McGinley & Associates

5690 Riggins Court
Suite C
Reno, NV 89502

ph: 775.829.2245
fax: 775.829.2213
www.mcgin.com

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REMEDIAL ACTION PLAN (RAP)

FORMER DODD/DEAL FIRE ACADEMY
LOWER SITE
STEAD, NEVADA

Prepared for:
University of Nevada Reno
Physical Plant Department
Reno, Nevada 89557

and,

State of Nevada
Division of Environmental Protection
333 W. Nye Lane
Carson City, Nevada

Prepared by:

McGinley & Associates, Inc.
5690 Riggins Ct., Suite C
Reno, Nevada

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1. INTRODUCTION

On behalf of the University of Nevada Reno (UNR), McGinley & Associates Inc. (MGA) is pleased to submit this Remedial Action Plan (RAP) for the Former Dodd/Deal Fire Fighting Academy located in Stead, Nevada (Figure 1). This RAP addresses impacts to both soils and groundwater at the site by historic facility usage. The former fire fighting academy, previously operated by UNR encompasses a total of approximately 77 acres, of which approximately 42 acres were used for administrative buildings and fire fighting training. Within the 42 acres, only certain portions of the land were used for active fire fighting training facilities. The 42 acre portion consists of an Upper Site and a Lower Site as shown on Figure 2. This Remedial Action Plan (RAP) addresses only the portion of the facility known as "The Lower Site", which is located at the southeast corner of Military Road and Echo Avenue. The lower site encompasses about 28 acres. The Upper Site located north of Echo Avenue at the Military Road intersection encompasses about 14 acres and is addressed under separate cover in the MGA "Remedial Action Plan, Former UNR Fire Fighting Training Academy, Upper site, Stead, Nevada."

UNR, the current property owner, has decommissioned the facility and removed the buildings. Soils at the site have been impacted by petroleum hydrocarbons and chlorinated solvents, and groundwater has been impacted by petroleum hydrocarbons. UNR intends to sell the property. Alternative land use planning includes potential development for commercial and/or light industrial purposes.

The RAP for the site includes a Risk Based Corrective Action (RBCA) evaluation utilizing risk-based screening levels (RBSLs) ASTM Tier 1 and site-specific target levels (SSTLs) ASTM Tier 2 to determine areas that require soil remediation. The Tier 1 and Tier 2 evaluation presented in this report focuses solely on petroleum hydrocarbons in soil at the site. Soils not meeting the Tier 2 soil screening level will be excavated and hauled offsite for treatment and disposal. The RAP also includes a recommendation that groundwater be monitored for one year to assess the stability of petroleum product constituent impacts to groundwater.

Following corrective action, post remediation confirmation samples will be collected and analyzed with full laboratory QA/QC procedures to confirm that the remediation goals were met. In addition, the screening level samples will be compared to the post remediation soil samples to determine usability for a post remediation forward baseline risk assessment. The combined data sets from pre- and post-remediation sampling will be used to conduct a forward risk assessment for site closure.

1.1 Site Background

Fire fighting training was conducted at mock facilities that were set afire using diesel fuel with some gasoline as an igniter. The fires were extinguished with water and foam. Fire training mocks were placed on concrete pads such that the water utilized could be captured and conveyed to three lined ponds and one unlined pond and subsequently re-circulated.

Initial response actions upon decommissioning the site included the installation of perimeter fencing and gates to limit site access. Retention ponds containing water and sludge accumulated from former site activities were sampled. The water was treated and discharged under the issuance of a temporary permit from the NDEP. The residual sludge was excavated from the ponds and subsequently transported to and disposed of at Nevada Thermal Services in Storey County, Nevada.

1.2 Previous Site Investigations

Three previous site investigations were completed for soil and groundwater characterization for petroleum hydrocarbons. The site characterization activity is summarized below. Selected data from the soil and groundwater characterization is incorporated in the RBCA evaluation and summarized in Appendix A.

1.2.1 Results of Limited Phase II Environmental Site Assessment (ESA) Fire Training Academy

A preliminary Phase II Environmental Site Assessment (ESA) was performed in 1999. Six soil samples were collected from soil borings and one groundwater sample was collected from one of the borings. Laboratory analytical results reported non-detectable Total Petroleum Hydrocarbon (TPH) concentrations in all six soil samples. The groundwater sample was collected from a boring installed in apparent downgradient direction of the center retention pond. The groundwater sample was analyzed for TPH and volatile organic compounds (VOCs) by EPA Method 8260B. Results of these analyses indicated the groundwater at that point contained 19.9 μg/L of methyl-tert butyl ether (MTBE). All other analytes were reported at non-detectable concentrations.

1.2.2 Environmental Assessment Activities and Corrective Action Plan for Remediation of Petroleum Contaminated Soil and Groundwater – Part 1 Initial Environmental Assessment Activities

Fifty-two (52) exploratory test trenches (TT-1 through TT-52) were excavated at the facility. Of the 52 test trenches installed, 22 were installed at the lower site at the approximate locations indicated on Figure 2. In general, the locations of the test trenches were selected based upon proximity to above ground or known below ground areas of known petroleum product usage. These include former pond areas, underground fuel conveyance piping, mock areas, and stained soil areas. A total of 81 soil samples were collected at discrete depths from ground surface to five to eight feet below ground surface. At two locations the test trenches were advanced to a depth of approximately 12 feet below ground surface.

In addition to the shallow test trenches, portions of the existing concrete pads at the mock areas were removed to expose underlying soils for sampling purposes. The areas of concrete removal and soil sampling points are noted on Figure 2 with a “CP” notation.

The former three lined ponds at the lower site, shown on Figure 2, accumulated sludge materials due to routine facility usage. Facility maintenance practices included periodic removal of these accumulated sludge materials and placing them within above ground storage tanks at the site. The accumulated sludge has been removed, properly disposed of and the ponds have been backfilled. There were formerly 12 above ground tanks containing sludge materials at the facility. All the tanks have been removed from the facility and properly disposed. Five samples of the sludge material were collected for laboratory analyses for waste characterization purposes from different above ground tanks. In addition, a representative sample of sludge material within the center pond was collected prior to backfilling.

Three soil borings were installed at the subject site for the collection of representative soil samples and for conversion to groundwater monitoring wells (MW-4, MW-5 and MW-6). The approximate

locations of the soil borings installed at the site are indicated on Figure 4. Soil samples were collected from each borehole at various depths by driving a split spoon sampling device into undisturbed soils. Soil samples were classified using the Unified Soil Classification System (USCS) in accordance with ASTM D2487.

The monitor wells were checked for the presence of free phase product using a Solinist oil/water interface probe. During the sampling activities, neither free product nor sheen was noted in the wells. Water levels were measured and recorded with the interface probe as well. Groundwater samples were collected from each monitoring well using disposable bailers.

The results of several groundwater sampling events are summarized in Table 1. As indicated, MTBE concentrations of 199.3 µg/L and 130 µg/L, and benzene concentrations of 13.7 µg/L and 3.6 µg/L were reported in the groundwater samples collected from MW-6. Benzene, toluene, ethylbenzene and MTBE were all reported at non-detectable concentrations for each of the other wells.

1.2.3 Environmental Assessment Activities and Corrective Action Plan for Remediation of Petroleum Contaminated Soil and Groundwater – Part 2 Additional Environmental Assessment Activities

Based on the analytical results of the groundwater samples collected, four additional groundwater monitoring wells (MW-10, through MW-13) were installed to further assess the lateral extent of groundwater contamination at the Lower Site. The wells were installed on September 5 through September 8, 2000. The well boreholes were advanced to approximately ten feet below the groundwater table. The groundwater samples were analyzed for concentrations of volatile organic compounds by EPA Method 8260B. The results of several groundwater sampling events are summarized in Table 1. As indicated, benzene concentrations up to 11.9 µg/L (MW-13) and MTBE concentrations up to 162.5 µg/L (MW-11) were reported in the groundwater samples collected from the monitoring wells.

1.2.4 Results of Additional Groundwater Assessment Activities – Lower Site

In response to the findings discussed above, eight additional monitoring wells (MW-15 through MW-22) wee installed in June and in October/November, 2001. The wells were installed to further assess the lateral extent of groundwater contamination (specifically MTBE), assess site geologic/hydrogeologic conditions and assess potential environmental receptors. The results of several groundwater sampling events are summarized in Table 1. As indicated, benzene concentrations ranged from non-detect to 81 ug/L (MW-21), and MTBE concentrations ranged from non-detect to 880 ug/L (MW-15). Based on this data, there appeared to be two separate dissolved MTBE plumes originating at the site (Figure 3). As indicated, it appeared that the boundary of groundwater contamination lies between the eastern property line of the Lower site and wells MW-17 and MW-21.

Consistent with previous studies, groundwater was determined to be flowing in a southwesterly direction at a gradient of 0.0097 to 0.024. Identified sensitive receptors included Swan Lake (Figure 1), and a fire well located at the Upper Site. Based on the results of the environmental activities performed, it did not appear that the identified groundwater contamination posed an immediate threat to either at that time.

2. PROJECT OBJECTIVES

The objectives of this RAP were to develop a remedial strategy to: 1) mitigate risks to human health and environmental receptors from the identified petroleum hydrocarbon soil contamination at the subject site, and 2) evaluate dissolved petroleum product constituents in groundwater relative to potential impacts to sensitive receptors.

With respect to soil contamination, our objective included identification of areas the site that require remediation based on a Tier 1 RBSL and Tier 2 SSTL screening level evaluation. Data from previous investigations and new soil samples were used for the screening evaluation. Previous analytical methods included TPH by EPA Method 8015 Modified and volatile organic compounds (VOCs) by EPA 8260B. However, additional analyses were required to fully characterize the chemicals of potential concern (COPCs) for the site (USEPA, 1992a, ASTM, E 1739-95$^{\varepsilon_1}$). In addition to VOCs, the new soil samples were analyzed for polycyclic aromatic hydrocarbons (PAHs) and carbon fractions.

Carbon fractions were utilized to facilitate incorporation of previously collected site characterization data for TPH. The TPH Criteria Working Group developed a method to calculate RBSLs and SSTLs for TPH based on transport properties of fractions of the petroleum compounds. The fractions were delineated by the equivalent carbon (EC) number, because these values are related to the compound's mobility in the environment (TPH Criteria Working Group, 1999). Petroleum mixture and individual compound toxicity data were used to develop conservative Reference Doses (RfDs) and Reference Concentrations (RfCs) most representative of each fraction's toxicity (TPH Criteria Working Group, 1999). The petroleum fractions and toxicity criteria were incorporated into the RBCA framework enabling risk evaluation based on TPH. Utilizing a modification to the TPH Criteria Working Group, risk based cleanup standards were developed for TPH fractions.

With respect to petroleum impacts to groundwater, our objective was to evaluate petroleum product impacts to groundwater relative to MCLs, evaluate potential impact to sensitive receptors, including wells and surface bodies of water, and develop a remedial strategy as appropriate.

3. SCOPE OF SERVICES

To achieve the project objectives, the following scope of services were performed:

- Advancement of 53 test trenches at selected areas of the site;
- Representative soil sampling;
- Analytical testing of sampled soils;
- Data validation;
- Development of a site conceptual model;
- Development of risk based clean-up standards;
- Evaluation of groundwater remedial alternatives; and,
- Preparation of this Remedial Action Plan, complete with all findings and recommendations.

Each of these services is discussed in detail in the following sections.

4. ADDITIONAL SITE SOIL CHARACTERIZATION

4.1 Field Data Collection

Additional soil data was collected to identify COPCs, delineate the lateral extent of surficial and subsurface soil contamination, and measure physical and chemical properties of the soil. Soil sampling activities followed the ASTM Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases (ASC) (ASTM, E 1912-98), the Triad Approach to Site Characterization (US EPA, 2001), and Standard Operating Procedures (SOPs) (McGinley Associates, 2001).

Sampling uncertainty increases when fewer samples are collected for higher quality analytical results. The ASC (ASTM, E 1912-98) approach to site characterization defines four levels of data quality that adapts to field screening or equivalent analytical methods for sample analysis. The Triad Approach to Site Characterization allows analytical uncertainty to increase, thus achieving a higher sampling density to characterize a site (Crumbling, et. al, 2001). The result is that sampling uncertainty decreases lowering the overall uncertainty in site characterization. Using these combined approaches 138 soil samples were collected at 53 locations at the Lower Site. Sample locations are shown in Figure 4.

4.1.1 Sample Location and Frequency

The Lower Site was subdivided into two strata each requiring different levels of investigation. Based on previous site characterization data, knowledge of site activities, and visual inspection, the two strata are: 1) areas unlikely to be contaminated and 2) areas known to be contaminated (US EPA, 1996). At the Lower Site, strata one was planned for 11 sample sites or 0.7 acre per sample; strata two was planned for 42 samples or 0.5 acre per sample. Areas unlikely to be contaminated were sampled at depths of 2 and 4 feet. Areas known to contain contaminated soils were sampled at depths of 2, 4, and 8 feet.

For the each of the strata, specific sample locations were planned based on a random-start triangular grid (systematic sample). The triangular grid was selected because the probability of hitting a hot spot is typically greater with a triangular grid than with a square grid of the same sample density (US EPA, 1992b). In the areas known to be contaminated, the systematic sampling was supplemented by judgmental sampling for locating hot spots. Hot spots as used here refer to proximity to either above ground or known below ground facility appurtenances. These include former pond areas, underground piping, and/or mock areas. Systematic sampling supplemented by judgmental sampling is the best strategy for the location of potential hot spots (US EPA, 1992a).

Individual sample locations were located on a base map of the site using the methodology outlined above. The locations were then digitized from the map and located in the field using a differential correction GPS survey (real time kinematic survey).

4.1.2 Sample Designation

Soil sampling was conducted during previous investigations, thus it was necessary to develop a sample designation system that enabled the distinction of samples from previous sampling efforts.

Each sample received an alpha designation as LS to indicate Lower Site. Two additional alpha characters were used to designate the type of sample. These were the same for all samples, but were different from all previous sampling efforts. This designation was "TP" for test pit. Based on the survey for sample locations, each sample point at site was given a numeric designation starting at one. Then each sample was designated by the sample depth. For example, the designation for a sample collected at the site is as follows:

- LSTP - 25 @ 8' (Lower Site Test Pit - 25 Sampled at Eight Feet).

Sample designations are listed in Table 2 for all locations and sample locations are shown on Figure 4.

4.1.3 Sampling Procedures

Samples were collected from backhoe dug test trenches at depths of 2, 4, and 8 feet as indicated in Table 2. Soil samples were collected using SOPs (McGinley Associates, 2001). The test trenches were dug to 4 feet and samples were collected from the side wall of the excavations at 2 and 4 feet. Care was taken to remove any loose soil to expose fresh soil for sampling. The soil samples were collected by scraping the face of the pit sidewall at the desired depth interval with a stainless steel trowel and placed directly into clean 4 ounce glass jars.

Samples from the 8-foot depth were scraped from soil in the backhoe bucket directly into the glass sample jars. If backhoe refusal was encountered before the 8-foot sample interval, then a sample was collected at the refusal depth and marked as such on the field sample forms and sample container.

Sample jars were properly sealed and labeled with sample number, site location, date, and time. The samples were stored in a cooler at 4^0C until delivered to the laboratory for analyses.

4.1.4 Sample Custody

Field document control procedures were implemented to ensure that documents and samples were traceable at project completion. Information relevant to field operations was recorded in field sample data sheets and chain-of-custody records. Chain-of-custody procedures were followed during field sample collection, handling, and transfer to Alpha Analytical, Inc. for organic chemical analysis and T N and Associates, Inc. for physical property and chemical analysis. Field document control and sample custody procedures followed SOPs (McGinley & Associates, 2001).

4.2 Sample Chemical Analysis

The soil samples collected at the site were initially screened to determine the presence of petroleum hydrocarbons by carbon fraction, PAH, and BTEX. Samples with detects in the initial screening were further evaluated for an extended list of VOCs related to petroleum hydrocarbons and chlorinated solvents. Laboratory reported results from the initial and extended analytical screening are included Appendix B for the initial screening results and Appendix C for the extended list of VOCs.

4.2.1 Analytical Methods

BTEX was determined by a slightly modified EPA Method 8260B. Matrix spikes and matrix spike duplicates (MS/MSDs) and laboratory control samples (LCSs) were not prepared with these samples, although periodic Standards and Method Blanks were analyzed. The samples did not undergo the normal multiple analyses necessary to place limiting analytes within, but as near as possible to the upper end of an instrument's calibration. All normal extraction procedures, internal and surrogate standards, and the instrument's normal calibration were used.

The PAHs were determined by a modified EPA Method 8270. MS/MSDs and LCSs were not prepared with these samples, although periodic Standards and Method Blanks were analyzed. The samples did not undergo the normal multiple analyses necessary to place limiting analytes within, but as near as possible to the upper end of an instrument's calibration. A 20-gram aliquot of soil was extracted with 20 ml of methylene chloride in order to achieve the reporting limit of 250 μg/Kg for most of the PAHs. Surrogates were not added, but normal internal standards were used. A special low-level calibration of the PAHs was used to quantitate the data.

The TPH-E was determined using a slightly modified EPA Method 8015B and the same extract that was prepared for the PAHs. The TPHs that were detected were divided into C ranges from C8-C9 to C38-C39, all quantified with diesel calibration and each with a reporting limit of 3 mg/Kg.

4.2.2 Data Quality Level

The ASTM Standard Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases (ASTM, E 1912-98) employs a four tiered data quality system as described in Table 3. The data quality level employed for the field investigation reported herein would be classified Level 2. Laboratory methods were used employing the same instruments that are used for Level 3 EPA Method procedures. Quality control (QC) procedures such as initial multi-point calibration curves, continuing calibration checks and background/blank samples were performed. All results were reported as estimated concentrations from modified-method screen procedures. The data quality was deemed sufficient to screen the data for comparison to RBSLs and SSTLs to determine areas where soils require remediation.

Post remediation confirmation samples will be collected and analyzed with full laboratory QA/QC procedures to confirm the initial site samples and that the remediation goals were met. The screening level samples will be compared to the post remediation soil samples to determine usability for a post remediation forward baseline risk assessment.

4.3 Data Validation

4.3.1 Field Quality Control Samples

Eight samples were collected for quality control. These included nine field duplicates, two trip blanks, and two field blanks. Results of the quality control samples are included in Appendix D.

4.3.1.1 Field Blanks

Field blanks were prepared in the field by filling a sample container with clean sand supplied by Alpha Analytical. Field blanks are typically used to evaluate contamination associated with field operations, but may also be used to evaluate contamination associated with laboratory procedures. Field blanks were planned at a rate of one per day during the three day sampling, but two field blanks were prepared. Field blanks were below detection limit for all PAH, BTEX, and carbon fractions.

4.3.1.2 Trip Blanks

Trip blanks were prepared by the laboratory and transported and analyzed in the same manner as the other samples. Trip blanks are used to evaluate contamination associated with sampling, sample handling and shipment, or laboratory handling and analysis. Trip blanks were planned at a rate of one per full day during the sampling activities, and correspondingly, one was collected. The Trip blank was below detection limit for all PAH, BTEX, and carbon fractions.

4.3.1.3 Field Duplicate Samples

Field duplicate samples were prepared by taking a split from the soil sample collected and placing into a separate container. These samples are used to evaluate error associated with sample heterogeneity, sample methodology, and analytical procedures. Field duplicate samples were planned at a rate of one per 20 samples collected. Six field duplicate samples were collected from a total of 138 soil samples.

The sample and duplicate sample for LSTP-30@2 and LSTP53@2 contained neither PAHs nor BTEX compounds, but contained comparable levels of carbon fractions.

The other five sample and duplicate samples were all below detection limit for all analytes.

4.3.2 Comparison with Previous Data

Summary TPH soil data were compared for the previous investigation (Appendix A, Tables A-1 and A-2) and current soil investigations (Appendix E, Table E-1). The TPH values for the Lower Site ranged from 80 to 11,460 mg/kg for the previous investigation and for the current data from 49 to 10,000 mg/kg. The median values were 643 and 460 mg/kg, respectively. The two soil investigations sampled some of the same areas around the mocks, underground piping, and ponds. Additionally, the current sampling effort also sampled soils on a more site wide basis using a random-start systematic sampling grid across the site. These data appear to indicate that the two data sets are comparable on the basis of TPH values.

4.4 Data Summary

The analytical data received from the laboratory (Appendices B and C) were compiled into data sets for the site and is presented in Appendix E, Table E-1. The initial laboratory screening was for PAH, BTEX, and carbon fraction. The compiled data were summarized statistically by number of samples, number of detections, range of detections, percent of samples with detection, range of detection limits. Soil sample data from the initial screening were reviewed for PAH, VOC, and carbon fraction detections and a subset of 22 samples were selected for additional analytical review by the

laboratory, Table 4.

The expanded laboratory review included VOCs by modified EPA Method 8260B. The PAH and VOC data for locations where there were analytical detections are listed by sample location in Appendix E, Table E-2. As shown, Tables E-2 summarizes the compounds detected for PAHs and VOCs by number of samples, number of detections, range of detections, and range of detection limits. Compounds not detected in the screening process are listed in Table 5. The detection data are summarized by sample location and depth for PAHs and VOCs in Table 6. At the Lower Site, there were more detections for PAHs and VOCs at shallower depths (two feet) than deeper depths and, there were more VOC detection than for PAH detections.

The TPH by carbon fraction laboratory data was also reviewed following the TPH Criteria Working Group methodology (TPH Criteria Working Group, 1998). The TPH Criteria Working Group recommended implementation of a method to determine TPH fractions by solvent extraction of the aliphatic and aromatic compounds by using different solvents for the two groups of compounds. For this investigation the carbon fractions were analyzed as total carbon within a given range. The equivalent carbon number for each of the aromatic compounds (Appendix E, Table E-2) was used to assign these compounds to their respective carbon range, (Tables E-4). The aliphatic fractions were then separated from the total carbon by subtracting the aromatic fractions from the total carbon. The TPH carbon fraction data are included in Appendix E, Tables E-3, E-4, and E-5.

4.5 Soil Media Properties

Representative soil samples were collected from seven test pits for analysis of the physical and chemical properties. All samples were analyzed for dry bulk density (ASTM D2937), water content (ASTM D2216), specific gravity (ASTM D854), sieve and hydrometer analysis (ASTM D422 and C117), and soil pH (ASTM D4972). Based on the sieve and hydrometer analysis the USCS soil classification was silty sand, with gravel. The geometric mean for the dry bulk density was 1.36 grams/cubic centimeter (g/cm), gravimetric water content was 8.2 percent (11.2 percent volumetric), specific gravity was 2.64 g/cm^3, and pH was 7.6. Total organic content (ASTM D2974) was measured on four of the soil samples collected from areas not impacted by petroleum hydrocarbons. One of the test pits (LSTP-4@4) sampled contained asphalt material and the result from this sample was eliminated from further evaluation. The total organic content geometric mean of the remaining three samples was 0.4305 percent. This value was divided by 1.724 to account for organic matter other than carbon (e.g., nitrogen, sulfur, phosphorus) bound in the organic molecule. The resulting value for organic carbon was 0.25 percent. The geometric mean for the calculated porosity of the soil from all seven samples was 0.48. The laboratory results for the physical and inorganic chemical soil properties are included in Appendix F.

5. CONCEPTUAL SITE MODEL

Information on historical site use (contaminant sources), contaminant pathways and potential receptors was used to develop a conceptual site model (CSM) as shown in Figure 5 for the Lower Site. The CSM incorporates the interpretation of data developed from previous investigations and the current investigation on contaminant sources, types of contaminants, affected media, and potential routes of migration. The CSM also includes information on the geologic and hydrologic setting. The CSMs are the same except for the groundwater exposure media. The Lower Site has no on-site receptor for groundwater and two off-site receptors (1) the production well at the Upper Site and (2) Swan Lake.

5.1 Site Description

5.1.1 Topography

The Lower Site elevation on the west side is about 5040 feet msl and slopes toward the east to about 5000 feet msl. Surface drainage is east toward Swan Lake.

5.1.2 Climate

The area has an arid to semiarid climate with low annual precipitation, low humidity, and wide diurnal temperature fluctuations. The climate in the region is influenced by the presence of the Sierra Nevada Mountains. The area lies in the rain shadow of the Sierra Nevada, receiving approximately 7 inches of precipitation per year. The average annual potential evapotranspiration is approximately 47 to 71 inches per year (Nevada Bureau of Mines and Geology, 1996).

Meteorological data from Reno-Cannon International Airport for the period from 1984 through 1992 was modeled and the results are shown in a wind rose on Figure 6. For the nine year period modeled the predominant wind direction was from the WNW and S with an average wind speed over that same time period of 8.44 miles per hour.

5.1.3 Soil Conditions

Analysis of soil samples from the test trenches indicate that surficial and subsurface soils at the site consist of unconsolidated deposits of silty sand and poorly graded sands of quaternary to recent fluvial and lacustrine origin. These materials typically exhibit moderate to moderately high hydraulic conductivity. Soil materials at the Lower Site consist primarily of horizontally deposited sandy silt and sand. These materials typically exhibit low and high conductivities, respectively. Based on the sieve analysis and soil classification the hydraulic conductivity would likely range from less than about 0.03 to 28 feet/day.

Asphalt and concrete construction debris was observed in several of the test trenches at the site.

5.1.4 Groundwater Conditions

The water table occurs approximately 21 to 44 feet at the Lower Site. Based on groundwater elevation measurements, the groundwater flow direction was calculated to be easterly toward Swan Lake with a hydraulic gradient of 0.0097.

5.2 Chemicals of Potential Concern

During fire fighting training, the mock facilities were set on fire using diesel fuel with some gasoline as an igniter. Based on historical use, petroleum hydrocarbons were identified as chemicals of potential concern (COPCs). Specific compounds include BTEX, PAHs, fuel oxygenate additives, e.g., MTBE, and lead (older gasoline). For this screening level evaluation lead was assumed to be collocated with the petroleum hydrocarbons, and was not analyzed.

Analysis of previous soil samples from the Lower Site indicated the presence of methylene chloride, 1,1,2-trichloroethane, and trichloroethylene. Records from site closure activities indicate that heptane, kerosene, isoproponal, and methanol were stored on site. It is our understanding that solvents were not routinely utilized on-site.

To characterize the sludge material from the above ground storage tanks and ponds, five samples from different tanks and one representative sample of sludge material within the center pond were collected for laboratory analyses. Analyses of the sludge material are included in Appendix A, Table A-5. Analytes detected at least once include naphthalene, benzene, toluene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and n-propylbenzene.

The monitoring wells installed on-site as part of the previous investigation have been checked for the presence of free phase product using an oil/water interface probe. No free phase product has been observed in any of the monitoring wells.

5.3 Source Characterization

Primary sources included above ground and underground product storage tanks, distribution lines to the mock areas, wastewater treatment areas, and surface impoundments. Petroleum hydrocarbon releases to the environment possibly occurred as leaks from fuel distribution lines, leaks from lined water storage ponds, seepage from the unlined storage pond, and potentially from over spray from fire fighting activity. Secondary sources include hydrocarbon impacted surface and subsurface soils, and dissolved contaminants in groundwater.

Previous site investigations have focused on the areas where fuel was stored, underground pipe lines, mock areas, concrete pads, and water storage ponds. The current soil sampling effort was based on a random starting point, systematic grid across the site with a sample frequency of about one sample per one-half acre. The current sampling strategy has confirmed that the soil contamination is concentrated around the areas of fuel storage, pipe lines, mock areas, concrete pads, and water storage ponds.

Reportedly, the three lined ponds at the lower site accumulated sludge material due to routine facility usage. Facility maintenance practices included periodic removal of the accumulated sludge materials and placing them within above ground storage tanks at the site. The former unlined was replaced

with the lined ponds during facility operation.

At the Lower Site, the ponds containing water and sludge accumulated from former site activities were closed by removal and treatment of the water, excavation of the sludge and offsite disposal, liner removal, and subsequently backfilled. Soil samples (LSTP-43, LSTP-44, and LSTP-52) collected at depths from 14 to15 feet within the former ponds showed no contamination. The closest soil sample locations to the ponds were LSTP-41, LSTP-42, LSTP-45, LSTP-49, and LSTP-53. PAH, BTEX, and carbon fractions were not detected in soil samples from LSTP-41, LSTP-42, and LSTP-45. The soil samples from LSTP-49, adjacent to MW-6, had detections for carbon fractions from depths of 2, 4, and 6 feet. The 8-foot soil sample also contained naphthalene and phenanthrene. Soil samples from LSTP-53 contained carbon fractions but neither PAHs nor VOCs. Soil samples collected during the drilling of MW-6 indicated no detections of TPH-E and TPH-V was not analyzed Appendix A, Table A-4). The groundwater sample from MW-6 (Appendix A, Table A-6) contained benzene and MTBE. Thus, for the CSM at the Lower Site, the soil was assumed impacted to the water table.

5.4 Transport Mechanisms

5.4.1 Volatilization and Atmospheric Dispersion/Enclosed Space Accumulation

Transport mechanisms include volatilization from affected surficial soil, subsurface soil, and groundwater to outdoor air and indoor air. The transport of COPCs by wind was evaluated to locate potential down wind receptors. Soil data from the current and previous investigations indicates that the affected soil zone extends from land surface to the water table in some locations.

5.4.2 Leaching and Groundwater Transport

Several chemicals that were detected in soils during previous investigations were also detected in groundwater at the Lower Site. These chemicals include benzene, toluene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, and MTBE (Appendix A, Table A-5). However, no chlorinated solvents were detected in groundwater.

5.5 Exposure Pathways

The anticipated future use for the site is industrial development. Thus the on-site receptors evaluated were commercial/industrial and construction worker exposure. The onsite exposure pathways include:

- Dermal contact with surfical and subsurface soils,
- Inhalation of outdoor air and indoor air,
- Potential potable water use from an existing well at the Upper Site, and
- Groundwater migration to Swan Lake.

Two offsite receptors evaluated were:

- Groundwater migration to Swan Lake; and,
- Potential potable water use from an existing well located at the Upper site.

5.6 Receptor Description

5.6.1 Adjacent Land Use

Adjacent parcels of land to the north and southeast are currently developed for commercial purposes. North of the lower Site is an undeveloped parcel which given current surrounding land use, would reasonably be developed as commercial property. East of the site is undeveloped land currently owned by the Nevada National Guard, and Swan Lake.

Approximately 1000 feet west of the site is property currently developed for residential use. This location is not in the predominately downwind direction from the site (see Wind Rose Figure 6).

5.6.2 Wells

Well log files at the Division of Water Resources, Department of Conservation and Natural Resources in Carson City were reviewed for wells located within one mile of the site. A production well is located on the Upper site, and is designated on the Well Drillers Report as a "Fire Well" (Appendix G). Based on information from UNR personnel the well has been sold to the Truckee Meadows Water Authority. The "Fire Well" is 8-inches-diameter, 300 feet deep, and the well casing is cemented from land surface to 50 feet deep and gravel packed from 50 to 300 feet. No other drinking water or irrigation wells were found within a one-mile radius of the subject property. However, the records indicate that there are 16 wells located on land owned by UNR in Stead. Based on conversations with UNR personnel, our understanding is that two wells exist on the subject property, both of which are located on the upper site. One well is a monitoring well installed for a different investigation unrelated to the site.

The only other wells within a one-mile radius of the subject property are 1) a test well at the Stead Airport, approximately ½-mile to the north, 2) an industrial use well on unimproved private property, 500 feet to the east, and 3) a plugged well on private property, approximately ½-mile to the southeast.

5.6.3 Wetlands

Swan Lake lies about 1500 feet east of the Lower Site. The lake appears as a perennial feature. Shallow groundwater from the site discharges to the lake. About 2000 feet south from the Lower Site, the Reno/Stead Wastewater Treatment plant discharges water to Swan Lake. About 490 AF/year of water is committed for discharge from the treatment plant.

6. RISK-BASED CLEANUP STANDARDS

The development of the risk-based cleanup standards were based on the exposure parameters listed in Appendices H and I, Input Parameter Summary, which are USEPA default values. The target risk values were established at 10^{-6} individual and 10^{-5} cumulative for Class A/B carcinogens and 10^{-5} individual for Class C carcinogens. The target hazard index was 1.0. There are no aquatic standards for PAH and BTEX. Thus for the soil leaching to groundwater and transport to Swan Lake pathway, the standard used was the maximum concentration level (MCL). Development of the risk-based standards herein utilized the software program RBCA Toolkit for Chemical Releases (Groundwater Services, Inc., 2000), which is based on the ASTM RBCA Guidance (ASTM, E 1739-95$^{\varepsilon_1}$).

6.1 Tier 1 RBSLs

Tier 1 evaluation typically uses a look-up table for generic RBSLs based on default values for exposure factors and estimated site properties. The assumptions to derive the Tier 1 RBSL values were reviewed and determined to be very conservative for some pathways (e.g., precipitation infiltration rate at 11.8 inches/year) and under estimates other site parameters (e.g., source width parallel to groundwater flow and wind velocity). Other site specific parameters that differ from the Tier 1 assumptions include depth of the surface soil zone, depth to the base of the contaminated zone, and depth to the water table. However, Tier 1 results were compared to soil sampling data from the current investigation. The results were weighed against maximum detection, maximum detection limit, and the exposure media and receptor in Table 7 for the site. Tier 1 model results are included in Appendix H. This review aided in the development of the Tier 2 SSTLs for the Lower Site. No COPCs were removed from further Tier evaluation at this level of screening.

6.2 Tier 2 SSTLs

6.2.1 Lower Site – Comparison of Data with Tier 2 SSTLs

The Tier 2 evaluation was developed by using site specific information (explained in Section 4.5) collected during the current investigation and appropriate points of exposure as described in the CSM. Given the target risk levels and exposure factors (Appendix I), SSTLs were back calculated for each COPC at the site. The applicable SSTLs calculated were for the complete exposure pathways for volatilization from soil to indoor air for commercial workers and surface soil vapor inhalation, ingestion and dermal contract for construction workers, Table 8 and Appendix I.

6.2.1.1 Exposure Media and Receptor Evaluation

Alternative land use planning for the Lower Site includes potential development for commercial and/or light industrial purposes. Based on current land use adjacent to the subject property, the most reasonable development of adjacent land would also be for commercial and/or light industrial purposes. The exposure pathways modeled at this site were (1) indoor air inhalation of vapor from impacted soil and groundwater by on-site workers and construction workers, (2) outdoor air inhalation of vapor from impacted soil and groundwater by on-site workers and construction workers, (3) dermal contact and ingestion of the soil by on-site workers and construction workers,

and (4) leaching to groundwater and transport to Swan Lake. Figure 5 shows the exposure pathways for the Tier 2 SSTL screening.

6.2.1.2 PAH and VOC Compounds

A summary of soil sampling data from the current investigation was compared with the maximum sample detection and maximum detection limit, and the exposure media and receptor in Table 8. Benzo(b)fluoranthene was detected once in test pit LSTP50@2 and benzene was detected once in test pit LSTP18@8.

The minimum and maximum detection limit for benzo(b)fluoranthene was 0.250 mg/Kg for all analyses and the SSTL was 0.084 mg/Kg. Benzo(b)fluoranthene would likely be associated with sample locations that have high TPH fractions and other PAH compounds. On that basis, sites most likely to have benzo(b)fluoranthene detections and elevated limits would be at test pit locations LSTP18, LSTP 19, and LSTP 49.

The minimum and maximum detection limit for benzene was 0.010 and 0.050 mg/Kg, respectively. The SSTL for benzene was 0.024 mg/Kg. The maximum detection limit for thirteen soil samples exceeded the SSTL. The samples were from eleven test pit locations at LSTP18, LSTP19, LSTP21, LSTP28, LSTP29, LSTP32, LSTP33, LSTP34, LSTP40, LSTP41, and LSTP47. Of these locations, test pit LSTP-18 is associated with elevated detections of PAH and VOC compounds and likely to have benzene above its SSTL.

6.2.1.3 TPH Fractions

Typically in applying the TPH Criteria Working Group methodology, concentration information for individual PAH and VOC compounds is not established, except for benzene and toluene because of the very limited C range reported, see Appendix E, Table E-4. The method utilizes the risk associated with the compounds within a specified carbon range.

For this assessment the TPH fractions were analyzed as total carbon (aliphatic and aromatic) within a given carbon range, Table E-3, and reported to 3 mg/Kg. Equivalent carbon numbers for the analytes detected by the modified EPA Method 8260B and PAHs by modified EPA Method 8270 were used to develop the aromatic fraction list shown on Table E-4 with reporting limits in the microgram/kilogram range. The aliphatic fraction, Table E-5, was developed by subtracting the aromatic fraction from the total carbon fraction. This methodology for developing the carbon fractions differs from the TPH Criteria Working Group methodology which utilizes a combination of solvent extraction and extract cleanup to separate the sample into aliphatic and aromatic fractions. However, because the methodology used for this assessment utilizes a more sensitive method to determine the aromatic fractions, the results should be as accurate as the Working Group methodology and are suitable for screening level evaluation of site soils.

The lowest carbon fraction analyzed by the modified EPA method 8015B was C-8. Thus, aliphatic compounds lighter than C-8 are not included in the assessment. Findings from both previous site investigations and the current investigation indicate that diesel is the most common fuel hydrocarbon found at the site. For diesel the lightest aliphatic compound is n-Octane at C-8. The aromatic fractions were developed from the modified EPA 8260B analysis, thus benzene (C-6) the lightest of

the aromatic compounds, is included in the assessment.

The SSTL for TPH screening was calculated using the critical fraction method where the minimum value of all the fraction specific SSTLs is divided by their respective mass fractions. On this basis the SSTL for TPH at the Lower Site was calculated at 1,200 mg/Kg. Based on the assumptions made in applying the TPH methodology, for soil screening purposes 1,000 mg/Kg was used to compare to the TPH data. Table 9 summarizes the data from the current investigation where TPH exceeded the target SSTL. Samples from test pits at locations LSTP-18, -27, -34,-49, and 50 exceeded the TPH SSTL. Table 10 summarizes the data from previous investigations where TPH exceeded the target SSTL. Samples from test pits at locations TT-26, -27, -29,-30, -35, and 36 exceeded the TPH SSTL. These locations are shown on Figure 2.

6.2.1.4 SSTL Summary

For this screening level evaluation, concentration information was developed for individual PAH and VOC compounds, as well as for TPH. Table 11 summarizes the current soil sampling data with TPH greater than 1,000 mg/Kg and PAH and VOC detections. At LSTP-18 TPH exceed its SSTL and benzene exceeded its SSTL. At LSTP-50 TPH exceed its SSTL and benzo(b)fluoranthene exceed its SSTL. At these locations TPH was in the range of 9,000 to 10,000 mg/Kg. At locations where TPH was less than 5,000 mg/Kg neither PAHs nor VOCs exceeded their respective SSTL values.

6.2.1.5 Uncertainty Associated with Estimation of SSTLs

Uncertainties associated with the development of the Tier 2 SSTLs include factors relating to the analytical laboratory analysis methodology, selection of COPCs, soil sampling (distribution of contaminants), site physical setting, exposure parameters, and modeling assumptions.

The analytical laboratory methodology was selected to provide screening level data at as many points across the site as possible to lower the overall sampling uncertainty. The data quality level employed for the field investigation reported herein was at Level 2 according to ASTM ASC Guidance (ASTM, E 1912-98). All results were reported as estimated concentrations from modified EPA method screen procedures. The data quality was deemed sufficient to screen the data for comparison to RBSLs and SSTLs to determine areas where soils require remediation. The laboratory procedures enabled a larger number of samples to be collected that reduced the sampling uncertainty (Crumbling, et. al, 2001).

Based on historical site use, the COPCs were limited to consideration of petroleum hydrocarbons and solvents. Specific compounds include BTEX, PAHs, fuel oxygenate additives, e.g., MTBE, and lead (older gasoline). For this screening level evaluation lead was assumed to be collocated with the petroleum hydrocarbons, and was not analyzed. Analysis of previous soil samples from the Lower Site indicated the presence of methylene chloride, 1,1,2-trichloroethane, and trichloroethylene. Records from site closure activities indicate that heptane, kerosene, isoproponal, and methanol were stored on site. It is our understanding that solvents were not routinely utilized on-site.

Based on previous site investigations, the distribution of contaminants was conceptualized as being associated with the fuel storage and distribution lines, mock facilities, and ponds. For the current study, soil samples were collected based on a random starting point systematic grid across the site with samples added at suspected hot spots. The current sampling program has confirmed that soil

contamination is focused around the former site facilities. Sample locations outside the fuel storage and distribution lines, mock facilities, and ponds did not indicate the presence of TPH, PAHs, and/or VOCs.

The physical setting includes characteristics related land use and exposure pathways. The future land use for the SSTLs assumes that the site is developed solely for commercial/industrial purposes. Additionally, that groundwater will not be developed on-site in the future.

Exposure parameters were based on EPA default values as outlined in the ASTM RBCA guidance. The EPA factors are generally conservative and therefore uncertainty associated with the use of these factors is likely small.

Chemical fate and transport, and exposure modeling require assumptions about the physical and chemical environment. There is uncertainty associated with how well models approximate the relationship between the site environmental conditions, COPCs, and exposure media.

Air source zone modeling is based on wind speed and direction data from Reno Cannon Airport. The wind rose model used data averaged over a period of nine years and should be indicative of long-term conditions for the region.

Subsurface vapor modeling was based on the Johnson and Ettinger model. In general, the model is highly sensitive to soil water-filled porosity, soil vapor permeability, soil-building pressure differential, depth to bottom of soil contamination, and depth to top of soil contamination (Johnson and Ettinger, 1997). Soil physical and chemical parameters (porosity, percent water content, density, grain size distribution, and organic content) were based on samples collected from the site. Soil vapor permeability and soil-building pressure differential were based on default values. The depth to the top and base of the contaminated soil was based on the CSM and assumed that the entire soil column was impacted. The assumption is believed to be conservative and therefore the model likely would over predict subsurface vapor concentrations.

7. EVALUATION OF GROUNDWATER REMEDIAL ALTERNATIVES

MGA evaluated several alternatives for the remediation of petroleum product impacts to groundwater. Factors considered included: the nature of contamination, extent of contamination, contaminant concentration, geologic and hydrogeologic conditions, regulatory remedial objectives, distance to sensitive receptors, site constraints, estimated cost and other site specific factors.

The following remedial alternatives were evaluated:

- Monitored natural attenuation (MNA);
- Groundwater pump and treat (GPT);
- Air sparging (AS) and vapor extraction (VE).

Each of these remedial alternatives is discussed in detail in the following sections.

7.1 Monitored Natural Attenuation

Monitored Natural Attenuation (MNA) consists of a variety of physical, chemical, and/or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume and concentration of contaminants in the soil and groundwater. These processes include: intrinsic biodegradation, dispersion, dilution, sorption, volatilization, and chemical or biological stabilization, transformation or destruction of contaminants (*U.S. Environmental Protection Agency, 1997*). MNA consists of collecting data to assess the rate at which natural attenuation may be occurring and evaluate whether natural attenuation processes will reduce the contaminant concentrations in the soil and/or groundwater to acceptable levels within a reasonable time frame.

Several factors must be considered when evaluating MNA as a sole remedial alternative. These factors include, but are not limited to, the following:

- Proximity of the plume(s) to sensitive receptors or sensitive areas (i.e. drinking water or irrigation wells, surface waters, wetlands, playgrounds, schools, etc.);
- Potential exposure pathways;
- Geologic and hydrogeologic conditions;
- Extent of contamination;
- Source control;
- Contaminant concentrations in the soil and groundwater;
- Present and future land use;
- Chemical and physical properties of the soil and groundwater (i.e. pH, soil moisture content, total organic content, availability of electron acceptors such as nitrate, oxygen, carbon dioxide, sulfate, and iron, soiil/groundwater temperature, nutrient concentrations, etc.);
- Nature of contaminant(s); and,
- Regulatory remedial objectives.

Each of these factors is discussed in more detail in the following sections.

7.1.1 Proximity of Dissolved Contaminant Plume to Sensitive Receptors

The only municipal/private drinking water wells or irrigation wells identified within a one-mile radius of the subject during our review of files at the Division of Water Resources and Department of Conservation and Natural Resources was the well at the upper site (See Section 5.6.2). Historically, this well has been used solely for production of water for fire-fighting purposes. With respect to surface bodies of water, Swan Lake is located approximately 700 to 1,000 feet east of the site (Figure 1).

7.1.2 Potential Exposure Pathways

As discussed in Section 6.2.1.1, the identified exposure pathways with respect to groundwater include; indoor air inhalation of vapor from impacted groundwater by on-site workers and construction workers, outdoor air inhalation of vapor from impacted groundwater by on-site workers and construction workers, transport to Swan Lake. As indicated on Figure 3, it does not appear that identified contaminant plumes have migrated to Swan Lake.

7.1.3 Geologic and Hydrogeologic Conditions

As discussed herein and in other reports (SRK, McGinley & Associates), the shallow soils at the Lower Site consists primarily of silty sand, sandy silt and poorly graded sands. The water table occurs approximately 21 to 44 feet at the Lower Site. Based on groundwater elevation measurements, the groundwater flow direction was calculated to be easterly toward Swan Lake with a hydraulic gradient of 0.0097.

7.1.4 Extent of Groundwater Contamination

The inferred lateral extent of MTBE impacts to groundwater is depicted in Figure 3. As indicated, it appears that the MTBE plumes have migrated beyond the property line. However, benzene impacts to groundwater are significantly less extensive, and appear to generally be confined to the property.

7.1.5 Source Control

Fire-fighting operations are no longer being performed on the property. The fuel storage and distribution facilities, and the retention ponds have been decommissioned; therefore, the source of contamination has been eliminated.

7.1.6 Contaminant Concentrations in Groundwater

McGinley & Associates (2002) reported that maximum BTEX concentrations were detected in MW-21 with a benzene concentration of 81 µg/L, an ethylbenzene concentration of 40 µg/L, a toluene concentration of 33 µg/L, and a xylene concentration of 72 µg/L. A maximum MTBE concentration of 880 µg/L was reported in monitor well MW-15.

7.1.7 Land Use

It is our understanding that UNR intends to decommission the property and sell portions for land development. At this time, it is assumed that future development will be either industrial or commercial.

7.1.8 Chemical and Physical Properties of Groundwater

No analyses have been performed to assess the physiochemical and microbial parameters of the soil and groundwater.

7.1.9 Nature of Contaminants

Chemicals of Potential Concern (COPCs) in soil are discussed in detail in Section 5.2. With respect to groundwater, the primary COPC is MTBE.

7.1.10 Regulatory Remedial Objectives

MTBE concentrations exceeding the Nevada interim action level of 20 µg/L (sites less than 1,000 feet from a sensitive receptor) were reported for groundwater samples collected from monitoring wells MW-6 (199.3 µg/L), MW-10 (290 µg/L), MW-11 (510 µg/L), MW-12 (34 µg/L), MW-17 (46 µg/L) and MW-21 (140 µg/L). At this site, both Swan Lake and the water well at the upper site have been identified as sensitive receptors.

7.2 Groundwater Pump and Treat

The groundwater pump and treat (GPT) alternative would consist of installing several groundwater extraction wells, a water treatment system (activated carbon and/or air stripping) to reduce MTBE concentrations to acceptable levels, and a permitted discharge system (underground injection, surface discharge, etc.). It should be recognized that a GPT system may not reduce the dissolved contaminant concentrations to or below the MCLs. GPT is effective in reducing the dissolved contaminant concentrations initially; however, the contaminant concentrations would probably reach asymptotic levels, which may be above the MCLs, at which point continued operation of the GPT system does not achieve significant results.

The estimated capital cost for the installation of a GPT system is $160,000. Annual operating costs (system operation/maintenance and quarterly sampling) is estimated to be on the order of $60,000. Considering that the system would probably be operated for a period of up to three years, the total estimated costs for the GPT system is $340,000.

7.3 Air Sparging and Vacuum Extraction

This remedial option would consist of installing an in-situ air sparging (AS) and vacuum extraction (VE) system reduce the MTBE concentrations. Air sparging is an in-situ groundwater remediation technology where air is injected at low to moderate pressures (0 to 15 psi) below the dissolved contaminant plume through a series of AS points. As air bubbles migrate upward through the saturated zone, contaminants are "stripped" and/or volatilized and are transferred into the unsaturated zone where they can be extracted by a VE system. VOC's captured by the VE system are either destroyed utilizing thermal oxidation, catalytic oxidation or internal combustion or captured by passing the extracted vapor stream through granular activated carbon (GAC).

The remediation system would consist of numerous AS points and several vertical VE wells placed strategically throughout the identified plume area, associated conveyance piping and appurtenances, equipment and GAC to capture VOC's that are extracted by the VE system. We estimate it may take one to two years to reduce the dissolved contaminant concentrations in the groundwater at the Lower Site to or below the target remedial levels using AS and VE.

The estimated capital cost for the installation of a AS/VE system is $166,000. Annual operating costs (system operation/maintenance and quarterly sampling) is estimated to be on the order of $48,000. Considering that the system would probably be operated for a period of one to two years, the total estimated costs for the AS/VE system is $262,000.

8. RECOMMENDED REMEDIAL APPROACH

8.1 Soil Remediation

As discussed in Section 6.2.1.3, results of the ASTM risk assessment indicated that TPH levels below a concentration of 1200 mg/kg should meet the established health risk criteria. For conservative purposes, four areas of the site with TPH concentrations exceeding 1000 mg/kg (screening level analyses) have been approximated and are indicated on Figure 8.

It is recommended that soils exceeding the 1200 mg/kg SSTL within the identified areas be excavated to a maximum depth of eight feet below ground surface, and remediated by either onsite or offsite treatment technologies. Based on volumetric calculations of the areas shown on Figure 8, and depths of soil sampling activities, it is estimated that approximately 11,000 cubic yards of soil will require excavation/treatment. During excavation activities, analytical screening of representative soil samples should be performed such that only contaminated soils exceeding the SSTL TPH concentration of 1200 mg/kg are excavated. It is proposed that University of Nevada Reno laboratory facilities be utilized for the TPH screening analyses.

Following soil excavation activities, it is recommended confirmation soil samples be collected and compared to pre-remediation screening level samples. The combined data sets from pre- and post-remediation sampling will be should be used to conduct a forward risk assessment for site closure.

8.2 Groundwater Remediation

Based on our evaluation of the remedial alternatives detailed herein, MGA recommends that UNR implement monitored natural attenuation as a remedial option for benzene and MTBE groundwater plumes identified. Although groundwater geochemical parameters have not been measured, it is likely that the groundwater at the site has sufficient capacity to biodegrade the dissolved plumes, given their relative low concentrations and associated mass. The dissolved contaminant plume will likely stabilize and/or decrease in size over time primarily due to biodegradation, dispersion and dilution.

9. LIMITATIONS

The conclusions and recommendations presented herein are based on analytical data, field measurements, survey data and results of previous environmental assessment and/or remediation activities. MGA makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. The results reported herein are applicable to the time the sampling occurred. Changes in site conditions may occur as a result of rainfall, snowmelt, water usage, or other factors.

It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact science. Judgments and opinions leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies. Additional information not found or available to MGA at the time of writing this report may result in a modification to the conclusions and recommendations contained herein.

The presentation of data in plots of contours presented herein is intended for the purpose of the visualization of environmental conditions. A greater degree of spatial and temporal data density may result in a more accurate representation of environmental conditions. Although such data visualization techniques may aid in providing a conceptual understanding of environmental conditions, such presentations are not intended to completely depict environmental conditions.

This report is not a legal opinion. The services performed by MGA have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions. No other warranty, expressed or implied, is made.

10. CLOSING

MGA trusts the information provided herein satisfies the requirements of the NDEP and the University of Nevada Reno at this time. Should you have any questions regarding this report, feel free to contact us at (775) 829-2245 at your convenience.

Respectfully submitted,

McGinley & Associates, Inc.

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations, and ordinances.

The use of the word "certify" in this document constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification and does not constitute a warranty or guarantee, either expressed or implied.

Joseph M. McGinley, PE, RG
Prinicpal, C.E.M. #1036, Exp. 11/02

In association with,
Hackenberry Associates, LLC.

Paul Hackenberry

11. REFERENCES

ASTM, Designation: E 1739-95ε1, Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites.

ASTM, Designation: E 1689-95, Standard Guide for Developing Conceptual Site Models for Contaminated Sites.

ASTM, Designation: E 1912-98, Standard Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases.

Crumbling, Deana M., 2001, Managing Uncertainty in Environmental Decisions, Environmental Science & Technology, pp.405-409, October.

McGinley & Associates, 2001, Standard Operating Procedures.

McGinley & Associates, May 31, 2002, Results of additional Groundwater Assessment Activities – Lower Site, Former Dodd/Beal Fire Academy, Stead, Nevada.

Nevada Bureau of Mines and Geology, 1996, Statewide Potential Evapotranspiration Maps for Nevada, Report 48.

US EPA, 1987, Methods for Evaluating the Attainment of Cleanup Standards Volume 1: Soils and Solid Media, Office of Policy, Planning, and Evaluation.

US EPA, 1989, Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response, December

US EPA, 1992a, Guidance for Data Usability in Risk Assessment (Part A) Final, Office of Solid Waste and Emergency Response, April.

US EPA, 1992b, Statistical Methods For Evaluating The Attainment Of Cleanup Standards, Volume 3: Referenced-Based Standards For Soils And Solid Media, Office of Policy, Planning, and Evaluation, December.

US EPA, 1996, Field Methods Compendium (FMC) Draft, Offices of Emergency and Remedial Response, Hazardous Site Evaluation Division, August.

US EPA, 1996, Soil Screening Guidance: User's Guide, Second Edition, Office of Solid Waste and Emergency Response, July.

US EPA, 1997, User's Guide for the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings, Office of Emergency and Remedial Response, September.

US EPA, 2001, Current Perspectives in Site Remediation and Monitoring: Using the Triad Approach to Improve the Cost-Effectiveness of Hazardous Waste Site Cleanups, Office of Solid Waste and Emergency Response, October.

Table 1: Laboratory Analytical Results for Groundwater Samples – Lower Site

ID	DATE	BENZ	TOL	ETH	XYL	MTBE
MW-4	1-21-00	ND	ND	ND	ND	ND
	6-22-00	ND	ND	ND	ND	ND
MW-5	1-21-00	ND	ND	ND	ND	ND
	6-22-00	ND	ND	ND	ND	ND
MW-6	1-21-00	13.7	ND	ND	ND	199.3
	6-22-00	3.6	ND	ND	ND	130
MW-10	9-7-00	7.2	ND	ND	ND	146.1
	9-20-00	ND	ND	ND	ND	138.4
	6-20-01	ND	ND	ND	ND	220
	7-16-01	ND	ND	ND	ND	290
MW-11	9-7-00	9.5	ND	ND	ND	130.5
	9-20-00	2.2	ND	ND	ND	162.5
	6-20-01	6.7	ND	ND	ND	280
	7-16-01	ND	ND	ND	ND	510
MW-12	9-7-00	ND	ND	ND	ND	22.1
	9-20-00	ND	ND	ND	ND	21.8
	6-20-01	ND	ND	ND	ND	24
	7-16-01	ND	ND	ND	ND	34
MW-13	9-8-00	11.9	ND	ND	ND	ND
	9-20-00	6.4	ND	ND	ND	ND
MW-14	9-8-00	ND	ND	ND	ND	ND
	9-20-00	ND	ND	ND	ND	ND
MW-15	6-20-01	ND	ND	ND	9.4	380
	7-16-01	ND	ND	ND	12	880
	11-12-01	ND	ND	5.8	24	410
	5-2-02	ND	ND	ND	ND	ND
MW-16	6-20-01	ND	ND	ND	ND	2.5
	7-16-01	ND	ND	ND	ND	3.1
MW-17	6-20-01	ND	ND	ND	ND	39
	7-16-01	ND	ND	ND	ND	46
	11-12-01	ND	ND	ND	ND	25
	5-2-02	ND	ND	ND	ND	ND

Table 1: Laboratory Analytical Results for Groundwater Samples – Lower Site

ID	DATE	BENZ	TOL	ETH	XYL	MTBE
MW-18	11-12-01	ND	ND	ND	ND	ND
	5-2-02	ND	ND	ND	ND	ND
MW-19	11-12-01	ND	ND	ND	ND	ND
	5-2-02	ND	ND	ND	ND	1
MW-20	11-12-01	ND	ND	ND	ND	ND
	5-2-02	ND	ND	ND	ND	15
MW-21	11-12-01	ND	1.2	ND	6.2	140
	5-2-02	81	40	33	72	8.2
MW-22	5-2-02	ND	ND	ND	ND	ND

ID Sample location
BENZ Benzene (µg/L)
ETH Ethylbenzene (µg/L)
TOL Toluene (µg/L)
XYL Xylenes (µg/L)
MTBE Methyl tert-butyl ether (µg/L)
ND Not detected

Table 2. Sample Location Key, Sample Number, and Field Observations, Lower Site

Strata	Map Number	Sample Location Number	Chemical Analysis					Soil Media Physical Properties	Comments/Observations
			Depth (feet) and Last Digit of Sample Number			Comments	Strata Total Sample Count	Sample Depth	
1	1	LSTP-1	2	4					Hold 4 ft sample pending results of 2 ft sample.
	2	LSTP-2	2	4					Hold 4 ft sample pending results of 2 ft sample.
	3	LSTP-3	2	4					Hold 4 ft sample pending results of 2 ft sample.
	4	LSTP-4	2	4				4	Hold 4 ft sample pending results of 2 ft sample. Asphalt observed as fill material at 4 ft.
	5	LSTP-5	2	4					Hold 4 ft sample pending results of 2 ft sample.
	6	LSTP-6	2	4					Hold 4 ft sample pending results of 2 ft sample.
	7	LSTP-7	2	4					Hold 4 ft sample pending results of 2 ft sample. Duplicate sample collected at 4 ft.
	8	LSTP-8	2	4					Hold 4 ft sample pending results of 2 ft sample.
	9	LSTP-9	2	4					Hold 4 ft sample pending results of 2 ft sample.
	10	LSTP-10	2	4					Hold 4 ft sample pending results of 2 ft sample.
	11	LSTP-11	2	4			22		Hold 4 ft sample pending results of 2 ft sample.
2	12	LSTP-12	2	4					Hold 4 ft sample pending results of 2 ft sample.
	13	LSTP-13	2	4					Hold 4 ft sample pending results of 2 ft sample.
	14	LSTP-14	2	4	8				
	15	LSTP-15	2	4					
	16	LSTP-16	2	4	8				Duplicate sample collected at 4 ft.
	17	LSTP-17	2	4	8				Slight hydrocarbon odor detected at 2 ft and 4 ft.
	18	LSTP-18	2	4	8				Moderate hydrocarbon odor detected at 2 ft and 4 ft. Strong hydrocarbon odor detected at 8 ft.
	19	LSTP-19	2	4	6				Refusal at 6 ft, collected sample at refusal depth
	20	LSTP-20	2	4				4	
	21	LSTP-21	2	4	8				
	22	LSTP-22	2	4	8				
	23	LSTP-23	2	4	8				Duplicate sample collected at 4 ft. Contractor sprayed WD-40 on bucket linkage
	24	LSTP-24	2	4	8				
	25	LSTP-25	2	4	8				
	26	LSTP-26	2	4	7				Refusal at 7 ft, collected sample at refusal depth
	27	LSTP-27	2	4	8				
	28	LSTP-28	2	4	8				
	29	LSTP-29	2	4	8				
	30	LSTP-30	2	4	8				Duplicate sample collected at 2 f
	31	LSTP-31	2	4	8				
	32	LSTP-32	2	4	8				
	33	LSTP-33	2	4	8				
	34	LSTP-34	2	4	8				
	35	LSTP-35	2	4	8				
	36	LSTP-36	2	4	8				Duplicate sample collected at 8 ft
	37	LSTP-37	2	4	8			4	
	38	LSTP-38	2	4	8				
	39	LSTP-39	2	4	8				
	40	LSTP-40	2	4	8				
	41	LSTP-41	2	4	8				
	42	LSTP-42	2	4	8				
	43	LSTP-43			10	Backhoe Limit			Excavate through pond fill material. Collected sample at 14 ft.
	44	LSTP-44			10	Backhoe Limit			Excavate through pond fill material. Collected sample at 15 ft.
	45	LSTP-45	2	4	8				Duplicate sample collected at 4 ft
	46	LSTP-46	2	4	7				Refusal at 7 ft, collected sample at refusal depth
	47	LSTP-47	2	4	8				Asphalt observed as fill material at 2 and 4 ft
	48	LSTP-48	2	4	6			4	Refusal at 6 ft, collected sample at refusal depth
	49	LSTP-49	2	4	8				Moderate hydrocarbon odor detected at 8 ft
	50	LSTP-50	2	4	8				
	51	LSTP-51	2	4	8				
	52	LSTP-52			10	Backhoe Limit			Excavate through pond fill material. Collected sample at 15 ft.
	53	LSTP-53	2	4	8		116		Duplicate sample collected at 2 ft
Total by Depth			50	50	38				
TOTAL NUMBER OF SAMPLES							138	4	

Table 3. Data Quality Levels for Accelerated Site Characterization (ASTM E1912-98)		
Data Quality Level	Instruments Used for Quality Level	Comments
1	PID	Initial soil screening, clean samples cannot be determined from these methods.
2	GC/PID; IR; Immunoassay	Laboratory methods that have been adapted for field use. Intended for delineation of COCs.
3	EPA Approved Laboratory Methods (EPA SW846)	EPA SW846 Methods with complete QA/QC
4	"State of the Art" developed specifically for a site or COPC	Methods specifically developed for a particular site or chemical.

Table 4. Samples Selected for EPA 8260B Review

Sample Identification	ClientSample Identification	Total Carbon Range mg/Kg
LOWER SITE		
02012160-01A	LSTP-18@2	1900
02012160-02A	LSTP-18@4	750
02012160-03A	LSTP-18@8	9200
02012220-19A	LSTP-27 @ 2	940
02012220-20A	LSTP-27 @ 4	3300
02012220-21A	LSTP-27 @ 8	1300
02012220-22A	LSTP-28 @ 2	150
02012220-23A	LSTP-28 @ 4	55
02012221-02A	LSTP-30 @ 2	150
02012221-03A	LSTP-30 @ 4	220
02012221-08A	LSTP-32 @ 2	240
02012221-14A	LSTP-34 @ 2	2500
02012221-15A	LSTP-34 @ 4	70
02012222-06A	LSTP-40 @ 2	240
02012222-07A	LSTP-40 @ 4	150
02012223-01A	LSTP-47 @ 2	89
02012223-07A	LSTP-49 @ 2	680
02012223-08A	LSTP-49 @ 4	860
02012223-09A	LSTP-49 @ 8	4500
02012223-10A	LSTP-50 @ 2	10000
02012223-11A	LSTP-50 @ 4	49
02012223-17A	LSTP-53 @ 2	78
Total Number of Samples		22

Table 5. Summary of Compounds Not Detected in Soil	
Acenaphthylene	Ethyl Tertiary Butyl Ether (ETBE)
Acenaphthene	Tertiary Amyl Methyl Ether (TAME)
Fluoranthene	Tertiary Butyl Alcohol (TBA)
Pyrene	Bromobenzene
Chrysene	Bromochloromethane
Benzo(b)fluoranthene	Bromodichloromethane
tert-Butylbenzene	Bromoform
1,1,1,2-Tetrachloroethane	Bromomethane
1,1,1-Trichloroethane	Carbon tetrachloride
1,1,2,2-Tetrachloroethane	Chlorobenzene
1,1,2-Trichloroethane	Chloroethane
1,1-Dichloroethane	Chloroform
1,1-Dichloroethene	Chloromethane
1,1-Dichloropropene	cis-1,2-Dichloroethene
1,2-Dibromo-3-chloropropane (DBCP)	cis-1,3-Dichloropropene
1,2-Dibromoethane (EDB)	Dibromochloromethane
1,2-Dichlorobenzene	Dibromomethane
1,2-Dichloroethane	Dichlorodifluoromethane
1,2-Dichloropropane	Dichloromethane
1,3-Dichlorobenzene	Hexachlorobutadiene
1,3-Dichloropropane	Styrene
1,4-Dichlorobenzene	Tetrachloroethene
2,2-Dichloropropane	trans-1,2-Dichloroethene
2-Chlorotoluene	trans-1,3-Dichloropropene
4-Chlorotoluene	Trichloroethene
Methyl tert-butyl ether (MTBE)	Trichlorofluoromethane
Di-isopropyl Ether (DIPE)	Vinyl chloride

Table 6. Summary of Detections in Soil by Location and Depth for PAH and VOC at the Lower Site

Sample Identification	Client Sample Identification	PAH Summary	VOC Summary
LOWER SITE STRATA - 2			
02012160-01A	LSTP-18@2	3	10
02012160-02A	LSTP-18@4	2	7
02012160-03A	LSTP-18@8	3	14
02012160-04A	LSTP-19@2	1	0
02012223-09A	LSTP-49 @ 8	2	0
02012223-10A	LSTP-50 @ 2	7	8
Total Number	2 feet	11	18
of Detections	4 feet	2	7
by Depth	8 feet	5	14

Table 7. Tier 1 RBSL Evaluation for Soils at Lower Site, January 2002

	Number of Samples	Number of Detects	Minimum Detect (mg/kg)	Maximum Detect (mg/kg)	Minimum Detection Limit (mg/kg)	Maximum Detcetion Limit (mg/kg)	Tier 1 RBSL (mg/kg)	Comparison to RBSL	RBSL Comparison to Maximum Detection Limit
Polynuclear Aromatic Hydrocarbons (PAHs)									
Naphthalene	125	5	3.20E-01	2.00E+01	2.50E-01	2.50E-01	3.40E+04	Max. Value < RBSL	Max. DL < RBSL
Fluorene	125	4	2.50E-01	1.80E+00	2.50E-01	2.50E-01	1.20E+02 >C_{sat}		Max. DL < RBSL
Phenanthrene	125	3	1.20E+00	4.70E+00	2.50E-01	2.50E-01	2.30E+02 >C_{sat}		Max. DL < RBSL
Anthracene	125	1	6.20E-01	6.20E-01	2.50E-01	2.50E-01	6.40E+00 >C_{sat}		Max. DL < RBSL
Fluoranthene	125	1	6.30E-01	6.30E-01	2.50E-01	2.50E-01	7.80E+01 >C_{sat}		Max. DL < RBSL
Pyrene	125	1	7.30E-01	7.30E-01	2.50E-01	2.50E-01	6.10E+01 >C_{sat}		Max. DL < RBSL
Chrysene	125	1	2.70E-01	2.70E-01	2.50E-01	2.50E-01	6.60E-01	Max. Value < RBSL	Max. DL < RBSL
Benzo(b)fluoranthene	125	1	3.00E-01	3.00E-01	2.50E-01	2.50E-01	7.20E-01	Max. Value < RBSL	Max. DL < RBSL
Aromatic Hydrocarbons									
Benzene	125	1	5.20E+00	5.20E+00	1.00E-02	5.00E-02	9.60E-03	Max. Value > RBSL	Max. DL > RBSL
Toluene	125	1	2.30E+01	2.30E+01	2.50E-02	1.00E-01	5.00E+01	Max. Value < RBSL	Max. DL < RBSL
Ethylbenzene	125	2	2.30E-01	4.10E+01	2.50E-02	1.00E-01	6.40E+01	Max. Value < RBSL	Max. DL < RBSL
Xylenes, Total	125	4	4.50E-01	2.10E+02	2.50E-02	4.00E-02	1.90E+04	Max. Value < RBSL	Max. DL < RBSL
TPH Fractions									
Aliphatic >C08-C10	125	18	3.62E+00	6.56E+02	3.00E+00	3.00E+01	1.80E+03	Max. Value < RBSL	Max. DL < RBSL
Aliphatic >C10-C12	125	19	3.00E+00	1.52E+03	3.00E+00	3.00E+01	1.80E+03	Max. Value < RBSL	Max. DL < RBSL
Aliphatic >C12-C16	125	22	5.05E+00	3.44E+03	3.00E+00	3.00E+01	2.50E+03	Max. Value > RBSL	Max. DL < RBSL
Aliphatic >C16-C21	125	22	6.95E+00	6.52E+03	3.00E+00	3.00E+01	1.60E+01 >C_{sat}		Max. DL > RBSL
Aliphatic >C21-C34	125	22	9.15E+00	2.40E+03	3.00E+00	3.00E+01	1.60E+01 >C_{sat}		Max. DL > RBSL
Aromatic >C05-C07	125	1	5.20E+00	5.20E+00	1.00E-02	5.00E-02	4.60E-01	Max. Value > RBSL	Max. DL < RBSL
Aromatic >C07-C08	125	1	2.30E+01	2.30E+01	2.50E-02	1.00E-01	7.40E+01	Max. Value < RBSL	Max. DL < RBSL
Aromatic >C08-C10	125	4	1.74E+00	4.38E+02	2.50E-01	2.50E-01	1.10E+02	Max. Value > RBSL	Max. DL < RBSL
Aromatic >C10-C12	125	5	3.20E-01	9.19E+01	2.50E-01	2.50E-01	1.70E+02	Max. Value < RBSL	Max. DL < RBSL
Aromatic >C12-C16	125	0	0.00E+00	0.00E+00	2.50E-01	2.50E-01	1.10E+03	Max. Value < RBSL	Max. DL < RBSL
Aromatic >C16-C21	125	5	2.50E-01	7.23E+00	2.50E-01	2.50E-01	1.00E+02 >C_{sat}		Max. DL < RBSL
Aromatic >C21-C35	125	1	1.20E+00	1.20E+00	2.50E-01	2.50E-01	8.30E+00 >C_{sat}		Max. DL < RBSL

Note:
Numbers in dark blue indicate that risk-based target concentration is greater than constituent residual saturation value

Table 8. Tier 2 SSTL Evaluation for Soils at Lower Site, January 2002

	Number of Samples	Number of Detects	Minimum Detect (mg/kg)	Maximum Detect (mg/kg)	Minimum Detection Limit (mg/kg)	Maximum Detcetion Limit (mg/kg)	Tier 2 SSTL (mg/kg)		Comparison to SSTL	SSTL Comparison to Maximum Detection Limit	Exposure Media and Receptor
Polynuclear Aromatic Hydrocarbons (PAHs)											
Naphthalene	125	5	3.20E-01	2.00E+01	2.50E-01	2.50E-01	5.60E+03		Max. Value < SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
Fluorene	125	4	2.50E-01	1.80E+00	2.50E-01	2.50E-01	3.10E+01	$>C_{sat}$			
Phenanthrene	125	3	1.20E+00	4.70E+00	2.50E-01	2.50E-01	5.70E+01	$>C_{sat}$			
Anthracene	125	1	6.20E-01	6.20E-01	2.50E-01	2.50E-01	1.60E+00	$>C_{sat}$			
Fluoranthene	125	1	6.30E-01	6.30E-01	2.50E-01	2.50E-01	2.00E+01	$>C_{sat}$			
Pyrene	125	1	7.30E-01	7.30E-01	2.50E-01	2.50E-01	1.50E+01	$>C_{sat}$			
Chrysene	125	1	2.70E-01	2.70E-01	2.50E-01	2.50E-01	6.60E-01		Max. Value < SSTL	Max. DL < SSTL	Commercial Worker Inhalation, Ingestion, Dermal Contact
Benzo(b)fluoranthene	125	1	3.00E-01	3.00E-01	2.50E-01	2.50E-01	8.40E-02		Max. Value > SSTL	Max. DL > SSTL	Commercial Outdoor Air On-Site/Off-Site
Aromatic Hydrocarbons											
Benzene	125	1	5.20E+00	5.20E+00	1.00E-02	5.00E-02	2.40E-02		Max. Value > SSTL	Max. DL > SSTL	Comercial Indoor Air On-Site
Toluene	125	1	2.30E+01	2.30E+01	2.50E-02	1.00E-01	2.80E+01		Max. Value < SSTL	Max. DL < SSTL	Comercial Indoor Air On-Site
Ethylbenzene	125	2	2.30E-01	4.10E+01	2.50E-02	1.00E-01	8.30E+01		Max. Value < SSTL	Max. DL < SSTL	Comercial Indoor Air On-Site
Xylenes, Total	125	4	4.50E-01	2.10E+02	2.50E-02	4.00E-02	2.60E+03		Max. Value < SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
TPH Fractions											
Aliphatic >C08-C10	125	18	3.62E+00	6.56E+02	3.00E+00	3.00E+01	2.10E+02		Max. Value > SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
Aliphatic >C10-C12	125	19	3.00E+00	1.52E+03	3.00E+00	3.00E+01	4.20E+02		Max. Value > SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
Aliphatic >C12-C16	125	22	5.05E+00	3.44E+03	3.00E+00	3.00E+01	7.80E+02		Max. Value > SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
Aliphatic >C16-C21	125	22	6.95E+00	6.52E+03	3.00E+00	3.00E+01	3.90E+00	$>C_{sat}$			
Aliphatic >C21-C34	125	22	9.15E+00	2.40E+03	3.00E+00	3.00E+01	3.90E+00	$>C_{sat}$			
Aromatic >C05-C07	125	1	5.20E+00	5.20E+00	1.00E-02	5.00E-02	4.10E-01		Max. Value > SSTL	Max. DL < SSTL	Comercial Indoor Air On-Site
Aromatic >C07-C08	125	1	2.30E+01	2.30E+01	2.50E-02	1.00E-01	2.80E+01		Max. Value < SSTL	Max. DL < SSTL	Comercial Indoor Air On-Site
Aromatic >C08-C10	125	4	1.74E+00	4.38E+02	2.50E-01	2.50E-01	3.30E+01		Max. Value > SSTL	Max. DL < SSTL	Comercial Indoor Air On-Site
Aromatic >C10-C12	125	5	3.20E-01	9.19E+01	2.50E-01	2.50E-01	2.30E+02		Max. Value < SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
Aromatic >C12-C16	125	0	0.00E+00	0.00E+00	2.50E-01	2.50E-01	4.40E+02		Max. Value < SSTL	Max. DL < SSTL	Construction Worker Inhalation, Ingestion, Dermal Contact
Aromatic >C16-C21	125	5	2.50E-01	7.23E+00	2.50E-01	2.50E-01	2.60E+01	$>C_{sat}$		Max. DL < SSTL	
Aromatic >C21-C35	125	1	1.20E+00	1.20E+00	2.50E-01	2.50E-01	2.10E+00	$>C_{sat}$		Max. DL < SSTL	

Note:

Numbers in dark blue indicate that risk-based target concentration is greater than constituent residual saturation value

Table 9. Summary of Current Soil Sampling Data with TPH Greater Than 1,000 mg/Kg

ClientSample ID	C8-C9	C10-C11	C12-C13	C14-C15	C16-C17	C18-C19	C20-C21	C22-C23	C24-C25	C26-C27	C28-C29	C30-C31	C32-C33	C34-C35	C36-C37	C38-C39	Total Carbon Range
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
LOWER SITE STRATA - 2																	
LSTP-18@2	<3	130	310	350	440	370	200	87	32	7.3	4.1	<3	<3	<3	<3	<3	1,930
LSTP-18@8	610	1500	1500	1900	1500	1200	580	230	51	18	3.9	<3	<3	<3	<3	<3	9,093
LSTP-27 @ 4	<3	<3	<3	120	480	960	1100	390	170	<3	<3	<3	<3	<3	<3	<3	3,220
LSTP-27 @ 8	650	240	120	98	83	29	24	24	18	16	14	13	<3	<3	<3	<3	1,329
LSTP-34 @ 2	<3	7.8	35	140	380	600	570	460	190	88	43	13	13	<3	<3	<3	2,540
LSTP-49 @ 8	<3	39	220	710	1000	1100	840	380	130	31	11	<3	<3	<3	<3	<3	4,461
LSTP-50 @ 2	<3	150	500	1500	2400	2700	2400	430	80	73	<3	<3	<3	<3	<3	<3	10,233

TABLE 10. Summary of Previous Soil Sampling Data with TPH Greater Than 1,000 mg/Kg

Sample ID	TPH- E (mg/Kg)	TPH-V (mg/Kg)	Range
Lower Site			
TT-26 @ 2’	2,068	47	Diesel
TT-27 @ 6.5’	2,675	NA	Diesel
TT-29 @ 4’	1,618	NA	Diesel
TT-29 @ 8’	1,009	NA	Diesel
TT-30 @ 4’	2,329	NA	Diesel
TT-35 @ 4’	11,460	NA	Diesel
TT-36 @ 2’	4,790	NA	Diesel
TT-36 @ 4’	9,880	NA	Diesel

Table 11. Summary of Current Soil Sampling Data with TPH Greater Than 1,000 mg/Kg and PAH/VOC Detections

ClientSample ID		Total Carbon Range mg/Kg	PAH Summary	VOC Summary	PAH and/or VOC Exceeding Tier 2 SSTLs
LOWER SITE STRATA - 2					
LSTP-18@2		1,930	3	10	
LSTP-18@4		<1,000	2	7	
LSTP-18@8		9,093	3	14	Benzene
LSTP-19@2		<1,000	1		
LSTP-27 @ 4		3,220			
LSTP-27 @ 8		1,329			
LSTP-34 @ 2		2,540			
LSTP-49 @ 8		4,461	2		
LSTP-50 @ 2		10,233	7	8	Benzo(b)fluoranthene
Total Number of Detections of TPH/PAH/VOC by Depth	2 feet	3	11	18	
	4 feet	1	2	7	
	8 feet	3	5	14	

REFERENCE			
	DESIGNED	TJ	5/01
	DRAWN	TAD	5/01
	CHECKED		
	APPROVED		
REVISIONS	No.	DESCRIPTION BY	DATE

FIGURE 1

PROJECT LOCATION MAP
-SHOWING-

FORMER DODD/BEAL FIRE ACADEMY STEAD, NEVADA

McGinley & Associates

SCALE: AS SHOWN	REVISION
JOB NO. UNR-004	A
DWG NAME UNR-004-01	

LEGEND

MW–1 4973.90 — GROUNDWATER MONITORING WELL/ GROUNDWATER ELEVATION

4965 — GROUNDWATER ISOCONTOUR (DASHED WHERE INFERRED)

0.067 — GROUNDWATER FLOW DIRECTION/ HYDRAULIC GRADIENT

N

0 APPROX 200 FEET

MW–3 4987.68

MW–14 4987.90

MW–7 4986.79

UPPER SITE

MW–9 4983.43

MW–2 4984.58

MW–8 4976.85

MT LIMBO AVENUE

ECHO AVENUE

FORMER POND

MW–1 4973.90

MW–13 4973.32

MW–16 4953.74

FORMER LINED POND (POND A)

MW–11 4959.15

MW–16 4960.75

MW–10 4956.75

MW–17 4924.06

MW–12 4958.70

FORMER LINED POND (POND B)

MW–4 4967.11

FORMER LINED POND (POND C)

MW–5 4960.92

BLM PROPERTY

SWAN LAKE

SHORE LINE (APPROXIMATE)

MW–22 4923.25

LOWER SITE

MILITARY ROAD

MW–19 4962.99

MW–18 4966.55

MW–15 4962.37

MW–21 4961.14

FORMER UNLINED POND

MW–20 4962.00

4985 4980 4975 4970 4965 4960 4955 4950 4945 4940 4935 4930 4925

0.031 0.029 0.024 0.11 0.067

REFERENCE	DESIGNED	TJ	2/02
	DRAWN	TAD	2/02
	CHECKED		
	APPROVED		
REVISIONS	No.	DESCRIPTION BY	DATE

FIGURE 3

POTENTIOMETRIC MAP
MAY 2002

FORMER DODD/BEAL FIRE ACADEMY
STEAD, NEVADA

McGinley & Associates

SCALE: 1"=200' | REVISION

JOB NO. UNR–002

DWG NAME unr–002–02–FEB02

A

MW-3
ND
(6/22/00)

MW-14
ND
(6/22/00)

MW-7
ND
(6/22/00)

MW-9
ND
(7/16/01)

MW-2
ND
(7/16/01)

UPPER SITE

MT LIMBO AVENUE

MW-8
ND
(7/16/01)

MW-1
2.9
(7/16/01)

ECHO AVENUE

MW-13
ND (9/20/00)

LEGEND

MW-1 2.9 (7/16/02) — GROUNDWATER MONITORING WELL/ MTBE CONCENTRATION IN ug/L (DATE SAMPLED)

MTBE ISOCONCENTRATION LINE (DASHED WHERE INFERRED)

ND — NOT DETECTED

HA-1 — APPROXIMATE LOCATION OF HAND-AUGERED BORING

MTBE CONCENTRATION

- 0.5 – 20
- 20 – 200
- > 200

N

0 APPROX 200
FEET

MW-16
3.1
(7/16/01)

FORMER
LINED POND
(POND A)

MW-11
280
(6/20/01)

MW-6
130
(6/22/01)

MW-10
220
(6/20/01)

MW-17
25
(11/12/01)

FORMER
LINED POND
(POND B)

MW-12
24
(6/20/01)

HA-1

SWAN LAKE

SHORE LINE
(APPROXIMATE)

MW-4
ND (1/21/00)

FORMER
LINED POND
(POND C)

MW-5
ND
(11/12/01)

BLM PROPERTY

MW-22
ND
(4/5/02)

LOWER SITE

MILITARY ROAD

MW-19
ND
(11/12/01)

MW-18
ND
(11/12/01

MW-15
410
(11/12/01)

MW-21
140
(11/12/01)

FORMER UNLINED
POND

MW-20
ND
(11/12/01

REFERENCE	DESIGNED	TJ	08/02
	DRAWN	TAD	08/02
	CHECKED		
	APPROVED		
REVISIONS	No.	DESCRIPTION BY	DATE

FIGURE 3

INFERRED LATERAL DISTRIBUTION
OF DISSOLVED MTBE

FORMER DODD/BEAL FIRE ACADEMY
STEAD, NEVADA

McGinley & Associates

SCALE: 1"=200' | REVISION

JOB NO. UNR-002
DWG NAME UNR-004-03-AUG-02

A

LEGEND

- SECTION CORNER
- STORM DRAIN MANHOLE
- WATER VALVE
- POWER POLE
- FIRE HYDRANT
- GUY WIRE
- FIBER OPTIC DESIGNATOR
- FOUND MONUMENT AS NOTED
- WATER BOX
- FENCE LINE
- EDGE PAVEMENT
- FLOWLINE
- DIRT ROAD
- FRONT FACE CURB
- MW-1 GROUNDWATER MONITORING WELL
- 1 NEW TEST PIT LOCATION
- TT-1 PREVIOUS TEST TRENCH

REVISIONS No.	DESCRIPTION	BY	DATE

REFERENCE			
DESIGNED	TJ	08/01
DRAWN	TAD	08/01
CHECKED		
APPROVED		
APPROVED		

FIGURE 4

FORMER DODD/DEAL
FIRE ACADEMY
NEW TEST TRENCH LOCATIONS
LOWER SITE
STEAD, NEVADA

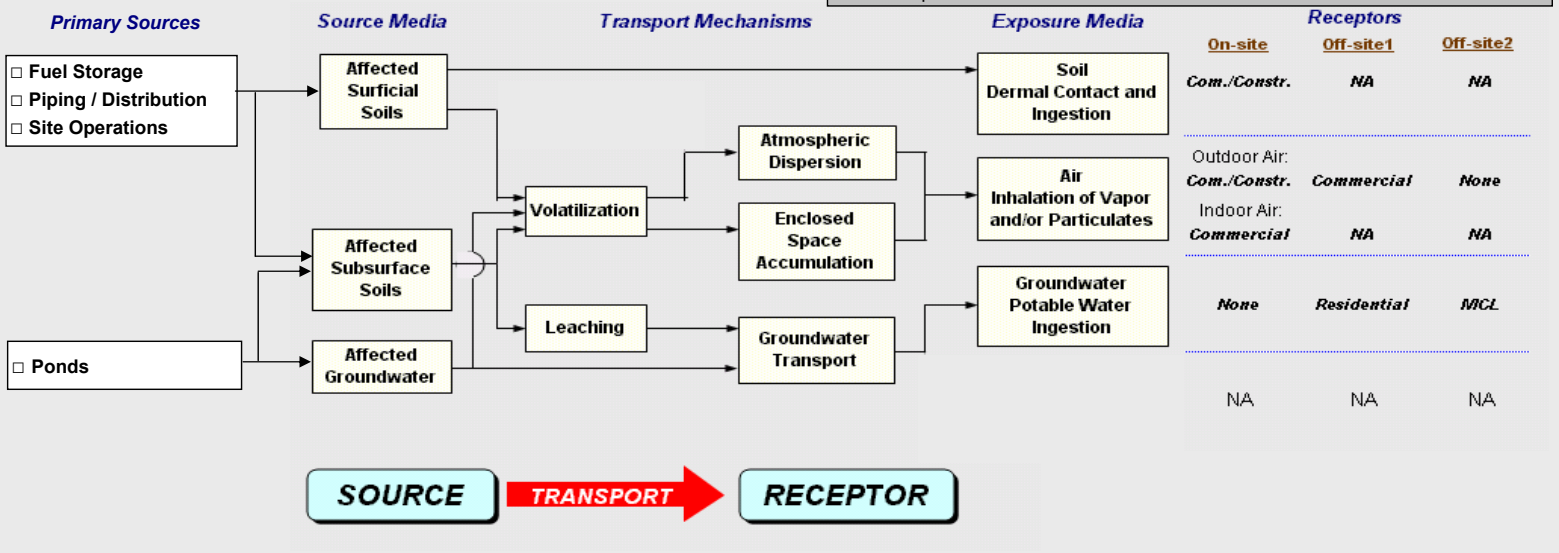
McGinley & Associates

DRAWING No.:	SHEET No. 1 OF 1
SCALE: NOT TO SCALE	
PROJECT No.: UNRFIRE	
DRAWING NAME COMPOSIT	

A REVISION

Figure 5. Conceptual Site Model for Lower Site

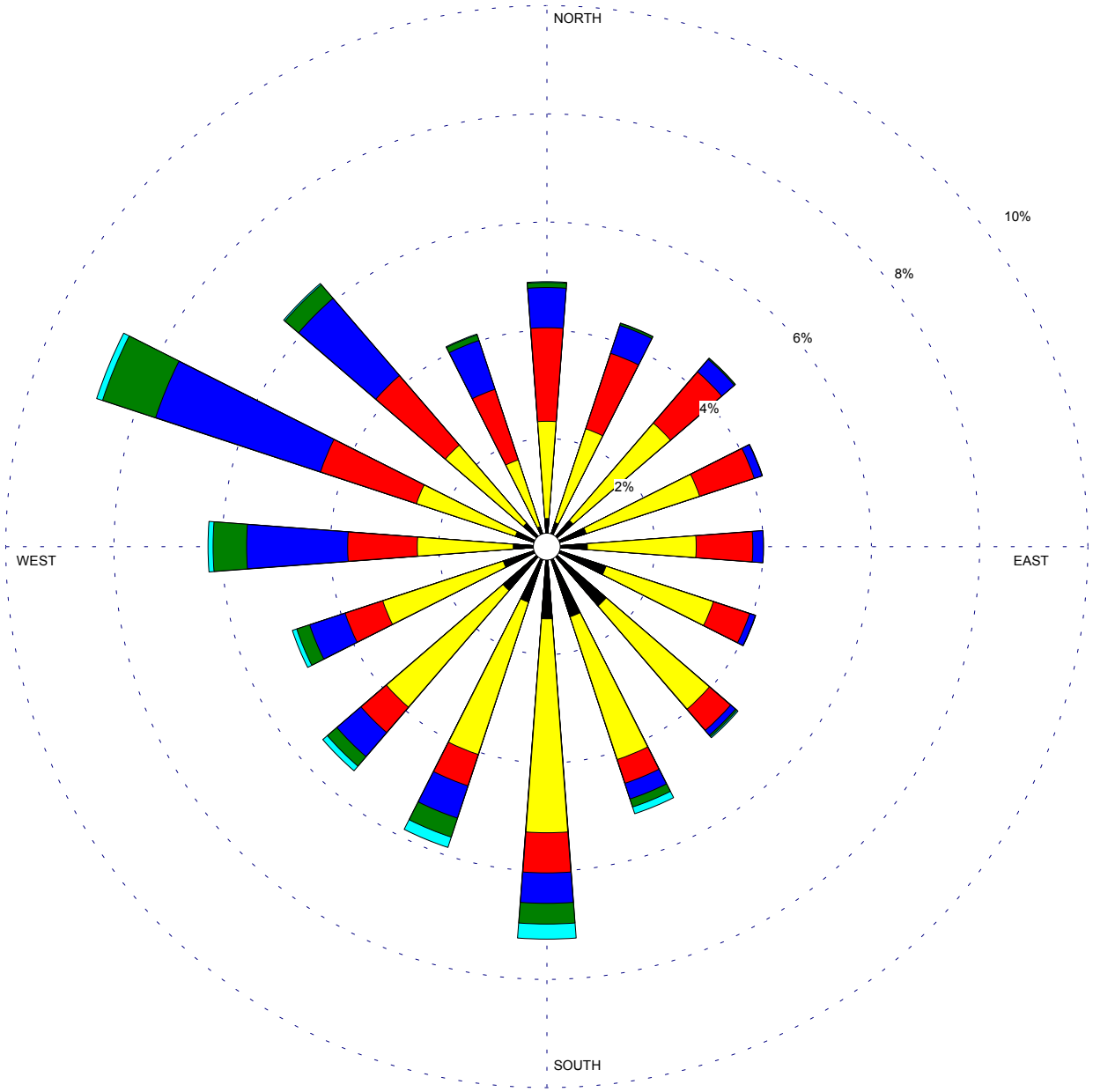
Site Name: Former Fire Fighting Training Facility Job No.: LS T2.Ind.
Location: Stead, Nevada
Compiled By: P. S. Hackenberry
Date: 16-Apr-02



RBCA Tool Kit for Chemical Releases, Version 1.3a

WIND ROSE PLOT

Station #23185 - RENO/CANNON INT'L ARPT, NV

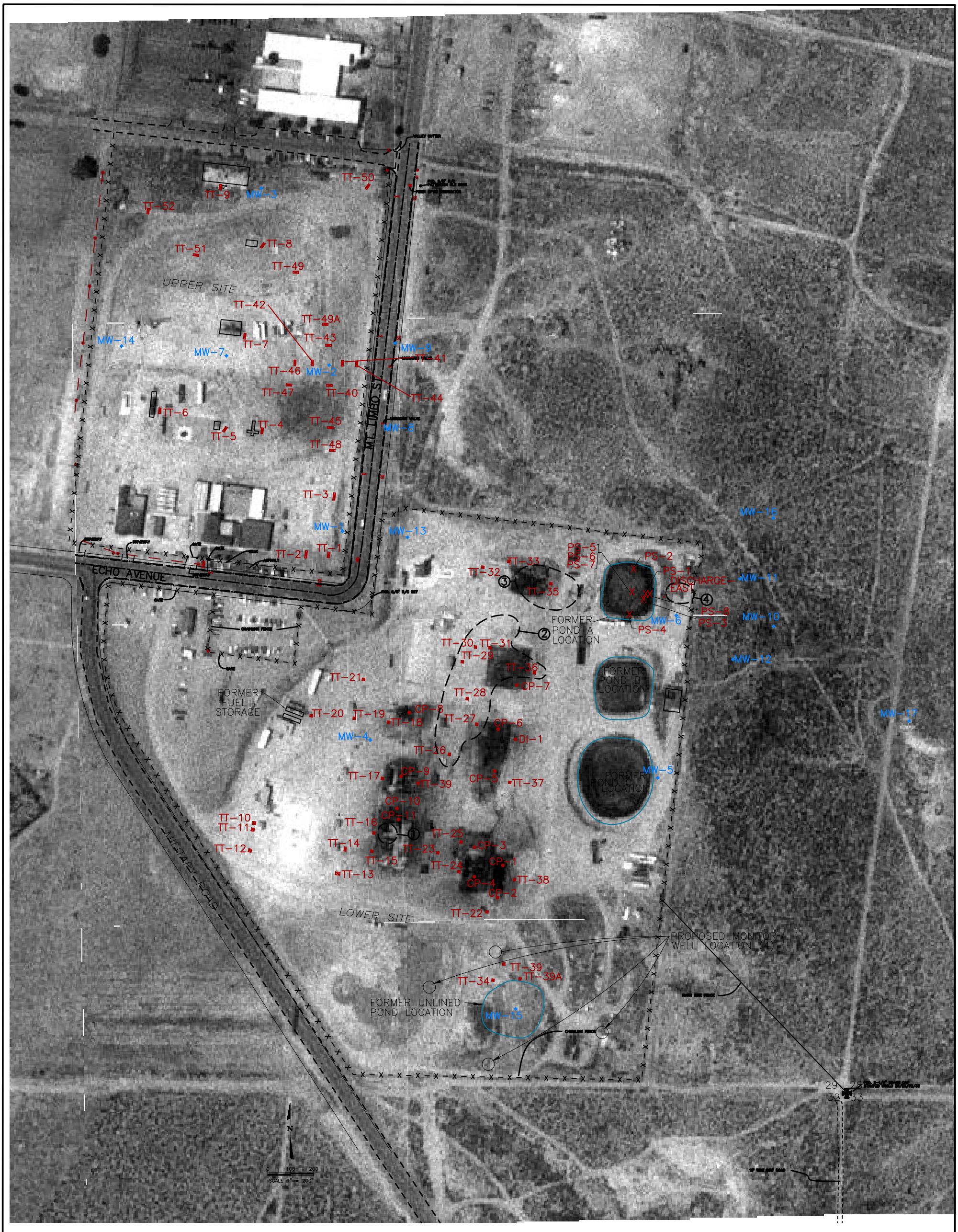


Wind Speed (m/s)

- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER **P. Hackenberry**	DATE **11/11/2002**	COMPANY NAME **McGinley Associates**
DISPLAY **Wind Speed**	UNIT **m/s**	COMMENTS **Former UNR Fire Fighting Training Facility, Stead, Nevada**
AVG. WIND SPEED **3.77 m/s**	CALM WINDS **14.92%**	
ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **1984 1985 1986 1987 1988 1992 1991 1990 1989 Jan 1 - 31Dec Midnight - 11 PM**	PROJECT/PLOT NO. **Figure 6**

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com



LEGEND

- SECTION CORNER
- STORM DRAIN MANHOLE
- WATER VALVE
- POWER POLE
- FIRE HYDRANT
- GUY WIRE
- FIBER OPTIC DESIGNATOR
- FOUND MONUMENT AS NOTED
- WATER BOX
- FENCE LINE
- EDGE PAVEMENT
- FLOWLINE
- DIRT ROAD
- FRONT FACE CURB
- APPROXIMATED SOIL AREA W/TPH> 1000 ppm
- MW-1 ◆ GROUNDWATER MONITORING WELL
- TT-1 ⊠ PREVIOUS TEST TRENCH LOCATION PREVIOUS

REVISIONS	No.	DESCRIPTION	BY	DATE

REFERENCE			
DESIGNED	TJ	08/01	
DRAWN	TAD	08/01	
CHECKED			
APPROVED			
APPROVED			

FIGURE 7

FORMER DODD/DEAL FIRE ACADEMY
APPROXIMATE SOIL AREAS EXCEEDING THP CONCENTRATION OF 1,000 PPM
LOWER SITE
STEAD, NEVADA

McGinley & Associates

DRAWING No.:	SHEET No. 1 OF 1
SCALE: NOT TO SCALE	
PROJECT No.: UNRFIRE	
DRAWING NAME COMPOSIT	

A REVISION

APPENDIX A

Summary of Analytical Data from Previous Investigations

TABLE A-1. Summary of Previous Soil Sampling Data from Shallow Test Trenches, Lower Site

Sample ID	TPH- E	TPH-V	Range	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethylbenezene	n-Butylbenezene	n-Propylbenezen e	sec-Butylbenezen e	MTBE	Methylene Chloride	1,1,2-TCA	TCE
	(mg/Kg)	(mg/Kg)		µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
TT-10 @ 2'	NA	56	-												
TT-11 @ 1'	80	NA	Diesel												
TT-12 @ 2'	NA	9	-												
TT-12 @ 4'	NA	54	-												
TT-13 @ 2'	127	NA	Diesel												
TT-14 @ 2'	178	NA	Diesel												
TT-15 @ 3'	356	NA	Diesel												
TT-16 @ 3'	270	NA	Diesel												
TT-17 @ 3'	NA	61	-												
TT-17 @ 8'	NA	60	-												
TT-18 @ 3'	ND	NA	-												
TT-19 @ 18"	ND	NA	-												
TT-20 @ 18"	ND	NA	-												
TT-21 @ 1'	380	NA	Diesel												
TT-22 @ 1'	ND	NA	-												
TT-22 @ 3'	ND	NA	-												
TT-23 @ 1'	80	NA	Diesel												
TT-24 @ 3.5'	ND	NA	Diesel												
TT-25 @ 3.5'	ND	NA	Diesel												
TT-26 @ 2'	2,068	47	Diesel												
TT-26 @ 7'	269	9	Diesel												
TT-27 @ 6.5'	2,675	NA	Diesel												
TT-28 @ 18"	785	NA	Diesel												
TT-29 @ 4'	1,618	NA	Diesel	ND	ND	10,516	24,528	ND	ND	ND	12,418	484	ND	426	43
TT-29 @ 8'	1,009	NA	Diesel												
TT-30 @ 4'	2,329	NA	Diesel	ND	6,536	9,988	31,014	10,344	ND	9,262	ND	ND	2,920	ND	ND
TT-30 @ 9'	535	NA	Diesel												
TT-31 @ 4'	190	NA	Diesel												
TT-31 @ 8'	680	NA	Diesel												
TT-31B @ 8'															
TT-32 @ 4'	ND	NA	-												
TT-32 @ 6'	ND	NA	-												
TT-33 @ 4'	ND	NA	-												
TT-33 @ 6.5'	ND	NA	-												
TT-34 @ 2'	606	NA	Diesel	ND	20	104	592	168	24	ND	ND	ND	2,452	ND	ND
TT-34 @ 4'	221	NA	Diesel												
TT-34B @ 4'															
TT-35 @ 2'	730	NA	Diesel												
TT-35 @ 4'	11,460	NA	Diesel												
TT-36 @ 2'	4,790	NA	Diesel												
TT-36 @ 4'	9,880	NA	Diesel												
TT-37 @ 2'	840	NA	Diesel												
TT-37 @ 4'	ND	NA	-												
TT-38 @ 2'	ND	NA	-												
TT-38 @ 4'	ND	NA	-												
TT-39 @ 2'	ND	NA	-												
TT-39 @ 4'	ND	NA	-												
TT-39 @ 6'	ND	NA	-												
MDL	20	0.5		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

TABLE A-2. Summary of Previous Sampling Data for Soil Underlying Concrete Pads, Lower Site

Sample ID	TPH- E	TPH-V	Range	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethylbenezene	n-Butylbenezene	n-Propylbenezene	sec-Butylbenezene	MTBE	Methylene Chloride	1,1,2-TCA	TCE
	(mg/Kg)	(mg/Kg)		µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
CP-1 @ 6'	376	NA	Diesel												
CP-2 @ 2'	126	NA	Diesel	ND	1,848	84	416	ND	ND	ND	ND	ND	2,914	ND	ND
CP- 2 @ 4.5'	ND	NA	-												
CP-3 @ 2'	850	NA	Diesel												
CP- 3 @ 4'	268	NA	Diesel												
CP- 4 @ 6'	748	NA	Diesel												
CP- 5 @ 3'	104	NA	Diesel												
CP- 5 @ 6'	ND	NA	-												
CP- 6 @ 3'	215	NA	Diesel												
CP- 6 @ 6'	514	NA	Diesel												
CP- 7 @ 4'	616	NA	Diesel												
CP- 7 @ 6'	ND	NA	-												
CP- 8 @ 3'	305	NA	Diesel												
CP- 8 @ 6'	35	NA	Diesel												
CP- 9 @ 3'	115	NA	Diesel												
CP- 9 @ 6'	864	NA	Diesel												
CP- 10 @ 3'	ND	NA	-												
CP- 11 @ 3'	ND	NA	-												
CP- 11 @ 7'	ND	NA	-												
MDL	20			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

TABLE A-3. TPH Results: Soil Samples Collected During Drilling			
Sample ID	TPH- E (mg/Kg)	TPH-V (mg/Kg)	Range
MW-4 @ 25'	<20	NA	-
MW-4 @ 50'	<20	NA	-
MW-5 @ 20'	<20	NA	-
MW-5 @ 35'	<20	NA	-
MW-6 @ 20'	<20	NA	-
MW-6 @ 35'	<20	NA	-
Detection Limit	20	0.5	

TABLE A-4. Summary of Previous Sludge Samples from Above Ground Tanks and Center Pond

Sample ID	TPH- E	Range	Naphthalene	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethylbenezene	1,3,5-Trimethylbenezene	n-Propylbenezene	sec-Butylbenezene	MTBE	Methylene Chloride	1,1,2-TCA	TCE
	(mg/Kg)		µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
SLG-3	132,400	Oil	ND	ND	ND	ND	3,200	ND	ND	ND	ND	ND	ND	ND	ND
SLG-4	110,100	Oil	ND	ND	ND	ND	880	ND	ND	ND	ND	ND	ND	ND	ND
SLG-7	184,600	Oil	133,520	7,040	155,360	118,720	45,880	580,880	267,920	102,000	ND	ND	ND	ND	ND
SLG-10	91,700	Oil	27,120	ND	8,320	10,240	52,000	157,040	45,600	14,560	ND	ND	ND	ND	ND
SLG-11	70,500	Oil	ND	ND	ND	ND	3,120	ND	ND	ND	ND	ND	ND	ND	ND
Center Pond	38,000	Diesel	ND	ND	53,600	34,800	204,400	100,400	ND	ND	ND	ND	ND	ND	ND
MDL	20		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

TABLE A-5. Summary of Previous Groundwater Sampling Data

Well Number	Date Sampled	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	MTBE	Tetrachloroethene	Chloroform
		Contaminant Concentrations (µg/L)								
MW-1	01/21/00	13.3	80.3	ND	ND	27	21	ND	8.5	ND
	06/22/00	53	ND	ND	ND	ND	ND	ND		ND
MW-2	01/21/00	1020	20	15	362			ND	ND	ND
	06/22/00	920	14	ND	362	ND	ND	ND	ND	ND
MW-3	01/21/00	ND	3.3	ND	ND	ND	ND	ND	ND	ND
	06/22/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	01/21/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/22/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-5	01/21/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/22/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-6	01/21/00	13.7	ND	ND	ND	ND	ND	199.3	ND	ND
	06/22/00	3.6	ND	ND	ND	ND	ND	130	ND	ND
MW-7	04/25/00	150.8	6.5	40.1	67.1	37.2	14.9	ND	ND	ND
	06/22/00	190	8	ND	152	ND	ND	ND	ND	ND
MW-8	04/25/00	ND	ND	ND	ND			ND		ND
	06/22/00	ND	ND	ND	ND			ND		5.5
MW-9	04/25/00	113.5	ND	ND	17.5			ND		ND
	06/22/00	83	ND	ND	ND			ND		ND
MW-10	09/07/00	7.2	ND	ND	ND			146.1		ND
	09/20/00	4.4	ND	ND	ND			138.4		ND
MW-11	09/07/00	9.5	ND	ND	ND			130.5		ND
	09/20/00	2.2	ND	ND	ND			162.5		ND
MW-12	09/07/00	ND	ND	ND	ND			22.1		ND
	09/20/00	ND	ND	ND	ND			21.8		ND
MW-13	09/08/00	11.9	ND	ND	ND			ND		ND
	09/20/00	6.4	ND	ND	ND			ND		ND
MW-14	09/08/00	ND	ND	ND	ND			ND		ND
	09/20/00	ND	ND	ND	ND			ND		ND
MDL		2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0

APPENDIX B

Laboratory Results, Initial Soil Screening

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**SampID**	**ClientSampID**	**CollectionDate**	**Naphthalene**	**Acenaphthylene**	**Acenaphthene**	**Fluorene**	**Phenanthrene**	**Anthracene**	**Fluoranthene**	**Pyrene**	**Benzo(a)anthracene**	**Chrysene**
2	02012101-13A	LSTP-1 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
3	02012101-15A	LSTP-2 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
4	02012101-17A	LSTP-3 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
5	02012101-19A	LSTP-4 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
6	02012101-21A	LSTP-5 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
7	02012101-23A	LSTP-6 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
8	02012101-25A	LSTP-7 at 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
9													
10	02012120-03A	LSTP-8 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
11	02012120-05A	LSTP-9 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
12	02012120-07A	LSTP-10 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
13	02012120-09A	LSTP-11 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
14	02012120-11A	LSTP-12 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
15	02012120-13A	LSTP-13 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
16	02012120-15A	LSTP-14 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
17	02012120-16A	LSTP-14 @ 4	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
18	02012120-17A	LSTP-14 @ 8	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
19	02012120-18A	LSTP-15 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
20	02012120-19A	LSTP-15 @ 4	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
21	02012120-20A	LSTP-16 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
22	02012120-21A	LSTP-16 @ 4	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
23	02012120-22A	LSTP-16 @ 4-Duplicate	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
24	02012120-23A	LSTP-16 @ 8	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
25	02012120-24A	LSTP-17 @ 2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
26	02012120-25A	LSTP-17 @ 4	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
27	02012120-26A	LSTP-17 @ 8	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
28													
29	02012160-01A	LSTP-18@2	1/18/2002	3500µg/Kg	<250µg/Kg	<250µg/Kg	660µg/Kg	<250µg/Kg	620µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
30	02012160-02A	LSTP-18@4	1/18/2002	1500µg/Kg	<250µg/Kg	<250µg/Kg	250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
31	02012160-03A	LSTP-18@8	1/18/2002	20000µg/Kg	<250µg/Kg	<250µg/Kg	1600µg/Kg	1600µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
32	02012160-04A	LSTP-19@2	1/18/2002	410µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
33	02012160-05A	LSTP-19@4	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
34	02012160-06A	LSTP-19@6	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
35	02012160-07A	LSTP-20@2	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
36	02012160-08A	LSTP-20@4	1/18/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
37													
38	02012220-01A	LSTP-21 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
39	02012220-02A	LSTP-21 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
40	02012220-03A	LSTP-21 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
41	02012220-04A	LSTP-22 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
42	02012220-05A	LSTP-22 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
43	02012220-06A	LSTP-22 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
44	02012220-07A	LSTP-23 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
45	02012220-08A	LSTP-23 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
46	02012220-09A	LSTP-23 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
47	02012220-10A	LSTP-24 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
48	02012220-11A	LSTP-24 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
49	02012220-12A	LSTP-24 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
50	02012220-13A	LSTP-25 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
51	02012220-14A	LSTP-25 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
52	02012220-15A	LSTP-25 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
53	02012220-16A	LSTP-26 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
54	02012220-17A	LSTP-26 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
55	02012220-18A	LSTP-26 @ 7	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
56	02012220-19A	LSTP-27 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
57	02012220-20A	LSTP-27 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg

	A	N	O	P	Q	R	S	T	U	V	W	X	Y
1	**SampID**	**Benzo(b)fluoranthene**	**Benzo(k)fluoranthene**	**Benzo(a)pyrene**	**Indeno(1,2,3-cd)pyrene**	**Dibenz(a,h)anthracene**	**Benzo(g,h,i)perylene**	**C8-C9**	**C10-C11**	**C12-C13**	**C14-C15**	**C16-C17**	**C18-C19**
2	02012101-13A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	3.3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
3	02012101-15A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
4	02012101-17A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg
5	02012101-19A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
6	02012101-21A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
7	02012101-23A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
8	02012101-25A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
9													
10	02012120-03A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
11	02012120-05A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
12	02012120-07A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
13	02012120-09A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
14	02012120-11A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
15	02012120-13A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
16	02012120-15A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
17	02012120-16A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
18	02012120-17A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
19	02012120-18A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
20	02012120-19A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
21	02012120-20A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
22	02012120-21A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
23	02012120-22A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
24	02012120-23A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
25	02012120-24A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
26	02012120-25A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
27	02012120-26A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
28													
29	02012160-01A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	130mg/Kg	310mg/Kg	350mg/Kg	440mg/Kg	370mg/Kg
30	02012160-02A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	56mg/Kg	130mg/Kg	140mg/Kg	200mg/Kg	120mg/Kg
31	02012160-03A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	610mg/Kg	1500mg/Kg	1500mg/Kg	1900mg/Kg	1500mg/Kg	1200mg/Kg
32	02012160-04A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
33	02012160-05A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
34	02012160-06A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
35	02012160-07A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
36	02012160-08A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
37													
38	02012220-01A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
39	02012220-02A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
40	02012220-03A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
41	02012220-04A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
42	02012220-05A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
43	02012220-06A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
44	02012220-07A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
45	02012220-08A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
46	02012220-09A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
47	02012220-10A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
48	02012220-11A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
49	02012220-12A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
50	02012220-13A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
51	02012220-14A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
52	02012220-15A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
53	02012220-16A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
54	02012220-17A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
55	02012220-18A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
56	02012220-19A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	72mg/Kg	83mg/Kg	83mg/Kg	66mg/Kg	59mg/Kg	61mg/Kg
57	02012220-20A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	120mg/Kg	480mg/Kg	960mg/Kg

	A	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	**SampID**	**C20-C21**	**C22-C23**	**C24-C25**	**C26-C27**	**C28-C29**	**C30-C31**	**C32-C33**	**C34-C35**	**C36-C37**	**C38-C39**	**Total Carbon Range**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes, Total**
2	02012101-13A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
3	02012101-15A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
4	02012101-17A	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<30mg/Kg	<480mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
5	02012101-19A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
6	02012101-21A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
7	02012101-23A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
8	02012101-25A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
9																
10	02012120-03A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
11	02012120-05A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
12	02012120-07A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
13	02012120-09A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
14	02012120-11A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
15	02012120-13A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
16	02012120-15A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
17	02012120-16A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
18	02012120-17A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
19	02012120-18A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
20	02012120-19A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
21	02012120-20A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
22	02012120-21A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
23	02012120-22A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
24	02012120-23A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
25	02012120-24A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
26	02012120-25A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
27	02012120-26A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
28																
29	02012160-01A	200mg/Kg	87mg/Kg	32mg/Kg	7.3mg/Kg	4.1mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	1900mg/Kg	<100µg/Kg	<100µg/Kg	230µg/Kg	3200µg/Kg
30	02012160-02A	70mg/Kg	26mg/Kg	10mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	750mg/Kg	<100µg/Kg	<100µg/Kg	<100µg/Kg	450µg/Kg
31	02012160-03A	580mg/Kg	230mg/Kg	51mg/Kg	18mg/Kg	3.9mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	9200mg/Kg	5200µg/Kg	23000µg/Kg	41000µg/Kg	210000µg/Kg
32	02012160-04A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
33	02012160-05A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
34	02012160-06A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
35	02012160-07A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
36	02012160-08A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
37																
38	02012220-01A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
39	02012220-02A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
40	02012220-03A	<3mg/Kg	<3mg/Kg	12mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	13mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
41	02012220-04A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
42	02012220-05A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
43	02012220-06A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
44	02012220-07A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
45	02012220-08A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
46	02012220-09A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
47	02012220-10A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
48	02012220-11A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
49	02012220-12A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
50	02012220-13A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
51	02012220-14A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
52	02012220-15A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
53	02012220-16A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
54	02012220-17A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
55	02012220-18A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
56	02012220-19A	68mg/Kg	67mg/Kg	64mg/Kg	67mg/Kg	74mg/Kg	85mg/Kg	54mg/Kg	42mg/Kg	<30mg/Kg	<30mg/Kg	940mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
57	02012220-20A	1100mg/Kg	390mg/Kg	170mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	3300mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**SampID**	**ClientSampID**	**CollectionDate**	**Naphthalene**	**Acenaphthylene**	**Acenaphthene**	**Fluorene**	**Phenanthrene**	**Anthracene**	**Fluoranthene**	**Pyrene**	**Benzo(a)anthracene**	**Chrysene**
58	02012220-21A	LSTP-27 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
59	02012220-22A	LSTP-28 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
60	02012220-23A	LSTP-28 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
61	02012220-24A	LSTP-28 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
62	02012220-25A	LSTP-29 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
63	02012220-26A	LSTP-29 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
64													
65	02012221-01A	LSTP-29 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
66	02012221-02A	LSTP-30 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
67	02012221-03A	LSTP-30 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
68	02012221-04A	LSTP-30 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
69	02012221-05A	LSTP-31 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
70	02012221-06A	LSTP-31 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
71	02012221-07A	LSTP-31 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
72	02012221-08A	LSTP-32 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
73	02012221-09A	LSTP-32 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
74	02012221-10A	LSTP-32 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
75	02012221-11A	LSTP-33 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
76	02012221-12A	LSTP-33 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
77	02012221-13A	LSTP-33 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
78	02012221-14A	LSTP-34 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
79	02012221-15A	LSTP-34 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
80	02012221-16A	LSTP-34 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
81	02012221-17A	LSTP-35 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
82	02012221-18A	LSTP-35 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
83	02012221-19A	LSTP-35 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
84	02012221-20A	LSTP-36 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
85	02012221-21A	LSTP-36 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
86	02012221-22A	LSTP-36 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
87	02012221-23A	LSTP-37 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
88	02012221-24A	LSTP-37 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
89	02012221-25A	LSTP-37 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
90	02012221-26A	LSTP-38 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
91													
92	02012222-01A	LSTP-38 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
93	02012222-02A	LSTP-38 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
94	02012222-03A	LSTP-39 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
95	02012222-04A	LSTP-39 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
96	02012222-05A	LSTP-39 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
97	02012222-06A	LSTP-40 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
98	02012222-07A	LSTP-40 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
99	02012222-08A	LSTP-40 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
100	02012222-09A	LSTP-41 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
101	02012222-10A	LSTP-41 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
102	02012222-11A	LSTP-41 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
103	02012222-12A	LSTP-42 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
104	02012222-13A	LSTP-42 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
105	02012222-14A	LSTP-42 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
106	02012222-15A	LSTP-43 @ 14	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
107	02012222-16A	LSTP-44 @ 15	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
108	02012222-17A	LSTP-45 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
109	02012222-18A	LSTP-45 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
110	02012222-19A	LSTP-45 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
111	02012222-20A	LSTP-46 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
112	02012222-21A	LSTP-46 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
113	02012222-22A	LSTP-46 @ 7	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg

	A	N	O	P	Q	R	S	T	U	V	W	X	Y
1	**SampID**	**Benzo(b)fluoranthene**	**Benzo(k)fluoranthene**	**Benzo(a)pyrene**	**Indeno(1,2,3-cd)pyrene**	**Dibenz(a,h)anthracene**	**Benzo(g,h,i)perylene**	**C8-C9**	**C10-C11**	**C12-C13**	**C14-C15**	**C16-C17**	**C18-C19**
58	02012220-21A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	650mg/Kg	240mg/Kg	120mg/Kg	98mg/Kg	83mg/Kg	29mg/Kg
59	02012220-22A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	10mg/Kg	8.4mg/Kg	9.3mg/Kg	8.6mg/Kg	7.6mg/Kg	8.7mg/Kg
60	02012220-23A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	15mg/Kg	13mg/Kg	8.6mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
61	02012220-24A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	4.7mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	3mg/Kg
62	02012220-25A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	6.1mg/Kg	4.6mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
63	02012220-26A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
64													
65	02012221-01A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
66	02012221-02A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	6.6mg/Kg	5.7mg/Kg	6.1mg/Kg	6.6mg/Kg	9.9mg/Kg	15mg/Kg
67	02012221-03A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	3mg/Kg	11mg/Kg	31mg/Kg	55mg/Kg
68	02012221-04A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
69	02012221-05A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	3mg/Kg	5.1mg/Kg	9mg/Kg
70	02012221-06A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
71	02012221-07A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
72	02012221-08A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	9.5mg/Kg	8.2mg/Kg	9.4mg/Kg	12mg/Kg	19mg/Kg	28mg/Kg
73	02012221-09A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
74	02012221-10A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
75	02012221-11A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	3.2mg/Kg	5.6mg/Kg
76	02012221-12A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
77	02012221-13A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
78	02012221-14A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	7.8mg/Kg	35mg/Kg	140mg/Kg	380mg/Kg	600mg/Kg
79	02012221-15A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	4.7mg/Kg	13mg/Kg	22mg/Kg
80	02012221-16A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	4.9mg/Kg	5.4mg/Kg
81	02012221-17A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
82	02012221-18A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
83	02012221-19A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
84	02012221-20A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
85	02012221-21A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
86	02012221-22A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
87	02012221-23A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
88	02012221-24A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
89	02012221-25A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
90	02012221-26A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
91													
92	02012222-01A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
93	02012222-02A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
94	02012222-03A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
95	02012222-04A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
96	02012222-05A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
97	02012222-06A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	9.7mg/Kg	18mg/Kg	22mg/Kg	18mg/Kg	16mg/Kg	16mg/Kg
98	02012222-07A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	4.2mg/Kg	9.7mg/Kg	8.5mg/Kg	6.8mg/Kg	7.5mg/Kg
99	02012222-08A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
100	02012222-09A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
101	02012222-10A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
102	02012222-11A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
103	02012222-12A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
104	02012222-13A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
105	02012222-14A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
106	02012222-15A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
107	02012222-16A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
108	02012222-17A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
109	02012222-18A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
110	02012222-19A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
111	02012222-20A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
112	02012222-21A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
113	02012222-22A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg

	A	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	**SampID**	**C20-C21**	**C22-C23**	**C24-C25**	**C26-C27**	**C28-C29**	**C30-C31**	**C32-C33**	**C34-C35**	**C36-C37**	**C38-C39**	**Total Carbon Range**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes, Total**
58	02012220-21A	24mg/Kg	24mg/Kg	18mg/Kg	16mg/Kg	14mg/Kg	13mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	1300mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
59	02012220-22A	10mg/Kg	11mg/Kg	11mg/Kg	11mg/Kg	12mg/Kg	15mg/Kg	12mg/Kg	9mg/Kg	3.2mg/Kg	<3mg/Kg	150mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
60	02012220-23A	<3mg/Kg	<3mg/Kg	3.2mg/Kg	3mg/Kg	3.7mg/Kg	3.8mg/Kg	3.8mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	55mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
61	02012220-24A	3.6mg/Kg	4mg/Kg	4.1mg/Kg	4mg/Kg	5.5mg/Kg	4.5mg/Kg	5mg/Kg	3.3mg/Kg	3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
62	02012220-25A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
63	02012220-26A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
64																
65	02012221-01A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
66	02012221-02A	15mg/Kg	12mg/Kg	12mg/Kg	11mg/Kg	12mg/Kg	16mg/Kg	11mg/Kg	8.6mg/Kg	3.4mg/Kg	<3mg/Kg	150mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
67	02012221-03A	57mg/Kg	42mg/Kg	14mg/Kg	6.3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	220mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
68	02012221-04A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
69	02012221-05A	7.8mg/Kg	4.6mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
70	02012221-06A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
71	02012221-07A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
72	02012221-08A	30mg/Kg	23mg/Kg	17mg/Kg	15mg/Kg	16mg/Kg	20mg/Kg	15mg/Kg	11mg/Kg	3.8mg/Kg	<3mg/Kg	240mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
73	02012221-09A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
74	02012221-10A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
75	02012221-11A	4.6mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
76	02012221-12A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
77	02012221-13A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
78	02012221-14A	570mg/Kg	460mg/Kg	190mg/Kg	88mg/Kg	43mg/Kg	13mg/Kg	13mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	2500mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
79	02012221-15A	18mg/Kg	9.3mg/Kg	3.8mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	70mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
80	02012221-16A	4.4mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
81	02012221-17A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
82	02012221-18A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
83	02012221-19A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
84	02012221-20A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
85	02012221-21A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
86	02012221-22A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
87	02012221-23A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
88	02012221-24A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
89	02012221-25A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
90	02012221-26A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
91																
92	02012222-01A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
93	02012222-02A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
94	02012222-03A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
95	02012222-04A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
96	02012222-05A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
97	02012222-06A	16mg/Kg	15mg/Kg	14mg/Kg	15mg/Kg	18mg/Kg	22mg/Kg	20mg/Kg	17mg/Kg	6.8mg/Kg	<3mg/Kg	240mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
98	02012222-07A	13mg/Kg	12mg/Kg	12mg/Kg	14mg/Kg	16mg/Kg	17mg/Kg	16mg/Kg	12mg/Kg	4.7mg/Kg	<3mg/Kg	150mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
99	02012222-08A	<3mg/Kg	4.3mg/Kg	6.2mg/Kg	4.4mg/Kg	5.1mg/Kg	5.5mg/Kg	5.4mg/Kg	5.7mg/Kg	3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
100	02012222-09A	<3mg/Kg	<3mg/Kg	4mg/Kg	3.4mg/Kg	3.2mg/Kg	3.5mg/Kg	3.9mg/Kg	4.2mg/Kg	4mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
101	02012222-10A	<3mg/Kg	<3mg/Kg	<3mg/Kg	5.3mg/Kg	<3mg/Kg	<3mg/Kg	3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
102	02012222-11A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
103	02012222-12A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
104	02012222-13A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
105	02012222-14A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
106	02012222-15A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
107	02012222-16A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
108	02012222-17A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
109	02012222-18A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
110	02012222-19A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
111	02012222-20A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
112	02012222-21A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
113	02012222-22A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**SampID**	**ClientSampID**	**CollectionDate**	**Naphthalene**	**Acenaphthylene**	**Acenaphthene**	**Fluorene**	**Phenanthrene**	**Anthracene**	**Fluoranthene**	**Pyrene**	**Benzo(a)anthracene**	**Chrysene**
114													
115	02012223-01A	LSTP-47 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
116	02012223-02A	LSTP-47 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
117	02012223-03A	LSTP-47 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
118	02012223-04A	LSTP-48 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
119	02012223-05A	LSTP-48 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
120	02012223-06A	LSTP-48 @ 6	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
121	02012223-07A	LSTP-49 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
122	02012223-08A	LSTP-49 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
123	02012223-09A	LSTP-49 @ 8	1/21/2002	320µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	1200µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
124	02012223-10A	LSTP-50 @ 2	1/21/2002	2200µg/Kg	<250µg/Kg	<250µg/Kg	1800µg/Kg	4700µg/Kg	<250µg/Kg	630µg/Kg	730µg/Kg	<250µg/Kg	270µg/Kg
125	02012223-11A	LSTP-50 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
126	02012223-12A	LSTP-50 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
127	02012223-13A	LSTP-51 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
128	02012223-14A	LSTP-51 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
129	02012223-15A	LSTP-51 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
130	02012223-16A	LSTP-52 @ 15	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
131	02012223-17A	LSTP-53 @ 2	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
132	02012223-18A	LSTP-53 @ 4	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
133	02012223-19A	LSTP-53 @ 8	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
134	02012223-20A	LSTP-23 @ 4-Duplicate	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
135	02012223-21A	LSTP-30 @ 2-Duplicate	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
136	02012223-22A	LSTP-36 @ 8-Duplicate	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
137	02012223-23A	LSTP-45 @ 4-Duplicate	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
138	02012223-24A	LSTP-53 @ 2-Duplicate	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
139	02012223-25A	LSTP-Trip Blank	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg
140	02012223-26A	LSTP- Field Blank	1/21/2002	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg	<250µg/Kg

	A	N	O	P	Q	R	S	T	U	V	W	X	Y
1	**SampID**	**Benzo(b)fluoranthene**	**Benzo(k)fluoranthene**	**Benzo(a)pyrene**	**Indeno(1,2,3-cd)pyrene**	**Dibenz(a,h)anthracene**	**Benzo(g,h,i)perylene**	**C8-C9**	**C10-C11**	**C12-C13**	**C14-C15**	**C16-C17**	**C18-C19**
114													
115	02012223-01A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	8.5mg/Kg	9.9mg/Kg	8.8mg/Kg	7.7mg/Kg	7.4mg/Kg
116	02012223-02A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	4.3mg/Kg	4.9mg/Kg	4.3mg/Kg	3.5mg/Kg	3.1mg/Kg
117	02012223-03A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
118	02012223-04A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
119	02012223-05A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
120	02012223-06A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
121	02012223-07A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	8.4mg/Kg	14mg/Kg	38mg/Kg	93mg/Kg	150mg/Kg
122	02012223-08A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	6.3mg/Kg	16mg/Kg	53mg/Kg	130mg/Kg	210mg/Kg
123	02012223-09A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	39mg/Kg	220mg/Kg	710mg/Kg	1000mg/Kg	1100mg/Kg
124	02012223-10A	300µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	150mg/Kg	500mg/Kg	1500mg/Kg	2400mg/Kg	2700mg/Kg
125	02012223-11A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	5.1mg/Kg	9.3mg/Kg	13mg/Kg	13mg/Kg
126	02012223-12A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
127	02012223-13A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
128	02012223-14A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
129	02012223-15A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	3.2mg/Kg
130	02012223-16A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
131	02012223-17A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	4.8mg/Kg	13mg/Kg	22mg/Kg	20mg/Kg
132	02012223-18A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
133	02012223-19A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
134	02012223-20A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
135	02012223-21A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	4.5mg/Kg	7.6mg/Kg	9.1mg/Kg	9.5mg/Kg	17mg/Kg	28mg/Kg
136	02012223-22A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
137	02012223-23A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
138	02012223-24A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	4.6mg/Kg	11mg/Kg	14mg/Kg	10mg/Kg
139	02012223-25A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg
140	02012223-26A	<250µg/Kg	<250µg/Kg	<250µg/Kg	<500µg/Kg	<500µg/Kg	<500µg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg

	A	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	**SampID**	**C20-C21**	**C22-C23**	**C24-C25**	**C26-C27**	**C28-C29**	**C30-C31**	**C32-C33**	**C34-C35**	**C36-C37**	**C38-C39**	**Total Carbon Range**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes, Total**
114																
115	02012223-01A	7.1mg/Kg	6.9mg/Kg	6.3mg/Kg	6.4mg/Kg	6.5mg/Kg	6mg/Kg	4.2mg/Kg	3mg/Kg	<3mg/Kg	<3mg/Kg	89mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
116	02012223-02A	3.2mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
117	02012223-03A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
118	02012223-04A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
119	02012223-05A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
120	02012223-06A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
121	02012223-07A	140mg/Kg	93mg/Kg	50mg/Kg	32mg/Kg	21mg/Kg	17mg/Kg	11mg/Kg	7.6mg/Kg	5.3mg/Kg	<3mg/Kg	680mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
122	02012223-08A	180mg/Kg	120mg/Kg	59mg/Kg	35mg/Kg	23mg/Kg	17mg/Kg	10mg/Kg	6.3mg/Kg	<3mg/Kg	<3mg/Kg	860mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
123	02012223-09A	840mg/Kg	380mg/Kg	130mg/Kg	31mg/Kg	11mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	4500mg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
124	02012223-10A	2400mg/Kg	430mg/Kg	80mg/Kg	73mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	10000mg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	450µg/Kg
125	02012223-11A	8.1mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	49mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
126	02012223-12A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
127	02012223-13A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
128	02012223-14A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
129	02012223-15A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
130	02012223-16A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
131	02012223-17A	12mg/Kg	6.4mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	78mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
132	02012223-18A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
133	02012223-19A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
134	02012223-20A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
135	02012223-21A	26mg/Kg	19mg/Kg	14mg/Kg	13mg/Kg	15mg/Kg	15mg/Kg	11mg/Kg	7.4mg/Kg	<3mg/Kg	<3mg/Kg	190mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
136	02012223-22A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
137	02012223-23A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
138	02012223-24A	6.4mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
139	02012223-25A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg
140	02012223-26A	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<3mg/Kg	<48mg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg	<25µg/Kg

APPENDIX C

Laboratory Results, Extended List of VOCs

	A	B	C	D	E	F	G	H
1	**SampID**	**ClientSampID**	**CollectionDate**	**1,1,1,2-Tetrachloroethane**	**1,1,1-Trichloroethane**	**1,1,2,2-Tetrachloroethane**	**1,1,2-Trichloroethane**	**1,1-Dichloroethane**
2	02012160-01A	LSTP-18@2	1/18/2002	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	LSTP-18@4	1/18/2002	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	LSTP-18@8	1/18/2002	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	LSTP-27 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	LSTP-27 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	LSTP-27 @ 8	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	LSTP-28 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	LSTP-28 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	LSTP-30 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	LSTP-30 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	LSTP-32 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	LSTP-34 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	LSTP-34 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	LSTP-40 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	LSTP-40 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	LSTP-47 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	LSTP-49 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	LSTP-49 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	LSTP-49 @ 8	1/21/2002	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	LSTP-50 @ 2	1/21/2002	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	LSTP-50 @ 4	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	LSTP-53 @ 2	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	LSTP-30 @ 2-Duplicate	1/21/2002	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg

	A	I	J	K	L	M	N	O
1	**SampID**	**1,1-Dichloroethene**	**1,1-Dichloropropene**	**1,2,3,4-Tetramethylbenzene**	**1,2,3,5-Tetramethylbenzene**	**1,2,3-Trichlorobenzene**	**1,2,3-Trichloropropane**	**1,2,3-Trimethylbenzene**
2	02012160-01A	<200µg/Kg	<200µg/Kg	2189µg/Kg	2157µg/Kg	<800µg/Kg	<800µg/Kg	1979µg/Kg
3	02012160-02A	<200µg/Kg	<200µg/Kg	1450.03µg/Kg	1299µg/Kg	<800µg/Kg	<800µg/Kg	895.4µg/Kg
4	02012160-03A	<1000µg/Kg	<1000µg/Kg	12000µg/Kg	15000µg/Kg	<4000µg/Kg	<4000µg/Kg	33000µg/Kg
5	02012220-19A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
6	02012220-20A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
7	02012220-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
8	02012220-22A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
9	02012220-23A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
10	02012221-02A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
11	02012221-03A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
12	02012221-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
13	02012221-14A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
14	02012221-15A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
15	02012222-06A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
16	02012222-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
17	02012223-01A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
18	02012223-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
19	02012223-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
20	02012223-09A	<80µg/Kg	<80µg/Kg	<320µg/Kg	<320µg/Kg	<320µg/Kg	<320µg/Kg	<320µg/Kg
21	02012223-10A	<80µg/Kg	<80µg/Kg	740µg/Kg	930µg/Kg	<320µg/Kg	<320µg/Kg	530µg/Kg
22	02012223-11A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
23	02012223-17A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg
24	02012223-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg	<160µg/Kg

	A	P	Q	R	S	T	U
1	**SampID**	**1,2,4,5-Tetramethylbenzene**	**1,2,4-Trichlorobenzene**	**1,2,4-Trimethylbenzene**	**1,2-Dibromo-3-chloropropane (DBCP)**	**1,2-Dibromoethane (EDB)**	**1,2-Dichlorobenzene**
2	02012160-01A	1501µg/Kg	<800µg/Kg	6175µg/Kg	<1200µg/Kg	<800µg/Kg	<200µg/Kg
3	02012160-02A	935.6µg/Kg	<800µg/Kg	3101µg/Kg	<1200µg/Kg	<800µg/Kg	<200µg/Kg
4	02012160-03A	10000µg/Kg	<4000µg/Kg	120000µg/Kg	<6000µg/Kg	<4000µg/Kg	<1000µg/Kg
5	02012220-19A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
6	02012220-20A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
7	02012220-21A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
8	02012220-22A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
9	02012220-23A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
10	02012221-02A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
11	02012221-03A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
12	02012221-08A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
13	02012221-14A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
14	02012221-15A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
15	02012222-06A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
16	02012222-07A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
17	02012223-01A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
18	02012223-07A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
19	02012223-08A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
20	02012223-09A	<320µg/Kg	<320µg/Kg	<80µg/Kg	<480µg/Kg	<320µg/Kg	<80µg/Kg
21	02012223-10A	660µg/Kg	<320µg/Kg	930µg/Kg	<480µg/Kg	<320µg/Kg	<80µg/Kg
22	02012223-11A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
23	02012223-17A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg
24	02012223-21A	<160µg/Kg	<160µg/Kg	<40µg/Kg	<240µg/Kg	<160µg/Kg	<40µg/Kg

	A	V	W	X	Y	Z	AA	AB	AC
1	**SamplD**	**1,2-Dichloroethane**	**1.2-Dichloropropane**	**1,3,5-Trimethylbenzene**	**1,3-Dichlorobenzene**	**1,3-Dichloropropane**	**1,4-Dichlorobenzene**	**2,2-Dichloropropane**	**2-Chlorotoluene**
2	02012160-01A	<200µg/Kg	<200µg/Kg	1806µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	<200µg/Kg	<200µg/Kg	843µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	<1000µg/Kg	<1000µg/Kg	38000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	<80µg/Kg	<80µg/Kg	360µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg

	A	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	**SampID**	**4-Chlorotoluene**	**4-Isopropyltoluene**	**Benzene**	**Bromobenzene**	**Bromochloromethane**	**Bromodichloromethane**	**Bromoform**	**Bromomethane**	**Carbon tetrachloride**
2	02012160-01A	<200µg/Kg	<200µg/Kg	<50µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	<200µg/Kg	<200µg/Kg	<50µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	<1000µg/Kg	1900µg/Kg	5200µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	<80µg/Kg	<80µg/Kg	<20µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	<80µg/Kg	<80µg/Kg	<20µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	<40µg/Kg	<40µg/Kg	<10µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg

	A	AM	AN	AO	AP	AQ	AR	AS	AT
1	**SamplD**	**Chlorobenzene**	**Chloroethane**	**Chloroform**	**Chloromethane**	**cis-1,2-Dichloroethene**	**cis-1,3-Dichloropropene**	**Di-isopropyl Ether (DIPE)**	**Dibromochloromethane**
2	02012160-01A	<200µg/Kg	<200µg/Kg	<200µg/Kg	<800µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	<200µg/Kg	<200µg/Kg	<200µg/Kg	<800µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<4000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	<80µg/Kg	<80µg/Kg	<80µg/Kg	<320µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	<80µg/Kg	<80µg/Kg	<80µg/Kg	<320µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg

	A	AU	AV	AW	AX	AY	AZ	BA	BB
1	**SampID**	**Dibromomethane**	**Dichlorodifluoromethane**	**Dichloromethane**	**Ethyl Tertiary Butyl Ether (ETBE)**	**Ethylbenzene**	**Hexachlorobutadiene**	**Isopropylbenzene**	**m,p-Xylene**
2	02012160-01A	<200µg/Kg	<200µg/Kg	<800µg/Kg	<200µg/Kg	230µg/Kg	<800µg/Kg	<200µg/Kg	2100µg/Kg
3	02012160-02A	<200µg/Kg	<200µg/Kg	<800µg/Kg	<200µg/Kg	<100µg/Kg	<800µg/Kg	<200µg/Kg	340µg/Kg
4	02012160-03A	<1000µg/Kg	<1000µg/Kg	<4000µg/Kg	<1000µg/Kg	41000µg/Kg	<4000µg/Kg	4700µg/Kg	150000µg/Kg
5	02012220-19A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
6	02012220-20A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
7	02012220-21A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
8	02012220-22A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
9	02012220-23A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
10	02012221-02A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
11	02012221-03A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
12	02012221-08A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
13	02012221-14A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
14	02012221-15A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
15	02012222-06A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
16	02012222-07A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
17	02012223-01A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
18	02012223-07A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
19	02012223-08A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
20	02012223-09A	<80µg/Kg	<80µg/Kg	<320µg/Kg	<80µg/Kg	<40µg/Kg	<320µg/Kg	<80µg/Kg	<40µg/Kg
21	02012223-10A	<80µg/Kg	<80µg/Kg	<320µg/Kg	<80µg/Kg	<40µg/Kg	<320µg/Kg	<80µg/Kg	250µg/Kg
22	02012223-11A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
23	02012223-17A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg
24	02012223-21A	<40µg/Kg	<40µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg	<160µg/Kg	<40µg/Kg	<25µg/Kg

	A	BC	BD	BE	BF	BG	BH	BI	BJ
1	**SampID**	**Methyl tert-butyl ether (MTBE)**	**n-Butylbenzene**	**n-Propylbenzene**	**Naphthalene**	**o-Xylene**	**sec-Butylbenzene**	**Styrene**	**tert-Butylbenzene**
2	02012160-01A	<100µg/Kg	<200µg/Kg	340µg/Kg	2737µg/Kg	1100µg/Kg	224µg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	<100µg/Kg	<200µg/Kg	<200µg/Kg	1833µg/Kg	120µg/Kg	<200µg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	<500µg/Kg	<1000µg/Kg	20000µg/Kg	25000µg/Kg	68000µg/Kg	4600µg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	<40µg/Kg	<80µg/Kg	<80µg/Kg	<320µg/Kg	<40µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	<40µg/Kg	320µg/Kg	<80µg/Kg	1000µg/Kg	200µg/Kg	<80µg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	<25µg/Kg	<40µg/Kg	<40µg/Kg	<160µg/Kg	<25µg/Kg	<40µg/Kg	<40µg/Kg	<40µg/Kg

	A	BK	BL	BM	BN	BO	BP	BQ
1	**SampID**	**Tertiary Amyl Methyl Ether (TAME)**	**Tertiary Butyl Alcohol (TBA)**	**Tetrachloroethene**	**Toluene**	**TPH Purgeable**	**trans-1,2-Dichloroethene**	**trans-1,3-Dichloropropene**
2	02012160-01A	<200µg/Kg	<10000µg/Kg	<200µg/Kg	<100µg/Kg	220mg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	<200µg/Kg	<10000µg/Kg	<200µg/Kg	<100µg/Kg	150mg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	<1000µg/Kg	<50000µg/Kg	<1000µg/Kg	23000µg/Kg	2100mg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	<80µg/Kg	<4000µg/Kg	<80µg/Kg	<40µg/Kg	14mg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	<80µg/Kg	<4000µg/Kg	<80µg/Kg	<40µg/Kg	74mg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	5.1mg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	<40µg/Kg	<2000µg/Kg	<40µg/Kg	<25µg/Kg	<5mg/Kg	<40µg/Kg	<40µg/Kg

	A	BR	BS	BT
1	**SamplD**	**Trichloroethene**	**Trichlorofluoromethane**	**Vinyl chloride**
2	02012160-01A	<200µg/Kg	<200µg/Kg	<200µg/Kg
3	02012160-02A	<200µg/Kg	<200µg/Kg	<200µg/Kg
4	02012160-03A	<1000µg/Kg	<1000µg/Kg	<1000µg/Kg
5	02012220-19A	<40µg/Kg	<40µg/Kg	<40µg/Kg
6	02012220-20A	<40µg/Kg	<40µg/Kg	<40µg/Kg
7	02012220-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg
8	02012220-22A	<40µg/Kg	<40µg/Kg	<40µg/Kg
9	02012220-23A	<40µg/Kg	<40µg/Kg	<40µg/Kg
10	02012221-02A	<40µg/Kg	<40µg/Kg	<40µg/Kg
11	02012221-03A	<40µg/Kg	<40µg/Kg	<40µg/Kg
12	02012221-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg
13	02012221-14A	<40µg/Kg	<40µg/Kg	<40µg/Kg
14	02012221-15A	<40µg/Kg	<40µg/Kg	<40µg/Kg
15	02012222-06A	<40µg/Kg	<40µg/Kg	<40µg/Kg
16	02012222-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg
17	02012223-01A	<40µg/Kg	<40µg/Kg	<40µg/Kg
18	02012223-07A	<40µg/Kg	<40µg/Kg	<40µg/Kg
19	02012223-08A	<40µg/Kg	<40µg/Kg	<40µg/Kg
20	02012223-09A	<80µg/Kg	<80µg/Kg	<80µg/Kg
21	02012223-10A	<80µg/Kg	<80µg/Kg	<80µg/Kg
22	02012223-11A	<40µg/Kg	<40µg/Kg	<40µg/Kg
23	02012223-17A	<40µg/Kg	<40µg/Kg	<40µg/Kg
24	02012223-21A	<40µg/Kg	<40µg/Kg	<40µg/Kg

APPENDIX D

Laboratory Results, Quality Control Samples

Table D-1. Results for Quality Control Samples for Lower Site

Sample ID	Client Sample ID	Collection Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
			µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
02012120-21A	LSTP-16 @ 4	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012120-22A	LSTP-16 @ 4-Duplicate	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012220-08A	LSTP-23 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-20A	LSTP-23 @ 4-Duplicate	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012221-02A	LSTP-30 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-21A	LSTP-30 @ 2-Duplicate	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012221-22A	LSTP-36 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-22A	LSTP-36 @ 8-Duplicate	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012222-18A	LSTP-45 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-23A	LSTP-45 @ 4-Duplicate	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-17A	LSTP-53 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-24A	LSTP-53 @ 2-Duplicate	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-25A	LSTP-Trip Blank	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
02012223-26A	LSTP- Field Blank	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250

Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	C8-C9	C10-C11	C12-C13	C14-C15	C16-C17	C18-C19	C20-C21	C22-C23	C24-C25	C26-C27	C28-C29	C30-C31	C32-C33	C34-C35	C36-C37	C38-C39	Total Carbon Range	Benzene	Toluene	Ethylbenzene	Xylenes, Total
µg/Kg	µg/Kg	µg/Kg	µg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	6.6	5.7	6.1	6.6	9.9	15	15	12	12	11	12	16	11	8.6	3.4	<3	150	<25	<25	<25	<25
<250	<500	<500	<500	4.5	7.6	9.1	9.5	17	28	26	19	14	13	15	15	11	7.4	<3	<3	190	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	4.8	13	22	20	12	6.4	<3	<3	<3	<3	<3	<3	<3	<3	78	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	4.6	11	14	10	6.4	<3	<3	<3	<3	<3	<3	<3	<3	<3	46	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
<250	<500	<500	<500	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25

APPENDIX E

Laboratory Results, TPH Soil Data

Table E-1. Summary of Soil Sampling Data for Lower Site

Sample ID	Client Sample ID	Collection Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene
			µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
LOWER SITE STRATA - 1																		
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02012101-21A	LSTP-5 at 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012120-03A	LSTP-8 @ 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012120-09A	LSTP-11 @ 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
LOWER SITE STRATA - 2																		
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02012120-13A	LSTP-13 @ 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-15A	LSTP-14 @ 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-16A	LSTP-14 @ 4	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-17A	LSTP-14 @ 8	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012120-20A	LSTP-16 @ 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-21A	LSTP-16 @ 4	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-23A	LSTP-16 @ 8	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-24A	LSTP-17 @ 2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-25A	LSTP-17 @ 4	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012120-26A	LSTP-17 @ 8	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012160-05A	LSTP-19@4	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012160-06A	LSTP-19@6	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012160-07A	LSTP-20@2	1/18/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012220-03A	LSTP-21 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-04A	LSTP-22 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-05A	LSTP-22 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-06A	LSTP-22 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-07A	LSTP-23 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-08A	LSTP-23 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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Table E-1. Summary of Soil Sampling Data for Lower Site

Sample ID	Client Sample ID	Collection Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene
			µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
02012220-10A	LSTP-24 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-11A	LSTP-24 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-12A	LSTP-24 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-13A	LSTP-25 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012220-15A	LSTP-25 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012220-17A	LSTP-26 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-18A	LSTP-26 @ 7	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-19A	LSTP-27 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012220-22A	LSTP-28 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-23A	LSTP-28 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-24A	LSTP-28 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-25A	LSTP-29 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012220-26A	LSTP-29 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012221-02A	LSTP-30 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012221-04A	LSTP-30 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012221-13A	LSTP-33 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012221-23A	LSTP-37 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012221-24A	LSTP-37 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012221-26A	LSTP-38 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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Sample ID	Client Sample ID	Collection Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene
			µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
02012222-03A	LSTP-39 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012222-05A	LSTP-39 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012222-06A	LSTP-40 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012222-07A	LSTP-40 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012222-08A	LSTP-40 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012222-11A	LSTP-41 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012222-16A	LSTP-44 @ 15	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012222-17A	LSTP-45 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
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02012222-22A	LSTP-46 @ 7	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-01A	LSTP-47 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-02A	LSTP-47 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-03A	LSTP-47 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-04A	LSTP-48 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-05A	LSTP-48 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-06A	LSTP-48 @ 6	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-07A	LSTP-49 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-08A	LSTP-49 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-09A	LSTP-49 @ 8	1/21/2002	320	<250	<250	<250	1200	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-10A	LSTP-50 @ 2	1/21/2002	2200	<250	<250	1800	4700	<250	630	730	<250	270	300	<250	<250	<500	<500	<500
02012223-11A	LSTP-50 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-12A	LSTP-50 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-13A	LSTP-51 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-14A	LSTP-51 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-15A	LSTP-51 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-16A	LSTP-52 @ 15	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-17A	LSTP-53 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-18A	LSTP-53 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
02012223-19A	LSTP-53 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
Total Number of Samples		125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
Total Number of Detects			6	0	0	4	3	1	1	1	0	1	1	0	0	0	0	0
Minimum Detect			320	0	0	250	1200	620	630	730	0	270	300	0	0	0	0	0
Maximum Detect			20000	0	0	1800	4700	620	630	730	0	270	300	0	0	0	0	0
Percent of Samples with Detect			4.8%	0.0%	0.0%	3.2%	2.4%	0.8%	0.8%	0.8%	0.0%	0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Minimum Detection Limit			<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500
Maximum Detection Limit			<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<500

Table E-1. Summary of Soil Sampling Data for L

Sample ID	Client Sample ID	Collection Date	C8-C9	C10-C11	C12-C13	C14-C15	C16-C17	C18-C19	C20-C21	C22-C23	C24-C25	C26-C27	C28-C29	C30-C31	C32-C33	C34-C35	C36-C37	C38-C39	Total Carbon Range	Benzene	Toluene	Ethylbenzene	Xylenes, Total
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
LOWER SITE STRATA - 1																							
02012101-13A	LSTP-1 at 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012101-15A	LSTP-2 at 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012101-17A	LSTP-3 at 2	1/18/2002	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<480	<25	<25	<25	<25
02012101-19A	LSTP-4 at 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012101-21A	LSTP-5 at 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012101-23A	LSTP-6 at 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012101-25A	LSTP-7 at 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-03A	LSTP-8 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-05A	LSTP-9 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-07A	LSTP-10 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-09A	LSTP-11 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
LOWER SITE STRATA - 2																							
02012120-11A	LSTP-12 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-13A	LSTP-13 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-15A	LSTP-14 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-16A	LSTP-14 @ 4	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-17A	LSTP-14 @ 8	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-18A	LSTP-15 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-19A	LSTP-15 @ 4	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-20A	LSTP-16 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-21A	LSTP-16 @ 4	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-23A	LSTP-16 @ 8	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-24A	LSTP-17 @ 2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-25A	LSTP-17 @ 4	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012120-26A	LSTP-17 @ 8	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012160-01A	LSTP-18@2	1/18/2002	<3	130	310	350	440	370	200	87	32	7.3	4.1	<3	<3	<3	<3	<3	1900	<100	<100	230	3200
02012160-02A	LSTP-18@4	1/18/2002	<3	56	130	140	200	120	70	26	10	<3	<3	<3	<3	<3	<3	<3	750	<100	<100	<100	450
02012160-03A	LSTP-18@8	1/18/2002	610	1500	1500	1900	1500	1200	580	230	51	18	3.9	<3	<3	<3	<3	<3	9200	5200	23000	41000	210000
02012160-04A	LSTP-19@2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012160-05A	LSTP-19@4	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012160-06A	LSTP-19@6	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012160-07A	LSTP-20@2	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012160-08A	LSTP-20@4	1/18/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-01A	LSTP-21 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-02A	LSTP-21 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-03A	LSTP-21 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	12	<3	<3	<3	<3	<3	<3	13	<48	<25	<25	<25	<25
02012220-04A	LSTP-22 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-05A	LSTP-22 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-06A	LSTP-22 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-07A	LSTP-23 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-08A	LSTP-23 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-09A	LSTP-23 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25

Table E-1. Summary of Soil Sampling Data for L

Sample ID	Client Sample ID	Collection Date	C8-C9	C10-C11	C12-C13	C14-C15	C16-C17	C18-C19	C20-C21	C22-C23	C24-C25	C26-C27	C28-C29	C30-C31	C32-C33	C34-C35	C36-C37	C38-C39	Total Carbon Range	Benzene	Toluene	Ethylbenzene	Xylenes, Total
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
02012220-10A	LSTP-24 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-11A	LSTP-24 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-12A	LSTP-24 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-13A	LSTP-25 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-14A	LSTP-25 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-15A	LSTP-25 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-16A	LSTP-26 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-17A	LSTP-26 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-18A	LSTP-26 @ 7	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-19A	LSTP-27 @ 2	1/21/2002	72	83	83	66	59	61	68	67	64	67	74	85	54	42	<30	<30	940	<25	<25	<25	<25
02012220-20A	LSTP-27 @ 4	1/21/2002	<3	<3	<3	120	480	960	1100	390	170	<3	<3	<3	<3	<3	<3	<3	3300	<25	<25	<25	<25
02012220-21A	LSTP-27 @ 8	1/21/2002	650	240	120	98	83	29	24	24	18	16	14	13	<3	<3	<3	<3	1300	<25	<25	<25	<25
02012220-22A	LSTP-28 @ 2	1/21/2002	10	8.4	9.3	8.6	7.6	8.7	10	11	11	11	12	15	12	9	3.2	<3	150	<25	<25	<25	<25
02012220-23A	LSTP-28 @ 4	1/21/2002	15	13	8.6	<3	<3	<3	<3	<3	3.2	3	3.7	3.8	3.8	<3	<3	<3	55	<25	<25	<25	<25
02012220-24A	LSTP-28 @ 8	1/21/2002	4.7	<3	<3	<3	<3	3	3.6	4	4.1	4	5.5	4.5	5	3.3	3	<3	<48	<25	<25	<25	<25
02012220-25A	LSTP-29 @ 2	1/21/2002	6.1	4.6	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012220-26A	LSTP-29 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-01A	LSTP-29 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-02A	LSTP-30 @ 2	1/21/2002	6.6	5.7	6.1	6.6	9.9	15	15	12	12	11	12	16	11	8.6	3.4	<3	150	<25	<25	<25	<25
02012221-03A	LSTP-30 @ 4	1/21/2002	<3	<3	3	11	31	55	57	42	14	6.3	<3	<3	<3	<3	<3	<3	220	<25	<25	<25	<25
02012221-04A	LSTP-30 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-05A	LSTP-31 @ 2	1/21/2002	<3	<3	<3	3	5.1	9	7.8	4.6	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-06A	LSTP-31 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-07A	LSTP-31 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-08A	LSTP-32 @ 2	1/21/2002	9.5	8.2	9.4	12	19	28	30	23	17	15	16	20	15	11	3.8	<3	240	<25	<25	<25	<25
02012221-09A	LSTP-32 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-10A	LSTP-32 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-11A	LSTP-33 @ 2	1/21/2002	<3	<3	<3	<3	3.2	5.6	4.6	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-12A	LSTP-33 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-13A	LSTP-33 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-14A	LSTP-34 @ 2	1/21/2002	<3	7.8	35	140	380	600	570	460	190	88	43	13	13	<3	<3	<3	2500	<25	<25	<25	<25
02012221-15A	LSTP-34 @ 4	1/21/2002	<3	<3	<3	4.7	13	22	18	9.3	3.8	<3	<3	<3	<3	<3	<3	<3	70	<25	<25	<25	<25
02012221-16A	LSTP-34 @ 8	1/21/2002	<3	<3	<3	<3	4.9	5.4	4.4	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-17A	LSTP-35 @ 2	1/21/2002	<3	<3	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-18A	LSTP-35 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-19A	LSTP-35 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-20A	LSTP-36 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-21A	LSTP-36 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-22A	LSTP-36 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-23A	LSTP-37 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-24A	LSTP-37 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-25A	LSTP-37 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012221-26A	LSTP-38 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-01A	LSTP-38 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-02A	LSTP-38 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25

Table E-1. Summary of Soil Sampling Data for L

Sample ID	Client Sample ID	Collection Date	C8-C9	C10-C11	C12-C13	C14-C15	C16-C17	C18-C19	C20-C21	C22-C23	C24-C25	C26-C27	C28-C29	C30-C31	C32-C33	C34-C35	C36-C37	C38-C39	Total Carbon Range	Benzene	Toluene	Ethylbenzene	Xylenes, Total
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
02012222-03A	LSTP-39 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-04A	LSTP-39 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-05A	LSTP-39 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-06A	LSTP-40 @ 2	1/21/2002	9.7	18	22	18	16	16	16	15	14	15	18	22	20	17	6.8	<3	240	<25	<25	<25	<25
02012222-07A	LSTP-40 @ 4	1/21/2002	<3	4.2	9.7	8.5	6.8	7.5	13	12	12	14	16	17	16	12	4.7	<3	150	<25	<25	<25	<25
02012222-08A	LSTP-40 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	4.3	6.2	4.4	5.1	5.5	5.4	5.7	3	<3	<48	<25	<25	<25	<25
02012222-09A	LSTP-41 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	4	3.4	3.2	3.5	3.9	4.2	4	<3	<48	<25	<25	<25	<25
02012222-10A	LSTP-41 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	5.3	<3	<3	3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-11A	LSTP-41 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-12A	LSTP-42 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-13A	LSTP-42 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-14A	LSTP-42 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-15A	LSTP-43 @ 14	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-16A	LSTP-44 @ 15	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-17A	LSTP-45 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-18A	LSTP-45 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-19A	LSTP-45 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-20A	LSTP-46 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-21A	LSTP-46 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012222-22A	LSTP-46 @ 7	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-01A	LSTP-47 @ 2	1/21/2002	<3	8.5	9.9	8.8	7.7	7.4	7.1	6.9	6.3	6.4	6.5	6	4.2	3	<3	<3	89	<25	<25	<25	<25
02012223-02A	LSTP-47 @ 4	1/21/2002	<3	4.3	4.9	4.3	3.5	3.1	3.2	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-03A	LSTP-47 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-04A	LSTP-48 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-05A	LSTP-48 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-06A	LSTP-48 @ 6	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-07A	LSTP-49 @ 2	1/21/2002	<3	8.4	14	38	93	150	140	93	50	32	21	17	11	7.6	5.3	<3	680	<25	<25	<25	<25
02012223-08A	LSTP-49 @ 4	1/21/2002	<3	6.3	16	53	130	210	180	120	59	35	23	17	10	6.3	<3	<3	860	<25	<25	<25	<25
02012223-09A	LSTP-49 @ 8	1/21/2002	<3	39	220	710	1000	1100	840	380	130	31	11	<3	<3	<3	<3	<3	4500	<40	<40	<40	<40
02012223-10A	LSTP-50 @ 2	1/21/2002	<3	150	500	1500	2400	2700	2400	430	80	73	<3	<3	<3	<3	<3	<3	10000	<40	<40	<40	450
02012223-11A	LSTP-50 @ 4	1/21/2002	<3	<3	5.1	9.3	13	13	8.1	<3	<3	<3	<3	<3	<3	<3	<3	<3	49	<25	<25	<25	<25
02012223-12A	LSTP-50 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-13A	LSTP-51 @ 2	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-14A	LSTP-51 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-15A	LSTP-51 @ 8	1/21/2002	<3	<3	<3	<3	<3	3.2	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-16A	LSTP-52 @ 15	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-17A	LSTP-53 @ 2	1/21/2002	<3	<3	4.8	13	22	20	12	6.4	<3	<3	<3	<3	<3	<3	<3	<3	78	<25	<25	<25	<25
02012223-18A	LSTP-53 @ 4	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
02012223-19A	LSTP-53 @ 8	1/21/2002	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
Total Number of Samples		125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
Total Number of Detects			10	19	22	23	25	27	26	23	24	21	18	15	15	12	9	1	22	1	1	2	4
Minimum Detect			4.7	4.2	3	3	3.2	3	3.2	4	3.2	3	3.2	3.5	3	3	3	13	49	5200	23000	230	450
Maximum Detect			650	1500	1500	1900	2400	2700	2400	460	190	88	74	85	54	42	6.8	13	10000	5200	23000	41000	210000
Percent of Samples with Detect			8.0%	15.2%	17.6%	18.4%	20.0%	21.6%	20.8%	18.4%	19.2%	16.8%	14.4%	12.0%	12.0%	9.6%	7.2%	0.8%	17.6%	0.8%	0.8%	1.6%	3.2%
Minimum Detection Limit			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<48	<25	<25	<25	<25
Maximum Detection Limit			<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<480	<100	<100	<100	<40

Table E-2. Summary of Soil Sampling Data for PAH and VOC Screen at Lower Site

Sample ID	Client Sample ID	Collection Date	Naphthalene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Chrysene	Benzo(b)fluoranthene	Benzene	Toluene	Ethylbenzene	Xylenes, Total	1,2,3,4-Tetramethylbenzene	1,2,3,5-Tetramethylbenzene	1,2,4,5-Tetramethylbenzene	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Isopropylbenzene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene
			µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Carbon Number			10	13	14	14	16	16	18	20	6	7	8	8	10	10	10	9	9	9	10	9	10	9	10
Equivalent Carbon Number			11.69	16.55	19.36	19.43	21.85	20.8	27.41	30.14	6.5	7.58	8.5	8.61	11.57	11.09	11.05	10.06	9.84	9.62		9.13	10.5	9.47	9.98
LOWER SITE STRATA - 2																									
02012160-01A	LSTP-18@2	1/18/2002	3500	660	<250	620	<250	<250	<250	<250	<50	<100	230	3200	2189	2157	1501	1979	6175	1806	<200	<200	<200	340	224
02012160-02A	LSTP-18@4	1/18/2002	1500	250	<250	<250	<250	<250	<250	<250	<50	<100	<100	450	1450	1299	936	895	3101	843	<200	<200	<200	<200	<200
02012160-03A	LSTP-18@8	1/18/2002	20000	1600	1600	<250	<250	<250	<250	<250	5200	23000	41000	210000	12000	15000	10000	33000	120000	38000	1900	4700	<1000	20000	4600
02012160-04A	LSTP-19@2	1/18/2002	410	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012220-03A	LSTP-21 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012220-19A	LSTP-27 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012220-20A	LSTP-27 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012220-21A	LSTP-27 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012220-22A	LSTP-28 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012220-23A	LSTP-28 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012220-24A	LSTP-28 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012220-25A	LSTP-29 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012221-02A	LSTP-30 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012221-03A	LSTP-30 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012221-05A	LSTP-31 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012221-08A	LSTP-32 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012221-11A	LSTP-33 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012221-14A	LSTP-34 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012221-15A	LSTP-34 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012221-16A	LSTP-34 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012222-06A	LSTP-40 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012222-07A	LSTP-40 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012222-08A	LSTP-40 @ 8	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012222-09A	LSTP-41 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012222-10A	LSTP-41 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012223-01A	LSTP-47 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012223-02A	LSTP-47 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<25	<25	<25	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02012223-07A	LSTP-49 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012223-08A	LSTP-49 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012223-09A	LSTP-49 @ 8	1/21/2002	320	<250	1200	<250	<250	<250	<250	<250	<20	<40	<40	<40	<320	<320	<320	<320	<80	<80	<80	<80	<80	<80	<80
02012223-10A	LSTP-50 @ 2	1/21/2002	2200	1800	4700	<250	630	730	270	300	<20	<40	<40	450	740	930	660	530	930	360	<80	<80	320	<80	<80
02012223-11A	LSTP-50 @ 4	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
02012223-17A	LSTP-53 @ 2	1/21/2002	<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
Total Number of Samples			125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
Total Number of Detects			6	4	3	1	1	1	1	1	1	1	2	4	4	4	4	4	4	4	1	1	1	2	2
Minimum Detect			320	250	1200	620	630	730	270	300	5200	23000	230	450	740	930	660	530	930	360	1900	4700	320	340	224
Maximum Detect			20000	1800	4700	620	630	730	270	300	5200	23000	41000	210000	12000	15000	10000	33000	120000	38000	1900	4700	320	20000	4600
Percent of Samples with Detect			4.8%	3.2%	2.4%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	1.6%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	0.8%	0.8%	0.8%	1.6%	1.6%
Minimum Detection Limit			<250	<250	<250	<250	<250	<250	<250	<250	<10	<25	<25	<25	<40	<160	<160	<160	<40	<40	<40	<40	<40	<40	<40
Maximum Detection Limit			<250	<250	<250	<250	<250	<250	<250	<250	<50	<100	<100	<40	<320	<320	<320	<320	<80	<80	<80	<80	<80	<80	<80
Tier 2 SSTL Value (µg/Kg)			**4,300,000**	**31,000**	**57,000**	**1,600**	**20,000**	**15,000**	**650**	**77**	**24**	**28,000**	**83,000**	**2,000,000**											

Note:
Numbers in dark blue indicate that risk-based target concentration is greater than constituent residual saturation value

Table E-3. Total Mass Fractions (Aliphatic + Aromatic)

Sample ID	Client Sample ID	Total Carbon Range	>C8-C10	>C10-C12	>C12-C16	>C16-C21	>C21-C35
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
LOWER SITE STRATA - 2							
02012160-01A	LSTP-18@2	1.96E+03	3.41E+01	2.06E+02	7.31E+02	8.30E+02	1.60E+02
02012160-02A	LSTP-18@4	7.86E+02	1.51E+01	8.91E+01	3.09E+02	3.14E+02	5.81E+01
02012160-03A	LSTP-18@8	9.31E+03	1.09E+03	1.61E+03	3.44E+03	2.76E+03	3.93E+02
02012220-19A	LSTP-27 @ 2	1.01E+03	9.25E+01	9.18E+01	1.45E+02	1.65E+02	5.13E+02
02012220-20A	LSTP-27 @ 4	4.31E+03	1.50E+01	1.28E+01	2.21E+02	2.33E+03	1.74E+03
02012220-21A	LSTP-27 @ 8	1.34E+03	6.56E+02	2.89E+02	1.72E+02	9.49E+01	1.24E+02
02012220-22A	LSTP-28 @ 2	1.47E+02	1.08E+01	8.91E+00	1.66E+01	2.30E+01	8.75E+01
02012220-23A	LSTP-28 @ 4	5.45E+01	4.61E+00	1.32E+01	5.05E+00	6.95E+00	2.48E+01
02012221-02A	LSTP-30 @ 2	1.54E+02	7.14E+00	5.78E+00	1.29E+01	3.75E+01	9.08E+01
02012221-03A	LSTP-30 @ 4	2.23E+02	<3	<3	1.76E+01	1.28E+02	7.68E+01
02012221-08A	LSTP-32 @ 2	2.48E+02	1.18E+01	9.15E+00	2.44E+01	7.18E+01	1.31E+02
02012221-14A	LSTP-34 @ 2	2.62E+03	9.93E+00	1.51E+01	2.52E+02	1.38E+03	9.62E+02
02012221-15A	LSTP-34 @ 4	7.72E+01	<3	<3	8.65E+00	4.64E+01	2.22E+01
02012222-06A	LSTP-40 @ 2	2.57E+02	1.76E+01	2.21E+01	4.15E+01	4.36E+01	1.32E+02
02012222-07A	LSTP-40 @ 4	1.60E+02	5.87E+00	9.42E+00	1.75E+01	2.36E+01	1.04E+02
02012223-01A	LSTP-47 @ 2	9.30E+01	5.35E+00	1.00E+01	1.82E+01	1.87E+01	4.07E+01
02012223-07A	LSTP-49 @ 2	6.69E+02	8.63E+00	1.26E+01	7.23E+01	3.32E+02	2.43E+02
02012223-08A	LSTP-49 @ 4	8.73E+02	5.67E+00	1.00E+01	9.53E+01	4.55E+02	3.07E+02
02012223-09A	LSTP-49 @ 8	4.60E+03	3.62E+00	9.43E+01	1.12E+03	2.62E+03	7.56E+02
02012223-10A	LSTP-50 @ 2	1.16E+04	3.38E+01	2.45E+02	2.42E+03	6.53E+03	2.40E+03
02012223-11A	LSTP-50 @ 4	5.85E+01	<3	3.00E+00	1.75E+01	2.89E+01	9.15E+00
02012223-17A	LSTP-53 @ 2	8.91E+01	<3	<3	2.29E+01	5.01E+01	1.61E+01
Total Number of Samples		22					
Minimum Detect		55	3.62E+00	3.00E+00	5.05E+00	6.95E+00	9.15E+00
Maximum Detect		11631	1.09E+03	1.61E+03	3.44E+03	6.53E+03	2.40E+03

Table E-4. Aromatic Fractions

Sample ID	Client Sample ID	Total Carbon Range	Total Aromatic	Aromatic Percent of Total Carbon	>C5-C7	>C7-C8	>C8-C10	>C10-C12	>C12-C16	>C16-C21	>C21-C35
		mg/Kg	mg/Kg		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
LOWER SITE STRATA - 2											
02012160-01A	LSTP-18@2	1.96E+03	2.46E+01	1.25%			1.20E+01	1.13E+01		1.28E+00	
02012160-02A	LSTP-18@4	7.86E+02	1.07E+01	1.36%			4.39E+00	6.08E+00		2.50E-01	
02012160-03A	LSTP-18@8	9.31E+03	5.62E+02	6.04%	5.20E+00	2.30E+01	4.38E+02	9.19E+01		3.20E+00	
02012220-19A	LSTP-27 @ 2	1.01E+03									
02012220-20A	LSTP-27 @ 4	4.31E+03									
02012220-21A	LSTP-27 @ 8	1.34E+03									
02012220-22A	LSTP-28 @ 2	1.47E+02									
02012220-23A	LSTP-28 @ 4	5.45E+01									
02012221-02A	LSTP-30 @ 2	1.54E+02									
02012221-03A	LSTP-30 @ 4	2.23E+02									
02012221-08A	LSTP-32 @ 2	2.48E+02									
02012221-14A	LSTP-34 @ 2	2.62E+03									
02012221-15A	LSTP-34 @ 4	7.72E+01									
02012222-06A	LSTP-40 @ 2	2.57E+02									
02012222-07A	LSTP-40 @ 4	1.60E+02									
02012223-01A	LSTP-47 @ 2	9.30E+01									
02012223-07A	LSTP-49 @ 2	6.69E+02									
02012223-08A	LSTP-49 @ 4	8.73E+02									
02012223-09A	LSTP-49 @ 8	4.60E+03	1.52E+00	0.03%				3.20E-01		1.20E+00	
02012223-10A	LSTP-50 @ 2	1.16E+04	1.56E+01	0.13%			1.74E+00	5.38E+00		7.23E+00	1.20E+00
02012223-11A	LSTP-50 @ 4	5.85E+01									
02012223-17A	LSTP-53 @ 2	8.91E+01									
Total Number of Samples		2.20E+01			1	1	4	5	0	5	1
Minimum Detect		5.45E+01	1.52E+00		5.20E+00	2.30E+01	1.74E+00	3.20E-01	0.00E+00	2.50E-01	1.20E+00
Maximum Detect		1.16E+04	5.62E+02		5.20E+00	2.30E+01	4.38E+02	9.19E+01	0.00E+00	7.23E+00	1.20E+00
Tier 2 SSTL					**4.10E-01**	**2.80E+01**	**3.30E+01**	**1.90E+02**	**3.60E+02**	**2.60E+01**	**2.10E+00**

Note:
Numbers in dark blue indicate that risk-based target concentration is greater than constituent residual saturation value

Table E-5. Aliphatic Fractions

Sample ID	Client Sample ID	Total Carbon Range	Total Aliphatic	>C8-C10	>C10-C12	>C12-C16	>C16-C21	>C21-C35
		mg/Kg		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
LOWER SITE STRATA - 2								
02012160-01A	LSTP-18@2	1.96E+03	1.94E+03	2.21E+01	1.95E+02	7.31E+02	8.29E+02	1.60E+02
02012160-02A	LSTP-18@4	7.86E+02	7.75E+02	1.07E+01	8.30E+01	3.09E+02	3.14E+02	5.81E+01
02012160-03A	LSTP-18@8	9.31E+03	8.77E+03	6.55E+02	1.52E+03	3.44E+03	2.76E+03	3.93E+02
02012220-19A	LSTP-27 @ 2	1.01E+03	9.83E+02	9.25E+01	6.88E+01	1.45E+02	1.65E+02	5.13E+02
02012220-20A	LSTP-27 @ 4	4.31E+03	4.31E+03	1.50E+01	1.28E+01	2.21E+02	2.33E+03	1.74E+03
02012220-21A	LSTP-27 @ 8	1.34E+03	1.34E+03	6.56E+02	2.89E+02	1.72E+02	9.49E+01	1.24E+02
02012220-22A	LSTP-28 @ 2	1.47E+02	1.47E+02	1.08E+01	8.91E+00	1.66E+01	2.30E+01	8.75E+01
02012220-23A	LSTP-28 @ 4	5.45E+01	5.45E+01	4.61E+00	1.32E+01	5.05E+00	6.95E+00	2.48E+01
02012221-02A	LSTP-30 @ 2	1.54E+02	1.54E+02	7.14E+00	5.78E+00	1.29E+01	3.75E+01	9.08E+01
02012221-03A	LSTP-30 @ 4	2.23E+02	2.23E+02			1.76E+01	1.28E+02	7.68E+01
02012221-08A	LSTP-32 @ 2	2.48E+02	2.48E+02	1.18E+01	9.15E+00	2.44E+01	7.18E+01	1.31E+02
02012221-14A	LSTP-34 @ 2	2.62E+03	2.62E+03	9.93E+00	1.51E+01	2.52E+02	1.38E+03	9.62E+02
02012221-15A	LSTP-34 @ 4	7.72E+01	7.72E+01			8.65E+00	4.64E+01	2.22E+01
02012222-06A	LSTP-40 @ 2	2.57E+02	2.57E+02	1.76E+01	2.21E+01	4.15E+01	4.36E+01	1.32E+02
02012222-07A	LSTP-40 @ 4	1.60E+02	1.60E+02	5.87E+00	9.42E+00	1.75E+01	2.36E+01	1.04E+02
02012223-01A	LSTP-47 @ 2	9.30E+01	9.30E+01	5.35E+00	1.00E+01	1.82E+01	1.87E+01	4.07E+01
02012223-07A	LSTP-49 @ 2	6.69E+02	6.69E+02	8.63E+00	1.26E+01	7.23E+01	3.32E+02	2.43E+02
02012223-08A	LSTP-49 @ 4	8.73E+02	8.73E+02	5.67E+00	1.00E+01	9.53E+01	4.55E+02	3.07E+02
02012223-09A	LSTP-49 @ 8	4.60E+03	4.60E+03	3.62E+00	9.40E+01	1.12E+03	2.62E+03	7.56E+02
02012223-10A	LSTP-50 @ 2	1.16E+04	1.16E+04	3.20E+01	2.40E+02	2.42E+03	6.52E+03	2.40E+03
02012223-11A	LSTP-50 @ 4	5.85E+01	5.85E+01		3.00E+00	1.75E+01	2.89E+01	9.15E+00
02012223-17A	LSTP-53 @ 2	8.91E+01	8.91E+01			2.29E+01	5.01E+01	1.61E+01
Total Number of Samples		22		18	19	22	22	22
Minimum Detect		5.45E+01	5.45E+01	3.62E+00	3.00E+00	5.05E+00	6.95E+00	9.15E+00
Maximum Detect		1.16E+04	1.16E+04	6.56E+02	1.52E+03	3.44E+03	6.52E+03	2.40E+03
Tier 2 SSTL				**1.60E+02**	**3.20E+02**	**6.30E+02**	**3.90E+00**	**3.90E+00**

Note:
Numbers in dark blue indicate that risk-based target concentration is greater than constituent residual saturation value

APPENDIX F

Laboratory Results, Soil Physical Parameters

T N and Associates, Inc.	SOILS REPORT	(775) 267-0566
Project: UNR		Date: February 5, 2002
Client: McGinley and Associates		Project #: 2002014
Sample #s:		Lab #: CVL00-304
Location/Source:		Sample Date: 1/17/02
Material:		Sampled By: D. Yohey

Sample Number	Depth	Date	T.O.C * (%) ASTM D2974	Water Content (%) ASTM D2216	Wet Density (pcf)	Dry Density (pcf) ASTM D2937	-200 (%) ASTM C117	Sieve & Hydrom. ASTM D422	pH ASTM D4972	Specific Gravity ASTM D854	Theo. Porosity		
USTP -3 at 4		1/17/2002	0.31	4.0	102.7	98.8	9.6	SEE ATTACHED REPORTS	7.7	2.628	39.8		
USTP-11 at 4		1/17/2002	0.39	5.6	77.7	73.6	9.3		7.8	2.666	55.7		
USTP-26 at 4		1/17/2002	n/a	9.4	83.0	75.9	14		7.5	2.663	54.3		
LSTP-4 at 4		1/18/2002	0.66	10.5	95.0	86.0	31.8		7.7	2.615	47.3		
LSTP-20 at 4		1/18/2002	0.66	13.9	95.9	84.2	31.2		7.6	2.632	51.3		
LSTP-37 at 4		1/21/2002	n/a	11.7	113.0	101.2	16.9		7.4	2.641	38.6		
LSTP-48 at 4		1/21/2002	n/a	7.2	85.3	79.6	31.4		7.3	2.667	52.2		

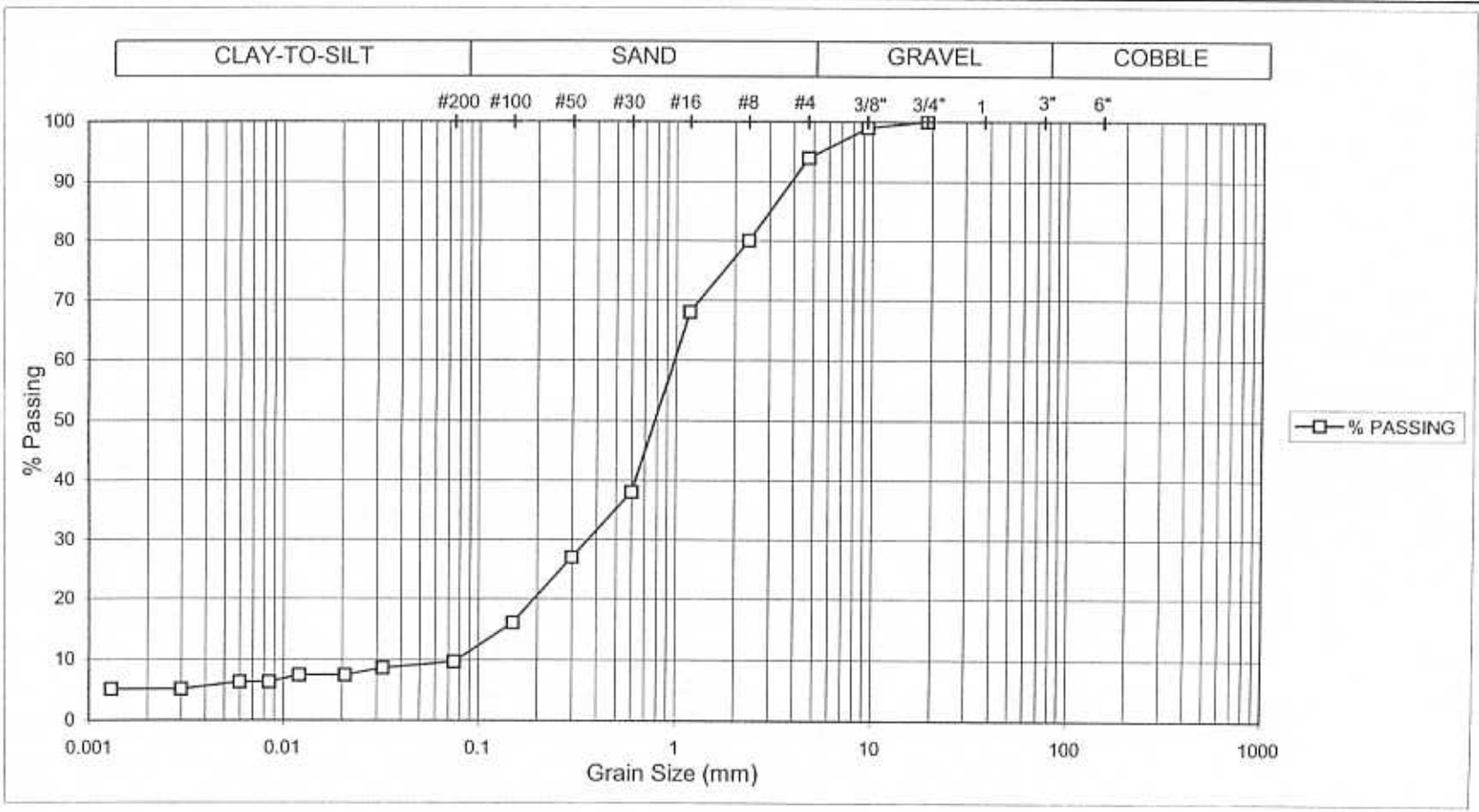
Collette Tressler 2-5-02

Laboratory Manager Date

*Note-Total Organic Content

T N & Associates, Inc. GRAIN SIZE DISTRIBUTION

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	USTP-3 @4'	Lab # :	CVL00304
Material Description:	Light Olive Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002



Reported By: Collette Tenschon

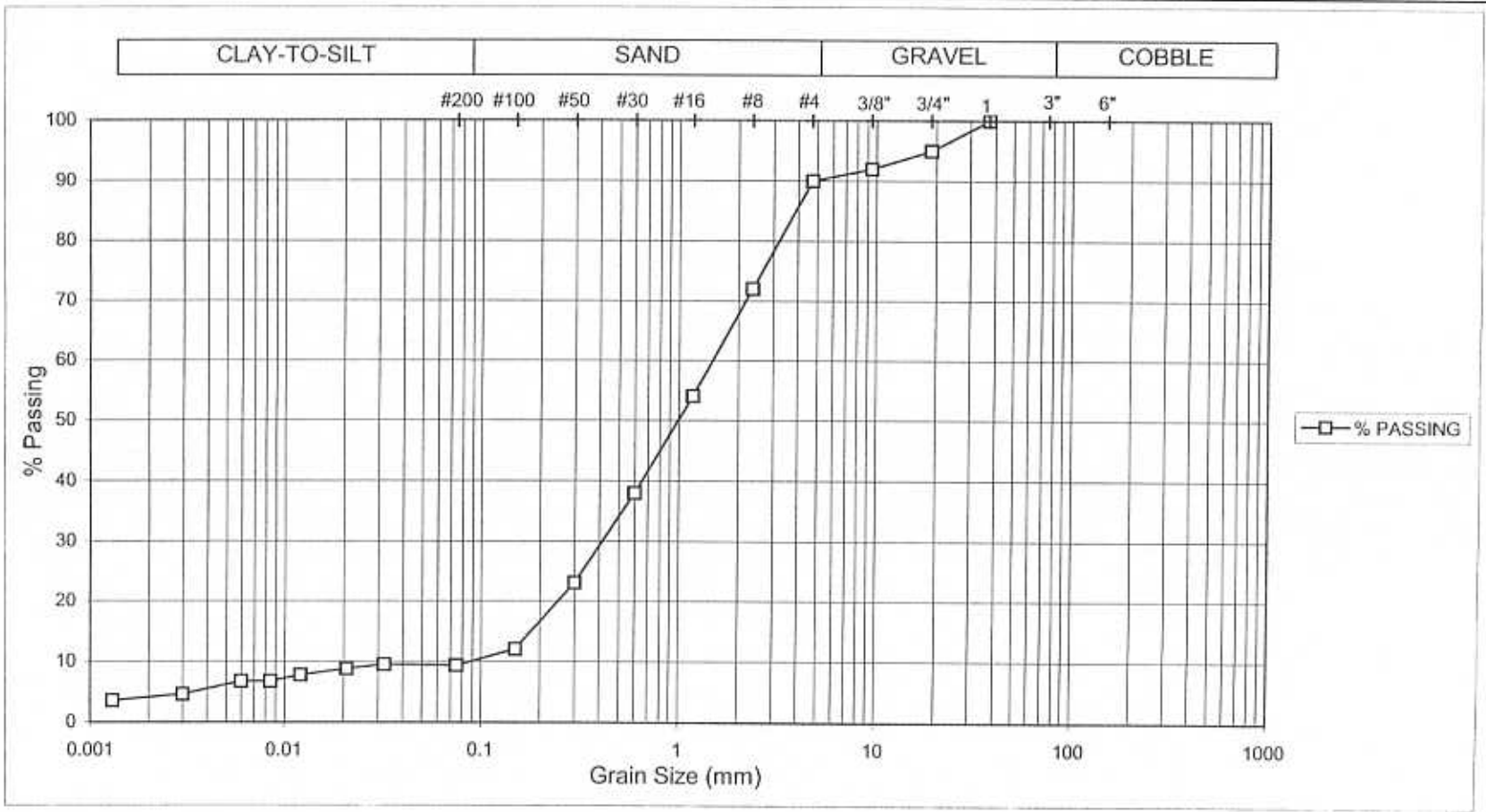
Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	
3/4"	19.0000	100.0
3/8"	9.5000	99.0
#4	4.7500	94.0
#8	2.3600	80.0
#16	1.1800	68.0
#30	0.6000	38.0
#50	0.3000	27.0
#100	0.1500	16.0
#200	0.0750	9.6
2 min	0.0323	8.6
5 min	0.0208	7.4
15 min	0.0121	7.4
30 min	0.0085	6.2
60 min	0.0060	6.2
250 min	0.0030	5.1
1440 min	0.0013	5.1

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	USTP-3 @4'	Lab # :	CVL00304
Material Description:	Light Olive Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002

T N & Associates, Inc. **GRAIN SIZE DISTRIBUTION**

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	USTP-11 @4'	Lab # :	CVL00304
Material Description:	Light Yellowish Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002



Reported By: Collette Teuscher

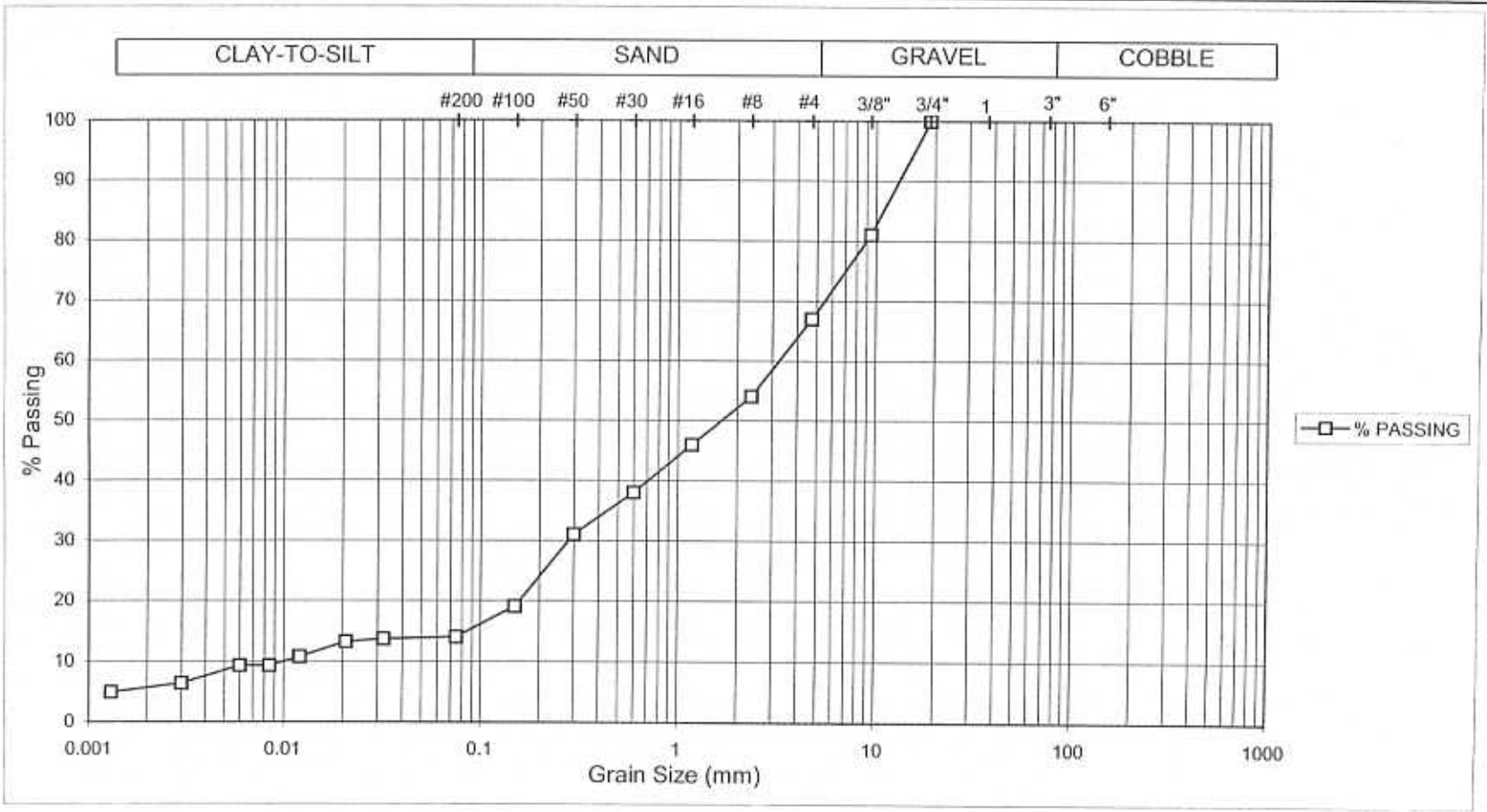
Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	100.0
3/4"	19.0000	95.0
3/8"	9.5000	92.0
#4	4.7500	90.0
#8	2.3600	72.0
#16	1.1800	54.0
#30	0.6000	38.0
#50	0.3000	23.0
#100	0.1500	12.0
#200	0.0750	9.3
2 min	0.0323	9.5
5 min	0.0208	8.8
15 min	0.0121	7.7
30 min	0.0085	6.7
60 min	0.0060	6.7
250 min	0.0030	4.6
1440 min	0.0013	3.5

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	USTP-11 @4'	Lab # :	CVL00304
Material Description:	Light Yellowish Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002

T N & Associates, Inc. **GRAIN SIZE DISTRIBUTION**

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	USTP-26 @4'	Lab # :	CVL00304
Material Description:	Very Dark Grayish Brown Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002



Reported By: Collette Tenaches

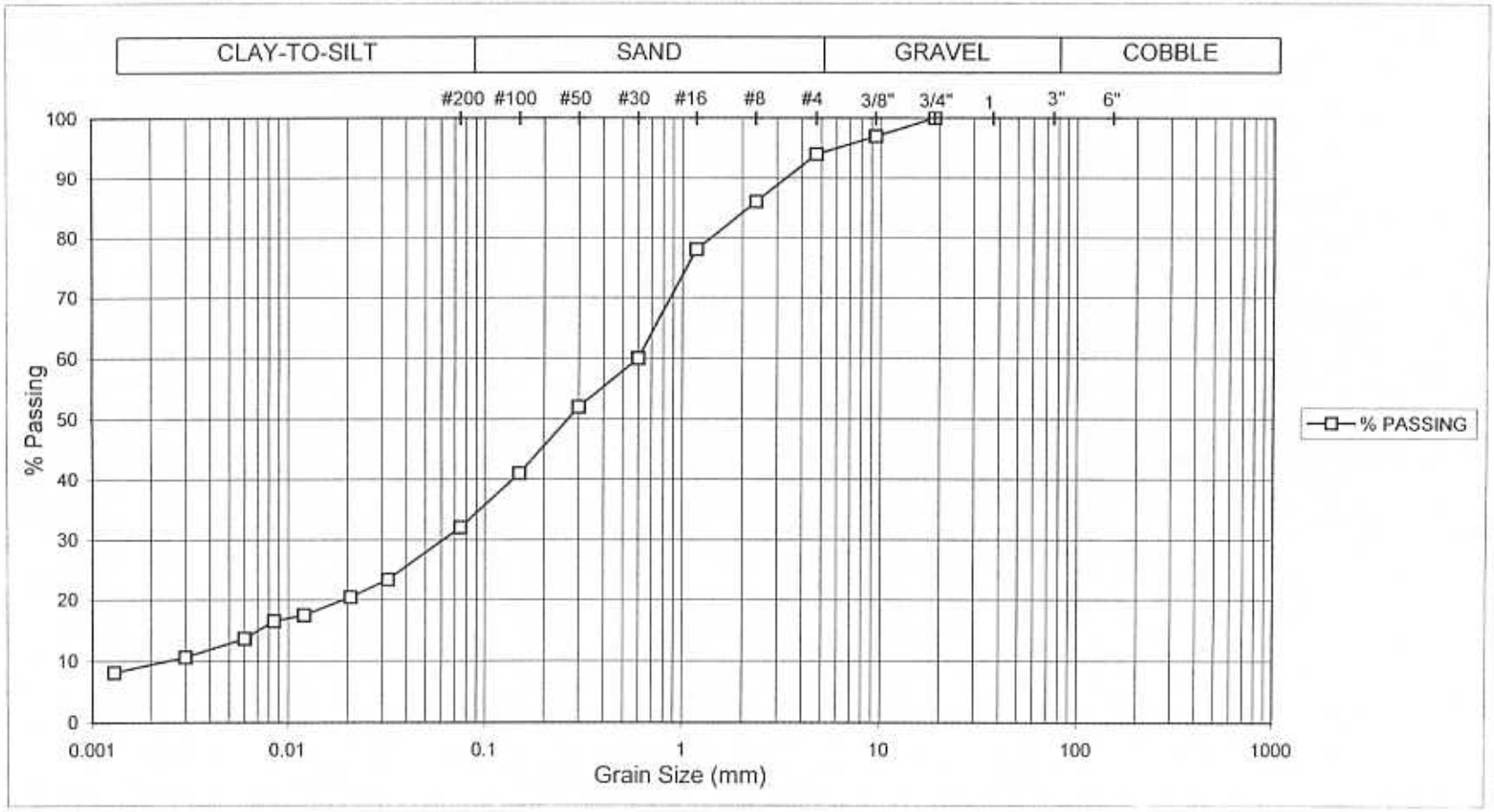
Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	
3/4"	19.0000	100.0
3/8"	9.5000	81.0
#4	4.7500	67.0
#8	2.3600	54.0
#16	1.1800	46.0
#30	0.6000	38.0
#50	0.3000	31.0
#100	0.1500	19.0
#200	0.0750	14.0
2 min	0.0323	13.7
5 min	0.0208	13.2
15 min	0.0121	10.7
30 min	0.0085	9.3
60 min	0.0060	9.3
250 min	0.0030	6.3
1440 min	0.0013	4.9

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	USTP-26 @4'	Lab # :	CVL00304
Material Description:	Very Dark Grayish Brown Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 20

T N & Associates, Inc. **GRAIN SIZE DISTRIBUTION**

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-4 @4'	Lab # :	CVL00304
Material Description:	Olive Brown Silty Sand w/gravel	Date Tested:	Jan. 28, 2002



Reported By: Collette Teeselink

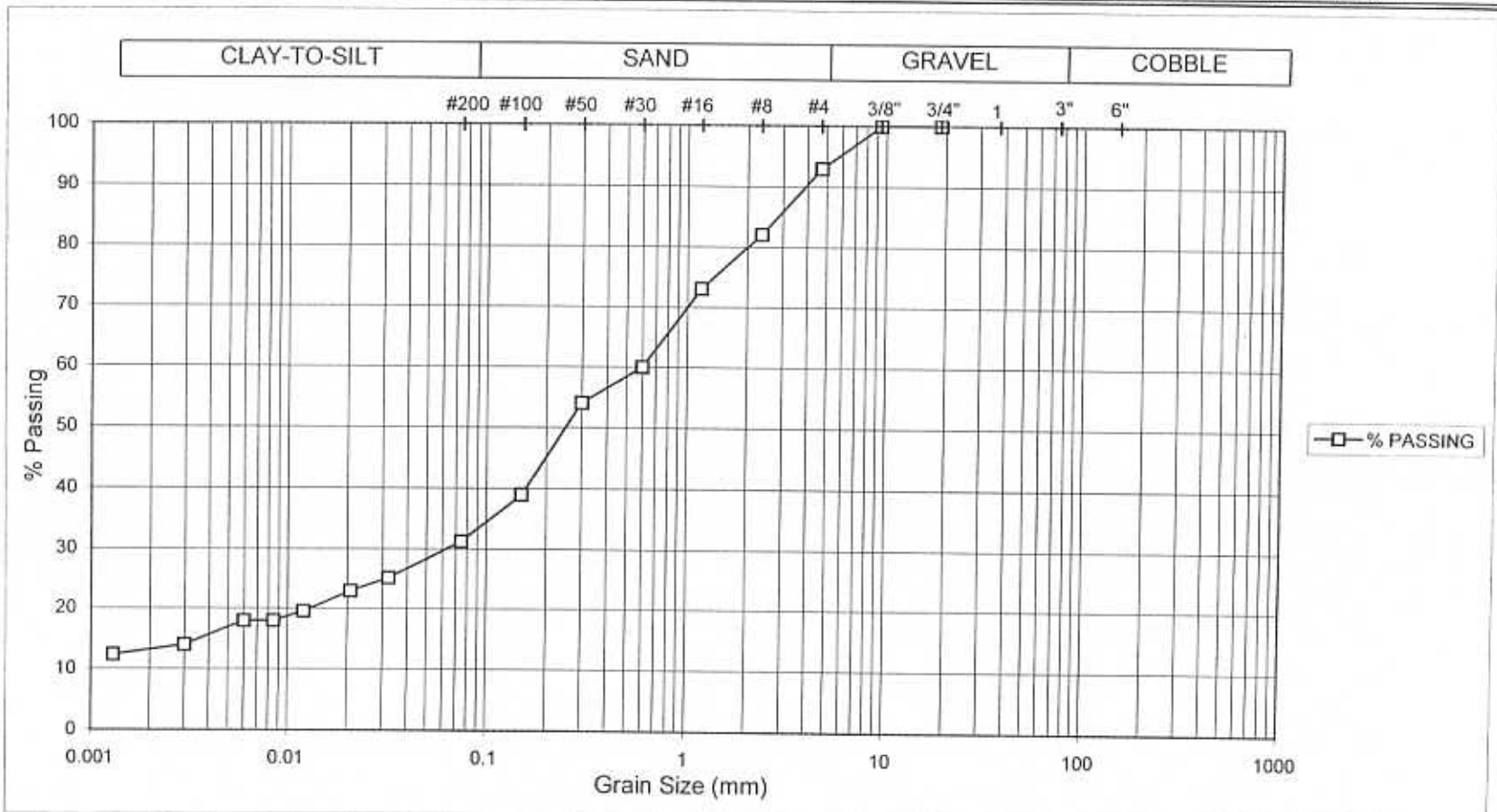
Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	
3/4"	19.0000	100.0
3/8"	9.5000	97.0
#4	4.7500	94.0
#8	2.3600	86.0
#16	1.1800	78.0
#30	0.6000	60.0
#50	0.3000	52.0
#100	0.1500	41.0
#200	0.0750	32.0
2 min	0.0323	23.3
5 min	0.0208	20.4
15 min	0.0121	17.4
30 min	0.0085	16.5
60 min	0.0060	13.6
250 min	0.0030	10.6
1440 min	0.0013	8.1

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-4 @4'	Lab # :	CVL00304
Material Description:	Olive Brown Silty Sand w/gravel	Date Tested:	Jan. 28, 20

T N & Associates, Inc. **GRAIN SIZE DISTRIBUTION**

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-20 @4'	Lab # :	CVL00304
Material Description:	Dark Grayish Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002



Reported By: Colette Tennesha

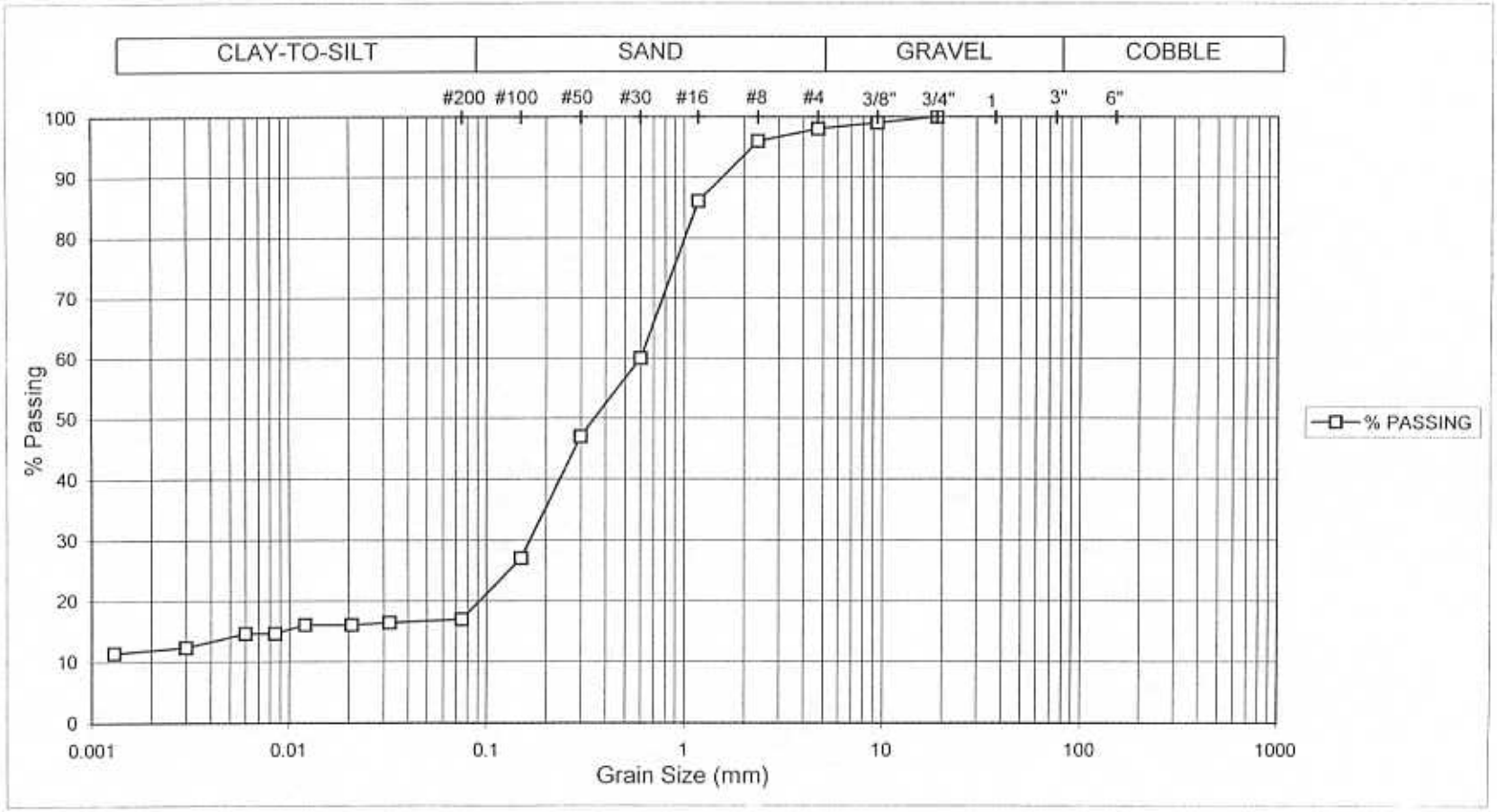
Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	
3/4"	19.0000	100.0
3/8"	9.5000	100.0
#4	4.7500	93.0
#8	2.3600	82.0
#16	1.1800	73.0
#30	0.6000	60.0
#50	0.3000	54.0
#100	0.1500	39.0
#200	0.0750	31.2
2 min	0.0323	25.1
5 min	0.0208	22.9
15 min	0.0121	19.5
30 min	0.0085	17.9
60 min	0.0060	17.9
250 min	0.0030	13.9
1440 min	0.0013	12.3

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-20 @4'	Lab # :	CVL00304
Material Description:	Dark Grayish Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002

T N & Associates, Inc. **GRAIN SIZE DISTRIBUTION**

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-37 @4'	Lab # :	CVL00304
Material Description:	Dark Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002



Reported By: Collette Teeselink

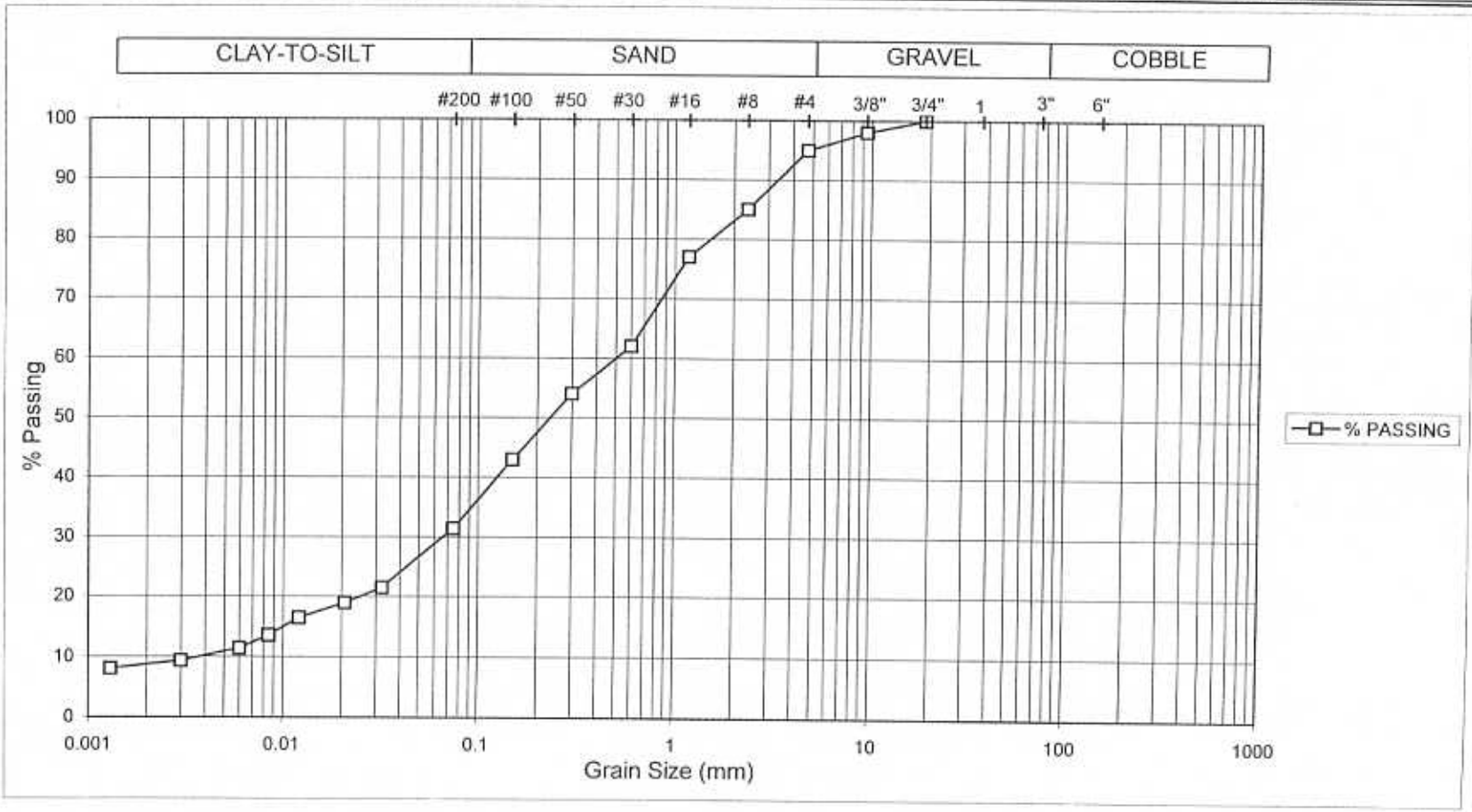
Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	
3/4"	19.0000	100.0
3/8"	9.5000	99.0
#4	4.7500	98.0
#8	2.3600	96.0
#16	1.1800	86.0
#30	0.6000	60.0
#50	0.3000	47.0
#100	0.1500	27.0
#200	0.0750	16.9
2 min	0.0323	16.4
5 min	0.0208	16.0
15 min	0.0121	16.0
30 min	0.0085	14.6
60 min	0.0060	14.6
250 min	0.0030	12.3
1440 min	0.0013	11.4

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-37 @4'	Lab # :	CVL00304
Material Description:	Dark Brown Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002

T N & Associates, Inc. **GRAIN SIZE DISTRIBUTION**

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-48 @4'	Lab # :	CVL00304
Material Description:	Brown Clayey Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002



Reported By: Collette Tavaglione

Grain Size Distribution

SIEVE SIZE	PARTICLE DIAMETER	% PASSING
6"	152.0000	
3"	76.0000	
1 1/2"	37.5000	
3/4"	19.0000	100.0
3/8"	9.5000	98.0
#4	4.7500	95.0
#8	2.3600	85.0
#16	1.1800	77.0
#30	0.6000	62.0
#50	0.3000	54.0
#100	0.1500	43.0
#200	0.0750	31.4
2 min	0.0323	21.4
5 min	0.0208	18.9
15 min	0.0121	16.4
30 min	0.0085	13.5
60 min	0.0060	11.4
250 min	0.0030	9.3
1440 min	0.0013	8.0

Project:	UNR	Date:	2/5/02
Client:	McGinley & Associates	Project #:	2002014
Source/Location:	LSTP-48 @4'	Lab # :	CVL00304
Material Description:	Brown Clayey Silty Sand w/ gravel	Date Tested:	Jan. 28, 2002

APPENDIX G

Well Log for Existing Supply Well – Lower Site

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

OFFICE USE ONLY
Log No. 22918
Permit No. 41973
Basin

WELL DRILLERS REPORT

Please complete this form in its entirety

1. OWNER UNIVERSITY OF NEVADA ADDRESS STEAD FIRE ACADEMY
RENO, NEVADA 89557 STEAD, NEVADA

2. LOCATION SW ¼ SE ¼ Sec. 35 T. 21 N/S R. 19 E. WASHOE County
PERMIT NO. 41973

3. TYPE OF WORK				4. PROPOSED USE					5. TYPE WELL		
New Well	☒	Recondition	☐	Domestic	☐	Irrigation	☐	Test ☐	Cable	☐	Rotary ☒
Deepen	☐	Other	☐	Municipal	☐	Industrial	☐	Stock ☐	Other	☐	
				FIRE WELL							

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
SANDY CLAY		0	16	16
COURSE SAND & GRAVEL		16	30	14
SAND & CLAY		30	55	25
BR. CLAY W/LG GRANIT ROCKS		55	80	24
TIGHT DECOMPOSED GRANIT		80	90	10
DECOMPOSED GRANIT W/S LG. ROCKS				
		90	95	5
SANDY BR. CLAY W/S ROCKS		95	110	15
BR. CLAY & DECOMPOSED GRANIT		110	130	20
HD. DECOMPSED GRANIT W/S				
LG. ROCKS		130	155	25
HD. SANDY BR. CLAY W/SAND				
& GRAVEL IMBEDDED		155	280	125
BLUE CLAY W/SAND STRINGERS		280	300	20

Date started 5-5-81, 19
Date completed 5-8-81, 19

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump
	183	165	12

BAILER TEST

G.P.M. Draw down feet hours
G.P.M. Draw down feet hours
G.P.M. Draw down feet hours

8. WELL CONSTRUCTION

Diameter hole 20 inches Total depth 300 feet
Casing record 8"
Weight per foot 12.74 Thickness ¼

Diameter		From		To	
8 5/8 BLANK	inches	0	feet	100	feet
8 5/8 PERF	inches	100	feet	300	feet
	inches		feet		feet
	inches		feet		feet
	inches		feet		feet
	inches		feet		feet

Surface seal: Yes ☒ No ☐ Type concrete
Depth of seal 50' feet
Gravel packed: Yes ☒ No ☐
Gravel packed from 51' feet to 300 feet

Perforations:
Type perforation ROSCOE MOSS FULL FLOW
Size perforation 1/8"
From feet to feet
From feet to feet
From SEE ABOVE feet to feet
From feet to feet
From feet to feet

9. WATER LEVEL

Static water level Feet below land surface
Flow G.P.M.
Water temperature °F. Quality

10. DRILLERS CERTIFICATION

This well was drilled under my supervision and the report is true to the best of my knowledge.

Name BRAD SANTUCCI
Address 6860 W. ROSECREEK ROAD WINNEMUCCA, NEVADA 89445

Nevada contractor's license number 15234
Nevada driller's license number 1153
Signed [signature]
Date 6-2-81

USE ADDITIONAL SHEETS IF NECESSARY

APPENDIX H

Tier 1 Model Results

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: UNR Former Fire Fighting Training Facility
Site Location: Stead, Nevada

Completed By: P. S. Hackenberry
Date Completed: 16-Apr-02

Job ID: T1.Ind

Exposure Parameters		Residential			Commercial/Industrial	
		Adult	(1-6yrs)	(1-16 yrs)	Chronic	Construc.
AT_c	Averaging time for carcinogens (yr)	70				
AT_n	Averaging time for non-carcinogens (yr)	30			25	1
BW	Body weight (kg)	70	15	35	70	
ED	Exposure duration (yr)	30	6	16	25	1
τ	Averaging time for vapor flux (yr)	30			25	1
EF	Exposure frequency (days/yr)	350			250	180
EF_D	Exposure frequency for dermal exposure	350			250	
IR_w	Ingestion rate of water (L/day)	2			1	
IR_s	Ingestion rate of soil (mg/day)	100	200		50	100
SA	Skin surface area (dermal) (cm^2)	5800		2023	5800	5800
M	Soil to skin adherence factor	1				
ET_{swim}	Swimming exposure time (hr/event)	3				
EV_{swim}	Swimming event frequency (events/yr)	12	12	12		
IR_{swim}	Water ingestion while swimming (L/hr)	0.05	0.5			
SA_{swim}	Skin surface area for swimming (cm^2)	23000		8100		
IR_{fish}	Ingestion rate of fish (kg/yr)	0.025				
F_{fish}	Contaminated fish fraction (unitless)	1				

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	Residential	NA	NA
Soil Leaching to Groundwater Ingestion	Residential	NA	NA
Applicable Surface Water Exposure Routes:			
Swimming			NA
Fish Consumption			NA
Aquatic Life Protection			NA
Soil:			
Direct Ingestion and Dermal Contact	Com./Constr.		
Outdoor Air:			
Particulates from Surface Soils	None	NA	NA
Volatilization from Soils	Com./Constr.	NA	NA
Volatilization from Groundwater	Commercial	NA	NA
Indoor Air:			
Volatilization from Subsurface Soils	Commercial	NA	NA
Volatilization from Groundwater	Commercial	NA	NA

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	0	NA	NA	(ft)
Soil leaching to groundwater receptor	0	NA	NA	(ft)
Outdoor air inhalation receptor	0	NA	NA	(ft)

Target Health Risk Values		Individual	Cumulative
TR_{ab}	Target Risk (class A&B carcinogens)	1.0E-6	1.0E-5
TR_c	Target Risk (class C carcinogens)	1.0E-5	
THQ	Target Hazard Quotient (non-carcinogenic risk)	1.0E+0	1.0E+0

Modeling Options	
RBCA tier	Tier 1
Outdoor air volatilization model	Surface & subsurface models
Indoor air volatilization model	Johnson & Ettinger model
Soil leaching model	ASTM leaching model
Use soil attenuation model (SAM) for leachate?	No
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable

Surface Parameters		General	Construction	(Units)
A	Source zone area	2.2E+4	2.2E+4	(ft^2)
W	Length of source-zone area parallel to wind	1.5E+2	1.5E+2	(ft)
W_{gw}	Length of source-zone area parallel to GW flow	1.5E+2		(ft)
U_{air}	Ambient air velocity in mixing zone	6.4E+5		(ft/d)
δ_{air}	Air mixing zone height	6.6E+0		(ft)
P_a	Areal particulate emission rate	NA		(g/cm^2/s)
L_{ss}	Thickness of affected surface soils	3.3E+0		(ft)

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	1.6E-1			(ft)
h_v	Vadose zone thickness	9.7E+0			(ft)
ρ_s	Soil bulk density	1.7E+0			(g/cm^3)
f_{oc}	Fraction organic carbon	1.0E-2			(-)
θ_T	Soil total porosity	3.8E-1			(-)
K_{vs}	Vertical hydraulic conductivity	2.8E+1			(ft/d)
k_v	Vapor permeability	1.1E-11			(ft^2)
L_{gw}	Depth to groundwater	9.8E+0			(ft)
L_s	Depth to top of affected soils	0.0E+0			(ft)
L_{base}	Depth to base of affected soils	9.8E+0			(ft)
L_{subs}	Thickness of affected soils	9.8E+0			(ft)
pH	Soil/groundwater pH	6.8E+0			(-)
		capillary	vadose	foundation	
θ_w	Volumetric water content	0.342	0.12	0.12	(-)
θ_a	Volumetric air content	0.038	0.26	0.26	(-)

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	9.84E+0	(ft)
A_b	Foundation area	NA	7.53E+2	(ft^2)
X_{crk}	Foundation perimeter	NA	1.12E+2	(ft)
ER	Building air exchange rate	NA	1.99E+1	(1/d)
L_{crk}	Foundation thickness	NA	4.92E-1	(ft)
Z_{crk}	Depth to bottom of foundation slab	NA	4.92E-1	(ft)
η	Foundation crack fraction	NA	1.00E-2	(-)
dP	Indoor/outdoor differential pressure	NA	0.00E+0	(psi)
Q_s	Convective air flow through slab	NA	0.00E+0	(ft^3/d)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	6.6E+0	(ft)
I_f	Net groundwater infiltration rate	1.2E+1	(in/yr)
U_{gw}	Groundwater Darcy velocity	2.2E-1	(ft/d)
V_{gw}	Groundwater seepage velocity	5.9E-1	(ft/d)
K_s	Saturated hydraulic conductivity	NA	(ft/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(ft)
S_d	Depth of groundwater source zone	NA	(ft)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		Groundwater Ingestion		Soil Leaching to GW		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(ft)
α_y	Transverse dispersivity	NA	NA	NA	NA	(ft)
α_z	Vertical dispersivity	NA	NA	NA	NA	(ft)
Lateral Outdoor Air Transport		Soil to Outdoor Air Inhal.		GW to Outdoor Air Inhal.		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(ft)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(ft)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(ft^3/d)
W_{pi}	Width of GW plume at SW discharge	NA	(ft)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(ft)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

RBCA SITE ASSESSMENT

Site Name: UNR Former Fire Fighting Training Facility
Site Location: Stead, Nevada

Completed By: P. S. Hackenberry
Date Completed: 16-Apr-02

Job ID: T1.Ind

SOIL (0 - 9.8 ft) RBSL VALUES

Target Risk (Class A & B) 1.0E-6
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

RBSL Results For Complete Exposure Pathways ("X" if Complete)

			X	Soil Leaching to Groundwater Ingestion			X	Soil Vol. to Indoor Air	X	Soil Volatilization to Outdoor Air				X	Surface Soil Inhalation, Ingestion,Dermal Contact		Applicable RBSL	RBSL Exceeded ?	Required CRF
CONSTITUENTS OF CONCERN		**Representative Concentration**		On-site (0 ft)	NA	NA		On-site (0 ft)		On-site (0 ft)		NA	NA		On-site (0 ft)				Only if "yes" left
CAS No.	**Name**	(mg/kg)		Residential	NA	NA		Commercial		Commercial	Construction Worker	NA	NA		Commercial	Construction Worker	(mg/kg)	"■" if yes	
71-43-2	Benzene			9.6E-3	NA	NA		5.3E-2		7.6E+0	2.2E+1	NA	NA		2.8E+0	1.8E+1	9.6E-3	☐	NA
108-88-3	Toluene			5.0E+1	NA	NA		6.2E+1		>7.5E+2	>7.5E+2	NA	NA		4.6E+3	1.2E+3	5.0E+1	☐	NA
100-41-4	Ethylbenzene			6.4E+1	NA	NA		3.0E+2		>6.3E+2	>6.3E+2	NA	NA		3.2E+3	1.8E+3	6.4E+1	☐	NA
1330-20-7	Xylene (mixed isomers)			>5.0E+2	NA	NA		>5.0E+2		>5.0E+2	>5.0E+2	NA	NA		5.6E+4	1.9E+4	1.9E+4	☐	NA
91-20-3	Naphthalene			>6.2E+2	NA	NA		>6.2E+2		>6.2E+2	>6.2E+2	NA	NA		6.8E+4	3.4E+4	3.4E+4	☐	NA
86-73-7	Fluorene			>1.2E+2	NA	NA		NC		NC	NC	NA	NA		NC	NC	>1.2E+2	☐	NA
85-01-8	Phenanthrene			>2.3E+2	NA	NA		NC		NC	NC	NA	NA		NC	NC	>2.3E+2	☐	NA
120-12-7	Anthracene			>6.4E+0	NA	NA		NC		NC	NC	NA	NA		NC	NC	>6.4E+0	☐	NA
206-44-0	Fluoranthene			>7.8E+1	NA	NA		NC		NC	NC	NA	NA		NC	NC	>7.8E+1	☐	NA
129-00-0	Pyrene			>6.1E+1	NA	NA		NC		NC	NC	NA	NA		NC	NC	>6.1E+1	☐	NA
218-01-9	Chrysene			7.0E-1	NA	NA		>3.6E+0		>3.6E+0	>3.6E+0	NA	NA		6.6E-1	1.6E+1	6.6E-1	☐	NA
205-99-2	Benzo(b)Fluoranthene			3.0E+0	NA	NA		>8.1E+1		7.2E-1	>8.1E+1	NA	NA		1.0E+0	2.4E+1	7.2E-1	☐	NA

">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.

RBCA SITE ASSESSMENT

Site Name: UNR Former Fire Fighting Training Facility
Completed By: P. S. Hackenberry
Job ID: LS TPH T1.Ind
Site Location: Stead, Nevada
Date Completed: 16-Apr-02

SOIL (0 - 9.8 ft) RBSL VALUES

Target Risk (Class A & B) 1.0E-6
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

RBSL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	X Soil Leaching to Groundwater Ingestion			X Soil Vol. to Indoor Air	X Soil Volatilization to Outdoor Air				X Surface Soil Inhalation, Ingestion,Dermal Contact		Applicable RBSL	RBSL Exceeded ?	Required CRF
			On-site (0 ft)	NA	NA	On-site (0 ft)	On-site (0 ft)		NA	NA	On-site (0 ft)				Only if "yes" left
CAS No.	Name	(mg/kg)	Residential	NA	NA	Commercial	Commercial	Construction Worker	NA	NA	Commercial	Construction Worker	(mg/kg)	"■" if yes	
0-00-0	TPH - Aliph >C08-C10		>1.4E+2	NA	NA	>1.4E+2	>1.4E+2	>1.4E+2	NA	NA	3.3E+3	1.8E+3	1.8E+3	☐	NA
0-00-0	TPH - Aliph >C10-C12		>8.6E+1	NA	NA	>8.6E+1	>8.6E+1	>8.6E+1	NA	NA	3.3E+3	1.8E+3	1.8E+3	☐	NA
0-00-0	TPH - Aliph >C12-C16		>3.8E+1	NA	NA	>3.8E+1	>3.8E+1	>3.8E+1	NA	NA	3.3E+3	2.5E+3	2.5E+3	☐	NA
0-00-0	TPH - Aliph >C16-C21		>1.6E+1	NA	NA	NC	NC	NC	NA	NA	NC	NC	>1.6E+1	☐	NA
0-00-0	TPH - Aliph >C21-C34		>1.6E+1	NA	NA	NC	NC	NC	NA	NA	NC	NC	>1.6E+1	☐	NA
0-00-0	TPH - Arom >C05-C07		4.6E-1	NA	NA	9.3E-1	1.3E+2	2.2E+1	NA	NA	8.3E+1	1.8E+1	4.6E-1	☐	NA
0-00-0	TPH - Arom >C07-C08		9.0E+1	NA	NA	7.4E+1	>1.4E+3	>1.4E+3	NA	NA	5.5E+3	1.2E+3	7.4E+1	☐	NA
0-00-0	TPH - Arom >C08-C10		1.1E+2	NA	NA	1.3E+2	>1.0E+3	1.0E+3	NA	NA	1.3E+3	5.8E+2	1.1E+2	☐	NA
0-00-0	TPH - Arom >C10-C12		1.7E+2	NA	NA	>6.3E+2	>6.3E+2	>6.3E+2	NA	NA	1.3E+3	8.7E+2	1.7E+2	☐	NA
0-00-0	TPH - Arom >C12-C16		>2.9E+2	NA	NA	>2.9E+2	>2.9E+2	>2.9E+2	NA	NA	1.3E+3	1.1E+3	1.1E+3	☐	NA
0-00-0	TPH - Arom >C16-C21		>1.0E+2	NA	NA	NC	NC	NC	NA	NA	NC	NC	>1.0E+2	☐	NA
0-00-0	TPH - Arom >C21-C35		>8.3E+0	NA	NA	NC	NC	NC	NA	NA	NC	NC	>8.3E+0	☐	NA

">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.

APPENDIX I

Applicable SSTL's

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Former Fire Fighting Training Facility
Site Location: Stead, Nevada

Completed By: P. S. Hackenberry
Date Completed: 16-Apr-02

Job ID: LS T2.Ind

Exposure Parameters		Residential			Commercial/Industrial	
		Adult	(1-6yrs)	(1-16 yrs)	Chronic	Construc.
AT_c	Averaging time for carcinogens (yr)	70				
AT_n	Averaging time for non-carcinogens (yr)	30			25	1
BW	Body weight (kg)	70	15	35	70	
ED	Exposure duration (yr)	30	6	16	25	1
τ	Averaging time for vapor flux (yr)	30			25	1
EF	Exposure frequency (days/yr)	350			250	180
EF_D	Exposure frequency for dermal exposure	350			250	
IR_w	Ingestion rate of water (L/day)	2			1	
IR_s	Ingestion rate of soil (mg/day)	100	200		50	100
SA	Skin surface area (dermal) (cm^2)	5800		2023	5800	5800
M	Soil to skin adherence factor	1				
ET_{swim}	Swimming exposure time (hr/event)	3				
EV_{swim}	Swimming event frequency (events/yr)	12	12	12		
IR_{swim}	Water ingestion while swimming (L/hr)	0.05	0.5			
SA_{swim}	Skin surface area for swimming (cm^2)	23000		8100		
IR_{fish}	Ingestion rate of fish (kg/yr)	0.025				
F_{fish}	Contaminated fish fraction (unitless)	1				

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	Residential	MCL
Soil Leaching to Groundwater Ingestion	None	Residential	MCL
Applicable Surface Water Exposure Routes:			
Swimming			NA
Fish Consumption			NA
Aquatic Life Protection			NA
Soil:			
Direct Ingestion and Dermal Contact	Com./Constr.		
Outdoor Air:			
Particulates from Surface Soils	None	None	None
Volatilization from Soils	Com./Constr.	Commercial	None
Volatilization from Groundwater	Commercial	Commercial	None
Indoor Air:			
Volatilization from Subsurface Soils	Commercial	NA	NA
Volatilization from Groundwater	Commercial	NA	NA

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	700	1500	(ft)
Soil leaching to groundwater receptor	NA	700	1500	(ft)
Outdoor air inhalation receptor	0	75	NA	(ft)

Target Health Risk Values		Individual	Cumulative
TR_{ab}	Target Risk (class A&B carcinogens)	1.0E-6	1.0E-5
TR_c	Target Risk (class C carcinogens)	1.0E-5	
THQ	Target Hazard Quotient (non-carcinogenic risk)	1.0E+0	1.0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	Surface & subsurface models
Indoor air volatilization model	Johnson & Ettinger model
Soil leaching model	ASTM leaching model
Use soil attenuation model (SAM) for leachate?	No
Air dilution factor	3-D Gaussian dispersion
Groundwater dilution-attenuation factor	Domenico model

NOTE: NA = Not applicable

Surface Parameters		General	Construction	(Units)
A	Source zone area	8.9E+5	8.9E+5	(ft^2)
W	Length of source-zone area parallel to wind	9.5E+2	9.5E+2	(ft)
W_{gw}	Length of source-zone area parallel to GW flow	9.5E+2		(ft)
U_{air}	Ambient air velocity in mixing zone	1.1E+6		(ft/d)
δ_{air}	Air mixing zone height	6.6E+0		(ft)
P_a	Areal particulate emission rate	NA		(g/cm^2/s)
L_{ss}	Thickness of affected surface soils	2.2E+1		(ft)

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	3.0E-1			(ft)
h_v	Vadose zone thickness	2.2E+1			(ft)
ρ_s	Soil bulk density	1.7E+0			(g/cm^3)
f_{oc}	Fraction organic carbon	2.5E-3			(-)
θ_T	Soil total porosity	4.1E-1			(-)
K_{vs}	Vertical hydraulic conductivity	2.8E+0			(ft/d)
k_v	Vapor permeability	1.1E-12			(ft^2)
L_{gw}	Depth to groundwater	2.2E+1			(ft)
L_s	Depth to top of affected soils	0.0E+0			(ft)
L_{base}	Depth to base of affected soils	2.2E+1			(ft)
L_{subs}	Thickness of affected soils	2.2E+1			(ft)
pH	Soil/groundwater pH	7.6E+0			(-)
		capillary	vadose	foundation	
θ_w	Volumetric water content	0.369	0.12	0.12	(-)
θ_a	Volumetric air content	0.041	0.29	0.26	(-)

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	9.84E+0	(ft)
A_b	Foundation area	NA	7.53E+2	(ft^2)
X_{crk}	Foundation perimeter	NA	1.12E+2	(ft)
ER	Building air exchange rate	NA	1.99E+1	(1/d)
L_{crk}	Foundation thickness	NA	4.92E-1	(ft)
Z_{crk}	Depth to bottom of foundation slab	NA	4.92E-1	(ft)
η	Foundation crack fraction	NA	1.00E-2	(-)
dP	Indoor/outdoor differential pressure	NA	0.00E+0	(psi)
Q_s	Convective air flow through slab	NA	0.00E+0	(ft^3/d)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	5.0E+1	(ft)
I_f	Net groundwater infiltration rate	2.2E-1	(in/yr)
U_{gw}	Groundwater Darcy velocity	2.2E-1	(ft/d)
V_{gw}	Groundwater seepage velocity	7.3E-1	(ft/d)
K_s	Saturated hydraulic conductivity	2.2E+1	(ft/d)
i	Groundwater gradient	9.7E-3	(-)
S_w	Width of groundwater source zone	4.0E+2	(ft)
S_d	Depth of groundwater source zone	5.0E+1	(ft)
θ_{eff}	Effective porosity in water-bearing unit	3.0E-1	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	1.0E-3	(-)
pH_{sat}	Groundwater pH	7.0E+0	(-)
	Biodegradation considered?	No	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		Groundwater Ingestion		Soil Leaching to GW		
α_x	Longitudinal dispersivity	2.1E+1	2.9E+1	2.1E+1	2.9E+1	(ft)
α_y	Transverse dispersivity	2.1E+0	2.9E+0	2.1E+0	2.9E+0	(ft)
α_z	Vertical dispersivity	2.1E-1	2.9E-1	2.1E-1	2.9E-1	(ft)
Lateral Outdoor Air Transport		Soil to Outdoor Air Inhal.		GW to Outdoor Air Inhal.		
σ_y	Transverse dispersion coefficient	8.6E+0	NA	8.6E+0	NA	(ft)
σ_z	Vertical dispersion coefficient	5.8E+0	NA	5.8E+0	NA	(ft)
ADF	Air dispersion factor	1.0E+0	NA	1.0E+0	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(ft^3/d)
W_{pi}	Width of GW plume at SW discharge	NA	(ft)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(ft)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

RBCA SITE ASSESSMENT

Site Name: Former Fire Fighting Training Facility
Site Location: Stead, Nevada

Completed By: P. S. Hackenberry
Date Completed: 16-Apr-02

Job ID: LS T2.Ind

SOIL (0 - 22 ft) SSTL VALUES

Target Risk (Class A & B) 1.0E-6
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

Groundwater DAF Option: Domenico - No Decay
(One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	X Soil Leaching to Groundwater Ingestion			X Soil Vol. to Indoor Air	X Soil Volatilization to Outdoor Air				X Surface Soil Inhalation, Ingestion,Dermal Contact		Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (700 ft)	Off-site 2 (1500 ft)	On-site (0 ft)	On-site (0 ft)		Off-site 1 (75 ft)	Off-site 2 (0 ft)	On-site (0 ft)				Only if "yes" left
CAS No.	Name	(mg/kg)	None	Residential	MCL	Commercial	Commercial	Construction Worker	Commercial	None	Commercial	Construction Worker	(mg/kg)	"■" if yes	
71-43-2	Benzene		NA	1.7E-1	3.3E-1	2.4E-2	8.9E-1	1.4E+0	8.9E-1	NA	7.0E-1	1.4E+0	2.4E-2	☐	NA
108-88-3	Toluene		NA	>2.3E+2	1.2E+2	2.8E+1	>2.3E+2	1.2E+2	>2.3E+2	NA	8.8E+2	1.1E+2	2.8E+1	☐	NA
100-41-4	Ethylbenzene		NA	>1.7E+2	>1.7E+2	8.3E+1	>1.7E+2	>1.7E+2	>1.7E+2	NA	1.5E+3	3.8E+2	8.3E+1	☐	NA
1330-20-7	Xylene (mixed isomers)		NA	>1.4E+2	>1.4E+2	>1.4E+2	>1.4E+2	>1.4E+2	>1.4E+2	NA	1.4E+4	2.6E+3	2.6E+3	☐	NA
91-20-3	Naphthalene		NA	>1.6E+2	noMCL	>1.6E+2	>1.6E+2	>1.6E+2	>1.6E+2	NA	1.8E+4	5.6E+3	5.6E+3	☐	NA
86-73-7	Fluorene		NA	>3.1E+1	noMCL	NC	NC	NC	NC	NA	NC	NC	>3.1E+1	☐	NA
85-01-8	Phenanthrene		NA	>5.7E+1	noMCL	NC	NC	NC	NC	NA	NC	NC	>5.7E+1	☐	NA
120-12-7	Anthracene		NA	>1.6E+0	noMCL	NC	NC	NC	NC	NA	NC	NC	>1.6E+0	☐	NA
206-44-0	Fluoranthene		NA	>2.0E+1	noMCL	NC	NC	NC	NC	NA	NC	NC	>2.0E+1	☐	NA
129-00-0	Pyrene		NA	>1.5E+1	noMCL	NC	NC	NC	NC	NA	NC	NC	>1.5E+1	☐	NA
218-01-9	Chrysene		NA	>9.0E-1	>9.0E-1	>9.0E-1	>9.0E-1	>9.0E-1	>9.0E-1	NA	6.6E-1	1.5E+1	6.6E-1	☐	NA
205-99-2	Benzo(b)Fluoranthene		NA	>2.0E+1	noMCL	>2.0E+1	8.4E-2	>2.0E+1	8.4E-2	NA	1.0E+0	2.3E+1	8.4E-2	☐	NA

">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.

RBCA SITE ASSESSMENT

Site Name: Former Fire Fighting Training Facility
Site Location: Stead, Nevada

Completed By: P. S. Hackenberry
Date Completed: 16-Apr-02

Job ID: LS TPH T2.IndR2

SOIL (0 - 22 ft) SSTL VALUES

Target Risk (Class A & B) 1.0E-6
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

Groundwater DAF Option: Domenico - No Decay
(One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	X Soil Leaching to Groundwater Ingestion			X Soil Vol. to Indoor Air	X Soil Volatilization to Outdoor Air				X Surface Soil Inhalation, Ingestion,Dermal Contact		Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (700 ft)	Off-site 2 (1500 ft)	On-site (0 ft)	On-site (0 ft)		Off-site 1 (75 ft)	Off-site 2 (0 ft)	On-site (0 ft)				Only if "yes" left
CAS No.	Name	(mg/kg)	None	Residential	MCL	Commercial	Commercial	Construction Worker	Commercial	None	Commercial	Construction Worker	(mg/kg)	"■" if yes	
0-00-0	TPH - Aliph >C08-C10		NA	>4.0E+1	noMCL	>4.0E+1	>4.0E+1	>4.0E+1	>4.0E+1	NA	1.5E+3	2.1E+2	2.1E+2	☐	NA
0-00-0	TPH - Aliph >C10-C12		NA	>2.2E+1	noMCL	>2.2E+1	>2.2E+1	>2.2E+1	>2.2E+1	NA	1.5E+3	4.2E+2	4.2E+2	☐	NA
0-00-0	TPH - Aliph >C12-C16		NA	>9.6E+0	noMCL	>9.6E+0	>9.6E+0	>9.6E+0	>9.6E+0	NA	1.8E+3	7.8E+2	7.8E+2	☐	NA
0-00-0	TPH - Aliph >C16-C21		NA	>3.9E+0	noMCL	NC	NC	NC	NC	NA	NC	NC	>3.9E+0	☐	NA
0-00-0	TPH - Aliph >C21-C34		NA	>3.9E+0	noMCL	NC	NC	NC	NC	NA	NC	NC	>3.9E+0	☐	NA
0-00-0	TPH - Arom >C05-C07		NA	7.7E+0	noMCL	4.1E-1	1.6E+1	1.4E+0	1.6E+1	NA	1.4E+1	1.4E+0	4.1E-1	☐	NA
0-00-0	TPH - Arom >C07-C08		NA	>3.9E+2	noMCL	2.8E+1	>3.9E+2	1.3E+2	>3.9E+2	NA	9.1E+2	1.3E+2	2.8E+1	☐	NA
0-00-0	TPH - Arom >C08-C10		NA	>2.7E+2	noMCL	3.3E+1	>2.7E+2	1.2E+2	>2.7E+2	NA	3.8E+2	1.1E+2	3.3E+1	☐	NA
0-00-0	TPH - Arom >C10-C12		NA	>1.6E+2	noMCL	>1.6E+2	>1.6E+2	>1.6E+2	>1.6E+2	NA	5.9E+2	2.3E+2	2.3E+2	☐	NA
0-00-0	TPH - Arom >C12-C16		NA	>7.3E+1	noMCL	>7.3E+1	>7.3E+1	>7.3E+1	>7.3E+1	NA	8.7E+2	4.4E+2	4.4E+2	☐	NA
0-00-0	TPH - Arom >C16-C21		NA	>2.6E+1	noMCL	NC	NC	NC	NC	NA	NC	NC	>2.6E+1	☐	NA
0-00-0	TPH - Arom >C21-C35		NA	>2.1E+0	noMCL	NC	NC	NC	NC	NA	NC	NC	>2.1E+0	☐	NA

">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.

RBCA SITE ASSESSMENT | **TPH Criteria SSTL Worksheet**

Site Name: Former Fire Fighting Training Facility
Site Location: Stead, Nevada
Completed By: P. S. Hackenberry
Date Completed: 16-Apr-02
Job ID: LS TPH T2.IndR2

CALCULATION OF SSTL VALUES FOR TPH

		Mass Fractions		Representative Concentrations		Calculated Concentration Limits		Appilcable SSTL Values	
CONSTITUENTS OF CONCERN		**Soil**	**Groundwater**	**Soil**	**Groundwater**	**Residual Soil Concentration**	**Solubility**	**Soils (0 - 22 ft)**	**Groundwater**
CAS No.	**Name**	(-)	(-)	(mg/kg)	(mg/L)	(mg/kg)	(mg/L)	(mg/kg)	(mg/L)
0-00-0	TPH - Aliph >C08-C10	4.3E-2	0.0E+0			4.0E+1	4.3E-1	2.1E+2	>4.3E-1
0-00-0	TPH - Aliph >C10-C12	1.0E-1	0.0E+0			2.2E+1	3.4E-2	4.2E+2	>3.4E-2
0-00-0	TPH - Aliph >C12-C16	2.3E-1	0.0E+0			9.6E+0	7.6E-4	7.8E+2	>7.6E-4
0-00-0	TPH - Aliph >C16-C21	4.3E-1	0.0E+0			3.9E+0	2.5E-6	>3.9E+0	>2.5E-6
0-00-0	TPH - Aliph >C21-C34	1.6E-1	0.0E+0			3.9E+0	2.5E-6	>3.9E+0	>2.5E-6
0-00-0	TPH - Arom >C05-C07	0.0E+0	0.0E+0			5.6E+2	1.8E+3	4.1E-1	1.1E-1
0-00-0	TPH - Arom >C07-C08	2.0E-3	0.0E+0			3.9E+2	5.2E+2	2.8E+1	7.3E+0
0-00-0	TPH - Arom >C08-C10	2.9E-2	0.0E+0			2.7E+2	6.5E+1	3.3E+1	1.5E+0
0-00-0	TPH - Arom >C10-C12	6.0E-3	0.0E+0			1.6E+2	2.5E+1	2.3E+2	1.5E+0
0-00-0	TPH - Arom >C12-C16	0.0E+0	0.0E+0			7.3E+1	5.8E+0	4.4E+2	1.5E+0
0-00-0	TPH - Arom >C16-C21	0.0E+0	0.0E+0			2.6E+1	6.5E-1	>2.6E+1	>6.5E-1
0-00-0	TPH - Arom >C21-C35	0.0E+0	0.0E+0			2.1E+0	6.6E-3	>2.1E+0	>6.6E-3
	Total	1.0E+0	0.0E+0	0.0E+0	0.0E+0		**Total TPH SSTL value**	1.2E+3	

">" indicates risk-based target concentration greater than constituent residual saturation value. NC = Not calculated.