum based hydrocarbons, within the south, southwestern quadrant of the Site, exceeding groundwater standards (typically 5 parts-per billion or ppb), with a maximum concentration of 10 ppb. The primary contaminants of concern are Benzene, Ethylbenzene, Naphthalene, Xylenes and n-Propylbenzene, which were reported within Site groundwater at concentrations of 510, 330, 270, 140 and 130ppb respectively.

4.6 PCS Disposal Work Plan by DT Consulting Services, Inc. Revised, May 16, 2022

The Petroleum Contaminated Soil (PCS) Disposal Work Plan was prepared at the request of the NYSDEC to properly load, transport and dispose of approximately 900 tons of petroleum contaminated soil generated, stockpiled on 6-mil polysheeting and covered during remedial processes conducted under a NYSDEC

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approved work plan on the Site in July 2020. Included in the work plan was a Site specific HASP and CAMP to ensure the proper protection of on-Site workers and the surrounding community.

4.7 PCS Disposal Report by DT Consulting Services, Inc. August 9, 2022

Between July 5 and 11, 2022, the petroleum contaminated source material staged on-Site was loaded with the use of heavy equipment into permitted NYSDEC Division of Materials Management Part 364 waste transport trailers and transported to the Broome County Landfill, Binghamton, New York. In total, 1,058.59 tons of PCS was accepted by the Broome County Landfill during disposal procedures performed on the Subject Property. Copies of the waste shipment records and scale tickets can be referenced in the PCS Disposal Report, DTCS, August 9, 2022.

As stated in the approved PCS Disposal Work Plan, air monitoring was performed during earth moving activities to ensure that there are no VOCs and/or fugitive dust generated during the loading of impacted soils which could potentially impact the air quality on and surrounding the Site. No exceedances were recorded during the execution of the CAMP on-Site.

4.8 Data Assessment And Needs

Based upon the results of previous investigations, subsurface impacts (attributed to the historic petroleum bulk storage) have been identified on the Subject Property. Although existing soil and groundwater data can be utilized to assist in defining the principal contaminant source areas, additional investigative activities will need to be performed to define the extent of subsurface contamination while further delineating the source area(s).

5.0 REMEDIAL INVESTIGATION APPROACH

As stated previously, historic uses of the Site have been centered on commercial, PBS enterprises dating back to the 1920s. Although the exact location of the historical former PBS tanks (the suspected source of Site contamination) is unknown, remnants of a tank cradle were unearthed within the southwestern quadrant of the Site during initial remedial action in July 2020. No other sources of contamination are known to exist on-Site. The scope of the investigation program is directed at providing sufficient information that will complete data gaps in historical site surveys. Ultimately, the goal of this RI is to verify current soil, soil gas and groundwater quality on the Site and evaluate the potential for migration of contaminants off-Site, if any, so that a remedial program, if any is needed, can be selected, and implemented. The RI objectives and methods have been developed in accordance with the NYSDEC Brownfield Program Cleanup Guidance (NYSDEC May 2004), and relevant provisions of Department of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation May 2010. A Site and contaminant specific HASP and CAMP has been prepared for the Site and has been placed in Attachment A.

Although the scope of work as described herein provides specific locations for soil boring and soil gas installations, additional testing locations may be added or otherwise adjusted during the course of work, as warranted to define the limits of impact. Figure 5 show the proposed soil, soil gas and groundwater sampling locations for this Site investigation work plan. All information collected during this monitoring event will be included in the Remedial Investigation Report (RIR) to follow at the completion of this investigation.

5.1 Soil Sampling and Analysis

A direct-push drilling rig (Geoprobe) will be used to advance seven soil borings surrounding historical location of the petroleum impacts and areas within the BCP Site boundary. Upon retrieval from the four-five foot sampler equipped with an

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acetate liner, the collected sample shall be placed in laboratory supplied glassware, labeled, and readied for transport to the laboratory for analysis. The sampling tubes and tools used to collect the soil samples will be decontaminated between each sampling location using a detergent wash and potable water rinse. Soil sampling will be conducted continuously from the surface to a maximum depth of approximately 14 feet below grade, or approximately four feet into the top of observed ground water table.

The reported depth to groundwater is approximately 10 feet below grade, as is assumed to flow in an easterly direction across the Site. The borings may be advanced deeper to determine the vertical extent of subsurface contamination, if encountered. An on-site Geologist will prepare geologic logs that will include the boring identification, depth interval, soil descriptions, moisture, and other notable features. Soil samples retrieved from each boring will be screened in approximate two-foot intervals for organic vapors using a field calibrated PID equipped with a 10.2 electron volt lamp. The PID probe will be inserted into the headspace of each sample bag and the maximum reading will be recorded. To assure successful delineation of soil contamination (if encountered), soil samples will be collected from the upper and lower soil horizon in each core. Upper soil horizon sampling zone would consist of soils gathered between depths of two – four feet bgs, while the lower horizon soil sampling would be conducted from samples corresponding to the water table or capillary zone above the water table if there is no indication of the presence of subsurface contamination based on visual and and/or PID measurements. Additional soil sampling within a contaminated zone (as identified by visual or PID field observations), would also be conducted if encountered.

Selected samples will be submitted to a New York State Department of Health (NYSDOH)-approved laboratory for analysis of VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), Target analyte list (TAL) metals (USEPA Various Methods), pesticides (USEPA Method 8081), polychlorinated biphenyl's

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or PCBs (USEPA Method 8082), and Per- And Polyfluoroalkyl Substances or PFAs (USEPA Method 537.1), cyanide and 1, 4-dioxane. All analyses will be performed by NYSDEC Analytical Services Protocol (ASP) with Category B deliverables. Sample collection and analysis will be in accordance with the methods described in the Quality Assurance/Quality Control (QA/QC) Plan as described in Section 6 of this report. Field quality control measures including trip and field blanks will be collected and submitted to the chemical laboratory for analysis. These control measures are described in Section 6 of this report.

All boring sample locations will be measured and plotted on a scaled base map.

5.2 Soil Vapor

There are no sub-slab soil vapor sampling points proposed for the Site, as the facility is not improved with any structures with the exception of an unmanned booth. However, a total of six soil gas sampling locations are proposed along the periphery of the Site property boundaries. The locations of the soil gas sampling points were chosen to assess soil gas along the periphery of the Site to help evaluate the potential for off-Site migration. All proposed sampling locations are identified on Figure 5, attached herein.

The proposed soil gas samples to be collected along the Site boundary will be collected by installing a soil boring to at least six feet below grade. For all sampling locations, sample tubing (0.188-inch inner diameter Teflon) will be inserted into the boring, which will be partially filled with clean well sand. The remaining aperture will be sealed off with a non-VOC containing material to prevent surface air from entering the system. Air in the Teflon tubing will be screened for VOCs prior to purging. The exact purge volume will be dependent on the boring depth and subsequent length of tubing. Three borehole and tubing volumes will be purged prior to sample collection. The purge rate will not exceed 0.2 liters per minute. If warranted, purge gas will be discharged outside of the

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building, via plastic tubing. Following purging of ambient air from the collection device, soil gas samples will be collected over a two-hour period (at a rate not exceeding 0.2 liters per minute) into individual laboratory-certified clean Summa canisters equipped with two-hour flow regulators.

The soil vapor samples will be submitted to a NYSDOH-approved laboratory for analysis of VOCs by EPA Method TO-15 with reporting to be submitted in an EQUIS-ready format. Sample collection and analysis will be in accordance with the methods described in the Quality Assurance/Quality Control (QA/QC) Plan as described in Section 6 of this report.

All boring soil vapor sampling locations will be measured and plotted on a scaled base map.

5.3 Outdoor Ambient Air Sampling and Analysis

A total of one outdoor ambient air sample will be collected concurrently during the RI. The outdoor ambient air sample will be collected from an upwind location on the property. The proposed sampling rationale is provided in the Analytical Methods/Quality Assurance Summary Table below, while Figure 5 displays proposed sampling locations. Parameters including outdoor air temperature, wind direction and relative humidity will be noted during the sampling event. The air sample will be collected for analysis in a batch clean SUMMA canister equipped with a laboratory calibrated flow control device to facilitate the collection of the samples for a two-hour sample duration time. Following sampling, the pressure of the SUMMA canister will be recorded. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, vacuum of canisters before and after the samples are collected, and chain of custody protocols.

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The ambient air sample will be submitted to a NYSDOH-approved laboratory for analysis of VOCs by EPA Method TO-15 with reporting to be submitted in an EQUIS-ready format. Sample collection and analysis will be in accordance with the methods described in the Quality Assurance/Quality Control (QA/QC) Plan as described in Section 6 of this report.

All ambient air sampling locations will be measured and plotted on a scaled base map.

5.4 Ground Water Well Installation, Sampling and Analysis

To further assess hydro-geologic conditions, seven groundwater monitoring wells (denoted as MW-1 & MW-7 in Figure 5) will be installed into each of the proposed boring locations (SB-1 & SB-7) on Site. Each well will be constructed of one inch inside diameter (ID), schedule 40 PVC casing and 0.01 inch slotted PVC screen. The screened section of the well will extend a minimum of five feet above and five feet below the groundwater table, for a total of ten feet. To complete the groundwater well, a locking cap and a flush mounted four-inch manhole clearly marked “monitoring well” will be installed within a framed concrete pad. Monitoring wells will be developed following installation to remove fine material that may have settled in the well, remove any drilling fluids that were used during well installation, and to enhance the hydraulic communication with the surrounding formation. Monitoring wells will be allowed to set for at least two days following installation to allow the grout to cure before developing the well. Wells will be developed by surging and purging the entire screened interval at each location. The monitoring wells will be considered properly developed when a minimum of five well volumes of water have been removed or until a monitoring well has been pumped dry after surging.

All Site groundwater wells will be sampled using the USEPA Low Flow method. Sampling will be conducted using the following protocol:

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- Basic climatological data (e.g., temperature, precipitation, etc.) and all field observations will be recorded in the field logbook. Groundwater sampling will begin at the potentially least contaminated well (as determined from well location and/or previous data) and proceed to the potentially most contaminated well. New nitrile gloves will be worn by the sampler at each well location.
- The protective casing on the well will be unlocked, the air in the well head will be screened with the PID, and the static water level (relative to the top of the casing) will be measured with a decontaminated water-level meter. Polyethylene tubing will be slowly lowered until reaching two to three feet off the bottom to prevent disturbance and re-suspension of any sediment present in the bottom of the well.
- Water level measurements will be recorded to the nearest 0.01 foot prior to ground water sampling. The well would then be pumped at a rate of 200 to 500 milliliters per minute, and the water level will be measured approximately every three to five minutes to ensure that stabilization (drawdown of 0.3' or less) is achieved.
- All groundwater samples will be collected in a manner consistent with NYSDEC sample collection protocols. Each groundwater sample will be placed into, appropriately labeled, containers provided by the laboratory. All samples will be maintained at appropriate cold temperatures.
- The protective cap on the well will be replaced and locked following sampling, and the field sampling crew will move to the next most contaminated well and the process will be repeated.

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One round of groundwater samples will be collected from the existing monitoring wells and will be analyzed for VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), Target analyte list (TAL) metals (USEPA Various Methods), pesticides (USEPA Method 8081), polychlorinated biphenyl's or PCBs (USEPA Method 8082), Per- And Polyfluoroalkyl Substances or PFAs (USEPA Method 537.1), cyanide, and 1, 4-dioxane. All analyses will be performed by NYSDEC Analytical Services Protocol (ASP) with Category B deliverables. Field quality control measures including trip and field blanks will be collected and submitted to the chemical laboratory for analysis. These control measures are described in Section 6 of this report.

The locations of each soil boring/monitoring well point will be determined and included in a site plan. The boreholes will be located horizontally by measuring the distance to the nearest 0.10-foot, to at least two permanent structures. Locations of all sampling locations and other significant features will be shown on a scaled site plan preceding the investigation. While conducting surveying procedures, appropriate elevation measurements will also be obtained from each well so as to generate a groundwater contour map for the Subject Property.

5.5 Waste Handling

All investigation-derived waste (IDW) will be contained on-Site in a secure area for appropriate characterization and disposal by DTCS. Soil cuttings, personal protective equipment, and spent disposable sampling materials will be segregated by waste type and placed in DOT-approved 55-gallon steel drums. All decontamination water, purged groundwater, and drilling water will be stored in 55-gallon drums as necessary. Field staff will maintain an inventory of all waste storage vessels. All storage vessels will be appropriately labeled with the contents, generator, location, and date.

6.0 QUALITY ASSURANCE PROJECT PLAN

As stated previously, the goals of this RI Work Plan are to verify subsurface soil, soil gas and groundwater impacts from the identified source area. Therefore, this Quality Assurance Project Plan (QAPP) has been developed to establish the procedures and protocols for collection and laboratory analysis of samples associated with the completion of the BCP RI element on-site. Project management/organizational responsibilities will be performed under the direction of Deborah J. Thompson.

6.1 Quality Assurance/Quality Control (QA/QC) Objectives

The NYSDEC Analytical Services Protocol (ASP) provides levels of quality for laboratory testing as they apply to remedial investigation and construction activities. As such, the NYSDEC ASP will be followed during site investigation/remediation on the Subject Property. The overall data quality objectives of the project are:

- To ensure that samples collected are representative.
- To provide detection limits for the selected analytical methods, which are below the established cleanup objective or regulatory standards.
- To measure and document precision and accuracy using procedures established by the laboratories, the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) and U.S. Environmental Protection Agency (EPA) approved analytical methods.
- To ensure that a NYSDOH ELAP and NYSDOH ELAP CLP certified laboratory will conduct all analyses.

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- To ensure that all final site verification samples (Confirmatory samples) are reported with ASP Category B deliverables.

6.2 Analytical Methods/Quality Assurance Summary

- ✓ *Matrix type:*
Soil, Soil Gas and Groundwater
- ✓ *Number or frequency of samples to be collected per matrix:*
Variable, pending field conditions
- ✓ *Number of field and trip blanks per matrix:*
Soil – 1, Groundwater – 1
- ✓ *Analytical parameters to be measured per matrix:*
Soil/Groundwater - VOCs, SVOCs, TAL Metals, Pesticides, PCBs, PFAs
Soil Gas – VOCs
- ✓ *Analytical methods to be used per matrix:*
EPA Test Methods 8260, 8270, 6010/7470/7471, 8080, 8082 & 537.1
- ✓ *The number/type of matrix spiked, duplicate and blank samples to be collected:*

Dependent upon the total number of samples of each matrix to be analyzed but, there will be at least one split per soil and groundwater matrix.

Analytical Methods/Quality Assurance Summary

| Matrix Type | No. of Samples | No of FBs / TBs | Analytical Parameters | Analytical Method | Duplicate Frequency | Sample Container & Preservation (Per Sample) | Hold Time |
|-------------|----------------|-----------------|--|---|---------------------|---|-------------------------------------|
| Soil | 7 | 1 | VOCs, SVOCs, TAL Metals, pesticides, PCBs, PFAs, cyanide and 1, 4-dioxane. | 8260, 8270 6010/7471, 8080, 8082, 537.1, 9014/9010C and 8270 SIM. | 1 | 4 x 40ml/ DI, MeOH 4 x 4oz | 7 days – 6 months. See chart below. |
| Soil Vapor | 6 | N/A | VOCs | TO-15 | 1 | 1 x Summa | 7 days – 6 months. See chart below. |
| Groundwater | 7 | 1 | VOCs, SVOCs, TAL Metals, pesticides, PCBs, PFAs, cyanide and 1, 4-dioxane | 8260, 8270 6010/7471, 8080, 8082, 537.1, SM 4500 CN C/E and 8270 SIM. | 1 | 3 x 40ml/Hcl 4 x 1L/None 1 x 250ml/HNO3 | 7 days – 6 months. See chart below. |

6.3 Field Quality Control Samples

Field quality controls for laboratory confirmation samples include the collection and analysis of field duplicate and equipment rinsate samples. The frequency of collection for the specified QC field samples is as follows:

- ✓ A trip blank will be prepared before the sample bottles are sent by the laboratory. A trip blank will be included with each shipment of samples where sampling and analysis for VOC is planned (water matrix only).
- ✓ One field blank per day for PFA sampling.

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- ✓ One field duplicate sample per 20 field samples. Duplicate samples will be collected by initially collecting twice as much material as is normally collected for a sample. After mixing, the material will be apportioned into two sets of containers.

- ✓ One equipment blank (rinsate) sample per 40 samples.

6.4 Field Sampling Procedures

Sampling/Analytical procedures are described in detail in the RI Work Plan as outlined above and will not be reiterated in this QAPP. The Work Plan also includes Site maps and sampling diagrams as well as details for sampling implementation, decontamination, and waste management.

Sample Containerization

| Analysis | Bottle Type | Preservative | Holding Time |
|---------------------|-----------------------|---------------------|--|
| <i>Soil</i> | | | |
| VOCs | 40ml glass | DI MeOH | 7 days (until extraction, 40 days extracted) |
| SVOCs | Wide mouth glass | None | 7 days (until extraction, 40 days extracted) |
| Metals ¹ | Wide mouth glass | None | 6 months Cyanide: 12 days Mercury: 28 days |
| Pesticides | Wide mouth glass | None | 7 days (until extraction, 40 days extracted) |
| PCBs | Wide mouth glass | None | 7 days (until extraction, 40 days extracted) |
| PFAs | 250ml PP ² | None | 14 days |

Sample Containerization (continued)

| | | | |
|----------------------------|-----------------------|----------------------|--|
| <i>Soil Gas</i> | | | |
| VOCs GC/MS (TO-15) | 1L Summa Canister | None | 7 days (until extraction, 40 days extracted) |
| <i>Groundwater Samples</i> | | | |
| VOCs | 40 ml with septum cap | HCl | 14 days |
| SVOCs | 1 L glass | None | 7 days (until extraction, 40 days extracted) |
| Metals ¹ | 1 L plastic | Nitric acid to pH <2 | 6 months Mercury, 26 days |
| Pesticides | Wide mouth glass | None | 7 days (until extraction, 40 days extracted) |
| PCBs | Wide mouth glass | None | 7 days (until extraction, 40 days extracted) |
| PFAs | 125ml PP | None | 14 days |

As all bottles will contain the necessary preservatives as shown above, they need only be filled. Each VOC 40ml vial must be filled to the brim with no air bubbles. The other sample jars should be filled to within an inch from the top for liquids, and to the brim for soils and sediment. All samples will be preserved with ice during collection and shipment.

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- (1) Metals referred to the 24 metals and cyanide in the Target Analyte List, Methods 6010/7470/7471
- (2) PP is Polypropylene

Sample Preservation

The samples collected for analysis will require preservation prior to shipment (as described above). Preservation of the sample ensures sample integrity and prevents or minimizes degradation or transformation of the constituents to be analyzed. Specific preservation requirements include proper handling, packaging in laboratory-supplied sample containers, and chilled to 4° Celsius (°C) for shipping to the contract analytical laboratory.

Documenting Field Samples

The DTCS Field Team will use field logbooks or specific field forms to record pertinent information regarding subsurface characteristics, field screening results, and confirmatory sampling activities. Field staff will record the project name and number, date, sampling personnel on site, other personnel present, weather conditions, and other relevant events to sampling activity in a chronological order. The field logbook and/or analysis forms will be maintained in the project file.

6.5 Sample Custody

Chain-of-Custody Forms

Each sample will be recorded onto a chain-of-custody (COC) form. The form will include the project name and number, names of the field sampling personnel, the sample number, date and time the sample was collected, whether the sample is a composite or grab sample, sample location, number of containers per sample number, constituents to be analyzed, and pertinent comments. The form will

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document the date, time, and signature of person(s) relinquishing and receiving custody of the samples.

Sample Transportation to the Laboratory

Samples will be shipped for analysis to the laboratory either the day the samples are collected or within 24 hours following collection, except in the case of samples that are collected on Saturday. Samples will be transported by a laboratory supplied carrier service. If samples are collected on a Saturday, they will be stored by field personnel during the weekend and then readied for transport on Monday. The contract analytical laboratory will be required to perform the analyses on the samples within the allowable holding time proscribed for the analyses.

Laboratory Sample Custody

Upon arrival at the analytical laboratory, samples will be checked in by the sample custodian. The sample custodian will:

- Sign the COC form documenting receipt of the samples from the carrier;
- Verify that the number of samples received in the shipment agrees with the number listed on the COC form;
- Verify that the information on each bottle agrees with the information documented on the COC form; and
- Document on the COC form the integrity/condition (bottle intact, temperature, etc.) of all received samples.

In the event of any discrepancy or problems associated with the shipment of samples for chemical analysis, the analytical laboratory project manager will

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immediately notify the field personnel. A unique laboratory sample number will be assigned to each sample. Pertinent information from the COC form and/or sample label (e.g., sample identification, sampling location, sampling date and time, sample description, and requested analyses) together with the date of sample receipt will be entered into the analytical laboratory's data management system which will be used to record the status of samples, their storage locations, and the analytical results. The analytical laboratory will have in-house COC procedures to ensure proper security of all samples.

Laboratory Selection

The laboratory chosen for the project must be certified, and maintain certification, under the NYSDOH ELAP and NYSDOH ELAP CLP for analyses of solid and hazardous waste. DTCS has contracted with York Analytical Laboratories, Inc. located in Stratford, CT to perform laboratory services for this Work Plan.

6.6 Data Reduction, Verification and Reporting

Verification of data obtained from sampling will be performed by the Project Manager who will determine the validity of the data by comparing the actual procedures used for field measurements, sampling, and custody, as documented on forms and in the field log book, with those prescribed in the work plan and/or approved by the Project Manager.

All analytical results will be submitted to the NYSDEC in the most recent version of the EQUIS electronic data deliverable (EDD) format. Raw analytical data will also be provided to the NYSDEC in electronic format.

6.7 Data Usability Summary Report

As part of this Remedial Investigation Work Plan, a Data Usability Summary Report or DUSR will be prepared to summarize the soil and groundwater sampling and analytical results for the LL Fuels, LLC Site. The primary objective

of the DUSR is to determine whether the analytical data meets site specific objectives for data quality and data use.

The DUSR will be prepared following the guidelines provided in DER-10 *Technical Guidance for Site Investigation and Remediation*, May 2010, Guidance for the Development of Data Usability Summary Reports. The complete validated analytical results and Form 1s will be provided in the DUSR during reporting of the remedial investigation.

7.0 HUMAN HEALTH EXPOSURE ASSESSMENT

Site data will be evaluated to determine whether human receptors, both on and off site are potentially exposed. The purpose of the exposure assessment will be to qualitatively determine the route, intensity, frequency, and duration of actual or potential exposures of human to site-related chemicals. The assessment will also describe the nature and size of the population potentially exposed to the contaminants.

Laboratory analytical reporting on soil and groundwater will be compared to applicable health-based screening criteria:

- **Soil/Sediment**

Soil analytical results will be compared to NYSDEC's Subpart 375-6: Remedial Program Unrestricted Soil Cleanup Objectives.

- **Soil Gas**

Soil gas analytical results will be compared to NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

- **Groundwater**

Groundwater analytical results will be compared to NYSDEC Guidance Values as referenced in Technical Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998 for class GA groundwater.

The comparison of analytical result to the applicable screening values will be utilized to tentatively identify contaminants of potential concern.

8.0 FISH AND WILDLIFE EXPOSURE ASSESSMENT

A Fish and Wildlife Resource Evaluation (FWRIA) will be completed to provide an initial screening of potentially affected fish and wildlife resources in connection with the site. The first step of the FWRIA process, resource characterization, will be completed as part of the site investigation scope.

Resource characterization includes the following basic steps:

- Identify fish and wildlife resources for the area within a one-half mile radius of the site, based on NYSDEC records and knowledge of the site area.
- Identify contaminant migration patterns that may potentially expose fish and wildlife resource to site-related contaminants.
- Identify specific contaminants of ecological concern.
- Draw conclusions regarding potential adverse effects.

The findings of the initial FWRIA phase will be employed to determine whether it is likely that the commercial site has a negative effect on local wildlife and related habitats.

9.0 REMEDIAL INVESTIGATION REPORT

Following the completion of the proposed sampling, analysis and data evaluation, a Remedial Investigation Report will be prepared and will present the findings of the investigation. The following information will be included in the RI Report.

1. A narrative discussion of methods and results. Work completed under the approved RI Work Plan will be described, including the methods employed for sample collection and laboratory analysis.
2. Sources of contamination. Specific contaminant source areas will be identified based upon the delineation of identified source areas by additional assessment of site soils and groundwater. Analytical results from soil and groundwater sampling locations will further define the migrations pathways for petroleum and chlorinated compounds previously detected. Maps displaying soil, sediment, soil gas, air and groundwater analytical results, with text boxes depicting contaminant concentrations at each monitoring point will be produced as part of this report.
3. Hydrogeologic Data. Hydrogeologic factors and their influence on the migration and distribution of contaminants will be discussed. Supporting data including soil boring logs with stratigraphic descriptions of the soil column at each boring location from the RI and prior investigations, groundwater monitoring well installation logs and contour maps will be prepared for the inclusion in the final RI Report.
4. Standards and guidance that pertain to the sampled site media will be identified and listed in summary tables along with the analytical results for each medium. Any exceedances encountered above regulatory standards will be indicated on the tables and discussed in the technical overview.

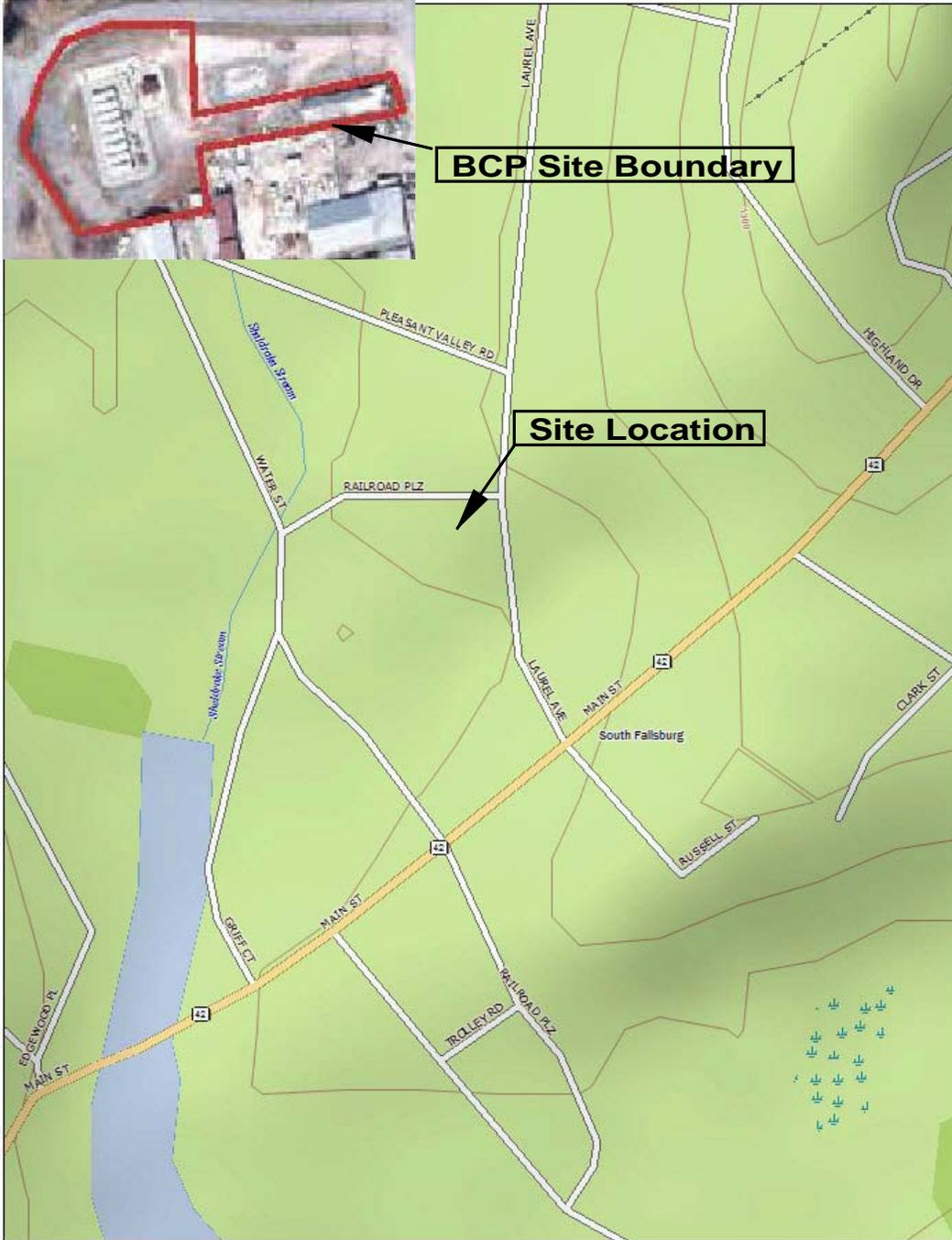
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5. Human Health Exposure Assessment. An assessment of potential exposure scenarios will be presented in the context of the site's existing and future contemplated use. Exposure scenarios will be addressed both on and off-site in the assessment.
6. Fish and Wildlife Resources. Area fish and wildlife resources will be identified and the overall habitat value for the site will be discussed. The site's effect on the overall habitat value for the area based on current conditions and the future anticipated use will be included the resource assessment.
7. Conclusions/Recommendations. The results of the RI will be summarized and will identify source areas and potential exposure pathways in relation to human and environmental receptors and an evaluation of the potential for off-Site migration of contaminants, if any. A Remedial Alternative Analysis Report will be submitted along with the RI Report which will evaluate appropriate remedial options, if any are necessary, based upon the RI results.
8. Supporting Information. To support the site data collected during the implementation of the RI Work Plan, the following items will be appended to the RI Report:
 - Site photographs
 - Soil boring logs
 - Site maps, including groundwater contour map and text box figures depicting analytical results
 - Laboratory analysis

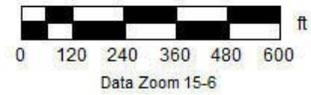
10.0 PROJECT SCHEDULE

The RI sampling and analysis program proposed herein will be implemented following NYSDEC and NYSDOH approval. RI field sampling work will be scheduled to begin within forty-five days of approval. Specific public participation milestones are denoted in a separate Citizens Participation Plan. DTCS estimates that the field work will require three days to complete, and laboratory analysis within two weeks of the conclusion of field work on-Site. The RI Report and Remedial Action Work Plan will be submitted for NYSDEC and NYSDOH review and approval within ninety days of work plan approval.

FIGURES



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DT Consulting Services, Inc.
 1291 Old Post Road
 Ulster Park, New York 12487
 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: Laurel Avenue & Griff Court (Tax ID 51.-1-8.2), South Fallsburg, New York

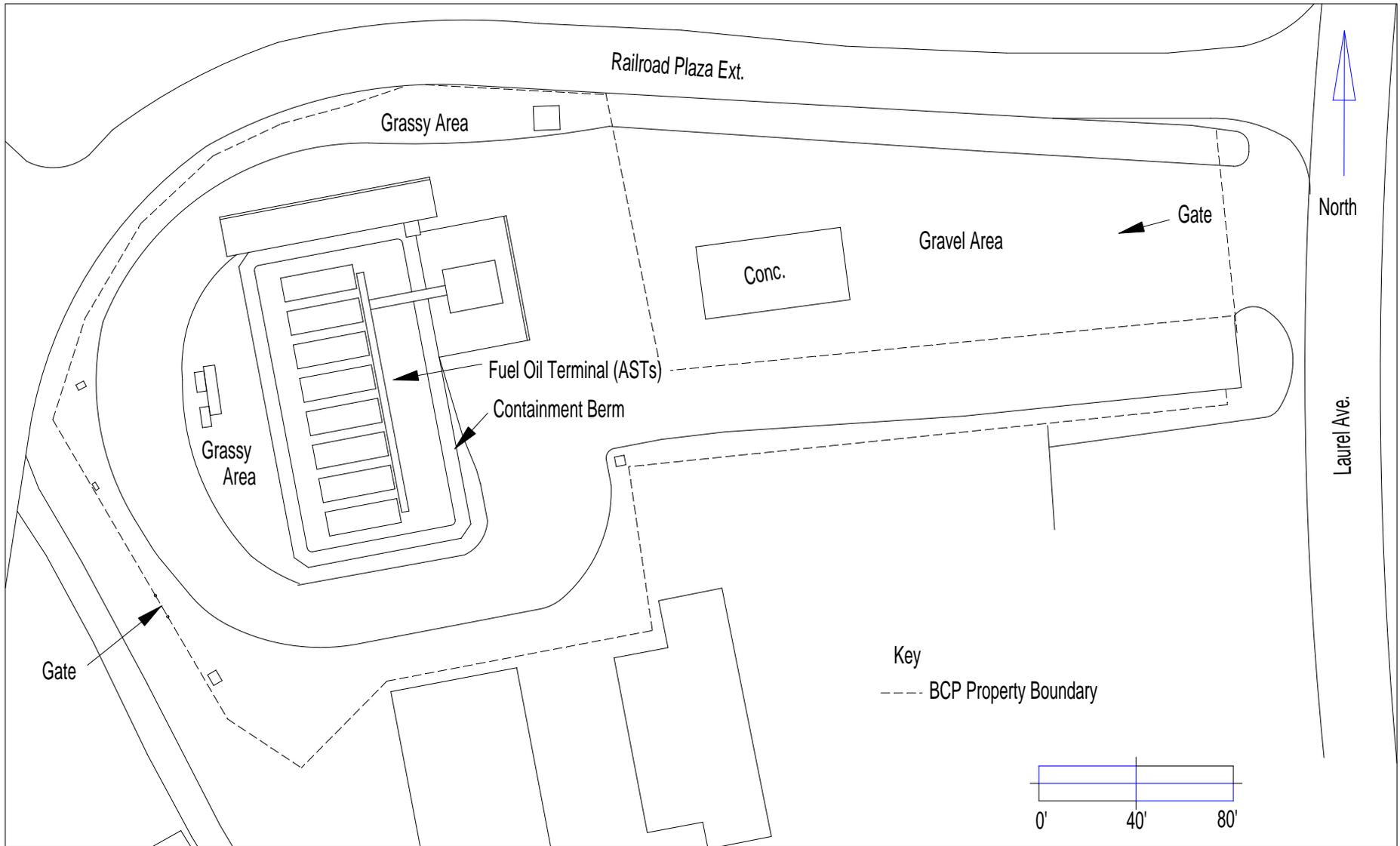
Title: Site Location Map

BCP Site No: C353017

Scale: Graphic

Drawn By: D.T.

Figure No.: 1



DT Consulting Services, Inc.
 1291 Old Post Road
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 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: Laurel Avenue & Griff Court, South Fallsburg, Sullivan County, New York

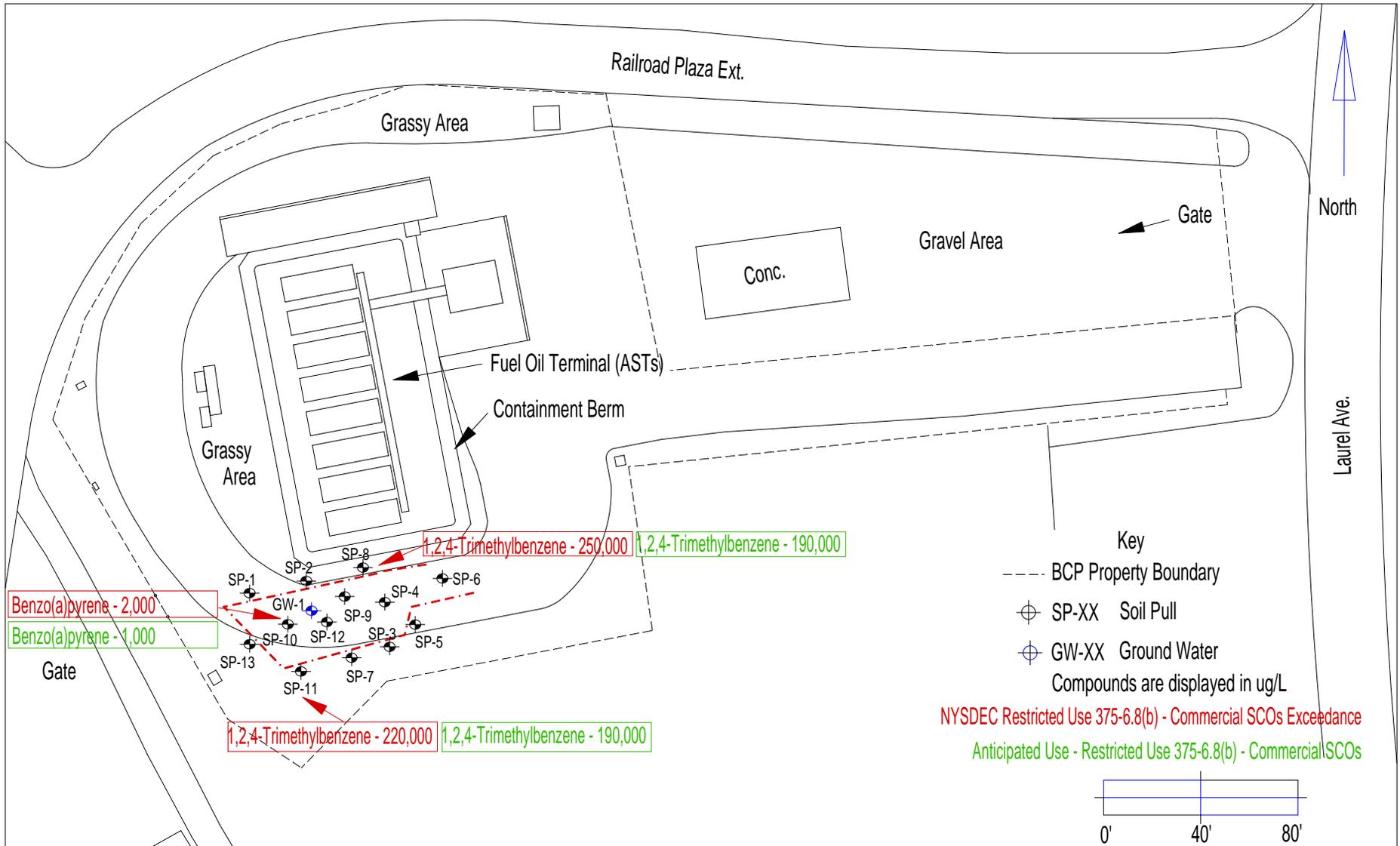
Title: Site (base) Map

Scale: Graphic

Drawn By: O.T.

BCP Site No.: C353017

Figure No.: 2



DT Consulting Services, Inc.
 1291 Old Post Road
 Ulster Park, New York 12487
 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: Laurel Avenue & Griff Court, South Fallsburg, Sullivan County, New York

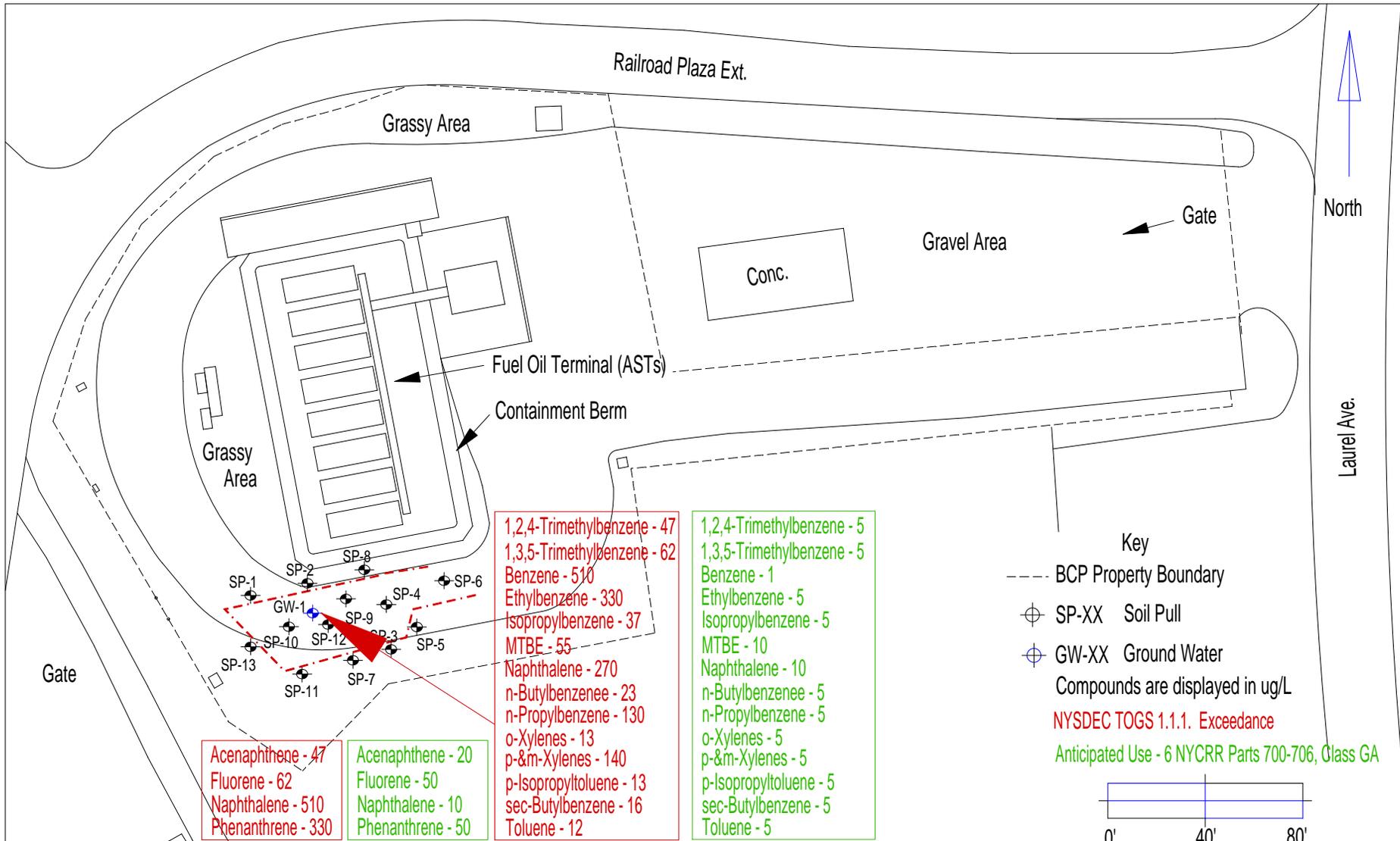
Title: Volatile/Semi-Volatile Organic Compounds Contaminant Exceedances/Standards for Anticipated Use - Soil July 10, 2020

Scale: Graphic

Drawn By: O.T.

BCP Site No.: C353017

Figure No.: 3



1,2,4-Trimethylbenzene - 47
 1,3,5-Trimethylbenzene - 62
 Benzene - 510
 Ethylbenzene - 330
 Isopropylbenzene - 37
 MTBE - 55
 Naphthalene - 270
 n-Butylbenzene - 23
 n-Propylbenzene - 130
 o-Xylenes - 13
 p-&m-Xylenes - 140
 p-Isopropyltoluene - 13
 sec-Butylbenzene - 16
 Toluene - 12

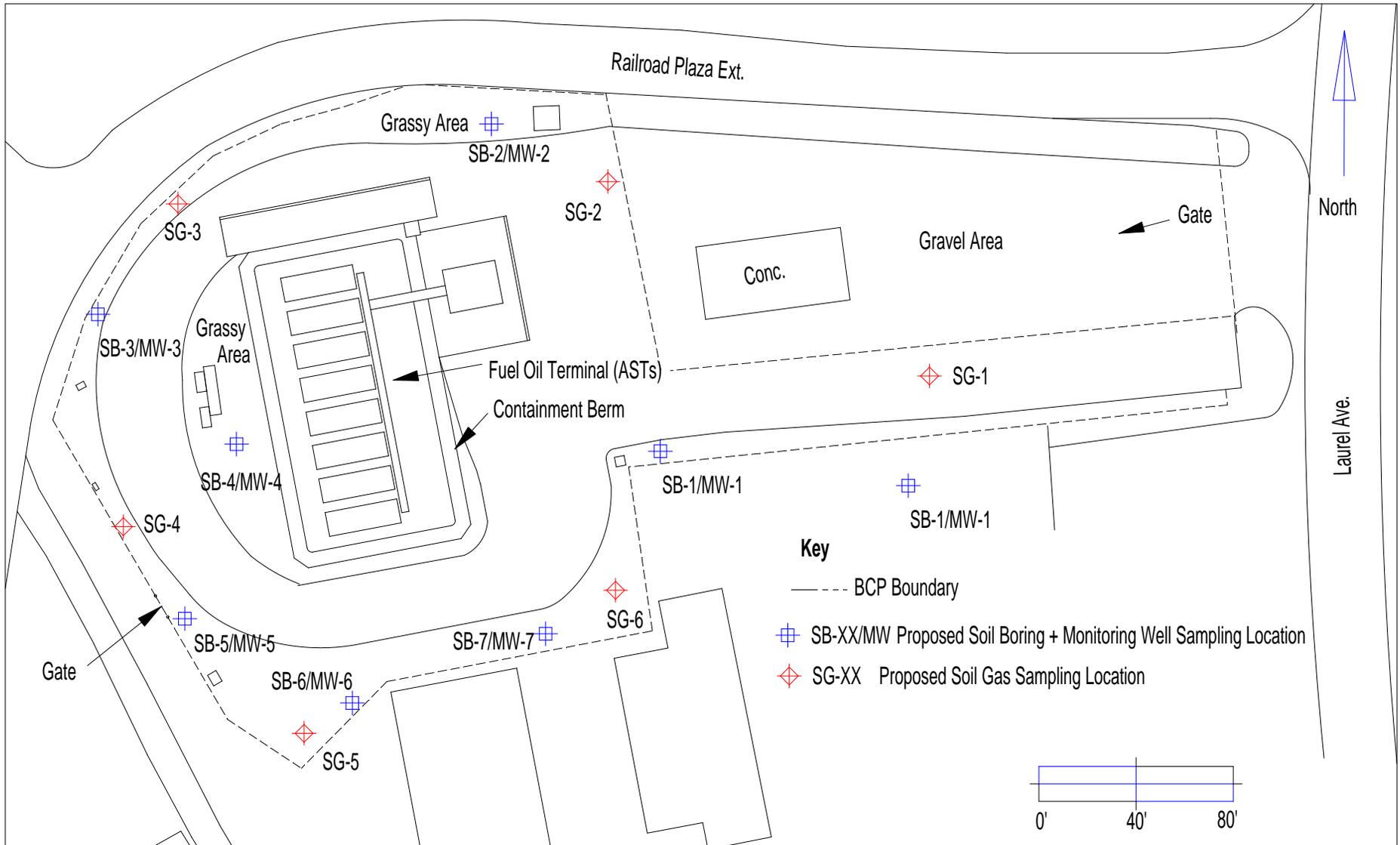
1,2,4-Trimethylbenzene - 5
 1,3,5-Trimethylbenzene - 5
 Benzene - 1
 Ethylbenzene - 5
 Isopropylbenzene - 5
 MTBE - 10
 Naphthalene - 10
 n-Butylbenzene - 5
 n-Propylbenzene - 5
 o-Xylenes - 5
 p-&m-Xylenes - 5
 p-Isopropyltoluene - 5
 sec-Butylbenzene - 5
 Toluene - 5

Acenaphthene - 47
 Fluorene - 62
 Naphthalene - 510
 Phenanthrene - 330

Acenaphthene - 20
 Fluorene - 50
 Naphthalene - 10
 Phenanthrene - 50

DT Consulting Services, Inc.
 1291 Old Post Road
 Ulster Park, New York 12487
 (845) 658-3484

| | |
|---|----------------|
| Client: LL Fuel Storage, LLC | |
| Location: Laurel Avenue & Griff Court, South Fallsburg, Sullivan County, New York | |
| Title: Volatile and Semi-Volatile Organic Compounds Contaminant Exceedances/Standards for Anticipated Use - Groundwater July 10, 2020 | |
| Scale: Graphic | Drawn By: O.T. |
| BCP Site No: C353017 | Figure No: 4 |



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 1291 Old Post Road
 Ulster Park, New York 12487
 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: Laurel Avenue & Griff Court, South Fallsburg, Sullivan County, New York

Title: Proposed Soil, Soil Gas & Groundwater Sampling Locations

Scale: Graphic

Drawn By: O.T.

BCP Site No.: C353017

Figure No.: 5

TABLES

Summary of Soil Laboratory Analysis for Volatile Organic Compounds (VOCs) - Concentrations/Standards

Remedial Action - Performed July 2020

Site: LL Fuel Storage, LLC – South Fallsburg Terminal
 Laurel Avenue & Griff Court (Tax ID 51.-1-8.2)
 South Fallsburg, Sullivan County, New York

Client Name: LL Fuel Storage, LLC
Address: Post Office Box 454
 Hurley, New York 12443
Contact Name: Kenneth Davenport

NYSDEC PBS NO. 3-123226/BCP# C353017

| Sample Location | | | SP-1 | SP-2 | SP-3 | SP-4 | SP-5 | SP-6 | SP-7 | SP-8 | SP-9 | Groundwater Excavation | | |
|------------------------|----------|-----------------|----------------------|----------------------|---------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|-------------------|
| Sample Number | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Date Collected | | | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | | |
| Matrix | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Groundwater | | |
| Analytical Method | | | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | | |
| Compound | Soils | Projected Soils | | | | | | | | | | Groundwater | Projected Groundwater | Sample Con |
| | Guidance | Guidance | Sample Con | Sample Con | Sample Con | Sample Con | Sample Con | Sample Con | Sample Con | Sample Con | Sample Con | Guidance | Guidance | |
| 1,2,4-Trimethylbenzene | 3,600 | 190,000 | <u>61,000</u> | <u>36,000</u> | 40 | <u>22,000</u> | <u>36,000</u> | <u>150,000</u> | <u>140,000</u> | <u>250,000</u> | <u>160,000</u> | 5 | 5 | <u>47</u> |
| 1,3,5-Trimethylbenzene | 8,400 | 190,000 | <u>9,700</u> | 5,000 | 790 | 1,300 | <u>9,800</u> | <u>44,000</u> | 6,900 | <u>14,000</u> | ND | 5 | 5 | <u>62</u> |
| Benzene | 60 | 89,000 | ND | ND | ND | <u>1,200</u> | <u>3,600</u> | <u>4,200</u> | ND | <u>2,700</u> | ND | 0.7 | 1 | <u>510</u> |
| Ethylbenzene | 1,000 | 390,000 | <u>41,000</u> | <u>13,000</u> | 4 | <u>5,900</u> | <u>17,000</u> | <u>48,000</u> | <u>34,000</u> | <u>68,000</u> | <u>41,000</u> | 5 | 5 | <u>330</u> |
| Isopropylbenzene | 2,300 | NS | <u>7,300</u> | <u>3,600</u> | ND | 820 | 2,300 | <u>6,100</u> | <u>4,900</u> | <u>8,400</u> | ND | 5 | 5 | <u>37</u> |
| MTBE | 930 | 500,000 | ND | ND | 3.4 | ND | ND | ND | ND | ND | ND | 10 | 10 | <u>55</u> |
| Naphthalene | 12,000 | 500,000 | <u>31,000</u> | <u>20,000</u> | 32 | 5,100 | <u>15,000</u> | <u>29,000</u> | <u>28,000</u> | <u>36,000</u> | <u>28,000</u> | 10 | 10 | <u>270</u> |
| n-Butylbenzene | 12,000 | 500,000 | 11,000 | 6,000 | ND | 1,600 | 4,200 | 11,000 | 9,200 | <u>15,000</u> | ND | 5 | 5 | <u>23</u> |
| n-Propylbenzene | 3,900 | 500,000 | <u>24,000</u> | <u>13,000</u> | ND | 3,100 | <u>7,400</u> | <u>20,000</u> | <u>18,000</u> | <u>30,000</u> | <u>22,000</u> | 5 | 5 | <u>130</u> |
| o-Xylene | 260 | 500,000 | ND | ND | 4.4 | 540 | <u>1,200</u> | <u>47,000</u> | ND | <u>1,900</u> | ND | 5 | 5 | <u>13</u> |
| p-&m-Xylenes | 260 | 500,000 | <u>3,500</u> | <u>7800</u> | 17 | <u>5,900</u> | <u>7,800</u> | <u>160,000</u> | <u>15,000</u> | <u>46,000</u> | ND | 5 | 5 | <u>140</u> |
| p-Isopropyltoluene | 10,000 | NS | 3,900 | 2,300 | ND | 520 | 1,600 | ND | 2,900 | 4,200 | ND | 5 | 5 | <u>13</u> |
| sec-Butylbenzene | 11,000 | 500,000 | 5,500 | 3,200 | ND | 710 | 1,800 | 3,100 | 4,100 | 6,200 | ND | 5 | 5 | <u>16</u> |
| tert-Butylbenzene | 5,900 | 500,000 | <u>7,700</u> | ND | ND | ND | ND | ND | ND | ND | ND | 5 | 5 | ND |
| Toluene | 700 | 500,000 | ND | ND | ND | ND | ND | <u>4,700</u> | ND | ND | ND | 5 | 5 | <u>12</u> |

Notes:

1. Soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb. Groundwater results are recorded in micrograms-per-liter (µg/L) or ppb.
2. ND = Undetected. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
3. The presented soil quality guidance values were adopted from the NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010 .
 Projected soil standard for anticipated use adopted from NYSDEC 6 NYCRR Part 375, Table 375-6.8(b): Commercial Use Soil Cleanup Objectives, December 2006
4. The presented groundwater guidance values were adopted by the NYSDEC Groundwater Quality Standards, Division of Water Technical & Operational Guidance Series (TOGS 1.1.1).
 Projected groundwater standard for anticipated use adopted from 6 NYCRR Parts 700-706, Class GA.
5. Analytical measurements exceeding CP-51/TOGS 1.1.1 guidance values are in bold type and underlined as such **100**.

Summary of Soil Laboratory Analysis for Volatile Organic Compounds (VOCs) - Concentrations/Standards

Remedial Action - Performed July 2020

Page 2 of 4

Site: LL Fuel Storage, LLC – South Fallsburg Terminal
 Laurel Avenue & Griff Court (Tax ID 51.-1-8.2)
 South Fallsburg, Sullivan County, New York

Client Name: LL Fuel Storage, LLC
 Address: Post Office Box 454
 Hurley, New York 12443
 Contact Name: Kenneth Davenport

NYSDEC PBS NO. 3-123226/BCP# C353017

| Sample Location | | | SP-10 | SP-11 | SP-12 | SP-13 |
|------------------------|----------|-----------------|---------------|-----------------------|---------------------|----------------------|
| Sample Number | | | 1 | 2 | 3 | 4 |
| Date Collected | | | 7/13/2020 | 7/13/2020 | 7/13/2020 | 7/13/2020 |
| Matrix | | | Soil | Soil | Soil | Soil |
| Analytical Method | | | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 | 8260C - CP-51 |
| Compound | Soils | Projected Soils | Sample Con | Sample Con | Sample Con | Sample Con |
| | Guidance | Guidance | | | | |
| 1,2,4-Trimethylbenzene | 3,600 | 190,000 | 130 | <u>220,000</u> | <u>4,100</u> | ND |
| 1,3,5-Trimethylbenzene | 8,400 | 190,000 | 130 | <u>8,900</u> | 470J | 570 |
| Benzene | 60 | 89,000 | ND | <u>1,200J</u> | ND | ND |
| Ethylbenzene | 1,000 | 390,000 | 8.2 | <u>15,000</u> | 720 | <u>2,600</u> |
| Isopropylbenzene | 2,300 | NS | ND | <u>2,800</u> | ND | <u>4,000</u> |
| MTBE | 930 | 500,000 | ND | ND | ND | ND |
| Naphthalene | 12,000 | 500,000 | 27 | <u>25,000</u> | 1,500 | 2,900 |
| n-Butylbenzene | 12,000 | 500,000 | 3.3J | 6,000 | 400J | 5,800 |
| n-Propylbenzene | 3,900 | 500,000 | 2.8J | <u>7,800</u> | 480J | <u>13,000</u> |
| o-Xylene | 260 | 500,000 | 5.2J | <u>1,500J</u> | ND | ND |
| p-&m-Xylenes | 260 | 500,000 | 25 | <u>16,000</u> | <u>420J</u> | ND |
| p-Isopropyltoluene | 10,000 | NS | 12 | 4,300 | ND | 1,600 |
| sec-Butylbenzene | 11,000 | 500,000 | 2.9J | 4,000 | ND | 3,300 |
| tert-Butylbenzene | 5,900 | 500,000 | ND | ND | ND | ND |
| Toluene | 700 | 500,000 | ND | ND | ND | ND |

- Notes:
- Soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb.
 - ND = Undetected. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
 - The presented soil quality guidance values were adopted from the NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010 .
 Projected soil standard for anticipated use adopted from NYSDEC 6 NYCRR Part 375, Table 375-6.8(b): Commercial Use Soil Cleanup Objectives, December 2006
 - Analytical measurements exceeding CP-51 guidance values are in bold type and underlined as such **100**.

Summary of Soil Laboratory Analysis for Semi-Volatile Organic Compounds (SVOCs) - Concentrations/Standards

Remedial Action - Performed July 2020

Page 3 of 4

Site: LL Fuel Storage, LLC – South Fallsburg Terminal
 Laurel Avenue & Griff Court (Tax ID 51.-1-8.2)
 South Fallsburg, Sullivan County, New York

Client Name: LL Fuel Storage, LLC
 Address: Post Office Box 454
 Hurley, New York 12443
 Contact Name: Kenneth Davenport

NYSDEC PBS NO. 3-123226/BCP# C353017

| Sample Location | | | SP-1 | SP-2 | SP-3 | SP-4 | SP-5 | SP-6 | SP-7 | SP-8 | SP-9 | Groundwater Excavation | | |
|------------------------|----------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|-----------------------|------------|
| Sample Number | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Date Collected | | | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | 7/10/2020 | | |
| Matrix | | | Soil | Groundwater | | |
| Analytical Method | | | 8270 B/N - CP-51 | | |
| Compound | Soils | Projected Soils | Sample Con | Groundwater | Projected Groundwater | Sample Con |
| | Guidance | Guidance | | | | | | | | | | Guidance | Guidance | |
| Acenaphthene | 20,000 | 500,000 | 1,500 | 1,000 | 95 | 150 | 910 | 200 | 1,400 | 1,100 | 1,700 | 20 | 20 | 44 |
| Acenaphthylene | 100,000 | 500,000 | 490 | 340 | ND | ND | 320 | 79 | 380 | 390 | 550 | NS | NS | ND |
| Anthracene | 100,000 | 500,000 | 810 | 570 | 62 | 80 | 500 | 100 | 620 | 640 | 940 | 50 | 50 | 29 |
| Benzo(a)anthracene | 1,000 | 5,600 | ND | 66 | ND | ND | ND | 59 | ND | ND | 48 | 0.002 | NS | ND |
| Benzo(a)pyrene | 1,000 | 1,000 | ND | 0.002 | ND | ND |
| Benzo(b)fluoranthene | 1,000 | 5,600 | ND | 49 | ND | ND | ND | 63 | ND | ND | ND | 0.002 | 0.002 | ND |
| Benzo(g,h,i)perylene | 100,000 | 500,000 | ND | NS | NS | ND |
| Benzo(k)fluoranthene | 800 | 56,000 | ND | 0.002 | 0.002 | ND |
| Chrysene | 1,000 | 56,000 | 47 | 71 | ND | ND | 55 | 80 | 57 | 50 | 68 | 0.002 | 0.002 | ND |
| Dibenz(a,h)anthracene | 330 | 560 | ND | NS | NS | ND |
| Fluoranthene | 100,000 | 500,000 | 180 | 180 | ND | ND | 180 | 170 | 150 | 150 | 230 | 50 | 50 | ND |
| Fluorene | 30,000 | 500,000 | 2,700 | 1,800 | 210 | 290 | 1,600 | 350 | 2,100 | 2,100 | 3,200 | 50 | 50 | 99 |
| Indeno(1,2,3-cd)pyrene | 500 | 5,600 | ND | 0.002 | 0.002 | ND |
| Naphthalene | 12,000 | 500,000 | 13,000 | 650 | 89 | 780 | 8,100 | 16,000 | 6,800 | 6,600 | 17,000 | 10 | 10 | 960 |
| Phenanthrene | 100,000 | 500,000 | 5,700 | 4,300 | 410 | 570 | 3,300 | 620 | 4,300 | 4,400 | 6,900 | 50 | 50 | 210 |
| Pyrene | 100,000 | 500,000 | 540 | 450 | 52 | 73 | 400 | 180 | 420 | 480 | 670 | 50 | 50 | ND |

Notes:

- Soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb. Groundwater results are recorded in micrograms-per-liter (µg/L) or ppb.
- ND = Undetected. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
- The presented soil quality guidance values were adopted from the NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010 .
 Projected soil standard for anticipated use adopted from NYSDEC 6 NYCRR Part 375, Table 375-6.8(b): Commercial Use Soil Cleanup Objectives, December 2006
- The presented groundwater guidance values were adopted by the NYSDEC Groundwater Quality Standards, Division of Water Technical & Operational Guidance Series (TOGS 1.1.1).
 Projected groundwater standard for anticipated use adopted from 6 NYCRR Parts 700-706, Class GA.
- Analytical measurements exceeding CP-51/TOGS 1.1.1 guidance values are in bold type and underlined as such **100**.

Summary of Soil Laboratory Analysis for Semi-Volatile Organic Compounds (SVOCs) - Concentrations/Standards

Remedial Action - Performed July 2020

Page 4 of 4

Site: LL Fuel Storage, LLC – South Fallsburg Terminal
 Laurel Avenue & Griff Court (Tax ID 51.-1-8.2)
 South Fallsburg, Sullivan County, New York

Client Name: LL Fuel Storage, LLC
 Address: Post Office Box 454
 Hurley, New York 12443
 Contact Name: Kenneth Davenport

NYSDEC PBS NO. 3-123226/BCP# C353017

| Sample Location | | | SP-10 | SP-11 | SP-12 | SP-13 |
|------------------------|-----------------|------------------------|---------------------|-------------------|-------------------|-------------------|
| Sample Number | | | 1 | 2 | 3 | 4 |
| Date Collected | | | 7/13/2020 | 7/13/2020 | 7/13/2020 | 7/13/2020 |
| Matrix | | | Soil | Soil | Soil | Soil |
| Analytical Method | | | 8270 B/N - CP-51 | 8270 B/N - CP-51 | 8270 B/N - CP-51 | 8270 B/N - CP-51 |
| | Soils | Projected Soils | | | | |
| Compound | Guidance | Guidance | Sample Con | Sample Con | Sample Con | Sample Con |
| Acenaphthene | 20,000 | 500,000 | 770 | 2,200 | 150 | 1,000 |
| Acenaphthylene | 100,000 | 500,000 | 300 | 650 | 50 | 290 |
| Anthracene | 100,000 | 500,000 | 1,000 | 1,100 | 100 | 500 |
| Benzo(a)anthracene | 1,000 | 5,600 | <u>2,200</u> | 110 | ND | ND |
| Benzo(a)pyrene | 1,000 | 1,000 | <u>2,000</u> | 54 | ND | ND |
| Benzo(b)fluoranthene | 1,000 | 5,600 | <u>1,800</u> | 79 | ND | ND |
| Benzo(g,h,i)perylene | 100,000 | 500,000 | 1,000 | 49 | ND | ND |
| Benzo(k)fluoranthene | 800 | 56,000 | <u>1,600</u> | 56 | ND | ND |
| Chrysene | 1,000 | 56,000 | <u>2,000</u> | 140 | ND | ND |
| Dibenz(a,h)anthracene | 330 | 560 | <u>480</u> | ND | ND | ND |
| Fluoranthene | 100,000 | 500,000 | 4,600 | 400 | ND | 100 |
| Fluorene | 30,000 | 500,000 | 1,400 | 4,300 | 270 | 1,600 |
| Indeno(1,2,3-cd)pyrene | 500 | 5,600 | <u>1,100</u> | ND | ND | ND |
| Naphthalene | 12,000 | 500,000 | 230 | 9,700 | 53 | 1,600 |
| Phenanthrene | 100,000 | 500,000 | 4,900 | 8,900 | 520 | 3,700 |
| Pyrene | 100,000 | 500,000 | 3,600 | 950 | 95 | 270 |

Notes:

1. Soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb.
2. ND = Undetected. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
3. The presented soil quality guidance values were adopted from the NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010 .
 Projected soil standard for anticipated use adopted from NYSDEC 6 NYCRR Part 375, Table 375-6.8(b): Commercial Use Soil Cleanup Objectives, December 2006
4. Analytical measurements exceeding CP-51 guidance values are in bold type and underlined as such **100**.

DT CONSULTING SERVICES, INC.

ATTACHMENTS

DT CONSULTING SERVICES, INC.

ATTACHMENT A

Environmental Services Health & Safety Plan

Job Name: LL Fuel Storage LLC

DT CONSULTING SERVICES, INC

1.0 Introduction

2.0 Organizational Structure

2.1 Safety and Health Manager

2.2 Site Safety and Health Office

2.2.1 Responsibilities

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3.1 Protection Levels

3.1.1 Level A

3.1.2 Level B

3.1.3 Level C

3.1.4 Level D

4.0 Work Zones

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4.2 Contamination Reduction Zone

4.3 Support Zone

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6.0 Site Communications

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10.8.2 Contamination reduction corridor

10.9 Decontamination

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11.0 Key Personnel

12.0 Work Plan

12.1 Job objective / Detailed work plan

DT CONSULTING SERVICES, INC

1.0 INTRODUCTION

DT Consulting Services, Inc. (DTCS) has designed a safety and health program to provide its employees and subcontractors with the guidelines necessary to ensure their own safety and health as well as that of the surrounding community. The goal of this plan is to minimize the risk of injury during remedial investigation procedures including the advancement and sampling of soil cores, coring for soil gas sampling, along with the monitoring of groundwater wells.

2.0 ORGANIZATIONAL STRUCTURE

2.1 SAFETY AND HEALTH MANAGER

It is the responsibility of the safety and health manager to develop the comprehensive safety and health plan. The safety and health manager will be appraised of any changes in the comprehensive safety and health plan as well as all Site-specific procedural determinations. The safety and health manager for this project will be Ms. Deborah Thompson.

2.1.1 RESPONSIBILITIES

- a) Initial Site evaluation
- b) Hazard identification
- c) Determination of appropriate protection levels
- d) Conduct daily safety and health meetings
- e) Supervision of Site sampling and monitoring
- f) Supervision of decontamination procedures
- g) Designate work zones to maintain Site integrity

3.0 PERSONAL PROTECTIVE EQUIPMENT

The proper personal protective equipment is chosen by the Site safety and health officer in consultation with the safety and health manager. The level of protection is dependent on the hazards that are likely to be encountered on-Site.

3.1 PROTECTION LEVELS

DTCS utilizes four levels of protection as set forth in the OSHA guidelines, Appendix B of 1910.120.

3.1.1 Level A

Level A provides the greatest level of skin, respiratory, and eye protection with the following minimum equipment:

- Full face, self-contained breathing apparatus (SCBA) or supplied air with escape SCBA
- Fully encapsulated chemical resistant suit
- Chemical resistant boots
- Chemical resistant inner and outer gloves

3.1.2 Level B

Level B provides the greatest level of respiratory protection, but a lower level of skin protection than Level A with the following minimum equipment:

- Full face SCBA or supplied air with escape SCBA
- Chemical resistant clothing
- Chemical resistant inner and out gloves
- Chemical resistant boots

3.1.3 Level C

Level C provides the same level of skin protection as Level B, but a lower level of respiratory protection with the following minimum equipment:

- Full face piece air purifying respirator with appropriate cartridge. Cartridges are chosen based on knowledge of hazardous material
- Chemical resistant clothing
- Chemical resistant inner and outer gloves
- Chemical resistant boots

3.1.4 Level D

Level D provides the lowest level of skin protection and no respiratory protection with the following minimum equipment:

- Coveralls
- Safety boots
- Gloves
- Safety glasses or splash goggles

4.0 WORK ZONES

DTCS utilizes the standard three-zone approach to Site control. These zones are the exclusion zone, the contamination reduction zone and the support zone. Movement of personnel and equipment through these zones shall be strictly regulated in order to prevent contamination of clean environments and to protect workers in the support zone from possible exposure.

4.1 EXCLUSION ZONE

The exclusion zone is the area of highest contamination. All personnel entering this zone must wear the appropriate level of protection as prescribed in the Site specific safety plan. The outer boundary of the exclusion zone, referred to as the Hotline, shall be determined based upon such considerations as; extent of surface contamination, safe distance in the case of fire or explosion, physical area necessary for workers to conduct operations in a safe manner and safe distance in the event of vapor or gas emissions. Upon determination, the Hotline shall be visibly marked and secured to prevent accidental entry by unauthorized personnel.

4.2 CONTAMINATION REDUCTION ZONE

The Contamination Reduction Zone is the area between the exclusion zone and the support zone. Its purpose is to protect the clean environment from contamination as workers enter and exit the exclusion zone. The outer boundary of this zone is referred to as the Coldline and shall be clearly marked. Decontamination stations shall be set up in this zone in a line known as the contamination reduction corridor. All personnel exiting the exclusion zone must follow the steps as prescribed in the decontamination procedures prior to re-entering the support zone.

4.3 SUPPORT ZONE

The support zone is the area furthest away from the exclusion zone. It is considered a clean, non-contaminated area where workers need not wear any protective equipment. The command post, equipment trailer, first aid station and lavatory facilities are all located in this area. This area is not, however, open to traffic. Only authorized personnel may enter.

5.0 AIR MONITORING

As the initial Site evaluation work plan entails Site intrusive activities which include soil borings with a track mounted drill rig, a Community Air Monitoring Plan or CAMP has been generated and will be utilized during this phase of Site work. Refer to the CAMP located in Attachment B for further details on planned air monitoring activities.

6.0 SITE COMMUNICATIONS

Various methods of communication will be employed based upon Site conditions and work zones. Regardless of method of communication, personnel working in the exclusion zone will remain within constant view of support crews.

DTCS has a network of devices to aid in communications. All or some of the following devices may be used depending upon job Site requirements; hand held radios, headset transistor walkie-talkies and cellular telephones.

The following hand signals shall be standardized for use in emergencies and in event of radio communication breakdown.

- Hand gripping throat - out of air, can't breathe
- Grip partner's wrist - leave area immediately
- Hands on top of head - need assistance
- Thumbs up - I am all right, okay
- Thumbs down - no, negative

Horn blasts may be used to gain the immediate attention of crews to indicate that dangerous conditions exist.

7.0 EMERGENCY PROCEDURES

The following procedures shall be followed by all Site personnel in the event of an emergency. Any changes to this procedure shall be noted in the Site-specific plan. In all situations where there has been an evacuation of exclusion zone, reentry shall not be permitted until the following conditions have been met; the cause of the emergency has been determined and corrected, the Site hazards have been reassessed, the safety plan has been reviewed and all personnel have been apprised of any changes.

7.1 INJURY IN THE EXCLUSION ZONE

In the event of an injury in the exclusion zone, the emergency signal shall be sounded. All personnel in the exclusion zone will assemble at the contamination reduction corridor. First aid procedures will begin on-Site and if necessary, an ambulance will be called. No personnel will be allowed to re-enter the exclusion zone until the exact nature and cause of the injury has been determined.

7.2 INJURY IN THE SUPPORT ZONE

In the event of an injury in the support zone, on-Site first aid procedures will begin immediately and an ambulance called if necessary. The Site safety and health officer shall determine if the nature and cause of the injury or loss of the injured person will jeopardize the smooth running of the operations. If so, the emergency signal will be sounded and all personnel will follow the same procedure as outline above.

7.3 FIRE OR EXPLOSION

In the event of fire or explosion, the emergency signal shall be sounded and all personnel will assemble at the contamination reduction corridor. The fire department will be called and all personnel will be evacuated to a safe distance.

7.4 PROTECTIVE EQUIPMENT FAILURE

In the vent of protective equipment failure, the affected worker and his/her buddy will leave the exclusion zone immediately. In the event of any other equipment failure, the Site safety and health officer will determine if this failure affects the operation. If so, the emergency signal will be sounded and all personnel will leave the exclusion zone until such time as it is deemed safe.

8.0 STANDARD SAFETY PRACTICES

The following guidelines will be followed by all personnel at all times; any changes must be approved by the safety and health manager.

- All employees will attend the daily safety meetings prior to Site entry.

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- The buddy system will be utilized at all times.
- There will be no eating, drinking, smoking, or use of smoking material (i.e. matches) within the work area(s).
- Only authorized personnel will be allowed in designated work zones and will wear the proper personal protective clothing and equipment as prescribed in the Site safety plan.
- The Site safety and health officer will be appraised of any unusual circumstances immediately.

Such circumstances include but are not limited to the following; unusual odors, emissions, signs of chemical reaction, and discovery of conditions or substances not mentioned in the Site safety plan. The Site safety officer will then determine if these conditions warrant a shut down of operations.

9.0 DAILY SAFETY MEETINGS

Daily safety meetings will be conducted by the Site safety and health officer prior to commencement of work. All personnel, regardless of job classification are required to attend.

9.1 DISCUSSIONS

1. Overview of safety and health plan.
2. Detailed discussion of substances of concern with emphasis on exposure limits, exposure symptoms and exposure hazards.
3. Review of standard safety precautions and work practices.
4. Review of work plan.
5. Review of hand signals and emergency signals.

Personnel will sign a daily attendance sheet, which shall include an overview of the topics discussed.

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10.0 SITE SPECIFIC PLAN

10.1 DETAILED SITE INFORMATION

- **Plan Date** TBA
- **Job Name** LL Fuel Storage LLC
- **Client** LL Fuel Storage LLC
- **Client Contact/Phone No.** Ken Davenport – (845) 656-4600
- **Site Address** LL Fuel Storage LLC
Laurel Avenue & Griff Court
South Fallsburg, New York 12779
- **Cross Street** Railroad Plaza Ext.
- **Site Access** Direct

10.2 CONTAMINANTS ON SITE/ACTION LEVELS

The following substances are known or suspected to be on Site, primarily in Site wastes. The primary hazards of each are identified, associated primarily with direct skin contact and inhalation.

| SUBSTANCE | PRIMARY HAZARDS |
|---|---|
| <i>Volatile Organics</i> | |
| Benzene Toluene Ethylbenzene Xylenes (BTEX) | Eye, skin and respiratory irritation. Nausea, vomiting, headache |

Action Levels

Action levels shall be determined by monitoring of work zone breathing space with a portable Photoionization detector (PID) or comparable instrument. Measurement of a sustained concentration above ambient (background) conditions shall initiate action. The following criteria shall be used to determine appropriate action:

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| VOCs in Breathing Zone (sustained and above background) | Level of Respiratory Protection |
|--|--|
| 0 – 25 ppm | Level D |
| 25 – 200 ppm | Level C |
| 200 – 1000 ppm | Level B - air line |
| 1000+ ppm | Level A - SCBA |

If the above criteria indicate the need to increase from Level D to a higher level of personal protection, all work in that particular Site area will be immediately suspended until the required protective equipment is made available, or until Level D conditions return.

10.3 EMERGENCY INFORMATION

10.3.1 EMERGENCY RESPONDERS

10.3.1.1 HOSPITAL

Name: Catskill Regional Medical Center

Address & Telephone Number:

38 Concord Road, Monticello, NY 12701

(845) 333-6500

Distance from Site: 3.5 Miles

10.3.1.2 EMERGENCY TELEPHONE NUMBERS

Police 911 on Cellular Phone

Fire 911 on Cellular Phone

Ambulance 911 on Cellular Phone

10.3.1.3 REGULATORY AGENCIES

EPA Telephone Number 1-800-424-8802

NYSDEC Spills Hotline 1-800-457-7362

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10.4 FIRST AID

First Aid available at the following stations:

First Aid Kit TRUCK

Emergency Eye Wash TRUCK & ON SITE

10.5 WORK ZONES

10.5.1 COMMAND POST

Command post will be mobile.

10.6 SITE COMMUNICATIONS

10.6.1 TELEPHONE

Command Post Telephone - Cellular Phone
Number (845)943-0159

10.6.2 HAND SIGNALS

See Section 6.0

10.7 ENVIRONMENTAL MONITORING

10.7.1 MONITORING EQUIPMENT

Refer to CAMP

10.8 PERSONAL PROTECTIVE EQUIPMENT

10.8.1 EXCLUSION ZONE, PROTECTION LEVEL

| | |
|------------------------------|--------------------|
| PROTECTIVE EQUIPMENT: | Level D |
| RESPIRATORY | None |
| HANDS | Nitrile or Leather |
| FEET | Steel Toed Boots |
| SUIT | None |

**10.8.2 CONTAMINATION REDUCTION
CORRIDOR (DECON LINE)**

| | |
|------------------------------|--------------------|
| PROTECTIVE EQUIPMENT: | Level D |
| RESPIRATORY | None |
| HANDS | Nitrile or Leather |
| FEET | Steel Toed |
| SUIT | None |

10.9 DECONTAMINATION

10.9.1 DECONTAMINATION PROCEDURE

STATION 1 SOAPY WATER

STATION 2 WATER

11.0 KEY PERSONNEL

SAFETY AND HEALTH MANAGER / ON-SITE SUPERVISOR

Deborah J. Thompson

FOREMEN

TBA

FIELD PERSONNEL

Will Vary

12.0 WORK PLAN

12.1 JOB OBJECTIVE

The objective of the Remedial Investigation is to focus on and address specific areas at the Site to gain current subsurface quality data, to document the environmental conditions at portions of the Site not previously investigated, and to evaluate the potential for migration of contaminants off-Site.

DT CONSULTING SERVICES, INC.

ATTACHMENT B

Community Air Monitoring Plan

Job Name/Site Number: LL Fuel Storage, LLC / C353017

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ATTACHMENTS

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|--------|---|

1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) has been prepared by DT Consulting Services, Inc. (DTCS) to support the implementation of a Remedial Investigation (RI) to be scheduled for the Subject Property located at Laurel Avenue & Griff Court, South Fallsburg, Sullivan County, New York. A Site Plan is provided as Figure 1. Details related to the planned RI activities are presented in the RI Work Plan by DTCS to which this CAMP is included as an attachment and as a supporting plan. This CAMP fulfills the routine monitoring requirements provided in the New York State Department of Environmental Conservation (NYSDEC) document entitled *Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation* (DER-10) issued on May 3, 2010 (NYSDEC 2010). Appendix 1A of DER-10 (included in Attachment A) provides general guidance and protocols for the preparation and implementation of a CAMP. Appendix 1B of DER- 10 (included in Attachment A) supplements the contents of Appendix 1A of DER-10 and provides additional requirements for fugitive dust/particulate monitoring. This CAMP identifies the required air monitoring to protect the community during the implementation of proposed investigative activities.

1.1 CAMP Objectives

The overall objective of the CAMP is to establish requirements for protection measures for downwind receptors from potential airborne releases of constituents of concern during intrusive and/or potential dust generating Site activities. As summarized in the RI Work Plan, laboratory analysis indicates that constituents of concern at the Site include volatile organic compounds (VOCs). This CAMP identifies potential air emissions, and describes air monitoring procedures, the monitoring schedule, data collection, and reporting requirements for the RI actions to be completed by DTCS. DTCS will implement this CAMP and will provide all labor, materials, and equipment necessary to implement the monitoring program specified in this CAMP.

1.2 Revisions to the CAMP

Any changes to the scope or procedures in this CAMP will be formally documented as a revision to this document. A revision number will be indicated on the front page of any revised document and will serve as a historical record of any and all revisions made to the document.

For changes requiring immediate resolution during the implementation of this CAMP, approval will be secured from the NYSDEC and, if applicable, the Responsible Party.

1.3 Potential Air Emissions Related to Investigative Activities

Soil coring activities have the potential to generate localized impacts to air quality. Investigative components that are considered intrusive for the purposes of this CAMP and that have the potential to generate air emissions are anticipated to include, but may not be limited to the following:

- ✓ Soil coring/boring; and
- ✓ Groundwater monitoring well installations/sampling.

2.0 COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for VOCs and particulate levels will be performed at representative locations, upwind and downwind during Site investigative activities. Furthermore, continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, the coring and retrieval of subsurface materials. In addition, during work hours, hourly or more frequent monitoring for Site-related odors at the perimeter of the work area will be performed.

Exceedances of action levels observed during performance of the CAMP will be reported to the DEC Project Manager and included in the Daily Report.

2.1 Selection of Monitoring Locations

Upwind and downwind monitoring station locations for VOCs and PM₁₀ will be determined daily based on data from published information (predictions of prevailing and predominant wind direction) for the Site and the nature and location of the anticipated construction activities.

An upwind location (station “UPW”) for both VOCs and PM₁₀ will be confirmed at the start of each workday, based upon the use of the meteorological data and the location of the proposed construction activities. A downwind location (station “DWN 1”) (based upon prevalent wind direction) for both VOCs and PM₁₀ will also be selected. If wind directions shift radically during the workday and for an extended

period such that the upwind direction and downwind locations no longer fall within acceptable guidelines (+60 degrees compass change from the original wind direction), the monitoring stations will be relocated so that the upwind and downwind locations are maintained. Any changes will be documented in the CAMP reports.

2.2 VOC Monitoring

VOCs will be monitored continuously during the intrusive and/or potential dust-generating investigative activities with instrumentation equipped with electronic data-logging capabilities. A real-time VOC monitor (RAE MultiRae 3000 or equivalent) equipped with a Photoionization Detector (PID) will be used for monitoring. All 15-minute average concentrations, as well as any instantaneous readings taken to facilitate activity decisions, will be recorded, stored on-Site and summarized in a CAMP report.

2.3 Total Particulates Monitoring

Total particulates will also be monitored continuously during intrusive and/or potential dust-generating loading activities using instrumentation equipped with electronic data-logging capabilities. The particulate monitoring equipment will also be equipped with an audible alarm to indicate exceedances of the action levels identified below in Section 2.5. A TSI DustTrak II 8530 (or equivalent) will be used to conduct the real-time PM₁₀ monitoring during the planned soil disposal activities. All 15-minute average concentrations, as well as any instantaneous readings taken to facilitate activity decisions, will be recorded and summarized in a CAMP report. Fugitive dust migration will be visually assessed during all work activities, and reasonable dust suppression techniques will be used during any activity that may generate fugitive dust.

2.4 Periodic Monitoring for Odors

During work hours, hourly or more frequent walks around the perimeter of the work area will be performed to qualitatively monitor for the presence and intensity of Site-related odors. Perimeter checks will be performed more frequently, as necessary, depending on the nature and location of work being performed. If odors are noted at the perimeter of the work area, work will continue and odor, vapor, and dust controls will be employed to abate emissions. Additionally, construction techniques will be evaluated and modified, if necessary and appropriate, and more frequent checks of the perimeter of the work area will be performed. If odors persist at the perimeter of the work area at an unacceptable intensity, work will be stopped while activities are re-evaluated. The source or cause of the odors will be identified and additional odor,

vapor, and dust controls will be employed. Work will resume provided that the controls are successful in mitigating the intensity of odors at the perimeter of the work area.

2.5 Action Levels

The action levels provided below are to be used to initiate corrective actions, if necessary, based upon the real-time monitoring. If the action levels are exceeded at the perimeter locations for VOCs or PM₁₀, work will be suspended and engineering controls will be implemented to bring concentrations back down to acceptable levels. Each piece of monitoring equipment will have alarm capabilities (audible and/or visual) to indicate exceedances of the action levels specified below. All readings will be recorded and available review.

Action Levels for Organic Vapors

If the ambient air concentration of total VOCs at the downwind perimeter of the work area, Exclusion Zone, or opposite the nearest occupied building exceeds 5 parts per million (ppm) above the background (upwind) concentration for the 15-minute average, work activities will be temporarily halted while monitoring continues. If total VOC concentration readily decreases (through observation of instantaneous readings) below 5 ppm above the background concentration, work activities will resume with continued monitoring.

If the ambient air concentration of total VOCs at the downwind perimeter of the work area, Exclusion Zone, or opposite the nearest occupied building persists at levels in excess of 5 ppm but less than 25 ppm above the background (upwind) concentration: (1) work activities will be halted; (2) the source of the elevated total VOC concentration will be identified; (3) corrective actions will be implemented to reduce or abate the emissions; and (4) air monitoring will be continued. Once these activities have been implemented, work activities will resume provided the following two conditions are met:

- The 15-minute average VOC concentrations remain below 5 ppm above background (upwind); and

➤ The total VOC concentration 200 feet downwind of the work area/Exclusion Zone or half the distance to the nearest potential receptor or residential/commercial structure whichever is less but in no case less than 20 feet) is below 5 ppm over the background (upwind) concentration for the 15-minute average.

If the ambient air concentration of total VOCs at the downwind perimeter of the work area, Exclusion Zone, or opposite the nearest occupied building exceeds 25 ppm above the background (upwind) concentration, work activities will stop, and corrective actions will be implemented to reduce or abate the emissions. When work shutdown occurs, as directed by the Environmental Monitor, corrective actions will be implemented to ensure that vapor emission does not impact the nearest occupied structure at levels exceeding the action levels specified herein. If following work shutdown, or as the result of an emergency, VOC concentrations persist above 5 ppm above background (upwind) 200 feet downwind (or half the distance to the nearest occupied structure), then air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20-foot zone).

Action Levels for PM₁₀

If the ambient air concentration of PM₁₀ at the downwind perimeter of the work area or nearest occupied building exceeds 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) above the background (upwind) concentration, or if airborne dust is observed leaving the work area, dust suppression techniques will be employed. Work will continue with dust suppression techniques provided the downwind PM₁₀ concentration does not exceed 150 $\mu\text{g}/\text{m}^3$ above the background (upwind) concentration. If, after implementation of dust suppression techniques, the downwind PM₁₀ concentration is greater than 150 $\mu\text{g}/\text{m}^3$ above the background (upwind) concentration, work will be stopped while activities are re-evaluated. Work will resume provided the dust suppression techniques and other controls are successful in: (1) reducing the downwind PM₁₀ concentration to less than 150 $\mu\text{g}/\text{m}^3$ above the background (upwind) concentration; and (2) preventing visible dust from leaving the work area.

2.6 Instrument Calibration

Calibration of the VOC and PM₁₀, instrumentation will be conducted in accordance with each of the equipment manufacturer's calibration and quality assurance requirements. The VOC and PM₁₀ monitoring equipment will be calibrated or zeroed, respectively, daily (at a minimum), and such calibrations will be recorded in the field logbook.

3.0 MONITORING SCHEDULE/DATA COLLECTION/REPORTING

The following identifies the monitoring schedule and data collection/reporting requirements.

3.1 Monitoring Schedule

Community air monitoring will be conducted prior to initiating RI activities to establish adequate baseline data and until such time that intrusive and/or potential dust generating activities are complete. The frequency of community air monitoring will be relative to the level of Site work activities being conducted and may be adjusted as the work proceeds and in consideration of the monitoring results. Air monitoring for VOCs and dust may be discontinued during periods of heavy precipitation that would otherwise result in unreliable data or damage to monitoring equipment.

3.2 Data Collection and Reporting

Community air monitoring data will be collected continuously from VOC and PM₁₀ monitors during all intrusive and/or potential dust-generating activities by the electronic data-logging systems, except as discussed above in Section 3.1. The data management software will be set up to continuously monitor instantaneous readings and record average concentrations (calculated for continuous 15-minute increments: i.e., 08:00 to 08:15, 08:15 to 08:30, etc.). Results of the perimeter/community air monitoring for total organic vapors and particulates (both instantaneous readings and 15- minute average concentrations) will be recorded by the monitoring instruments (data loggers).

The Environmental Monitor will prepare a CAMP reports that will include, but not be limited to, the following:

- A brief memorandum summarizing the air monitoring work activities and results for the monitoring period. A summary of the qualitative perimeter monitoring for the presence and intensity of Site-related odors will also be included. The memorandum will be supported by two attachments: (1) Attachment A showing air monitoring station daily locations; and (2) Attachment B presenting graphs of the 15-minute time-weighted average VOC and particulate concentrations recorded at each of the sampling stations (one graph for each station showing the results relative to action levels).

In the event that an exceedance of a community air monitoring action level (for either PM₁₀ or VOCs), the Environmental Monitor will notify DEC (via telephone) as soon as possible (i.e., real time). Within 24 hours of the observed exceedance, the Environmental Monitor will send a follow-up e-mail to DEC's representative, and the Responsible Party summarizing the data, the cause of the exceedance, and any corrective measures implemented (or to be implemented) as a result of the exceedance. The information will also be documented in the CAMP report.

Odor complaints received from the public will be evaluated and verified based on the following:

- Date and time of complaint;
- Location and nature of work activities being performed at the Site;
- Location and nature of non-project-related work activities being performed in the surrounding community; and
- Prevailing wind direction and other local meteorological conditions.

Regardless of the outcome of this evaluation, all associated parties will be notified of odor complaints within 24 hours. In response to a verified odor complaint, perimeter monitoring will continue and additional odor, vapor, and dust controls will be employed to mitigate Site-related odor emissions. Construction techniques will also be evaluated and modified, if necessary and appropriate.

The time and outcome of each perimeter check will be documented in a daily odor monitoring log, specifically noting the presence or absence of Site-related odors and identifying the intensity and general location(s) along the perimeter of the work area where odors (if any) are noted. The time and outcome of any odor complaints from the public will also be documented in the daily odor monitoring log.