COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROGRAMS DIVISION

CLOSURE REPORT REQUIREMENTS

A closure report shall be submitted to the County of Los Angeles Department of Public Works, Environmental Programs Division, P.O. Box 1460, Alhambra, California 91802-1460, containing:

1. File number of facility and closure permit number.
2. Plot plan to scale showing locations of tanks, sampling points, buildings, adjacent streets, and north arrow.
3. Description of methods for obtaining, handling, and transporting samples.
4. Time and date samples were obtained.
5. Soil sampling certification (including but not limited to soils classification, boring logs, sample procedures, sample locations, initiating chain-of-custody, and groundwater location) for UST closure shall be certified by a California registered geologist, a California certified engineering geologist, or a California registered civil engineer with sufficient experience in soils. The certification must clearly state that all work was performed under the supervision of the person signing.
6. Chain-of-custody documentation initiated by person obtaining sample through person at a California Department of Health Services certified laboratory.
7. Disposal destination of tanks and evidence of legal disposal.
8. Analysis results by a State certified laboratory submitted on laboratory letterhead showing analysis date, methods of extraction, and methods of analysis.
9. Documentation as to depth of groundwater at facility.
10. Manifests to document hazardous waste disposal of any removed soil and tank rinsate.
11. Evidence of legal disposal of soils designated as nonhazardous.
12. Any observations of site contamination.
13. Remedial action plan to mitigate contamination.
14. Report to be signed by a California registered geologist, a California certified engineering geologist, or a California registered civil engineer with sufficient experience in soils.

Print Name Dale Zelenak

Signature Dale Zelenak Date March 12, 2014

UST1/CRR 07/25/02

Imagine the result

Atlantic Richfield Company

Tank Closure and Site Assessment Report

Former ARCO Station No. 1289
4861 East Firestone Boulevard
South Gate, California

LARWQCB File No. I-12054
CERS Facility ID 10400464
DPW Closure Permit Site-File No. 13060-57615

March 12, 2014

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Tank Closure and Site Assessment Report

Former ARCO Station No. 1289
4861 East Firestone Boulevard
South Gate, California

CRWQCB-LA File
No. I-12054 (Priority D)

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Date:
March 12, 2014

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Tank Closure and Site Assessment Report

Former ARCO Facility No. 1289

1. Introduction

On behalf of Tesoro Corporation (Tesoro), ARCADIS U.S., Inc. (ARCADIS) prepared this Tank Closure and Site Assessment Report (report) for the former Atlantic Richfield Company (ARCO) Station No. 1289 located at 4861 East Firestone Boulevard, South Gate, California (site; Figure 1). Information pertaining to tank closure is being submitted in accordance with Los Angeles County Department of Public Works (LACDPW) requirements. Site assessment information is being submitted in response the Los Angeles Regional Water Quality Control Board's (LARWQCB's) directive issued on January 27, 2014 (LARWQCB 2014a).

Prior to the discovery of a non-permitted underground storage tank (UST), closure was requested for this site in May 2013 (ARCADIS 2013b). The LARWQCB's case review was not completed due to the discovery of the non-permitted UST during site redevelopment activities. With the submittal of this report, ARCADIS is requesting the LARWQCB to resume the case review for closure.

This report summarizes the following:

- Task 1: Sampling of the tank contents conducted in August 2013
- Task 2: Sampling of native soil for use as backfill in January 2014
- Task 3: UST removal and sampling of the soil along the sidewalls and bottom of the tank pit in January 2014
- Task 4: Soil excavation activities and confirmation soil sampling conducted in January and February 2014 to excavate soil potentially impacted by overflow of the tank contents
- Task 5: Oversight of excavation backfill and compaction activities in February 2014
- Task 6: Investigation-derived waste (IDW) sampling in January 2014
- Task 7: Collection of one grab groundwater sample using a HydroPunch™ sampling tool in February 2014

All field activities were completed under the direction of a California Professional Geologist. This report summaries field activities and includes an evaluation of the data in the context of site assessment to support a request for closure.

2. Background

The UST was discovered at the above referenced site on July 26, 2013. Azalea Joint Venture, LLC (Azalea Joint Venture, property owner) is redeveloping the site and surrounding parcels for a retail center. The UST was discovered during soil excavation and grading activities associated with site redevelopment. The UST is located in the eastern portion of the site, north of the former USTs that were removed in 2001 (Figure 2). During the UST permitting process and prior to removal, the tank filled with water and overflowed. The surrounding soil impacted by the tank liquids was excavated, and confirmation soil samples were collected

to evaluate the extent of impacts. Additionally, as requested by the LARWQCB via telephone on February 4, 2014, one groundwater sample was collected (LARWQCB 2014b).

3. Regional Geology and Hydrogeology

The site is located in the Los Angeles Basin, which has very high volumes of hydrocarbons in its sedimentary fill (Biddle 1991). Within the Los Angeles Basin, the site is located in the central portion of the Downey Plain, which extends from the Ballona Gap in the west, across the Coastal Plain of Los Angeles County, into the Coastal Plain of Orange County to the City of Santa Ana. Alluvial fans formed by the Los Angeles and Rio Hondo-San Gabriel River systems, the major drainage system of the Coastal Plain of Los Angeles County, have coalesced to form the Downey Plain. The uppermost sediments in the site vicinity are Quaternary in age and generally consist of interbedded sand, silt, and clay (California Department of Water Resources [CDWR] 1961).

The site is located within the Central Basin Pressure Area, which is overlain by the Downey Plain. Water-bearing sediments in the Pressure Area range in age from Recent to Pliocene. The Pressure Area is bounded on the southwest by the Newport-Inglewood Uplift and on the north by the South Gate-Santa Ana Depression. The Bellflower Aquiclude, with sediments of lesser permeability (which restricts vertical movement of groundwater), is present beneath the site. The Bellflower Aquiclude in the site vicinity is approximately 60 feet thick (from ground surface to approximately 60 feet below ground surface [bgs]). The Bellflower Aquiclude is composed mainly of silt and clay; however, there are numerous areas where it consists of clayey sand and gravel where its effectiveness as an aquiclude is limited (CDWR 1961).

The shallowest producing aquifer beneath the site is the Gaspur Aquifer, which occurs between approximately 50 and 90 feet bgs in the site vicinity. Regionally, the overlying Bellflower Aquiclude restricts vertical percolation into the Gaspur Aquifer. The Lakewood Formation contains the Exposition and Gage Aquifers. The base of the Lakewood Formation is approximately 275 feet bgs in the site vicinity. The San Pedro Formation lies beneath the Lakewood Formation and contains the Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside Aquifers. The San Pedro Formation extends to approximately 1,300 feet bgs in the site vicinity (CDWR 1961).

4. Site Geology and Hydrogeology

Soil types encountered beneath the site primarily consist of coarse-grained sediments (sands and silty sands) with interbedded fine-grained sediments (silts and clays) to 75 feet bgs, which is the maximum depth explored. During the UST removal and soil excavation, sands and silty sands were observed. Pea gravel was encountered in the trench containing abandoned vent lines associated with former USTs removed in 2001 (Delta 2002).

Depth to first encountered groundwater beneath the site has ranged from 40.29 feet bgs (MW-11; March 16, 2000; ARCADIS 2013a) to 55.92 feet bgs (MW-1; August 28, 1992; ARCADIS 2013a). On February 17, 2014, the depth to groundwater measured during groundwater sampling was approximately 52 feet bgs. Groundwater was not encountered during UST removal or soil excavation activities.

5. Pre-Field Activities

Prior to implementing field activities, as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 Code of Federal Regulations Section 1910.120), and by California Occupational Health and Safety Administration (Cal-OSHA) "Hazardous Waste Operations and Emergency Response" guidelines (California Code of Regulations Title 8, Section 5192), ARCADIS prepared a health and safety plan (HASP). Field staff and contractors reviewed the HASP before beginning field operations at the site.

5.1 UST Removal and Soil Excavation

Innovative Construction Solutions (ICS), a subcontractor of ARCADIS, registered the UST through the California Environmental Reports System (CERS, Facility ID 10400464). A permit was obtained by the Los Angeles County Department of Public Works (LACDPW, Site-File Number 13060-57615) to remove the UST. As required by the Los Angeles County Fire Department (LACFD), a Tank Removal Permit was obtained. The City of South Gate Department of Building and Safety issued a Building Permit (Number 14-327) requiring inspection during backfill and compaction following tank removal. Copies of the approved permits are included in Appendix A.

Prior to conducting UST removal and soil excavation field work, the following agencies and companies were notified: Underground Service Alert (USA) of Southern California, Azalea Joint Venture, LACDPW, LACFD, and LARWQCB. The area surrounding the UST and impacted soil were also cleared for utility conflicts by a third-party private utility locator.

5.2 Groundwater Sampling

Prior to collecting the groundwater sample using a HydroPunch™ sampling device, the approved Well Permit (Number 892273) was obtained from Los Angeles County Environmental Health Drinking Water Program and the UST ticket was renewed. The LARWQCB, property owner, and Los Angeles County Environmental Health Drinking Water Program were notified prior to the start of field activities.

6. Field Activities

ARCADIS provided oversight for all field activities, including UST removal, soil excavation, and advancement of one direct push boring for groundwater sampling. The UST removal and soil excavation activities were completed by Innovative Construction Solutions (ICS, License Number 764815, A-HAZ-C21). ICS provided notification to the South Coast Air Quality Management District in accordance with the Rule 1166 Various Locations Plan. Martini Drilling Corp (C-57 License Number 831982) completed the advancement of one direct push boring to collect the groundwater sample.

All samples collected during field activities were preserved on ice, transported following industry standard chain-of-custody procedures, and submitted to Calscience Environmental Laboratories, Inc. (Calscience) for analysis. All analytical results are tabulated in Tables 1 – 15. Confirmation soil sample and groundwater sample locations are shown on Figure 3. The laboratory analytical reports and chain-of-custody documentation are included in Appendix B.

6.1 Task 1: UST Contents Sampling

On August 7, 2013, a sample of the UST contents was collected using a bailer and submitted to Calscience for the analyses listed below. During sampling, a mixture of liquids and sludge was observed. Due to the high viscosity of the sample, Calscience was required to analyze the sample as a solid.

- Gasoline Range Organics (GRO) by U.S. Environmental Protection Agency (USEPA) method 8015B
- Diesel Range Organics (DRO) by USEPA method 8015B
- Carbon fraction by USEPA method 8015B
- Metals by USEPA method 6010B
- Mercury by USEPA method 7471A
- Polychlorinated biphenyls (PCBs) by USEPA method 8082
- Volatile organic compounds (VOCs) by USEPA 8260B
- Semi-volatile organic compounds (SVOCs), including polycyclic aromatic hydrocarbons (PAHs), by USEPA method 8270C
- Ignitability by USEPA method 1010A

The analytical results (Tables 1 – 5) indicated the contents were a waste oil mixture with PCBs; mercury was not detected.

6.2 Task 2: Backfill Soil Sampling

Due to the construction activities, native material from the site was available for backfill following completion of UST removal and soil excavation activities. To confirm the native material was clean soil, Department of Toxic Substances Control's (DTSC's) Information Advisory Clean Imported Fill was followed (DTSC 2001). The DTSC guidance recommends collecting one soil sample per 250 cubic yards (cy) of backfill material. Due to the limited area and depth of excavation, one soil sample was collected in a 4- oz glass sampling jar and submitted to Calscience for the analyses listed below. Approximately 30 cy of soil was excavated, backfilled, and compacted.

- GRO by USEPA method 8015B
- DRO by USEPA method 8015B
- Metals by USEPA method 6010B
- Mercury by USEPA method 7471A
- PCBs by USEPA method 8082
- VOCs by USEPA 8260B
- SVOCs, including PAHs, by USEPA method 8270C

The analytical results are summarized in Tables 6 – 10.

6.3 Task 3: UST Removal and Tank Pit Sampling

On January 29, 2014, ARCADIS personnel observed the removal of the UST. Inspector Mario Chavez (LACFD) and Waste Control Engineering Inspector Joe Antig (LACDPW) were present prior to and during UST removal activities. The UST liquids were pumped from the tank and containerized in 55-gallon Department of Transportation-approved drums for disposal. Following removal of the liquids from the single-wall steel tank with an estimated capacity of 280 gallons, the tank was triple-rinsed. The rinse water was evacuated from the tank following each rinse cycle. The mixture of UST liquids and rinse water, totaling approximately 360 gallons, were shipped as Resource Conservation and Recovery Act (RCRA) hazardous waste to US Ecology, Inc. (US Ecology) in Beatty, Nevada. A copy of the Uniform Hazardous Waste Manifest (Manifest Tracking Number 005767663 FLE) is included in Appendix C.

A Certified Industrial Hygienist inspected the UST for an explosive atmosphere by utilizing a combustible gas indicator. The lower explosive limits were measured and determined to be less than 20 percent. Subsequently, the UST was removed and inspected for signs of deterioration; no holes were observed in the tank. Following inspection, the tank was loaded and transported off site for disposal at Ecology Auto Parts in Fontana, California. Copies of the Hazardous Waste Tank Closure Certification and Certificate of Destruction are included in Appendix D.

The approximate total depth of the tank pit was 4 feet bgs. No visual staining of soil was observed, nor were there any lateral pipes entering the tank. As directed by LACDPW, one soil sample was collected from the floor of the pit, approximately 6 feet bgs. Additional soil samples were collected at the discretion of ARCADIS for site closure purposes: one floor sample at 7.5 feet bgs, and one sample from each sidewall. The analytical results are summarized in Tables 6 – 10.

6.4 Task 4 and 5: Soil Excavation, Backfill, and Compaction

On January 29 and 30, 2014, after tank removal activities, additional soil south and southeast of the UST pit impacted by the overflow of tank liquids was excavated to approximately 5.0 ft bgs (Figures 2 and 3). Soil samples were collected for field analysis using the headspace method and a photo-ionization detector (PID). The bucket of the excavator was used to collect the samples from depths greater than 4 feet bgs. Excavation continued until PID headspace readings were less than or equal to 50 parts per million (ppm). The total depth and lateral extent of excavation was based on observed visual staining and PID readings.

During the removal of this soil, a trench containing pea gravel and the former UST vent lines was discovered; the two vent lines were determined to be associated with historical USTs that were removed in 2001 (Delta 2002). Based on visual assessment, staining, and odor, the pea gravel was impacted by the tank contents. The stained pea gravel and surrounding soils in the trench were excavated, and placed into roll off bins.

Confirmation soil samples (Figure 3) were collected and submitted to Calscience for the analyses described below.

- GRO by USEPA method 8015B
- DRO by USEPA method 8015B
- Carbon fraction by USEPA method 8015B
- Metals by USEPA method 6010B
- Mercury by USEPA method 7471A
- PCBs by USEPA method 8082
- VOCs by USEPA 8260B
- SVOCs, including PAHs, by USEPA method 8270C

Eight excavation soil confirmation samples were collected in accordance with USEPA Method 5035 using Encore™ samplers. In addition, soil was collected in one 4-ounce (oz) glass sampling jar for each confirmation soil sample. To be conservative, the analytical results were compared to the San Francisco Regional Water Quality Control Board (SFRWQCB) Tier 1 environmental screening level (ESL) for soil of 100 milligrams per kilogram (mg/kg). The State Water Resources Control Board (SWRCB) Low Threat Closure Policy (LTCP; SWRCB 2012) only provides guidance regarding DRO concentrations in soil when

considering soil gas concentrations and at depths shallower than 5 feet bgs (for future construction). The DRO concentration of 230 mg/kg at 6.5 feet bgs in sample EXC-B2-6.5 exceeded the ESL. Additionally, the DRO concentration of 270 mg/kg at 10 feet bgs in sample EXC-B2-10 did not indicate attenuation with depth. Subsequently, additional soil excavation was completed to ensure removal of impacted soil.

Further soil excavation was completed on February 5, 2014 in the area surrounding this sample location. The excavation extended to approximately 11 feet bgs in the southeastern portion of the trench. An additional confirmation sample was collected at 15 feet bgs (EXC-B2-15); the DRO concentration was 5.7 mg/kg. The excavation extents are depicted on Figure 2.The laboratory analyses and results are discussed for all soil samples in Section 5 and summarized in Tables 6 – 10.

On February 11, 2014, the UST pit and excavation area was backfilled with native material and compacted. Approximately 30 cy of soil were used for backfill. Due to future construction planned for the site, the property owner provided the subcontractor, Geocon, Inc. (Geocon), for geotechnical oversight for compaction activities. Geocon is functioning as a representative for the City of South Gate Department of Building and Safety and completed the permit-required inspection activities.

6.5 Task 6: IDW Sampling

All excavated soil was placed into two roll off bins. One IDW sample was collected from each roll off bin in 4-oz jars. The IDW samples were submitted to Calscience for the following analyses:

- GRO by USEPA method 8015B
- DRO by USEPA method 8015B
- Carbon fraction by USEPA method 8015B
- Metals by USEPA method 6010B
- Mercury by USEPA method 7471A
- PCBs by USEPA method 8082
- VOCs by USEPA 8260B
- SVOCs, including PAHs, by USEPA method 8270C

The contents of one roll off bin were classified as non-hazardous waste; this bin was transported off site for disposal at Soil Safe located in Adelanto, California (Manifest Tracking Number 42401 001). However, additional analyses were required for sample IDW-S-01292014, collected from the second roll-off bin, due to the lead concentration of 120 mg/kg:

- Toxicity Characteristic Leaching Procedure (TCLP) for lead by USEPA method 6010B
- Soluble Threshold Limit Concentration (STLC) for lead by USEPA method 6010B

Based on these results, the waste was classified as a non-RCRA hazardous waste; this roll off bin was transported off site for disposal at US Ecology located in Beatty, Nevada (Manifest Tracking Number 005759503 FLE). The waste manifests for each roll off bin are provided in Appendix C.

6.6 Task 7: Groundwater Sampling

On February 17, 2014, at the request of LARWQCB, one direct push boring was advanced to allow for the collection of a groundwater sample using a HydroPunch™ sampling device. The direct push boring was completed southeast of the UST pit and collocated with the EXC-B2 sample location. Samples collected from the EXC-B2 location contained the highest concentrations of DRO in the soil confirmation samples. The depth to groundwater was approximately 52 feet bgs. The groundwater sample was collected following the ARCADIS Standard Operating Procedure: Groundwater Sampling Using HydroPunch™ (Appendix E). The groundwater sample was placed into laboratory-supplied containers and submitted to Calscience for the analyses described below.

- GRO by USEPA method 8015B
- DRO by USEPA method 8015B
- Carbon fraction by USEPA method 8015B
- Metals by USEPA method 6010B
- PCBs by USEPA method 8082
- VOCs by USEPA 8260B
- SVOCs, including PAHs, by USEPA method 8270C

The analyses are consistent with the constituents detected in the UST contents sample. Mercury was not detected in the UST contents sample nor has mercury been considered a constituent of concern at this site. Subsequently, mercury analysis was not completed for the groundwater sample. The analytical results are summarized in Tables 11 – 15.

7. Discussion and Site Assessment Evaluation

The analytical results for the backfill soil sample, UST pit soil samples, soil excavation confirmation samples, and groundwater sample are discussed in this section. Additionally, the results of a site assessment evaluation and review of surrounding land uses are provided in this section.

Soil analytical results were compared to the SWRCB LTCP (SWRCB 2012) for benzene, ethylbenzene, naphthalene, and PAHs. For all other constituents, except GRO and DRO, USEPA Regional Screening Levels (RSLs) for industrial soil (USEPA 2013) were used as the standard. The LTCP only provides guidance regarding GRO and DRO concentrations in soil when considering soil gas concentrations and at

depths shallower than 5 feet bgs (future construction scenario). Therefore, to be conservative, the SFRWQCB ESLs were used as the standard (SFRWQCB 2013).

The groundwater analytical results were compared to the USEPA maximum contaminant levels (MCLs) when established. The California Department of Health Services (CDHS) Primary MCLs were used as the groundwater standard for all other constituents, except for GRO and tertiary butyl alcohol (TBA). No USEPA MCL or CDHS MCL is established for GRO; therefore, an ESL of 0.1 milligrams per liter (mg/L) was used in accordance with the SFRWQCB final ceiling level for groundwater based on the USEPA Suggested No Adverse Response Level for taste and odor (SFRWQCB 2013). An MCL is not established for TBA; therefore, the CDHS notification level of 0.012 mg/L was used. These standards are consistent with the site closure request previously submitted (ARCADIS 2013b).

Prior to the discovery of the UST, LTC was requested for this site in May 2013 (ARCADIS 2013b). The LARWQCB's case review was not completed due to the discovery of the UST. Soil and groundwater data collected following soil excavation in the overflow area were evaluated to complete the site assessment.

7.1 Task 2: Backfill Soil Sample Results

The backfill soil sample analytical results indicated the arsenic concentration of 3.38 mg/kg exceeded the RSL of 2.4 mg/kg. However, a study completed by the DTSC indicates elevated background arsenic concentrations occur throughout southern California, including Los Angeles County (Chernoff et al. 2008). The background arsenic threshold concentration is estimated to be 12 mg/kg. The detected concentration in the backfill sample is less than 12 mg/kg and was deemed acceptable.

7.2 Task 3: Tank Pit Sample Results

Two confirmation soil samples were collected from the floor of the former UST pit at approximately 6 and 7.5 feet bgs: UST-Floor1-6.0 and UST-Floor2-7.5, respectively. Four sidewall samples were collected, one from each sidewall. The sidewall samples were collected from 7.5 feet bgs to be consistent with the depth of sample UST-Floor2-7.5. All samples were collected from the bucket of the excavator. The analytical results indicated the no standards were exceeded.

7.3 Task 4: Excavation Soil Sample Results

The confirmation soil analytical results for all soil samples left in place indicated concentrations below the standards, except for the following samples:

- **Sample EXC-B1-6.5**: this is an excavation floor sample collected at approximately 6.5 feet bgs.

The 2,4-dinitrotoluene concentration of 6.8 mg/kg exceeded the RSL of 5.5 mg/kg. 2,4-dinitrotoluene was not detected above the method reporting limit (MRL) in the UST contents sample; the source of the 2,4-dinitrotoluene is unknown.

The DRO concentration of 170 mg/kg exceeded the ESL of 100 mg/kg. However, the DRO concentration in sample EXC-B1-10, collected at 10 feet bgs and directly below sample EXC-B1-6.5, was 23 mg/kg. Sample EXC-B1-10 demonstrates attenuation with depth and is below the ESL.

- **Sample EXC-S-4.0**: this is an excavation sidewall sample collected at approximately 4 feet bgs.

  The arsenic concentration of 6.07 mg/kg exceeded the RSL of 2.4 mg/kg. As previously discussed in Section 6.1, the background arsenic threshold concentration is estimated to be 12 mg/kg in southern California (Chernoff et al. 2008). The detected concentration in the sidewall sample is less than 12 mg/kg and was left in place.

7.4 Task 7: Groundwater Sample Results

Groundwater analytical results indicated that only DRO, arsenic, barium, beryllium, chromium, lead, and trichloroethene (TCE) were detected above the standard. However, of these constituents, only DRO, arsenic, chromium, and lead were detected in the UST contents sample. In the confirmation soil samples, DRO, arsenic, barium, beryllium, chromium, lead were detected at levels below the standard. In addition, TCE which was detected in groundwater was not detected in the contents of the UST or any soil samples.

7.5 Site Assessment

A site assessment was completed to evaluate the overflowed UST contents as a potential source for detected constituents in groundwater. To perform this evaluation of soil and groundwater data, the vertical convective mobility of constituents in soil was investigated (Jury et al 1984). The DRO concentration of 270 mg/kg in soil boring EXC-B2-10 at approximately 10 feet bgs was used as a conservative, worst case, impact to soils to evaluate a potential connection to groundwater.

To examine the convective vertical mobility, multiple parameters were used. The parameters used and assumptions made to complete this assessment are provided below:

- Vertical hydraulic conductivity of the soil system was approximated by assuming a value of 10 feet per day (ft/d), which is conservative for the purposes of this assessment such that vertical hydraulic conductivity of a soil system may be approximated by the recharge rate, much smaller in this case.
- Porosity was assumed to be 20 percent (Payne et al 2008).
- Soil bulk density was assumed to be 1.65 kilograms per liter.

- Distribution coefficient of 336 liters per kilogram derived from a fraction of organic carbon of 0.002, which is default for risk assessment (IDEM RISC 2001) and a soil-water partition coefficient of 168,000 liters per kilogram representing TPH in place of DRO.
- Volumetric air content of 32 percent.
- Henry's Law constant for TPH at 2.08 was used in place of DRO.

With these values, the resulting vertically downward convective mobility was estimated at approximately 1.8×10^{-2} ft/d. The approximate travel distance from the soil sample collected at EXC-B2-10 at 10 feet bgs to groundwater measured at 52 feet bgs on February 11, 2014 is 42 feet. Hence, the convective mobility travel time for vertical migration downward to the water table was estimated to be approximately 6 years using highly conservative parameters.

The precise date of the UST overflow is not known. However, based on field observations during sampling of the backfill soil on January 17, 2014, the UST had not overflowed. Therefore, the maximum amount of time UST contents were in contact with soil adjacent to the UST less than 1 month. The results of this assessment demonstrate that 6 months is an insufficient amount of time for the overflow to impact the groundwater. Subsequently, the elevated concentrations of DRO and metals in the groundwater are from an unknown source.

7.6 Nearby Land Use

The EnviroStor and Geotracker databases were reviewed to identify the current and/or former land use of nearby properties. A summary of these properties with the COCs consistent with constituents identified in the groundwater sample (DRO, arsenic, barium, beryllium, chromium, lead, and TCE), which are not considered site-specific COCs, is provided below:

- *South Region ES #4 Site 1 5640017* located at 8929 Kauffman Avenue, approximately 0.3 miles west of the site and just south of Firestone Boulevard.

  Historical site uses include residential, former service station, machine shop, printing operation, and auto repair facilities, as well as onsite pole-mounted transformers (Envirostor 2014). Additionally, there is an offsite dry cleaner. Soil and soil vapor samples have been collected at the site beginning in 2005. The soil sample results indicated elevated concentrations of lead. Subsequently, the lead-impacted soil was excavated and no further action for this site area was granted (DTSC 2013). The site area with soil vapor impacts indicate elevated concentrations of tetrachloroethene (PCE) and its degradation product, TCE.

- *Former Ameron Facility* located at 4635 Firestone Boulevard, approximately 0.2 miles west of the site on the north side of Firestone Boulevard.

During land development by Azalea Joint Venture for a retail center, which is the same retail center the site is being developed for, 3 non-permitted USTs, a portion of a 55-gallon metal drum, and soil contamination was encountered (Environ International Corporation 2013). TPH (including carbon ranges for GRO and DRO), VOCs, SVOCs, and metals were identified in soil samples prior to excavation. PCE was present in soil vapor samples.

8. Recommendations

Based on the laboratory analytical results and field observations, no further work is necessary for tank closure. This concludes activities associated with tank removal. No further action for tank removal activities is requested from the LACDPW.

As documented by this report, the UST has been removed, and soil impacted by the UST overflow has been excavated. Based on the soil and groundwater analytical results in conjunction with the site assessment evaluation this site meets the criteria for LTC. Additionally, the potential for historical impacts from upgradient sites and the known presence of hydrocarbons in the Los Angeles Basin contribute to the conclusion the groundwater impacts are from an unknown source. ARCADIS requests that the LARWQCB resume the case review for no further action for this site.

9. References

ARCADIS U.S. Inc. 2013a. First Quarter 2013 Site Conceptual Model Update. April 15.

ARCADIS, U.S., Inc. 2013b. Request for Low-Threat Closure. May 24.

Biddle, Kevin T. 1991. Active Margin Basins. The Los Angeles Basin: An Overview: Chapter 1. American Association of Petroleum Geologists. June 1.

California Department of Water Resources (CDWR). 1961. Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A: Ground Water Geology, Bulletin No. 104.

Chernoff, G., W. Bosan, and D. Oudiz. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil. Department of Toxic Substance Control, Sacramento, CA.

Delta. 2002. Underground Storage Tank Removal Report, ARCO Facility No. 1289. February 1.

Department of Toxic Substances Control. 2001. Information Advisory, Clean Imported Fill Material. October.

Department of Toxic Substances Control. 2013. Approval of 2012 Second Semi-Annual Soil Vapor Probe Sampling Report – South Region Elementary School #4 – Area 2, 8929 Kaufman Avenue, South Gate (Site Code: 304510). February 25.

Environ International Corporation. 2013. Soil Excavation Report, Former Ameron Facility, 4635 Firestone Boulevard, South Gate, California. July 31.

EnviroStor. 2014. http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=60000123. Accessed March 10.

Indiana Department of Environmental Management (IDEM) Risk Integrated System of Closure (RISC). 2001. Technical Resource Guidance Document (Technical Guide). Indianapolis, IN.

Jury, W.A., Farmer, W.J., and Spencer, W.F., 1984, Behavior Assessment Model for Trace Organics in Soil: II. Chemical Classification and Parameter Sensitivity, J. Environ. Qual., Vol 13, no. 4.

Los Angeles Regional Water Quality Control Board. 2014a. Directive to Take Corrective Action in Response to Unauthorized Underground Storage Tank Release – Health and Safety Code Section 25296.10 and Title 23, Chapter 16, California Code of Regulations, Sections 2720-2727. January 27.

Los Angeles Regional Water Quality Control Board. 2014b. Telephone conversation between Mr. Nhan Bao (LARWQCB) and Mrs. Darla Zelenak (ARCADIS). February 4.

Payne, F., Quinnan, J., Potter, T., 2008, Remediation Hydraulics, CRC press.

State Water Resources Control Board. 2012. Low-threat Underground Storage Tank Case Closure Policy. August 17.

San Francisco Regional Water Quality Control Board. 2013. Screening for Environmental Concerns at Sites with Soil and Groundwater, Interim Final. February.

USEPA. 2013. Regional Screening Levels. November.

Tables

Table 1
UST Contents Analytical Results - Select VOCs and Organics
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	GRO [C6-C12] (mg/kg)	DRO [C10-C28] (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	ETBE (mg/kg)	VC (mg/kg)	Ethanol (mg/kg)
UST-20130807	8/7/2013	25	300	380	1690	5.0	360	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 500

Notes:

VOCs	Volatile Organic Compounds
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
MTBE	Methyl tertiary butyl ether
TBA	Tertiary butyl alcohol
DIPE	Diisopropyl ether
TAME	Tertiary amyl methyl ether
ETBE	Ethyl tertiary butyl alcohol
mg/kg	Milligrams per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available

Sample UST-20130807 had a very high viscosity and as a result was analyzed as a solid. Analytical results are presented in milligrams per kilogram (mg/kg).

Table 2
UST Contents Analytical Results - Carbon Fractions
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	$[C_6]$ (mg/kg)	$[C_7]$ (mg/kg)	$[C_8]$ (mg/kg)	$[C_9\text{-}C_{10}]$ (mg/kg)	$[C_{11}\text{-}C_{12}]$ (mg/kg)	$[C_{13}\text{-}C_{14}]$ (mg/kg)	$[C_{15}\text{-}C_{16}]$ (mg/kg)	$[C_{17}\text{-}C_{18}]$ (mg/kg)	$[C_{19}\text{-}C_{20}]$ (mg/kg)	$[C_{21}\text{-}C_{22}]$ (mg/kg)	$[C_{23}\text{-}C_{24}]$ (mg/kg)	$[C_{25}\text{-}C_{28}]$ (mg/kg)	$[C_{29}\text{-}C_{32}]$ (mg/kg)	$[C_{33}\text{-}C_{36}]$ (mg/kg)	$[C_{37}\text{-}C_{40}]$ (mg/kg)	$[C_{41}\text{-}C_{44}]$ (mg/kg)	$[C_6\text{-}C_{44}]_{TOT}$ (mg/kg)
UST-20130807	8/7/2013	< 12000	< 12000	< 12000	19000	14000	< 12000	< 12000	< 12000	27000	38000	84000	130000	110000	86000	61000	34000	620000

Notes:

ft bgs Feet below ground surface
mg/kg Milligrams per kilogram
< Analyte was not detected above the specified method reporting limit
-- Not available
Sample UST-20130807 had a very high viscosity and as a result was analyzed as a solid. Analytical results are presented in milligrams per kilogram (mg/kg).

Table 3
UST Contents Analytical Results - Inorganics
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
UST-20130807	8/7/2013	< 1.50	1.74	17.8	< 0.50	1.26	5.71	< 0.50	43.7	2910	< 0.0835	1.69	1.13	< 1.50	< 0.50	< 1.50	< 0.50	1060

Notes:

US EPA	United States Environmental Protection Agency
mg/kg	Milligrams per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available

Sample UST-20130807 had a very high viscosity and as a result was analyzed as a solid. Analytical results are presented in milligrams per kilogram (mg/kg).

Table 4
UST Contents Analytical Results - PCB Mixtures
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Sample Depth (ft bgs)	Aroclor 1016 (µg/kg)	Aroclor 1221 (µg/kg)	Aroclor 1232 (µg/kg)	Aroclor 1242 (µg/kg)	Aroclor 1248 (µg/kg)	Aroclor 1254 (µg/kg)	Aroclor 1260 (µg/kg)	Aroclor 1262 (µg/kg)
UST-20130807	8/7/2013	--	< 10	< 10	43	< 10	< 10	< 10	< 10	< 10

Notes:

PCB	Polychlorinated Biphenyls
µg/kg	Micrograms per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available

Sample UST-20130807 had a very high viscosity and as a result was analyzed as a solid. Analytical results are presented in milligrams per kilogram (mg/kg).

Table 5
UST Contents Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	**UST-20130807**
Sample Date	**8/7/2013**
1,1,1,2-Tetrachloroethane	< 5
1,1,1-Trichloroethane	< 5
1,1,2,2-Tetrachloroethane	7.4
1,1,2-Trichloro-1,2,2-Trifluoroethane	< 50
1,1,2-Trichloroethane	6.2
1,1-Dichloroethane	< 5
1,1-Dichloroethene	< 5
1,1-Dichloropropene	< 5
1,2,3-Trichlorobenzene	< 10
1,2,3-Trichloropropane	< 5
1,2,4-Trichlorobenzene	< 100
1,2,4-Trichlorobenzene	< 100
1,2,4-Trimethylbenzene	1500
1,2-Dibromo-3-Chloropropane	46
1,2-Dibromoethane	< 5
1,2-Dichlorobenzene	< 100
1,2-Dichlorobenzene	< 100
1,2-Dichloroethane	< 5
1,2-Dichloropropane	< 5
1,3,5-Trimethylbenzene	360
1,3-Dichlorobenzene	< 100
1,3-Dichlorobenzene	< 100
1,3-Dichloropropane	< 5
1,4-Dichlorobenzene	< 100
1,4-Dichlorobenzene	< 100
1-Methylnaphthalene	560
2,2-Dichloropropane	< 5
2,4,5-Trichlorophenol	< 100
2,4,6-Trichlorophenol	< 100
2,4-Dichlorophenol	< 100
2,4-Dimethylphenol	< 100
2,4-Dinitrophenol	< 1000
2,4-Dinitrotoluene	< 100
2,6-Dinitrotoluene	< 100
2-Butanone	< 50
2-Chloroethyl Vinyl Ether	< 250
2-Chloronaphthalene	< 100
2-Chlorophenol	< 100
2-Chlorotoluene	150
2-Hexanone	72
2-Methylnaphthalene	1100
2-Methylphenol	< 100
2-Nitroaniline	< 1000
2-Nitrophenol	< 100

Table 5
UST Contents Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	**UST-20130807**
Sample Date	**8/7/2013**
3,3'-Dichlorobenzidine	< 100
3/4-Methylphenol	< 100
3-Nitroaniline	< 1000
4,6-Dinitro-2-Methylphenol	< 1000
4-Bromophenyl-Phenyl Ether	< 100
4-Chloro-3-Methylphenol	< 100
4-Chloroaniline	< 100
4-Chlorophenyl-Phenyl Ether	< 100
4-Chlorotoluene	38
4-Methyl-2-Pentanone	< 50
4-Nitroaniline	< 1000
4-Nitrophenol	< 1000
Acenaphthene	< 100
Acenaphthylene	< 100
Acetone	< 120
Aniline	< 100
Anthracene	< 100
Azobenzene	< 100
Benzidine	< 100
Benzo (a) Anthracene	< 100
Benzo (a) Pyrene	< 500
Benzo (b) Fluoranthene	< 400
Benzo (g,h,i) Perylene	< 500
Benzo (k) Fluoranthene	< 400
Benzoic Acid	< 100
Benzyl Alcohol	< 1000
Bis(2-Chloroethoxy) Methane	< 100
Bis(2-Chloroethyl) Ether	< 100
Bis(2-Chloroisopropyl) Ether	< 100
Bis(2-Ethylhexyl) Phthalate	120
Bromobenzene	< 5
Bromochloromethane	< 5
Bromodichloromethane	< 5
Bromoform	< 5
Bromomethane	< 50
Butyl Benzyl Phthalate	< 100
c-1,2-Dichloroethene	< 5
c-1,3-Dichloropropene	< 5
Carbon Disulfide	< 50
Carbon Tetrachloride	< 5
Chlorobenzene	< 5
Chloroethane	< 25
Chloroform	< 5
Chloromethane	< 5

Table 5
UST Contents Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	**UST-20130807**
Sample Date	**8/7/2013**
Chrysene	< 100
Dibenz (a,h) Anthracene	< 500
Dibenzofuran	< 100
Dibromochloromethane	< 5
Dibromomethane	< 5
Dichlorodifluoromethane	< 5
Diethyl Phthalate	< 100
Dimethyl Phthalate	< 100
Di-n-Butyl Phthalate	< 100
Di-n-Octyl Phthalate	< 500
Fluoranthene	< 100
Fluorene	< 100
Hexachloro-1,3-Butadiene	< 100
Hexachloro-1,3-Butadiene	< 100
Hexachlorocyclopentadiene	< 100
Hexachloroethane	< 100
Hexachlorobenzene	< 100
Indeno (1,2,3-c,d) Pyrene	< 500
Isophorone	< 100
Isopropylbenzene	35
Methylene Chloride	< 50
Naphthalene	950
Naphthalene	950
n-Butylbenzene	170
Nitrobenzene	< 100
N-Nitrosodiphenylamine	< 1000
N-Nitrosodimethylamine	< 100
N-Nitroso-di-n-propylamine	< 1000
n-Propylbenzene	160
Pentachlorophenol	< 1000
Phenanthrene	100
Phenol	110
p-Isopropyltoluene	17
Pyrene	< 100
Pyridine	< 100
sec-Butylbenzene	24
Styrene	17
t-1,2-Dichloroethene	< 5
t-1,3-Dichloropropene	< 5
tert-Butylbenzene	< 5
Tetrachloroethene	< 5
Trichloroethene	< 5

Table 5
UST Contents Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	**UST-20130807**
Sample Date	**8/7/2013**
Trichlorofluoromethane	< 50
Vinyl Acetate	< 50

Notes:

VOCs Volatile Organic Compounds
SVOCs Semi-volatile Organic Compounds
mg/kg Milligrams per kilogram
ft bgs Feet below ground surface
< Analyte was not detected above the specified method reporting limit
-- Not available

Sample UST-20130807 had a very high viscosity and as a result was analyzed as a solid. Analytical results are presented in milligrams per kilogram (mg/kg).

Table 6
Soil Analytical Results - Select VOCs and Organics
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	GRO [C6-C12] (mg/kg)	DRO [C10-C28] (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	ETBE (mg/kg)	VC (mg/kg)	Ethanol (mg/kg)
	Soil Standard		8.2	89	4500	300	100	100	220	--	1000	--	--	1.7	--
Stockpile	1/17/2014	--	< 0.001	< 0.001	< 0.001	< 0.002	<0.48	10	< 0.001	< 0.010	< 0.002	< 0.002	< 0.002	< 0.001	< 0.1
UST-Floor1-7.5	1/29/2014	7.5	< 0.0011	< 0.0011	< 0.0011	< 0.0022	< 0.25	17	< 0.0011	< 0.011	< 0.0022	< 0.0022	< 0.0022	< 0.0011	< D 0.11
UST-Floor2-6.0	1/29/2014	6.0	< 0.0009	< 0.0009	< 0.0009	< 0.0018	< 0.23	< 5.0	< 0.0009	< 0.009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.092
UST-S-7.5	1/29/2014	7.5	0.0034	< 0.00092	0.0018	0.0087	< 0.26	35	< 0.00092	< 0.0092	< 0.0018	< 0.0018	< 0.0018	< 0.00092	< 0.092
UST-E-7.5	1/29/2014	7.5	0.0020	< 0.0012	0.0013	0.0032	< 0.25	15	< 0.0012	< 0.012	< 0.0023	< 0.0023	< 0.0023	< 0.0012	< 0.12
UST-W-7.5	1/29/2014	7.5	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.23	20	< 0.0010	< 0.010	< 0.0020	< 0.0020	< 0.0020	< 0.0010	< D 0.10
UST-N-7.5	1/29/2014	7.5	0.0030	< 0.00092	0.0013	< 0.00184	< 0.23	25	< 0.00092	< 0.0092	< 0.0018	< 0.0018	< 0.0018	< 0.00092	< 0.092
EXC-W-4.0	1/30/2014	4.0	0.0037	< 0.0011	0.0014	< 0.0024	< 0.28	9.4	< 0.0011	< 0.011	< 0.0022	< 0.0022	< 0.0022	< 0.0011	< 0.11
EXC-B1-6.5	1/30/2014	6.5	< 0.0011	< 0.0011	0.0013	0.0074	< 0.26	**170**	< 0.0011	< 0.011	< 0.0021	< 0.0021	< 0.0021	< 0.0011	< 0.11
EXC-B1-10	1/30/2014	10.0	--	--	--	--	--	23	--	--	--	--	--	--	--
EXC-B2-6.5	1/30/2014	6.5	0.0014	< 0.0010	0.0019	0.0064	< 0.23	**230**	< 0.0010	< 0.010	< 0.0021	< 0.0021	< 0.0021	< 0.0010	< 0.10
EXC-B2-10	1/30/2014	10.0	--	--	--	--	--	**270**	--	--	--	--	--	--	--
EXC-B2-15	2/5/2014	15.0	--	--	--	--	--	5.7	--	--	--	--	--	--	--
EXC-E1-4.0	1/30/2014	4.0	0.0014	< 0.0012	< 0.0012	< 0.0024	< 0.28	< 5.0	< 0.0012	< 0.012	< 0.0024	< 0.0024	< 0.0024	< 0.0012	< 0.12
EXC-E2-4.0	1/30/2014	4.0	< 0.0012	< 0.0012	< 0.0012	< 0.0024	< 0.26	13	< 0.0012	< 0.012	< 0.0024	< 0.0024	< 0.0024	< 0.0012	< 0.12 1
EXC-S-4.0	1/30/2014	4.0	< 0.00089	0.0031	0.0019	0.0235	< 0.24	19	< 0.00089	< 0.0089	< 0.0018	< 0.0018	< 0.0018	< 0.00089	< 0.089
IDW-S-01292014	1/29/2014	--	< 0.098	1.4	0.9	11.3	**190**	**2100**	< 0.098	< 0.98	< 0.20	< 0.20	< 0.20	< 0.098	< 9.8
IDW-S-01302014	1/30/2014	--	< 0.10	0.4	0.16	3.3	77	**3300**	< 0.10	< 1.0	< 0.20	< 0.20	< 0.20	< 0.10	< 10 1

Notes:

VOCs	Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
RSL	Regional Screening Level
SWRCB	State Water Resources Control Board
ESL	Environmental Screening Level
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
MTBE	Methyl tertiary butyl ether
TBA	Tertiary butyl alcohol
DIPE	Diisopropyl ether
TAME	Tertiary amyl methyl ether
ETBE	Ethyl tertiary butyl alcohol
mg/kg	Milligrams per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the US EPA Region 9 Soil Standard

USEPA RSLs for industrial soil revised in November 2013 were used as the soil standard for all constituents, except benzene, ethylbenzene, DRO, and GRO. The benzene and ethylbenzene standards established in the Low Threat Closure Policy (SWRCB 2012) were used to be consistent with the LTC request submitted for this site (ARCADIS 2013); the standards shown in the table are for the 0 to 5 ft bgs interval for commercial/industrial, which is the most conservative. The San Francisco RWQCB Tier 1 ESLs for soil were used as the standard for GRO and DRO.

References:

State Water Resources Control Board. 2012. Low-threat Underground Storage Tank Case Closure Policy. August 17, 2012.

ARCADIS. 2013. Request for Low-Threat Closure. May 24, 2013.

Table 7
Soil Analytical Results - Carbon Fractions
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Sample Depth (ft bgs)	$[C_6]$ (mg/kg)	$[C_7]$ (mg/kg)	$[C_8]$ (mg/kg)	$[C_9\text{-}C_{10}]$ (mg/kg)	$[C_{11}\text{-}C_{12}]$ (mg/kg)	$[C_{13}\text{-}C_{14}]$ (mg/kg)	$[C_{15}\text{-}C_{16}]$ (mg/kg)	$[C_{17}\text{-}C_{18}]$ (mg/kg)	$[C_{19}\text{-}C_{20}]$ (mg/kg)	$[C_{21}\text{-}C_{22}]$ (mg/kg)	$[C_{23}\text{-}C_{24}]$ (mg/kg)	$[C_{25}\text{-}C_{28}]$ (mg/kg)	$[C_{29}\text{-}C_{32}]$ (mg/kg)	$[C_{33}\text{-}C_{36}]$ (mg/kg)	$[C_{37}\text{-}C_{40}]$ (mg/kg)	$[C_{41}\text{-}C_{44}]$ (mg/kg)	$[C_6\text{-}C_{44}]_{TOT}$ (mg/kg)
UST-Floor1-7.5	1/29/2014	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	14	< 5.0	< 5.0	< 5.0	14
UST-Floor2-6.0	1/29/2014	6.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
UST-S-7.5	1/29/2014	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	9.8	23	9.5	6.4	< 5.0	57
UST-E-7.5	1/29/2014	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	12	< 5.0	< 5.0	< 5.0	17
UST-W-7.5	1/29/2014	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	15	< 5.0	< 5.0	< 5.0	17
UST-N-7.5	1/29/2014	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	15	< 5.0	< 5.0	< 5.0	< 5.0	30
EXC-W-4.0	1/30/2014	4.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.5	< 5.0	5.1	< 5.0	< 5.0	20
EXC-B1-6.5	1/30/2014	6.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	11	24	44	47	80	42	15	6.5	280
EXC-B2-6.5	1/30/2014	6.5	< 5.0	< 5.0	< 5.0	6.2	6.9	< 5.0	< 5.0	< 5.0	17	31	48	16	150	60	18	8.4	370
EXC-E1-4.0	1/30/2014	4.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
EXC-E2-4.0	1/30/2014	4.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	11	< 5.0	< 5.0	< 5.0	14
EXC-S-4.0	1/30/2014	4.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.2	11	7.8	6.6	< 5.0	39
IDW-S-01292014	1/29/2014	--	< 5.0	< 5.0	< 5.0	69	85	25	< 5.0	84	130	310	450	710	870	560	240	150	3700
IDW-S-01302014	1/30/2014	--	< 5.0	< 5.0	< 5.0	130	160	49	54	63	270	480	710	1100	1200	760	360	230	5600

Notes:

ft bgs	Feet below ground surface
mg/kg	Milligrams per kilogram
<	Analyte was not detected above the specified method reporting limit
--	Not available

Table 8
Soil Analytical Results - Inorganics
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Sample Depth (ft bgs)	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
Soil Standard			41	2.4	19000	200	80	--	30	4100	800	4.3	510	2000	510	510	1	510	31000
Stockpile	1/29/2014	--	<0.761	**3.38**	115	0.325	<0.508	14.5	10.8	16.0	11.9	<0.0835	0.434	11.5	<0.761	<0.254	<0.761	35.0	71.6
UST-Floor1-7.5	1/29/2014	7.5	< 0.75	1.18	72.1	< 0.25	< 0.50	8.99	7.05	7.46	< 0.50	< 0.0835	< 0.25	6.58	< 0.75	< 0.25	< 0.75	25.7	33.9
UST-Floor2-6.0	1/29/2014	6.0	< 0.75	2.15	110	0.375	< 0.50	15	10.4	15.4	1.25	< 0.0805	0.906	11.6	< 0.75	< 0.25	< 0.75	36.6	45.9
UST-S-7.5	1/29/2014	7.5	< 0.76	1.87	112	0.343	< 0.51	13.9	9.79	13.5	7.37	< 0.0795	0.474	10.5	< 0.76	< 0.25	< 0.76	32.7	168
UST-E-7.5	1/29/2014	7.5	< 0.75	1.33	126	0.367	0.676	15.4	10.9	14.9	12.8	< 0.0860	0.499	11.7	< 0.75	< 0.25	< 0.75	35.8	1400
UST-W-7.5	1/29/2014	7.5	< 0.74	0.839	81.9	0.283	< 0.50	12	8.48	10.7	0.876	< 0.0820	0.276	8.59	< 0.75	< 0.25	< 0.75	29.7	59.8
UST-N-7.5	1/29/2014	7.5	< 0.75	0.86	107	0.342	< 0.50	13.2	9.59	13.6	2.67	< 0.0845	0.56	9.74	< 0.75	< 0.25	< 0.75	32	201
EXC-W-4.0	1/30/2014	4.0	< 0.74	1.74	123	0.393	< 0.50	15.8	10.7	15.3	5.63	< 0.0875	0.71	11.8	< 0.74	< 0.25	< 0.74	35.3	60.8
EXC-B1-6.5	1/30/2014	6.5	<0.74	0.789	67.6	< 0.25	< 0.49	10.1	7.38	8.82	27.4	< 0.0805	< 0.25	7.09	< 0.74	< 0.25	< 0.74	26	41.7
EXC-B2-6.5	1/30/2014	6.5	< 0.75	0.912	93.7	0.325	< 0.50	13.4	9.44	11.9	2.76	< 0.0860	0.343	9.76	< 0.75	< 0.25	< 0.75	32.6	42.1
EXC-E1-4.0	1/30/2014	4.0	<0.74	1.07	87.4	0.245	< 0.49	10.2	7.71	8.87	0.9815	< 0.0780	< 0.25	7.77	< 0.74	< 0.25	< 0.74	24.8	36.3
EXC-E2-4.0	1/30/2014	4.0	<0.74	0.983	95	0.277	< 0.50	12	8.52	10.6	2.76	< 0.0780	0.391	8.64	< 0.74	< 0.25	< 0.74	28.7	44.3
EXC-S-4.0	1/30/2014	4.0	<0.74	**6.07**	115	0.448	< 0.50	21.9	11	20	9.18	< 0.0795	0.728	18.2	< 0.74	< 0.25	< 0.74	36.5	49.1
IDW-S-01292014	1/29/2014	--	< 0.75	2.09	91.1	0.295	< 0.50	13.3	8.66	14.4	120	< 0.0820	0.282	9.59	< 0.75	< 0.25	< 0.75	29	91.5
IDW-S-01302014	1/30/2014	--	< 0.75	2	112	0.368	< 0.50	15.2	10.3	15.3	46.7	< 0.0835	0.628	11.3	< 0.75	< 0.25	< 0.75	33.8	84

Notes:

USEPA	United States Environmental Protection Agency
RSL	Regional Screening Level
mg/kg	Milligrams per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the US EPA Region 9 Soil Standard

USEPA RSLs for industrial soil revised in November 2013 were used as the soil standard for all constituents.

Table 9
Soil Analytical Results - PCB Mixtures
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Sample Depth (ft bgs)	Aroclor 1016 (mg/kg)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Aroclor 1262 (mg/kg)
Soil Standard			3.7	0.54	0.54	0.74	0.74	0.74	0.74	--
Stockpile	1/17/2014	--	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
UST-Floor1-7.5	1/29/2014	7.5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
UST-Floor2-6.0	1/29/2014	6.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
UST-S-7.5	1/29/2014	7.5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
UST-E-7.5	1/29/2014	7.5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
UST-W-7.5	1/29/2014	7.5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
UST-N-7.5	1/29/2014	7.5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
EXC-W-4.0	1/30/2014	4.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
EXC-B1-6.5	1/30/2014	6.5	< 0.050	< 0.050	0.11	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
EXC-B2-6.5	1/30/2014	6.5	< 0.050	< 0.050	0.066	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
EXC-E1-4.0	1/30/2014	4.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
EXC-E2-4.0	1/30/2014	4.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
EXC-S-4.0	1/30/2014	4.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
IDW-S-01292014	1/29/2014	--	< 0.050	< 0.050	0.24	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
IDW-S-01302014	1/30/2014	--	< 0.050	< 0.050	0.21	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

Notes:

PCB	Polychlorinated Biphenyls
USEPA	United States Environmental Protection Agency
RSL	Regional Screening Level
mg/kg	Milligrams per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the US EPA Region 9 Soil Standard

USEPA RSLs for industrial soil revised in November 2013 were used as the soil standard for all constituents.

Table 10
Soil Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification Sample Date Sample Depth (ft bgs)	Soil Standard (mg/kg)	Stockpile 1/17/2014 --	UST-Floor1-7.5 1/29/2014 7.5	UST-Floor2-6.0 1/29/2014 6.0	UST-S-7.5 1/29/2014 7.5	UST-E-7.5 1/29/2014 7.5	UST-W-7.5 1/29/2014 7.5	UST-N-7.5 1/29/2014 7.5	EXC-W-4.0 1/30/2014 4.0	EXC-B1-6.5 1/30/2014 6.5	EXC-B2-6.5 1/30/2014 6.5	EXC-E1-4.0 1/30/2014 4.0	EXC-E2-4.0 1/30/2014 4.0	EXC-S-4.0 1/30/2014 4.0	IDW-S-01292014 1/29/2014 --	IDW-S-01302014 1/30/2014 --
1,1,1,2-Tetrachloroethane	9.3	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,1,1-Trichloroethane	3800	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,1,2,2-Tetrachloroethane	2.8	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,1,2-Trichloro-1,2,2-Trifluoroethane	18000	< 10	< 0.011	< 0.0092	< 0.010	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
1,1,2-Trichloroethane	0.68	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,1-Dichloroethane	17	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,1-Dichloroethene	110	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,1-Dichloropropene	--	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,2,3-Trichlorobenzene	49	<2.0	< 0.0022	< 0.001	< 0.0018	< 0.0023	< 0.0020	< 0.0018	< 0.0022	< 0.0021	< 0.0021	< 0.0024	< 0.0024	< 0.0018	< 0.20	< 0.20
1,2,3-Trichloropropane	0.095	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,2,4-Trichlorobenzene	27	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	27	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,2,4-Trimethylbenzene	26	<1.0	< 0.0011	0.0010	0.010	0.0014	< 0.0010	< 0.00092	< 0.0011	0.0092	0.0042	< 0.0012	< 0.0012	0.035	15	6.2
1,2-Dibromo-3-Chloropropane	0.069	<1.0	< 0.0055	< 0.0046	< 0.0052	< 0.0058	< 0.0050	< 0.0046	< 0.0054	< 0.0054	< 0.0052	< 0.0059	< 0.0060	< 0.0044	< 0.49	< 0.50
1,2-Dibromoethane	0.17	<5.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,2-Dichlorobenzene	980	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	980	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,2-Dichloroethane	2.2	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,2-Dichloropropane	4.7	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,3,5-Trimethylbenzene	1000	<1.0	< 0.0011	< 0.0009	0.0033	< 0.0012	< 0.0010	< 0.00092	< 0.0011	0.0026	0.0013	< 0.0012	< 0.0012	0.01	4.5	1.6
1,3-Dichlorobenzene	--	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	--	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,3-Dichloropropane	2000	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1,4-Dichlorobenzene	12	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	12	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
1-Methylnaphthalene	53	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1	< 0.50
2,2-Dichloropropane	--	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
2,4,5-Trichlorophenol	6200	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	62	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	180	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	1200	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrophenol	120	<1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
2,4-Dinitrotoluene	5.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**6.8**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	1.2	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Butanone	20000	< 10	< 0.011	< 0.0092	< 0.010	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
2-Chloroethyl Vinyl Ether	--	< 50	< 0.055	< 0.046	< 0.046	< 0.058	< 0.050	< 0.046	< 0.054	< 0.054	< 0.052	< 0.059	< 0.060	< 0.044	< 4.9	< 5.0
2-Chloronaphthalene	8200	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	510	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorotoluene	2000	< 50	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
2-Hexanone	140	< 10	< 0.011	< 0.009	< 0.0092	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
2-Methylnaphthalene	220	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.2	< 0.50
2-Methylphenol	3100	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	600	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
3,3'-Dichlorobenzidine	3.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3/4-Methylphenol	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
3-Nitroaniline	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4,6-Dinitro-2-Methylphenol	4.9	< 10	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
4-Bromophenyl-Phenyl Ether	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	6200	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	8.6	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenyl-Phenyl Ether	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorotoluene	2000	< 10	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
4-Methyl-2-Pentanone	5300	< 10	< 0.011	< 0.009	< 0.0092	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
4-Nitroaniline	86	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitrophenol	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Table 10
Soil Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification Sample Date Sample Depth (ft bgs)	Soil Standard (mg/kg)	Stockpile 1/17/2014 --	UST-Floor1-7.5 1/29/2014 7.5	UST-Floor2-6.0 1/29/2014 6.0	UST-S-7.5 1/29/2014 7.5	UST-E-7.5 1/29/2014 7.5	UST-W-7.5 1/29/2014 7.5	UST-N-7.5 1/29/2014 7.5	EXC-W-4.0 1/30/2014 4.0	EXC-B1-6.5 1/30/2014 6.5	EXC-B2-6.5 1/30/2014 6.5	EXC-E1-4.0 1/30/2014 4.0	EXC-E2-4.0 1/30/2014 4.0	EXC-S-4.0 1/30/2014 4.0	IDW-S-01292014 1/29/2014 --	IDW-S-01302014 1/30/2014 --
Acenaphthene	3300	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	--	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acetone	63000	37	< 0.028	< 0.023	< 0.026	< 0.029	< 0.025	< 0.023	< 0.027	< 0.027	< 0.026	< 0.030	< 0.030	0.025	< 2.5	< 2.5
Aniline	300	<25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Anthracene	17000	<25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Azobenzene	23	<25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzidine	0.0075	<1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo (a) Anthracene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo (a) Pyrene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo (b) Fluoranthene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo (g,h,i) Perylene	--	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo (k) Fluoranthene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzoic Acid	250000	<1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Benzyl Alcohol	6200	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy) Methane	180	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethyl) Ether	1	<1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Bis(2-Chloroisopropyl) Ether	--	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl) Phthalate	120	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.89	< 0.50
Bromobenzene	180	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Bromochloromethane	68	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Bromodichloromethane	1.4	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Bromoform	220	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Bromomethane	3.2	< 10	< 0.011	< 0.0092	< 0.010	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
Butyl Benzyl Phthalate	910	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
c-1,2-Dichloroethene	200	< 10	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
c-1,3-Dichloropropene	--	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Carbon Disulfide	370	<10	< 0.011	< 0.0092	< 0.010	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
Carbon Tetrachloride	3	<10	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Chlorobenzene	140	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Chloroethane	6100	<1.0	< 0.0055	< 0.0046	< 0.0052	< 0.0058	< 0.0050	< 0.0046	< 0.0054	< 0.0054	< 0.0052	< 0.0059	< 0.0060	< 0.0044	< 0.49	< 0.50
Chloroform	1.5	<5.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Chloromethane	50	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Chrysene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenz (a,h) Anthracene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenzofuran	100	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibromochloromethane	3.3	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Dibromomethane	11	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Dichlorodifluoromethane	40	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Diethyl Phthalate	49000	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dimethyl Phthalate	--	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-n-Butyl Phthalate	6200	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-n-Octyl Phthalate	620	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	2200	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	2200	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloro-1,3-Butadiene	22	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloro-1,3-Butadiene	22	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Hexachlorocyclopentadiene	370	<1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Hexachloroethane	43	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobenzene	1.1	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Indeno (1,2,3-c,d) Pyrene	*	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	1800	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isopropylbenzene	1100	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	0.26	< 0.10
Methylene Chloride	310	< 10	< 0.011	< 0.009	< 0.0092	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
Naphthalene	45	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.6	< 0.50	< 0.50	< 0.50	< 0.50	4.2	< 0.50
Naphthalene	45	< 10	< 0.011	< 0.009	< 0.0092	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	0.013	8.1	3.4
n-Butylbenzene	5100	< 10	< 0.0011	< 0.0009	0.0014	< 0.0012	< 0.0010	< 0.0009	< 0.0011	0.0012	< 0.0010	< 0.0012	< 0.0012	0.0048	2.7	1.1

Table 10
Soil Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification Sample Date Sample Depth (ft bgs)	Soil Standard (mg/kg)	Stockpile 1/17/2014 --	UST-Floor1-7.5 1/29/2014 7.5	UST-Floor2-6.0 1/29/2014 6.0	UST-S-7.5 1/29/2014 7.5	UST-E-7.5 1/29/2014 7.5	UST-W-7.5 1/29/2014 7.5	UST-N-7.5 1/29/2014 7.5	EXC-W-4.0 1/30/2014 4.0	EXC-B1-6.5 1/30/2014 6.5	EXC-B2-6.5 1/30/2014 6.5	EXC-E1-4.0 1/30/2014 4.0	EXC-E2-4.0 1/30/2014 4.0	EXC-S-4.0 1/30/2014 4.0	IDW-S-01292014 1/29/2014 --	IDW-S-01302014 1/30/2014 --
Nitrobenzene	24	<1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
N-Nitrosodiphenylamine	350	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodimethylamine	0.034	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitroso-di-n-propylamine	0.25	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
n-Propylbenzene	2100	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	0.0032	1.4	0.47
Pentachlorophenol	2.7	<1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**5.8**	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Phenanthrene	--	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.54	< 0.50
Phenol	18000	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
p-Isopropyltoluene	--	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	0.21	< 0.10
Pyrene	1700	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pyridine	100	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
sec-Butylbenzene	10000	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	0.28	0.12
Styrene	3600	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
t-1,2-Dichloroethene	69	<1.0	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
t-1,3-Dichloropropene	--	<1.0	< 0.0011	< 0.0009	0.0012	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
tert-Butylbenzene	10000	< 10	< 0.0011	< 0.0009	< 0.0010	< 0.0012	< 0.0010	< 0.0009	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Tetrachloroethene	41	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Trichloroethene	2	<1.0	< 0.0011	< 0.0009	< 0.00092	< 0.0012	< 0.0010	< 0.00092	< 0.0011	< 0.0011	< 0.0010	< 0.0012	< 0.0012	< 0.00089	< 0.098	< 0.10
Trichlorofluoromethane	340	< 10	< 0.011	< 0.009	< 0.0092	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0
Vinyl Acetate	410	< 10	< 0.011	< 0.009	< 0.0092	< 0.012	< 0.010	< 0.0092	< 0.011	< 0.011	< 0.010	< 0.012	< 0.012	< 0.0089	< 0.98	< 1.0

Notes:

VOCs	Volatile Organic Compounds
SVOCs	Semi-volatile Organic Compounds
USEPA	United States Environmental Protection Agency
RSL	Regional Screening Level
PAH	Polycyclic Aromatic Hydrocarbon
BaPe	Benzo(a)pyrene toxicity equivalent
MRL	Method Reporting Limit
mg/kg	Milligrams per kilogram
ft bgs	Feet below ground surface
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the US EPA Region 9 Soil Standard
	All concentrations reported in mg/kg.

USEPA RSLs for industrial soil revised in November 2013 were used as the soil standard for all constituents, except naphthalene and select PAHs as noted by an asterisk (*). The naphthalene standard established in the Low Threat Closure Policy (SWRCB 2012) was used to be consistent with the LTC request submitted for this site (ARCADIS 2013); the standard shown in the table is for the 0 to 5 ft bgs interval for commercial/industrial land use, which is the most conservative. The select PAHs (*) are the 7 carcinogenic PAHs; the BaPe was not calculated since all results were below the MRL (SWRCB 2012).

Select constituents were analyzed using USEPA method 8270C (SVOCs) and USEPA method 8260B (VOCs), respectively; results from both analytical methods are included in the table.

References:

State Water Resources Control Board. 2012. Low-threat Underground Storage Tank Case Closure Policy. August 17, 2012.

ARCADIS. 2013. Request for Low-Threat Closure. May 24, 2013.

Table 11
Groundwater Analytical Results - Select VOCs and Organics
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	GRO [C6-C12] (µg/L)	DRO [C10-C28] (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	VC (µg/L)	Ethanol (µg/L)
Groundwater Standard		5	700	1000	10000	100	100	13	12	--	--	--	2	--
HP1-02172014	8/7/2013	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	0.280	0.0026	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 500

Notes:

VOCs	Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
MCL	Maximum Contaminant Level
CDHS	California Department of Health Services
ESL	Environmental Screening Level
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
MTBE	Methyl tertiary butyl ether
TBA	Tertiary butyl alcohol
DIPE	Diisopropyl ether
TAME	Tertiary amyl methyl ether
ETBE	Ethyl tertiary butyl alcohol
µg/L	Micrograms per liter
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the standard

USEPA MCLs and the CDHS Primary MCLs were used as the groundwater standard for constituents, except for GRO and TBA. An MCL is not established for GRO; therefore, an ESL of 0.1 mg/L was used in accordance with the San Francisco Regional Water Quality Control Board final ceiling level for groundwater based on the USEPA Suggested No Adverse Response Level for taste and odor (CRWQCB-SFB 2013). An MCL is not established for TBA; therefore, the CDHS notification level of 0.012 mg/L was used.

Table 12
Groundwater Analytical Results - Carbon Fractions
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	$[C_6]$ (µg/L)	$[C_7]$ (µg/L)	$[C_8]$ (µg/L)	$[C_9\text{-}C_{10}]$ (µg/L)	$[C_{11}\text{-}C_{12}]$ (µg/L)	$[C_{13}\text{-}C_{14}]$ (µg/L)	$[C_{15}\text{-}C_{16}]$ (µg/L)	$[C_{17}\text{-}C_{18}]$ (µg/L)	$[C_{19}\text{-}C_{20}]$ (µg/L)	$[C_{21}\text{-}C_{22}]$ (µg/L)	$[C_{23}\text{-}C_{24}]$ (µg/L)	$[C_{25}\text{-}C_{28}]$ (µg/L)	$[C_{29}\text{-}C_{32}]$ (µg/L)	$[C_{33}\text{-}C_{36}]$ (µg/L)	$[C_{37}\text{-}C_{40}]$ (µg/L)	$[C_{41}\text{-}C_{44}]$ (µg/L)	$[C_6\text{-}C_{44}]_{TOT}$ (µg/L)
HP1-02172014	8/7/2013	< 50	< 50	< 50	< 50	90	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	260

Notes:

µg/L Micrograms per Liter

< Analyte was not detected above the specified method reporting limit

-- Not available

Table 13
Groundwater Analytical Results - Inorganics
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
Groundwater Standard		6.0	10	2000	4	5	100	--	1300	15	--	--	50	--	2	--	--
HP1-02172014	8/7/2013	< 15	**47.4**	**4060**	**13.5**	< 10	**2520**	235	1070	**83.1**	127	650	< 15	< 5	< 10	607	4440

Notes:

USEPA	United States Environmental Protection Agency
MCL	Maximum Contaminant Level
CDHS	California Department of Health Services
µg/L	Micrograms per Liter
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the standard

USEPA MCLs and the CDHS Primary MCLs were used as the groundwater standard for constituents.

Table 14
Groundwater Analytical Results - PCB Mixtures
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Sample Date	Aroclor 1016 (µg/L)	Aroclor 1221 (µg/L)	Aroclor 1232 (µg/L)	Aroclor 1242 (µg/L)	Aroclor 1248 (µg/L)	Aroclor 1254 (µg/L)	Aroclor 1260 (µg/L)	Aroclor 1262 (µg/L)
Groundwater Standard		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HP1-02172014	2/17/2014	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98

Notes:

PCB	Polychlorinated Biphenyls
USEPA	United States Environmental Protection Agency
MCL	Maximum Contaminant Level
CDHS	California Department of Health Services
mg/L	Milligrams per liter
<	Analyte was not detected above the specified method reporting limit
--	Not available
BOLD	Indicates detected concentration exceeded the standard

USEPA MCLs and the CDHS Primary MCLs were used as the groundwater standard for constituents.

Table 15
Groundwater Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Groundwater Standard (µg/L)	HP1-02172014
Sample Date		2/17/2014
1,1,1,2-Tetrachloroethane	--	< 0.5
1,1,1-Trichloroethane	200	< 0.5
1,1,2,2-Tetrachloroethane	1.0	< 0.5
1,1,2-Trichloro-1,2,2-Trifluoroethane	--	< 0.5
1,1,2-Trichloroethane	5.0	< 0.5
1,1-Dichloroethane	5.0	< 0.5
1,1-Dichloroethene	7.0	< 0.5
1,1-Dichloropropene	--	< 0.5
1,2,3-Trichlorobenzene	--	< 0.5
1,2,3-Trichloropropane	--	< 1
1,2,4-Trichlorobenzene	70	< 10
1,2,4-Trichlorobenzene	70	< 10
1,2,4-Trimethylbenzene	--	< 0.5
1,2-Dibromo-3-Chloropropane	0.2	< 5
1,2-Dibromoethane	--	< 0.5
1,2-Dichlorobenzene	600	< 10
1,2-Dichlorobenzene	600	< 10
1,2-Dichloroethane	5.0	< 0.5
1,2-Dichloropropane	5.0	< 0.5
1,3,5-Trimethylbenzene	--	< 0.5
1,3-Dichlorobenzene	--	< 10
1,3-Dichlorobenzene	--	< 10
1,3-Dichloropropane	--	< 1
1,4-Dichlorobenzene	600	< 10
1,4-Dichlorobenzene	600	< 10
1-Methylnaphthalene	--	< 10
2,2-Dichloropropane	--	< 1
2,4,5-Trichlorophenol	--	< 10
2,4,6-Trichlorophenol	--	< 10
2,4-Dichlorophenol	--	< 10
2,4-Dimethylphenol	--	< 10
2,4-Dinitrophenol	--	< 52
2,4-Dinitrotoluene	--	< 10
2,6-Dinitrotoluene	--	< 10
2-Butanone	--	< 5
2-Chloroethyl Vinyl Ether	--	< 5
2-Chloronaphthalene	--	< 10
2-Chlorophenol	--	< 10
2-Chlorotoluene	--	< 0.5
2-Hexanone	--	< 10
2-Methylnaphthalene	--	< 10
2-Methylphenol	--	< 10
2-Nitroaniline	--	< 10
2-Nitrophenol	--	< 10
3,3'-Dichlorobenzidine	--	< 26
3/4-Methylphenol	--	< 10
3-Nitroaniline	--	< 10
4,6-Dinitro-2-Methylphenol	--	< 52
4-Bromophenyl-Phenyl Ether	--	< 10

Table 15
Groundwater Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Groundwater Standard (µg/L)	HP1-02172014
Sample Date		2/17/2014
4-Chloro-3-Methylphenol	--	< 10
4-Chloroaniline	--	< 10
4-Chlorophenyl-Phenyl Ether	--	< 10
4-Chlorotoluene	--	< 0.5
4-Methyl-2-Pentanone	--	< 5
4-Nitroaniline	--	< 10
4-Nitrophenol	--	< 10
Acenaphthene	--	< 10
Acenaphthylene	--	< 10
Acetone	--	< 10
Aniline	--	--
Anthracene	--	< 10
Azobenzene	--	--
Benzidine	--	< 52
Benzo (a) Anthracene	--	< 10
Benzo (a) Pyrene	0.2	< 10
Benzo (b) Fluoranthene	--	< 10
Benzo (g,h,i) Perylene	--	< 10
Benzo (k) Fluoranthene	--	< 10
Benzoic Acid	--	< 52
Benzyl Alcohol	--	< 10
Bis(2-Chloroethoxy) Methane	--	< 10
Bis(2-Chloroethyl) Ether	--	< 26
Bis(2-Chloroisopropyl) Ether	--	< 10
Bis(2-Ethylhexyl) Phthalate	--	< 10
Bromobenzene	--	< 0.5
Bromochloromethane	--	< 1
Bromodichloromethane	--	< 0.5
Bromoform	--	< 0.5
Bromomethane	--	< 1
Butyl Benzyl Phthalate	--	< 10
c-1,2-Dichloroethene	70	5.6
c-1,3-Dichloropropene	--	< 0.5
Carbon Disulfide	--	< 1
Carbon Tetrachloride	0.5	< 0.5
Chlorobenzene	100	< 0.5
Chloroethane	--	< 0.5
Chloroform	--	< 0.5
Chloromethane	--	< 0.5
Chrysene	--	< 10
Dibenz (a,h) Anthracene	--	< 10
Dibenzofuran	--	< 10
Dibromochloromethane	--	< 0.5
Dibromomethane	--	< 0.5
Dichlorodifluoromethane	--	< 1
Diethyl Phthalate	--	< 10
Dimethyl Phthalate	--	< 10
Di-n-Butyl Phthalate	--	< 10
Di-n-Octyl Phthalate	--	< 10

Table 15
Groundwater Analytical Results - Additional VOCs and SVOCs
CA-01289
4861 E. Firestone Blvd., South Gate, CA

Sample Identification	Groundwater Standard (µg/L)	HP1-02172014
Sample Date		**2/17/2014**
Fluoranthene	--	< 10
Fluorene	--	< 10
Hexachloro-1,3-Butadiene	--	< 10
Hexachloro-1,3-Butadiene	--	< 10
Hexachlorocyclopentadiene	--	--
Hexachloroethane	--	< 10
Hexachlorobenzene	1.0	< 10
Indeno (1,2,3-c,d) Pyrene	--	< 10
Isophorone	--	< 10
Isopropylbenzene	--	< 0.5
Methylene Chloride	5.0	< 1
Naphthalene	--	< 10
Naphthalene	--	< 10
n-Butylbenzene	--	< 0.5
Nitrobenzene	--	< 26
N-Nitrosodiphenylamine	--	< 10
N-Nitrosodimethylamine	--	< 10
N-Nitroso-di-n-propylamine	--	< 10
n-Propylbenzene	--	< 0.5
Pentachlorophenol	1.0	< 10
Phenanthrene	--	< 10
Phenol	--	< 10
p-Isopropyltoluene	--	< 0.5
Pyrene	--	< 10
Pyridine	--	--
sec-Butylbenzene	--	< 0.5
Styrene	100	< 0.5
t-1,2-Dichloroethene	100	< 0.5
t-1,3-Dichloropropene	--	< 0.5
tert-Butylbenzene	--	< 0.5
Tetrachloroethene	5.0	< 0.5
Trichloroethene	5.0	**8.1**
Trichlorofluoromethane	150	< 0.5
Vinyl Acetate	--	< 5

Notes:

All values reported in µg/L.

VOCs Volatile Organic Compounds

SVOCs Semi-volatile Organic Compounds

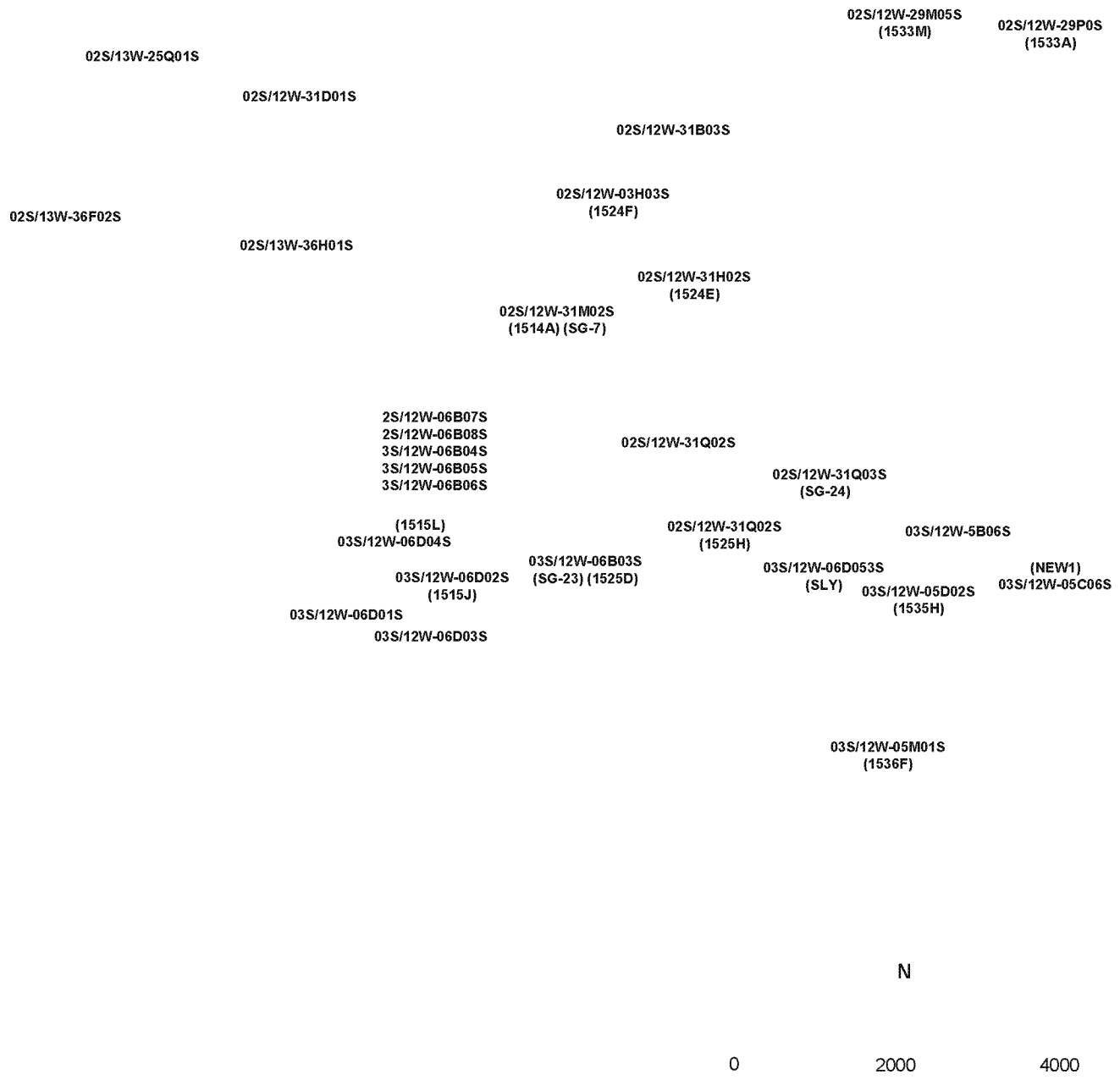
µg/L Micrograms per liter

< Analyte was not detected above the specified method reporting limit

-- Not available

Figures

CITY: EMERYVILLE DIV/GROUP: ENV DB: DCB LD: PIC: KEITH DIAS PM: JEREMIE MAEHR TM: JACQUELINE HEADRICK
G:\ENVCAD\Emeryville\ACT\GP09BPNA\C167\N00000\2012-Q3-GWM\RIDWG\GP09BPNAC167 N01.dwg LAYOUT: 1 SAVED: 10/15/2012 11:35 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 10/15/2012 11:35 AM BY: REYES, ALEC
PROJECTNAME: C167



FORMER ARCO STATION No. 1289
4861 EAST FIRESTONE BLVD
SOUTH GATE, CALIFORNIA

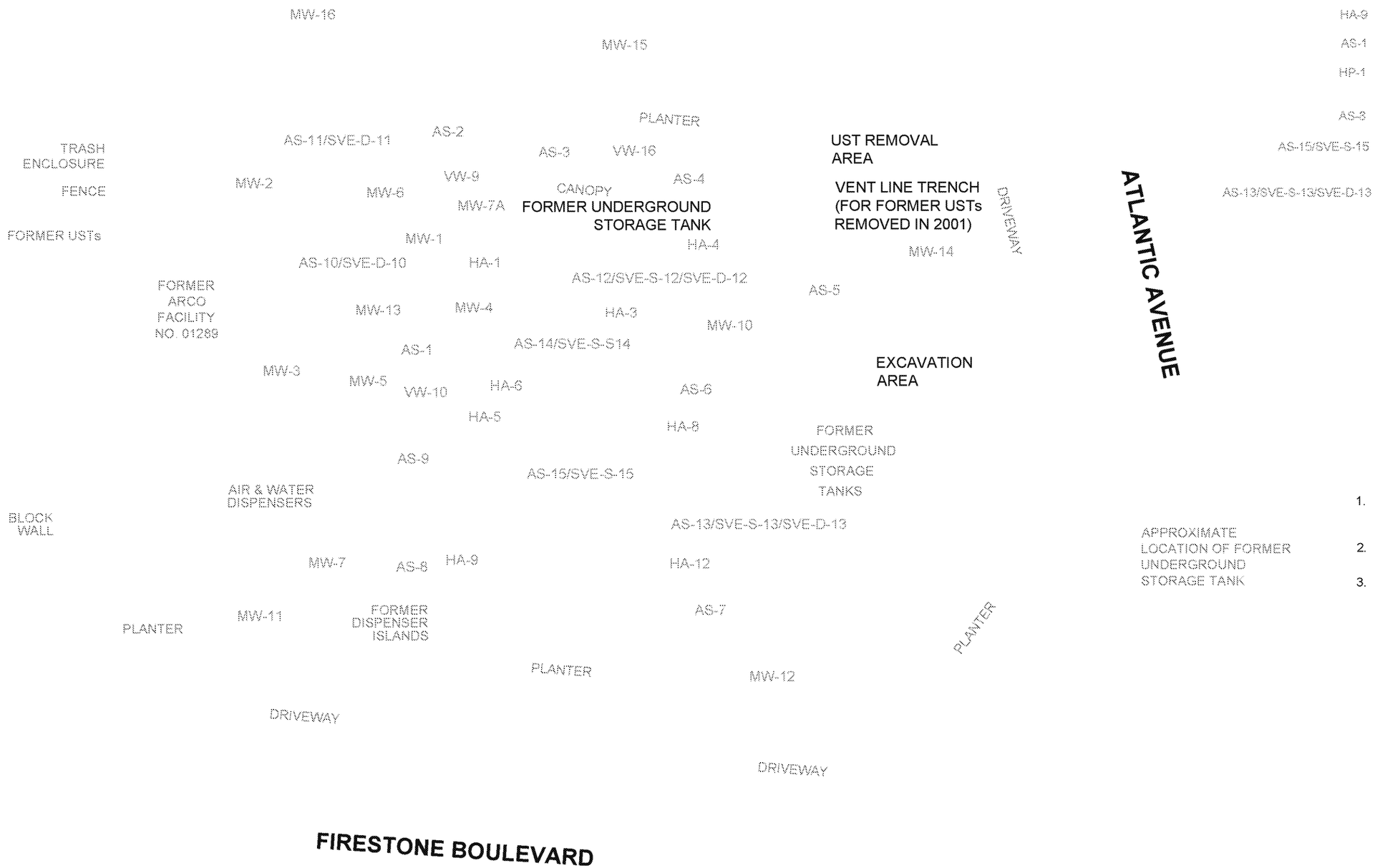
SITE LOCATION MAP

LEGEND

- PUBLIC SUPPLY WELL
- PUBLIC SUPPLY WELL (DESTROYED)
- OBSERVATION WELL
- WELL
- WELL (DESTROYED)

NOTE:
STATE WELLS NO. 2S/13W-36A02S, 2S/13W-36H02S, AND 3S/13W-01G01S ARE NOT LOCATED ON THE MAP BECAUSE THEIR EXACT LOCATIONS CANNOT BE FOUND.

FIGURE
1



LEGEND

	APPROXIMATE SITE BOUNDARY
MW-7	ABANDONED MONITORING WELL
VW-10	ABANDONED SOIL VAPOR EXTRACTION WELL
HA-9	ABANDONED HAND AUGER BORING
AS-1	DESTROYED HYDROPUNCH BORING
HP-1	ABANDONED AIR SPARGE/SOIL VAPOR EXTRACTION WELL
AS-3	ABANDONED AIR SPARGE WELL
AS-15/SVE-S-15	DUAL NESTED AIR SPARGE/SOIL VAPOR EXTRACTION WELL
AS-13/SVE-S-13/SVE-D-13	ABANDONED TRIPLE NESTED AIR SPARGE/ SOIL VAPOR EXTRACTION WELL (AS/DUAL SVE)
	APPROXIMATE VENT LINE TRENCH LOCATION
	APPROXIMATE EXCAVATION AREA EXTENTS
	APPROXIMATE EXCAVATION AREA EXTENTS TO EXPOSE VENT LINES
	APPROXIMATE UNDERGROUND STORAGE TANK REMOVAL AREA EXTENTS

NOTES:

1. SOURCE OF MAP; SECOR MAP DATED JUNE 2003 AND LOS ANGELES COUNTY ASSESSORS MAP DATED MARCH 8, 1958.
2. GROUNDWATER MONITORING WELLS SURVEYED DECEMBER 09, 2004 AND JANUARY 09, 2009.
3. SITE FEATURES ARE APPROXIMATE.

N

0 20 40

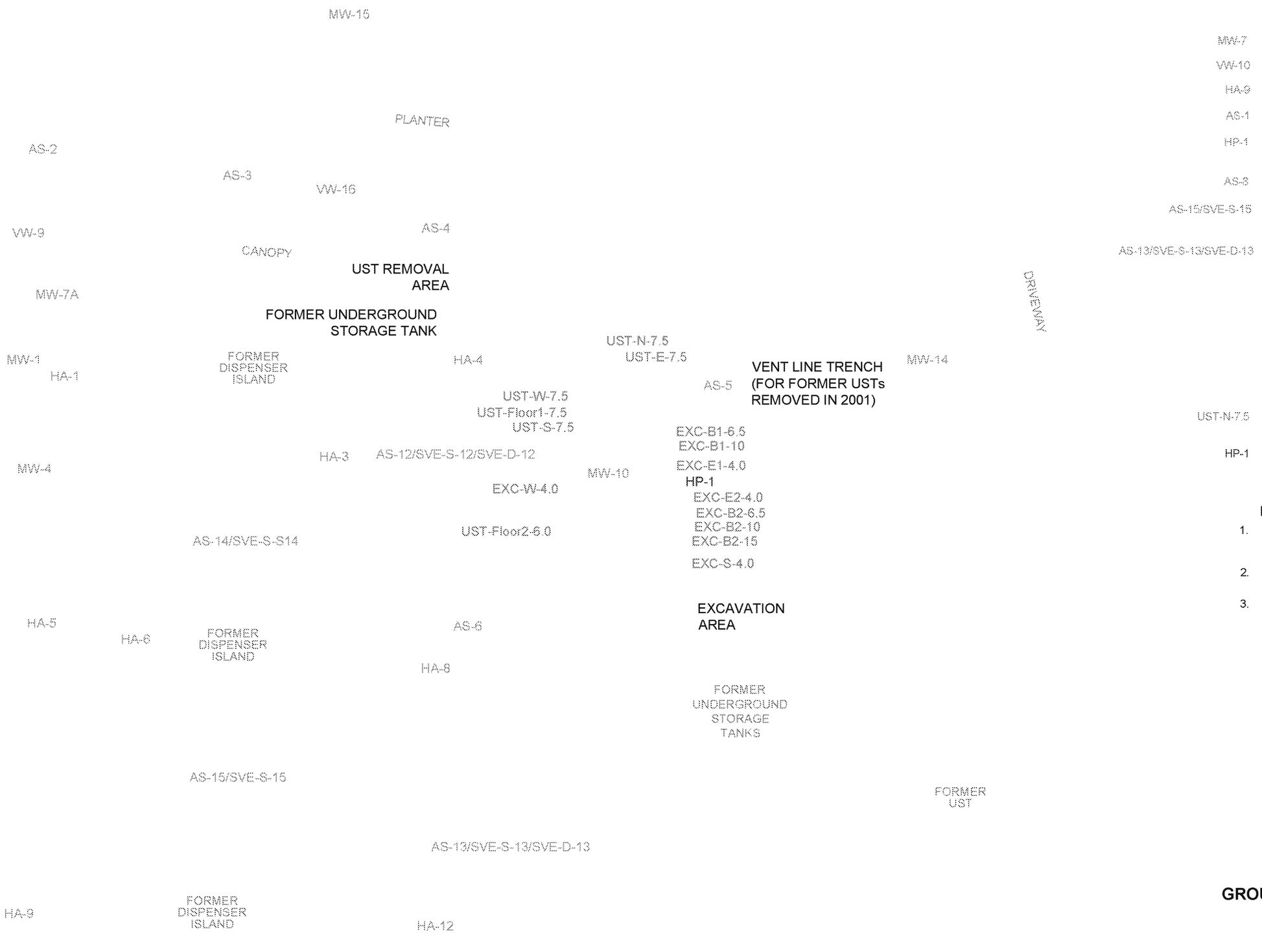
APPROXIMATE SCALE IN FEET

FORMER ARCO STATION No. 1289
4861 EAST FIRESTONE BLVD
SOUTH GATE, CALIFORNIA

SITE MAP

FIGURE
2

CITY: EMERYVILLE,CA DIV/GROUP: ENVCAD DB: D.BEARDSLEY, J. HARRIS
C:\Users\harris\Desktop\ENVCAD\RETURN-TO\EMERYVILLE, CA\GP09BPNA\C167\G0000\DWG\GP09BPNAC167.B02.dwg LAYOUT: 2 SAVED: 3/3/2014 8:37 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/4/2014 1:51 PM BY: HARRIS, JESSICA
PROJECTNAME: C167



LEGEND

	APPROXIMATE SITE BOUNDARY
MW-7	ABANDONED MONITORING WELL
VW-10	ABANDONED SOIL VAPOR EXTRACTION WELL
HA-9	ABANDONED HAND AUGER BORING
AS-1	DESTROYED HYDROPUNCH BORING
HP-1	ABANDONED AIR SPARGE/SOIL VAPOR EXTRACTION WELL
AS-3	ABANDONED AIR SPARGE WELL
AS-15/SVE-S-15	DUAL NESTED AIR SPARGE/SOIL VAPOR EXTRACTION WELL
AS-13/SVE-S-13/SVE-D-13	ABANDONED TRIPLE NESTED AIR SPARGE/ SOIL VAPOR EXTRACTION WELL (AS/DUAL SVE)
	APPROXIMATE VENT LINE TRENCH LOCATION
	APPROXIMATE EXCAVATION AREA EXTENTS
	APPROXIMATE EXCAVATION AREA EXTENTS TO EXPOSE VENT LINES
	APPROXIMATE UNDERGROUND STORAGE TANK REMOVAL AREA EXTENTS
UST-N-7.5	CONFIRMATION SOIL SAMPLE LOCATION (APPROXIMATE)
HP-1	GROUNDWATER SAMPLE LOCATION (APPROXIMATE)

NOTES:

1. SOURCE OF MAP; SECOR MAP DATED JUNE 2003 AND LOS ANGELES COUNTY ASSESSORS MAP DATED MARCH 8, 1958.
2. GROUNDWATER MONITORING WELLS SURVEYED DECEMBER 09, 2004 AND JANUARY 09, 2009.
3. SITE FEATURES ARE APPROXIMATE.

N

0 10 20

APPROXIMATE SCALE IN FEET

FORMER ARCO STATION No. 1289
4861 EAST FIRESTONE BLVD
SOUTH GATE, CALIFORNIA

CONFIRMATION SOIL AND GROUNDWATER SAMPLE LOCATIONS

FIGURE
3

CITY: EMERYVILLE,CA DIV/GROUP: ENVCAD DB: D.BEARDSLEY, J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\RETURN-TO\EMERYVILLE, CA\GP09BPNA\C167\Q0000\DWG\GP09BPNAC167 B03.dwg LAYOUT: 3 SAVED: 3/3/2014 8:40 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/4/2014 1:48 PM BY: HARRIS, JESSICA
PROJECTNAME: C167

Appendix A

Approved Permits

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

Form 710

TANK REMOVAL PERMIT

FIRE DEPARTMENT APPROVAL FOR REMOVAL OF UNDERGROUND TANKS AS REGULATED IN CHAPTER 34 AND SECTION 105 OF THE 2011 LOS ANGELES COUNTY FIRE CODE (LACC TITLE 32), AND LOS ANGELES COUNTY FIRE DEPARTMENT REGULATION 22, IS GRANTED UNDER THE FOLLOWING CONDITIONS:

Date: 1-27-14

FD Permit Number:

PW Permit Number: 13060-57615

Number of Tanks: 1

Tank Site Occupant Name: Azalea Joint Venture LLC

Address: 4635 Firestone Blvd

Phone Number: (310) 652-1177

Contact Person: Joe Oddo

Contractor Name: Innovative Construction Solution

Address: 4011 West Chandler Ave. Santa Ana, CA. 92704

Phone Number: (714) 893-6366

State License Number: 764815

EPA Number or Generator Number:

The following information is to be submitted to the local Fire Prevention Area Unit office.

1. Copy of County of Los Angeles Public Works, Waste Management Division permit.
2. Copy of State of California, Division of Occupational Safety and Health Administration, (CAL-OSHA) excavating permit. (Type of permit: Annual or Site Specific)
3. Copy of South Coast Air Quality Management District (SCAQMD) degassing permit.
4. A detailed site plan depicting tank location, buildings, property lines and overhead/underground utilities.
5. Upon issuance of the "Tank Removal Permit" and "Tank Removal Verification and Site Log" notify this department a minimum of 48 hours prior to removing tank(s). A representative of this department shall inspect the site to verify compliance with this regulation.

☐ CLEANED ☐ NOT CLEANED ☐ ABANDONED IN PLACE

THIS PERMIT IS NONTRANSFERABLE AND IS GRANTED ONLY FOR SITE INDICATED ABOVE AND MAY BE REVOKED FOR FAILURE TO COMPLY WITH THE FIRE DEPARTMENT REGULATIONS OR THE ITEMS LISTED ABOVE. PERMISSION MAY BE GRANTED FOR A SPECIFIC PERIOD AND IS SUBJECT TO REVOCATION FOR PROPER CAUSE, FOR VIOLATION OF FIRE CODE, TITLE 19 CALIFORNIA ADMINISTRATIVE CODE, OR WHEN NECESSARY FOR PUBLIC SAFETY. NON-COMPLIANCE WITH ANY PROVISION STIPULATED HEREIN CONSTITUTES A VIOLATION.

I have completely read and fully understand the foregoing Fire Department requirements and warnings that apply to this permit.

Permittee Joe Oddo

Fire Inspector Mario Chavez

Rev. 10/2002

FORM VALID JULY 1, 2013 TO JUNE 30, 2014

CLOSURE AUTHORIZATION

FOR HAZARDOUS MATERIAL UNDERGROUND STORAGE TANKS
COUNTY OF LOS ANGELES, DEPARTMENT OF PUBLIC WORKS
Environmental Programs Division
900 South Fremont Avenue, 3rd Floor Annex Building
Alhambra, CA 91803-1331
Phone Number (626) 458-3517, Fax Number (626) 458-3569
www.CleanLA.com

DPW USE ONLY:
SITE-FILE NO. 13060 - 67615
APP NO. 764433 AREA 25
CHECK [X] CASH [ ] OTHER [ ]
FEE $ 468.00

CLOSURE REQUESTED:

- [x] PERMANENT, UST REMOVAL
- [ ] PERMANENT, UST CLOSURE IN-PLACE - Attach Justification Statement
- [ ] TEMPORARY CLOSURE
- [ ] OTHER (ONLY PIPING, UNDER DISPENSER CONTAINMENT, ETC), EXPLAIN: _____

ATTACH PLOT PLAN Show existing tanks, piping and dispenser locations, etc. (to scale)

FACILITY California Environmental Reporting System (CERS) ID: 10400464 DATE INFORMATION SUBMITTED TO CERS: ~~12-10-13~~ 12/31/2013

HOW MANY UNDERGROUND STORAGE TANKS WILL REMAIN AFTER THIS CLOSURE? 0 **EXISTING HMUSP NUMBER:** _____

Who is closing the UST(s)? [ ] UST OWNER/OPERATOR OR [x] CONTRACTOR

FACILITY TO BE CLOSED (VERIFICATION FOR NOTIFICATIONS):

Facility Name: Azalea Joint Venture LLC Phone: 310-652-1177
Facility Address: 4635 Firestone Blvd City: South Gate Zip: 90280
Tank Owner/Contact: Azalea Joint ventures LLC, Vanessa Title: Project Manager
Contractor Name: Innovative Construction Solutions Phone: 714 893 6366
Contractor License No.: 764815 Class(s): A-HAZ, C21

Contractors Shall Be Hazardous Substance Removal Certified "HAZ" per California Business & Professions Code Division 3, Chapter 9, Article 4, §7058.7 (e)

NUMBER OF UST's TO BE CLOSED	UST ID NO. (DPW USE ONLY)	CAPACITY GALLONS	MATERIALS STORED (PAST/PRESENT)	CLOSURE FEE
1	#004	250 gal	Oil	$468.00
2				$576.00
3				$684.00
4				$792.00
5				$900.00
6 (+ ATTACH LIST)				$360.00 + $108.00/PER TANK =

Closure of Underground Storage Tanks (USTs) shall be in compliance with Los Angeles County Code Title 11, Division 4

COMPLETE SURVEY:

	YES	NO
Has an unauthorized release ever occurred at this site?	[ ]	[ ]
Has a structural repair ever been made to these underground storage tanks?	[ ]	[ ]
Will new underground storage tanks be installed after closure?	[ ]	[ ]
Will any wells, including monitoring wells, be abandoned?	[ ]	[ ]

NOTICE: CONTAMINATED TANKS AND RESIDUES IN TANKS TO BE CLOSED, MAY BE HAZARDOUS WASTE WHICH MUST BE TRANSPORTED AND DISPOSED OF PURSUANT TO CALIFORNIA HEALTH AND SAFETY CODE DIVISON 20, CHAPTER 6.5 AND MUST BE REPORTED IN THE CLOSURE REPORT. FAILURE TO COMPLY MAY BE PROSECUTED AS A FELONY VIOLATION.

By signature below, you certify that all statements and disclosures above are true and correct and that you have read and agree to abide by this authorization and all conditions and limitations on the back and attached:

Authorization Recipient (Print Name) Giuseppe Odo Phone 714 893 6366
Recipient's Signature _____ Date 12-18-13
Recipient is: **UST Owner** [ ] **UST Operator** [ ] or **Contractor** [x]

TO BE COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS

PURSUANT TO SECTION 11.80.070B, LOS ANGELES COUNTY CODE, PERMISSION IS HEREBY GRANTED TO PROCEED WITH THE CLOSURE DESCRIBED ABOVE SUBJECT TO THE ATTACHED CONDITIONS AND LIMITATIONS.

THIS AUTHORIZATION EXPIRES: 07/23/2014 *****SEE ATTACHMENTS*****

GAIL FARBER
Director of Public Works

By: _____ Date: 01/23/2014

 Complete Certification of Compliance with Los Angeles County Lobbyist Ordinance on back ClosApp FORMAT DPW Rev. 07/13

UNDERGROUND STORAGE TANKS
CLOSURE INFORMATION

1. This authorization to temporarily or permanently close an underground storage tank (UST) pursuant to Los Angeles County Code, Title 11, Division 4. This authorization may also be used for product piping removal associated with an existing or removed USTs.

2. This authorization will not be approved unless a valid Hazardous Material Underground Storage Permit (HMUSP) or Unified Program (UP) Permit application is on file with the Department of Public Works (DPW).

3. USTs closed on site by removal or cleaning and filling with an inert solid material prior to January 1, 1984, need not comply with current closure requirements, however, contamination related to these USTs must be reported and cleaned up.

4. This authorization must be accompanied by submittal in the California Environmental Reporting System (CERS) database of the Unified Program UST FACILITY and UST TANK information for each UST to be removed or closed. http://cers.calepa.ca.gov/

5. All work shall be carried out in full compliance with all applicable federal, state and local laws, ordinances, rules and regulations.

6. All fees due to DPW and/or to the Certified Unified Program Agency (CUPA) for the operation and/or maintenance of the facility subject to closure through the date of closure shall be paid in full.

7. All closure authorizations are site specific and may be subject to additional sampling and site characterization requirements as necessary to protect the public health and safety, underground and surface water supplies, and may include requirements, requested by Federal, State or other regulatory agencies.

8. All inspection notification(s) shall be made as directed by the attached conditions of this approval.

9. Within 30 days after closure, all requirements of this Closure authorization shall be furnished to the DPW in a closure report per the DPW Closure Report Requirements and Supplements, describing all work completed, results of any required sampling, disposition of any contaminated soils or materials found and any other requirements made part of the closure application.

10. In all cases, closure authorizations expire 180 days from the date of issue unless otherwise specified. It is the responsibility of the owner or operator to make sure that the final report contains the required information and is submitted to the DPW within 30 days from the sampling date or 180 days from the date of the permit issuance, whichever is earlier. The total number of tanks listed on the HMUSP or UP Permit and the yearly annual permit maintenance billing will remain unchanged until the closure report is received by the DPW. Only one copy of the closure report needs to be submitted unless otherwise directed.

11. If an unauthorized release has occurred, reporting requirements must comply with the California Health and Safety Code Division 20, Chapter 6.7.

12. All correspondence related to this closure authorization shall include the SITE-FILE numbers listed on the front of this document, found in the upper right box and be addressed to the following location:

DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROGRAMS DIVISION
900 SOUTH FREMONT AVENUE
ALHAMBRA, CA 91803-1331
(626) 458-3517

CERTIFICATION OF COMPLIANCE WITH
LOS ANGELES COUNTY LOBBYIST ORDINANCE

This is to certify that I, as permit applicant for the project located at 4635 Firestone Blvd, South Gate
LOCATION ADDRESS
am familiar with the requirements of Los Angeles County Code Chapter 2.160 et seq., (relating to the Los Angeles County Lobbyist Ordinance) and all persons acting on behalf of myself have complied and will continue to comply therewith through the application process.

Giuseppe Oddo
APPLICANT (PRINT NAME)

APPLICANT SIGNATURE

I.C.S
COMPANY NAME (If employed by an entity/agency)

12-18-13
DATE

If you suspect fraud or wrongdoing by a County employee, please report it to the County Fraud Hotline at 1-800-544-6861 or www.lacountyfraud.org. You may remain anonymous.

State Of California

CONTRACTORS STATE LICENSE BOARD

ACTIVE LICENSE

Consumer Affairs

License Number **764815** Type CORP

Business Name INNOVATIVE CONSTRUCTION SOLUTIONS

Classifications A HAZ C21

Expiration Date **06/30/2015** www.cslb.ca.gov

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 06/13/2013 10:41

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Barney & Barney LLC
CA Insurance Lic: 0C03950
101 Enterprise, Suite 330
Aliso Viejo, CA 92656
949-900-1780

CONTACT NAME: Nicole Crudup
PHONE (A/C, No, Ext): (949) 544-8461 FAX (A/C, No): (949) 643-3710
E-MAIL ADDRESS: nicolegw@barneyandbarney.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Golden Eagle Insurance Company	10375
INSURER B: Starr Surplus Lines Insurance Company	13604
INSURER C: Federal Insurance Company	20281
INSURER D:	
INSURER E:	
INSURER F:	

INSURED
Innovative Construction Solutions (ICS)
Innovative Construction Solutions - Norcal
4011 W. Chandler Ave.
Santa Ana, CA 92704
Client # 55124

COVERAGES **CERTIFICATE NUMBER:** 650129 MST NUMBER: 27892 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR X Contr. Poll. Liability GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC			SLSLEIL72032713	5/27/2013	5/27/2014	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS X HIRED AUTOS X SCHEDULED AUTOS X NON-OWNED AUTOS			BA8954820	6/12/2013	5/27/2014	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			SLSLXNV73024313	5/27/2013	5/27/2014	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		9044727549	6/12/2013	5/27/2014	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
B	Professional Liability			SLSLEIL72032713	5/27/2013	5/27/2014	Claims Made Form Each Claim- $1,000,000 General Aggregate- $2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Evidence of Insurance

CERTIFICATE HOLDER

Innovative Construction Solutions
4011 W. Chandler Ave.
Santa Ana, CA 92704

Subject

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Nicole Crudup

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COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROGRAMS DIVISION

CLOSURE REPORT REQUIREMENTS

A closure report shall be submitted to the County of Los Angeles Department of Public Works, Environmental Programs Division, P.O. Box 1460, Alhambra, California 91802-1460, containing:

1. File number of facility and closure permit number.
2. Plot plan to scale showing locations of tanks, sampling points, buildings, adjacent streets, and north arrow.
3. Description of methods for obtaining, handling, and transporting samples.
4. Time and date samples were obtained.
5. Soil sampling certification (including but not limited to soils classification, boring logs, sample procedures, sample locations, initiating chain-of-custody, and groundwater location) for Underground Storage Tank closure shall be certified by a California registered geologist, a California certified engineering geologist, or a California registered civil engineer with sufficient experience in soils. The certification must clearly state that all work was performed under the supervision of the person signing.
6. Chain-of-custody documentation initiated by person obtaining sample through person at a California Department of Health Services certified laboratory.
7. Disposal destination of tanks and evidence of legal disposal.
8. Analysis results by a State certified laboratory submitted on laboratory letterhead showing analysis date, methods of extraction, and methods of analysis.
9. Documentation as to depth of groundwater at facility.
10. Manifests to document hazardous waste disposal of any removed soil and tank rinsate.
11. Evidence of legal disposal of soils designated as nonhazardous.
12. Any observations of site contamination.
13. Remedial action plan to mitigate contamination.
14. Report to be signed by a California registered geologist, a California certified engineering geologist, or a California registered civil engineer with sufficient experience in soils.

Print Name Giuseppe Oddo

Signature _____ Date 1-23-14

UST1/CPR 07/25/02

CLOSURE – UNDERGROUND STORAGE TANKS

CONDITIONS A – GENERAL

1. Closures shall be carried out such that all applicable regulations from the following agencies are complied with: Los Angeles County, Department of County Engineer – Facilities; Los Angeles County Fire Department, Fire Prevention Division or the appropriate City Fire Department; South Coast Air Quality Management District; and Los Angeles County Department of Health Services.

2. The County Engineer and Fire Departments shall be notified in advance of any closure in accordance with the following:

   a. Removal of tank shall require a three (3)-business day advance notification.
   b. Permanent closure of a tank in place or a temporary closure shall require a 30-calendar notification.

3. Consult current fee schedule for costs.

4. All abandoned wells shall be destroyed in such a way that they will not produce water or act as a channel for interchange of water, when such interchange may result in deterioration of the quality of water in any or all water bearing formations penetrated, or present a hazard to the safety and well-being of people and animals.

5. A well destruction permit issued by the Los Angeles Department of Health Services shall be required for all wells requiring a permit for their initial construction.

6. Well destruction shall be accomplished according to methods described in the latest "Water Well Standards: State of California" by the Department of Water Resources, contained in Bulletin 74 – 81, December 1981, or any other methods that will provide equivalent or better protection.

7. Plans for the decontamination of a facility shall be submitted to the County Engineer for approval no later than 30 days before the commencement of such operations. Other agencies having jurisdiction shall also be notified. These agencies are California Regional Water Quality Board, the Los Angeles County Department of Health Services, and the South Coast Air Quality Management District.

8. Decontamination shall require the following, as a minimum:

   a. Cleaning operations shall be done under the supervision of persons who understand the hazardous potential of the original liquid stored and its components.
   b. The equipment shall be sufficiently skilled to safely carry out such operations.
   c. Contaminated materials removed from such facility shall be disposed of at legal point of discharge.
   d. The operation shall be carried out in a manner that will not endanger the health of the public and the environment.

CONDITIONS B – TEMPORARY

1. All temporary closures shall be carried out as indicated in Los Angeles County Fire Department, Fire Prevention Division, Supplement #A – Inspection Guide #6, "Abandonment or Removal of Underground Tanks," Part A and any other applicable Parts.

2. A temporary closure shall not exceed 90 days.

CONDITIONS C – PERMANENT TANK (S) REMOVAL

1. All tank removals shall be carried out as indicated in Los Angeles County Fire Department, Fire Prevention Division, Supplement #A – Inspection Guide #6, Part D and any other applicable Parts.

2. Owner/operators shall notify the Building Department having jurisdiction at the place of removal if a grading permit is necessary.

3. Removed tanks shall not be transported away from the site until an inspection to establish site integrity is carried by the County Engineer.

4. If an appointment has been arranged with a County Engineer Inspector to inspect the removal of a tank, the inspector will only wait at the site a reasonable amount of time (approximately one hour) after arriving for the removal to commence. Another closure fee may be charged if the inspector has to return to the site.

5. After inspection, tank shall be transported to a legal disposal point.

6. If the tank has stored materials other than motor fuel, fuel oil or waste oil, site integrity shall be demonstrated using the soil sampling and analysis procedures described in CONDITIONS D below.

7. The site shall be filled and re-compacted to a relative compaction of 90%.

CONDITIONS D – PERMANENT

1. All permanent closures of tanks in place shall comply with Los Angeles County Fire Department, Fire Prevention Division, Supplement #A – Inspection Guide #6, Parts B or E, and any other applicable Parts.

2. Owner/operators shall demonstrate part site integrity as follows:

   a. Test borings shall be slant drilled to intercept a point beneath the center of the tank, if possible. If slant drilling is not feasible, the test boring may be drilled vertically and the reason stated in the report in 2.b. below.
   b. For single tanks, a minimum of two test borings will be required, each located on opposite sides of the tank along the major axis of the tank.
   c. For multiple tanks, as a minimum, boring shall be placed at 20-foot intervals around the tank cluster. The actual number and location of borings shall be evaluated on a case-by-case basis. Tanks separated by 20 feet or more shall be considered single tanks for the purposes of test location and placement.
   d. Soil samples shall be taken at depths of 5, 10, 20, 30 and 40 feet below grade level.
   e. A Shelby Tube or a Modified California Sampler shall be utilized for taking all soil samples.
   f. Soil samples shall not be extruded in the field but are to be immediately placed in a refrigerated ice chest and transported to a state certified laboratory for analysis, using suitable methods.
   g. A report containing the results of the above analysis shall be submitted to the County Engineer.

3. If the soil analysis in 2. above indicates the presence of contaminants, the County Engineer shall require a site investigation as described in Chapter V of the County's "Underground Storage of Hazardous Materials – Guidelines."

4. A report shall be submitted to the County Engineer containing the results of the site investigation.

STATE OF CALIFORNIA
California Regional Water Quality Control Board
Los Angeles Region
(Underground Storage Tank Program)

General Laboratory Testing Requirements for Petroleum Hydrocarbon Impacted Sites

The purpose of this document is to supplement the Regional Board's Laboratory Report Form (6/00) in order to update obsolete testing requirements and set forth the new requirements for fuel oxygenates and natural attenuation testing. Each analytical method used must be certified by the California Environmental Accreditation Laboratory Program (ELAP).

1. General Laboratory QA/QC Requirements

Conform to the Regional Board's Laboratory Report Form (6/00) in general, except for items specified below.

2. Compounds to be Tested

Total petroleum hydrocarbons in gasoline range (TPHg) (C4 – C12); Total petroleum hydrocarbons in diesel range (TPHd) (C13 – C22); benzene, toluene, ethylbenzene, xylenes (BTEX); methyl tertiary butyl ether (MTBE); di-isopropyl ether (DIPE); ethyl tertiary butyl ether (ETBE); tertiary amyl methyl ether (TAME); tertiary butyl alcohol (TBA). If the gasoline tanks historically or currently contain methanol or ethanol, these compounds are also to be tested.

3. Analytical Test Methods and Detection Limits

Conform to Table 1 below. Report any concentration detected between the method detection limit (MDL) and estimated quantitation limit (EQL) (or reporting limit (RL)) in a numerical value with a "J" flag indicator. All "Non-Detect" (ND) shall be reported in the format with "< (numerical MDL)." Integrate all fuel oxygenate additive concentrations into total petroleum hydrocarbons (TPH) and report it as TPH. EPA Method 8021B may be used to substitute EPA Method 8260B at the sites where all fuel oxygenates have not been identified by EPA Method 8260B in soil and/or groundwater.

Table 1: Analytical Requirements

		Required MDL (Method detection limit)	
Analyte	Analytical Method	Soil (µg/kg)	Water (µg/L)
BTEX	EPA Method 8260B(8021B)	1	0.5
MTBE	EPA Method 8260B	2	1
DIPE	EPA Method 8260B	2	1
ETBE	EPA Method 8260B	2	1
TAME	EPA Method 8260B	2	1
TBA	EPA Method 8260B	20	10
TPHg	Cal-LUFT GC/FID or GC/MS	100-200	50-100
TPHd	Cal-LUFT GC/FID	1000	500
Methanol	Cal-LUFT GC/FID	1000	500
Ethanol	Cal-LUFT GC/FID(EPA8260B)	500	250

CLOSURE APPLICATION SUPPLEMENT **PART 1 OF 3**
HAZARDOUS MATERIALS UNDERGROUND STORAGE
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROGRAMS DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CA 91803

DPW USE ONLY:
SITE-FILE NO. 13060 - 67615
APPLICATION NO. 764433

To satisfy the permanent closure requirements for underground storage tanks storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for Closure or contained in an approved Closure Plan.

***** Soil sampling will be required for Vent and Vapor Recovery piping for UST systems installed after July 1, 2003. *****

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.

2. For each SP, samples shall be obtained at the following depths:

SP	Depth(s)	Compounds	Analysis Method
1 A	2-4 feet below tank invert	TPHG & TPHD →	8015 (m)
		TRPH →	418.1
		BTEX, MTBE, Fuel Oxygenates, Ethanol →	8260 B
		* Organic Lead →	DOHS Method
1 sample	2-4 feet below each UDC or remote fill, if applicable.	Same as above	Same as above
1 sample	2-4 feet below piping, every 20 feet starting from UDC's/ remote fill.	Same as above	Same as above

Apply EPA Method 5035 for soil sample collection, preparation & preservati

* Test for organic lead if past UST contents were leaded, or if it is unknowi whether past contents were leaded.

Continued on Page 2

5. All soil/groundwater samples shall be analyzed by a laboratory approved by the California Environmental Accreditation Laboratory Program (ELAP).

6. Analytical results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) Detection limits for each analytical procedure and determination; d) The method of analysis; e) Signature of chemist certifying results.

7. All soil/groundwater samples obtained shall be handled and transported to laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.

8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present.

9. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed.

10. A final report that contains all of the above required information shall be submitted to the office above within one (1) month form the sampling date or 180 days from the date of this permit, whichever is earlier.

11. All electronic data shall be submitted to the State Water Resources Control Board Geotracker database.

NOTICE TO CLOSURE PERMIT APPLICANTS

The South Coast Air Quality Management District (SCAQMD) has adopted Rule 1166 regulating emissions of Volatile Organic Compounds (VOC) from decontamination of soil effective **August 5, 1988.**

In addition to the requirements of your Closure Permit, persons excavating any underground storage tank that previously contained VOCs must:

- Notify the SCAQMD by telephone at (909) 396-2326 or by fax at (909) 396-3342 using the SCAQMD notification form 24 hours prior to tank excavation. 1166(c)(1)(A)

- Monitor the excavated material during the excavation for VOC contamination. 1166(c)(1)(B)

- When VOC contamination is detected:

  * Cease excavation.
  * Cover the contaminated soil until implementation of approved mitigation measures. 1166(c)(1)(C)
  * Notify the SCAQMD at (909) 396-2326 within 24 hours of detection of VOC contaminated soil. 1166(c)(2)(A)

- A person shall not engage in or allow any on- or off-site spreading of VOC contaminated soil which results in uncontrolled evaporation of VOC to the atmosphere. 1166(c)(3)

Exemptions

- Treatment of less than one (1) cubic yard of contaminated soil. 1166(d)(1)(A)

- Decontamination of soil containing organic compounds that have an initial boiling point of 302°F or greater, Reid Vapor Pressure less than 80 mm Hg or Absolute Vapor Pressure less than 36 mm Hg at 20°C. 1166(d)(1)(B),(F)

- Removal of soil for sampling purposes pursuant to Environmental Protection Agency methods. 1166(d)(1)(C)

- Accidental spillage of five (5) gallons or less of VOC. 1166(d)(1)(D)

- Documentation of soil which is contaminated through natural seepage of VOC from oil and gas wells or other natural sources. 1166(d)(1)(E)

SPECIFIC QUESTIONS ON RULE 1166 SHOULD BE REFERRED TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (909) 396-2326

ATTENTION CONTRACTOR

NOTIFICATION/PERMIT REQUIREMENTS

This Closure Authorization is issued subject to compliance with all applicable laws and regulations relating to the performance of work including, but not limited to, business license requirements, Building Codes, Fire Codes, Air Quality regulations, Health and Safety Codes, Water Codes, and Transportation regulations.

Pursuant to Los Angeles County Code, Section 11.78.045, and the Conditions and Limitations of the attached Hazardous Materials Underground Storage Closure Authorization, you are required to complete ALL of the agency notifications indicated below within the time period specified prior to commencement of work on this closure.

[X] 72 HOUR–DEPARTMENT OF PUBLIC WORKS WASTE CONTROL ENGINEERING INSPECTOR:

>>>Unless otherwise noted, Public Works inspectors are available at the following offices, Monday through Friday, between 8 a.m. and 9:30 a.m. ONLY.<<<

[ ] WHITTIER AREA–(562) 906-8426
13523 East Telegraph Road, Whittier, CA 90605-3437

[ ] CENTINELA VALLEY AREA–(310) 534-4862 or (310) 534-4859
24320 South Narbonne Avenue, Lomita, CA 90717-1194

[X] LENNOX AREA–(310) 534-4862 or 534-4859
24320 South Narbonne Avenue, Lomita, CA 90717-1194

[ ] SAN GABRIEL VALLEY AREA–(626) 574-0962
125 South Baldwin Avenue, Arcadia, CA 91007-2652

[ ] SAN DIMAS AREA–(626) 574-0962
125 South Baldwin Avenue, Arcadia, CA 91007-2652

[ ] EAST LOS ANGELES AREA–(323) 881-7031
5119 East Beverly Boulevard, Los Angeles, CA 90022-3801

[ ] CITY OF COMMERCE–(323) 887-4456
2535 Commerce Way, Commerce, CA 90040-1487

[ ] NEWHALL AREA–(661) 222-2953
23757 West Valencia Boulevard, Santa Clarita, CA 91355-2192

[X] 48 HOUR (OR AS REQUIRED)–LOCAL FIRE DEPARTMENT FIRE PREVENTION INSPECTOR:

[ ] City of _____

[X] Los Angeles County Fire Department (310) 603 – 6258

[X] 24 HOUR–SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Telephone: (909) 396-2326
Fax: (909) 396-3342

[ ] COUNTY SERVES AS BUILDING OFFICIAL, SEE ATTACHED

[X] CITY SERVES AS BUILDING OFFICIAL

FAILURE TO PROVIDE NOTICE AS REQUIRED ABOVE MAY RESULT IN PERMIT REVOCATION, ADDITIONAL SITE ASSESSMENT REQUIREMENTS, AND/OR ADMINISTRATIVE PENALTIES AS PROVIDED BY LAW.

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROGRAMS DIVISION

ADDITIONAL CONDITIONS FOR UST CLOSURE/SITE ASSESSMENT

TITLE 23: CALIFORNIA CODE OF REGULATIONS - WATERS
DIVISION 3: STATE WATER RESOURCES CONTROL BOARD (SWRCB)
CHAPTER 30: ELECTRONIC SUBMITTAL OF INFORMATION

Article 1 – GENERAL PROVISIONS

Section 3890. General Intent, Content, and Applicability of Regulations

(a) The regulations in this Chapter are intended to provide electronic access to reports, including soil, vapor, and water data, prepared for the purpose of subsurface investigation or remediation of: (1) an unauthorized discharge or deposit of waste as defined in section 13050 of the Water Code, (2) an unauthorized release of a hazardous substance as defined in section 25281 of the Health and Safety Code, or (3) a discharge of waste to land subject to Division 2 of Title 27 or Division 3, Chapter 15, of Title 23 of the California Code of Regulations (CCR).

(b) The regulations in this Chapter require persons responsible for submitting certain reports to the State Board, a regional board, or a local agency to submit these reports electronically over the Internet to the State Board's Geotracker system.

(c) The requirements of this Chapter are in addition to, and not superseded by, any other applicable reporting requirements.

(d) Except as provided in Section 3895(b), the electronic reporting requirements of this Chapter are intended to replace requirements for the submittal of paper copies of reports, beginning July 1, 2005.

Authority cited: Sections 13196 and 13198(c), Water Code.

Reference: Sections 13196 and 13198, Water Code.

Article 2. - ELECTRONIC SUBMITTAL OF INFORMATION

Section 3891. Definition of Terms

"COELT" is the United States Army Corps of Engineers Loading Tool program. It is a relational database application that is designed to run with the Microsoft Windows operating system. COELT places laboratory data into the standardized Electronic Deliverable Format (EDF). The program can accept data from Laboratory Information Management System (LIMS) or manually entered data. COELT is an optional software application that is intended to help laboratories that require new software to produce the EDF data deliverable. COELT includes a report utility that allows hard copy laboratory reports to be printed that match the actual electronic data. For purposes of the requirements of this chapter, version 1.2a of COELT may be used. The program (coelt12i.exe) and documents (coelt 1.2i manual.zip) for version 1.2i of COELT are available through links provided at http://www.waterboards.ca.gov/ust "CSRS-H" is the California Spatial Reference System-Horizontal, which includes the High Precision Geodetic Network (HPGN), the High Precision Geodetic Network–Densification (HPGN-D) and other geodetic control positions. These control positions have been determined by Global Positioning System survey methods in accordance with first order or better standards and specifications from the Federal Geodetic Control Subcommittee (FGCS) of the Federal Geographic Data Committee. These control positions are published by the National Geodetic Survey, California Spatial Reference Center or its successor.

Section 3892. Reports

The following reports are subject to the requirements of this Chapter, when those reports are required for the purpose of subsurface investigation or remediation of: (1) an unauthorized discharge or deposit of waste as defined in section 13050 of the Water Code, (2) an unauthorized release of a hazardous substance as defined in section 25281 of the Health and Safety Code, or (3) a discharge of waste to land subject to Division 2 of Title 27 or Division 3, Chapter 15 of Title 23 of the California Code of Regulations (CCR).

(a) Reports submitted pursuant to Division 3, Chapter 16, Article 11 of Title 23 of the CCR.

(b) Reports submitted pursuant to Division 2 of Title 27 or Division 3, Chapter 15 of Title 23 of the CCR.

(c) Reports submitted pursuant to section 13304 of the Water Code.

(d) Reports submitted pursuant to section 13267 of the Water Code.

(e) Reports submitted pursuant to any order or directive of the State Board, a regional board or a local agency.

(f) Reports submitted pursuant to the Two-year Joint Cooperative Agreement Execution Plans under the Defense / State Memorandum of Agreement and Navy Cost Recovery Cooperative Agreement, for the State of California.

Authority cited: Sections 13196 and 13198 (c), Water Code.

Reference: Sections 13196 (a) and 13198 (c), Water Code.

Section 3893. Electronic Submittal of Reports

(a) Persons responsible for submitting reports pursuant to this Chapter shall submit the following information described in subdivision (b) electronically over the Internet to the State Board's Geotracker system in conformance with data dictionaries found in Title 27, Division 3, Subdivision 2 (Monitoring and Release Information) and specifications contained in the State Water Resources Control Board EDF Guidelines and Restrictions (version 1.2i) and Survey XYZ Guidelines and Restrictions (Version 6). These data dictionaries and documents are available through links provided at http://www.waterboards.ca.gov/ust.

(b) Data generated after the effective date of the regulations by chemical analysis of soil, vapor, or water samples (including surface water, groundwater and influent/effluent water samples from remediation systems), shall be submitted in EDF format. All data submitted in EDF format shall be checked for errors prior to and during submittal using the EDCC software consistency-checking tool. All data submitted in EDF format must pass this error-checking tool as well as meet normal regulatory requirements in order to be considered valid data. In addition, when required for reports subject to this Chapter, the following shall also be submitted electronically:

(1) The latitude and longitude of any permanent monitoring well for which data is reported in EDF format, accurate to within 1 meter and referenced to a minimum of two reference points from the California Spatial Reference System (CSRS-H), if available.

(2) The surveyed elevation relative to a geodetic datum of any permanent monitoring well.

(3) The elevation of groundwater in any permanent monitoring well relative to the surveyed elevation.

(4) A site map or maps showing the location of all sampling points referred to in the report.

(5) The depth to the screened interval and the length of screened interval for any permanent monitoring well.

(6) Boring logs, in PDF format.

(7) A complete copy of the report, in PDF format, which includes the signed transmittal letter and professional certification.

(c) All deadlines and timeframes for submittals of reports are applicable to the information submitted electronically pursuant to this Chapter.

Authority cited: Sections 13196 and 13198 (c), Water Code.

Reference: Sections 13196 and13198 (c), Water Code.

THIS CARD MUST BE POSTED IN A CONSPICUOUS PLACE

CITY OF SOUTH GATE
DEPARTMENT OF BUILDING AND SAFETY
8650 CALIFORNIA AVENUE, SOUTH GATE, CA 90280

COMMERCIAL - INDUSTRIAL INSPECTION RECORD

FOR INSPECTION CALL: (323) 826-4647 OR (323) 563-9549.
MONDAY THROUGH THURSDAY, FROM 7:30 P.M., CLOSED ON FRIDAY
A MINIMUM 24 HOUR NOTICE IS REQUIRED FOR ALL INSPECTION REQUESTS.

BUILDING PERMIT # 14-323 DATE ISSUED 2/5/14

PROPERTY ADDRESS: 4635 Firestone Blvd

PROPERTY OWNER:

CONTRACTOR:

APPROVALS		DATE	INSPECTOR
1.	FORMS AND FOUNDATIONS		
2.	REINFORCING STEEL		
3.	ELECTRICAL GROUNDWORK/UFER		
4.	PLUMBING GROUNDWORK		
5.	SEWER INSTALLATION		
6.	GRADING		
DO NOT POUR CONCRETE UNTIL ABOVE ITEMS ARE SIGNED OFF			
7.	REINFORCED STEEL		
8.	MASONRY		
9.	GROUT INSPECTION		
10.	FLOOR JOIST, GIRDERS		
11.	UNDERFLOOR PLUMBING		
12.	UNDERFLOOR INSULATION		
13.	ROUGH ELECTRICAL		
14.	ROUGH PLUMBING		
15.	ROUGH HEATING AND VENTILATION		
16.	OBSERVATION REPORT		
17.	FRAMING		
18.	EXTERIOR SHEAR		
19.	ROOF SHEATHING		
20.	WALL AND CEILING INSULATION		
DO NOT COVER WORK UNTIL ABOVE HAS BEEN SIGNED			
19.	DRYWALL - WALL COVERING		
20.	EXTERIOR LATHING		
21.	PLASTER SCRATCH COAT		
22.	PLASTER BROWN COAT		
23.	ELECTRICAL FIXTURES		
24.	PLUMBING FIXTURES (including gas test)		
25.	FINAL HEATING AND VENTILATING		
26.	PLANNING DIVISION FINAL		
27.	PUBLIC WORKS FINAL		
28.	FIRE DEPARTMENT APPROVAL		
29.	BUILDING DEPARTMENT FINAL		

DESCRIPTION OF WORK TO BE DONE (PERMIT VALID 180 DAYS UNLESS NOTED OTHERWISE)

Removal of underground Tank

PLEASE NOTE: IT IS THE RESPONSIBILITY OF EACH APPLICANT TO MAKE SURE THIS CARD IS AVAILABLE AT EACH INSPECTION AND IS WRITTEN PROPERLY.
AN ADDITIONAL FEE WILL BE CHARGED FOR REINSPECTION CARDS.

****
CITY OF SOUTH GATE
CUSTOMER SERVICE DEPARTMENT
8650 CALIFORNIA AVENUE
SOUTH GATE, CA 90280
323-563-9500
****
Reg# #/Rcpt#: 034-00005002 [JCG]
Accounting Date: Wed, Feb 5, 2014
Date/Time: Wed, Feb 5, 2014 9:56 AM
****
P/BLDG-BUILDING PERMIT

EF #: HDL PERMIT#:014-000-327/100-4301
FEE AMOUNT: $ 348.25
P/BLDG-BUILDING PERMIT

F #: HDL PERMIT#:014-000-327/100-4302
FEE AMOUNT: $ 2.00
/BLDG-BUILDING PERMIT

F #: HDL PERMIT#:014-000-327/100-4308
FEE AMOUNT: $ 1.00

ECEIPT TOTAL = $ 351.25
****
Payment Data:
:1
Payer: INNOVATIVE CONSTRUCT
Method: CK
Ref#: 26205
JNT = $ 351.25

****
RECEIPT SUMMARY
****
AL TENDERED = $ 351.25
EIPT TOTAL = $ 351.25

NGE DUE = $ 0.00
****
HAVE A NICE DAY!
****
v:1.0.4106

---

th Gate
Division
ee, South Gate, CA 90280
9549 • Fax (323) 563-9571

PERMIT NO. 014-000-327
Permit Type: Detached Storage, Patio covers
Subtype: Commercial

LCO NO.	APPROVAL DATE	ISSUED BY	Issue Date: 02/05/2014
	2/5/2014	JCG	Permit Status: Issued

ASSESSOR'S PARCEL NO. GEO CODE
6216-000-0223

ADDRESS
Figueroa St 3000
Angeles, Ca 90012-
PHONE NO. (310) 652-1177 FAX NO.

ADDRESS
PHONE NO. FAX NO.

ADDRESS
25 Fenwick Ln Ste O
estminster, CA 92683
PHONE NO. (714) 893-6366 FAX NO.
EMAIL ADDRESS:

ADDRESS
PHONE NO. FAX NO.

GROUND WASTE STORGAE TANK LOCATED AT CORNER OF ATLANTIC AVE

D BEFORE FINAL INSPECTION**

F UNITS	VALUE	CALCULATION TYPE	UOM	# OF UNITS	VALUE
20,000	$20,000.00				

OCCUPANCY U Utility, Misc TOTAL VALUATION $20,000.00

FEE DETAIL

AMT	AMT PAID*		*Includes today's payment AMT DUE	AMT PAID
321.25	321.25			
27.00	27.00			
2.00	2.00			
1.00	1.00			

Total Fees: $ 351.25 Total Paid: $ 351.25 Balance Unpaid: $ 0.00 Paid Today: $351.25

RECEIPTS DETAIL

RECEIPT#	TRANS. DATE	NAME	PAYMENT TYPE	PAYMENT TYPE#	AMOUNT
22,539	2/5/2014	INNOVATIVE CONSTRUCTION	Check	26205	$351.25

ENVIRONMENTAL HEALTH

Drinking Water Program

County of Los Angeles
Public Health

5050 Commerce Drive, Baldwin Park, CA 91706
Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/epitier/dw_main.htm

Well Permit Approval

CA-1289

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
4561 Firestone Blvd.	South Gate	90280	Catherine.gallagher@arcadis-us.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

Juan Rodriguez 626-430-5386 or jurodriguez@ph.lacounty.gov

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

☐ WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:

☑ WORK PLAN APPROVED

DATE: 2-14-14

Los Angeles County Drinking Water stamp

ADDITIONAL APPROVAL CONDITIONS:

On 2/13/14 $130.00 was paid for Permit # 892273 to advance a hydropunch at above address.

STAMP NO. 6330

Juan Rodriguez

☐ ANNULAR SEAL FINAL INSPECTION REQUIRED

DATE ACCEPTED: REHS signature

☐ WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

☐ WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

☐ WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

☐ WATER SUPPLY YIELD REQUIRED

DATE ACCEPTED: REHS signature

☐ OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

Revised: October 2012

ARCADIS

Appendix B

Laboratory Reports and Chain-of-Custody Forms

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 13-08-0511

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP-1289 / GP09BPNA.C167

Attention: Darla Gill
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 08/08/2013 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

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Client Project Name: BP-1289 / GP09BPNA.C167
Work Order Number: 13-08-0511

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 13-08-0511 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 08/07/13. They were assigned to Work Order 13-08-0511.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**GC 45**	**08/07/13**	**08/08/13 11:52**	**130807B01**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	360000	12000	2500	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	122	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-366-13**	**N/A**	**Oil**	**GC 45**	**08/07/13**	**08/07/13 15:39**	**130807B01**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	85	61-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**GC 47**	**08/07/13**	**08/07/13 21:29**	**130807B06**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	12000	2500	
C7	ND	12000	2500	
C8	ND	12000	2500	
C9-C10	19000	12000	2500	
C11-C12	14000	12000	2500	
C13-C14	ND	12000	2500	
C15-C16	ND	12000	2500	
C17-C18	ND	12000	2500	
C19-C20	27000	12000	2500	
C21-C22	38000	12000	2500	
C23-C24	84000	12000	2500	
C25-C28	130000	12000	2500	
C29-C32	110000	12000	2500	
C33-C36	86000	12000	2500	
C37-C40	61000	12000	2500	
C41-C44	34000	12000	2500	
C6-C44 Total	620000	12000	2500	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	94	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-490-449**	**N/A**	**Oil**	**GC 47**	**08/07/13**	**08/07/13 13:06**	**130807B06**

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1	
C7	ND	5.0	1	
C8	ND	5.0	1	
C9-C10	ND	5.0	1	
C11-C12	ND	5.0	1	
C13-C14	ND	5.0	1	
C15-C16	ND	5.0	1	
C17-C18	ND	5.0	1	
C19-C20	ND	5.0	1	
C21-C22	ND	5.0	1	
C23-C24	ND	5.0	1	
C25-C28	ND	5.0	1	
C29-C32	ND	5.0	1	
C33-C36	ND	5.0	1	
C37-C40	ND	5.0	1	
C41-C44	ND	5.0	1	
C6-C44 Total	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	79	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**GC 56**	**08/07/13**	**08/07/13 20:09**	**130807B01**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	5000	100	200	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	133	42-126	2,7

Method Blank	**099-12-697-462**	**N/A**	**Oil**	**GC 56**	**08/07/13**	**08/07/13 18:34**	**130807B01**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	ND	4.0	8	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	85	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**ICP 7300**	**08/07/13**	**08/08/13 13:00**	**130807L05**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	1.50	2	
Arsenic	1.74	1.50	2	
Barium	17.8	1.00	2	
Beryllium	ND	0.500	2	
Cadmium	1.26	1.00	2	
Chromium	5.71	0.500	2	
Cobalt	ND	0.500	2	
Copper	43.7	1.00	2	
Lead	2910	1.00	2	
Molybdenum	1.69	0.500	2	
Nickel	1.13	0.500	2	
Selenium	ND	1.50	2	
Silver	ND	0.500	2	
Thallium	ND	1.50	2	
Vanadium	ND	0.500	2	
Zinc	1060	2.00	2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-17180**	**N/A**	**Oil**	**ICP 7300**	**08/07/13**	**08/08/13 12:49**	**130807L05**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	ND	0.750	1	
Barium	ND	0.500	1	
Beryllium	ND	0.250	1	
Cadmium	ND	0.500	1	
Chromium	ND	0.250	1	
Cobalt	ND	0.250	1	
Copper	ND	0.500	1	
Lead	ND	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	ND	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	ND	0.250	1	
Zinc	ND	1.00	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**Mercury**	**08/07/13**	**08/07/13 18:05**	**130807L02**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Method Blank	**099-04-007-9528**	**N/A**	**Oil**	**Mercury**	**08/07/13**	**08/07/13 13:13**	**130807L02**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8082
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-A**	**08/07/13 13:19**	**Oil**	**GC 58**	**08/07/13**	**08/08/13 11:43**	**130807L12**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	10000	10	
Aroclor-1221	ND	10000	10	
Aroclor-1232	43000	10000	10	
Aroclor-1242	ND	10000	10	
Aroclor-1248	ND	10000	10	
Aroclor-1254	ND	10000	10	
Aroclor-1260	ND	10000	10	
Aroclor-1262	ND	10000	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	122	50-130	
2,4,5,6-Tetrachloro-m-Xylene	86	50-130	

Method Blank	**096-01-013-594**	**N/A**	**Oil**	**GC 58**	**08/07/13**	**08/08/13 10:13**	**130807L12**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1000	1	
Aroclor-1221	ND	1000	1	
Aroclor-1232	ND	1000	1	
Aroclor-1242	ND	1000	1	
Aroclor-1248	ND	1000	1	
Aroclor-1254	ND	1000	1	
Aroclor-1260	ND	1000	1	
Aroclor-1262	ND	1000	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	112	50-130	
2,4,5,6-Tetrachloro-m-Xylene	104	50-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**GC/MS SS**	**08/07/13**	**08/08/13 11:57**	**130807L13**

Parameter	Result	RL	DF	Qualifiers
N-Nitrosodimethylamine	ND	100	10	
Aniline	ND	100	10	
Phenol	110	100	10	
Bis(2-Chloroethyl) Ether	ND	100	10	
2-Chlorophenol	ND	100	10	
1,3-Dichlorobenzene	ND	100	10	
1,4-Dichlorobenzene	ND	100	10	
Benzyl Alcohol	ND	1000	10	
1,2-Dichlorobenzene	ND	100	10	
2-Methylphenol	ND	100	10	
Bis(2-Chloroisopropyl) Ether	ND	100	10	
3/4-Methylphenol	ND	100	10	
N-Nitroso-di-n-propylamine	ND	1000	10	
Hexachloroethane	ND	100	10	
Nitrobenzene	ND	100	10	
Isophorone	ND	100	10	
2-Nitrophenol	ND	100	10	
2,4-Dimethylphenol	ND	100	10	
Benzoic Acid	ND	1000	10	
Bis(2-Chloroethoxy) Methane	ND	100	10	
2,4-Dichlorophenol	ND	100	10	
Pyridine	ND	100	10	
1,2,4-Trichlorobenzene	ND	100	10	
Naphthalene	950	100	10	
4-Chloroaniline	ND	100	10	
Hexachloro-1,3-Butadiene	ND	100	10	
4-Chloro-3-Methylphenol	ND	100	10	
2-Methylnaphthalene	1100	100	10	
1-Methylnaphthalene	560	400	10	
Hexachlorocyclopentadiene	ND	100	10	
2,4,5-Trichlorophenol	ND	100	10	
2-Chloronaphthalene	ND	100	10	
2-Nitroaniline	ND	1000	10	
Dimethyl Phthalate	ND	100	10	
Acenaphthylene	ND	100	10	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	08/07/13
1687 Cole Blvd., Suite 200	Work Order:	13-08-0511
Lakewood, CO 80401-3318	Preparation:	EPA 3580A
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167		Page 2 of 6

Parameter	Result	RL	DF	Qualifiers
3-Nitroaniline	ND	1000	10	
Acenaphthene	ND	100	10	
2,4-Dinitrophenol	ND	1000	10	
4-Nitrophenol	ND	1000	10	
Dibenzofuran	ND	100	10	
2,4-Dinitrotoluene	ND	100	10	
2,6-Dinitrotoluene	ND	100	10	
Diethyl Phthalate	ND	100	10	
4-Chlorophenyl-Phenyl Ether	ND	100	10	
Fluorene	ND	100	10	
4-Nitroaniline	ND	1000	10	
Azobenzene	ND	100	10	
4,6-Dinitro-2-Methylphenol	ND	1000	10	
N-Nitrosodiphenylamine	ND	1000	10	
2,4,6-Trichlorophenol	ND	100	10	
4-Bromophenyl-Phenyl Ether	ND	100	10	
Hexachlorobenzene	ND	100	10	
Pentachlorophenol	ND	1000	10	
Phenanthrene	100	100	10	
Anthracene	ND	100	10	
Di-n-Butyl Phthalate	ND	100	10	
Fluoranthene	ND	100	10	
Benzidine	ND	100	10	
Pyrene	ND	100	10	
Butyl Benzyl Phthalate	ND	100	10	
3,3'-Dichlorobenzidine	ND	100	10	
Benzo (a) Anthracene	ND	100	10	
Bis(2-Ethylhexyl) Phthalate	120	100	10	
Chrysene	ND	100	10	
Di-n-Octyl Phthalate	ND	500	10	
Benzo (k) Fluoranthene	ND	400	10	
Benzo (b) Fluoranthene	ND	400	10	
Benzo (a) Pyrene	ND	500	10	
Indeno (1,2,3-c,d) Pyrene	ND	500	10	
Dibenz (a,h) Anthracene	ND	500	10	
Benzo (g,h,i) Perylene	ND	500	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	93	25-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	08/07/13
1687 Cole Blvd., Suite 200	Work Order:	13-08-0511
Lakewood, CO 80401-3318	Preparation:	EPA 3580A
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167		Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
Phenol-d6	68	24-113	
Nitrobenzene-d5	83	23-120	
2-Fluorobiphenyl	102	30-115	
2,4,6-Tribromophenol	89	19-122	
p-Terphenyl-d14	92	18-137	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-01-011-310**	**N/A**	**Oil**	**GC/MS SS**	**08/07/13**	**08/08/13 10:39**	**130807L13**

Parameter	Result	RL	DF	Qualifiers
N-Nitrosodimethylamine	ND	10	1	
Aniline	ND	10	1	
Phenol	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	10	1	
2-Chlorophenol	ND	10	1	
1,3-Dichlorobenzene	ND	10	1	
1,4-Dichlorobenzene	ND	10	1	
Benzyl Alcohol	ND	100	1	
1,2-Dichlorobenzene	ND	10	1	
2-Methylphenol	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1	
3/4-Methylphenol	ND	10	1	
N-Nitroso-di-n-propylamine	ND	100	1	
Hexachloroethane	ND	10	1	
Nitrobenzene	ND	10	1	
Isophorone	ND	10	1	
2-Nitrophenol	ND	10	1	
2,4-Dimethylphenol	ND	10	1	
Benzoic Acid	ND	100	1	
Bis(2-Chloroethoxy) Methane	ND	10	1	
2,4-Dichlorophenol	ND	10	1	
Pyridine	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1	
Naphthalene	ND	10	1	
4-Chloroaniline	ND	10	1	
Hexachloro-1,3-Butadiene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1	
2-Methylnaphthalene	ND	10	1	
1-Methylnaphthalene	ND	40	1	
Hexachlorocyclopentadiene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1	
2-Chloronaphthalene	ND	10	1	
2-Nitroaniline	ND	100	1	
Dimethyl Phthalate	ND	10	1	
Acenaphthylene	ND	10	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	08/07/13
1687 Cole Blvd., Suite 200	Work Order:	13-08-0511
Lakewood, CO 80401-3318	Preparation:	EPA 3580A
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167		Page 5 of 6

Parameter	Result	RL	DF	Qualifiers
3-Nitroaniline	ND	100	1	
Acenaphthene	ND	10	1	
2,4-Dinitrophenol	ND	100	1	
4-Nitrophenol	ND	100	1	
Dibenzofuran	ND	10	1	
2,4-Dinitrotoluene	ND	10	1	
2,6-Dinitrotoluene	ND	10	1	
Diethyl Phthalate	ND	10	1	
4-Chlorophenyl-Phenyl Ether	ND	10	1	
Fluorene	ND	10	1	
4-Nitroaniline	ND	100	1	
Azobenzene	ND	10	1	
4,6-Dinitro-2-Methylphenol	ND	100	1	
N-Nitrosodiphenylamine	ND	100	1	
2,4,6-Trichlorophenol	ND	10	1	
4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachlorobenzene	ND	10	1	
Pentachlorophenol	ND	100	1	
Phenanthrene	ND	10	1	
Anthracene	ND	10	1	
Di-n-Butyl Phthalate	ND	10	1	
Fluoranthene	ND	10	1	
Benzidine	ND	10	1	
Pyrene	ND	10	1	
Butyl Benzyl Phthalate	ND	10	1	
3,3'-Dichlorobenzidine	ND	10	1	
Benzo (a) Anthracene	ND	10	1	
Bis(2-Ethylhexyl) Phthalate	ND	10	1	
Chrysene	ND	10	1	
Di-n-Octyl Phthalate	ND	50	1	
Benzo (k) Fluoranthene	ND	40	1	
Benzo (b) Fluoranthene	ND	40	1	
Benzo (a) Pyrene	ND	50	1	
Indeno (1,2,3-c,d) Pyrene	ND	50	1	
Dibenz (a,h) Anthracene	ND	50	1	
Benzo (g,h,i) Perylene	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	106	25-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	08/07/13
1687 Cole Blvd., Suite 200	Work Order:	13-08-0511
Lakewood, CO 80401-3318	Preparation:	EPA 3580A
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167		Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
Phenol-d6	84	24-113	
Nitrobenzene-d5	99	23-120	
2-Fluorobiphenyl	105	30-115	
2,4,6-Tribromophenol	82	19-122	
p-Terphenyl-d14	99	18-137	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-D**	**08/07/13 13:19**	**Oil**	**GC/MS Q**	**08/07/13**	**08/07/13 19:35**	**130807L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120000	5000	
Benzene	25000	5000	5000	
Bromobenzene	ND	5000	5000	
Bromochloromethane	ND	5000	5000	
Bromodichloromethane	ND	5000	5000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50000	5000	
Bromoform	ND	5000	5000	
Bromomethane	ND	50000	5000	
2-Butanone	ND	50000	5000	
n-Butylbenzene	170000	5000	5000	
sec-Butylbenzene	24000	5000	5000	
tert-Butylbenzene	ND	5000	5000	
Carbon Disulfide	ND	50000	5000	
Carbon Tetrachloride	ND	5000	5000	
Chlorobenzene	ND	5000	5000	
Chloroethane	ND	25000	5000	
Chloroform	ND	5000	5000	
Chloromethane	ND	5000	5000	
2-Chlorotoluene	150000	5000	5000	
4-Chlorotoluene	38000	5000	5000	
Dibromochloromethane	ND	5000	5000	
1,2-Dibromo-3-Chloropropane	46000	25000	5000	
1,2-Dibromoethane	ND	5000	5000	
Dibromomethane	ND	5000	5000	
1,2-Dichlorobenzene	ND	5000	5000	
1,3-Dichlorobenzene	ND	5000	5000	
1,4-Dichlorobenzene	ND	5000	5000	
Dichlorodifluoromethane	ND	5000	5000	
1,1-Dichloroethane	ND	5000	5000	
1,2-Dichloroethane	ND	5000	5000	
1,1-Dichloroethene	ND	5000	5000	
c-1,2-Dichloroethene	ND	5000	5000	
t-1,2-Dichloroethene	ND	5000	5000	
1,2-Dichloropropane	ND	5000	5000	
1,3-Dichloropropane	ND	5000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	08/07/13
1687 Cole Blvd., Suite 200	Work Order:	13-08-0511
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167		Page 2 of 6

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	5000	5000	
1,1-Dichloropropene	ND	5000	5000	
c-1,3-Dichloropropene	ND	5000	5000	
t-1,3-Dichloropropene	ND	5000	5000	
Ethylbenzene	300000	5000	5000	
2-Hexanone	72000	50000	5000	
Isopropylbenzene	35000	5000	5000	
p-Isopropyltoluene	17000	5000	5000	
Methylene Chloride	ND	50000	5000	
4-Methyl-2-Pentanone	ND	50000	5000	
Naphthalene	460000	50000	5000	
n-Propylbenzene	160000	5000	5000	
Styrene	17000	5000	5000	
Ethanol	ND	500000	5000	
1,1,1,2-Tetrachloroethane	ND	5000	5000	
1,1,2,2-Tetrachloroethane	7400	5000	5000	
Tetrachloroethene	ND	5000	5000	
Toluene	380000	5000	5000	
1,2,3-Trichlorobenzene	ND	10000	5000	
1,2,4-Trichlorobenzene	ND	5000	5000	
1,1,1-Trichloroethane	ND	5000	5000	
Hexachloro-1,3-Butadiene	ND	5000	5000	
1,1,2-Trichloroethane	6200	5000	5000	
Trichloroethene	ND	5000	5000	
Trichlorofluoromethane	ND	50000	5000	
1,2,3-Trichloropropane	ND	5000	5000	
1,3,5-Trimethylbenzene	360000	5000	5000	
Vinyl Acetate	ND	50000	5000	
Vinyl Chloride	ND	5000	5000	
p/m-Xylene	1200000	5000	5000	
o-Xylene	490000	5000	5000	
Methyl-t-Butyl Ether (MTBE)	ND	5000	5000	
Tert-Butyl Alcohol (TBA)	ND	50000	5000	
Diisopropyl Ether (DIPE)	ND	10000	5000	
Ethyl-t-Butyl Ether (ETBE)	ND	10000	5000	
Tert-Amyl-Methyl Ether (TAME)	ND	10000	5000	
2-Chloroethyl Vinyl Ether	ND	250000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	
Dibromofluoromethane	99	63-141	
1,2-Dichloroethane-d4	106	62-146	
Toluene-d8	97	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trimethylbenzene	1500000	10000	10000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	108	60-132	
Dibromofluoromethane	95	63-141	
1,2-Dichloroethane-d4	124	62-146	
Toluene-d8	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-755**	**N/A**	**Oil**	**GC/MS Q**	**08/07/13**	**08/07/13 16:01**	**130807L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2500	100	
Benzene	ND	100	100	
Bromobenzene	ND	100	100	
Bromochloromethane	ND	100	100	
Bromodichloromethane	ND	100	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	100	
Bromoform	ND	100	100	
Bromomethane	ND	1000	100	
2-Butanone	ND	1000	100	
n-Butylbenzene	ND	100	100	
sec-Butylbenzene	ND	100	100	
tert-Butylbenzene	ND	100	100	
Carbon Disulfide	ND	1000	100	
Carbon Tetrachloride	ND	100	100	
Chlorobenzene	ND	100	100	
Chloroethane	ND	500	100	
Chloroform	ND	100	100	
Chloromethane	ND	100	100	
2-Chlorotoluene	ND	100	100	
4-Chlorotoluene	ND	100	100	
Dibromochloromethane	ND	100	100	
1,2-Dibromo-3-Chloropropane	ND	500	100	
1,2-Dibromoethane	ND	100	100	
Dibromomethane	ND	100	100	
1,2-Dichlorobenzene	ND	100	100	
1,3-Dichlorobenzene	ND	100	100	
1,4-Dichlorobenzene	ND	100	100	
Dichlorodifluoromethane	ND	100	100	
1,1-Dichloroethane	ND	100	100	
1,2-Dichloroethane	ND	100	100	
1,1-Dichloroethene	ND	100	100	
c-1,2-Dichloroethene	ND	100	100	
t-1,2-Dichloroethene	ND	100	100	
1,2-Dichloropropane	ND	100	100	
1,3-Dichloropropane	ND	100	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	08/07/13
1687 Cole Blvd., Suite 200	Work Order:	13-08-0511
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167		Page 5 of 6

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	100	100	
1,1-Dichloropropene	ND	100	100	
c-1,3-Dichloropropene	ND	100	100	
t-1,3-Dichloropropene	ND	100	100	
Ethylbenzene	ND	100	100	
2-Hexanone	ND	1000	100	
Isopropylbenzene	ND	100	100	
p-Isopropyltoluene	ND	100	100	
Methylene Chloride	ND	1000	100	
4-Methyl-2-Pentanone	ND	1000	100	
Naphthalene	ND	1000	100	
n-Propylbenzene	ND	100	100	
Styrene	ND	100	100	
Ethanol	ND	10000	100	
1,1,1,2-Tetrachloroethane	ND	100	100	
1,1,2,2-Tetrachloroethane	ND	100	100	
Tetrachloroethene	ND	100	100	
Toluene	ND	100	100	
1,2,3-Trichlorobenzene	ND	200	100	
1,2,4-Trichlorobenzene	ND	100	100	
1,1,1-Trichloroethane	ND	100	100	
Hexachloro-1,3-Butadiene	ND	100	100	
1,1,2-Trichloroethane	ND	100	100	
Trichloroethene	ND	100	100	
Trichlorofluoromethane	ND	1000	100	
1,2,3-Trichloropropane	ND	100	100	
1,3,5-Trimethylbenzene	ND	100	100	
Vinyl Acetate	ND	1000	100	
Vinyl Chloride	ND	100	100	
p/m-Xylene	ND	100	100	
o-Xylene	ND	100	100	
Methyl-t-Butyl Ether (MTBE)	ND	100	100	
Tert-Butyl Alcohol (TBA)	ND	1000	100	
Diisopropyl Ether (DIPE)	ND	200	100	
Ethyl-t-Butyl Ether (ETBE)	ND	200	100	
Tert-Amyl-Methyl Ether (TAME)	ND	200	100	
2-Chloroethyl Vinyl Ether	ND	5000	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	99	63-141	
1,2-Dichloroethane-d4	108	62-146	
Toluene-d8	95	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-757**	**N/A**	**Oil**	**GC/MS V V**	**08/08/13**	**08/08/13 12:12**	**130808L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trimethylbenzene	ND	100	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	109	60-132	
Dibromofluoromethane	85	63-141	
1,2-Dichloroethane-d4	121	62-146	
Toluene-d8	102	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-08-0438-6	**Solid**	**GC 47**	**08/07/13**	**08/07/13 13:40**	**130807S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	6576	400.0	6664	22	7033	114	64-130	5	0-15	3

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 2 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-20130807	**Oil**	**GC 56**	**08/07/13**	**08/07/13 20:40**	**130807S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	5048	2000	7459	121	7426	119	42-126	0	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 3 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-08-0449-5	**Solid**	**ICP 7300**	**08/07/13**	**08/08/13 12:56**	**130807S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	6.878	28	6.776	27	50-115	2	0-20	3
Arsenic	3.137	25.00	26.10	92	25.78	91	75-125	1	0-20	
Barium	50.72	25.00	76.04	101	75.99	101	75-125	0	0-20	
Beryllium	ND	25.00	26.23	105	26.30	105	75-125	0	0-20	
Cadmium	ND	25.00	25.80	103	25.90	104	75-125	0	0-20	
Chromium	30.44	25.00	53.36	92	53.50	92	75-125	0	0-20	
Cobalt	9.187	25.00	35.28	104	35.37	105	75-125	0	0-20	
Copper	11.07	25.00	36.68	102	37.02	104	75-125	1	0-20	
Lead	3.753	25.00	29.10	101	28.85	100	75-125	1	0-20	
Molybdenum	ND	25.00	22.74	91	22.58	90	75-125	1	0-20	
Nickel	48.33	25.00	76.54	113	77.01	115	75-125	1	0-20	
Selenium	ND	25.00	20.22	81	20.80	83	75-125	3	0-20	
Silver	ND	12.50	12.66	101	12.64	101	75-125	0	0-20	
Thallium	ND	25.00	24.10	96	23.69	95	75-125	2	0-20	
Vanadium	21.36	25.00	43.81	90	44.05	91	75-125	1	0-20	
Zinc	25.63	25.00	52.55	108	52.63	108	75-125	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP-1289 / GP09BPNA.C167			Page 4 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-08-0358-1	**Solid**	**Mercury**	**08/07/13**	**08/07/13 13:49**	**130807S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	7.219	0.8350	8.307	4X	8.883	4X	80-120	4X	0-15	Q

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8082
Project: BP-1289 / GP09BPNA.C167			Page 5 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-20130807	**Oil**	**GC 58**	**08/07/13**	**08/08/13 10:31**	**130807S12**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	2000	27370	1369	28140	1407	50-135	3	0-25	3
Aroclor-1260	ND	2000	6460	323	6045	302	50-135	7	0-25	3

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8270C
Project: BP-1289 / GP09BPNA.C167			Page 6 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-20130807	**Oil**	**GC/MS SS**	**08/07/13**	**08/08/13 12:23**	**130807S13**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Phenol	109.5	200.0	245.0	68	247.4	69	20-120	1	0-42	
2-Chlorophenol	ND	200.0	172.8	86	164.6	82	23-134	5	0-40	
1,4-Dichlorobenzene	ND	200.0	186.1	93	179.0	89	20-124	4	0-28	
N-Nitroso-di-n-propylamine	ND	200.0	0	0	167.2	84	0-230	0	0-38	
1,2,4-Trichlorobenzene	ND	200.0	181.9	91	180.9	90	44-142	1	0-28	
Naphthalene	947.1	200.0	1050	52	1029	41	50-150	2	0-20	3
4-Chloro-3-Methylphenol	ND	200.0	124.3	62	133.6	67	80-120	7	0-20	3
Dimethyl Phthalate	ND	200.0	180.0	90	179.1	90	50-150	1	0-20	
Acenaphthylene	ND	200.0	209.4	105	196.8	98	50-150	6	0-20	
Acenaphthene	ND	200.0	203.9	102	205.0	102	47-145	1	0-31	
4-Nitrophenol	ND	200.0	0	0	0	0	80-120	0	0-20	3
2,4-Dinitrotoluene	ND	200.0	167.6	84	151.3	76	39-139	10	0-38	
Fluorene	ND	200.0	231.2	116	225.5	113	50-150	3	0-20	
Pentachlorophenol	ND	200.0	53.01	27	95.13	48	80-120	57	0-20	3,4
Pyrene	ND	200.0	244.2	122	243.1	122	80-120	0	0-20	3
Butyl Benzyl Phthalate	ND	200.0	180.6	90	185.3	93	50-150	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 7 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-08-0392-13	Solid	GC/MS Q	08/07/13	08/07/13 18:15	130807S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	752900	500000	1163000	82	1146000	79	61-127	2	0-20	
Carbon Tetrachloride	ND	500000	490000	98	471800	94	51-135	4	0-29	
Chlorobenzene	ND	500000	401000	80	395800	79	57-123	1	0-20	
1,2-Dibromoethane	ND	500000	447600	90	438200	88	64-124	2	0-20	
1,2-Dichlorobenzene	ND	500000	422800	85	413600	83	35-131	2	0-25	
1,2-Dichloroethane	ND	500000	491600	98	475200	95	80-120	3	0-20	
1,1-Dichloroethene	ND	500000	474600	95	476600	95	47-143	0	0-25	
Ethylbenzene	192900	500000	621200	86	606600	83	57-129	2	0-22	
Ethanol	ND	5000000	4517000	90	4553000	91	17-167	1	0-47	
Toluene	310000	500000	716700	81	697800	78	63-123	3	0-20	
Trichloroethene	ND	500000	457000	91	439300	88	44-158	4	0-20	
Vinyl Chloride	ND	500000	403500	81	390200	78	49-139	3	0-47	
p/m-Xylene	486600	1000000	1256000	77	1220000	73	70-130	3	0-30	
o-Xylene	142300	500000	528100	77	511400	74	70-130	3	0-30	
Methyl-t-Butyl Ether (MTBE)	783500	500000	1145000	72	1136000	70	57-123	1	0-21	
Tert-Butyl Alcohol (TBA)	ND	2500000	2193000	88	2151000	86	30-168	2	0-34	
Diisopropyl Ether (DIPE)	ND	500000	504100	101	487900	98	57-129	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	500000	488700	98	480700	96	55-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	500000	439000	88	429900	86	58-124	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 8 of 8

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-08-0455-9	Solid	GC/MS V V	08/07/13	08/08/13 14:12	130808S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	42.61	85	41.03	82	61-127	4	0-20	
Carbon Tetrachloride	ND	50.00	61.31	123	58.05	116	51-135	5	0-29	
Chlorobenzene	ND	50.00	37.66	75	35.97	72	57-123	5	0-20	
1,2-Dibromoethane	ND	50.00	44.85	90	43.46	87	64-124	3	0-20	
1,2-Dichlorobenzene	ND	50.00	32.20	64	29.05	58	35-131	10	0-25	
1,2-Dichloroethane	ND	50.00	60.60	121	56.84	114	80-120	6	0-20	3
1,1-Dichloroethene	ND	50.00	54.80	110	52.09	104	47-143	5	0-25	
Ethylbenzene	ND	50.00	41.46	83	39.93	80	57-129	4	0-22	
Ethanol	ND	500.0	467.0	93	431.1	86	17-167	8	0-47	
Toluene	ND	50.00	43.44	87	41.76	84	63-123	4	0-20	
Trichloroethene	ND	50.00	47.62	95	43.90	88	44-158	8	0-20	
Vinyl Chloride	ND	50.00	39.92	80	40.50	81	49-139	1	0-47	
p/m-Xylene	ND	100.0	80.71	81	75.92	76	70-130	6	0-30	
o-Xylene	ND	50.00	39.48	79	37.70	75	70-130	5	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	49.40	99	47.04	94	57-123	5	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	223.9	90	219.5	88	30-168	2	0-34	
Diisopropyl Ether (DIPE)	ND	50.00	44.56	89	42.87	86	57-129	4	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	49.50	99	48.69	97	55-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	45.49	91	44.65	89	58-124	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 1 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
13-08-0449-5	Solid	ICP 7300	08/07/13 00:00	08/08/13 12:58	130807S05

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	PDSD Conc.	PDSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	22.27	89	21.97	88	75-125	1	0-20	
Arsenic	3.137	25.00	25.53	90	24.87	87	75-125	3	0-20	
Barium	50.72	25.00	74.48	95	74.43	95	75-125	0	0-20	
Beryllium	ND	25.00	25.35	101	25.36	101	75-125	0	0-20	
Cadmium	ND	25.00	25.13	101	25.09	100	75-125	0	0-20	
Chromium	30.44	25.00	53.23	91	53.40	92	75-125	0	0-20	
Cobalt	9.187	25.00	34.71	102	34.42	101	75-125	1	0-20	
Copper	11.07	25.00	37.50	106	37.36	105	75-125	0	0-20	
Lead	3.753	25.00	28.28	98	28.04	97	75-125	1	0-20	
Molybdenum	ND	25.00	24.06	96	24.02	96	75-125	0	0-20	
Nickel	48.33	25.00	72.94	98	72.85	98	75-125	0	0-20	
Selenium	ND	25.00	22.16	89	22.09	88	75-125	0	0-20	
Silver	ND	12.50	12.12	97	12.21	98	75-125	1	0-20	
Thallium	ND	25.00	23.17	93	23.25	93	75-125	0	0-20	
Vanadium	21.36	25.00	45.08	95	45.18	95	75-125	0	0-20	
Zinc	25.63	25.00	51.51	104	51.51	103	75-125	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP-1289 / GP09BPNA.C167			Page 2 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
13-08-0358-1	**Solid**	**Mercury**	**08/07/13 00:00**	**08/07/13 13:33**	**130807S02**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	PDSD Conc.	PDSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	7.219	8.335	16.26	109	16.31	109	75-125	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
099-15-366-13	**Solid**	**GC 45**	**08/07/13 15:58**	**130807B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Diesel Range Organics (C10-C28)	400.0	389.2	97	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 2 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
099-15-490-449	**Solid**	**GC 47**	**08/07/13 13:24**	**130807B06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	365.9	91	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 3 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
099-12-697-462	**Solid**	**GC 56**	**08/07/13 19:05**	**130807B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Gasoline Range Organics (C6-C12)	10.00	9.846	98	70-118	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 4 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
097-01-002-17180	**Solid**	**ICP 7300**	**08/08/13 12:51**	**130807L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	25.95	104	80-120	73-127	
Arsenic	25.00	23.48	94	80-120	73-127	
Barium	25.00	24.47	98	80-120	73-127	
Beryllium	25.00	25.17	101	80-120	73-127	
Cadmium	25.00	25.53	102	80-120	73-127	
Chromium	25.00	23.87	95	80-120	73-127	
Cobalt	25.00	26.70	107	80-120	73-127	
Copper	25.00	24.89	100	80-120	73-127	
Lead	25.00	24.57	98	80-120	73-127	
Molybdenum	25.00	24.80	99	80-120	73-127	
Nickel	25.00	25.14	101	80-120	73-127	
Selenium	25.00	23.02	92	80-120	73-127	
Silver	12.50	12.01	96	80-120	73-127	
Thallium	25.00	24.82	99	80-120	73-127	
Vanadium	25.00	24.49	98	80-120	73-127	
Zinc	25.00	27.93	112	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP-1289 / GP09BPNA.C167			Page 5 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
099-04-007-9528	**Solid**	**Mercury**	**08/07/13 13:15**	**130807L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8674	104	85-121	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8082
Project: BP-1289 / GP09BPNA.C167			Page 6 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
096-01-013-594	**Solid**	**GC 58**	**08/08/13 09:55**	**130807L12**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	2000	1957	98	50-135	
Aroclor-1260	2000	1874	94	50-135	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 3580A
		Method:	EPA 8270C
Project: BP-1289 / GP09BPNA.C167			Page 7 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
096-01-011-310	**Solid**	**GC/MS SS**	**08/08/13 11:05**	**130807L13**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Phenol	200.0	178.6	89	20-120	3-137	
2-Chlorophenol	200.0	197.3	99	23-134	4-152	
1,4-Dichlorobenzene	200.0	196.4	98	20-124	3-141	
N-Nitroso-di-n-propylamine	200.0	183.9	92	0-230	0-268	
1,2,4-Trichlorobenzene	200.0	192.6	96	44-142	28-158	
Naphthalene	200.0	189.1	95	21-133	2-152	
4-Chloro-3-Methylphenol	200.0	178.5	89	22-147	1-168	
Dimethyl Phthalate	200.0	187.7	94	0-112	0-131	
Acenaphthylene	200.0	197.7	99	33-145	14-164	
Acenaphthene	200.0	195.3	98	47-145	31-161	
4-Nitrophenol	200.0	116.1	58	0-132	0-154	
2,4-Dinitrotoluene	200.0	188.9	94	39-139	22-156	
Fluorene	200.0	204.5	102	59-121	49-131	
Pentachlorophenol	200.0	109.8	55	14-176	0-203	
Pyrene	200.0	185.5	93	52-115	42-126	
Butyl Benzyl Phthalate	200.0	171.5	86	0-152	0-177	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 8 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
099-12-709-755	Solid	GC/MS Q	08/07/13 14:16	130807L02

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	43.28	87	78-120	71-127	
Bromobenzene	50.00	45.46	91	80-120	73-127	
Bromochloromethane	50.00	41.03	82	80-120	73-127	
Bromodichloromethane	50.00	45.90	92	80-120	73-127	
Bromoform	50.00	54.04	108	80-120	73-127	
Bromomethane	50.00	68.47	137	80-120	73-127	X
n-Butylbenzene	50.00	48.77	98	77-123	69-131	
sec-Butylbenzene	50.00	45.01	90	80-120	73-127	
tert-Butylbenzene	50.00	46.16	92	80-120	73-127	
Carbon Disulfide	50.00	40.81	82	80-120	73-127	
Carbon Tetrachloride	50.00	51.91	104	49-139	34-154	
Chlorobenzene	50.00	42.12	84	79-120	72-127	
Chloroethane	50.00	51.52	103	80-120	73-127	
Chloroform	50.00	46.36	93	80-120	73-127	
Chloromethane	50.00	43.81	88	80-120	73-127	
2-Chlorotoluene	50.00	43.44	87	80-120	73-127	
4-Chlorotoluene	50.00	43.83	88	80-120	73-127	
Dibromochloromethane	50.00	45.11	90	80-120	73-127	
1,2-Dibromo-3-Chloropropane	50.00	45.20	90	80-120	73-127	
1,2-Dibromoethane	50.00	43.84	88	80-120	73-127	
Dibromomethane	50.00	43.80	88	80-120	73-127	
1,2-Dichlorobenzene	50.00	43.38	87	75-120	68-128	
1,3-Dichlorobenzene	50.00	44.36	89	80-120	73-127	
1,4-Dichlorobenzene	50.00	47.09	94	80-120	73-127	
Dichlorodifluoromethane	50.00	43.29	87	80-120	73-127	
1,1-Dichloroethane	50.00	46.39	93	80-120	73-127	
1,2-Dichloroethane	50.00	49.50	99	80-120	73-127	
1,1-Dichloroethene	50.00	52.02	104	74-122	66-130	
c-1,2-Dichloroethene	50.00	45.61	91	80-120	73-127	
t-1,2-Dichloroethene	50.00	46.64	93	80-120	73-127	
1,2-Dichloropropane	50.00	45.72	91	79-115	73-121	
1,3-Dichloropropane	50.00	41.47	83	80-120	73-127	
2,2-Dichloropropane	50.00	51.08	102	80-120	73-127	
1,1-Dichloropropene	50.00	46.02	92	80-120	73-127	
c-1,3-Dichloropropene	50.00	46.34	93	80-120	73-127	
t-1,3-Dichloropropene	50.00	43.54	87	80-120	73-127	
Ethylbenzene	50.00	45.76	92	76-120	69-127	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 9 of 11

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Isopropylbenzene	50.00	43.42	87	80-120	73-127	
p-Isopropyltoluene	50.00	44.39	89	80-120	73-127	
Methylene Chloride	50.00	44.02	88	80-120	73-127	
Naphthalene	50.00	45.99	92	80-120	73-127	
n-Propylbenzene	50.00	42.97	86	80-120	73-127	
Styrene	50.00	45.05	90	80-120	73-127	
Ethanol	500.0	526.3	105	56-140	42-154	
1,1,1,2-Tetrachloroethane	50.00	48.15	96	80-120	73-127	
1,1,2,2-Tetrachloroethane	50.00	44.70	89	80-120	73-127	
Tetrachloroethene	50.00	46.37	93	80-120	73-127	
Toluene	50.00	44.62	89	77-120	70-127	
1,2,3-Trichlorobenzene	50.00	48.29	97	80-120	73-127	
1,2,4-Trichlorobenzene	50.00	49.98	100	80-120	73-127	
1,1,1-Trichloroethane	50.00	49.94	100	80-120	73-127	
1,1,2-Trichloroethane	50.00	42.92	86	80-120	73-127	
Trichloroethene	50.00	46.10	92	80-120	73-127	
Trichlorofluoromethane	50.00	56.16	112	80-120	73-127	
1,2,3-Trichloropropane	50.00	40.25	80	80-120	73-127	
1,2,4-Trimethylbenzene	50.00	47.44	95	80-120	73-127	
1,3,5-Trimethylbenzene	50.00	47.77	96	80-120	73-127	
Vinyl Acetate	50.00	49.32	99	80-120	73-127	
Vinyl Chloride	50.00	42.00	84	68-122	59-131	
p/m-Xylene	100.0	85.50	86	75-125	67-133	
o-Xylene	50.00	41.94	84	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	39.24	78	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	242.6	97	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	49.60	99	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	49.45	99	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	43.86	88	75-120	68-128	

Total number of LCS compounds: 66
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 10 of 11

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
099-12-709-757	**Solid**	**GC/MS V V**	**08/08/13 11:12**	**130808L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	47.77	96	78-120	71-127	
Bromobenzene	50.00	49.00	98	80-120	73-127	
Bromochloromethane	50.00	47.99	96	80-120	73-127	
Bromodichloromethane	50.00	59.78	120	80-120	73-127	
Bromoform	50.00	67.04	134	80-120	73-127	X
Bromomethane	50.00	42.11	84	80-120	73-127	
n-Butylbenzene	50.00	51.14	102	77-123	69-131	
sec-Butylbenzene	50.00	46.90	94	80-120	73-127	
tert-Butylbenzene	50.00	48.15	96	80-120	73-127	
Carbon Disulfide	50.00	41.31	83	80-120	73-127	
Carbon Tetrachloride	50.00	65.02	130	49-139	34-154	
Chlorobenzene	50.00	46.31	93	79-120	72-127	
Chloroethane	50.00	45.76	92	80-120	73-127	
Chloroform	50.00	54.29	109	80-120	73-127	
Chloromethane	50.00	46.61	93	80-120	73-127	
2-Chlorotoluene	50.00	46.78	94	80-120	73-127	
4-Chlorotoluene	50.00	47.16	94	80-120	73-127	
Dibromochloromethane	50.00	60.87	122	80-120	73-127	ME
1,2-Dibromo-3-Chloropropane	50.00	58.23	116	80-120	73-127	
1,2-Dibromoethane	50.00	47.53	95	80-120	73-127	
Dibromomethane	50.00	50.99	102	80-120	73-127	
1,2-Dichlorobenzene	50.00	46.87	94	75-120	68-128	
1,3-Dichlorobenzene	50.00	44.96	90	80-120	73-127	
1,4-Dichlorobenzene	50.00	49.37	99	80-120	73-127	
Dichlorodifluoromethane	50.00	52.23	104	80-120	73-127	
1,1-Dichloroethane	50.00	56.27	113	80-120	73-127	
1,2-Dichloroethane	50.00	61.81	124	80-120	73-127	ME
1,1-Dichloroethene	50.00	54.57	109	74-122	66-130	
c-1,2-Dichloroethene	50.00	49.34	99	80-120	73-127	
t-1,2-Dichloroethene	50.00	53.44	107	80-120	73-127	
1,2-Dichloropropane	50.00	50.91	102	79-115	73-121	
1,3-Dichloropropane	50.00	48.84	98	80-120	73-127	
2,2-Dichloropropane	50.00	54.90	110	80-120	73-127	
1,1-Dichloropropene	50.00	53.42	107	80-120	73-127	
c-1,3-Dichloropropene	50.00	55.76	112	80-120	73-127	
t-1,3-Dichloropropene	50.00	52.02	104	80-120	73-127	
Ethylbenzene	50.00	49.74	99	76-120	69-127	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 11 of 11

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Isopropylbenzene	50.00	47.73	95	80-120	73-127	
p-Isopropyltoluene	50.00	46.91	94	80-120	73-127	
Methylene Chloride	50.00	51.18	102	80-120	73-127	
Naphthalene	50.00	47.83	96	80-120	73-127	
n-Propylbenzene	50.00	45.55	91	80-120	73-127	
Styrene	50.00	46.68	93	80-120	73-127	
Ethanol	500.0	515.7	103	56-140	42-154	
1,1,1,2-Tetrachloroethane	50.00	56.14	112	80-120	73-127	
1,1,2,2-Tetrachloroethane	50.00	49.15	98	80-120	73-127	
Tetrachloroethene	50.00	49.69	99	80-120	73-127	
Toluene	50.00	49.57	99	77-120	70-127	
1,2,3-Trichlorobenzene	50.00	48.71	97	80-120	73-127	
1,2,4-Trichlorobenzene	50.00	49.39	99	80-120	73-127	
1,1,1-Trichloroethane	50.00	59.97	120	80-120	73-127	
1,1,2-Trichloroethane	50.00	48.99	98	80-120	73-127	
Trichloroethene	50.00	53.21	106	80-120	73-127	
Trichlorofluoromethane	50.00	60.74	121	80-120	73-127	ME
1,2,3-Trichloropropane	50.00	51.37	103	80-120	73-127	
1,2,4-Trimethylbenzene	50.00	49.63	99	80-120	73-127	
1,3,5-Trimethylbenzene	50.00	51.12	102	80-120	73-127	
Vinyl Acetate	50.00	66.54	133	80-120	73-127	X
Vinyl Chloride	50.00	43.49	87	68-122	59-131	
p/m-Xylene	100.0	94.87	95	75-125	67-133	
o-Xylene	50.00	46.80	94	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	50.14	100	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	247.7	99	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	59.96	120	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.57	105	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.59	97	75-120	68-128	

Total number of LCS compounds: 66
Total number of ME compounds: 3
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 13-08-0511

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Calscience Environmental Laboratories, Inc.

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
Other CA office locations: Concord and San Luis Obispo
For courier service / sample drop off information,
contact sales@calscience.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY **13-08-0511**

Date 8/7/13

Page 1 of 1

LABORATORY CLIENT: Arcadis-US

ADDRESS: 630 Plaza Drive suite 100

CITY: Highlands Ranch STATE: CO ZIP: 80129

TEL: 303-471-3419 E-MAIL: Darla.Gill@Arcadis-US.com

CLIENT PROJECT NAME / NUMBER: BP-1289/LP09BPNA.C167

P.O. NO.:

PROJECT CONTACT: Darla Gill

SAMPLER(S): (PRINT) A. Leavitt (AL)

TURNAROUND TIME: ☐ SAME DAY ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
① product sample
② please C.C. Greg Fiol @ Greg.Fiol@Arcadis-US.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☒ GRO 8015	☐ TPH(d) ☒ DRO ~~8015~~	TPH ☐ C6-C36 ☒ C6-C44	TPH	BTEX / MTBE ☒ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☒ 8270 ☐ 8270 SIM	T22 Metals ☒ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6
1	UST-20130807	08/07/13	1319	product	4	1	3		X	X	X		X	X	X		X		X	X	X	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]	8/7/13	1530
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

11/01/12 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-08-0511

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ARCADIS

DATE: 08/07/13

TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.8 °C - 0.2 °C (CF) = 3.6 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Initial: PS

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: PS

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Product ~~**Water:**~~ ☐VOA ☑3 VOAh ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TN

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** NJC

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** NJC

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

Additional requested analyses are reported as a stand-alone report.

CALSCIENCE

WORK ORDER NUMBER: 13-08-0511

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP-1289 / GP09BPNA.C167

Attention: Darla Gill
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 08/15/2013 by:
Richard Villafania
Project Manager

ResultLink ▸

Email your PM ▸

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

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Client Project Name: BP-1289 / GP09BPNA.C167
Work Order Number: 13-08-0511

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5 Chain of Custody/Sample Receipt Form. 7

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 13-08-0511 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 08/07/13. They were assigned to Work Order 13-08-0511.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	N/A
		Method:	EPA 1010A(M)
		Units:	ºF
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-20130807	**13-08-0511-1-A**	**08/07/13 13:19**	**Oil**	**FP 3**	**N/A**	**08/14/13 20:00**	**D0814FPD3**

Parameter	Result	RL	DF	Qualifiers
Ignitability	>212	70	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Sample Duplicate

ARCADIS U.S., Inc.		Date Received:	08/07/13
1687 Cole Blvd., Suite 200		Work Order:	13-08-0511
Lakewood, CO 80401-3318		Preparation:	N/A
		Method:	EPA 1010A(M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
UST-20130807	**Oil**	**FP 3**	**N/A**	**08/14/13 20:00**	**D0814FPD3**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Ignitability	>212	>212	0	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 13-08-0511

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
Other CA office locations: Concord and San Luis Obispo
For courier service / sample drop off information, contact sales@calscience.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY **13-08-0511**

Date 8/7/13

Page 1 of 1

LABORATORY CLIENT: Arcadis-US

ADDRESS: 630 Plaza Drive suite 100

CITY: Highlands Ranch STATE: CO ZIP: 80129

TEL: 303-471-3419 E-MAIL: Darla.Gill@Arcadis-US.com

CLIENT PROJECT NAME / NUMBER: BP-1289/RP09BPNA.C167

P.O. NO.:

PROJECT CONTACT: Darla Gill

SAMPLER(S): (PRINT) A. Leavitt (AL)

TURNAROUND TIME: ☐ SAME DAY ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
① product sample
② please C.C. Greg Fiol @ Greg.Fiol@Arcadis-US.com

* 8/14/13 Additional analysis requested by Greg Fiol, 24hr TAT.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☒ GRO 8015	☐ TPH(d) ☒ DRO ~~8015~~	TPH ☐ C6-C36 ☒ C6-C44	TPH ___	BTEX / MTBE ☒ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☒ 8270 ☐ 8270 SIM	T22 Metals ☒ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6		Flashpoint*		
1	UST-20130807	08/07/13	1319	product	4	1	3		X	X	X		X	X	X		X		X	X	X			X		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]	8/7/13	1530
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

11/01/12 Revision

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-08-0511

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ARCADIS

DATE: 08/07/13

TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.8 °C - 0.2 °C (CF) = 3.6 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Initial: PS

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: PS

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Product ~~**Water:**~~ ☐VOA 3 ☑VOAh ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TN

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** NJC

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** NJC

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-01-0993

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP-1289 / GP09BPNA.C167

Attention: Jacqueline Headrick
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 01/21/2014 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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NELAP ID: 03220CA | DoD-ELAP ID: L10-41 | DSDLAC ID: 101109 | SCAQMD ID: 93LA0830

Calscience Environmental Laboratories, Inc.

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Work Order Number: 14-01-0993

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-0993 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/17/14. They were assigned to Work Order 14-01-0993.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-A**	**01/17/14 14:30**	**Solid**	**GC 46**	**01/20/14**	**01/21/14 09:28**	**140120B03A**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	10	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-B**	**01/17/14 14:30**	**Solid**	**GC 29**	**01/17/14**	**01/21/14 02:08**	**140120B02**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	ND	0.48	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	64	42-126	

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	64	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-AA**	**01/17/14 14:30**	**Solid**	**ICP 7300**	**01/17/14**	**01/21/14 13:26**	**140117L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	3.38	0.761	1.02	
Barium	115	0.508	1.02	
Beryllium	0.325	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	14.5	0.254	1.02	
Cobalt	10.8	0.254	1.02	
Copper	16.0	0.508	1.02	
Lead	11.9	0.508	1.02	
Molybdenum	0.434	0.254	1.02	
Nickel	11.5	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	ND	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	35.0	0.254	1.02	
Zinc	71.6	1.02	1.02	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-17928**	**N/A**	**Solid**	**ICP 7300**	**01/17/14**	**01/21/14 13:16**	**140117L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	ND	0.750	1	
Barium	ND	0.500	1	
Beryllium	ND	0.250	1	
Cadmium	ND	0.500	1	
Chromium	ND	0.250	1	
Cobalt	ND	0.250	1	
Copper	ND	0.500	1	
Lead	ND	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	ND	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	ND	0.250	1	
Zinc	ND	1.00	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-AA**	**01/17/14 14:30**	**Solid**	**Mercury**	**01/17/14**	**01/21/14 16:38**	**140117L02**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-A**	**01/17/14 14:30**	**Solid**	**GC 31**	**01/17/14**	**01/20/14 18:17**	**140117L13**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	109	24-168	
2,4,5,6-Tetrachloro-m-Xylene	108	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	131	24-168	
2,4,5,6-Tetrachloro-m-Xylene	117	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-A**	**01/17/14 14:30**	**Solid**	**GC/MS CCC**	**01/20/14**	**01/21/14 13:32**	**140120L09**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-0993
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167		Page 2 of 6

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	76	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	74	25-120	
Nitrobenzene-d5	75	33-123	
p-Terphenyl-d14	83	27-159	
Phenol-d6	79	26-122	
2,4,6-Tribromophenol	85	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-2826**	**N/A**	**Solid**	**GC/MS CCC**	**01/20/14**	**01/21/14 12:40**	**140120L09**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-0993
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167		Page 5 of 6

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP-1289 / GP09BPNA.C167			Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	72	25-120	
Nitrobenzene-d5	74	33-123	
p-Terphenyl-d14	81	27-159	
Phenol-d6	79	26-122	
2,4,6-Tribromophenol	78	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Stockpile	**14-01-0993-1-B**	**01/17/14 14:30**	**Solid**	**GC/MS BB**	**01/17/14**	**01/17/14 22:29**	**140117L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	37	25	1	
Benzene	ND	1.0	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	1.0	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	1.0	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-0993
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167		Page 2 of 6

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	1	
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	1.0	1	
t-1,3-Dichloropropene	ND	1.0	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
Ethanol	ND	100	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	2.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
Hexachloro-1,3-Butadiene	ND	1.0	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	1.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	1.0	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
2-Chloroethyl Vinyl Ether	ND	50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	60-132	
Dibromofluoromethane	103	63-141	
1,2-Dichloroethane-d4	105	62-146	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-764**	**N/A**	**Solid**	**GC/MS BB**	**01/17/14**	**01/17/14 22:01**	**140117L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	25	1	
Benzene	ND	1.0	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	1.0	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	1.0	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-0993
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167		Page 5 of 6

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	1	
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	1.0	1	
t-1,3-Dichloropropene	ND	1.0	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
Ethanol	ND	100	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	2.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
Hexachloro-1,3-Butadiene	ND	1.0	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	1.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	1.0	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
2-Chloroethyl Vinyl Ether	ND	50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: BP-1289 / GP09BPNA.C167			Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	60-132	
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	102	62-146	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Stockpile	**Sample**	**Solid**	**GC 29**	**01/17/14**	**01/21/14 02:08**	**140120S02**
Stockpile	**Matrix Spike**	**Solid**	**GC 29**	**01/17/14**	**01/21/14 02:44**	**140120S02**
Stockpile	**Matrix Spike Duplicate**	**Solid**	**GC 29**	**01/17/14**	**01/21/14 03:20**	**140120S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	ND	10.00	7.177	72	7.231	72	42-126	1	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0954-2	**Sample**	**Solid**	**ICP 7300**	**01/17/14**	**01/21/14 13:21**	**140117S02**
14-01-0954-2	**Matrix Spike**	**Solid**	**ICP 7300**	**01/17/14**	**01/21/14 13:22**	**140117S02**
14-01-0954-2	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**01/17/14**	**01/21/14 13:23**	**140117S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	6.337	25	4.528	18	50-115	33	0-20	3,4
Arsenic	2.129	25.00	27.76	103	27.47	101	75-125	1	0-20	
Barium	74.64	25.00	109.4	139	103.1	114	75-125	6	0-20	3
Beryllium	ND	25.00	27.05	108	27.14	109	75-125	0	0-20	
Cadmium	ND	25.00	25.74	103	25.77	103	75-125	0	0-20	
Chromium	71.32	25.00	99.39	112	91.64	81	75-125	8	0-20	
Cobalt	25.59	25.00	44.11	74	44.98	78	75-125	2	0-20	3
Copper	34.89	25.00	59.17	97	63.96	116	75-125	8	0-20	
Lead	4.718	25.00	31.55	107	34.31	118	75-125	8	0-20	
Molybdenum	ND	25.00	22.21	89	20.84	83	75-125	6	0-20	
Nickel	718.0	25.00	89.74	4X	82.32	4X	75-125	4X	0-20	Q
Selenium	ND	25.00	20.75	83	19.10	76	75-125	8	0-20	
Silver	ND	12.50	13.33	107	13.35	107	75-125	0	0-20	
Thallium	ND	25.00	20.88	84	21.12	84	75-125	1	0-20	
Vanadium	80.47	25.00	107.2	107	107.6	109	75-125	0	0-20	
Zinc	57.16	25.00	83.60	106	88.81	127	75-125	6	0-20	3

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP-1289 / GP09BPNA.C167			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0863-1	**Sample**	**Solid**	**Mercury**	**01/17/14**	**01/20/14 12:24**	**140117S02**
14-01-0863-1	**Matrix Spike**	**Solid**	**Mercury**	**01/17/14**	**01/20/14 12:26**	**140117S02**
14-01-0863-1	**Matrix Spike Duplicate**	**Solid**	**Mercury**	**01/17/14**	**01/20/14 12:29**	**140117S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.6117	73	0.6412	77	71-137	5	0-14	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0954-2	**Sample**	**Solid**	**GC 31**	**01/17/14**	**01/20/14 17:19**	**140117S13**
14-01-0954-2	**Matrix Spike**	**Solid**	**GC 31**	**01/17/14**	**01/20/14 17:38**	**140117S13**
14-01-0954-2	**Matrix Spike Duplicate**	**Solid**	**GC 31**	**01/17/14**	**01/20/14 17:58**	**140117S13**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	96.99	97	146.8	147	50-135	41	0-20	3,4
Aroclor-1260	ND	100.0	78.04	78	82.58	83	50-135	6	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: BP-1289 / GP09BPNA.C167			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1024-6	**Sample**	**Solid**	**GC/MS CCC**	**01/20/14**	**01/21/14 14:48**	**140120S09**
14-01-1024-6	**Matrix Spike**	**Solid**	**GC/MS CCC**	**01/17/14**	**01/21/14 15:14**	**140120S09**
14-01-1024-6	**Matrix Spike Duplicate**	**Solid**	**GC/MS CCC**	**01/17/14**	**01/21/14 15:40**	**140120S09**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	10.00	7.828	78	8.094	81	34-148	3	0-20	
Acenaphthylene	ND	10.00	8.111	81	8.343	83	53-120	3	0-20	
Butyl Benzyl Phthalate	ND	10.00	8.339	83	8.455	85	15-189	1	0-20	
4-Chloro-3-Methylphenol	ND	10.00	8.085	81	8.340	83	32-120	3	0-20	
2-Chlorophenol	ND	10.00	7.149	71	7.490	75	53-120	5	0-20	
1,4-Dichlorobenzene	ND	10.00	6.841	68	7.097	71	43-120	4	0-26	
Dimethyl Phthalate	ND	10.00	7.877	79	8.130	81	44-122	3	0-20	
2,4-Dinitrotoluene	ND	10.00	8.175	82	8.416	84	28-120	3	0-20	
Fluorene	ND	10.00	8.495	85	8.738	87	12-186	3	0-20	
N-Nitroso-di-n-propylamine	ND	10.00	6.933	69	7.314	73	38-140	5	0-20	
Naphthalene	ND	10.00	7.942	79	8.270	83	20-140	4	0-20	
4-Nitrophenol	ND	10.00	6.733	67	7.061	71	14-128	5	0-59	
Pentachlorophenol	ND	10.00	7.629	76	7.859	79	10-124	3	0-20	
Phenol	ND	10.00	6.710	67	7.000	70	22-124	4	0-20	
Pyrene	ND	10.00	8.845	88	9.008	90	31-169	2	0-20	
1,2,4-Trichlorobenzene	ND	10.00	7.689	77	8.018	80	56-120	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Stockpile	**Sample**	**Solid**	**GC/MS BB**	**01/17/14**	**01/17/14 22:29**	**140117S01**
Stockpile	**Matrix Spike**	**Solid**	**GC/MS BB**	**01/17/14**	**01/17/14 22:56**	**140117S01**
Stockpile	**Matrix Spike Duplicate**	**Solid**	**GC/MS BB**	**01/17/14**	**01/17/14 23:23**	**140117S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	43.67	87	44.11	88	61-127	1	0-20	
Chloroform	ND	50.00	44.03	88	45.00	90	80-120	2	0-20	
1,1-Dichloroethane	ND	50.00	43.75	88	44.55	89	80-120	2	0-20	
1,2-Dichloroethane	ND	50.00	44.90	90	44.33	89	80-120	1	0-20	
1,1-Dichloroethene	ND	50.00	41.60	83	43.22	86	47-143	4	0-25	
Ethanol	ND	500.0	444.1	89	503.6	101	17-167	13	0-47	
Tetrachloroethene	ND	50.00	48.62	97	49.22	98	80-120	1	0-20	
Toluene	ND	50.00	44.69	89	45.08	90	63-123	1	0-20	
Trichloroethene	ND	50.00	44.95	90	46.46	93	44-158	3	0-20	
p/m-Xylene	ND	100.0	88.77	89	89.97	90	70-130	1	0-30	
o-Xylene	ND	50.00	43.45	87	44.04	88	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	47.78	96	48.31	97	57-123	1	0-21	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
14-01-0954-2	**Sample**	**Solid**	**ICP 7300**	**01/17/14 00:00**	**01/21/14 13:21**	**140117S02**
14-01-0954-2	**PDS**	**Solid**	**ICP 7300**	**01/16/14 00:00**	**01/21/14 16:12**	**140117S02**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Antimony	ND	25.00	28.01	112	75-125	
Arsenic	2.129	25.00	28.07	104	75-125	
Barium	74.64	25.00	101.0	105	75-125	
Beryllium	ND	25.00	25.93	104	75-125	
Cadmium	ND	25.00	23.73	95	75-125	
Chromium	71.32	25.00	99.91	114	75-125	
Cobalt	25.59	25.00	49.79	97	75-125	
Copper	34.89	25.00	61.95	108	75-125	
Lead	4.718	25.00	29.03	97	75-125	
Molybdenum	ND	25.00	24.14	97	75-125	
Nickel	718.0	25.00	744.4	4X	75-125	Q
Selenium	ND	25.00	19.64	79	75-125	
Silver	ND	12.50	11.39	91	75-125	
Thallium	ND	25.00	20.71	83	75-125	
Vanadium	80.47	25.00	104.0	94	75-125	
Zinc	57.16	25.00	84.23	108	75-125	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-366-16	**LCS**	**Solid**	**GC 46**	**01/20/14**	**01/20/14 17:25**	**140120B03A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Diesel Range Organics (C10-C28)	400.0	382.4	96	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-697-469	**LCS**	**Solid**	**GC 29**	**01/20/14**	**01/21/14 01:32**	**140120B02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Gasoline Range Organics (C6-C12)	10.00	8.872	89	70-118	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-17928	LCS	Solid	ICP 7300	01/17/14	01/21/14 13:18	140117L02

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	25.69	103	80-120	73-127	
Arsenic	25.00	25.53	102	80-120	73-127	
Barium	25.00	25.66	103	80-120	73-127	
Beryllium	25.00	24.81	99	80-120	73-127	
Cadmium	25.00	26.36	105	80-120	73-127	
Chromium	25.00	25.46	102	80-120	73-127	
Cobalt	25.00	28.56	114	80-120	73-127	
Copper	25.00	27.27	109	80-120	73-127	
Lead	25.00	27.82	111	80-120	73-127	
Molybdenum	25.00	26.07	104	80-120	73-127	
Nickel	25.00	26.54	106	80-120	73-127	
Selenium	25.00	24.44	98	80-120	73-127	
Silver	12.50	13.28	106	80-120	73-127	
Thallium	25.00	26.49	106	80-120	73-127	
Vanadium	25.00	24.71	99	80-120	73-127	
Zinc	25.00	28.61	114	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP-1289 / GP09BPNA.C167			Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-007-9981	**LCS**	**Solid**	**Mercury**	**01/17/14**	**01/20/14 12:22**	**140117L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8362	100	85-121	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
Project: BP-1289 / GP09BPNA.C167			Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-2452	**LCS**	**Solid**	**GC 31**	**01/17/14**	**01/20/14 15:13**	**140117L13**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	116.2	116	50-135	
Aroclor-1260	100.0	107.4	107	50-135	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: BP-1289 / GP09BPNA.C167			Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-549-2826	LCS	Solid	GC/MS CCC	01/20/14	01/21/14 13:06	140120L09

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acenaphthene	10.00	7.347	73	51-123	39-135	
Acenaphthylene	10.00	7.568	76	52-120	41-131	
Butyl Benzyl Phthalate	10.00	7.568	76	43-139	27-155	
4-Chloro-3-Methylphenol	10.00	7.579	76	55-121	44-132	
2-Chlorophenol	10.00	7.155	72	58-124	47-135	
1,4-Dichlorobenzene	10.00	7.250	73	42-132	27-147	
Dimethyl Phthalate	10.00	7.354	74	51-123	39-135	
2,4-Dinitrotoluene	10.00	7.526	75	51-129	38-142	
Fluorene	10.00	8.044	80	54-126	42-138	
N-Nitroso-di-n-propylamine	10.00	6.971	70	40-136	24-152	
Naphthalene	10.00	7.613	76	32-146	13-165	
4-Nitrophenol	10.00	5.658	57	24-126	7-143	
Pentachlorophenol	10.00	6.371	64	23-131	5-149	
Phenol	10.00	6.670	67	40-130	25-145	
Pyrene	10.00	7.864	79	47-143	31-159	
1,2,4-Trichlorobenzene	10.00	7.463	75	45-129	31-143	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-709-764	LCS	Solid	GC/MS BB	01/17/14	01/17/14 20:32	140117L01

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	49.65	99	78-120	71-127	
Bromobenzene	50.00	50.99	102	80-120	73-127	
Bromochloromethane	50.00	47.10	94	80-120	73-127	
Bromodichloromethane	50.00	48.63	97	80-120	73-127	
Bromoform	50.00	51.41	103	80-120	73-127	
Bromomethane	50.00	43.83	88	80-120	73-127	
n-Butylbenzene	50.00	59.40	119	77-123	69-131	
sec-Butylbenzene	50.00	55.14	110	80-120	73-127	
tert-Butylbenzene	50.00	53.42	107	80-120	73-127	
Carbon Disulfide	50.00	50.94	102	80-120	73-127	
Carbon Tetrachloride	50.00	50.43	101	49-139	34-154	
Chlorobenzene	50.00	47.10	94	79-120	72-127	
Chloroethane	50.00	52.68	105	80-120	73-127	
Chloroform	50.00	49.65	99	80-120	73-127	
Chloromethane	50.00	54.09	108	80-120	73-127	
2-Chlorotoluene	50.00	51.68	103	80-120	73-127	
4-Chlorotoluene	50.00	50.01	100	80-120	73-127	
Dibromochloromethane	50.00	50.29	101	80-120	73-127	
1,2-Dibromo-3-Chloropropane	50.00	49.82	100	80-120	73-127	
1,2-Dibromoethane	50.00	49.65	99	80-120	73-127	
Dibromomethane	50.00	46.77	94	80-120	73-127	
1,2-Dichlorobenzene	50.00	48.06	96	75-120	68-128	
1,3-Dichlorobenzene	50.00	49.71	99	80-120	73-127	
1,4-Dichlorobenzene	50.00	51.77	104	80-120	73-127	
Dichlorodifluoromethane	50.00	52.49	105	80-120	73-127	
1,1-Dichloroethane	50.00	50.17	100	80-120	73-127	
1,2-Dichloroethane	50.00	47.71	95	80-120	73-127	
1,1-Dichloroethene	50.00	50.29	101	74-122	66-130	
c-1,2-Dichloroethene	50.00	52.64	105	80-120	73-127	
t-1,2-Dichloroethene	50.00	53.01	106	80-120	73-127	
1,2-Dichloropropane	50.00	50.05	100	79-115	73-121	
1,3-Dichloropropane	50.00	49.12	98	80-120	73-127	
2,2-Dichloropropane	50.00	54.47	109	80-120	73-127	
1,1-Dichloropropene	50.00	52.28	105	80-120	73-127	
c-1,3-Dichloropropene	50.00	58.05	116	80-120	73-127	
t-1,3-Dichloropropene	50.00	54.73	109	80-120	73-127	
Ethylbenzene	50.00	53.90	108	76-120	69-127	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-0993
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 8 of 8

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Isopropylbenzene	50.00	53.04	106	80-120	73-127	
p-Isopropyltoluene	50.00	54.71	109	80-120	73-127	
Methylene Chloride	50.00	50.73	101	80-120	73-127	
Naphthalene	50.00	54.69	109	80-120	73-127	
n-Propylbenzene	50.00	51.41	103	80-120	73-127	
Styrene	50.00	54.22	108	80-120	73-127	
Ethanol	500.0	493.4	99	56-140	42-154	
1,1,1,2-Tetrachloroethane	50.00	51.22	102	80-120	73-127	
1,1,2,2-Tetrachloroethane	50.00	50.19	100	80-120	73-127	
Tetrachloroethene	50.00	49.27	99	80-120	73-127	
Toluene	50.00	51.62	103	77-120	70-127	
1,2,3-Trichlorobenzene	50.00	55.21	110	80-120	73-127	
1,2,4-Trichlorobenzene	50.00	56.16	112	80-120	73-127	
1,1,1-Trichloroethane	50.00	51.91	104	80-120	73-127	
1,1,2-Trichloroethane	50.00	48.00	96	80-120	73-127	
Trichloroethene	50.00	50.18	100	80-120	73-127	
Trichlorofluoromethane	50.00	51.87	104	80-120	73-127	
1,2,3-Trichloropropane	50.00	45.29	91	80-120	73-127	
1,2,4-Trimethylbenzene	50.00	57.31	115	80-120	73-127	
1,3,5-Trimethylbenzene	50.00	57.72	115	80-120	73-127	
Vinyl Acetate	50.00	57.05	114	80-120	73-127	
Vinyl Chloride	50.00	53.22	106	68-122	59-131	
p/m-Xylene	100.0	106.0	106	75-125	67-133	
o-Xylene	50.00	51.83	104	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	52.12	104	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	224.1	90	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	53.73	107	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	54.48	109	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	52.35	105	75-120	68-128	

Total number of LCS compounds: 66
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-0993

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3050B	469	ICP 7300	1
EPA 7471A	EPA 7471A Total	769	Mercury	1
EPA 8015B (M)	EPA 3550B	847	GC 46	1
EPA 8015B (M)	EPA 5030C	902	GC 29	2
EPA 8082	EPA 3545	669	GC 31	1
EPA 8260B	EPA 5030C	823	GC/MS BB	2
EPA 8270C	EPA 3545	513	GC/MS CCC	1

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-0993

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name GP09 BPNA.C167.Q0000

Project Location 4861 East Firestone ave, Southgate CA

Laboratory Cal Science

Project Manager Jacqueline Headrick

Sampler(s)/Affiliation A. Leavitt (AUS)

14-01-0993

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	VOCs (8260B)	SVOCs (8270C)	TPH (8015)	PCBs (8082)	heavy metals including lead (6010B and 7471A)	48 Hour Rush	Remarks	Total
Stockpile	Soil	1/17/14/1430	1	X	X	X	X	X	X	2-4oz Jars	2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 2

Relinquished by: A. Leavitt	Organization: AUS	Date 1/17/14	Time 1522	Seal Intact? Yes No N/A
Received by: [signature]	Organization: CEL	Date 1/17/14	Time 15:22	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: 48 hour TAT

Delivery Method: ☒ In Person ☐ Common Carrier _____ SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

Return to Contents

AG 05-12/01

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-0993

SAMPLE RECEIPT FORM

Cooler 11 of 11

CLIENT: Arcadis

DATE: 01/17/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 3.2 °C - 0.3°C (CF) = 2.9 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 739

CUSTODY SEALS INTACT:

☐ Cooler ☐ _____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 739

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present Checked by: 739

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☑ 4ozCGJ (2) ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® ☐ TerraCores® ☐ _____

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs

☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 1PB ☐ 1PBna ☐ 500PB

☐ 250PB ☐ 250PBn ☐ 125PB ☐ 125PBznna ☐ 100PJ ☐ 100PJna$_2$ ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar® ☐ Canister Other: ☐ _____ Trip Blank Lot#: _____ Labeled/Checked by: 300

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 115

Preservative: h: HCL n: HNO$_3$ na$_2$: Na$_2$S$_2$O$_3$ na: NaOH p: H$_3$PO$_4$ s: H$_2$SO$_4$ u: Ultrapure znna: ZnAc$_2$+NaOH f: Filtered Scanned by: 115

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1839

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP/Tesoro 1289 / GP09BPNA.C167

Attention: Darla Zelenak
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 02/03/2014 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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NELAP ID: 03220CA | DoD-ELAP ID: L10-41 | DSDLAC ID: 101109 | SCAQMD ID: 93LA0830

Calscience Environmental Laboratories, Inc.

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Work Order Narrative

Work Order: 14-01-1839 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/30/14. They were assigned to Work Order 14-01-1839.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Per Andrew Leavitt's request, all analyses have been cancelled for samples UST-Floor1-10.0, EXC-B1-10.0, EXC-B2-10.0, and UST-Floor2-10.0.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-A**	**01/29/14 12:50**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 16:28**	**140131B02**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	17	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	35	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	134	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	15	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	131	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	20	4.9	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-N-7.5	**14-01-1839-6-A**	**01/29/14 14:04**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 18:44**	**140131B02**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	25	4.9	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	133	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	2100	24	5	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	138	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	9.4	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	139	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	170	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	126	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	230	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E1-4.0	**14-01-1839-15-A**	**01/30/14 13:06**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 20:43**	**140131B02**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	128	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	13	4.9	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	19	4.9	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	132	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	3300	25	5	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	139	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	129	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-A**	**01/29/14 12:50**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 16:28**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1	
C7	ND	5.0	1	
C8	ND	5.0	1	
C9-C10	ND	5.0	1	
C11-C12	ND	5.0	1	
C13-C14	ND	5.0	1	
C15-C16	ND	5.0	1	
C17-C18	ND	5.0	1	
C19-C20	ND	5.0	1	
C21-C22	ND	5.0	1	
C23-C24	ND	5.0	1	
C25-C28	ND	5.0	1	
C29-C32	14	5.0	1	
C33-C36	ND	5.0	1	
C37-C40	ND	5.0	1	
C41-C44	ND	5.0	1	
C6-C44 Total	14	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor2-6.0	**14-01-1839-2-A**	**01/29/14 13:30**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 16:45**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	0.99	
C7	ND	5.0	0.99	
C8	ND	5.0	0.99	
C9-C10	ND	5.0	0.99	
C11-C12	ND	5.0	0.99	
C13-C14	ND	5.0	0.99	
C15-C16	ND	5.0	0.99	
C17-C18	ND	5.0	0.99	
C19-C20	ND	5.0	0.99	
C21-C22	ND	5.0	0.99	
C23-C24	ND	5.0	0.99	
C25-C28	ND	5.0	0.99	
C29-C32	ND	5.0	0.99	
C33-C36	ND	5.0	0.99	
C37-C40	ND	5.0	0.99	
C41-C44	ND	5.0	0.99	
C6-C44 Total	ND	5.0	0.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-S-7.5	**14-01-1839-3-A**	**01/29/14 13:42**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 17:37**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	0.99	
C7	ND	5.0	0.99	
C8	ND	5.0	0.99	
C9-C10	ND	5.0	0.99	
C11-C12	ND	5.0	0.99	
C13-C14	ND	5.0	0.99	
C15-C16	ND	5.0	0.99	
C17-C18	ND	5.0	0.99	
C19-C20	ND	5.0	0.99	
C21-C22	ND	5.0	0.99	
C23-C24	ND	5.0	0.99	
C25-C28	9.8	5.0	0.99	
C29-C32	23	5.0	0.99	
C33-C36	9.5	5.0	0.99	
C37-C40	6.4	5.0	0.99	
C41-C44	ND	5.0	0.99	
C6-C44 Total	57	5.0	0.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	134	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-E-7.5	**14-01-1839-4-A**	**01/29/14 13:48**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 17:54**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	0.99	
C7	ND	5.0	0.99	
C8	ND	5.0	0.99	
C9-C10	ND	5.0	0.99	
C11-C12	ND	5.0	0.99	
C13-C14	ND	5.0	0.99	
C15-C16	ND	5.0	0.99	
C17-C18	ND	5.0	0.99	
C19-C20	ND	5.0	0.99	
C21-C22	ND	5.0	0.99	
C23-C24	ND	5.0	0.99	
C25-C28	ND	5.0	0.99	
C29-C32	12	5.0	0.99	
C33-C36	ND	5.0	0.99	
C37-C40	ND	5.0	0.99	
C41-C44	ND	5.0	0.99	
C6-C44 Total	17	5.0	0.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	131	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 5 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-W-7.5	**14-01-1839-5-A**	**01/29/14 13:56**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 18:28**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	0.98	
C7	ND	4.9	0.98	
C8	ND	4.9	0.98	
C9-C10	ND	4.9	0.98	
C11-C12	ND	4.9	0.98	
C13-C14	ND	4.9	0.98	
C15-C16	ND	4.9	0.98	
C17-C18	ND	4.9	0.98	
C19-C20	ND	4.9	0.98	
C21-C22	ND	4.9	0.98	
C23-C24	ND	4.9	0.98	
C25-C28	ND	4.9	0.98	
C29-C32	15	4.9	0.98	
C33-C36	ND	4.9	0.98	
C37-C40	ND	4.9	0.98	
C41-C44	ND	4.9	0.98	
C6-C44 Total	17	4.9	0.98	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-N-7.5	**14-01-1839-6-A**	**01/29/14 14:04**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 18:44**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	0.98	
C7	ND	4.9	0.98	
C8	ND	4.9	0.98	
C9-C10	ND	4.9	0.98	
C11-C12	ND	4.9	0.98	
C13-C14	ND	4.9	0.98	
C15-C16	ND	4.9	0.98	
C17-C18	ND	4.9	0.98	
C19-C20	ND	4.9	0.98	
C21-C22	ND	4.9	0.98	
C23-C24	ND	4.9	0.98	
C25-C28	15	4.9	0.98	
C29-C32	ND	4.9	0.98	
C33-C36	ND	4.9	0.98	
C37-C40	ND	4.9	0.98	
C41-C44	ND	4.9	0.98	
C6-C44 Total	30	4.9	0.98	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	133	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**GC 47**	**01/31/14**	**02/03/14 10:56**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	24	4.9	
C7	ND	24	4.9	
C8	ND	24	4.9	
C9-C10	69	24	4.9	
C11-C12	85	24	4.9	
C13-C14	25	24	4.9	
C15-C16	ND	24	4.9	
C17-C18	84	24	4.9	
C19-C20	130	24	4.9	
C21-C22	310	24	4.9	
C23-C24	450	24	4.9	
C25-C28	710	24	4.9	
C29-C32	870	24	4.9	
C33-C36	560	24	4.9	
C37-C40	240	24	4.9	
C41-C44	150	24	4.9	
C6-C44 Total	3700	24	4.9	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	138	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 8 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-W-4.0	**14-01-1839-9-A**	**01/30/14 14:30**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 19:17**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1	
C7	ND	5.0	1	
C8	ND	5.0	1	
C9-C10	ND	5.0	1	
C11-C12	ND	5.0	1	
C13-C14	ND	5.0	1	
C15-C16	ND	5.0	1	
C17-C18	ND	5.0	1	
C19-C20	ND	5.0	1	
C21-C22	ND	5.0	1	
C23-C24	ND	5.0	1	
C25-C28	5.5	5.0	1	
C29-C32	ND	5.0	1	
C33-C36	5.1	5.0	1	
C37-C40	ND	5.0	1	
C41-C44	ND	5.0	1	
C6-C44 Total	20	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	139	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 9 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-6.5	**14-01-1839-11-A**	**01/30/14 13:28**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 19:34**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1	
C7	ND	5.0	1	
C8	ND	5.0	1	
C9-C10	ND	5.0	1	
C11-C12	ND	5.0	1	
C13-C14	ND	5.0	1	
C15-C16	ND	5.0	1	
C17-C18	ND	5.0	1	
C19-C20	11	5.0	1	
C21-C22	24	5.0	1	
C23-C24	44	5.0	1	
C25-C28	47	5.0	1	
C29-C32	80	5.0	1	
C33-C36	42	5.0	1	
C37-C40	15	5.0	1	
C41-C44	6.5	5.0	1	
C6-C44 Total	280	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	133	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 10 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B2-6.5	**14-01-1839-13-A**	**01/30/14 13:45**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 20:09**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	0.99	
C7	ND	5.0	0.99	
C8	ND	5.0	0.99	
C9-C10	6.2	5.0	0.99	
C11-C12	6.9	5.0	0.99	
C13-C14	ND	5.0	0.99	
C15-C16	ND	5.0	0.99	
C17-C18	ND	5.0	0.99	
C19-C20	17	5.0	0.99	
C21-C22	31	5.0	0.99	
C23-C24	48	5.0	0.99	
C25-C28	16	5.0	0.99	
C29-C32	150	5.0	0.99	
C33-C36	60	5.0	0.99	
C37-C40	18	5.0	0.99	
C41-C44	8.4	5.0	0.99	
C6-C44 Total	370	5.0	0.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 11 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E1-4.0	**14-01-1839-15-A**	**01/30/14 13:06**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 20:43**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	0.99	
C7	ND	5.0	0.99	
C8	ND	5.0	0.99	
C9-C10	ND	5.0	0.99	
C11-C12	ND	5.0	0.99	
C13-C14	ND	5.0	0.99	
C15-C16	ND	5.0	0.99	
C17-C18	ND	5.0	0.99	
C19-C20	ND	5.0	0.99	
C21-C22	ND	5.0	0.99	
C23-C24	ND	5.0	0.99	
C25-C28	ND	5.0	0.99	
C29-C32	ND	5.0	0.99	
C33-C36	ND	5.0	0.99	
C37-C40	ND	5.0	0.99	
C41-C44	ND	5.0	0.99	
C6-C44 Total	ND	5.0	0.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	128	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 12 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E2-4.0	**14-01-1839-16-A**	**01/30/14 13:10**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 20:59**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	0.98	
C7	ND	4.9	0.98	
C8	ND	4.9	0.98	
C9-C10	ND	4.9	0.98	
C11-C12	ND	4.9	0.98	
C13-C14	ND	4.9	0.98	
C15-C16	ND	4.9	0.98	
C17-C18	ND	4.9	0.98	
C19-C20	ND	4.9	0.98	
C21-C22	ND	4.9	0.98	
C23-C24	ND	4.9	0.98	
C25-C28	ND	4.9	0.98	
C29-C32	11	4.9	0.98	
C33-C36	ND	4.9	0.98	
C37-C40	ND	4.9	0.98	
C41-C44	ND	4.9	0.98	
C6-C44 Total	14	4.9	0.98	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 13 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-S-4.0	**14-01-1839-17-A**	**01/30/14 13:18**	**Solid**	**GC 47**	**01/31/14**	**02/03/14 10:38**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	0.98	
C7	ND	4.9	0.98	
C8	ND	4.9	0.98	
C9-C10	ND	4.9	0.98	
C11-C12	ND	4.9	0.98	
C13-C14	ND	4.9	0.98	
C15-C16	ND	4.9	0.98	
C17-C18	ND	4.9	0.98	
C19-C20	ND	4.9	0.98	
C21-C22	ND	4.9	0.98	
C23-C24	ND	4.9	0.98	
C25-C28	6.2	4.9	0.98	
C29-C32	11	4.9	0.98	
C33-C36	7.8	4.9	0.98	
C37-C40	6.6	4.9	0.98	
C41-C44	ND	4.9	0.98	
C6-C44 Total	39	4.9	0.98	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	132	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 14 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01302014	**14-01-1839-19-A**	**01/30/14 14:10**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 23:34**	**140131B01**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	25	4.95	
C7	ND	25	4.95	
C8	ND	25	4.95	
C9-C10	130	25	4.95	
C11-C12	160	25	4.95	
C13-C14	49	25	4.95	
C15-C16	54	25	4.95	
C17-C18	63	25	4.95	
C19-C20	270	25	4.95	
C21-C22	480	25	4.95	
C23-C24	710	25	4.95	
C25-C28	1100	25	4.95	
C29-C32	1200	25	4.95	
C33-C36	760	25	4.95	
C37-C40	360	25	4.95	
C41-C44	230	25	4.95	
C6-C44 Total	5600	25	4.95	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	139	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 15 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-490-747**	**N/A**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:22**	**140131B01**

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1	
C7	ND	5.0	1	
C8	ND	5.0	1	
C9-C10	ND	5.0	1	
C11-C12	ND	5.0	1	
C13-C14	ND	5.0	1	
C15-C16	ND	5.0	1	
C17-C18	ND	5.0	1	
C19-C20	ND	5.0	1	
C21-C22	ND	5.0	1	
C23-C24	ND	5.0	1	
C25-C28	ND	5.0	1	
C29-C32	ND	5.0	1	
C33-C36	ND	5.0	1	
C37-C40	ND	5.0	1	
C41-C44	ND	5.0	1	
C6-C44 Total	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	129	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-G**	**01/29/14 12:50**	**Solid**	**GC 29**	**01/29/14**	**01/31/14 13:40**	**140131B03**

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.25	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.23	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	69	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.25	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	70	60-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-W-7.5	**14-01-1839-5-G**	**01/29/14 13:56**	**Solid**	**GC 29**	**01/29/14**	**01/31/14 16:04**	**140131B03**

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	0.23	0.22	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.23	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	69	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.28	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	67	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B2-6.5	**14-01-1839-13-G**	**01/30/14 13:45**	**Solid**	**GC 29**	**01/30/14**	**01/31/14 20:16**	**140131B03**

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.23	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.28	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

Comment(s): - TPH as Gasoline is quantified in the carbon range C6-C12.

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.24	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	69	60-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-5040**	**N/A**	**Solid**	**GC 29**	**01/31/14**	**01/31/14 10:57**	**140131B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.25	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	60-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**GC 1**	**01/31/14**	**01/31/14 21:22**	**140131B02**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	190	20	40	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	73	42-126	

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	77	10	20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	75	42-126	

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	ND	4.0	8	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	77	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-B**	**01/29/14 12:50**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:00**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	1.18	0.750	1	
Barium	72.1	0.500	1	
Beryllium	ND	0.250	1	
Cadmium	ND	0.500	1	
Chromium	8.99	0.250	1	
Cobalt	7.05	0.250	1	
Copper	7.46	0.500	1	
Lead	ND	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	6.58	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	25.7	0.250	1	
Zinc	33.9	1.00	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor2-6.0	**14-01-1839-2-B**	**01/29/14 13:30**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:10**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.746	0.995	
Arsenic	2.15	0.746	0.995	
Barium	110	0.498	0.995	
Beryllium	0.375	0.249	0.995	
Cadmium	ND	0.498	0.995	
Chromium	15.0	0.249	0.995	
Cobalt	10.4	0.249	0.995	
Copper	15.4	0.498	0.995	
Lead	1.25	0.498	0.995	
Molybdenum	0.906	0.249	0.995	
Nickel	11.6	0.249	0.995	
Selenium	ND	0.746	0.995	
Silver	ND	0.249	0.995	
Thallium	ND	0.746	0.995	
Vanadium	36.6	0.249	0.995	
Zinc	45.9	0.995	0.995	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-S-7.5	**14-01-1839-3-B**	**01/29/14 13:42**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:11**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	1.87	0.758	1.01	
Barium	112	0.505	1.01	
Beryllium	0.343	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	13.9	0.253	1.01	
Cobalt	9.79	0.253	1.01	
Copper	13.5	0.505	1.01	
Lead	7.37	0.505	1.01	
Molybdenum	0.474	0.253	1.01	
Nickel	10.5	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	32.7	0.253	1.01	
Zinc	168	1.01	1.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-E-7.5	**14-01-1839-4-B**	**01/29/14 13:48**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:12**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.754	1.01	
Arsenic	1.33	0.754	1.01	
Barium	126	0.503	1.01	
Beryllium	0.367	0.251	1.01	
Cadmium	0.676	0.503	1.01	
Chromium	15.4	0.251	1.01	
Cobalt	10.9	0.251	1.01	
Copper	14.9	0.503	1.01	
Lead	12.8	0.503	1.01	
Molybdenum	0.499	0.251	1.01	
Nickel	11.7	0.251	1.01	
Selenium	ND	0.754	1.01	
Silver	ND	0.251	1.01	
Thallium	ND	0.754	1.01	
Vanadium	35.8	0.251	1.01	
Zinc	1400	1.01	1.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 5 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-W-7.5	**14-01-1839-5-B**	**01/29/14 13:56**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:13**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.743	0.99	
Arsenic	0.839	0.743	0.99	
Barium	81.9	0.495	0.99	
Beryllium	0.283	0.248	0.99	
Cadmium	ND	0.495	0.99	
Chromium	12.0	0.248	0.99	
Cobalt	8.48	0.248	0.99	
Copper	10.7	0.495	0.99	
Lead	0.876	0.495	0.99	
Molybdenum	0.276	0.248	0.99	
Nickel	8.59	0.248	0.99	
Selenium	ND	0.743	0.99	
Silver	ND	0.248	0.99	
Thallium	ND	0.743	0.99	
Vanadium	29.7	0.248	0.99	
Zinc	59.8	0.990	0.99	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-N-7.5	**14-01-1839-6-B**	**01/29/14 14:04**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:14**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	0.860	0.750	1	
Barium	107	0.500	1	
Beryllium	0.342	0.250	1	
Cadmium	ND	0.500	1	
Chromium	13.2	0.250	1	
Cobalt	9.59	0.250	1	
Copper	13.6	0.500	1	
Lead	2.67	0.500	1	
Molybdenum	0.560	0.250	1	
Nickel	9.74	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	32.0	0.250	1	
Zinc	201	1.00	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-B**	**01/29/14 14:40**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:17**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.746	0.995	
Arsenic	2.09	0.746	0.995	
Barium	91.1	0.498	0.995	
Beryllium	0.295	0.249	0.995	
Cadmium	ND	0.498	0.995	
Chromium	13.3	0.249	0.995	
Cobalt	8.66	0.249	0.995	
Copper	14.4	0.498	0.995	
Lead	120	0.498	0.995	
Molybdenum	0.282	0.249	0.995	
Nickel	9.59	0.249	0.995	
Selenium	ND	0.746	0.995	
Silver	ND	0.249	0.995	
Thallium	ND	0.746	0.995	
Vanadium	29.0	0.249	0.995	
Zinc	91.5	0.995	0.995	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 8 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-W-4.0	**14-01-1839-9-B**	**01/30/14 14:30**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:19**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.743	0.99	
Arsenic	1.74	0.743	0.99	
Barium	123	0.495	0.99	
Beryllium	0.393	0.248	0.99	
Cadmium	ND	0.495	0.99	
Chromium	15.8	0.248	0.99	
Cobalt	10.7	0.248	0.99	
Copper	15.3	0.495	0.99	
Lead	5.63	0.495	0.99	
Molybdenum	0.710	0.248	0.99	
Nickel	11.8	0.248	0.99	
Selenium	ND	0.743	0.99	
Silver	ND	0.248	0.99	
Thallium	ND	0.743	0.99	
Vanadium	35.3	0.248	0.99	
Zinc	60.8	0.990	0.99	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 9 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-6.5	**14-01-1839-11-B**	**01/30/14 13:28**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:20**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.739	0.985	
Arsenic	0.789	0.739	0.985	
Barium	67.6	0.493	0.985	
Beryllium	ND	0.246	0.985	
Cadmium	ND	0.493	0.985	
Chromium	10.1	0.246	0.985	
Cobalt	7.38	0.246	0.985	
Copper	8.82	0.493	0.985	
Lead	27.4	0.493	0.985	
Molybdenum	ND	0.246	0.985	
Nickel	7.09	0.246	0.985	
Selenium	ND	0.739	0.985	
Silver	ND	0.246	0.985	
Thallium	ND	0.739	0.985	
Vanadium	26.0	0.246	0.985	
Zinc	41.7	0.985	0.985	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 10 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B2-6.5	**14-01-1839-13-B**	**01/30/14 13:45**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:27**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	0.912	0.750	1	
Barium	93.7	0.500	1	
Beryllium	0.325	0.250	1	
Cadmium	ND	0.500	1	
Chromium	13.4	0.250	1	
Cobalt	9.44	0.250	1	
Copper	11.9	0.500	1	
Lead	2.76	0.500	1	
Molybdenum	0.343	0.250	1	
Nickel	9.76	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	32.6	0.250	1	
Zinc	42.1	1.00	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 11 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E1-4.0	**14-01-1839-15-B**	**01/30/14 13:06**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:30**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.735	0.98	
Arsenic	1.07	0.735	0.98	
Barium	87.4	0.490	0.98	
Beryllium	0.245	0.245	0.98	
Cadmium	ND	0.490	0.98	
Chromium	10.2	0.245	0.98	
Cobalt	7.71	0.245	0.98	
Copper	8.87	0.490	0.98	
Lead	0.915	0.490	0.98	
Molybdenum	ND	0.245	0.98	
Nickel	7.77	0.245	0.98	
Selenium	ND	0.735	0.98	
Silver	ND	0.245	0.98	
Thallium	ND	0.735	0.98	
Vanadium	24.8	0.245	0.98	
Zinc	36.3	0.980	0.98	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 12 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E2-4.0	**14-01-1839-16-B**	**01/30/14 13:10**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:31**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.743	0.99	
Arsenic	0.983	0.743	0.99	
Barium	95.0	0.495	0.99	
Beryllium	0.277	0.248	0.99	
Cadmium	ND	0.495	0.99	
Chromium	12.0	0.248	0.99	
Cobalt	8.52	0.248	0.99	
Copper	10.6	0.495	0.99	
Lead	2.76	0.495	0.99	
Molybdenum	0.391	0.248	0.99	
Nickel	8.64	0.248	0.99	
Selenium	ND	0.743	0.99	
Silver	ND	0.248	0.99	
Thallium	ND	0.743	0.99	
Vanadium	28.7	0.248	0.99	
Zinc	44.3	0.990	0.99	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 13 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-S-4.0	**14-01-1839-17-B**	**01/30/14 13:18**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:33**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.743	0.99	
Arsenic	6.07	0.743	0.99	
Barium	115	0.495	0.99	
Beryllium	0.448	0.248	0.99	
Cadmium	ND	0.495	0.99	
Chromium	21.9	0.248	0.99	
Cobalt	11.0	0.248	0.99	
Copper	20.0	0.495	0.99	
Lead	9.18	0.495	0.99	
Molybdenum	0.728	0.248	0.99	
Nickel	18.2	0.248	0.99	
Selenium	ND	0.743	0.99	
Silver	ND	0.248	0.99	
Thallium	ND	0.743	0.99	
Vanadium	36.5	0.248	0.99	
Zinc	49.1	0.990	0.99	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 14 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01302014	**14-01-1839-19-B**	**01/30/14 14:10**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:35**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.746	0.995	
Arsenic	2.00	0.746	0.995	
Barium	112	0.498	0.995	
Beryllium	0.368	0.249	0.995	
Cadmium	ND	0.498	0.995	
Chromium	15.2	0.249	0.995	
Cobalt	10.3	0.249	0.995	
Copper	15.3	0.498	0.995	
Lead	46.7	0.498	0.995	
Molybdenum	0.628	0.249	0.995	
Nickel	11.3	0.249	0.995	
Selenium	ND	0.746	0.995	
Silver	ND	0.249	0.995	
Thallium	ND	0.746	0.995	
Vanadium	33.8	0.249	0.995	
Zinc	84.0	0.995	0.995	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 15 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-17966**	**N/A**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 17:55**	**140131L01D**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	ND	0.750	1	
Barium	ND	0.500	1	
Beryllium	ND	0.250	1	
Cadmium	ND	0.500	1	
Chromium	ND	0.250	1	
Cobalt	ND	0.250	1	
Copper	ND	0.500	1	
Lead	ND	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	ND	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	ND	0.250	1	
Zinc	ND	1.00	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-B**	**01/29/14 12:50**	**Solid**	**Mercury**	**01/31/14**	**01/31/14 13:16**	**140131L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0805	0.996	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0795	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0860	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0820	0.998	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0845	0.992	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0820	0.998	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0875	0.998	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-6.5	**14-01-1839-11-A**	**01/30/14 13:28**	**Solid**	**Mercury**	**01/31/14**	**01/31/14 13:47**	**140131L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0805	0.996	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0860	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0780	0.996	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0780	0.996	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0795	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-A**	**01/29/14 12:50**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 12:56**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	117	24-168	
2,4,5,6-Tetrachloro-m-Xylene	122	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	112	24-168	
2,4,5,6-Tetrachloro-m-Xylene	113	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-S-7.5	**14-01-1839-3-A**	**01/29/14 13:42**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 13:32**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	0.996	
Aroclor-1221	ND	0.050	0.996	
Aroclor-1232	ND	0.050	0.996	
Aroclor-1242	ND	0.050	0.996	
Aroclor-1248	ND	0.050	0.996	
Aroclor-1254	ND	0.050	0.996	
Aroclor-1260	ND	0.050	0.996	
Aroclor-1262	ND	0.050	0.996	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	109	24-168	
2,4,5,6-Tetrachloro-m-Xylene	109	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	104	24-168	
2,4,5,6-Tetrachloro-m-Xylene	107	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-W-7.5	**14-01-1839-5-A**	**01/29/14 13:56**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 14:08**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	0.996	
Aroclor-1221	ND	0.050	0.996	
Aroclor-1232	ND	0.050	0.996	
Aroclor-1242	ND	0.050	0.996	
Aroclor-1248	ND	0.050	0.996	
Aroclor-1254	ND	0.050	0.996	
Aroclor-1260	ND	0.050	0.996	
Aroclor-1262	ND	0.050	0.996	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	108	24-168	
2,4,5,6-Tetrachloro-m-Xylene	105	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	0.996	
Aroclor-1221	ND	0.050	0.996	
Aroclor-1232	ND	0.050	0.996	
Aroclor-1242	ND	0.050	0.996	
Aroclor-1248	ND	0.050	0.996	
Aroclor-1254	ND	0.050	0.996	
Aroclor-1260	ND	0.050	0.996	
Aroclor-1262	ND	0.050	0.996	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	114	24-168	
2,4,5,6-Tetrachloro-m-Xylene	111	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**GC 58**	**01/30/14**	**02/01/14 01:09**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	0.24	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	96	24-168	
2,4,5,6-Tetrachloro-m-Xylene	98	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	24-168	
2,4,5,6-Tetrachloro-m-Xylene	95	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 5 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-6.5	**14-01-1839-11-A**	**01/30/14 13:28**	**Solid**	**GC 58**	**01/30/14**	**02/01/14 01:45**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	0.11	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	97	24-168	
2,4,5,6-Tetrachloro-m-Xylene	98	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	0.066	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	95	24-168	
2,4,5,6-Tetrachloro-m-Xylene	96	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E1-4.0	**14-01-1839-15-A**	**01/30/14 13:06**	**Solid**	**GC 58**	**01/30/14**	**02/01/14 02:56**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	97	24-168	
2,4,5,6-Tetrachloro-m-Xylene	104	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	0.996	
Aroclor-1221	ND	0.050	0.996	
Aroclor-1232	ND	0.050	0.996	
Aroclor-1242	ND	0.050	0.996	
Aroclor-1248	ND	0.050	0.996	
Aroclor-1254	ND	0.050	0.996	
Aroclor-1260	ND	0.050	0.996	
Aroclor-1262	ND	0.050	0.996	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	108	24-168	
2,4,5,6-Tetrachloro-m-Xylene	105	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-S-4.0	**14-01-1839-17-A**	**01/30/14 13:18**	**Solid**	**GC 58**	**01/30/14**	**02/01/14 03:32**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	98	25-145	

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	0.21	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	102	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 8 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-2465**	**N/A**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 12:02**	**140130L22**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.050	1	
Aroclor-1221	ND	0.050	1	
Aroclor-1232	ND	0.050	1	
Aroclor-1242	ND	0.050	1	
Aroclor-1248	ND	0.050	1	
Aroclor-1254	ND	0.050	1	
Aroclor-1260	ND	0.050	1	
Aroclor-1262	ND	0.050	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	112	24-168	
2,4,5,6-Tetrachloro-m-Xylene	110	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-A**	**01/29/14 12:50**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 10:56**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 2 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	76	25-120	
Nitrobenzene-d5	79	33-123	
p-Terphenyl-d14	92	27-159	
Phenol-d6	80	26-122	
2,4,6-Tribromophenol	82	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor2-6.0	**14-01-1839-2-A**	**01/29/14 13:30**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 11:21**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 5 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	70	25-120	
Nitrobenzene-d5	69	33-123	
p-Terphenyl-d14	84	27-159	
Phenol-d6	76	26-122	
2,4,6-Tribromophenol	79	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-S-7.5	**14-01-1839-3-A**	**01/29/14 13:42**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 20:37**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 8 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	80	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 9 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	99	25-120	
Nitrobenzene-d5	81	33-123	
p-Terphenyl-d14	86	27-159	
Phenol-d6	107	26-122	
2,4,6-Tribromophenol	89	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 10 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-E-7.5	**14-01-1839-4-A**	**01/29/14 13:48**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 19:58**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 11 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 12 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	86	25-120	
Nitrobenzene-d5	72	33-123	
p-Terphenyl-d14	80	27-159	
Phenol-d6	94	26-122	
2,4,6-Tribromophenol	78	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 13 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-W-7.5	**14-01-1839-5-A**	**01/29/14 13:56**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 11:50**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 14 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 15 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	69	25-120	
Nitrobenzene-d5	69	33-123	
p-Terphenyl-d14	81	27-159	
Phenol-d6	74	26-122	
2,4,6-Tribromophenol	77	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 16 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-N-7.5	**14-01-1839-6-A**	**01/29/14 14:04**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 18:39**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 17 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	80	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 18 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	91	25-120	
Nitrobenzene-d5	77	33-123	
p-Terphenyl-d14	86	27-159	
Phenol-d6	101	26-122	
2,4,6-Tribromophenol	79	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 19 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 20:57**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	0.89	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 20 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	6.2	0.50	1	
1-Methylnaphthalene	3.1	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	4.2	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	0.54	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	79	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 21 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	89	25-120	
Nitrobenzene-d5	76	33-123	
p-Terphenyl-d14	85	27-159	
Phenol-d6	93	26-122	
2,4,6-Tribromophenol	93	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 22 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-W-4.0	**14-01-1839-9-A**	**01/30/14 14:30**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 20:18**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 23 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	75	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 24 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	85	25-120	
Nitrobenzene-d5	73	33-123	
p-Terphenyl-d14	80	27-159	
Phenol-d6	93	26-122	
2,4,6-Tribromophenol	79	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 25 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-6.5	**14-01-1839-11-A**	**01/30/14 13:28**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 17:45**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	6.2	0.50	1	
Acenaphthylene	6.4	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	6.1	0.50	1	
4-Chloro-3-Methylphenol	7.1	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	6.6	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	6.1	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 26 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	7.0	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	6.8	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	6.5	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	6.6	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	4.3	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	5.8	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	6.1	0.50	1	
Pyrene	6.7	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	6.6	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	55	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 27 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	67	25-120	
Nitrobenzene-d5	66	33-123	
p-Terphenyl-d14	76	27-159	
Phenol-d6	71	26-122	
2,4,6-Tribromophenol	76	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 28 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B2-6.5	**14-01-1839-13-A**	**01/30/14 13:45**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 15:54**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 29 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	65	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 30 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	72	25-120	
Nitrobenzene-d5	67	33-123	
p-Terphenyl-d14	74	27-159	
Phenol-d6	75	26-122	
2,4,6-Tribromophenol	78	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 31 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E1-4.0	**14-01-1839-15-A**	**01/30/14 13:06**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 16:23**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 32 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 33 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	70	25-120	
Nitrobenzene-d5	68	33-123	
p-Terphenyl-d14	75	27-159	
Phenol-d6	73	26-122	
2,4,6-Tribromophenol	75	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 34 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E2-4.0	**14-01-1839-16-A**	**01/30/14 13:10**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 16:48**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	9.9	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	9.9	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 35 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	57	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 36 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	63	25-120	
Nitrobenzene-d5	60	33-123	
p-Terphenyl-d14	72	27-159	
Phenol-d6	68	26-122	
2,4,6-Tribromophenol	70	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 37 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-S-4.0	**14-01-1839-17-A**	**01/30/14 13:18**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 18:38**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 38 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	38	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 39 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	59	25-120	
Nitrobenzene-d5	62	33-123	
p-Terphenyl-d14	76	27-159	
Phenol-d6	63	26-122	
2,4,6-Tribromophenol	56	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 40 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01302014	**14-01-1839-19-A**	**01/30/14 14:10**	**Solid**	**GC/MS CCC**	**01/30/14**	**02/01/14 19:04**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 41 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	58	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 42 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	63	25-120	
Nitrobenzene-d5	65	33-123	
p-Terphenyl-d14	75	27-159	
Phenol-d6	66	26-122	
2,4,6-Tribromophenol	68	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 43 of 45

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-2837**	**N/A**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 18:00**	**140130L23**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 44 of 45

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	90	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 45 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	102	25-120	
Nitrobenzene-d5	91	33-123	
p-Terphenyl-d14	90	27-159	
Phenol-d6	108	26-122	
2,4,6-Tribromophenol	92	18-138	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor1-7.5	**14-01-1839-1-D**	**01/29/14 12:50**	**Solid**	**GC/MS Z**	**01/29/14**	**01/31/14 13:44**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.028	1.1	
Benzene	ND	0.0011	1.1	
Bromobenzene	ND	0.0011	1.1	
Bromochloromethane	ND	0.0011	1.1	
Bromodichloromethane	ND	0.0011	1.1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.1	
Bromoform	ND	0.0011	1.1	
Bromomethane	ND	0.011	1.1	
2-Butanone	ND	0.011	1.1	
n-Butylbenzene	ND	0.0011	1.1	
sec-Butylbenzene	ND	0.0011	1.1	
tert-Butylbenzene	ND	0.0011	1.1	
Carbon Disulfide	ND	0.011	1.1	
Carbon Tetrachloride	ND	0.0011	1.1	
Chlorobenzene	ND	0.0011	1.1	
Chloroethane	ND	0.0055	1.1	
Chloroform	ND	0.0011	1.1	
Chloromethane	ND	0.0011	1.1	
2-Chlorotoluene	ND	0.0011	1.1	
4-Chlorotoluene	ND	0.0011	1.1	
Dibromochloromethane	ND	0.0011	1.1	
1,2-Dibromo-3-Chloropropane	ND	0.0055	1.1	
1,2-Dibromoethane	ND	0.0011	1.1	
Dibromomethane	ND	0.0011	1.1	
1,2-Dichlorobenzene	ND	0.0011	1.1	
1,3-Dichlorobenzene	ND	0.0011	1.1	
1,4-Dichlorobenzene	ND	0.0011	1.1	
Dichlorodifluoromethane	ND	0.0011	1.1	
1,1-Dichloroethane	ND	0.0011	1.1	
1,2-Dichloroethane	ND	0.0011	1.1	
1,1-Dichloroethene	ND	0.0011	1.1	
c-1,2-Dichloroethene	ND	0.0011	1.1	
t-1,2-Dichloroethene	ND	0.0011	1.1	
1,2-Dichloropropane	ND	0.0011	1.1	
1,3-Dichloropropane	ND	0.0011	1.1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 2 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0011	1.1	
1,1-Dichloropropene	ND	0.0011	1.1	
c-1,3-Dichloropropene	ND	0.0011	1.1	
t-1,3-Dichloropropene	ND	0.0011	1.1	
Ethylbenzene	ND	0.0011	1.1	
2-Hexanone	ND	0.011	1.1	
Isopropylbenzene	ND	0.0011	1.1	
p-Isopropyltoluene	ND	0.0011	1.1	
Methylene Chloride	ND	0.011	1.1	
4-Methyl-2-Pentanone	ND	0.011	1.1	
Naphthalene	ND	0.011	1.1	
n-Propylbenzene	ND	0.0011	1.1	
Styrene	ND	0.0011	1.1	
Ethanol	ND	0.11	1.1	
1,1,1,2-Tetrachloroethane	ND	0.0011	1.1	
1,1,2,2-Tetrachloroethane	ND	0.0011	1.1	
Tetrachloroethene	ND	0.0011	1.1	
Toluene	ND	0.0011	1.1	
1,2,3-Trichlorobenzene	ND	0.0022	1.1	
1,2,4-Trichlorobenzene	ND	0.0011	1.1	
1,1,1-Trichloroethane	ND	0.0011	1.1	
Hexachloro-1,3-Butadiene	ND	0.0011	1.1	
1,1,2-Trichloroethane	ND	0.0011	1.1	
Trichloroethene	ND	0.0011	1.1	
Trichlorofluoromethane	ND	0.011	1.1	
1,2,3-Trichloropropane	ND	0.0011	1.1	
1,2,4-Trimethylbenzene	ND	0.0011	1.1	
1,3,5-Trimethylbenzene	ND	0.0011	1.1	
Vinyl Acetate	ND	0.011	1.1	
Vinyl Chloride	ND	0.0011	1.1	
p/m-Xylene	ND	0.0011	1.1	
o-Xylene	ND	0.0011	1.1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0011	1.1	
Tert-Butyl Alcohol (TBA)	ND	0.011	1.1	
Diisopropyl Ether (DIPE)	ND	0.0022	1.1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0022	1.1	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0022	1.1	
2-Chloroethyl Vinyl Ether	ND	0.055	1.1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	60-132	
Dibromofluoromethane	90	63-141	
1,2-Dichloroethane-d4	91	62-146	
Toluene-d8	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-Floor2-6.0	**14-01-1839-2-D**	**01/29/14 13:30**	**Solid**	**GC/MS Z**	**01/29/14**	**01/31/14 14:11**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.023	0.923	
Benzene	ND	0.00092	0.923	
Bromobenzene	ND	0.00092	0.923	
Bromochloromethane	ND	0.00092	0.923	
Bromodichloromethane	ND	0.00092	0.923	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0092	0.923	
Bromoform	ND	0.00092	0.923	
Bromomethane	ND	0.0092	0.923	
2-Butanone	ND	0.0092	0.923	
n-Butylbenzene	ND	0.00092	0.923	
sec-Butylbenzene	ND	0.00092	0.923	
tert-Butylbenzene	ND	0.00092	0.923	
Carbon Disulfide	ND	0.0092	0.923	
Carbon Tetrachloride	ND	0.00092	0.923	
Chlorobenzene	ND	0.00092	0.923	
Chloroethane	ND	0.0046	0.923	
Chloroform	ND	0.00092	0.923	
Chloromethane	ND	0.00092	0.923	
2-Chlorotoluene	ND	0.00092	0.923	
4-Chlorotoluene	ND	0.00092	0.923	
Dibromochloromethane	ND	0.00092	0.923	
1,2-Dibromo-3-Chloropropane	ND	0.0046	0.923	
1,2-Dibromoethane	ND	0.00092	0.923	
Dibromomethane	ND	0.00092	0.923	
1,2-Dichlorobenzene	ND	0.00092	0.923	
1,3-Dichlorobenzene	ND	0.00092	0.923	
1,4-Dichlorobenzene	ND	0.00092	0.923	
Dichlorodifluoromethane	ND	0.00092	0.923	
1,1-Dichloroethane	ND	0.00092	0.923	
1,2-Dichloroethane	ND	0.00092	0.923	
1,1-Dichloroethene	ND	0.00092	0.923	
c-1,2-Dichloroethene	ND	0.00092	0.923	
t-1,2-Dichloroethene	ND	0.00092	0.923	
1,2-Dichloropropane	ND	0.00092	0.923	
1,3-Dichloropropane	ND	0.00092	0.923	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 5 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.00092	0.923	
1,1-Dichloropropene	ND	0.00092	0.923	
c-1,3-Dichloropropene	ND	0.00092	0.923	
t-1,3-Dichloropropene	ND	0.00092	0.923	
Ethylbenzene	ND	0.00092	0.923	
2-Hexanone	ND	0.0092	0.923	
Isopropylbenzene	ND	0.00092	0.923	
p-Isopropyltoluene	ND	0.00092	0.923	
Methylene Chloride	ND	0.0092	0.923	
4-Methyl-2-Pentanone	ND	0.0092	0.923	
Naphthalene	ND	0.0092	0.923	
n-Propylbenzene	ND	0.00092	0.923	
Styrene	ND	0.00092	0.923	
Ethanol	ND	0.092	0.923	
1,1,1,2-Tetrachloroethane	ND	0.00092	0.923	
1,1,2,2-Tetrachloroethane	ND	0.00092	0.923	
Tetrachloroethene	ND	0.00092	0.923	
Toluene	ND	0.00092	0.923	
1,2,3-Trichlorobenzene	ND	0.0018	0.923	
1,2,4-Trichlorobenzene	ND	0.00092	0.923	
1,1,1-Trichloroethane	ND	0.00092	0.923	
Hexachloro-1,3-Butadiene	ND	0.00092	0.923	
1,1,2-Trichloroethane	ND	0.00092	0.923	
Trichloroethene	ND	0.00092	0.923	
Trichlorofluoromethane	ND	0.0092	0.923	
1,2,3-Trichloropropane	ND	0.00092	0.923	
1,2,4-Trimethylbenzene	0.0010	0.00092	0.923	
1,3,5-Trimethylbenzene	ND	0.00092	0.923	
Vinyl Acetate	ND	0.0092	0.923	
Vinyl Chloride	ND	0.00092	0.923	
p/m-Xylene	ND	0.00092	0.923	
o-Xylene	ND	0.00092	0.923	
Methyl-t-Butyl Ether (MTBE)	ND	0.00092	0.923	
Tert-Butyl Alcohol (TBA)	ND	0.0092	0.923	
Diisopropyl Ether (DIPE)	ND	0.0018	0.923	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0018	0.923	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0018	0.923	
2-Chloroethyl Vinyl Ether	ND	0.046	0.923	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	89	63-141	
1,2-Dichloroethane-d4	90	62-146	
Toluene-d8	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-S-7.5	**14-01-1839-3-D**	**01/29/14 13:42**	**Solid**	**GC/MS Z**	**01/29/14**	**01/31/14 14:38**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.026	1.05	
Benzene	0.0034	0.0010	1.05	
Bromobenzene	ND	0.0010	1.05	
Bromochloromethane	ND	0.0010	1.05	
Bromodichloromethane	ND	0.0010	1.05	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.05	
Bromoform	ND	0.0010	1.05	
Bromomethane	ND	0.010	1.05	
2-Butanone	ND	0.010	1.05	
n-Butylbenzene	0.0014	0.0010	1.05	
sec-Butylbenzene	ND	0.0010	1.05	
tert-Butylbenzene	ND	0.0010	1.05	
Carbon Disulfide	ND	0.010	1.05	
Carbon Tetrachloride	ND	0.0010	1.05	
Chlorobenzene	ND	0.0010	1.05	
Chloroethane	ND	0.0052	1.05	
Chloroform	ND	0.0010	1.05	
Chloromethane	ND	0.0010	1.05	
2-Chlorotoluene	ND	0.0010	1.05	
4-Chlorotoluene	ND	0.0010	1.05	
Dibromochloromethane	ND	0.0010	1.05	
1,2-Dibromo-3-Chloropropane	ND	0.0052	1.05	
1,2-Dibromoethane	ND	0.0010	1.05	
Dibromomethane	ND	0.0010	1.05	
1,2-Dichlorobenzene	ND	0.0010	1.05	
1,3-Dichlorobenzene	ND	0.0010	1.05	
1,4-Dichlorobenzene	ND	0.0010	1.05	
Dichlorodifluoromethane	ND	0.0010	1.05	
1,1-Dichloroethane	ND	0.0010	1.05	
1,2-Dichloroethane	ND	0.0010	1.05	
1,1-Dichloroethene	ND	0.0010	1.05	
c-1,2-Dichloroethene	ND	0.0010	1.05	
t-1,2-Dichloroethene	ND	0.0010	1.05	
1,2-Dichloropropane	ND	0.0010	1.05	
1,3-Dichloropropane	ND	0.0010	1.05	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 8 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0010	1.05	
1,1-Dichloropropene	ND	0.0010	1.05	
c-1,3-Dichloropropene	ND	0.0010	1.05	
t-1,3-Dichloropropene	ND	0.0010	1.05	
Ethylbenzene	0.0012	0.0010	1.05	
2-Hexanone	ND	0.010	1.05	
Isopropylbenzene	ND	0.0010	1.05	
p-Isopropyltoluene	ND	0.0010	1.05	
Methylene Chloride	ND	0.010	1.05	
4-Methyl-2-Pentanone	ND	0.010	1.05	
Naphthalene	ND	0.010	1.05	
n-Propylbenzene	ND	0.0010	1.05	
Styrene	ND	0.0010	1.05	
Ethanol	ND	0.10	1.05	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.05	
1,1,2,2-Tetrachloroethane	ND	0.0010	1.05	
Tetrachloroethene	ND	0.0010	1.05	
Toluene	0.0018	0.0010	1.05	
1,2,3-Trichlorobenzene	ND	0.0021	1.05	
1,2,4-Trichlorobenzene	ND	0.0010	1.05	
1,1,1-Trichloroethane	ND	0.0010	1.05	
Hexachloro-1,3-Butadiene	ND	0.0010	1.05	
1,1,2-Trichloroethane	ND	0.0010	1.05	
Trichloroethene	ND	0.0010	1.05	
Trichlorofluoromethane	ND	0.010	1.05	
1,2,3-Trichloropropane	ND	0.0010	1.05	
1,2,4-Trimethylbenzene	0.010	0.0010	1.05	
1,3,5-Trimethylbenzene	0.0033	0.0010	1.05	
Vinyl Acetate	ND	0.010	1.05	
Vinyl Chloride	ND	0.0010	1.05	
p/m-Xylene	0.0052	0.0010	1.05	
o-Xylene	0.0035	0.0010	1.05	
Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1.05	
Tert-Butyl Alcohol (TBA)	ND	0.010	1.05	
Diisopropyl Ether (DIPE)	ND	0.0021	1.05	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0021	1.05	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0021	1.05	
2-Chloroethyl Vinyl Ether	ND	0.052	1.05	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 9 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	92	63-141	
1,2-Dichloroethane-d4	89	62-146	
Toluene-d8	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 10 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-E-7.5	**14-01-1839-4-D**	**01/29/14 13:48**	**Solid**	**GC/MS Z**	**01/29/14**	**01/31/14 15:05**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.029	1.17	
Benzene	0.0020	0.0012	1.17	
Bromobenzene	ND	0.0012	1.17	
Bromochloromethane	ND	0.0012	1.17	
Bromodichloromethane	ND	0.0012	1.17	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.012	1.17	
Bromoform	ND	0.0012	1.17	
Bromomethane	ND	0.012	1.17	
2-Butanone	ND	0.012	1.17	
n-Butylbenzene	ND	0.0012	1.17	
sec-Butylbenzene	ND	0.0012	1.17	
tert-Butylbenzene	ND	0.0012	1.17	
Carbon Disulfide	ND	0.012	1.17	
Carbon Tetrachloride	ND	0.0012	1.17	
Chlorobenzene	ND	0.0012	1.17	
Chloroethane	ND	0.0058	1.17	
Chloroform	ND	0.0012	1.17	
Chloromethane	ND	0.0012	1.17	
2-Chlorotoluene	ND	0.0012	1.17	
4-Chlorotoluene	ND	0.0012	1.17	
Dibromochloromethane	ND	0.0012	1.17	
1,2-Dibromo-3-Chloropropane	ND	0.0058	1.17	
1,2-Dibromoethane	ND	0.0012	1.17	
Dibromomethane	ND	0.0012	1.17	
1,2-Dichlorobenzene	ND	0.0012	1.17	
1,3-Dichlorobenzene	ND	0.0012	1.17	
1,4-Dichlorobenzene	ND	0.0012	1.17	
Dichlorodifluoromethane	ND	0.0012	1.17	
1,1-Dichloroethane	ND	0.0012	1.17	
1,2-Dichloroethane	ND	0.0012	1.17	
1,1-Dichloroethene	ND	0.0012	1.17	
c-1,2-Dichloroethene	ND	0.0012	1.17	
t-1,2-Dichloroethene	ND	0.0012	1.17	
1,2-Dichloropropane	ND	0.0012	1.17	
1,3-Dichloropropane	ND	0.0012	1.17	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 11 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0012	1.17	
1,1-Dichloropropene	ND	0.0012	1.17	
c-1,3-Dichloropropene	ND	0.0012	1.17	
t-1,3-Dichloropropene	ND	0.0012	1.17	
Ethylbenzene	ND	0.0012	1.17	
2-Hexanone	ND	0.012	1.17	
Isopropylbenzene	ND	0.0012	1.17	
p-Isopropyltoluene	ND	0.0012	1.17	
Methylene Chloride	ND	0.012	1.17	
4-Methyl-2-Pentanone	ND	0.012	1.17	
Naphthalene	ND	0.012	1.17	
n-Propylbenzene	ND	0.0012	1.17	
Styrene	ND	0.0012	1.17	
Ethanol	ND	0.12	1.17	
1,1,1,2-Tetrachloroethane	ND	0.0012	1.17	
1,1,2,2-Tetrachloroethane	ND	0.0012	1.17	
Tetrachloroethene	ND	0.0012	1.17	
Toluene	0.0013	0.0012	1.17	
1,2,3-Trichlorobenzene	ND	0.0023	1.17	
1,2,4-Trichlorobenzene	ND	0.0012	1.17	
1,1,1-Trichloroethane	ND	0.0012	1.17	
Hexachloro-1,3-Butadiene	ND	0.0012	1.17	
1,1,2-Trichloroethane	ND	0.0012	1.17	
Trichloroethene	ND	0.0012	1.17	
Trichlorofluoromethane	ND	0.012	1.17	
1,2,3-Trichloropropane	ND	0.0012	1.17	
1,2,4-Trimethylbenzene	0.0014	0.0012	1.17	
1,3,5-Trimethylbenzene	ND	0.0012	1.17	
Vinyl Acetate	ND	0.012	1.17	
Vinyl Chloride	ND	0.0012	1.17	
p/m-Xylene	0.0020	0.0012	1.17	
o-Xylene	0.0012	0.0012	1.17	
Methyl-t-Butyl Ether (MTBE)	ND	0.0012	1.17	
Tert-Butyl Alcohol (TBA)	ND	0.012	1.17	
Diisopropyl Ether (DIPE)	ND	0.0023	1.17	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0023	1.17	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0023	1.17	
2-Chloroethyl Vinyl Ether	ND	0.058	1.17	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 12 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	92	63-141	
1,2-Dichloroethane-d4	90	62-146	
Toluene-d8	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 13 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-W-7.5	**14-01-1839-5-D**	**01/29/14 13:56**	**Solid**	**GC/MS Z**	**01/29/14**	**01/31/14 15:33**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.025	1	
Benzene	ND	0.0010	1	
Bromobenzene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1	
Bromoform	ND	0.0010	1	
Bromomethane	ND	0.010	1	
2-Butanone	ND	0.010	1	
n-Butylbenzene	ND	0.0010	1	
sec-Butylbenzene	ND	0.0010	1	
tert-Butylbenzene	ND	0.0010	1	
Carbon Disulfide	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1	
Chloroethane	ND	0.0050	1	
Chloroform	ND	0.0010	1	
Chloromethane	ND	0.0010	1	
2-Chlorotoluene	ND	0.0010	1	
4-Chlorotoluene	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0010	1	
Dibromomethane	ND	0.0010	1	
1,2-Dichlorobenzene	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1	
1,1-Dichloroethane	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1	
1,1-Dichloroethene	ND	0.0010	1	
c-1,2-Dichloroethene	ND	0.0010	1	
t-1,2-Dichloroethene	ND	0.0010	1	
1,2-Dichloropropane	ND	0.0010	1	
1,3-Dichloropropane	ND	0.0010	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 14 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0010	1	
1,1-Dichloropropene	ND	0.0010	1	
c-1,3-Dichloropropene	ND	0.0010	1	
t-1,3-Dichloropropene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1	
2-Hexanone	ND	0.010	1	
Isopropylbenzene	ND	0.0010	1	
p-Isopropyltoluene	ND	0.0010	1	
Methylene Chloride	ND	0.010	1	
4-Methyl-2-Pentanone	ND	0.010	1	
Naphthalene	ND	0.010	1	
n-Propylbenzene	ND	0.0010	1	
Styrene	ND	0.0010	1	
Ethanol	ND	0.10	1	
1,1,1,2-Tetrachloroethane	ND	0.0010	1	
1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Tetrachloroethene	ND	0.0010	1	
Toluene	ND	0.0010	1	
1,2,3-Trichlorobenzene	ND	0.0020	1	
1,2,4-Trichlorobenzene	ND	0.0010	1	
1,1,1-Trichloroethane	ND	0.0010	1	
Hexachloro-1,3-Butadiene	ND	0.0010	1	
1,1,2-Trichloroethane	ND	0.0010	1	
Trichloroethene	ND	0.0010	1	
Trichlorofluoromethane	ND	0.010	1	
1,2,3-Trichloropropane	ND	0.0010	1	
1,2,4-Trimethylbenzene	ND	0.0010	1	
1,3,5-Trimethylbenzene	ND	0.0010	1	
Vinyl Acetate	ND	0.010	1	
Vinyl Chloride	ND	0.0010	1	
p/m-Xylene	ND	0.0010	1	
o-Xylene	ND	0.0010	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
2-Chloroethyl Vinyl Ether	ND	0.050	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 15 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	91	63-141	
1,2-Dichloroethane-d4	90	62-146	
Toluene-d8	97	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 16 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UST-N-7.5	**14-01-1839-6-D**	**01/29/14 14:04**	**Solid**	**GC/MS Z**	**01/29/14**	**01/31/14 16:00**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.023	0.917	
Benzene	0.0030	0.00092	0.917	
Bromobenzene	ND	0.00092	0.917	
Bromochloromethane	ND	0.00092	0.917	
Bromodichloromethane	ND	0.00092	0.917	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0092	0.917	
Bromoform	ND	0.00092	0.917	
Bromomethane	ND	0.0092	0.917	
2-Butanone	ND	0.0092	0.917	
n-Butylbenzene	ND	0.00092	0.917	
sec-Butylbenzene	ND	0.00092	0.917	
tert-Butylbenzene	ND	0.00092	0.917	
Carbon Disulfide	ND	0.0092	0.917	
Carbon Tetrachloride	ND	0.00092	0.917	
Chlorobenzene	ND	0.00092	0.917	
Chloroethane	ND	0.0046	0.917	
Chloroform	ND	0.00092	0.917	
Chloromethane	ND	0.00092	0.917	
2-Chlorotoluene	ND	0.00092	0.917	
4-Chlorotoluene	ND	0.00092	0.917	
Dibromochloromethane	ND	0.00092	0.917	
1,2-Dibromo-3-Chloropropane	ND	0.0046	0.917	
1,2-Dibromoethane	ND	0.00092	0.917	
Dibromomethane	ND	0.00092	0.917	
1,2-Dichlorobenzene	ND	0.00092	0.917	
1,3-Dichlorobenzene	ND	0.00092	0.917	
1,4-Dichlorobenzene	ND	0.00092	0.917	
Dichlorodifluoromethane	ND	0.00092	0.917	
1,1-Dichloroethane	ND	0.00092	0.917	
1,2-Dichloroethane	ND	0.00092	0.917	
1,1-Dichloroethene	ND	0.00092	0.917	
c-1,2-Dichloroethene	ND	0.00092	0.917	
t-1,2-Dichloroethene	ND	0.00092	0.917	
1,2-Dichloropropane	ND	0.00092	0.917	
1,3-Dichloropropane	ND	0.00092	0.917	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 17 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.00092	0.917	
1,1-Dichloropropene	ND	0.00092	0.917	
c-1,3-Dichloropropene	ND	0.00092	0.917	
t-1,3-Dichloropropene	ND	0.00092	0.917	
Ethylbenzene	ND	0.00092	0.917	
2-Hexanone	ND	0.0092	0.917	
Isopropylbenzene	ND	0.00092	0.917	
p-Isopropyltoluene	ND	0.00092	0.917	
Methylene Chloride	ND	0.0092	0.917	
4-Methyl-2-Pentanone	ND	0.0092	0.917	
Naphthalene	ND	0.0092	0.917	
n-Propylbenzene	ND	0.00092	0.917	
Styrene	ND	0.00092	0.917	
Ethanol	ND	0.092	0.917	
1,1,1,2-Tetrachloroethane	ND	0.00092	0.917	
1,1,2,2-Tetrachloroethane	ND	0.00092	0.917	
Tetrachloroethene	ND	0.00092	0.917	
Toluene	0.0013	0.00092	0.917	
1,2,3-Trichlorobenzene	ND	0.0018	0.917	
1,2,4-Trichlorobenzene	ND	0.00092	0.917	
1,1,1-Trichloroethane	ND	0.00092	0.917	
Hexachloro-1,3-Butadiene	ND	0.00092	0.917	
1,1,2-Trichloroethane	ND	0.00092	0.917	
Trichloroethene	ND	0.00092	0.917	
Trichlorofluoromethane	ND	0.0092	0.917	
1,2,3-Trichloropropane	ND	0.00092	0.917	
1,2,4-Trimethylbenzene	ND	0.00092	0.917	
1,3,5-Trimethylbenzene	ND	0.00092	0.917	
Vinyl Acetate	ND	0.0092	0.917	
Vinyl Chloride	ND	0.00092	0.917	
p/m-Xylene	ND	0.00092	0.917	
o-Xylene	ND	0.00092	0.917	
Methyl-t-Butyl Ether (MTBE)	ND	0.00092	0.917	
Tert-Butyl Alcohol (TBA)	ND	0.0092	0.917	
Diisopropyl Ether (DIPE)	ND	0.0018	0.917	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0018	0.917	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0018	0.917	
2-Chloroethyl Vinyl Ether	ND	0.046	0.917	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 18 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	90	63-141	
1,2-Dichloroethane-d4	90	62-146	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 19 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-W-4.0	**14-01-1839-9-D**	**01/30/14 14:30**	**Solid**	**GC/MS Z**	**01/30/14**	**01/31/14 16:55**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.027	1.08	
Benzene	0.0037	0.0011	1.08	
Bromobenzene	ND	0.0011	1.08	
Bromochloromethane	ND	0.0011	1.08	
Bromodichloromethane	ND	0.0011	1.08	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.08	
Bromoform	ND	0.0011	1.08	
Bromomethane	ND	0.011	1.08	
2-Butanone	ND	0.011	1.08	
n-Butylbenzene	ND	0.0011	1.08	
sec-Butylbenzene	ND	0.0011	1.08	
tert-Butylbenzene	ND	0.0011	1.08	
Carbon Disulfide	ND	0.011	1.08	
Carbon Tetrachloride	ND	0.0011	1.08	
Chlorobenzene	ND	0.0011	1.08	
Chloroethane	ND	0.0054	1.08	
Chloroform	ND	0.0011	1.08	
Chloromethane	ND	0.0011	1.08	
2-Chlorotoluene	ND	0.0011	1.08	
4-Chlorotoluene	ND	0.0011	1.08	
Dibromochloromethane	ND	0.0011	1.08	
1,2-Dibromo-3-Chloropropane	ND	0.0054	1.08	
1,2-Dibromoethane	ND	0.0011	1.08	
Dibromomethane	ND	0.0011	1.08	
1,2-Dichlorobenzene	ND	0.0011	1.08	
1,3-Dichlorobenzene	ND	0.0011	1.08	
1,4-Dichlorobenzene	ND	0.0011	1.08	
Dichlorodifluoromethane	ND	0.0011	1.08	
1,1-Dichloroethane	ND	0.0011	1.08	
1,2-Dichloroethane	ND	0.0011	1.08	
1,1-Dichloroethene	ND	0.0011	1.08	
c-1,2-Dichloroethene	ND	0.0011	1.08	
t-1,2-Dichloroethene	ND	0.0011	1.08	
1,2-Dichloropropane	ND	0.0011	1.08	
1,3-Dichloropropane	ND	0.0011	1.08	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 20 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0011	1.08	
1,1-Dichloropropene	ND	0.0011	1.08	
c-1,3-Dichloropropene	ND	0.0011	1.08	
t-1,3-Dichloropropene	ND	0.0011	1.08	
Ethylbenzene	ND	0.0011	1.08	
2-Hexanone	ND	0.011	1.08	
Isopropylbenzene	ND	0.0011	1.08	
p-Isopropyltoluene	ND	0.0011	1.08	
Methylene Chloride	ND	0.011	1.08	
4-Methyl-2-Pentanone	ND	0.011	1.08	
Naphthalene	ND	0.011	1.08	
n-Propylbenzene	ND	0.0011	1.08	
Styrene	ND	0.0011	1.08	
Ethanol	ND	0.11	1.08	
1,1,1,2-Tetrachloroethane	ND	0.0011	1.08	
1,1,2,2-Tetrachloroethane	ND	0.0011	1.08	
Tetrachloroethene	ND	0.0011	1.08	
Toluene	0.0014	0.0011	1.08	
1,2,3-Trichlorobenzene	ND	0.0022	1.08	
1,2,4-Trichlorobenzene	ND	0.0011	1.08	
1,1,1-Trichloroethane	ND	0.0011	1.08	
Hexachloro-1,3-Butadiene	ND	0.0011	1.08	
1,1,2-Trichloroethane	ND	0.0011	1.08	
Trichloroethene	ND	0.0011	1.08	
Trichlorofluoromethane	ND	0.011	1.08	
1,2,3-Trichloropropane	ND	0.0011	1.08	
1,2,4-Trimethylbenzene	ND	0.0011	1.08	
1,3,5-Trimethylbenzene	ND	0.0011	1.08	
Vinyl Acetate	ND	0.011	1.08	
Vinyl Chloride	ND	0.0011	1.08	
p/m-Xylene	ND	0.0011	1.08	
o-Xylene	ND	0.0011	1.08	
Methyl-t-Butyl Ether (MTBE)	ND	0.0011	1.08	
Tert-Butyl Alcohol (TBA)	ND	0.011	1.08	
Diisopropyl Ether (DIPE)	ND	0.0022	1.08	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0022	1.08	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0022	1.08	
2-Chloroethyl Vinyl Ether	ND	0.054	1.08	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 21 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	60-132	
Dibromofluoromethane	91	63-141	
1,2-Dichloroethane-d4	91	62-146	
Toluene-d8	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 22 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-6.5	**14-01-1839-11-D**	**01/30/14 13:28**	**Solid**	**GC/MS Z**	**01/30/14**	**01/31/14 17:23**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.027	1.07	
Benzene	ND	0.0011	1.07	
Bromobenzene	ND	0.0011	1.07	
Bromochloromethane	ND	0.0011	1.07	
Bromodichloromethane	ND	0.0011	1.07	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.07	
Bromoform	ND	0.0011	1.07	
Bromomethane	ND	0.011	1.07	
2-Butanone	ND	0.011	1.07	
n-Butylbenzene	0.0012	0.0011	1.07	
sec-Butylbenzene	ND	0.0011	1.07	
tert-Butylbenzene	ND	0.0011	1.07	
Carbon Disulfide	ND	0.011	1.07	
Carbon Tetrachloride	ND	0.0011	1.07	
Chlorobenzene	ND	0.0011	1.07	
Chloroethane	ND	0.0054	1.07	
Chloroform	ND	0.0011	1.07	
Chloromethane	ND	0.0011	1.07	
2-Chlorotoluene	ND	0.0011	1.07	
4-Chlorotoluene	ND	0.0011	1.07	
Dibromochloromethane	ND	0.0011	1.07	
1,2-Dibromo-3-Chloropropane	ND	0.0054	1.07	
1,2-Dibromoethane	ND	0.0011	1.07	
Dibromomethane	ND	0.0011	1.07	
1,2-Dichlorobenzene	ND	0.0011	1.07	
1,3-Dichlorobenzene	ND	0.0011	1.07	
1,4-Dichlorobenzene	ND	0.0011	1.07	
Dichlorodifluoromethane	ND	0.0011	1.07	
1,1-Dichloroethane	ND	0.0011	1.07	
1,2-Dichloroethane	ND	0.0011	1.07	
1,1-Dichloroethene	ND	0.0011	1.07	
c-1,2-Dichloroethene	ND	0.0011	1.07	
t-1,2-Dichloroethene	ND	0.0011	1.07	
1,2-Dichloropropane	ND	0.0011	1.07	
1,3-Dichloropropane	ND	0.0011	1.07	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 23 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0011	1.07	
1,1-Dichloropropene	ND	0.0011	1.07	
c-1,3-Dichloropropene	ND	0.0011	1.07	
t-1,3-Dichloropropene	ND	0.0011	1.07	
Ethylbenzene	ND	0.0011	1.07	
2-Hexanone	ND	0.011	1.07	
Isopropylbenzene	ND	0.0011	1.07	
p-Isopropyltoluene	ND	0.0011	1.07	
Methylene Chloride	ND	0.011	1.07	
4-Methyl-2-Pentanone	ND	0.011	1.07	
Naphthalene	ND	0.011	1.07	
n-Propylbenzene	ND	0.0011	1.07	
Styrene	ND	0.0011	1.07	
Ethanol	ND	0.11	1.07	
1,1,1,2-Tetrachloroethane	ND	0.0011	1.07	
1,1,2,2-Tetrachloroethane	ND	0.0011	1.07	
Tetrachloroethene	ND	0.0011	1.07	
Toluene	0.0013	0.0011	1.07	
1,2,3-Trichlorobenzene	ND	0.0021	1.07	
1,2,4-Trichlorobenzene	ND	0.0011	1.07	
1,1,1-Trichloroethane	ND	0.0011	1.07	
Hexachloro-1,3-Butadiene	ND	0.0011	1.07	
1,1,2-Trichloroethane	ND	0.0011	1.07	
Trichloroethene	ND	0.0011	1.07	
Trichlorofluoromethane	ND	0.011	1.07	
1,2,3-Trichloropropane	ND	0.0011	1.07	
1,2,4-Trimethylbenzene	0.0092	0.0011	1.07	
1,3,5-Trimethylbenzene	0.0026	0.0011	1.07	
Vinyl Acetate	ND	0.011	1.07	
Vinyl Chloride	ND	0.0011	1.07	
p/m-Xylene	0.0048	0.0011	1.07	
o-Xylene	0.0026	0.0011	1.07	
Methyl-t-Butyl Ether (MTBE)	ND	0.0011	1.07	
Tert-Butyl Alcohol (TBA)	ND	0.011	1.07	
Diisopropyl Ether (DIPE)	ND	0.0021	1.07	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0021	1.07	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0021	1.07	
2-Chloroethyl Vinyl Ether	ND	0.054	1.07	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 24 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	60-132	
Dibromofluoromethane	93	63-141	
1,2-Dichloroethane-d4	91	62-146	
Toluene-d8	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Date Received:	01/30/14
Work Order:	14-01-1839
Preparation:	EPA 5035
Method:	EPA 8260B
Units:	mg/kg

Project: BP/Tesoro 1289 / GP09BPNA.C167

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B2-6.5	**14-01-1839-13-D**	**01/30/14 13:45**	**Solid**	**GC/MS Z**	**01/30/14**	**01/31/14 18:18**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.026	1.03	
Benzene	0.0014	0.0010	1.03	
Bromobenzene	ND	0.0010	1.03	
Bromochloromethane	ND	0.0010	1.03	
Bromodichloromethane	ND	0.0010	1.03	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.03	
Bromoform	ND	0.0010	1.03	
Bromomethane	ND	0.010	1.03	
2-Butanone	ND	0.010	1.03	
n-Butylbenzene	ND	0.0010	1.03	
sec-Butylbenzene	ND	0.0010	1.03	
tert-Butylbenzene	ND	0.0010	1.03	
Carbon Disulfide	ND	0.010	1.03	
Carbon Tetrachloride	ND	0.0010	1.03	
Chlorobenzene	ND	0.0010	1.03	
Chloroethane	ND	0.0052	1.03	
Chloroform	ND	0.0010	1.03	
Chloromethane	ND	0.0010	1.03	
2-Chlorotoluene	ND	0.0010	1.03	
4-Chlorotoluene	ND	0.0010	1.03	
Dibromochloromethane	ND	0.0010	1.03	
1,2-Dibromo-3-Chloropropane	ND	0.0052	1.03	
1,2-Dibromoethane	ND	0.0010	1.03	
Dibromomethane	ND	0.0010	1.03	
1,2-Dichlorobenzene	ND	0.0010	1.03	
1,3-Dichlorobenzene	ND	0.0010	1.03	
1,4-Dichlorobenzene	ND	0.0010	1.03	
Dichlorodifluoromethane	ND	0.0010	1.03	
1,1-Dichloroethane	ND	0.0010	1.03	
1,2-Dichloroethane	ND	0.0010	1.03	
1,1-Dichloroethene	ND	0.0010	1.03	
c-1,2-Dichloroethene	ND	0.0010	1.03	
t-1,2-Dichloroethene	ND	0.0010	1.03	
1,2-Dichloropropane	ND	0.0010	1.03	
1,3-Dichloropropane	ND	0.0010	1.03	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 26 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0010	1.03	
1,1-Dichloropropene	ND	0.0010	1.03	
c-1,3-Dichloropropene	ND	0.0010	1.03	
t-1,3-Dichloropropene	ND	0.0010	1.03	
Ethylbenzene	ND	0.0010	1.03	
2-Hexanone	ND	0.010	1.03	
Isopropylbenzene	ND	0.0010	1.03	
p-Isopropyltoluene	ND	0.0010	1.03	
Methylene Chloride	ND	0.010	1.03	
4-Methyl-2-Pentanone	ND	0.010	1.03	
Naphthalene	ND	0.010	1.03	
n-Propylbenzene	ND	0.0010	1.03	
Styrene	ND	0.0010	1.03	
Ethanol	ND	0.10	1.03	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.03	
1,1,2,2-Tetrachloroethane	ND	0.0010	1.03	
Tetrachloroethene	ND	0.0010	1.03	
Toluene	0.0019	0.0010	1.03	
1,2,3-Trichlorobenzene	ND	0.0021	1.03	
1,2,4-Trichlorobenzene	ND	0.0010	1.03	
1,1,1-Trichloroethane	ND	0.0010	1.03	
Hexachloro-1,3-Butadiene	ND	0.0010	1.03	
1,1,2-Trichloroethane	ND	0.0010	1.03	
Trichloroethene	ND	0.0010	1.03	
Trichlorofluoromethane	ND	0.010	1.03	
1,2,3-Trichloropropane	ND	0.0010	1.03	
1,2,4-Trimethylbenzene	0.0042	0.0010	1.03	
1,3,5-Trimethylbenzene	0.0013	0.0010	1.03	
Vinyl Acetate	ND	0.010	1.03	
Vinyl Chloride	ND	0.0010	1.03	
p/m-Xylene	0.0041	0.0010	1.03	
o-Xylene	0.0023	0.0010	1.03	
Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1.03	
Tert-Butyl Alcohol (TBA)	ND	0.010	1.03	
Diisopropyl Ether (DIPE)	ND	0.0021	1.03	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0021	1.03	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0021	1.03	
2-Chloroethyl Vinyl Ether	ND	0.052	1.03	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 27 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	92	63-141	
1,2-Dichloroethane-d4	91	62-146	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 28 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E1-4.0	**14-01-1839-15-D**	**01/30/14 13:06**	**Solid**	**GC/MS Z**	**01/30/14**	**01/31/14 19:14**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.030	1.18	
Benzene	0.0014	0.0012	1.18	
Bromobenzene	ND	0.0012	1.18	
Bromochloromethane	ND	0.0012	1.18	
Bromodichloromethane	ND	0.0012	1.18	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.012	1.18	
Bromoform	ND	0.0012	1.18	
Bromomethane	ND	0.012	1.18	
2-Butanone	ND	0.012	1.18	
n-Butylbenzene	ND	0.0012	1.18	
sec-Butylbenzene	ND	0.0012	1.18	
tert-Butylbenzene	ND	0.0012	1.18	
Carbon Disulfide	ND	0.012	1.18	
Carbon Tetrachloride	ND	0.0012	1.18	
Chlorobenzene	ND	0.0012	1.18	
Chloroethane	ND	0.0059	1.18	
Chloroform	ND	0.0012	1.18	
Chloromethane	ND	0.0012	1.18	
2-Chlorotoluene	ND	0.0012	1.18	
4-Chlorotoluene	ND	0.0012	1.18	
Dibromochloromethane	ND	0.0012	1.18	
1,2-Dibromo-3-Chloropropane	ND	0.0059	1.18	
1,2-Dibromoethane	ND	0.0012	1.18	
Dibromomethane	ND	0.0012	1.18	
1,2-Dichlorobenzene	ND	0.0012	1.18	
1,3-Dichlorobenzene	ND	0.0012	1.18	
1,4-Dichlorobenzene	ND	0.0012	1.18	
Dichlorodifluoromethane	ND	0.0012	1.18	
1,1-Dichloroethane	ND	0.0012	1.18	
1,2-Dichloroethane	ND	0.0012	1.18	
1,1-Dichloroethene	ND	0.0012	1.18	
c-1,2-Dichloroethene	ND	0.0012	1.18	
t-1,2-Dichloroethene	ND	0.0012	1.18	
1,2-Dichloropropane	ND	0.0012	1.18	
1,3-Dichloropropane	ND	0.0012	1.18	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 29 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0012	1.18	
1,1-Dichloropropene	ND	0.0012	1.18	
c-1,3-Dichloropropene	ND	0.0012	1.18	
t-1,3-Dichloropropene	ND	0.0012	1.18	
Ethylbenzene	ND	0.0012	1.18	
2-Hexanone	ND	0.012	1.18	
Isopropylbenzene	ND	0.0012	1.18	
p-Isopropyltoluene	ND	0.0012	1.18	
Methylene Chloride	ND	0.012	1.18	
4-Methyl-2-Pentanone	ND	0.012	1.18	
Naphthalene	ND	0.012	1.18	
n-Propylbenzene	ND	0.0012	1.18	
Styrene	ND	0.0012	1.18	
Ethanol	ND	0.12	1.18	
1,1,1,2-Tetrachloroethane	ND	0.0012	1.18	
1,1,2,2-Tetrachloroethane	ND	0.0012	1.18	
Tetrachloroethene	ND	0.0012	1.18	
Toluene	ND	0.0012	1.18	
1,2,3-Trichlorobenzene	ND	0.0024	1.18	
1,2,4-Trichlorobenzene	ND	0.0012	1.18	
1,1,1-Trichloroethane	ND	0.0012	1.18	
Hexachloro-1,3-Butadiene	ND	0.0012	1.18	
1,1,2-Trichloroethane	ND	0.0012	1.18	
Trichloroethene	ND	0.0012	1.18	
Trichlorofluoromethane	ND	0.012	1.18	
1,2,3-Trichloropropane	ND	0.0012	1.18	
1,2,4-Trimethylbenzene	ND	0.0012	1.18	
1,3,5-Trimethylbenzene	ND	0.0012	1.18	
Vinyl Acetate	ND	0.012	1.18	
Vinyl Chloride	ND	0.0012	1.18	
p/m-Xylene	ND	0.0012	1.18	
o-Xylene	ND	0.0012	1.18	
Methyl-t-Butyl Ether (MTBE)	ND	0.0012	1.18	
Tert-Butyl Alcohol (TBA)	ND	0.012	1.18	
Diisopropyl Ether (DIPE)	ND	0.0024	1.18	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0024	1.18	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0024	1.18	
2-Chloroethyl Vinyl Ether	ND	0.059	1.18	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 30 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	60-132	
Dibromofluoromethane	92	63-141	
1,2-Dichloroethane-d4	90	62-146	
Toluene-d8	97	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 31 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-E2-4.0	**14-01-1839-16-D**	**01/30/14 13:10**	**Solid**	**GC/MS Z**	**01/30/14**	**01/31/14 19:41**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.030	1.2	
Benzene	ND	0.0012	1.2	
Bromobenzene	ND	0.0012	1.2	
Bromochloromethane	ND	0.0012	1.2	
Bromodichloromethane	ND	0.0012	1.2	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.012	1.2	
Bromoform	ND	0.0012	1.2	
Bromomethane	ND	0.012	1.2	
2-Butanone	ND	0.012	1.2	
n-Butylbenzene	ND	0.0012	1.2	
sec-Butylbenzene	ND	0.0012	1.2	
tert-Butylbenzene	ND	0.0012	1.2	
Carbon Disulfide	ND	0.012	1.2	
Carbon Tetrachloride	ND	0.0012	1.2	
Chlorobenzene	ND	0.0012	1.2	
Chloroethane	ND	0.0060	1.2	
Chloroform	ND	0.0012	1.2	
Chloromethane	ND	0.0012	1.2	
2-Chlorotoluene	ND	0.0012	1.2	
4-Chlorotoluene	ND	0.0012	1.2	
Dibromochloromethane	ND	0.0012	1.2	
1,2-Dibromo-3-Chloropropane	ND	0.0060	1.2	
1,2-Dibromoethane	ND	0.0012	1.2	
Dibromomethane	ND	0.0012	1.2	
1,2-Dichlorobenzene	ND	0.0012	1.2	
1,3-Dichlorobenzene	ND	0.0012	1.2	
1,4-Dichlorobenzene	ND	0.0012	1.2	
Dichlorodifluoromethane	ND	0.0012	1.2	
1,1-Dichloroethane	ND	0.0012	1.2	
1,2-Dichloroethane	ND	0.0012	1.2	
1,1-Dichloroethene	ND	0.0012	1.2	
c-1,2-Dichloroethene	ND	0.0012	1.2	
t-1,2-Dichloroethene	ND	0.0012	1.2	
1,2-Dichloropropane	ND	0.0012	1.2	
1,3-Dichloropropane	ND	0.0012	1.2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 32 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0012	1.2	
1,1-Dichloropropene	ND	0.0012	1.2	
c-1,3-Dichloropropene	ND	0.0012	1.2	
t-1,3-Dichloropropene	ND	0.0012	1.2	
Ethylbenzene	ND	0.0012	1.2	
2-Hexanone	ND	0.012	1.2	
Isopropylbenzene	ND	0.0012	1.2	
p-Isopropyltoluene	ND	0.0012	1.2	
Methylene Chloride	ND	0.012	1.2	
4-Methyl-2-Pentanone	ND	0.012	1.2	
Naphthalene	ND	0.012	1.2	
n-Propylbenzene	ND	0.0012	1.2	
Styrene	ND	0.0012	1.2	
Ethanol	ND	0.12	1.2	
1,1,1,2-Tetrachloroethane	ND	0.0012	1.2	
1,1,2,2-Tetrachloroethane	ND	0.0012	1.2	
Tetrachloroethene	ND	0.0012	1.2	
Toluene	ND	0.0012	1.2	
1,2,3-Trichlorobenzene	ND	0.0024	1.2	
1,2,4-Trichlorobenzene	ND	0.0012	1.2	
1,1,1-Trichloroethane	ND	0.0012	1.2	
Hexachloro-1,3-Butadiene	ND	0.0012	1.2	
1,1,2-Trichloroethane	ND	0.0012	1.2	
Trichloroethene	ND	0.0012	1.2	
Trichlorofluoromethane	ND	0.012	1.2	
1,2,3-Trichloropropane	ND	0.0012	1.2	
1,2,4-Trimethylbenzene	ND	0.0012	1.2	
1,3,5-Trimethylbenzene	ND	0.0012	1.2	
Vinyl Acetate	ND	0.012	1.2	
Vinyl Chloride	ND	0.0012	1.2	
p/m-Xylene	ND	0.0012	1.2	
o-Xylene	ND	0.0012	1.2	
Methyl-t-Butyl Ether (MTBE)	ND	0.0012	1.2	
Tert-Butyl Alcohol (TBA)	ND	0.012	1.2	
Diisopropyl Ether (DIPE)	ND	0.0024	1.2	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0024	1.2	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0024	1.2	
2-Chloroethyl Vinyl Ether	ND	0.060	1.2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 33 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	94	63-141	
1,2-Dichloroethane-d4	92	62-146	
Toluene-d8	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 34 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-S-4.0	**14-01-1839-17-D**	**01/30/14 13:18**	**Solid**	**GC/MS Z**	**01/30/14**	**01/31/14 20:08**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	0.025	0.022	0.887	
Benzene	ND	0.00089	0.887	
Bromobenzene	ND	0.00089	0.887	
Bromochloromethane	ND	0.00089	0.887	
Bromodichloromethane	ND	0.00089	0.887	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0089	0.887	
Bromoform	ND	0.00089	0.887	
Bromomethane	ND	0.0089	0.887	
2-Butanone	ND	0.0089	0.887	
n-Butylbenzene	0.0048	0.00089	0.887	
sec-Butylbenzene	ND	0.00089	0.887	
tert-Butylbenzene	ND	0.00089	0.887	
Carbon Disulfide	ND	0.0089	0.887	
Carbon Tetrachloride	ND	0.00089	0.887	
Chlorobenzene	ND	0.00089	0.887	
Chloroethane	ND	0.0044	0.887	
Chloroform	ND	0.00089	0.887	
Chloromethane	ND	0.00089	0.887	
2-Chlorotoluene	ND	0.00089	0.887	
4-Chlorotoluene	ND	0.00089	0.887	
Dibromochloromethane	ND	0.00089	0.887	
1,2-Dibromo-3-Chloropropane	ND	0.0044	0.887	
1,2-Dibromoethane	ND	0.00089	0.887	
Dibromomethane	ND	0.00089	0.887	
1,2-Dichlorobenzene	ND	0.00089	0.887	
1,3-Dichlorobenzene	ND	0.00089	0.887	
1,4-Dichlorobenzene	ND	0.00089	0.887	
Dichlorodifluoromethane	ND	0.00089	0.887	
1,1-Dichloroethane	ND	0.00089	0.887	
1,2-Dichloroethane	ND	0.00089	0.887	
1,1-Dichloroethene	ND	0.00089	0.887	
c-1,2-Dichloroethene	ND	0.00089	0.887	
t-1,2-Dichloroethene	ND	0.00089	0.887	
1,2-Dichloropropane	ND	0.00089	0.887	
1,3-Dichloropropane	ND	0.00089	0.887	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 35 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.00089	0.887	
1,1-Dichloropropene	ND	0.00089	0.887	
c-1,3-Dichloropropene	ND	0.00089	0.887	
t-1,3-Dichloropropene	ND	0.00089	0.887	
Ethylbenzene	0.0031	0.00089	0.887	
2-Hexanone	ND	0.0089	0.887	
Isopropylbenzene	ND	0.00089	0.887	
p-Isopropyltoluene	ND	0.00089	0.887	
Methylene Chloride	ND	0.0089	0.887	
4-Methyl-2-Pentanone	ND	0.0089	0.887	
Naphthalene	0.013	0.0089	0.887	
n-Propylbenzene	0.0032	0.00089	0.887	
Styrene	ND	0.00089	0.887	
Ethanol	ND	0.089	0.887	
1,1,1,2-Tetrachloroethane	ND	0.00089	0.887	
1,1,2,2-Tetrachloroethane	ND	0.00089	0.887	
Tetrachloroethene	ND	0.00089	0.887	
Toluene	0.0019	0.00089	0.887	
1,2,3-Trichlorobenzene	ND	0.0018	0.887	
1,2,4-Trichlorobenzene	ND	0.00089	0.887	
1,1,1-Trichloroethane	ND	0.00089	0.887	
Hexachloro-1,3-Butadiene	ND	0.00089	0.887	
1,1,2-Trichloroethane	ND	0.00089	0.887	
Trichloroethene	ND	0.00089	0.887	
Trichlorofluoromethane	ND	0.0089	0.887	
1,2,3-Trichloropropane	ND	0.00089	0.887	
1,2,4-Trimethylbenzene	0.035	0.00089	0.887	
1,3,5-Trimethylbenzene	0.010	0.00089	0.887	
Vinyl Acetate	ND	0.0089	0.887	
Vinyl Chloride	ND	0.00089	0.887	
p/m-Xylene	0.015	0.00089	0.887	
o-Xylene	0.0085	0.00089	0.887	
Methyl-t-Butyl Ether (MTBE)	ND	0.00089	0.887	
Tert-Butyl Alcohol (TBA)	ND	0.0089	0.887	
Diisopropyl Ether (DIPE)	ND	0.0018	0.887	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0018	0.887	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0018	0.887	
2-Chloroethyl Vinyl Ether	ND	0.044	0.887	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 36 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	
Dibromofluoromethane	91	63-141	
1,2-Dichloroethane-d4	89	62-146	
Toluene-d8	97	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 37 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-766**	**N/A**	**Solid**	**GC/MS Z**	**01/31/14**	**01/31/14 12:22**	**140131L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.025	1	
Benzene	ND	0.0010	1	
Bromobenzene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1	
Bromoform	ND	0.0010	1	
Bromomethane	ND	0.010	1	
2-Butanone	ND	0.010	1	
n-Butylbenzene	ND	0.0010	1	
sec-Butylbenzene	ND	0.0010	1	
tert-Butylbenzene	ND	0.0010	1	
Carbon Disulfide	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1	
Chloroethane	ND	0.0050	1	
Chloroform	ND	0.0010	1	
Chloromethane	ND	0.0010	1	
2-Chlorotoluene	ND	0.0010	1	
4-Chlorotoluene	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0010	1	
Dibromomethane	ND	0.0010	1	
1,2-Dichlorobenzene	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1	
1,1-Dichloroethane	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1	
1,1-Dichloroethene	ND	0.0010	1	
c-1,2-Dichloroethene	ND	0.0010	1	
t-1,2-Dichloroethene	ND	0.0010	1	
1,2-Dichloropropane	ND	0.0010	1	
1,3-Dichloropropane	ND	0.0010	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 38 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.0010	1	
1,1-Dichloropropene	ND	0.0010	1	
c-1,3-Dichloropropene	ND	0.0010	1	
t-1,3-Dichloropropene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1	
2-Hexanone	ND	0.010	1	
Isopropylbenzene	ND	0.0010	1	
p-Isopropyltoluene	ND	0.0010	1	
Methylene Chloride	ND	0.010	1	
4-Methyl-2-Pentanone	ND	0.010	1	
Naphthalene	ND	0.010	1	
n-Propylbenzene	ND	0.0010	1	
Styrene	ND	0.0010	1	
Ethanol	ND	0.10	1	
1,1,1,2-Tetrachloroethane	ND	0.0010	1	
1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Tetrachloroethene	ND	0.0010	1	
Toluene	ND	0.0010	1	
1,2,3-Trichlorobenzene	ND	0.0020	1	
1,2,4-Trichlorobenzene	ND	0.0010	1	
1,1,1-Trichloroethane	ND	0.0010	1	
Hexachloro-1,3-Butadiene	ND	0.0010	1	
1,1,2-Trichloroethane	ND	0.0010	1	
Trichloroethene	ND	0.0010	1	
Trichlorofluoromethane	ND	0.010	1	
1,2,3-Trichloropropane	ND	0.0010	1	
1,2,4-Trimethylbenzene	ND	0.0010	1	
1,3,5-Trimethylbenzene	ND	0.0010	1	
Vinyl Acetate	ND	0.010	1	
Vinyl Chloride	ND	0.0010	1	
p/m-Xylene	ND	0.0010	1	
o-Xylene	ND	0.0010	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
2-Chloroethyl Vinyl Ether	ND	0.050	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 39 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	89	63-141	
1,2-Dichloroethane-d4	85	62-146	
Toluene-d8	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 40 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**GC/MS BB**	**01/31/14**	**01/31/14 16:42**	**140131L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2.5	100	
Benzene	ND	0.098	100	
Bromobenzene	ND	0.098	100	
Bromochloromethane	ND	0.098	100	
Bromodichloromethane	ND	0.098	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.98	100	
Bromoform	ND	0.098	100	
Bromomethane	ND	0.98	100	
2-Butanone	ND	0.98	100	
n-Butylbenzene	2.7	0.098	100	
sec-Butylbenzene	0.28	0.098	100	
tert-Butylbenzene	ND	0.098	100	
Carbon Disulfide	ND	0.98	100	
Carbon Tetrachloride	ND	0.098	100	
Chlorobenzene	ND	0.098	100	
Chloroethane	ND	0.49	100	
Chloroform	ND	0.098	100	
Chloromethane	ND	0.098	100	
2-Chlorotoluene	ND	0.098	100	
4-Chlorotoluene	ND	0.098	100	
Dibromochloromethane	ND	0.098	100	
1,2-Dibromo-3-Chloropropane	ND	0.49	100	
1,2-Dibromoethane	ND	0.098	100	
Dibromomethane	ND	0.098	100	
1,2-Dichlorobenzene	ND	0.098	100	
1,3-Dichlorobenzene	ND	0.098	100	
1,4-Dichlorobenzene	ND	0.098	100	
Dichlorodifluoromethane	ND	0.098	100	
1,1-Dichloroethane	ND	0.098	100	
1,2-Dichloroethane	ND	0.098	100	
1,1-Dichloroethene	ND	0.098	100	
c-1,2-Dichloroethene	ND	0.098	100	
t-1,2-Dichloroethene	ND	0.098	100	
1,2-Dichloropropane	ND	0.098	100	
1,3-Dichloropropane	ND	0.098	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 41 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.098	100	
1,1-Dichloropropene	ND	0.098	100	
c-1,3-Dichloropropene	ND	0.098	100	
t-1,3-Dichloropropene	ND	0.098	100	
Ethylbenzene	1.4	0.098	100	
2-Hexanone	ND	0.98	100	
Isopropylbenzene	0.26	0.098	100	
p-Isopropyltoluene	0.21	0.098	100	
Methylene Chloride	ND	0.98	100	
4-Methyl-2-Pentanone	ND	0.98	100	
Naphthalene	8.1	0.98	100	
n-Propylbenzene	1.4	0.098	100	
Styrene	ND	0.098	100	
Ethanol	ND	9.8	100	
1,1,1,2-Tetrachloroethane	ND	0.098	100	
1,1,2,2-Tetrachloroethane	ND	0.098	100	
Tetrachloroethene	ND	0.098	100	
Toluene	0.90	0.098	100	
1,2,3-Trichlorobenzene	ND	0.20	100	
1,2,4-Trichlorobenzene	ND	0.098	100	
1,1,1-Trichloroethane	ND	0.098	100	
Hexachloro-1,3-Butadiene	ND	0.098	100	
1,1,2-Trichloroethane	ND	0.098	100	
Trichloroethene	ND	0.098	100	
Trichlorofluoromethane	ND	0.98	100	
1,2,3-Trichloropropane	ND	0.098	100	
1,2,4-Trimethylbenzene	15	0.098	100	
1,3,5-Trimethylbenzene	4.5	0.098	100	
Vinyl Acetate	ND	0.98	100	
Vinyl Chloride	ND	0.098	100	
p/m-Xylene	7.4	0.098	100	
o-Xylene	3.9	0.098	100	
Methyl-t-Butyl Ether (MTBE)	ND	0.098	100	
Tert-Butyl Alcohol (TBA)	ND	0.98	100	
Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
2-Chloroethyl Vinyl Ether	ND	4.9	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 42 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	60-132	
Dibromofluoromethane	96	63-141	
1,2-Dichloroethane-d4	104	62-146	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 43 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01302014	**14-01-1839-19-A**	**01/30/14 14:10**	**Solid**	**GC/MS BB**	**01/31/14**	**01/31/14 17:09**	**140131L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2.5	100	
Benzene	ND	0.10	100	
Bromobenzene	ND	0.10	100	
Bromochloromethane	ND	0.10	100	
Bromodichloromethane	ND	0.10	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	100	
Bromoform	ND	0.10	100	
Bromomethane	ND	1.0	100	
2-Butanone	ND	1.0	100	
n-Butylbenzene	1.1	0.10	100	
sec-Butylbenzene	0.12	0.10	100	
tert-Butylbenzene	ND	0.10	100	
Carbon Disulfide	ND	1.0	100	
Carbon Tetrachloride	ND	0.10	100	
Chlorobenzene	ND	0.10	100	
Chloroethane	ND	0.50	100	
Chloroform	ND	0.10	100	
Chloromethane	ND	0.10	100	
2-Chlorotoluene	ND	0.10	100	
4-Chlorotoluene	ND	0.10	100	
Dibromochloromethane	ND	0.10	100	
1,2-Dibromo-3-Chloropropane	ND	0.50	100	
1,2-Dibromoethane	ND	0.10	100	
Dibromomethane	ND	0.10	100	
1,2-Dichlorobenzene	ND	0.10	100	
1,3-Dichlorobenzene	ND	0.10	100	
1,4-Dichlorobenzene	ND	0.10	100	
Dichlorodifluoromethane	ND	0.10	100	
1,1-Dichloroethane	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100	
1,1-Dichloroethene	ND	0.10	100	
c-1,2-Dichloroethene	ND	0.10	100	
t-1,2-Dichloroethene	ND	0.10	100	
1,2-Dichloropropane	ND	0.10	100	
1,3-Dichloropropane	ND	0.10	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 44 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.10	100	
1,1-Dichloropropene	ND	0.10	100	
c-1,3-Dichloropropene	ND	0.10	100	
t-1,3-Dichloropropene	ND	0.10	100	
Ethylbenzene	0.40	0.10	100	
2-Hexanone	ND	1.0	100	
Isopropylbenzene	ND	0.10	100	
p-Isopropyltoluene	ND	0.10	100	
Methylene Chloride	ND	1.0	100	
4-Methyl-2-Pentanone	ND	1.0	100	
Naphthalene	3.4	1.0	100	
n-Propylbenzene	0.47	0.10	100	
Styrene	ND	0.10	100	
Ethanol	ND	10	100	
1,1,1,2-Tetrachloroethane	ND	0.10	100	
1,1,2,2-Tetrachloroethane	ND	0.10	100	
Tetrachloroethene	ND	0.10	100	
Toluene	0.16	0.10	100	
1,2,3-Trichlorobenzene	ND	0.20	100	
1,2,4-Trichlorobenzene	ND	0.10	100	
1,1,1-Trichloroethane	ND	0.10	100	
Hexachloro-1,3-Butadiene	ND	0.10	100	
1,1,2-Trichloroethane	ND	0.10	100	
Trichloroethene	ND	0.10	100	
Trichlorofluoromethane	ND	1.0	100	
1,2,3-Trichloropropane	ND	0.10	100	
1,2,4-Trimethylbenzene	6.2	0.10	100	
1,3,5-Trimethylbenzene	1.6	0.10	100	
Vinyl Acetate	ND	1.0	100	
Vinyl Chloride	ND	0.10	100	
p/m-Xylene	2.1	0.10	100	
o-Xylene	1.2	0.10	100	
Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
2-Chloroethyl Vinyl Ether	ND	5.0	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 45 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	60-132	
Dibromofluoromethane	93	63-141	
1,2-Dichloroethane-d4	89	62-146	
Toluene-d8	99	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 46 of 48

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-767**	**N/A**	**Solid**	**GC/MS BB**	**01/31/14**	**01/31/14 15:20**	**140131L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2.5	100	
Benzene	ND	0.10	100	
Bromobenzene	ND	0.10	100	
Bromochloromethane	ND	0.10	100	
Bromodichloromethane	ND	0.10	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	100	
Bromoform	ND	0.10	100	
Bromomethane	ND	1.0	100	
2-Butanone	ND	1.0	100	
n-Butylbenzene	ND	0.10	100	
sec-Butylbenzene	ND	0.10	100	
tert-Butylbenzene	ND	0.10	100	
Carbon Disulfide	ND	1.0	100	
Carbon Tetrachloride	ND	0.10	100	
Chlorobenzene	ND	0.10	100	
Chloroethane	ND	0.50	100	
Chloroform	ND	0.10	100	
Chloromethane	ND	0.10	100	
2-Chlorotoluene	ND	0.10	100	
4-Chlorotoluene	ND	0.10	100	
Dibromochloromethane	ND	0.10	100	
1,2-Dibromo-3-Chloropropane	ND	0.50	100	
1,2-Dibromoethane	ND	0.10	100	
Dibromomethane	ND	0.10	100	
1,2-Dichlorobenzene	ND	0.10	100	
1,3-Dichlorobenzene	ND	0.10	100	
1,4-Dichlorobenzene	ND	0.10	100	
Dichlorodifluoromethane	ND	0.10	100	
1,1-Dichloroethane	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100	
1,1-Dichloroethene	ND	0.10	100	
c-1,2-Dichloroethene	ND	0.10	100	
t-1,2-Dichloroethene	ND	0.10	100	
1,2-Dichloropropane	ND	0.10	100	
1,3-Dichloropropane	ND	0.10	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 47 of 48

Parameter	Result	RL	DF	Qualifiers
2,2-Dichloropropane	ND	0.10	100	
1,1-Dichloropropene	ND	0.10	100	
c-1,3-Dichloropropene	ND	0.10	100	
t-1,3-Dichloropropene	ND	0.10	100	
Ethylbenzene	ND	0.10	100	
2-Hexanone	ND	1.0	100	
Isopropylbenzene	ND	0.10	100	
p-Isopropyltoluene	ND	0.10	100	
Methylene Chloride	ND	1.0	100	
4-Methyl-2-Pentanone	ND	1.0	100	
Naphthalene	ND	1.0	100	
n-Propylbenzene	ND	0.10	100	
Styrene	ND	0.10	100	
Ethanol	ND	10	100	
1,1,1,2-Tetrachloroethane	ND	0.10	100	
1,1,2,2-Tetrachloroethane	ND	0.10	100	
Tetrachloroethene	ND	0.10	100	
Toluene	ND	0.10	100	
1,2,3-Trichlorobenzene	ND	0.20	100	
1,2,4-Trichlorobenzene	ND	0.10	100	
1,1,1-Trichloroethane	ND	0.10	100	
Hexachloro-1,3-Butadiene	ND	0.10	100	
1,1,2-Trichloroethane	ND	0.10	100	
Trichloroethene	ND	0.10	100	
Trichlorofluoromethane	ND	1.0	100	
1,2,3-Trichloropropane	ND	0.10	100	
1,2,4-Trimethylbenzene	ND	0.10	100	
1,3,5-Trimethylbenzene	ND	0.10	100	
Vinyl Acetate	ND	1.0	100	
Vinyl Chloride	ND	0.10	100	
p/m-Xylene	ND	0.10	100	
o-Xylene	ND	0.10	100	
Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
2-Chloroethyl Vinyl Ether	ND	5.0	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 48 of 48

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	93	60-132	
Dibromofluoromethane	100	63-141	
1,2-Dichloroethane-d4	106	62-146	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-Floor1-10.0	**Sample**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 19:01**	**140131S02**
UST-Floor1-10.0	**Matrix Spike**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:56**	**140131S02**
UST-Floor1-10.0	**Matrix Spike Duplicate**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 16:11**	**140131S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C28)	9.342	400.0	501.2	123	504.8	124	61-145	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-Floor1-10.0	**Sample**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 19:01**	**140131S01**
UST-Floor1-10.0	**Matrix Spike**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:56**	**140131S01**
UST-Floor1-10.0	**Matrix Spike Duplicate**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 16:11**	**140131S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	12.51	400.0	495.3	121	500.8	122	64-130	1	0-15	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IDW-S-01302014	**Sample**	**Solid**	**GC 1**	**01/31/14**	**01/31/14 19:34**	**140131S02**
IDW-S-01302014	**Matrix Spike**	**Solid**	**GC 1**	**01/31/14**	**01/31/14 20:10**	**140131S02**
IDW-S-01302014	**Matrix Spike Duplicate**	**Solid**	**GC 1**	**01/31/14**	**01/31/14 20:46**	**140131S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	77.09	200.0	307.0	115	325.2	124	42-126	6	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-Floor1-7.5	**Sample**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:00**	**140131S01**
UST-Floor1-7.5	**Matrix Spike**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:02**	**140131S01**
UST-Floor1-7.5	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 18:03**	**140131S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	8.462	34	9.682	39	50-115	13	0-20	3
Arsenic	1.183	25.00	27.01	103	25.72	98	75-125	5	0-20	
Barium	72.13	25.00	103.5	125	96.53	98	75-125	7	0-20	
Beryllium	ND	25.00	26.73	107	26.07	104	75-125	2	0-20	
Cadmium	ND	25.00	25.56	102	25.14	101	75-125	2	0-20	
Chromium	8.986	25.00	34.92	104	34.12	101	75-125	2	0-20	
Cobalt	7.053	25.00	34.04	108	33.48	106	75-125	2	0-20	
Copper	7.463	25.00	33.73	105	33.98	106	75-125	1	0-20	
Lead	ND	25.00	26.09	104	25.40	102	75-125	3	0-20	
Molybdenum	ND	25.00	25.51	102	24.77	99	75-125	3	0-20	
Nickel	6.579	25.00	32.35	103	31.50	100	75-125	3	0-20	
Selenium	ND	25.00	24.22	97	24.15	97	75-125	0	0-20	
Silver	ND	12.50	13.42	107	12.95	104	75-125	4	0-20	
Thallium	ND	25.00	20.10	80	19.74	79	75-125	2	0-20	
Vanadium	25.72	25.00	50.99	101	50.12	98	75-125	2	0-20	
Zinc	33.90	25.00	59.33	102	60.09	105	75-125	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-Floor1-7.5	**Sample**	**Solid**	**Mercury**	**01/31/14**	**01/31/14 13:16**	**140131S03**
UST-Floor1-7.5	**Matrix Spike**	**Solid**	**Mercury**	**01/31/14**	**01/31/14 13:18**	**140131S03**
UST-Floor1-7.5	**Matrix Spike Duplicate**	**Solid**	**Mercury**	**01/31/14**	**01/31/14 13:20**	**140131S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.8091	97	0.8265	99	71-137	2	0-14	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
EXC-W-4.0	**Sample**	**Solid**	**GC 58**	**01/30/14**	**02/01/14 01:27**	**140130S22**
EXC-W-4.0	**Matrix Spike**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 12:20**	**140130S22**
EXC-W-4.0	**Matrix Spike Duplicate**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 12:38**	**140130S22**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	0.1000	0.1312	131	0.1250	125	50-135	5	0-20	
Aroclor-1260	ND	0.1000	0.1034	103	0.09887	99	50-135	5	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-Floor1-10.0	**Sample**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 18:59**	**140130S23**
UST-Floor1-10.0	**Matrix Spike**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 19:19**	**140130S23**
UST-Floor1-10.0	**Matrix Spike Duplicate**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 19:38**	**140130S23**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	10.00	8.376	84	8.384	84	34-148	0	0-20	
Acenaphthylene	ND	10.00	8.382	84	8.378	84	53-120	0	0-20	
Butyl Benzyl Phthalate	ND	10.00	9.097	91	8.831	88	15-189	3	0-20	
4-Chloro-3-Methylphenol	ND	10.00	9.616	96	9.151	92	32-120	5	0-20	
2-Chlorophenol	ND	10.00	9.659	97	9.588	96	53-120	1	0-20	
1,4-Dichlorobenzene	ND	10.00	6.806	68	7.048	70	43-120	3	0-26	
Dimethyl Phthalate	ND	10.00	8.693	87	8.695	87	44-122	0	0-20	
2,4-Dinitrotoluene	ND	10.00	9.459	95	9.521	95	28-120	1	0-20	
Fluorene	ND	10.00	8.496	85	8.433	84	12-186	1	0-20	
N-Nitroso-di-n-propylamine	ND	10.00	10.31	103	9.924	99	38-140	4	0-20	
Naphthalene	ND	10.00	8.185	82	8.053	81	20-140	2	0-20	
4-Nitrophenol	ND	10.00	7.395	74	7.727	77	14-128	4	0-59	
Pentachlorophenol	ND	10.00	6.320	63	6.444	64	10-124	2	0-20	
Phenol	ND	10.00	10.44	104	10.05	100	22-124	4	0-20	
Pyrene	ND	10.00	8.330	83	8.164	82	31-169	2	0-20	
1,2,4-Trichlorobenzene	ND	10.00	7.223	72	7.210	72	56-120	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IDW-S-01292014	**Sample**	**Solid**	**GC/MS BB**	**01/31/14**	**01/31/14 16:42**	**140131S01**
IDW-S-01292014	**Matrix Spike**	**Solid**	**GC/MS BB**	**01/31/14**	**01/31/14 17:37**	**140131S01**
IDW-S-01292014	**Matrix Spike Duplicate**	**Solid**	**GC/MS BB**	**01/31/14**	**01/31/14 18:04**	**140131S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	5.000	4.836	97	4.291	86	61-127	12	0-20	
Chloroform	ND	5.000	4.264	85	3.729	75	80-120	13	0-20	3
1,1-Dichloroethane	ND	5.000	4.627	93	4.277	86	80-120	8	0-20	
1,2-Dichloroethane	ND	5.000	3.545	71	3.000	60	80-120	17	0-20	3
1,1-Dichloroethene	ND	5.000	4.264	85	3.718	74	47-143	14	0-25	
Ethanol	ND	50.00	15.79	32	7.962	16	17-167	66	0-47	3,4
Tetrachloroethene	ND	5.000	4.472	89	3.892	78	80-120	14	0-20	3
Toluene	0.8954	5.000	5.398	90	4.849	79	63-123	11	0-20	
Trichloroethene	ND	5.000	4.384	88	3.845	77	44-158	13	0-20	
p/m-Xylene	7.352	10.00	13.75	64	12.93	56	70-130	6	0-30	3
o-Xylene	3.886	5.000	7.384	70	6.905	60	70-130	7	0-30	3
Methyl-t-Butyl Ether (MTBE)	ND	5.000	5.309	106	4.717	94	57-123	12	0-21	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
UST-Floor1-7.5	**Sample**	**Solid**	**ICP 7300**	**01/31/14 00:00**	**01/31/14 18:00**	**140131S01**
UST-Floor1-7.5	**PDS**	**Solid**	**ICP 7300**	**01/31/14 00:00**	**01/31/14 18:04**	**140131S01**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Antimony	ND	25.00	23.00	92	75-125	
Arsenic	1.183	25.00	26.62	102	75-125	
Barium	72.13	25.00	96.56	98	75-125	
Beryllium	ND	25.00	25.83	103	75-125	
Cadmium	ND	25.00	24.86	99	75-125	
Chromium	8.986	25.00	34.20	101	75-125	
Cobalt	7.053	25.00	33.44	106	75-125	
Copper	7.463	25.00	33.40	104	75-125	
Lead	ND	25.00	25.45	102	75-125	
Molybdenum	ND	25.00	25.31	101	75-125	
Nickel	6.579	25.00	31.95	101	75-125	
Selenium	ND	25.00	23.73	95	75-125	
Silver	ND	12.50	11.17	89	75-125	
Thallium	ND	25.00	19.76	79	75-125	
Vanadium	25.72	25.00	50.21	98	75-125	
Zinc	33.90	25.00	60.49	106	75-125	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
UST-Floor1-7.5	**Sample**	**Solid**	**Mercury**	**01/31/14 00:00**	**01/31/14 13:16**	**140131S03**
UST-Floor1-7.5	**PDS**	**Solid**	**Mercury**	**01/31/14 00:00**	**01/31/14 13:22**	**140131S03**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Mercury	ND	0.8350	0.8345	100	75-125	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-366-17	**LCS**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:39**	**140131B02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Diesel Range Organics (C10-C28)	400.0	449.4	112	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-747	**LCS**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:39**	**140131B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	445.1	111	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5035
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 3 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-5040	**LCS**	**Solid**	**GC 29**	**01/31/14**	**01/31/14 12:09**	**140131B03**
099-12-285-5040	**LCSD**	**Solid**	**GC 29**	**01/31/14**	**01/31/14 12:45**	**140131B03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2.000	1.798	90	1.811	91	55-139	1	0-18	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 4 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-697-473	**LCS**	**Solid**	**GC 1**	**01/31/14**	**01/31/14 18:58**	**140131B02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Gasoline Range Organics (C6-C12)	10.00	8.905	89	70-118	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 5 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-17966	**LCS**	**Solid**	**ICP 7300**	**01/31/14**	**01/31/14 17:57**	**140131L01D**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	24.58	98	80-120	73-127	
Arsenic	25.00	25.90	104	80-120	73-127	
Barium	25.00	25.71	103	80-120	73-127	
Beryllium	25.00	25.14	101	80-120	73-127	
Cadmium	25.00	26.42	106	80-120	73-127	
Chromium	25.00	26.16	105	80-120	73-127	
Cobalt	25.00	28.33	113	80-120	73-127	
Copper	25.00	26.41	106	80-120	73-127	
Lead	25.00	26.59	106	80-120	73-127	
Molybdenum	25.00	25.74	103	80-120	73-127	
Nickel	25.00	27.32	109	80-120	73-127	
Selenium	25.00	24.48	98	80-120	73-127	
Silver	12.50	13.39	107	80-120	73-127	
Thallium	25.00	26.57	106	80-120	73-127	
Vanadium	25.00	25.25	101	80-120	73-127	
Zinc	25.00	27.37	109	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 6 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-007-10005	**LCS**	**Solid**	**Mercury**	**01/31/14**	**01/31/14 13:11**	**140131L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8764	105	85-121	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8082
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 7 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-2465	**LCS**	**Solid**	**GC 58**	**01/30/14**	**02/03/14 11:44**	**140130L22**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	0.1000	0.1265	127	50-135	
Aroclor-1260	0.1000	0.1124	112	50-135	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 8 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-549-2837	**LCS**	**Solid**	**GC/MS SS**	**01/30/14**	**01/31/14 18:20**	**140130L23**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acenaphthene	10.00	8.618	86	51-123	39-135	
Acenaphthylene	10.00	8.714	87	52-120	41-131	
Butyl Benzyl Phthalate	10.00	9.469	95	43-139	27-155	
4-Chloro-3-Methylphenol	10.00	9.210	92	55-121	44-132	
2-Chlorophenol	10.00	9.873	99	58-124	47-135	
1,4-Dichlorobenzene	10.00	8.584	86	42-132	27-147	
Dimethyl Phthalate	10.00	9.013	90	51-123	39-135	
2,4-Dinitrotoluene	10.00	9.775	98	51-129	38-142	
Fluorene	10.00	8.725	87	54-126	42-138	
N-Nitroso-di-n-propylamine	10.00	10.15	102	40-136	24-152	
Naphthalene	10.00	8.472	85	32-146	13-165	
4-Nitrophenol	10.00	7.443	74	24-126	7-143	
Pentachlorophenol	10.00	6.285	63	23-131	5-149	
Phenol	10.00	10.28	103	40-130	25-145	
Pyrene	10.00	8.515	85	47-143	31-159	
1,2,4-Trichlorobenzene	10.00	7.871	79	45-129	31-143	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.	Date Received:	01/30/14
1687 Cole Blvd., Suite 200	Work Order:	14-01-1839
Lakewood, CO 80401-3318	Preparation:	EPA 5035
	Method:	EPA 8260B
Project: BP/Tesoro 1289 / GP09BPNA.C167		Page 9 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-766	LCS	Solid	GC/MS Z	01/31/14	01/31/14 10:31	140131L02
099-12-709-766	LCSD	Solid	GC/MS Z	01/31/14	01/31/14 10:58	140131L02

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04355	87	0.04321	86	78-120	71-127	1	0-20	
Bromobenzene	0.05000	0.04512	90	0.04559	91	80-120	73-127	1	0-20	
Bromochloromethane	0.05000	0.04379	88	0.04493	90	80-120	73-127	3	0-20	
Bromodichloromethane	0.05000	0.04364	87	0.04418	88	80-120	73-127	1	0-20	
Bromoform	0.05000	0.05335	107	0.05603	112	80-120	73-127	5	0-20	
Bromomethane	0.05000	0.03683	74	0.03527	71	80-120	73-127	4	0-20	ME,X
n-Butylbenzene	0.05000	0.04925	98	0.04841	97	77-123	69-131	2	0-25	
sec-Butylbenzene	0.05000	0.04553	91	0.04520	90	80-120	73-127	1	0-20	
tert-Butylbenzene	0.05000	0.04516	90	0.04552	91	80-120	73-127	1	0-20	
Carbon Disulfide	0.05000	0.04355	87	0.04111	82	80-120	73-127	6	0-20	
Carbon Tetrachloride	0.05000	0.04678	94	0.04700	94	49-139	34-154	0	0-20	
Chlorobenzene	0.05000	0.04171	83	0.04198	84	79-120	72-127	1	0-20	
Chloroethane	0.05000	0.05321	106	0.05129	103	80-120	73-127	4	0-20	
Chloroform	0.05000	0.04317	86	0.04338	87	80-120	73-127	0	0-20	
Chloromethane	0.05000	0.05184	104	0.05132	103	80-120	73-127	1	0-20	
2-Chlorotoluene	0.05000	0.04188	84	0.04251	85	80-120	73-127	1	0-20	
4-Chlorotoluene	0.05000	0.04338	87	0.04261	85	80-120	73-127	2	0-20	
Dibromochloromethane	0.05000	0.04570	91	0.04739	95	80-120	73-127	4	0-20	
1,2-Dibromo-3-Chloropropane	0.05000	0.04112	82	0.04299	86	80-120	73-127	4	0-20	
1,2-Dibromoethane	0.05000	0.04547	91	0.04744	95	80-120	73-127	4	0-20	
Dibromomethane	0.05000	0.04382	88	0.04655	93	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	0.05000	0.04423	88	0.04510	90	75-120	68-128	2	0-20	
1,3-Dichlorobenzene	0.05000	0.04403	88	0.04435	89	80-120	73-127	1	0-20	
1,4-Dichlorobenzene	0.05000	0.04643	93	0.04718	94	80-120	73-127	2	0-20	
Dichlorodifluoromethane	0.05000	0.04355	87	0.04318	86	80-120	73-127	1	0-20	
1,1-Dichloroethane	0.05000	0.04840	97	0.04738	95	80-120	73-127	2	0-20	
1,2-Dichloroethane	0.05000	0.04294	86	0.04405	88	80-120	73-127	3	0-20	
1,1-Dichloroethene	0.05000	0.04286	86	0.04199	84	74-122	66-130	2	0-20	
c-1,2-Dichloroethene	0.05000	0.04681	94	0.04570	91	80-120	73-127	2	0-20	
t-1,2-Dichloroethene	0.05000	0.04471	89	0.04523	90	80-120	73-127	1	0-20	
1,2-Dichloropropane	0.05000	0.05058	101	0.05110	102	79-115	73-121	1	0-25	
1,3-Dichloropropane	0.05000	0.04285	86	0.04424	88	80-120	73-127	3	0-20	
2,2-Dichloropropane	0.05000	0.05319	106	0.05412	108	80-120	73-127	2	0-20	
1,1-Dichloropropene	0.05000	0.04377	88	0.04407	88	80-120	73-127	1	0-20	
c-1,3-Dichloropropene	0.05000	0.04473	89	0.04545	91	80-120	73-127	2	0-20	
t-1,3-Dichloropropene	0.05000	0.04362	87	0.04521	90	80-120	73-127	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Date Received: 01/30/14
Work Order: 14-01-1839
Preparation: EPA 5035
Method: EPA 8260B

Project: BP/Tesoro 1289 / GP09BPNA.C167

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Ethylbenzene	0.05000	0.04521	90	0.04505	90	76-120	69-127	0	0-20	
Isopropylbenzene	0.05000	0.04223	84	0.04241	85	80-120	73-127	0	0-20	
p-Isopropyltoluene	0.05000	0.04422	88	0.04392	88	80-120	73-127	1	0-20	
Methylene Chloride	0.05000	0.03876	78	0.04530	91	80-120	73-127	16	0-20	ME
Naphthalene	0.05000	0.04518	90	0.04730	95	80-120	73-127	5	0-20	
n-Propylbenzene	0.05000	0.04179	84	0.04147	83	80-120	73-127	1	0-20	
Styrene	0.05000	0.04447	89	0.04502	90	80-120	73-127	1	0-20	
Ethanol	0.5000	0.4735	95	0.5606	112	56-140	42-154	17	0-20	
1,1,1,2-Tetrachloroethane	0.05000	0.04971	99	0.05085	102	80-120	73-127	2	0-20	
1,1,2,2-Tetrachloroethane	0.05000	0.04765	95	0.05004	100	80-120	73-127	5	0-20	
Tetrachloroethene	0.05000	0.04723	94	0.04690	94	80-120	73-127	1	0-20	
Toluene	0.05000	0.04491	90	0.04478	90	77-120	70-127	0	0-20	
1,2,3-Trichlorobenzene	0.05000	0.04831	97	0.05014	100	80-120	73-127	4	0-20	
1,2,4-Trichlorobenzene	0.05000	0.04958	99	0.04969	99	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	0.05000	0.04506	90	0.04540	91	80-120	73-127	1	0-20	
1,1,2-Trichloroethane	0.05000	0.04468	89	0.04576	92	80-120	73-127	2	0-20	
Trichloroethene	0.05000	0.04689	94	0.04577	92	80-120	73-127	2	0-20	
Trichlorofluoromethane	0.05000	0.04177	84	0.04073	81	80-120	73-127	3	0-20	
1,2,3-Trichloropropane	0.05000	0.04307	86	0.04390	88	80-120	73-127	2	0-20	
1,2,4-Trimethylbenzene	0.05000	0.04815	96	0.04817	96	80-120	73-127	0	0-20	
1,3,5-Trimethylbenzene	0.05000	0.04601	92	0.04640	93	80-120	73-127	1	0-20	
Vinyl Acetate	0.05000	0.05639	113	0.05631	113	80-120	73-127	0	0-20	
Vinyl Chloride	0.05000	0.05151	103	0.04983	100	68-122	59-131	3	0-20	
p/m-Xylene	0.1000	0.08373	84	0.08411	84	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.04118	82	0.04151	83	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04616	92	0.04652	93	77-120	70-127	1	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2547	102	0.2734	109	68-122	59-131	7	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.05980	120	0.05994	120	78-120	71-127	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.06275	125	0.06313	126	78-120	71-127	1	0-20	ME
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04882	98	0.05036	101	75-120	68-128	3	0-20	

Total number of LCS compounds: 66
Total number of ME compounds: 3
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 11 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-709-767	LCS	Solid	GC/MS BB	01/31/14	01/31/14 14:16	140131L01

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	0.05000	0.04790	96	78-120	71-127	
Bromobenzene	0.05000	0.05048	101	80-120	73-127	
Bromochloromethane	0.05000	0.04742	95	80-120	73-127	
Bromodichloromethane	0.05000	0.04959	99	80-120	73-127	
Bromoform	0.05000	0.05210	104	80-120	73-127	
Bromomethane	0.05000	0.05076	102	80-120	73-127	
n-Butylbenzene	0.05000	0.05444	109	77-123	69-131	
sec-Butylbenzene	0.05000	0.05024	100	80-120	73-127	
tert-Butylbenzene	0.05000	0.04931	99	80-120	73-127	
Carbon Disulfide	0.05000	0.04499	90	80-120	73-127	
Carbon Tetrachloride	0.05000	0.04761	95	49-139	34-154	
Chlorobenzene	0.05000	0.04653	93	79-120	72-127	
Chloroethane	0.05000	0.05598	112	80-120	73-127	
Chloroform	0.05000	0.04870	97	80-120	73-127	
Chloromethane	0.05000	0.06194	124	80-120	73-127	ME
2-Chlorotoluene	0.05000	0.04885	98	80-120	73-127	
4-Chlorotoluene	0.05000	0.04904	98	80-120	73-127	
Dibromochloromethane	0.05000	0.05109	102	80-120	73-127	
1,2-Dibromo-3-Chloropropane	0.05000	0.04942	99	80-120	73-127	
1,2-Dibromoethane	0.05000	0.05108	102	80-120	73-127	
Dibromomethane	0.05000	0.04914	98	80-120	73-127	
1,2-Dichlorobenzene	0.05000	0.04714	94	75-120	68-128	
1,3-Dichlorobenzene	0.05000	0.04696	94	80-120	73-127	
1,4-Dichlorobenzene	0.05000	0.04910	98	80-120	73-127	
Dichlorodifluoromethane	0.05000	0.05898	118	80-120	73-127	
1,1-Dichloroethane	0.05000	0.05054	101	80-120	73-127	
1,2-Dichloroethane	0.05000	0.04795	96	80-120	73-127	
1,1-Dichloroethene	0.05000	0.04701	94	74-122	66-130	
c-1,2-Dichloroethene	0.05000	0.04983	100	80-120	73-127	
t-1,2-Dichloroethene	0.05000	0.04954	99	80-120	73-127	
1,2-Dichloropropane	0.05000	0.04852	97	79-115	73-121	
1,3-Dichloropropane	0.05000	0.04990	100	80-120	73-127	
2,2-Dichloropropane	0.05000	0.05201	104	80-120	73-127	
1,1-Dichloropropene	0.05000	0.05016	100	80-120	73-127	
c-1,3-Dichloropropene	0.05000	0.05274	105	80-120	73-127	
t-1,3-Dichloropropene	0.05000	0.05210	104	80-120	73-127	
Ethylbenzene	0.05000	0.05082	102	76-120	69-127	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 12 of 12

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Isopropylbenzene	0.05000	0.04966	99	80-120	73-127	
p-Isopropyltoluene	0.05000	0.04957	99	80-120	73-127	
Methylene Chloride	0.05000	0.05015	100	80-120	73-127	
Naphthalene	0.05000	0.05226	105	80-120	73-127	
n-Propylbenzene	0.05000	0.04925	98	80-120	73-127	
Styrene	0.05000	0.05265	105	80-120	73-127	
Ethanol	0.5000	0.4987	100	56-140	42-154	
1,1,1,2-Tetrachloroethane	0.05000	0.05069	101	80-120	73-127	
1,1,2,2-Tetrachloroethane	0.05000	0.04899	98	80-120	73-127	
Tetrachloroethene	0.05000	0.05022	100	80-120	73-127	
Toluene	0.05000	0.04863	97	77-120	70-127	
1,2,3-Trichlorobenzene	0.05000	0.05276	106	80-120	73-127	
1,2,4-Trichlorobenzene	0.05000	0.05326	107	80-120	73-127	
1,1,1-Trichloroethane	0.05000	0.04867	97	80-120	73-127	
1,1,2-Trichloroethane	0.05000	0.05037	101	80-120	73-127	
Trichloroethene	0.05000	0.04892	98	80-120	73-127	
Trichlorofluoromethane	0.05000	0.05495	110	80-120	73-127	
1,2,3-Trichloropropane	0.05000	0.04970	99	80-120	73-127	
1,2,4-Trimethylbenzene	0.05000	0.05375	108	80-120	73-127	
1,3,5-Trimethylbenzene	0.05000	0.05507	110	80-120	73-127	
Vinyl Acetate	0.05000	0.06473	129	80-120	73-127	X
Vinyl Chloride	0.05000	0.05856	117	68-122	59-131	
p/m-Xylene	0.1000	0.09904	99	75-125	67-133	
o-Xylene	0.05000	0.05078	102	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.05107	102	77-120	70-127	
Tert-Butyl Alcohol (TBA)	0.2500	0.2530	101	68-122	59-131	
Diisopropyl Ether (DIPE)	0.05000	0.05306	106	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.05193	104	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.05085	102	75-120	68-128	

Total number of LCS compounds: 66
Total number of ME compounds: 1
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1839

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3050B	598	ICP 7300	1
EPA 7471A	EPA 7471A Total	769	Mercury	1
EPA 8015B (M)	EPA 5035	902	GC 29	2
EPA 8015B (M)	EPA 3550B	682	GC 47	1
EPA 8015B (M)	EPA 5030C	902	GC 1	2
EPA 8082	EPA 3545	669	GC 58	1
EPA 8260B	EPA 5035	849	GC/MS Z	2
EPA 8260B	EPA 5030C	823	GC/MS BB	2
EPA 8270C	EPA 3545	449	GC/MS SS	1
EPA 8270C	EPA 3545	513	GC/MS CCC	1

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1839

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 14-01-1839

Date: 1/29/14

Page 1 of 2

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY: on file STATE: ZIP:

TEL: E-MAIL:

CLIENT PROJECT NAME / NUMBER: BP/tesoro 1259/GP09BPNA, C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak (formerly Gill)

SAMPLER(S): (PRINT) Same as Page 2

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
* CEL # 140124B place on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) 7471A	Cr(VI) [7196 or 7199 or 218.6]	mercury (7471A)
1	UST-Floor1-7.5	1/29/14	1250	Soil	7	2	5		X	X			X		X	X		X		X		X
2	UST-Floor2-6.0		1330	Soil	7	2	5		X	X			X		X	X		X		X		X
3	UST-S-7.5		1342	Soil	7	2	5		X	X			X		X	X		X		X		X
4	UST-E-7.5		1348	Soil	7	2	5		X	X			X		X	X		X		X		X
5	UST-W-7.5		1356	Soil	7	2	5		X	X			X		X	X		X		X		X
6	UST-N-7.5		1404	Soil	7	2	5		X	X			X		X	X		X		X		X
7	UST-Floor1-10.0		1421	Soil	7	2	5		X	X			X		X	X		X		X		X
8	IDW-S-01292014		1440	Soil	1	1			X	X			X			X		X		X		X
9	EXC-W-4.0	1/30/14	1430	Soil	7	2	5		X	X			X		X	X		X		X		
10	TRIP BLANK*	1/30/14	—	W	4		✓															

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Mark Swift	1-30-14	1500
Relinquished by: (Signature) Mark Swift	Received by: (Signature/Affiliation) Precy [signature]	1/30/14	1705
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
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(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

Date 1/30/14

Page 2 of 2

WO # / LAB USE ONLY: 01-1839

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY STATE ZIP

TEL: on file E-MAIL:

CLIENT PROJECT NAME / NUMBER: DP/Tesoro 1289 / CP09BPNA.C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak (formerly Gill)

SAMPLER(S): (PRINT) A. Leavitt

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
* 131212A place on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core (Terra Core Prep (5035))	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) 74714	Cr(VI) [7196 or 7199 or 218.6]	Mercury 7471A			
11	EXC-B1-6.5	1/30/14	1328	Soil	7	2	5		X	X			X		X	X		X		X		X			
12	EXC-B1-10.0		1336	Soil	7	2	5		X	X			X		X	X		X		X		X			
13	EXC-B2-6.5		1345	Soil	7	2	5		X	X			X		X	X		X		X		X			
14	EXC-B2-10.0		1358	Soil	7	2	5		X	X			X		X	X		X		X		X			
15	EXC-E1-4.0		1306	Soil	7	2	5		X	X			X		X	X		X		X		X			
16	EXC-E2-4.0		1310	Soil	7	2	5		X	X			X		X	X		X		X		X			
17	EXC-S-4.0		1318	Soil	7	2	5		X	X			X		X	X		X		X		X			
18	UST-Floor2-10.0		1407	Soil	7	2	5		X	X			X		X	X		X		X		X			
19	IDW-S-01302014		1410	Soil	1	1			X	X			X			X		X		X		X			
20	TRIP BLANK*	1/30/14	—	W	2		✓																		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]	1-30-14	1500
[signature]	[signature]	1/30/14	1705

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 1 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.9 °C - 0.3 °C (CF) = 1.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☑VOAh (10)(4) ☐VOA**na**$_2$ ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na**$_2$ ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na**$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 140124B3 **Labeled/Checked by:** 836

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 802

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 2 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1 . 7 °C - 0.3 °C (CF) = 1 . 4 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ (-8) ☑~~16~~ 8 ozCGJ A ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☑VOAh (-20) (2) ☐VOAna$_2$ 836 1/30/14 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna$_2$ ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 131212A **Labeled/Checked by:** 836

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 3 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.5 °C - 0.3 °C (CF) = 1.2 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na_2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

Additional requested analyses are reported as a stand-alone report.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1839

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP/Tesoro 1289 / GP09BPNA.C167

Attention: Darla Zelenak
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 02/04/2014 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: BP/Tesoro 1289 / GP09BPNA.C167
Work Order Number: 14-01-1839

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2 Client Sample Data. 4
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3.2 LCS/LCSD. 6

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6 Chain of Custody/Sample Receipt Form. 9

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1839 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/30/14. They were assigned to Work Order 14-01-1839.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Per Andrew Leavitt's request, all analyses have been cancelled for samples UST-Floor1-10.0, EXC-B1-10.0, EXC-B2-10.0, and UST-Floor2-10.0.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B1-10.0	**14-01-1839-12-A**	**01/30/14 13:36**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 19:52**	**140131B02**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	23	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	139	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	270	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	138	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	129	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UST-Floor1-10.0	**Sample**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 19:01**	**140131S02**
UST-Floor1-10.0	**Matrix Spike**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:56**	**140131S02**
UST-Floor1-10.0	**Matrix Spike Duplicate**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 16:11**	**140131S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C28)	9.342	400.0	501.2	123	504.8	124	61-145	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-366-17	**LCS**	**Solid**	**GC 47**	**01/31/14**	**01/31/14 15:39**	**140131B02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Diesel Range Organics (C10-C28)	400.0	449.4	112	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1839

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8015B (M)	EPA 3550B	682	GC 47	1

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1839

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 14-01-1839

Date: 1/29/14

Page 1 of 2

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY: on file STATE: ZIP:

TEL: E-MAIL:

CLIENT PROJECT NAME / NUMBER: BP/tesoro 1259/GP09BPNA, C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak (formerly Gill)

SAMPLER(S): (PRINT) Same as Page 2

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
* CEL # 140124B place on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) 7471A	Cr(VI) [7196 or 7199 or 218.6]	mercury (7471A)
1	UST-Floor1-7.5	1/29/14	1250	Soil	7	2	5		X	X			X		X	X		X		X		X
2	UST-Floor2-6.0		1330	Soil	7	2	5		X	X			X		X	X		X		X		X
3	UST-S-7.5		1342	Soil	7	2	5		X	X			X		X	X		X		X		X
4	UST-E-7.5		1348	Soil	7	2	5		X	X			X		X	X		X		X		X
5	UST-W-7.5		1356	Soil	7	2	5		X	X			X		X	X		X		X		X
6	UST-N-7.5		1404	Soil	7	2	5		X	X			X		X	X		X		X		X
7	UST-Floor1-10.0		1421	Soil	7	2	5		X	X			X		X	X		X		X		X
8	IDW-S-01292014		1440	Soil	1	1			X	X			X			X		X		X		X
9	EXC-W-4.0	1/30/14	1430	Soil	7	2	5		X	X			X		X	X		X		X		
10	TRIP BLANK*	1/30/14	—	W	4		✓															

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Mark Swift	1-30-14	1500
Mark Swift	Precy [signature]	1/30/14	1705

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(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

Date 1/30/14

Page 2 of 2

WO # / LAB USE ONLY: 01-1839

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY STATE ZIP

TEL: on file E-MAIL:

CLIENT PROJECT NAME / NUMBER: DP/Tesoro 1289 / CP09BPNA.C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak (formerly Gill)

SAMPLER(S): (PRINT) A. Leavitt

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
* 131212A place on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH (_____)	BTEX / MTBE (8260) or (_____)	VOCs (8260)	Oxygenates (8260)	En Core (Terra Core Prep (5035))	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) 74714	Cr(VI) [7196 or 7199 or 218.6]	Mercury 7471A			
11	EXC-B1-6.5	1/30/14	1328	Soil	7	2	5		X	X			X		X	X		X		X		X			
12	EXC-B1-10.0		1336	Soil	7	2	5		X	X			X		X	X		X		X		X			
13	EXC-B2-6.5		1345	Soil	7	2	5		X	X			X		X	X		X		X		X			
14	EXC-B2-10.0		1358	Soil	7	2	5		X	X			X		X	X		X		X		X			
15	EXC-E1-4.0		1306	Soil	7	2	5		X	X			X		X	X		X		X		X			
16	EXC-E2-4.0		1310	Soil	7	2	5		X	X			X		X	X		X		X		X			
17	EXC-S-4.0		1318	Soil	7	2	5		X	X			X		X	X		X		X		X			
18	UST-Floor2-10.0		1407	Soil	7	2	5		X	X			X		X	X		X		X		X			
19	IDW-S-01302014		1410	Soil	1	1			X	X			X			X		X		X		X			
20	TRIP BLANK*	1/30/14	—	W	2		✓																		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]	1-30-14	1500
[signature]	[signature]	1/30/14	1705

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 1 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.9 °C - 0.3 °C (CF) = 1.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☑VOAh (4) ☐VOA**na**$_2$ ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na**$_2$ ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na**$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 140124B **Labeled/Checked by:** 836

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 802

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 2 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1 . 7 °C - 0.3 °C (CF) = 1 . 4 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐ _____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ (-8) ☑~~16~~ 8 oz~~C~~A GJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☑VOA**h** (-20) (2) ☐VOA**na$_2$** 836 1/30/14 ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 131212A **Labeled/Checked by:** 836

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 3 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.5 °C - 0.3 °C (CF) = 1.2 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na_2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-02-0196

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP/Tesoro 1289 / GP09BPNA.C167

Attention: Darla Zelenak
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 02/06/2014 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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NELAP ID: 03220CA | DoD-ELAP ID: L10-41 | DSDLAC ID: 101109 | SCAQMD ID: 93LA0830

Calscience Environmental Laboratories, Inc.

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Client Project Name: BP/Tesoro 1289 / GP09BPNA.C167
Work Order Number: 14-02-0196

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5 Glossary of Terms and Qualifiers. 7

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-02-0196 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 02/05/14. They were assigned to Work Order 14-02-0196.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/05/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-0196
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EXC-B2-15.0	**14-02-0196-1-A**	**02/05/14 09:30**	**Solid**	**GC 48**	**02/05/14**	**02/05/14 20:52**	**140205B04A**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	5.7	5.0	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	89	61-145	

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	76	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	02/05/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-0196
Lakewood, CO 80401-3318		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-366-18	**LCS**	**Solid**	**GC 48**	**02/05/14**	**02/05/14 16:57**	**140205B04A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Diesel Range Organics (C10-C28)	400.0	390.7	98	75-123	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-02-0196

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8015B (M)	EPA 3550B	847	GC 48	1

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-02-0196

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 14-02-0196

Date: 2/5/14

Page 1 of 1

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY: on file STATE ZIP

TEL: E-MAIL:

CLIENT PROJECT NAME / NUMBER: BP/Tesoro 1289 / GPOA BPNA C167

P.O. NO.:

PROJECT CONTACT: Darla Zolenak (formerly Gill)

SAMPLER(S): (PRINT) A. Leavitt

TURNAROUND TIME: ☐ SAME DAY ☒ 24 HR * ☐ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
*24 hour TAT on ~~GRO~~ DRO only. all else on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO (C6C36) or (C6-C44) *	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/7470A)	Cr(VI) [7196 or 7199 or 218.6]					
1	EXC-B2-15.0	2/5/14	0930	Soil	7	2	5		X	X			X		X	X		X		X						

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	CEL	02/05/14	1124
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

09/01/13 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-02-0196

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Aradis

DATE: 02/05/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 5.9 °C - 0.3 °C (CF) = 5.6 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 300

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 300

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 300

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 2oz BJ

Aqueous: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 300

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 316

Preservative: h: HCL n: HNO_3 na_2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 300

Calscience Environmental Laboratories, Inc.

Supplemental Report 2

Additional requested analyses are reported as a stand-alone report.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1839

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP/Tesoro 1289 / GP09BPNA.C167

Attention: Darla Zelenak
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 02/13/2014 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1839 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/30/14. They were assigned to Work Order 14-01-1839.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Per Andrew Leavitt's request, all analyses have been cancelled for samples UST-Floor1-10.0, EXC-B1-10.0, EXC-B2-10.0, and UST-Floor2-10.0.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	T22.11.5. All
		Method:	EPA 6010B
		Units:	mg/L
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**ICP 7300**	**02/11/14**	**02/13/14 14:20**	**140213LA1**

Parameter	Result	RL	DF	Qualifiers
Lead	8.02	0.100	1	

Parameter	Result	RL	DF	Qualifiers
Lead	ND	0.100	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 1311
		Method:	EPA 6010B
		Units:	mg/L
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S-01292014	**14-01-1839-8-A**	**01/29/14 14:40**	**Solid**	**ICP 7300**	**02/11/14**	**02/12/14 14:10**	**140212LA2**

Parameter	Result	RL	DF	Qualifiers
Lead	0.913	0.100	1	

Parameter	Result	RL	DF	Qualifiers
Lead	ND	0.100	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	T22.11.5. All
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IDW-S-01292014	**Sample**	**Solid**	**ICP 7300**	**02/11/14**	**02/13/14 14:20**	**140213SA1**
IDW-S-01292014	**Matrix Spike**	**Solid**	**ICP 7300**	**02/11/14**	**02/13/14 14:21**	**140213SA1**
IDW-S-01292014	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**02/11/14**	**02/13/14 14:23**	**140213SA1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	8.017	5.000	12.51	90	13.80	116	75-125	10	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 1311
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IDW-S-01292014	**Sample**	**Solid**	**ICP 7300**	**02/11/14**	**02/12/14 14:10**	**140212SA2**
IDW-S-01292014	**Matrix Spike**	**Solid**	**ICP 7300**	**02/11/14**	**02/12/14 14:12**	**140212SA2**
IDW-S-01292014	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**02/11/14**	**02/12/14 14:13**	**140212SA2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	0.9133	5.000	6.251	107	5.898	100	84-120	6	0-7	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	T22.11.5. All
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IDW-S-01292014	**Sample**	**Solid**	**ICP 7300**	**02/11/14 00:00**	**02/13/14 14:20**	**140213SA1**
IDW-S-01292014	**PDS**	**Solid**	**ICP 7300**	**02/11/14 00:00**	**02/13/14 14:24**	**140213SA1**
IDW-S-01292014	**PDSD**	**Solid**	**ICP 7300**	**02/11/14 00:00**	**02/13/14 14:25**	**140213SA1**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	PDSD Conc.	PDSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	8.017	5.000	13.30	106	13.48	109	75-125	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 1311
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IDW-S-01292014	**Sample**	**Solid**	**ICP 7300**	**02/11/14 00:00**	**02/12/14 14:10**	**140212SA2**
IDW-S-01292014	**PDS**	**Solid**	**ICP 7300**	**02/11/14 00:00**	**02/12/14 16:43**	**140212SA2**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Lead	0.9133	5.000	5.934	100	75-125	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	T22.11.5. All
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-05-006-7141	**LCS**	**Aqueous**	**ICP 7300**	**02/11/14**	**02/13/14 14:16**	**140213LA1**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Lead	5.000	5.303	106	80-120	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	01/30/14
1687 Cole Blvd., Suite 200		Work Order:	14-01-1839
Lakewood, CO 80401-3318		Preparation:	EPA 1311
		Method:	EPA 6010B
Project: BP/Tesoro 1289 / GP09BPNA.C167			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-021-1103	**LCS**	**Aqueous**	**ICP 7300**	**02/11/14**	**02/12/14 14:08**	**140212LA2**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Lead	5.000	5.212	104	80-120	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1839

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 1311	469	ICP 7300	1
EPA 6010B	T22.11.5. All	469	ICP 7300	1

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1839

Qualifiers	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended maximum holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
JA	Analyte positively identified but quantitation is an estimate.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 14-01-1839

Date: 1/29/14

Page 1 of 2

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY: on file STATE: ZIP:

TEL: E-MAIL:

CLIENT PROJECT NAME / NUMBER: BP/tesoro 1259/GP09BPNA, C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak (formerly Gill)

SAMPLER(S): (PRINT) Same as Page 2

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
* CEL # 140124B place on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) 7471A	Cr(VI) [7196 or 7199 or 218.6]	mercury (7471A)
1	UST-Floor1-7.5	1/29/14	1250	Soil	7	2	5		X	X			X		X	X		X		X		X
2	UST-Floor2-6.0		1330	Soil	7	2	5		X	X			X		X	X		X		X		X
3	UST-S-7.5		1342	Soil	7	2	5		X	X			X		X	X		X		X		X
4	UST-E-7.5		1348	Soil	7	2	5		X	X			X		X	X		X		X		X
5	UST-W-7.5		1356	Soil	7	2	5		X	X			X		X	X		X		X		X
6	UST-N-7.5		1404	Soil	7	2	5		X	X			X		X	X		X		X		X
7	UST-Floor1-10.0		1421	Soil	7	2	5		X	X			X		X	X		X		X		X
8	IDW-S-01292014		1440	Soil	1	1			X	X			X			X		X		X		X
9	EXC-W-4.0	1/30/14	1430	Soil	7	2	5		X	X			X		X	X		X		X		
10	TRIP BLANK*	1/30/14	—	W	4		✓															

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Mark Swift	1-30-14	1500
Relinquished by: (Signature) Mark Swift	Received by: (Signature/Affiliation) Percy [signature]	1/30/14	1705
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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☐ NorCal Service Center
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Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

Date 1/30/14

Page 2 of 2

WO # / LAB USE ONLY: 01-1839

LABORATORY CLIENT: Arcadis

ADDRESS:

CITY STATE ZIP

TEL: on file E-MAIL:

CLIENT PROJECT NAME / NUMBER: DP/Tesoro 1289 / CP09BPNA.C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak (formerly Gill)

SAMPLER(S): (PRINT) A. Leavitt

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
* 131212A place on hold

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH (_____)	BTEX / MTBE (8260) or (_____)	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) 74714	Cr(VI) [7196 or 7199 or 218.6]	Mercury 7471A				
11	EXC-B1-6.5	1/30/14	1328	Soil	7	2	5		X	X			X		X	X		X		X		X				
12	EXC-B1-10.0		1336	Soil	7	2	5		X	X			X		X	X		X		X		X				
13	EXC-B2-6.5		1345	Soil	7	2	5		X	X			X		X	X		X		X		X				
14	EXC-B2-10.0		1358	Soil	7	2	5		X	X			X		X	X		X		X		X				
15	EXC-E1-4.0		1306	Soil	7	2	5		X	X			X		X	X		X		X		X				
16	EXC-E2-4.0		1310	Soil	7	2	5		X	X			X		X	X		X		X		X				
17	EXC-S-4.0		1318	Soil	7	2	5		X	X			X		X	X		X		X		X				
18	UST-Floor2-10.0		1407	Soil	7	2	5		X	X			X		X	X		X		X		X				
19	IDW-S-01302014		1410	Soil	1	1			X	X			X			X		X		X		X				
20	TRIP BLANK*	1/30/14	—	W	2		✓																			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]	1-30-14	1500
[signature]	[signature]	1/30/14	1705

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

09/01/13 Revision

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Richard Villafania

From: Zelenak, Darla [Darla.Zelenak@arcadis-us.com]
Sent: Tuesday, February 11, 2014 9:38 AM
To: Richard Villafania
Cc: Headrick, Jacqueline; Fiol, Greg
Subject: RE: STLC & TCLP analyses request

Richard,
I forgot to include in the email below, I only need TCLP and STLC for lead.
Thanks
-Darla

From: Zelenak, Darla
Sent: Tuesday, February 11, 2014 10:35 AM
To: Richard Villafania
Cc: Headrick, Jacqueline; Fiol, Greg
Subject: STLC & TCLP analyses request

Richard,
As we discussed on the phone, will you please check to see if you have enough of the soil sample IDW-S-01292014 for TCLP and STLC analysis? The soil samples were included in work order # 14-01-1839.
We would need a short TAT. I realize that we would get these results late Thursday afternoon or early Friday due to the extraction period.
Thanks
-Darla

Please note the last name & email change!

Darla Zelenak | Project Engineer | Darla.Zelenak@arcadis-us.com

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Professional Engineer / PE-AZ, 46991 | PE-CO, 42521

ARCADIS, Imagine the result

Please consider the environment before printing this email.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 1 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.9 °C - 0.3 °C (CF) = 1.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☑VOAh (4) ☐VOA**na**$_2$ ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na**$_2$ ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na**$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 140124B **Labeled/Checked by:** 836

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 802

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 2 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1 . 7 °C - 0.3 °C (CF) = 1 . 4 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ (-8) ☑~~16~~ 8 ozCGJ A ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☑VOAh (-20) (2) ☐VOAna$_2$ 836 1/30/14 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna$_2$ ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 13/2/2A **Labeled/Checked by:** 836

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na$_2$:$Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1839

SAMPLE RECEIPT FORM

Cooler 3 of 3

CLIENT: Arcadis

DATE: 01/30/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.5 °C - 0.3 °C (CF) = 1.2 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☑TerraCores® (5) ☑ 80 ml PJ

Aqueous: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na_2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-02-1124

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: BP-1289 / GP09BPNA.C167

Attention: Darla Zelenak
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Approved for release on 02/25/2014 by:
Richard Villafania
Project Manager

ResultLink ›

Email your PM ›

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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NELAP ID: 03220CA | DoD-ELAP ID: L10-41 | DSDLAC ID: 10109 | SCAQMD ID: 93LA0830

Calscience Environmental Laboratories, Inc.

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Work Order Number: 14-02-1124

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-02-1124 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 02/17/14. They were assigned to Work Order 14-02-1124.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Due to the low LCS/LCSD recoveries of Benzidine and Benzoic Acid for Method 8270C, any reported concentrations of this analyte should be considered to be bias low.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-H**	**02/17/14 09:00**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 03:39**	**140217B17**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	50	1.00	
C7	ND	50	1.00	
C8	ND	50	1.00	
C9-C10	ND	50	1.00	
C11-C12	90	50	1.00	
C13-C14	ND	50	1.00	
C15-C16	ND	50	1.00	
C17-C18	ND	50	1.00	
C19-C20	ND	50	1.00	
C21-C22	ND	50	1.00	
C23-C24	ND	50	1.00	
C25-C28	ND	50	1.00	
C29-C32	ND	50	1.00	
C33-C36	ND	50	1.00	
C37-C40	ND	50	1.00	
C41-C44	ND	50	1.00	
C6-C44 Total	260	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-472-182**	**N/A**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 02:49**	**140217B17**

Parameter	Result	RL	DF	Qualifiers
C6	ND	50	1.00	
C7	ND	50	1.00	
C8	ND	50	1.00	
C9-C10	ND	50	1.00	
C11-C12	ND	50	1.00	
C13-C14	ND	50	1.00	
C15-C16	ND	50	1.00	
C17-C18	ND	50	1.00	
C19-C20	ND	50	1.00	
C21-C22	ND	50	1.00	
C23-C24	ND	50	1.00	
C25-C28	ND	50	1.00	
C29-C32	ND	50	1.00	
C33-C36	ND	50	1.00	
C37-C40	ND	50	1.00	
C41-C44	ND	50	1.00	
C6-C44 Total	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	73	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-H**	**02/17/14 09:00**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 03:39**	**140217B18**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	280	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-679-63**	**N/A**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 02:49**	**140217B18**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics (C10-C28)	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	73	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-E**	**02/17/14 09:00**	**Aqueous**	**GC 42**	**02/18/14**	**02/19/14 04:51**	**140218B02**

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	75	38-134	

Method Blank	**099-12-695-1488**	**N/A**	**Aqueous**	**GC 42**	**02/18/14**	**02/19/14 03:41**	**140218B02**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics (C6-C12)	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	79	38-134	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-G**	**02/17/14 09:00**	**Aqueous**	**ICP 7300**	**02/17/14**	**02/19/14 18:41**	**140217LA6B**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	15.0	1.00	
Arsenic	47.4	10.0	1.00	
Barium	4060	10.0	1.00	
Beryllium	13.5	10.0	1.00	
Cadmium	ND	10.0	1.00	
Chromium	2520	10.0	1.00	
Cobalt	235	10.0	1.00	
Copper	1070	10.0	1.00	
Lead	83.1	10.0	1.00	
Molybdenum	127	10.0	1.00	
Nickel	650	10.0	1.00	
Selenium	ND	15.0	1.00	
Silver	ND	5.00	1.00	
Thallium	ND	15.0	1.00	
Vanadium	607	10.0	1.00	
Zinc	4440	10.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-14037**	**N/A**	**Aqueous**	**ICP 7300**	**02/17/14**	**02/19/14 18:33**	**140217LA6B**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	15.0	1.00	
Arsenic	ND	10.0	1.00	
Barium	ND	10.0	1.00	
Beryllium	ND	10.0	1.00	
Cadmium	ND	10.0	1.00	
Chromium	ND	10.0	1.00	
Cobalt	ND	10.0	1.00	
Copper	ND	10.0	1.00	
Lead	ND	10.0	1.00	
Molybdenum	ND	10.0	1.00	
Nickel	ND	10.0	1.00	
Selenium	ND	15.0	1.00	
Silver	ND	5.00	1.00	
Thallium	ND	15.0	1.00	
Vanadium	ND	10.0	1.00	
Zinc	ND	10.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8082
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-J**	**02/17/14 09:00**	**Aqueous**	**GC 31**	**02/19/14**	**02/24/14 17:24**	**140219L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.98	1.00	
Aroclor-1221	ND	0.98	1.00	
Aroclor-1232	ND	0.98	1.00	
Aroclor-1242	ND	0.98	1.00	
Aroclor-1248	ND	0.98	1.00	
Aroclor-1254	ND	0.98	1.00	
Aroclor-1260	ND	0.98	1.00	
Aroclor-1262	ND	0.98	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	85	50-135	
2,4,5,6-Tetrachloro-m-Xylene	106	50-135	

Method Blank	**099-12-533-893**	**N/A**	**Aqueous**	**GC 31**	**02/19/14**	**02/24/14 17:05**	**140219L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1.00	
Aroclor-1221	ND	1.0	1.00	
Aroclor-1232	ND	1.0	1.00	
Aroclor-1242	ND	1.0	1.00	
Aroclor-1248	ND	1.0	1.00	
Aroclor-1254	ND	1.0	1.00	
Aroclor-1260	ND	1.0	1.00	
Aroclor-1262	ND	1.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	127	50-135	
2,4,5,6-Tetrachloro-m-Xylene	117	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8270C
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-I**	**02/17/14 09:00**	**Aqueous**	**GC/MS TT**	**02/20/14**	**02/24/14 13:17**	**140220L08**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	10	1.00	
Acenaphthylene	ND	10	1.00	
Anthracene	ND	10	1.00	
Benzidine	ND	52	1.00	
Benzo (a) Anthracene	ND	10	1.00	
Benzo (a) Pyrene	ND	10	1.00	
Benzo (b) Fluoranthene	ND	10	1.00	
Benzo (g,h,i) Perylene	ND	10	1.00	
Benzo (k) Fluoranthene	ND	10	1.00	
Benzoic Acid	ND	52	1.00	
Benzyl Alcohol	ND	10	1.00	
Bis(2-Chloroethoxy) Methane	ND	10	1.00	
Bis(2-Chloroethyl) Ether	ND	26	1.00	
Bis(2-Chloroisopropyl) Ether	ND	10	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	10	1.00	
4-Bromophenyl-Phenyl Ether	ND	10	1.00	
Butyl Benzyl Phthalate	ND	10	1.00	
4-Chloro-3-Methylphenol	ND	10	1.00	
4-Chloroaniline	ND	10	1.00	
2-Chloronaphthalene	ND	10	1.00	
2-Chlorophenol	ND	10	1.00	
4-Chlorophenyl-Phenyl Ether	ND	10	1.00	
Chrysene	ND	10	1.00	
Di-n-Butyl Phthalate	ND	10	1.00	
Di-n-Octyl Phthalate	ND	10	1.00	
Dibenz (a,h) Anthracene	ND	10	1.00	
Dibenzofuran	ND	10	1.00	
1,2-Dichlorobenzene	ND	10	1.00	
1,3-Dichlorobenzene	ND	10	1.00	
1,4-Dichlorobenzene	ND	10	1.00	
3,3'-Dichlorobenzidine	ND	26	1.00	
2,6-Dichlorophenol	ND	10	1.00	
2,4-Dichlorophenol	ND	10	1.00	
Diethyl Phthalate	ND	10	1.00	
Dimethyl Phthalate	ND	10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: BP-1289 / GP09BPNA.C167		Page 2 of 6

Parameter	Result	RL	DF	Qualifiers
2,4-Dimethylphenol	ND	10	1.00	
4,6-Dinitro-2-Methylphenol	ND	52	1.00	IH
2,4-Dinitrophenol	ND	52	1.00	IH
2,4-Dinitrotoluene	ND	10	1.00	
2,6-Dinitrotoluene	ND	10	1.00	
Fluoranthene	ND	10	1.00	
Fluorene	ND	10	1.00	
Hexachloro-1,3-Butadiene	ND	10	1.00	
Hexachlorobenzene	ND	10	1.00	
Hexachloroethane	ND	10	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.00	
Isophorone	ND	10	1.00	
2-Methylnaphthalene	ND	10	1.00	
1-Methylnaphthalene	ND	10	1.00	
2-Methylphenol	ND	10	1.00	
3/4-Methylphenol	ND	10	1.00	
N-Nitroso-di-n-propylamine	ND	10	1.00	
N-Nitrosodimethylamine	ND	10	1.00	
N-Nitrosodiphenylamine	ND	10	1.00	
Naphthalene	ND	10	1.00	
4-Nitroaniline	ND	10	1.00	
3-Nitroaniline	ND	10	1.00	
2-Nitroaniline	ND	10	1.00	
Nitrobenzene	ND	26	1.00	
4-Nitrophenol	ND	10	1.00	
2-Nitrophenol	ND	10	1.00	
Pentachlorophenol	ND	10	1.00	
Phenanthrene	ND	10	1.00	
Phenol	ND	10	1.00	
Pyrene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	10	1.00	
2,4,6-Trichlorophenol	ND	10	1.00	
2,4,5-Trichlorophenol	ND	10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	50-110	
2-Fluorophenol	54	20-110	
Nitrobenzene-d5	80	40-110	
p-Terphenyl-d14	78	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8270C
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
Phenol-d6	38	10-115	
2,4,6-Tribromophenol	81	40-125	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8270C
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-671-25**	**N/A**	**Aqueous**	**GC/MS TT**	**02/20/14**	**02/24/14 12:22**	**140220L08**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	10	1.00	
Acenaphthylene	ND	10	1.00	
Anthracene	ND	10	1.00	
Benzidine	ND	50	1.00	
Benzo (a) Anthracene	ND	10	1.00	
Benzo (a) Pyrene	ND	10	1.00	
Benzo (b) Fluoranthene	ND	10	1.00	
Benzo (g,h,i) Perylene	ND	10	1.00	
Benzo (k) Fluoranthene	ND	10	1.00	
Benzoic Acid	ND	50	1.00	
Benzyl Alcohol	ND	10	1.00	
Bis(2-Chloroethoxy) Methane	ND	10	1.00	
Bis(2-Chloroethyl) Ether	ND	25	1.00	
Bis(2-Chloroisopropyl) Ether	ND	10	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	10	1.00	
4-Bromophenyl-Phenyl Ether	ND	10	1.00	
Butyl Benzyl Phthalate	ND	10	1.00	
4-Chloro-3-Methylphenol	ND	10	1.00	
4-Chloroaniline	ND	10	1.00	
2-Chloronaphthalene	ND	10	1.00	
2-Chlorophenol	ND	10	1.00	
4-Chlorophenyl-Phenyl Ether	ND	10	1.00	
Chrysene	ND	10	1.00	
Di-n-Butyl Phthalate	ND	10	1.00	
Di-n-Octyl Phthalate	ND	10	1.00	
Dibenz (a,h) Anthracene	ND	10	1.00	
Dibenzofuran	ND	10	1.00	
1,2-Dichlorobenzene	ND	10	1.00	
1,3-Dichlorobenzene	ND	10	1.00	
1,4-Dichlorobenzene	ND	10	1.00	
3,3'-Dichlorobenzidine	ND	25	1.00	
2,6-Dichlorophenol	ND	10	1.00	
2,4-Dichlorophenol	ND	10	1.00	
Diethyl Phthalate	ND	10	1.00	
Dimethyl Phthalate	ND	10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: BP-1289 / GP09BPNA.C167		Page 5 of 6

Parameter	Result	RL	DF	Qualifiers
2,4-Dimethylphenol	ND	10	1.00	
4,6-Dinitro-2-Methylphenol	ND	50	1.00	
2,4-Dinitrophenol	ND	50	1.00	
2,4-Dinitrotoluene	ND	10	1.00	
2,6-Dinitrotoluene	ND	10	1.00	
Fluoranthene	ND	10	1.00	
Fluorene	ND	10	1.00	
Hexachloro-1,3-Butadiene	ND	10	1.00	
Hexachlorobenzene	ND	10	1.00	
Hexachloroethane	ND	10	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.00	
Isophorone	ND	10	1.00	
2-Methylnaphthalene	ND	10	1.00	
1-Methylnaphthalene	ND	10	1.00	
2-Methylphenol	ND	10	1.00	
3/4-Methylphenol	ND	10	1.00	
N-Nitroso-di-n-propylamine	ND	10	1.00	
N-Nitrosodimethylamine	ND	10	1.00	
N-Nitrosodiphenylamine	ND	10	1.00	
Naphthalene	ND	10	1.00	
4-Nitroaniline	ND	10	1.00	
3-Nitroaniline	ND	10	1.00	
2-Nitroaniline	ND	10	1.00	
Nitrobenzene	ND	25	1.00	
4-Nitrophenol	ND	10	1.00	
2-Nitrophenol	ND	10	1.00	
Pentachlorophenol	ND	10	1.00	
Phenanthrene	ND	10	1.00	
Phenol	ND	10	1.00	
Pyrene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	10	1.00	
2,4,6-Trichlorophenol	ND	10	1.00	
2,4,5-Trichlorophenol	ND	10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	85	50-110	
2-Fluorophenol	64	20-110	
Nitrobenzene-d5	91	40-110	
p-Terphenyl-d14	88	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8270C
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
Phenol-d6	45	10-115	
2,4,6-Tribromophenol	86	40-125	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HP1-02172014	**14-02-1124-1-A**	**02/17/14 09:00**	**Aqueous**	**GC/MS L**	**02/18/14**	**02/18/14 21:53**	**140218L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	10	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	0.50	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	0.50	1.00	
Bromoform	ND	0.50	1.00	
Bromomethane	ND	1.0	1.00	
2-Butanone	ND	5.0	1.00	
n-Butylbenzene	ND	0.50	1.00	
sec-Butylbenzene	ND	0.50	1.00	
tert-Butylbenzene	ND	0.50	1.00	
Carbon Disulfide	ND	1.0	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	0.50	1.00	
Chloroethane	ND	0.50	1.00	
2-Chloroethyl Vinyl Ether	ND	5.0	1.00	
Chloroform	ND	0.50	1.00	
Chloromethane	ND	0.50	1.00	
2-Chlorotoluene	ND	0.50	1.00	
4-Chlorotoluene	ND	0.50	1.00	
Dibromochloromethane	ND	0.50	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	0.50	1.00	
Dibromomethane	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	0.50	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	0.50	1.00	
c-1,2-Dichloroethene	5.6	0.50	1.00	
t-1,2-Dichloroethene	ND	0.50	1.00	
Acetonitrile	ND	10	1.00	
1,2-Dichloropropane	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: BP-1289 / GP09BPNA.C167		Page 2 of 6

Parameter	Result	RL	DF	Qualifiers
Acrolein	ND	20	1.00	
Acrylonitrile	ND	10	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	
Allyl Chloride	ND	1.0	1.00	
1,1-Dichloropropene	ND	0.50	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	0.50	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	0.50	1.00	
p-Isopropyltoluene	ND	0.50	1.00	
Methylene Chloride	ND	1.0	1.00	
4-Methyl-2-Pentanone	ND	5.0	1.00	
Naphthalene	ND	1.0	1.00	
n-Propylbenzene	ND	0.50	1.00	
Styrene	ND	0.50	1.00	
Chloroprene	ND	0.50	1.00	
1,1,1,2-Tetrachloroethane	ND	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	0.50	1.00	
Tetrachloroethene	ND	0.50	1.00	
Toluene	ND	0.50	1.00	
1,2,3-Trichlorobenzene	ND	0.50	1.00	
Ethyl Methacrylate	ND	5.0	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
1,1,1-Trichloroethane	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	2.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1.00	
1,1,2-Trichloroethane	ND	0.50	1.00	
Iodomethane	ND	10	1.00	
Trichloroethene	8.1	0.50	1.00	
Trichlorofluoromethane	ND	0.50	1.00	
Isobutyl Alcohol	ND	10	1.00	
1,2,3-Trichloropropane	ND	1.0	1.00	
1,2,4-Trimethylbenzene	ND	0.50	1.00	
Methacrylonitrile	ND	10	1.00	
Methyl Methacrylate	ND	5.0	1.00	
1,3,5-Trimethylbenzene	ND	0.50	1.00	
Vinyl Acetate	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: BP-1289 / GP09BPNA.C167		Page 3 of 6

Parameter	Result	RL	DF	Qualifiers
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	0.50	1.00	
o-Xylene	ND	0.50	1.00	
Methyl-t-Butyl Ether (MTBE)	2.6	0.50	1.00	
t-1,4-Dichloro-2-Butene	ND	5.0	1.00	
Tetrahydrofuran	ND	5.0	1.00	
Propionitrile	ND	10	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	1.2	0.50	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1.00	
Ethanol	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-120	
Dibromofluoromethane	102	80-127	
1,2-Dichloroethane-d4	102	80-128	
Toluene-d8	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: BP-1289 / GP09BPNA.C167			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-10-025-2944**	**N/A**	**Aqueous**	**GC/MS L**	**02/18/14**	**02/18/14 14:56**	**140218L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	10	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	0.50	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	0.50	1.00	
Bromoform	ND	0.50	1.00	
Bromomethane	ND	1.0	1.00	
2-Butanone	ND	5.0	1.00	
n-Butylbenzene	ND	0.50	1.00	
sec-Butylbenzene	ND	0.50	1.00	
tert-Butylbenzene	ND	0.50	1.00	
Carbon Disulfide	ND	1.0	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	0.50	1.00	
Chloroethane	ND	0.50	1.00	
2-Chloroethyl Vinyl Ether	ND	5.0	1.00	
Chloroform	ND	0.50	1.00	
Chloromethane	ND	0.50	1.00	
2-Chlorotoluene	ND	0.50	1.00	
4-Chlorotoluene	ND	0.50	1.00	
Dibromochloromethane	ND	0.50	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	0.50	1.00	
Dibromomethane	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	0.50	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	0.50	1.00	
c-1,2-Dichloroethene	ND	0.50	1.00	
t-1,2-Dichloroethene	ND	0.50	1.00	
Acetonitrile	ND	10	1.00	
1,2-Dichloropropane	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: BP-1289 / GP09BPNA.C167		Page 5 of 6

Parameter	Result	RL	DF	Qualifiers
Acrolein	ND	20	1.00	
Acrylonitrile	ND	10	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	
Allyl Chloride	ND	1.0	1.00	
1,1-Dichloropropene	ND	0.50	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	0.50	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	0.50	1.00	
p-Isopropyltoluene	ND	0.50	1.00	
Methylene Chloride	ND	1.0	1.00	
4-Methyl-2-Pentanone	ND	5.0	1.00	
Naphthalene	ND	1.0	1.00	
n-Propylbenzene	ND	0.50	1.00	
Styrene	ND	0.50	1.00	
Chloroprene	ND	0.50	1.00	
1,1,1,2-Tetrachloroethane	ND	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	0.50	1.00	
Tetrachloroethene	ND	0.50	1.00	
Toluene	ND	0.50	1.00	
1,2,3-Trichlorobenzene	ND	0.50	1.00	
Ethyl Methacrylate	ND	5.0	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
1,1,1-Trichloroethane	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	2.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1.00	
1,1,2-Trichloroethane	ND	0.50	1.00	
Iodomethane	ND	10	1.00	
Trichloroethene	ND	0.50	1.00	
Trichlorofluoromethane	ND	0.50	1.00	
Isobutyl Alcohol	ND	10	1.00	
1,2,3-Trichloropropane	ND	1.0	1.00	
1,2,4-Trimethylbenzene	ND	0.50	1.00	
Methacrylonitrile	ND	10	1.00	
Methyl Methacrylate	ND	5.0	1.00	
1,3,5-Trimethylbenzene	ND	0.50	1.00	
Vinyl Acetate	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: BP-1289 / GP09BPNA.C167		Page 6 of 6

Parameter	Result	RL	DF	Qualifiers
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	0.50	1.00	
o-Xylene	ND	0.50	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1.00	
t-1,4-Dichloro-2-Butene	ND	5.0	1.00	
Tetrahydrofuran	ND	5.0	1.00	
Propionitrile	ND	10	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1.00	
Ethanol	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-120	
Dibromofluoromethane	101	80-127	
1,2-Dichloroethane-d4	102	80-128	
Toluene-d8	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
HP1-02172014	**Sample**	**Aqueous**	**GC 42**	**02/18/14**	**02/19/14 04:51**	**140218S02**
HP1-02172014	**Matrix Spike**	**Aqueous**	**GC 42**	**02/18/14**	**02/19/14 05:25**	**140218S02**
HP1-02172014	**Matrix Spike Duplicate**	**Aqueous**	**GC 42**	**02/18/14**	**02/19/14 06:00**	**140218S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	ND	2000	1767	88	1762	88	38-134	0	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
HP1-02172014	**Sample**	**Aqueous**	**ICP 7300**	**02/17/14**	**02/19/14 18:41**	**140217SA6A**
HP1-02172014	**Matrix Spike**	**Aqueous**	**ICP 7300**	**02/17/14**	**02/19/14 18:42**	**140217SA6A**
HP1-02172014	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**02/17/14**	**02/19/14 18:48**	**140217SA6A**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	500.0	34.80	7	41.11	8	72-132	17	0-10	LN,AY
Arsenic	47.40	500.0	395.7	70	423.3	75	80-140	7	0-11	LN,AY
Barium	4063	500.0	6017	4X	6333	4X	87-123	4X	0-6	BB
Beryllium	13.53	500.0	521.1	102	578.2	113	89-119	10	0-8	
Cadmium	ND	500.0	462.8	93	510.0	102	82-124	10	0-7	
Chromium	2525	500.0	3868	4X	4127	4X	86-122	4X	0-8	BB
Cobalt	234.9	500.0	744.2	102	793.3	112	83-125	6	0-7	
Copper	1072	500.0	2071	200	2218	229	78-126	7	0-7	LM,AY
Lead	83.10	500.0	563.8	96	619.9	107	84-120	9	0-7	
Molybdenum	127.4	500.0	361.4	47	367.8	48	78-126	2	0-7	LN,AY
Nickel	650.4	500.0	1228	116	1300	130	84-120	6	0-7	LM,AY
Selenium	ND	500.0	208.8	42	220.3	44	79-127	5	0-9	LN,AY
Silver	ND	250.0	196.8	79	220.4	88	86-128	11	0-7	LN,AY
Thallium	ND	500.0	251.7	50	306.2	61	79-121	20	0-8	LN,AY
Vanadium	606.6	500.0	917.0	62	935.5	66	88-118	2	0-7	LN,AY
Zinc	4441	500.0	5687	4X	5909	4X	89-131	4X	0-8	BB

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-02-0893-18	**Sample**	**Aqueous**	**GC/MS L**	**02/18/14**	**02/18/14 15:34**	**140218S01**
14-02-0893-18	**Matrix Spike**	**Aqueous**	**GC/MS L**	**02/18/14**	**02/18/14 16:28**	**140218S01**
14-02-0893-18	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS L**	**02/18/14**	**02/18/14 16:55**	**140218S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	40.00	40.69	102	40.96	102	76-124	1	0-20	
Carbon Tetrachloride	ND	40.00	43.62	109	45.62	114	74-134	4	0-20	
Chlorobenzene	ND	40.00	42.39	106	43.03	108	80-120	1	0-20	
1,2-Dibromoethane	ND	40.00	39.34	98	41.73	104	80-120	6	0-20	
1,2-Dichlorobenzene	ND	40.00	41.12	103	42.18	105	80-120	3	0-20	
1,2-Dichloroethane	ND	40.00	38.44	96	39.36	98	80-120	2	0-20	
1,1-Dichloroethene	ND	40.00	39.76	99	41.05	103	73-127	3	0-20	
Ethylbenzene	ND	40.00	42.01	105	42.92	107	78-126	2	0-20	
Toluene	ND	40.00	40.75	102	41.29	103	80-120	1	0-20	
Trichloroethene	ND	40.00	39.43	99	39.61	99	77-120	0	0-20	
Vinyl Chloride	ND	40.00	42.26	106	44.85	112	72-126	6	0-20	
p/m-Xylene	ND	80.00	85.58	107	87.28	109	70-130	2	0-30	
o-Xylene	ND	40.00	43.23	108	43.44	109	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	40.00	36.52	91	39.34	98	67-121	7	0-49	
Tert-Butyl Alcohol (TBA)	ND	200.0	219.8	110	209.9	105	36-162	5	0-30	
Diisopropyl Ether (DIPE)	ND	40.00	37.33	93	39.15	98	60-138	5	0-45	
Ethyl-t-Butyl Ether (ETBE)	ND	40.00	37.53	94	39.73	99	69-123	6	0-30	
Tert-Amyl-Methyl Ether (TAME)	ND	40.00	39.98	100	42.10	105	65-120	5	0-20	
Ethanol	ND	400.0	350.4	88	352.3	88	30-180	1	0-72	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
HP1-02172014	**Sample**	**Aqueous**	**ICP 7300**	**02/17/14 00:00**	**02/19/14 18:41**	**140217SA6A**
HP1-02172014	**PDS**	**Aqueous**	**ICP 7300**	**02/17/14 00:00**	**02/19/14 18:50**	**140217SA6A**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Antimony	ND	500.0	434.2	87	75-125	
Arsenic	47.40	500.0	577.1	106	75-125	
Barium	4063	500.0	4529	4X	75-125	BB
Beryllium	13.53	500.0	539.1	105	75-125	
Cadmium	ND	500.0	483.8	97	75-125	
Chromium	2525	500.0	3016	4X	75-125	BB
Cobalt	234.9	500.0	729.9	99	75-125	
Copper	1072	500.0	1606	107	75-125	
Lead	83.10	500.0	555.9	95	75-125	
Molybdenum	127.4	500.0	619.6	98	75-125	
Nickel	650.4	500.0	1126	95	75-125	
Selenium	ND	500.0	447.5	90	75-125	
Silver	ND	250.0	226.0	90	75-125	
Thallium	ND	500.0	245.7	49	75-125	LN,AY
Vanadium	606.6	500.0	1105	100	75-125	
Zinc	4441	500.0	4981	4X	75-125	BB

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-472-182	**LCS**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 03:05**	**140217B17**
099-15-472-182	**LCSD**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 03:22**	**140217B17**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1720	86	1653	83	75-117	4	0-13	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-679-63	**LCS**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 03:05**	**140217B18**
099-15-679-63	**LCSD**	**Aqueous**	**GC 47**	**02/17/14**	**02/19/14 03:22**	**140217B18**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C28)	2000	1737	87	1668	83	75-117	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: BP-1289 / GP09BPNA.C167			Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-695-1488	**LCS**	**Aqueous**	**GC 42**	**02/18/14**	**02/19/14 04:16**	**140218B02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Gasoline Range Organics (C6-C12)	2000	1856	93	78-120	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: BP-1289 / GP09BPNA.C167			Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-14037	**LCS**	**Aqueous**	**ICP 7300**	**02/17/14**	**02/19/14 18:35**	**140217LA6B**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	500.0	511.7	102	80-120	73-127	
Arsenic	500.0	484.0	97	80-120	73-127	
Barium	500.0	508.4	102	80-120	73-127	
Beryllium	500.0	482.8	97	80-120	73-127	
Cadmium	500.0	511.7	102	80-120	73-127	
Chromium	500.0	506.0	101	80-120	73-127	
Cobalt	500.0	552.8	111	80-120	73-127	
Copper	500.0	513.0	103	80-120	73-127	
Lead	500.0	518.1	104	80-120	73-127	
Molybdenum	500.0	494.6	99	80-120	73-127	
Nickel	500.0	535.5	107	80-120	73-127	
Selenium	500.0	467.4	93	80-120	73-127	
Silver	250.0	258.9	104	80-120	73-127	
Thallium	500.0	522.2	104	80-120	73-127	
Vanadium	500.0	485.7	97	80-120	73-127	
Zinc	500.0	493.6	99	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 3510C
		Method:	EPA 8082
Project: BP-1289 / GP09BPNA.C167			Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-533-893	**LCS**	**Aqueous**	**GC 31**	**02/19/14**	**02/24/14 17:43**	**140219L05**
099-12-533-893	**LCSD**	**Aqueous**	**GC 31**	**02/19/14**	**02/24/14 18:02**	**140219L05**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.273	114	2.348	117	50-135	3	0-25	
Aroclor-1260	2.000	2.235	112	2.390	119	50-135	7	0-25	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.	Date Received:	02/17/14
1687 Cole Blvd., Suite 200	Work Order:	14-02-1124
Lakewood, CO 80401-3318	Preparation:	EPA 3510C
	Method:	EPA 8270C
Project: BP-1289 / GP09BPNA.C167		Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-671-25	LCS	Aqueous	GC/MS TT	02/20/14	02/24/14 12:40	140220L08
099-12-671-25	LCSD	Aqueous	GC/MS TT	02/20/14	02/24/14 12:59	140220L08

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	200.0	168.6	84	166.3	83	45-110	34-121	1	0-11	
Acenaphthylene	200.0	163.0	82	161.6	81	50-105	41-114	1	0-20	
Anthracene	200.0	165.0	82	159.1	80	55-110	46-119	4	0-20	
Benzidine	200.0	0	0	0	0	50-130	37-143	0	0-20	LR
Benzo (a) Anthracene	200.0	177.7	89	173.4	87	55-110	46-119	2	0-20	
Benzo (a) Pyrene	200.0	195.4	98	192.4	96	55-110	46-119	2	0-20	
Benzo (b) Fluoranthene	200.0	190.6	95	187.9	94	45-120	32-132	1	0-20	
Benzo (g,h,i) Perylene	200.0	174.6	87	168.5	84	40-125	26-139	4	0-20	
Benzo (k) Fluoranthene	200.0	176.8	88	170.4	85	45-125	32-138	4	0-20	
Benzoic Acid	200.0	88.27	44	84.03	42	50-130	37-143	5	0-20	LR,ME
Benzyl Alcohol	200.0	144.8	72	145.2	73	30-110	17-123	0	0-20	
Bis(2-Chloroethoxy) Methane	200.0	165.2	83	160.8	80	45-105	35-115	3	0-20	
Bis(2-Chloroethyl) Ether	200.0	164.5	82	160.9	80	35-110	22-122	2	0-20	
Bis(2-Chloroisopropyl) Ether	200.0	166.8	83	162.9	81	25-130	8-148	2	0-20	
Bis(2-Ethylhexyl) Phthalate	200.0	176.3	88	174.1	87	40-125	26-139	1	0-20	
4-Bromophenyl-Phenyl Ether	200.0	172.6	86	165.9	83	50-115	39-126	4	0-20	
Butyl Benzyl Phthalate	200.0	176.1	88	172.2	86	45-115	33-127	2	0-20	
4-Chloro-3-Methylphenol	200.0	171.7	86	169.6	85	45-110	34-121	1	0-40	
4-Chloroaniline	200.0	116.0	58	126.6	63	15-110	0-126	9	0-20	
2-Chloronaphthalene	200.0	167.5	84	165.4	83	50-105	41-114	1	0-20	
2-Chlorophenol	200.0	167.8	84	165.2	83	35-105	23-117	2	0-18	
4-Chlorophenyl-Phenyl Ether	200.0	165.5	83	163.8	82	50-110	40-120	1	0-20	
Chrysene	200.0	174.2	87	170.3	85	55-110	46-119	2	0-20	
Di-n-Butyl Phthalate	200.0	166.5	83	162.4	81	55-115	45-125	3	0-20	
Di-n-Octyl Phthalate	200.0	182.6	91	179.6	90	35-135	18-152	2	0-20	
Dibenz (a,h) Anthracene	200.0	173.3	87	167.0	84	40-125	26-139	4	0-20	
Dibenzofuran	200.0	166.3	83	165.3	83	55-105	47-113	1	0-20	
1,2-Dichlorobenzene	200.0	170.8	85	167.6	84	35-100	24-111	2	0-20	
1,3-Dichlorobenzene	200.0	172.7	86	169.9	85	30-100	18-112	2	0-20	
1,4-Dichlorobenzene	200.0	173.0	87	168.8	84	30-100	18-112	2	0-26	
3,3'-Dichlorobenzidine	200.0	148.8	74	154.5	77	20-110	5-125	4	0-20	
2,6-Dichlorophenol	200.0	171.2	86	165.0	83	42-120	29-133	4	0-21	
2,4-Dichlorophenol	200.0	170.7	85	168.4	84	50-105	41-114	1	0-20	
Diethyl Phthalate	200.0	161.1	81	159.9	80	40-120	27-133	1	0-20	
Dimethyl Phthalate	200.0	157.6	79	156.3	78	25-125	8-142	1	0-20	
2,4-Dimethylphenol	200.0	147.3	74	139.5	70	30-110	17-123	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.
1687 Cole Blvd., Suite 200
Lakewood, CO 80401-3318

Date Received: 02/17/14
Work Order: 14-02-1124
Preparation: EPA 3510C
Method: EPA 8270C

Project: BP-1289 / GP09BPNA.C167

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
4,6-Dinitro-2-Methylphenol	200.0	221.1	111	218.3	109	40-130	25-145	1	0-20	
2,4-Dinitrophenol	200.0	237.8	119	244.5	122	15-140	0-161	3	0-20	
2,4-Dinitrotoluene	200.0	188.5	94	190.8	95	50-120	38-132	1	0-36	
2,6-Dinitrotoluene	200.0	197.4	99	195.1	98	50-115	39-126	1	0-20	
Fluoranthene	200.0	171.8	86	166.1	83	55-115	45-125	3	0-20	
Fluorene	200.0	165.6	83	165.0	83	50-110	40-120	0	0-20	
Hexachloro-1,3-Butadiene	200.0	178.4	89	171.5	86	25-105	12-118	4	0-20	
Hexachlorobenzene	200.0	173.2	87	165.5	83	50-110	40-120	5	0-20	
Hexachloroethane	200.0	177.8	89	170.8	85	30-95	19-106	4	0-20	
Indeno (1,2,3-c,d) Pyrene	200.0	185.5	93	178.7	89	45-125	32-138	4	0-20	
Isophorone	200.0	161.4	81	158.2	79	50-110	40-120	2	0-20	
2-Methylnaphthalene	200.0	172.9	86	170.0	85	45-105	35-115	2	0-20	
1-Methylnaphthalene	200.0	170.5	85	168.3	84	80-120	73-127	1	0-20	
2-Methylphenol	200.0	155.8	78	153.3	77	40-110	28-122	2	0-20	
3/4-Methylphenol	400.0	292.4	73	290.5	73	30-110	17-123	1	0-20	
N-Nitroso-di-n-propylamine	200.0	155.0	77	154.2	77	35-130	19-146	1	0-13	
N-Nitrosodimethylamine	200.0	117.9	59	115.4	58	25-110	11-124	2	0-20	
N-Nitrosodiphenylamine	200.0	203.5	102	193.6	97	50-110	40-120	5	0-20	
Naphthalene	200.0	168.4	84	164.4	82	40-100	30-110	2	0-20	
4-Nitroaniline	200.0	180.3	90	180.7	90	35-120	21-134	0	0-20	
3-Nitroaniline	200.0	158.6	79	169.3	85	20-125	2-142	7	0-20	
2-Nitroaniline	200.0	193.7	97	196.5	98	50-115	39-126	1	0-20	
Nitrobenzene	200.0	174.1	87	169.1	85	45-110	34-121	3	0-20	
4-Nitrophenol	200.0	125.6	63	125.3	63	20-150	0-172	0	0-40	
2-Nitrophenol	200.0	196.1	98	192.3	96	40-115	28-128	2	0-20	
Pentachlorophenol	200.0	178.8	89	174.1	87	40-115	28-128	3	0-40	
Phenanthrene	200.0	173.6	87	168.4	84	50-115	39-126	3	0-20	
Phenol	200.0	96.89	48	97.09	49	10-115	0-132	0	0-23	
Pyrene	200.0	184.2	92	179.3	90	50-130	37-143	3	0-20	
1,2,4-Trichlorobenzene	200.0	174.4	87	169.9	85	35-105	23-117	3	0-21	
2,4,6-Trichlorophenol	200.0	173.5	87	170.3	85	50-115	39-126	2	0-20	
2,4,5-Trichlorophenol	200.0	170.4	85	171.1	86	50-110	40-120	0	0-20	

Total number of LCS compounds: 68
Total number of ME compounds: 1
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ARCADIS U.S., Inc.		Date Received:	02/17/14
1687 Cole Blvd., Suite 200		Work Order:	14-02-1124
Lakewood, CO 80401-3318		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: BP-1289 / GP09BPNA.C167			Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-10-025-2944	**LCS**	**Aqueous**	**GC/MS L**	**02/18/14**	**02/18/14 14:02**	**140218L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	10.00	9.722	97	80-120	73-127	
Carbon Tetrachloride	10.00	9.826	98	74-134	64-144	
Chlorobenzene	10.00	10.32	103	80-120	73-127	
1,2-Dibromoethane	10.00	9.744	97	79-121	72-128	
1,2-Dichlorobenzene	10.00	10.16	102	80-120	73-127	
1,2-Dichloroethane	10.00	9.378	94	80-120	73-127	
1,1-Dichloroethene	10.00	9.418	94	78-126	70-134	
Ethylbenzene	10.00	10.11	101	80-120	73-127	
Toluene	10.00	9.492	95	80-120	73-127	
Trichloroethene	10.00	9.390	94	79-127	71-135	
Vinyl Chloride	10.00	10.33	103	72-132	62-142	
p/m-Xylene	20.00	20.70	104	75-125	67-133	
o-Xylene	10.00	10.58	106	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	10.00	9.035	90	69-123	60-132	
Tert-Butyl Alcohol (TBA)	50.00	49.09	98	63-123	53-133	
Diisopropyl Ether (DIPE)	10.00	9.088	91	59-137	46-150	
Ethyl-t-Butyl Ether (ETBE)	10.00	9.180	92	69-123	60-132	
Tert-Amyl-Methyl Ether (TAME)	10.00	9.563	96	70-120	62-128	
Ethanol	100.0	99.56	100	28-160	6-182	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-02-1124

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3010A Total	469	ICP 7300	1
EPA 8015B (M)	EPA 3510C	682	GC 47	1
EPA 8015B (M)	EPA 5030C	797	GC 42	2
EPA 8082	EPA 3510C	669	GC 31	1
EPA 8260B	EPA 5030C	316	GC/MS L	2
EPA 8270C	EPA 3510C	449	GC/MS TT	1

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-02-1124 Page 1 of 1

Qualifiers	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended maximum holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
JA	Analyte positively identified but quantitation is an estimate.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 14-02-1124

Date 2/17/14

Page 1 of 1

LABORATORY CLIENT: Aus (Arcadis)

ADDRESS:

CITY: On file STATE: ZIP:

TEL: E-MAIL:

CLIENT PROJECT NAME / NUMBER: BP 1289 / GP09BPNA-C167

P.O. NO.:

PROJECT CONTACT: Darla Zelenak

SAMPLER(S): (PRINT) A. Learitt

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/7471X)	Cr(VI) [7196 or 7199 or 218.6]					
1	HP1-021720 14	2/17/14	0900	H_2O	10	3	7		X	X		~~X~~	X			X		X		X						

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature] A. Lea	2/17/14	1157
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

09/01/13 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-02-1124

SAMPLE RECEIPT FORM

Cooler 1 **of** 1

CLIENT: Arcadis **DATE:** 02/17/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 16.9 °C - 0.3 °C (CF) = 16.6 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☑ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 603

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☑VOAh ☐VOAna$_2$ ☐125AGB ☐125AGBh ☐125AGBp ☑1AGB ☐1AGBna$_2$ ☐1AGBs

☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB

☐250PB ☑250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 603

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 836

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 836

ARCADIS

Appendix C

Waste Manifests

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number: CAR000100024	2. Page 1 of 1	3. Emergency Response Phone: (800) 424-9300	4. Manifest Tracking Number: 005767663 FLE

5. Generator's Name and Mailing Address
Tesoro
P.O. Box 80730
Rancho Santa Margarita, CA 92688
Generator's Phone: (949) 460-5200

Generator's Site Address (if different than mailing address)
Tesoro 97610-1289
4861 E FIRESTONE BOULEVARD
SOUTH GATE, CA 90280

6. Transporter 1 Company Name: BELSHIRE — U.S. EPA ID Number: CAR000183913

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology, Nevada Operations
Highway 95, 11 miles S. of Beatty
Beatty, NV 89003
Facility's Phone: (775) 553-2203
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3082, Hazardous Waste, Liquid, N.O.S., 9, PG III (D008, D018) Contains PCB's	07	DM	1300	K	D008	D018	261
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ERG#: 171
Waste Oil with PCB's
PROFILE #:070207948-0

WEAR ALL APPROPRIATE PROTECTIVE CLOTHING.
Out of Service 08.07.13

BESI:234703
TESORO CCN: 618330

FOLD LA... LINE. A... SIDE OF MATERIAL... TAB STICK... LTR#U ... 14

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Larry Moothart of BESI on behalf of generator — Signature: [signature] — Month 02 Day 14 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jose Ferreyra — Signature: [signature] — Month 02 Day 14 Year 14
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. HB2 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: [signature] — Signature: [signature] — Month 2 Day 19 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Generator and/or Consultant

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
/ /		394/732	A07	42401	001

Generator's Name and Billing Address: TESORO P.O. BOX 80730 RANCHO SANTA MARGARITA, CA 92688	Generator's Phone #: 949-460-5200	CAR000100024
	Person to Contact:	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address:	Consultant's Phone #:	
	Person to Contact:	
	FAX#:	Customer Account Number
Generation Site (Transport from): *(name & address)* TESORO 97610-1289 4661 E FIRESTONE BOULEVARD SOUTH GATE, CA 90280	Site Phone #:	
	Person to Contact:	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOIL SAFE 12328 HIBISCUS AVENUE ADELANTO, CA 92301	Facility Phone #: (800) 862-8001	
	Person to Contact: DELLENA JEFFREY	
	FAX#: (760) 246-8004	
Transporter Name and Mailing Address: BELSHIRE 25971 TOWNE CENTRE DRIVE FOOTHILL RANCH, CA 92610 BESI: 234186	Transporter's Phone #: 949-460-5200	CAR000183913
	Person to Contact: LARRY MOOTHART	450647
	FAX#: 949-460-5210	Customer Account Number

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0-10% ☐ 10-20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	17Y	soil	64100	37560	26540
Sand ☐ Organic ☐ Clay ☐ Other ☐	0-10% ☐ 10-20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					13.27

List any exception to items listed above: BINE SAT

Scale Ticket # 112711

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☐ — Larry Moothart of BESI on behalf of generator

Signature and date: [signature] — Month 02 Day 12 Year 14

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Kevin Dunlop

Signature and date: [signature] — Month 02 Day 12 Year 14

Recycling Facility

Discrepancies:
97610-1289
981789

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: D. JEFFREY/J. PROVANSAL

Signature and date: [signature] 2/14/14

Please print or type.

TRANSPORTER COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAR000100024
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 005759503 FLE

5. Generator's Name and Mailing Address
Tesoro
P.O. Box 80730
Rancho Santa Margarita, CA 92688
Generator's Phone: (949) 460-5200

Generator's Site Address (if different than mailing address)
Tesoro 97610-1289
4861 E FIRESTONE BOULEVARD
SOUTH GATE, CA 90280

6. Transporter 1 Company Name: BELSHIRE
U.S. EPA ID Number: CAR000183913

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology, Nevada Operations
Highway 95, 11 miles S. of Beatty
Beatty, NV 89003
Facility's Phone: (775) 553-2203
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. Non-RCRA Hazardous Waste, Solid	001	CM	9	Y	611		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ERG#: 171
Soil Contaminated with Lead
WEAR ALL APPROPRIATE PROTECTIVE CLOTHING.
BESI:234186
TESORO CCN: 618330
PROFILE #:070212655-1 Bin # 40CY

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Larry Moothart of BESI on behalf of generator
Signature:
Month Day Year: 02 25 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kevin Dunlop
Signature: Kevin Dunlop
Month Day Year: 02 25 14
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

ARCADIS

Appendix D

Tank Destruction and Closure Certificates

CERTIFICATE OF DESTRUCTION

ECOLOGY AUTO PARTS
13780 E. IMPERIAL HWY
SANTA FE SPRINGS, CA 90670
(562) 404-8683

COMPANY: Construction Site
JOB SITE : 4635 Firestone Blvd.
South Gate, CA

DESCRIPTION: *1–280 gallon steel tank*

UNDERGROUND STORAGE TANK
HAS BEEN SCRAPPED, CRUSHED AND DESTROYED AT
ECOLOGY AUTO PARTS
FONTANA, CA
ON: 01-29-14

SIGNATURE: Barbara Medrano
TITLE: MANAGER // BARBARA MEDRANO
DATE: 01 // 31 // 2014

UNIFIED PROGRAM CONSOLIDATED FORM

HAZARDOUS WASTE

HAZARDOUS WASTE TANK CLOSURE CERTIFICATION

SINGLE-WALL STEEL TANK, ~280-GALLON CAPACITY

Page 1 of 1

I. FACILITY IDENTIFICATION

BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) | FACILITY ID#

TANK OWNER NAME: CONSTRUCTION SITE

TANK OWNER ADDRESS: 4635 FIRESTONE BOULEVARD

TANK OWNER CITY: SOUTH GATE | STATE: CALIFORNIA | ZIP CODE: 90280

II. TANK CLOSURE INFORMATION

TANK INTERIOR ATMOSPHERE READINGS	Tank ID # (Attach additional copies of this page for more than three tanks)	Concentration of Flammable Vapor, %			Concentration of Oxygen, %		
		Top	Center	Bottom	Top	Center	Bottom
1	0129/1	<1	<1	<1	20.9	20.9	20.9
2							
3							

III. CERTIFICATION

On examination of the tank, I certify the tank is visually free from product, sludge, scale (film, flaky residual of tank contents), rinsate and debris. I further certify that the information provided herein is true and accurate to the best of my knowledge.

SIGNATURE OF CERTIFIER: Nancy G. Carraway

NAME OF CERTIFIER (Print): Nancy G. Carraway

TITLE OF CERTIFIER: Certified Industrial Hygienist

ADDRESS: 991 East California Boulevard

CITY: Pasadena, California 91106

PHONE: 626 676 7681

DATE: 01/29/2014 | CERTIFICATION TIME: 11:56 am - 11:59 am

STATUS OR AFFILIATION OF CERTIFYING PERSON

Certifier is a representative of the CUPA, authorized agency, or LIA: ☐ Yes ☐ No

Name of CUPA, authorized agency, or LIA: LOS ANGELES CITY FIRE DEPARTMENT

If certifier is other than CUPA / LIA check appropriate box below:

- ☒ a. Certified Industrial Hygienist (CIH)
- ☐ b. Certified Safety Professional (CSP)
- ☐ c. Certified Marine Chemist (CMC)
- ☒ d. Registered Environmental Health Specialist (REHS)
- ☐ e. Professional Engineer (PE)
- ☐ f. Class II Registered Environmental Assessor
- ☐ g. Contractors' State License Board licensed contractor (with hazardous substance removal certification)

TANK PREVIOUSLY HELD FLAMMABLE OR COMBUSTIBLE MATERIALS: PETROLEUM PRODUCTS

(If yes, the tank transfer exemption shall be re-checked with a combustible gas indicator prior to work being conducted on the tank.) ☒ Yes ☐ No

CERTIFIER'S TANK MANAGEMENT INSTRUCTIONS FOR SCRAP DEALER, DISPOSAL FACILITY, ETC:

INERT TANK INTERIOR BEFORE TORCH CUTTING OR USING SPARKING TOOLS ON OR NEAR TANK. TANK IS NOT SUITABLE FOR FOOD OR POTABLE WATER STORAGE, FOR PERSONNEL ENTRY, OR FOR HOT WORK. TANK IS SUITABLE FOR COLD WORK.

A copy of this certificate shall accompany the tank to the recycling / disposal facility and be provided to the CUPA. If there is no CUPA, copies shall be submitted to the LIA and authorized agency, owner / operator of the tank system, removal contractor, and the recycling / disposal facility.

CGI: QRAE II, serial number 181-113831

ARCADIS

Appendix E

ARCADIS Standard Operating Procedure: Groundwater Sampling Using a HydroPunch™

ARCADIS

Infrastructure, environment, facilities

Imagine the result

Groundwater Sampling Using HydroPunch™

Rev. #: 01

Rev Date: March 3, 2009

Approval Signatures

Prepared by: Andrew Kamik Date: 3/3/09

Reviewed by: Michael J Gefell Date: 3/3/09
(Technical Expert)

I. Scope and Application

This document describes procedures for collecting discrete-depth groundwater samples using the HydroPunch™ sampling device (QED Environmental Services, Inc.), or equivalent, during drilling in unconsolidated materials. HydroPunch™ can be used to collect a single sample from a selected depth, or multiple samples from a single borehole to produce a profile of groundwater quality data versus depth. The HydroPunch™ sampler is typically driven through open-ended drill casing or hollow-stem augers.

HydroPunch™ consists of a drive point, a stainless steel screen section, a sample reservoir integral within the tool body, and assorted O-rings and check valves to create watertight seals within the various components. Two models of HydroPunch™ have been developed, having slightly different designs and/or component parts as shown on the attached HydroPunch™ schematic drawings. All components are made of stainless steel, Teflon, or other relatively inert materials. The tool can be disassembled easily for cleaning between samples.

Although this document refers to groundwater sample collection, HydroPunch™ is also capable of obtaining samples of light or dense non-aqueous phase liquid (LNAPL or DNAPL, respectively), if present at sufficient saturation and pressure head at the depth of the ampler during deployment.

II. Personnel Qualifications

ARCADIS personnel directing, supervising, or leading groundwater sample collection activities using HydroPunch™ should have a minimum of 2 years of previous groundwater sampling experience and current health and safety training including 40-hour HAZWOPER training, site supervisor training, site-specific training, first aid, and CPR, as needed. Field personnel will also be compliant with client-specific training requirements. In addition, ARCADIS field sampling personnel will be versed in the relevant SOPs and posses the required skills and experience necessary to successfully complete the desired field work.

III. Equipment List

The following materials are required for the collection of discrete-depth groundwater samples using HydroPunch™.

- HydroPunch™ sampling device provided by drilling subcontractor

- Drill casing or augers having an effective inside diameter of at least 1.25 inches (to be provided by drilling subcontractor)
- Electronic water-level probe
- Groundwater sample containers provided by the testing laboratory
- Health and safety monitoring equipment and personal protective equipment
- Materials for decontamination of the sampler between samples

IV. Cautions

Because the HydroPunch™ sampler is a groundwater sampling device, it must be used in saturated soils. Positive hydraulic head is required to fill the sampler, and the sampler may fill slowly or not at all at depths just below the water table. HydroPunch™ I and HydroPunch™ II in the "groundwater mode" cannot be used at sampling depths less than 5 feet below the water table. HydroPunch™ II in the "hydrocarbon mode" is preferred for sampling at the water table.

Some types of geologic materials may not allow effective use of the HydroPunch™ sampler, even at significant depth below the water table. For example, extremely dense soils or those containing cobbles or boulders may resist penetration of the sampler, precluding its use. Low permeability soil such as silt and clay may not produce groundwater at a sufficient rate to fill the HydroPunch™ sampler within a practicable timeframe. For these types of situations, an alternative approach should be considered, such as collecting a sample of saturated soil for analysis.

Groundwater samples collected using HydroPunch™ should be considered screening-level data, suitable for obtaining a general understanding of groundwater quality and selecting depths for monitoring well screens. Samples obtained using HydroPunch™ are commonly more turbid than those produced from installed, developed monitoring wells. Higher turbidity could affect sample quality if samples are to be analyzed for sorptive analytes such as polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), pesticides or metals. For these types of analytes, unfiltered HydroPunch™ samples could produce concentrations that are higher than those of sediment-free aquifer water. Field or laboratory filtering of the samples obtained for these types of constituents should be considered. For less-sorptive analytes (volatile organic compounds, anions such as chloride, etc.), sample turbidity is unlikely to adversely impact the direct usability of unfiltered samples.

V. Health and Safety Considerations

- Sample collection will be performed using procedures consistent with the project Health and Safety Plan.
- Appropriate personal protective equipment must be worn by ARCADIS field personnel

VI. Procedure

The following steps will be followed during the collection of discrete-depth groundwater Samples using HydroPunch™:

1. Select the desired groundwater sampling depth.
2. The drilling subcontractor will advance the borehole to approximately 2 feet above the depth from which a discrete water sample is to be obtained.
3. The drilling subcontractor will disassemble the HydroPunch™ sampling device according to the manufacturer's instructions to allow the sampler to be decontaminated. The sampler should be completely disassembled, including O-rings and/or check valves.
4. Decontaminate the sampler as appropriate for the range of groundwater analytes to be sampled for, by washing with laboratory-grade detergent and potable water wash, followed by solvent rinse (if sampling for organics) and final rinse with deionized or distilled water. Check the condition of the O-rings during each cleaning, and replace if necessary.
5. The drilling subcontractor will reassemble the decontaminated HydroPunch™ sampling device according to the manufacturer's instructions and lower the device to the bottom of the borehole.
6. The drilling subcontractor will push or drive the HydroPunch™ 5 feet below the bottom of the casing or augers, then retract the sampler 3 feet upward. Subsurface friction will retain the drive point in place, exposing the screen and allowing groundwater to enter the sampling tool.
7. Allow sufficient time to allow the sampler to fill with water. Typically 30 minutes is sufficient, except in low permeability materials.
8. Collect a groundwater sample by:

- Retracting the sampler to ground surface – the drilling subcontractor will then open the sampler allowing collection of the groundwater sample [if using the HydroPunch™ I or else the HydroPunch™ II in groundwater mode (see Attachment A)]

- Lowering a bailer or a peristaltic or inertia pump tube through the rods and body of the sampler, and retrieving the bailer or operating the pump to collect the groundwater sample [if using the HydroPunch™ II in hydrocarbon mode (see Attachment A)]

9. Perform field filtering of samples if required by the work plan, FSP and/or QAPP.

10. Obtain field water quality measurements if required by the work plan, FSP and/or QAPP.

11. Label the sample containers at the time of sampling with the following information.

    - Project name and number
    - Sample location
    - Sample number
    - Date and time of collection
    - Sampler initials
    - Analyses required

12. Preserve, store, handle, and ship samples to the analytical laboratory under chain of custody procedures as described in by the work plan, FSP and/or QAPP.

VII. Waste Management

Investigation-derived waste will be managed as described in the Investigation-Derived Waste Handling and Storage SOP.

VIII. Data Recording and Management

Borehole identification, sample depth, sample date and time will be recorded in the field notebook, the boring log, and/or the personal digital assistant (PDA). The sample will also be identified on an appropriate chain of custody form, as appropriate for submittal to an analytical laboratory for analysis, if required. Consider digital photography to record unusual field conditions or to document compliance.

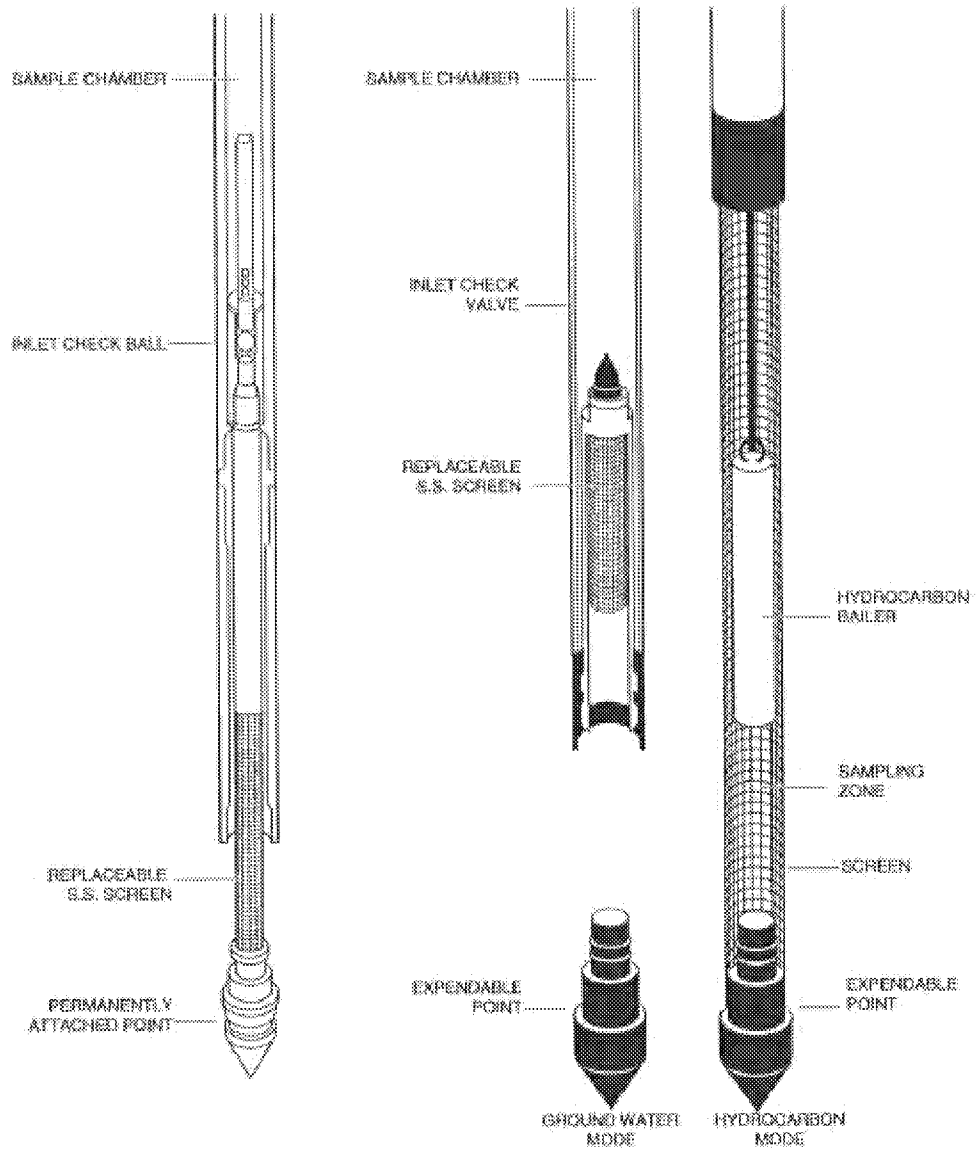
IX. Quality Assurance

The HydroPunch™ sampling device will be decontaminated as appropriate for the list of analytical parameters for which the groundwater samples are collected.

X. References

No references are required to accompany this SOP.

Attachment A - Hydropunch® Schematics



HydroPunch® I

- Collects ground water samples only (not floating layer)
- Permanently-attached drive cone and screen (leaves nothing in the ground)
- Can be used with cone penetrometer or drill rig

HydroPunch® II

- Collects floating layer and ground water
- Replaceable cones and screens are left in ground (note: screens may be retrievable)
- Stronger for tough duty; used with drill rig