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Infrastructure · Water · Environment · Buildings

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ENVIRONMENT

Mr. Keith Nowell, PG, CHG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6540

Subject:
Red Dye Diesel Fuel Release Response Summary Report
Union Pacific Railroad
Oakland, CA – March 26, 2015 Locomotive Fuel Release
Alameda County Case Number RO3169

Date:
June 17, 2015

Contact:
Scott Hackman

Phone:
916.786.7369

Email:
scott.hackman@arcadis-us.com

Our ref:
RV009598.0000

Dear Mr. Nowell:

ARCADIS U.S., Inc. (ARCADIS) has prepared this summary report on behalf of Union Pacific Railroad (UPRR). This report summarizes response activities implemented following a locomotive red dye diesel fuel release that occurred on March 26, 2015 along Track 58 at the Intermodal Yard in Oakland, California (Site; Figure1).

This report has been prepared at the request of the Alameda County Environmental Health Department (ACEHD) and presents background information, release response activities, sampling results, data evaluation, and project conclusions and recommendations related to the release.

Background

On March 26, 2015, UPRR personnel were moving a locomotive along Track 58 at the Site, and a damaged track ruptured the fuel tank of the locomotive. The rupture caused a diesel fuel release that extended approximately 215 feet along Track 58 and adjacent Tracks 57 and 59. The diesel fuel release area is approximately 3,000 feet from the nearest surface water (Figure 1) and the extent of the release area is shown on Figure 2.

UPRR estimated that approximately 4,000 gallons of diesel fuel were released from the locomotive fuel tank, based upon observed fuel tank levels. Immediately after identifying that the release occurred, UPRR contacted NRC and ARCADIS for cleanup support.

UPRR also notified the appropriate local and state agencies associated with release notification practices. Representatives from the ACEHD and the California Department of Fish and Wildlife visited the Site and observed the release response activities on March 26, 2015.

ACEHD upload requirements, a request for a work plan, and ACEHD case worker contact information was communicated to UPRR in an ACEHD email dated March 30, 2015. The *Updated Soil Excavation Work Plan*, prepared by ARCADIS and dated April 8, 2015 (the Work Plan), was submitted to the ACEHD and subsequently contingently approved by the ACEHD with requests on April 13, 2015. The release response and soil excavation activities summarized in this report were conducted in accordance with ACEHD requests and the Work Plan.

Objectives

The objectives of the response activities were to recover diesel product released on March 26, 2015 and to remove soil impacted by the March 26, 2015 release to the extent practicable.

These objectives were accomplished by excavating soil exhibiting the presence of newly released diesel fuel along the track and by recovering diesel product and contaminated water from the excavation. A summary of completed response activities is presented below.

Initial Release Response Scope of Work Conducted

Emergency response activities were conducted between March 26, 2015 and April 6, 2015 by ARCADIS and NRC on behalf of UPRR. These activities included advancing recovery trenches to remove product, removing portions of UPRR rail to facilitate soil excavation, and collecting waste characterization samples. The waste characterization sample locations are shown on Figure 2 and field photographs are included in Attachment 1.

On March 26, 2015, NRC and ARCADIS mobilized to the Site to assess the extent of impact and to initiate release response activities. Absorbent booms were placed at surface storm water drainage vaults and storm water outfalls in the vicinity of the release. Released diesel product was not observed in the storm water system on the Site during the release response.

NRC notified the Underground Service Alert and UPRR Call Before You Dig Hotline prior to subsurface disturbance.

Two approximately 200-foot-long recovery trenches (Trenches 1 and 2) were excavated to a depth of approximately 3 feet below ground surface (bgs) between Tracks 57 and 58 (Trench 1) and between Tracks 58 and 59 (Trench 2) to remove free product using a vacuum truck. In addition, on March 28, 2015 a third recovery trench (Trench 3) was excavated to a depth of approximately 4.5 feet bgs between Tracks 59 and 60 based on lateral extent potholing visual observations.

Corrugated polyvinyl chloride (PVC) pipe wrapped in mesh was installed in Trenches 1, 2, and 3 to collect diesel product. The trenches were backfilled with native material, and recovered product and water were purged from risers on each end of the PVC pipe using a vacuum truck. The diesel release area and recovery trench locations are shown on Figure 2.

Approximately 220 feet of track were removed from Track 58 and approximately 85 feet of track were removed from Tracks 57 and 59 to facilitate excavation. The excavation area was secured using orange safety barriers to prevent unauthorized entry into the work zone.

Soil Excavation Scope of Work Conducted

The excavation phase of this project was conducted between April 7, 2015 and April 20, 2015. The excavation was backfilled on April 21 and April 22, 2015. The excavation activities included removing visually impacted soil, collecting sidewall samples from left-in-place soil, and backfilling. The soil excavation area, left-in-place soil sampling locations, and soil sample diesel concentrations are shown on Figure 3. Field photographs are included in Attachment 1, and analytical laboratory reports, laboratory chromatograms, and a data validation memo are included in Attachment 2.

On April 7, 2015, Mainline, a UPRR excavation contractor, began to excavate diesel-impacted soil in the area of Track 58 beginning at the north end of the imapcted area. The recovery trenches were destroyed during the excavation activities. The excavated soil was stockpiled in a staging area before being loaded into gondola cars provided by UPRR for transport to ECDC Environmental Landfill (ECDC) in East Carbon, Utah.

An access road was built over rails near the south end of the excavation connecting the excavation area with the staging area. NRC continued to pump water and product from the excavation and monitor storm water outfalls during the soil removal activities.

By April 20, 2015, visually impacted soil removal was complete and approximately 1,570 tons of soil had been excavated. The completed excavation measured 214 feet long by 16.5 feet wide, with an 80-foot-long section in the center extended outward an additional 9 feet on the north side and 10 feet on the south side. The excavation was advanced to a depth of 5 feet bgs approximately to first encountered groundwater.

The excavation was extended to the extent practicable that met the objectives of the response activities. The excavation was extended to first encountered groundwater and laterally to the edge of the nearest active rail line and railroad infrastructure.

Excavation Backfilling

The bottom 3 feet of the excavation were backfilled by Mainline using approximately 970 tons of imported virgin Class II aggregate base from Graniterock – Wilson Quarry (Graniterock) in Aromas, California. In addition, the top approximately 2 feet of the excavation were backfilled by Mainline using ballast rock as requested by UPRR.

Sample results provided by Graniterock for the virgin Class II aggregate base were presented to the ACEHD in an email dated April 21, 2015. The ACEHD approved the backfill in its email to UPRR dated April 21, 2015. Copies of the sample results and the email communication are included in Attachment 3.

Waste Management

Six representative soil samples were collected from the release area to characterize the soil for disposal (WC-1 through WC-6; Figure 2). Based on the analytical results, the approximately 1,570 tons of excavated soil were classified as non-RCRA, California-hazardous waste, loaded onto gondola cars, and transported by rail to ECDC. The ECDC measured soil weights are tabulated in Attachment 4.

Red dye diesel product was purged from the three recovery trenches and from the excavation by a vacuum truck. Approximately 1,200 gallons of product and approximately 35,500 gallons of water were recovered during the response activities and containerized in two on-site aboveground tanks.

A sample of the water (Tank A3635 in Table 1) and a sample of the product were collected by NRC for characterization purposes. The product will likely be classified as non-RCRA, California-hazardous waste, and transported by truck to Clean Harbors in San Jose, California; and the water will likely be classified as non-hazardous waste and transported by truck to Waste Management, Altamont Landfill in Livermore, California. The product and water profiles are still pending.

Sampling Activities

On April 14, 2015, 25 post-excavation soil samples were collected from soil left in place on the excavation sidewalls at approximate depths ranging from 2.5 to 4.0 feet bgs. Soil samples were collected from sidewall areas with assumed highest concentrations of diesel using an excavator bucket. In addition, a sample was collected from water observed in the bottom of the excavation.

The soil samples and water sample were analyzed for the following:

- Total extractable petroleum hydrocarbons as diesel range organics (TPH-E [DRO]; carbon chain C13 through C22 with silica gel cleanup), using United States Environmental Protection Agency (USEPA) Method 8015B
- TPH-E as oil range organics (ORO; carbon chain C23 through C40 with silica gel cleanup), using USEPA Method 8015B
- TPH-Purgeable as gasoline range organics (TPH-P [GRO]; carbon chain C4 through C12), using USEPA Method 8260B
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and naphthalene, using USEPA Method 8260B.

The collected samples were labeled, placed in an ice-chilled cooler, and delivered to TestAmerica of Pleasanton, California, a California-certified laboratory. Chain-of-custody documentation is included in Attachment 2. The approximate soil sampling locations are shown on Figure 3.

Data Validation

Analytical data were reviewed by Conestoga-Rovers & Associates (CRA) in accordance with the criteria established by the analytical methods and the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, dated June 2008.

Duplicate soil samples were collected to support the data validation process. As shown in Table 1, sample D-1 correlated with sample SS-10-3.5, sample D-2 correlated with sample SS-17-3.5, sample D-3 correlated with sample SS-18-3.5, and sample D-4 correlated with sample SS-20-3.5. Duplicate samples were included in the data assessment.

Based on the information presented in the validation memo reference number 058324-1957, prepared by CRA and dated May 22, 2015, the summarized data are acceptable with the specific qualifications noted in the memo.

Water Analytical Results Summary

The water sample collected from the bottom of the excavation was labeled “Bottom Sample” (Table 1). TPH-P (GRO) was detected at 100 micrograms per liter (µg/L), TPH-E (DRO) was detected at 130 µg/L, toluene was detected at 1.3 µg/L, and xylenes were detected at 12 µg/L in the water sample. TPH-E (ORO), benzene, ethylbenzene, and naphthalene were not detected above their respective reporting limits.

Groundwater is not a current or potential drinking water source at the Site, TPH-P (GRO) and TPH-E (DRO) concentrations detected in the water sample collected from the excavation were compared to the December 2013 San Francisco Bay Regional Water Quality Control Board (RWQCB), Environmental Screening Levels (ESLs; Table F-1b). The TPH-P (GRO) 100 µg/L concentration and TPH-E (DRO) 130 µg/L concentration were both below their respective 500 µg/L and 640 µg/L ESLs.

Soil Analytical Results Summary and Chromatogram Assessment

Soil and water analytical results are summarized in Table 1, including BTEX. Soil sample locations and TPH-E (DRO) results are shown on Figure 3. Soil analytical results are summarized below.

Soil sample concentrations were compared to the December 2013 RWQCB groundwater protection ESLs (Table G), with the exception of TPH-E (ORO) concentrations, which were compared to the December 2013 RWQCB commercial/industrial (C/I) worker exposure scenario ESL (Table K-2).

BTEX and Naphthalene

Benzene was not detected at concentrations above the reporting limit in the 29 soil samples collected. Toluene, ethylbenzene, total xylenes, and/or naphthalene were detected at very low concentrations below their respective ESLs and slightly above the laboratory reporting limit in 11 of the 25 primary soil samples. Based on the non-detect benzene and less than ESL toluene, ethylbenzene, total xylenes, and naphthalene concentrations, the results discussion in this report focused on evaluating TPH-P (GRO), TPH-E (DRO), and TPH-E (ORO) as summarized below.

TPH-P (GRO)

TPH-P (GRO) was detected in all 29 soil samples collected from the excavation sidewalls at concentrations ranging from 0.91 to 660 milligrams per kilogram (mg/kg). TPH-P (GRO) was not detected at concentrations greater than the 3,800 mg/kg ESL.

Based on review of the soil sample analytical chromatograms included in Attachment 2, the analytical laboratory indicated TPH-P (GRO) detections are the result of heavier hydrocarbons associated with the recent diesel release and/or preexisting hydrocarbons eluting in the GRO range, and are not representative of hydrocarbons resulting from gasoline products.

TPH-E (DRO)

TPH-E (DRO) was detected in 27 of 29 soil samples collected from the excavation sidewalls at concentrations ranging from 97 to 14,000 mg/kg. TPH-E (DRO) was detected in 11 soil samples at concentrations greater than the 3,600 mg/kg ESL. Based on review of the soil sample analytical chromatograms included in Attachment 2, the soil samples contained relatively unweathered diesel range hydrocarbons as well as significantly weathered oil range hydrocarbons, as described below.

TPH-E (ORO)

TPH-E (ORO) was detected in 14 of 29 soil samples collected from the excavation sidewalls at concentrations ranging from 300 to 7,600 mg/kg. TPH-E (ORO) was not detected at concentrations greater than the 100,000 mg/kg C/I ESL.

Based on review of the soil sample analytical chromatograms included in Attachment 2, the oil range hydrocarbons typically lack distinct alkane peaks. These data suggest

that the oil range hydrocarbons are significantly weathered and likely significantly pre-date the March 26, 2015 release. These oil range hydrocarbons also contribute to the detected TPH-E (DRO), increasing the apparent concentration of TPH-E (DRO).

Mass Removal Estimate

Based on the TPH-E (DRO) concentrations reported in waste characterization soil samples and the approximately 1,570 tons of excavated soil, it is estimated that between 4,643.4 and 6,593.9 gallons of TPH-E (DRO) were recovered during remedial excavation activities. These lower and upper recovery values were generated using both the geometric mean and arithmetic average of soil concentrations, respectively, reported for soil collected during waste characterization activities (waste characterization samples WC-1 through WC-6). A table showing the mass calculation is included in Attachment 4.

The calculated range of TPH-E (DRO) recovered in soil, combined with the additional approximately 1,200 gallons of diesel product recovered in liquid phase during the response activities, yields total recovered volumes estimated between 5,843.4 and 7,793.9 gallons. Recovered quantities in excess of the initial release estimate volume (approximately 4,000 gallons) may represent a recovery of additional, historical TPH-E (DRO) present in site soil. These data suggest that the majority of hydrocarbon mass associated with the March 26, 2015 diesel release have been recovered.

Conclusions

Based on the response activities already conducted and results of soil and water analyses, the following conclusions can be made:

- Approximately 4,000 gallons of red dye diesel were released from a ruptured locomotive fuel tank on March 26, 2015. Emergency response, product recovery, soil removal, sample collection, and backfilling were conducted in accordance with the Work Plan.
- Released diesel product was not observed in the site storm water system during the release response activities.
- Approximately 1,570 tons of soil were excavated and transported off site for proper disposal. The excavation was extended to the extent practicable to first

encountered groundwater and laterally to the nearest active rail line and railroad infrastructure.

- Approximately 1,200 gallons of product were recovered from recovery trenches and the bottom of the excavation.
- Based on TPH-E (DRO) results from waste characterization samples, and including the approximately 1,200 gallons of product recovered, the calculated total recovered TPH-E (DRO) mass estimate ranges between approximately 5,840 and 7,790 gallons. These data suggest that the majority of hydrocarbon mass associated with the March 26, 2015 diesel release was recovered.
- Results of left-in-place soil sampling activities indicate that TPH-E (DRO) attributable to the recent locomotive fuel release was detected in soil samples collected from excavation sidewalls; however, more than half of the samples exhibited TPH-E (DRO) concentrations below the soil ESL and groundwater is not impacted at levels above the groundwater ESL.
- Preexisting hydrocarbon impacts were also detected, including the presence of significantly weathered diesel and oil range hydrocarbons.
- TPH-P (GRO) detected in many of the soil samples was determined by the analytical laboratory to be the result of hydrocarbons associated with heavier-chain fuel diesel and oil contributing to laboratory quantitation of TPH-P (GRO) rather than hydrocarbons associated with gasoline products.
- Analytical results for a water sample collected from the bottom of the excavation indicated the presence of only very low concentrations of TPH-E (DRO), suggesting that removal of soil affected by the March 26, 2015 release prevented significant impact to groundwater.
- Groundwater is not a current or potential drinking water source at the Site and the release area is approximately 3,000 feet from the nearest surface water.
- The lack of significantly elevated dissolved-phase hydrocarbons in water sampled from the bottom of the excavation indicates that preexisting hydrocarbon impacts to soil have not leached to groundwater at rates that exceed the rate of natural attenuation. This suggests that residual diesel left in place following the March 26, 2015 release will also degrade due to natural attenuation.

Based on the Site data, the majority of hydrocarbon mass associated with the March 26, 2015 diesel release has been recovered, the release response objectives have

been met, and groundwater has not been impacted to levels above the ESLs. Therefore, no further action is recommended.

Perjury Statement

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Closing

If you have any questions or comments, please contact Scott Hackman at 916.786.7369.

Sincerely,

ARCADIS U.S., Inc.

Scott Hackman
Project Manager

Becky Gerard, PE
(No. C82077, expires 3/31/16)
Project Engineer

Attachments:

Table 1	Summary of Soil and Water Analytical Results
Figure 1	Site Plan
Figure 2	Waste Characterization Sample Locations
Figure 3	Excavation Detail Showing TPH-E (DRO) Results
Attachment 1	Site Photographs
Attachment 2	Laboratory Analytical Report and Data Validation Memorandum
Attachment 3	Backfill Results
Attachment 4	Excavated Soil Information

Copies:

Lauren Mancuso, UPRR
James Eisert, ARCADIS

Table

TABLE 1

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Summary of Soil and Water Analytical Results
March 26, 2015 Locomotive Fuel Release
Oakland, California

Soil Sample ID	Side Wall Sample Depth	Collection Date	Collection Time	Total Petroleum Hydrocarbons SW846 Method 8015B with SGC		Volatile Organic Compounds SW846 Method 8260B/CA_LUFTM					
				TPH-DRO (C13-C22)	TPH-ORO (C23-C40)	TPH-GRO (C4-C12)	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SS-1-3.5	3.5	04/14/15	12:30	**2,300**	**1,000**	**1.6**	ND	ND	ND	ND	ND
SS-2-3.5	3.5	04/14/15	12:35	**7,700**	ND	**310**	ND	ND	**0.0099**	**0.14**	**0.014**
SS-3.4.0	4.0	04/14/15	12:45	**1,100**	ND	**7.9**	ND	ND	ND	ND	ND
SS-4-2.5	2.0	04/14/15	12:50	**3,800**	ND	**3.7**	ND	ND	ND	ND	ND
SS-5-3.0	3.0	04/14/15	13:20	**340**	**350**	ND	ND	ND	ND	ND	ND
SS-6-3.5	3.5	04/14/15	13:05	**3,100**	ND	**2.0**	ND	ND	ND	**0.022**	**0.01**
SS-7-3.5	3.5	04/14/15	12:25	**550**	**390**	**0.91**	ND	ND	ND	ND	ND
SS-8-2.5	2.5	04/14/15	12:20	**3,900**	ND	**110**	ND	ND	ND	ND	ND
SS-9-2.5	2.5	04/14/15	12:15	**3,100**	**1,300**	**1.9**	ND	ND	ND	**0.015**	ND
SS-10-3.5	3.5	04/14/15	13:30	**12,000**	ND	**660**	ND	ND	**0.99**	**7.5**	**1.9**
D-1 (DUP-SS-10-3.5)	3.5	04/14/15	13:32	**13,000**	ND	**390**	ND	ND	ND	**2.8**	ND
SS-11-3.5	3.5	04/14/15	13:40	**8,000**	ND	**180**	ND	ND	ND	ND	ND
SS-12-3.0	3.0	04/14/15	13:50	**3,500**	**3,200**	**3.3**	ND	ND	ND	ND	ND
SS-13-3.5	3.5	04/14/15	14:00	**4,600**	**4,100**	**4.5**	ND	ND	ND	ND	ND
SS-14-3.5	3.5	04/14/15	14:10	**2,000**	**1,500**	**2.9**	ND	ND	ND	**0.011**	ND
SS-15-3.75	3.8	04/14/15	14:15	**2,400**	**2,500**	**5.9**	ND	ND	ND	**0.038**	ND
SS-16-4.0	4.0	04/14/15	14:25	**14,000**	ND	**270**	ND	**0.0072**	**0.0093**	**0.11**	**0.068**
SS-17-3.5	3.5	04/14/15	14:30	**12,000**	**7,600**	**180**	ND	ND	ND	**0.37**	**0.067**
D-2 (DUP-SS-17-3.5)	3.5	04/14/15	14:32	**8,100**	**5,900**	**180**	ND	ND	ND	**0.44**	ND
SS-18-3.5	3.5	04/14/15	14:40	**2,400**	ND	**58 J**	ND	ND	ND	ND	ND
D-3 (DUP-SS-18-3.5)	3.5	04/14/15	14:43	**2,600**	ND	**9.6 J**	ND	ND	ND	ND	ND
SS-19-3.5	3.5	04/14/15	14:55	**97**	**350**	ND	ND	ND	ND	ND	ND
SS-20-3.5	3.5	04/14/15	15:00	**730 J**	**300**	**2.2 J**	ND	ND	ND	ND	ND
D-4 (DUP-SS-20-3.5)	3.5	04/14/15	15:04	**2,800 J**	ND	**5 J**	ND	ND	ND	ND	ND
SS-21-4.0	4	04/14/15	15:10	**5,400**	ND	**27**	ND	ND	ND	**0.17**	ND
SS-22-3.5	3.5	04/14/15	15:20	**2,800**	ND	**5.2**	ND	ND	ND	ND	ND
SS-23-3.0	3	04/14/15	15:25	**5,300**	**2,700**	**270**	ND	ND	ND	**0.79**	ND
SS-24.3.5	3.5	04/14/15	15:30	**3,700**	**1,500**	**190**	ND	ND	**0.023**	**0.65**	ND
SS-25.3.0	3	04/14/15	15:40	**3,000**	ND	**54**	ND	ND	ND	ND	ND
Water Sample ID		**Collection Date**	**Collection Time**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
BOTTOM SAMPLE		04/14/15	12:00	**130**	ND	**100**	ND	**1.3**	ND	**12**	ND
Purge Water Tank Sample		**Collection Date**	**Collection Time**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
*TANK A3635		04/08/15	8:00	**3,200,000**	**130,000**	**130,000**	**ND**	**220**	**250**	**1700**	**190**

Notes:
ND = Not detected at or above laboratory reporting limit
Bold = Concentration detected above laboratory reporting limit
-- = Not analyzed
TPH-GRO (C4-C12) = Total Petroleum Hydrocarbons as Gasoline Range Organics
TPH-DRO (C13-C22) = Total Petroleum Hydrocarbons as Diesel Range Organics after Silica Gel Cleanup
TPH-ORO (C23-C40) = Total Petroleum Hydrocarbons as Oil Range Organics
SGC = Silica Gel Cleanup

mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram
µg/L = Micrograms per liter
* = recovered liquid from the excavation
J = estimated value

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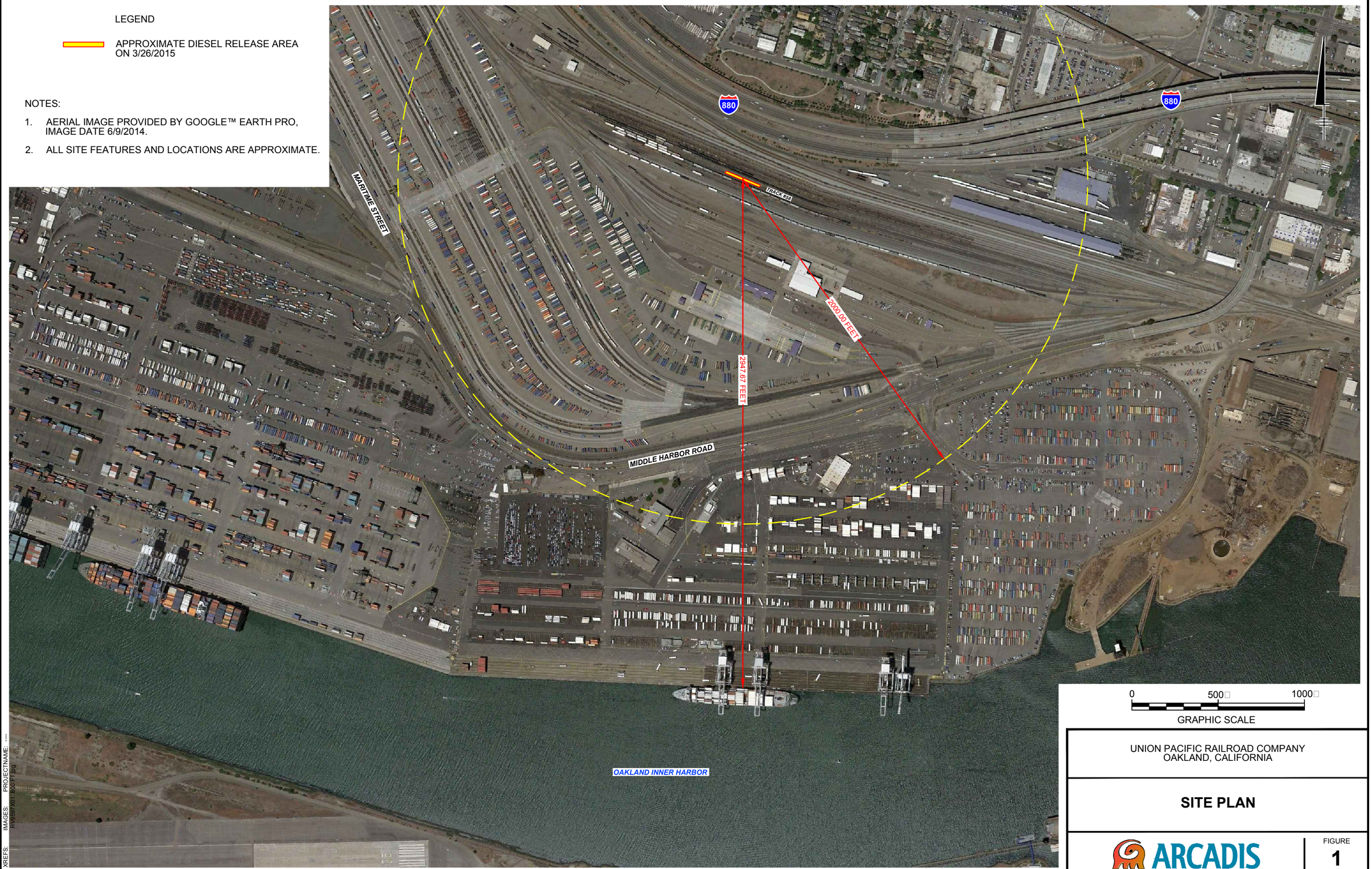
Figures

LEGEND

APPROXIMATE DIESEL RELEASE AREA ON 3/26/2015

NOTES:

1. AERIAL IMAGE PROVIDED BY GOOGLE™ EARTH PRO, IMAGE DATE 6/9/2014.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.



0 500 1000

GRAPHIC SCALE

UNION PACIFIC RAILROAD COMPANY
OAKLAND, CALIFORNIA

SITE PLAN

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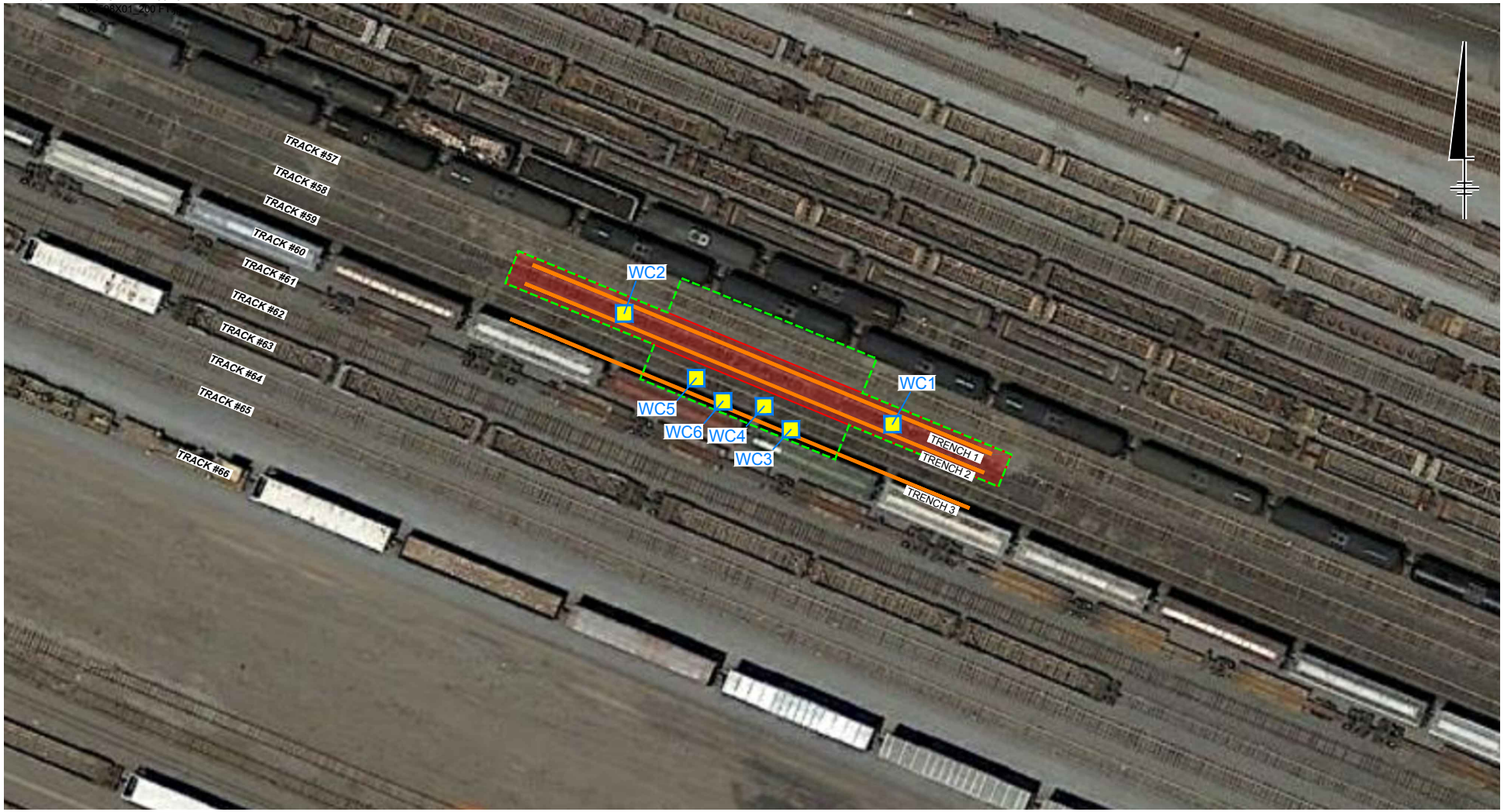
FIGURE
1

CITY:SAN RAFAEL DIV/GROUP:ENVCAD DB:J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\RV009598\0000\00002\DWG\RV9598B01.dwg LAYOUT: X SAVED: 4/17/2015 9:18 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: SETUP2 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 4/17/2015 9:55 AM BY: HARRIS, JESSICA
XREFS: IMAGES: PROJECTNAME: ----



LEGEND

- APPROXIMATE DIESEL RELEASE AREA ON 3/26/2015
- APPROXIMATE SOIL EXCAVATION AREA
- APPROXIMATE TRENCH LOCATION
- WC1 APPROXIMATE WASTE CHARACTERIZATION SAMPLE LOCATION

NOTES:

1. AERIAL IMAGE PROVIDED BY GOOGLE™ EARTH PRO, IMAGE DATE 6/9/2014.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 60' 120'
GRAPHIC SCALE

UNION PACIFIC RAILROAD COMPANY
OAKLAND, CALIFORNIA

WASTE CHARACTERIZATION SAMPLE LOCATIONS

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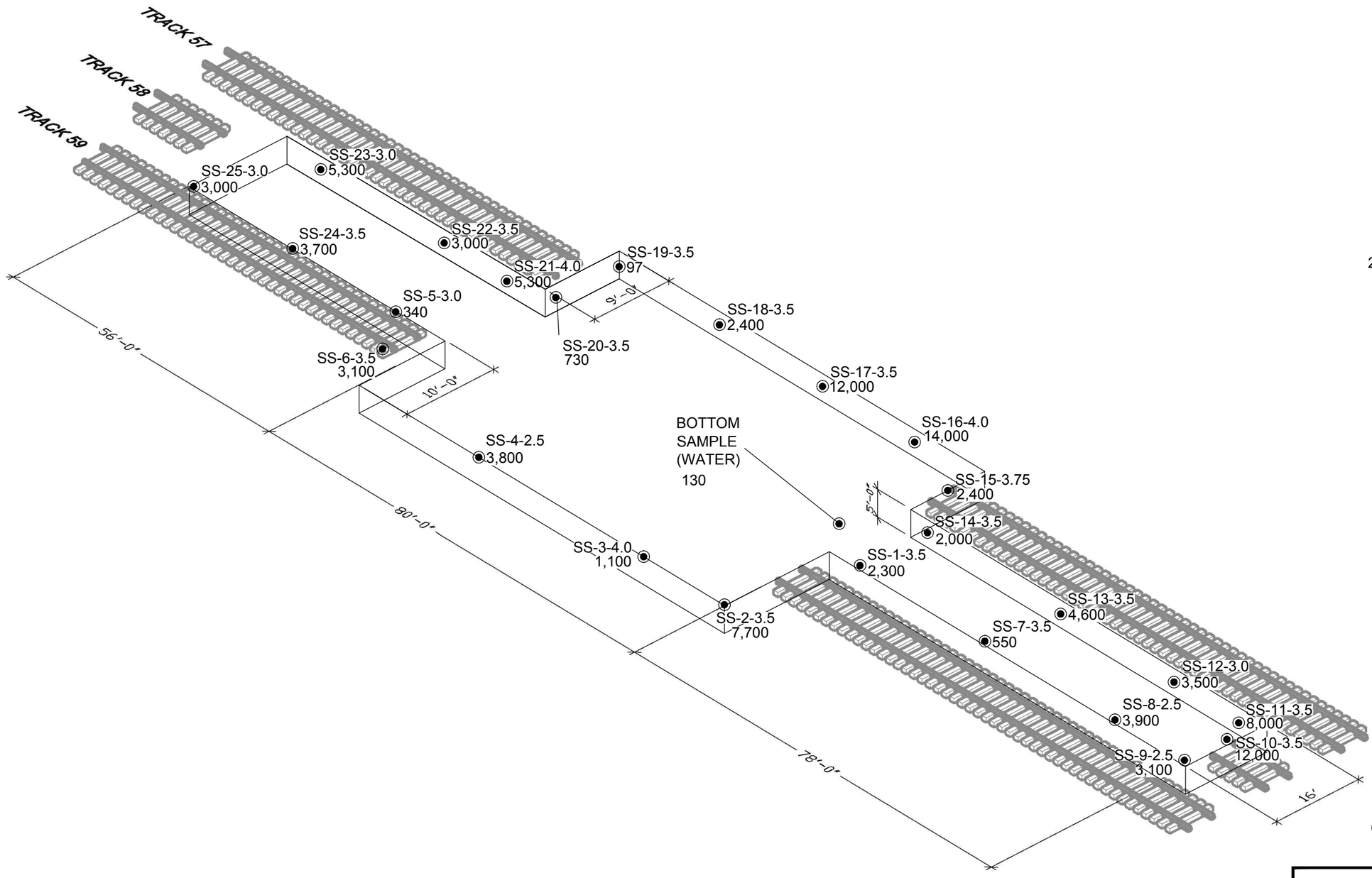
FIGURE
2



APPROXIMATE

LEGEND:

◉	SAMPLE LOCATION
2,300	TPH-E (DRO) RESULT IN MILLIGRAMS PER KILOGRAM (mg/Kg)
DRO	DIESEL RANGE ORGANICS
TPH	TOTAL PETROLEUM HYDROCARBONS

UNION PACIFIC RAILROAD COMPANY
OAKLAND, CALIFORNIA

EXCAVATION DETAIL SHOWING TPH-E (DRO) RESULTS

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FIGURE
3

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Attachment 1

Site Photographs

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Attachment 1. Site Photographs

03.26.2015 Release Area.

03.26.2015 Trench #1 excavation begins along west side of Track 58.

03.26.2015 Trench #1 excavation completed, Trench #2 excavation begins on opposite side of Track 58.

03.26.2015 Vacuum pumping begins in recovery Trench #1.

03.27.2015 Trench #1 and Trench #2 excavation completed, PVC piping installed, and trenches backfilled with native soil.

03.28.2015 Track 58 rail removal activities.

03.28.2015 Track 58 rail removal complete and Trench 3 excavation is visible.

03.30.2015 Trench 3 PVC piping installation activities.

04.06.2015 Tracks 57, 58, and 59 rail removal complete.

04.07.2015 Excavation activities, excavation started at the northern end.

04.07.2015 Excavation view with water in the bottom of the excavation.

04.10.2015 Product and water in the excavation. This liquid was removed and product was not visible in the excavation at the completion of the excavation activities.

04.20.2015 Excavation view, excavation complete.

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Attachment 2

Laboratory Analytical Report and
Data Validation Memorandum

CONESTOGA-ROVERS & ASSOCIATES

15575 SW Sequoia Parkway, Suite 140
Portland, OR 97224
Telephone: (206) 914-3141
www.CRAworld.com

MEMORANDUM

TO:	Scott Hackman	REF. NO.:	058324-1957
FROM:	Jeffrey Cloud/eew/613-NF	DATE:	May 22, 2015
CC:	Becky Gerard, Jesse Orth, Julie Lidstone		

RE: Analytical Results and Reduced Validation of Reports J64192 & J64194
IRR Soil Sampling
Union Pacific Railroad (UPRR) – Track 58 Response
Oakland, California
April 2015

1.0 Introduction

The following document details a reduced validation of analytical results for soil and water samples collected in support of the IRR Soil Sampling at the Track 58 Response Site in Oakland, California during April 2015. Samples were submitted to TestAmerica, located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Tables 3A and 3B.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008 subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in the methods. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (<6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices. Due to necessary sample dilutions, surrogate recoveries were not assessed for some samples.

All samples submitted for volatile organic compound (VOC), gasoline range organics (GRO) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the associated control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample (LCS) Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS/LCSD contained the compounds specified in the method. All LCS recoveries and RPDs were within the associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the compounds specified in the method. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

7.0 Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and four field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, four field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water/air and soil samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one or two time(s) the PQL value for water and soil samples, respectively.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with a few exceptions. The associated sample results and their duplicates were qualified as estimated due to variability (see Table 4).

8.0 Analyte Reporting

The laboratory did not report any detected concentrations below the laboratory's PQL/reporting limit (RL).

All soil results were reported on a wet weight basis.

9.0 Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

						Analysis/Parameters		
Sample Identification	***Location***	***Matrix***	***Initial Sample Depth (ft. bgs.)***	***Collection Date (mm/dd/yyyy)***	***Collection Time (hr:min)***	***SW-846 8260B***	***SW-846 8015B***	***Comments***
BOTTOM SAMPLE	Bottom	Water	5	04/14/2015	12:00	X	X	
TRIP BLANK	--	Water		04/14/2015	--		X	Trip Blank
SS-10-3.5	SS-10	Soil	3.5	04/14/2015	13:30	X	X	
SS-12-3.0	SS-12	Soil	3	04/14/2015	13:50	X	X	
SS-14-3.5	SS-14	Soil	3.5	04/14/2015	14:10	X	X	
SS-16-4.0	SS-16	Soil	4	04/14/2015	14:25	X	X	
SS-2-3.5	SS-2	Soil	3.5	04/14/2015	12:35	X	X	
SS-18-3.5	SS-18	Soil	3.5	04/14/2015	14:40	X	X	
D-3	SS-18	Soil	3.5	04/14/2015	14:43	X	X	FD(SS-18-3.5)
SS-20-3.5	SS-20	Soil	3.5	04/14/2015	15:00	X	X	
D-4	SS-20	Soil	3.5	04/14/2015	15:04	X	X	FD(SS-20-3.5)
SS-22-3.5	SS-22	Soil	3.5	04/14/2015	15:20	X	X	
SS-25-3.0	SS-25	Soil	3	04/14/2015	15:40	X	X	
SS-4-2.5	SS-4	Soil	2.5	04/14/2015	12:50	X	X	
SS-5-3.0	SS-5	Soil	3	04/14/2015	13:20	X	X	
SS-7-3.5	SS-7	Soil	3.5	04/14/2015	12:25	X	X	
SS-9-2.5	SS-9	Soil	2.5	04/14/2015	12:15	X	X	
SS-1-3.5	SS-1	Soil	3.5	04/14/2015	12:30	X	X	
SS-11-3.5	SS-11	Soil	3.5	04/14/2015	13:40	X	X	
D-1	SS-10	Soil	3.5	04/14/2015	13:32	X	X	FD(SS-10-3.5)
SS-13-3.5	SS-13	Soil	3.5	04/14/2015	14:00	X	X	
SS-15-3.75	SS-15	Soil	3.75	04/14/2015	14:15	X	X	
SS-17-3.5	SS-17	Soil	3.5	04/14/2015	14:30	X	X	
D-2	SS-17	Soil	3.5	04/14/2015	14:32	X	X	FD(SS-17-3.5)
SS-19-3.5	SS-19	Soil	3.5	04/14/2015	14:55	X	X	
SS-21-4.0	SS-21	Soil	4	04/14/2015	15:10	X	X	
SS-23-3.0	SS-23	Soil	3	04/14/2015	15:25	X	X	
SS-24-3.5	SS-24	Soil	3.5	04/14/2015	15:30	X	X	
SS-3-4.0	SS-3	Soil	4	04/14/2015	12:45	X	X	
SS-6-3.5	SS-6	Soil	3.5	04/14/2015	13:05	X	X	MS/MSD
SS-8-2.5	SS-8	Soil	2.5	04/14/2015	12:20	X	X	

Notes:

ft bgs - Feet below ground surface
FD - Field Duplicate Sample of sample in parenthesis
MS/MSD - Matrix Spike/Matrix Spike Duplicate

TABLE 2

ANALYTICAL METHODS
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

Parameter	*Method*	*Matrix*
Volatile Organic Compounds (VOCs)	SW-846 8260B	Water Soil
Gasoline Range Organics (GRO)	SW-846 8260B	Water Soil
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW-846 8015B	Water Soil

Notes:

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TABLE 3A

ANALYTICAL RESULTS SUMMARY
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

Sample Location:		***SS-1***	***SS-2***	***SS-3***	***SS-4***	***SS-5***	***SS-6***	***SS-7***	***SS-8***	***SS-9***
Sample ID:		***SS-1-3.5***	***SS-2-3.5***	***SS-3-4.0***	***SS-4-2.5***	***SS-5-3.0***	***SS-6-3.5***	***SS-7-3.5***	***SS-8-2.5***	***SS-9-2.5***
Sample Date:		***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***
Sample Depth:		***3.5 ft bgs***	***3.5 ft bgs***	***4 ft bgs***	***2.5 ft bgs***	***3 ft bgs***	***3.5 ft bgs***	***3.5 ft bgs***	***2.5 ft bgs***	***2.5 ft bgs***
Parameters	***Units***									
Volatile Organic Compounds										
Benzene	µg/kg	<7.5	<4.8	<25	<4.8	<4.6	<4.9	<4.7	<480	<4.9
Ethylbenzene	µg/kg	<7.5	9.9	<25	<4.8	<4.6	<4.9	<4.7	<480	<4.9
Naphthalene	µg/kg	<15	14	<50	<9.7	<9.1	10	<9.5	<950	<9.7
Toluene	µg/kg	<7.5	<4.8	<25	<4.8	<4.6	<4.9	<4.7	<480	<4.9
Xylenes (total)	µg/kg	<15	140	<50	<9.7	<9.1	22	<9.5	<950	15
Petroleum Products										
Total Petroleum Hydrocarbons (C4-C12) GRO	µg/kg	1600	310000	7900	3700	<250	2000	910	110000	1900
Total Petroleum Hydrocarbons (C13-C22) DRO (Silica Gel)	mg/kg	2300	7700	1100	3800	340	3100	550	3900	3100
Total Petroleum Hydrocarbons (C23-C40) ORO (Silica Gel)	mg/kg	1000	<2500	<500	<2500	350	<990	390	<2500	1300

TABLE 3A

ANALYTICAL RESULTS SUMMARY
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

Sample Location:		*SS-10*	*SS-10*	*SS-11*	*SS-12*	*SS-13*	*SS-14*	*SS-15*	*SS-16*	*SS-17*	*SS-17*
Sample ID:		*SS-10-3.5*	*D-1*	*SS-11-3.5*	*SS-12-3.0*	*SS-13-3.5*	*SS-14-3.5*	*SS-15-3.75*	*SS-16-4.0*	*SS-17-3.5*	*D-2*
Sample Date:		*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*	*4/14/2015*
Sample Depth:		*3.5 ft bgs*	*3.5 ft bgs*	*3.5 ft bgs*	*3 ft bgs*	*3.5 ft bgs*	*3.5 ft bgs*	*3.75 ft bgs*	*4 ft bgs*	*3.5 ft bgs*	*3.5 ft bgs*
			Duplicate								*Duplicate*
Parameters	***Units***										
Volatile Organic Compounds											
Benzene	µg/kg	<480	<480	<490	<4.6	<6.0	<4.8	<17	<4.7	<19	<23
Ethylbenzene	µg/kg	990	<480	<490	<4.6	<6.0	<4.8	<17	9.3	<19	<23
Naphthalene	µg/kg	1900	<960	<970	<9.1	<12	<9.7	<35	68	67	<47
Toluene	µg/kg	<480	<480	<490	<4.6	<6.0	<4.8	<17	7.2	<19	<23
Xylenes (total)	µg/kg	7500	2800	<970	<9.7	<12	11	38	110	370	440
Petroleum Products											
Total Petroleum Hydrocarbons (C4-C12) GRO	µg/kg	660000	390000	180000	3300	4500	2900	5900	270000	180000	180000
Total Petroleum Hydrocarbons (C13-C22) DRO (Silica Gel)	mg/kg	12000	13000	8000	3500	4600	2000	2400	14000	12000	8100
Total Petroleum Hydrocarbons (C23-C40) ORO (Silica Gel)	mg/kg	<10000	<5000	<4900	3200	4100	1500	2500	<10000	7600	5900

TABLE 3A

ANALYTICAL RESULTS SUMMARY
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

Sample Location:		***SS-18***	***SS-18***	***SS-19***	***SS-20***	***SS-20***	***SS-21***	***SS-22***	***SS-23***	***SS-24***	***SS-25***
Sample ID:		***SS-18-3.5***	***D-3***	***SS-19-3.5***	***SS-20-3.5***	***D-4***	***SS-21-4.0***	***SS-22-3.5***	***SS-23-3.0***	***SS-24-3.5***	***SS-25-3.0***
Sample Date:		***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***	***4/14/2015***
Sample Depth:		***3.5 ft bgs***	***3.5 ft bgs***	***3.5 ft bgs***	***3.5 ft bgs***	***3.5 ft bgs***	***4 ft bgs***	***3.5 ft bgs***	***3 ft bgs***	***3.5 ft bgs***	***3 ft bgs***
			Duplicate			***Duplicate***					
Parameters	***Units***										
Volatile Organic Compounds											
Benzene	µg/kg	<440	<25	<4.8	<23	<25	<19	<24	<20	<21	<430
Ethylbenzene	µg/kg	<440	<25	<4.8	<23	<25	<19	<24	<20	23	<430
Naphthalene	µg/kg	<870	<50	<9.6	<46	<50	<38	<47	<40	<41	<870
Toluene	µg/kg	<440	<25	<4.8	<23	<25	<19	<24	<20	<21	<430
Xylenes (total)	µg/kg	<870	<50	<9.6	<46	<50	170	<47	790	650	<870
Petroleum Products											
Total Petroleum Hydrocarbons (C4-C12) GRO	µg/kg	58000 J	9600 J	<240	2200 J	5000 J	27000	5200	270000	190000	54000
Total Petroleum Hydrocarbons (C13-C22) DRO (Silica Gel)	mg/kg	2400	2600	97	730 J	2800 J	5400	2800	5300	3700	3000
Total Petroleum Hydrocarbons (C23-C40) ORO (Silica Gel)	mg/kg	<1000	<1000	350	300	<990	<2500	<1000	2700	1500	<2500

Notes:

< - Not detected at the associated reporting limit
J - Estimated concentration
ft bgs - Feet below ground surface
GRO - Gasoline Range Organics
DRO - Diesel Range Organics
ORO - Motor Oil Range Organics

TABLE 3B

ANALYTICAL RESULTS SUMMARY
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

Sample Location:		***Bottom***
Sample ID:		***BOTTOM SAMPLE***
Sample Date:		***4/14/2015***
Sample Depth:		***5 ft bgs***
Parameters	***Units***	
Volatile Organic Compounds		
Benzene	µg/L	<0.50
Ethylbenzene	µg/L	<0.50
Naphthalene	µg/L	<1.0
Toluene	µg/L	1.3
Xylenes (total)	µg/L	12
Petroleum Products		
Total Petroleum Hydrocarbons (C4-C12) GRO	µg/L	100
Total Petroleum Hydrocarbons (C13-C22) DRO (Silica Gel)	µg/L	130
Total Petroleum Hydrocarbons (C23-C40) ORO (Silica Gel)	µg/L	<99

Notes:

< - Not detected at the associated reporting limit
GRO - Gasoline Range Organics
DRO - Diesel Range Organics
ORO - Motor Oil Range Organics
ft bgs - Feet below ground surface

TABLE 4

QUALIFIED SAMPLE DATA DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
IRR SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR) - TRACK 58 RESPONSE
OAKLAND, CALIFORNIA
APRIL 2015

Parameter	*Analyte*	*RPD/Diff*		*Sample ID*	*Qualified Result*	*Field Duplicate Sample ID*	*Qualified Result*	*Units*
SW-846 8260B	Total Petroleum Hydrocarbons (C4-C12) GRO	RPD	143.2	SS-18-3.5	58000 J	D-3	9600 J	µg/kg
	Total Petroleum Hydrocarbons (C4-C12) GRO	Diff	2800	SS-20-3.5	2200 J	D-4	5000 J	µg/kg
	Total Petroleum Hydrocarbons (C13-C22) DRO (Silica Gel)	RPD	117.3	SS-20-3.5	730 J	D-4	2800 J	mg/kg

Notes:

Diff - Difference (i.e., >1X RL for waters or >2XRL for soils)
RPD - Relative Percent Difference
J - Estimated concentration
GRO - Gasoline Range Organics
DRO - Diesel Range Organics

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-64192-1
Client Project/Site: UPRR-Oakland Track 58

For:
ARCADIS U.S. Inc
101 Creekside Ridge Court
2nd Floor
Roseville, California 95678

Attn: Mr. Scott Hackman

Authorized for release by:
4/22/2015 3:07:24 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-64192-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-64192-1

Comments
No additional comments.

Receipt
The samples were received on 4/15/2015 11:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Client Sample ID: BOTTOM SAMPLE — Lab Sample ID: 720-64192-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	1.3		0.50	0.17	ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	12		1.0	0.49	ug/L	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	100		50	21	ug/L	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	130		49	24	ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: TRIP BLANK — Lab Sample ID: 720-64192-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Client Sample ID: BOTTOM SAMPLE
Date Collected: 04/14/15 12:00
Date Received: 04/15/15 11:50

Lab Sample ID: 720-64192-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.25	ug/L			04/18/15 20:43	1
Ethylbenzene	ND		0.50	0.13	ug/L			04/18/15 20:43	1
Naphthalene	ND		1.0	0.22	ug/L			04/18/15 20:43	1
Toluene	**1.3**		0.50	0.17	ug/L			04/18/15 20:43	1
Xylenes, Total	**12**		1.0	0.49	ug/L			04/18/15 20:43	1
GRO (C4-C12)	**100**		50	21	ug/L			04/21/15 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*120*		*67 - 130*		*04/18/15 20:43*	*1*
4-Bromofluorobenzene	*100*		*67 - 130*		*04/21/15 16:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*126*		*72 - 130*		*04/18/15 20:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*72 - 130*		*04/21/15 16:39*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*04/18/15 20:43*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*04/21/15 16:39*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**130**		49	24	ug/L		04/20/15 10:39	04/21/15 00:25	1
TPH (C23-C40)	ND		99	36	ug/L		04/20/15 10:39	04/21/15 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.5*		*0 - 5*	*04/20/15 10:39*	*04/21/15 00:25*	*1*
p-Terphenyl	*100*		*31 - 150*	*04/20/15 10:39*	*04/21/15 00:25*	*1*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Client Sample ID: TRIP BLANK
Date Collected: 04/14/15 00:00
Date Received: 04/15/15 11:50

Lab Sample ID: 720-64192-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.25	ug/L			04/18/15 14:17	1
Ethylbenzene	ND		0.50	0.13	ug/L			04/18/15 14:17	1
Naphthalene	ND		1.0	0.22	ug/L			04/18/15 14:17	1
Toluene	ND		0.50	0.17	ug/L			04/18/15 14:17	1
Xylenes, Total	ND		1.0	0.49	ug/L			04/18/15 14:17	1
GRO (C4-C12)	ND		50	21	ug/L			04/18/15 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*118*		*67 - 130*		*04/18/15 14:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*124*		*72 - 130*		*04/18/15 14:17*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*04/18/15 14:17*	*1*

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-64192-1	BOTTOM SAMPLE	120	126	107
720-64192-1	BOTTOM SAMPLE	100	91	100
720-64192-2	TRIP BLANK	118	124	106
LCS 720-179992/5	Lab Control Sample	107	122	107
LCS 720-179992/7	Lab Control Sample	115	126	106
LCS 720-180099/7	Lab Control Sample	100	98	101
LCSD 720-179992/6	Lab Control Sample Dup	108	118	108
LCSD 720-179992/8	Lab Control Sample Dup	115	121	106
LCSD 720-180099/8	Lab Control Sample Dup	96	91	101
MB 720-179992/4	Method Blank	117	125	106
MB 720-180099/10	Method Blank	97	90	96

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)	
		NDA1	PTP1
Lab Sample ID	Client Sample ID	(0-5)	(31-150)
720-64192-1	BOTTOM SAMPLE	0.5	100
LCS 720-180032/2-A	Lab Control Sample		93
LCSD 720-180032/3-A	Lab Control Sample Dup		97
MB 720-180032/1-A	Method Blank	0	92

Surrogate Legend

NDA = Capric Acid (Surr)
PTP = p-Terphenyl

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-179992/4
Matrix: Water
Analysis Batch: 179992

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.25	ug/L			04/18/15 10:49	1
Ethylbenzene	ND		0.50	0.13	ug/L			04/18/15 10:49	1
Naphthalene	ND		1.0	0.22	ug/L			04/18/15 10:49	1
Toluene	ND		0.50	0.17	ug/L			04/18/15 10:49	1
Xylenes, Total	ND		1.0	0.49	ug/L			04/18/15 10:49	1
GRO (C4-C12)	ND		50	21	ug/L			04/18/15 10:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*		*67 - 130*		*04/18/15 10:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*125*		*72 - 130*		*04/18/15 10:49*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*04/18/15 10:49*	*1*

Lab Sample ID: LCS 720-179992/5
Matrix: Water
Analysis Batch: 179992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.5		ug/L		98	79 - 130
Ethylbenzene	25.0	24.7		ug/L		99	80 - 120
Naphthalene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	23.5		ug/L		94	78 - 120
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 142
o-Xylene	25.0	26.6		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*122*		*72 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCS 720-179992/7
Matrix: Water
Analysis Batch: 179992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	500	530		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*126*		*72 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 720-179992/6
Matrix: Water
Analysis Batch: 179992

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	24.6		ug/L		98	79 - 130	0	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-179992/6
Matrix: Water
Analysis Batch: 179992

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene			25.0	25.2		ug/L		101	80 - 120	2	20
Naphthalene			25.0	25.4		ug/L		101	70 - 130	2	20
Toluene			25.0	24.8		ug/L		99	78 - 120	5	20
m-Xylene & p-Xylene			25.0	26.7		ug/L		107	70 - 142	2	20
o-Xylene			25.0	26.8		ug/L		107	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*108*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*118*		*72 - 130*
Toluene-d8 (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 720-179992/8
Matrix: Water
Analysis Batch: 179992

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			500	528		ug/L		106	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*121*		*72 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 720-180099/10
Matrix: Water
Analysis Batch: 180099

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.25	ug/L			04/21/15 09:38	1
Ethylbenzene	ND		0.50	0.13	ug/L			04/21/15 09:38	1
Naphthalene	ND		1.0	0.22	ug/L			04/21/15 09:38	1
Toluene	ND		0.50	0.17	ug/L			04/21/15 09:38	1
Xylenes, Total	ND		1.0	0.49	ug/L			04/21/15 09:38	1
GRO (C4-C12)	ND		50	21	ug/L			04/21/15 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*67 - 130*		*04/21/15 09:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*		*04/21/15 09:38*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*04/21/15 09:38*	*1*

Lab Sample ID: LCS 720-180099/7
Matrix: Water
Analysis Batch: 180099

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
GRO (C4-C12)			500	464		ug/L		93	70 - 130		

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-180099/7
Matrix: Water
Analysis Batch: 180099

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	98		72 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 720-180099/8
Matrix: Water
Analysis Batch: 180099

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			500	446		ug/L		89	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	91		72 - 130
Toluene-d8 (Surr)	101		70 - 130

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-180032/1-A
Matrix: Water
Analysis Batch: 180112

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 180032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	ND		50	24	ug/L		04/20/15 10:39	04/21/15 12:30	1
TPH (C23-C40)	ND		99	37	ug/L		04/20/15 10:39	04/21/15 12:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 5	04/20/15 10:39	04/21/15 12:30	1
p-Terphenyl	92		31 - 150	04/20/15 10:39	04/21/15 12:30	1

Lab Sample ID: LCS 720-180032/2-A
Matrix: Water
Analysis Batch: 180018

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 180032

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TPH (C13-C22)			2500	1850		ug/L		74	31 - 117

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	93		31 - 150

Lab Sample ID: LCSD 720-180032/3-A
Matrix: Water
Analysis Batch: 180018

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 180032

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH (C13-C22)			2500	1860		ug/L		75	31 - 117	1	35

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-180032/3-A
Matrix: Water
Analysis Batch: 180018

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 180032

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	*97*		*31 - 150*

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

GC/MS VOA

Analysis Batch: 179992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64192-1	BOTTOM SAMPLE	Total/NA	Water	8260B/CA_LUFT MS	
720-64192-2	TRIP BLANK	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-179992/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-179992/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-179992/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-179992/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-179992/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 180099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64192-1	BOTTOM SAMPLE	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-180099/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-180099/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-180099/10	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

GC Semi VOA

Analysis Batch: 180018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64192-1	BOTTOM SAMPLE	Silica Gel Cleanup	Water	8015B	180032
LCS 720-180032/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	180032
LCSD 720-180032/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	180032

Prep Batch: 180032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64192-1	BOTTOM SAMPLE	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-180032/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-180032/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-180032/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 180112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-180032/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	180032

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Client Sample ID: BOTTOM SAMPLE

Lab Sample ID: 720-64192-1

Date Collected: 04/14/15 12:00

Matrix: Water

Date Received: 04/15/15 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	180099	04/21/15 16:39	ASC	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179992	04/18/15 20:43	PDR	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			180032	04/20/15 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	180018	04/21/15 00:25	JXL	TAL PLS

Client Sample ID: TRIP BLANK

Lab Sample ID: 720-64192-2

Date Collected: 04/14/15 00:00

Matrix: Water

Date Received: 04/15/15 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179992	04/18/15 14:17	PDR	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64192-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-64192-1	BOTTOM SAMPLE	Water	04/14/15 12:00	04/15/15 11:50
720-64192-2	TRIP BLANK	Water	04/14/15 00:00	04/15/15 11:50

160541

ARCADIS
Infrastructure Water Environment Buildings

ID#: 720-64192

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

4/27/2015

Send Results to:

Contact & Company Name: Scott HACKMAN	Telephone:
Address: on File	Fax:
City: State: Zip:	E-mail Address:
Project Name/Location (City, State): UPRR Oakland CA	Project #: RV009596.0000.00001
Sampler's Printed Name: GARY CLIFT	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information
						B		3	1
Bottom SAMPLE	4-14	12:00		✓	W	X	X	X	
TRIP BLANK	4-14	—		✓	W				X

PARAMETER ANALYSIS & METHOD: TPH C4-C40 by EPA 8015 B; BTEX; Naphthalene by EPA 8260 B; Silica gel Cleanup; EPA 8260

Keys	
Preservation Key:	**Container Information Key:**
A. H_2SO_4	1 40 ml Vial
B. HCL	2 1 L Amber
C. HNO_3	3. 250 ml Plastic
D. NaOH	4 500 ml Plastic
E. None	5. Encore
F. Other:	6 2 oz. Glass
G. Other:	7. 4 oz. Glass
H. Other:	8. 8 oz. Glass
	9. Other:
	10 Other:

Matrix Key: SO - Soil; SE - Sediment; NL - NAPL/Oil; W - Water; SL - Sludge; SW - Sample Wipe; T - Tissue; A - Air; Other

REMARKS

720-64192 Chain of Custody

Special Instructions/Comments:

Temp BLANK

☐ Special QA/QC Instructions(✓):

3.1°C

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Test AMERICA	Cooler Custody Seal (✓)	Printed Name: GARY CLIFT	Printed Name: Keith Hammond	Printed Name: Keith Hammond	Printed Name: Bryan Thomas
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 5 DAY TAT	Sample Receipt:	Firm: Arcadis	Firm/Courier: TA	Firm/Courier: TA	Firm: TestAmerica
Shipping Tracking #	Condition/Cooler Temp:	Date/Time: 4-14-15 6:00	Date/Time: 4-15-15 1038	Date/Time: 4-15-15 1150	Date/Time: 4/15/15 1150

20730826 CofC AR Form 01.12.2007

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 720-64192-1

Login Number: 64192

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-64194-1
Client Project/Site: UPRR-Oakland Track 58

For:
ARCADIS U.S. Inc
101 Creekside Ridge Court
2nd Floor
Roseville, California 95678

Attn: Mr. Scott Hackman

Authorized for release by:
4/22/2015 5:48:46 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

Table of Contents

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-64194-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-64194-1

Comments
No additional comments.

Receipt
The samples were received on 4/15/2015 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
Method 8015B: The following sample required a dilution due to the nature of the sample matrix: SS-2-3.5 (720-64194-2). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-10-3.5 (720-64194-10), SS-12-3.0 (720-64194-13), SS-14-3.5 (720-64194-15) and SS-16-4.0 (720-64194-17), SS-18-3.5 (720-64194-20), D-3 (720-64194-21), SS-20-3.5 (720-64194-23) and SS-25-3.0 (720-64194-29), SS-4-2.5 (720-64194-4), SS-5-3.0 (720-64194-5), SS-7-3.5 (720-64194-7), SS-9-2.5 (720-64194-9), SS-22-3.5 (720-64194-26) and D-4 (720-64194-24). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-2-3.5 — Lab Sample ID: 720-64194-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	9.9		4.8	0.71	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	14		9.5	1.4	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	140		9.5	1.2	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	310000		24000	9800	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	7700		50	37	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-4-2.5 — Lab Sample ID: 720-64194-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	3700		240	96	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3800		50	37	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-5-3.0 — Lab Sample ID: 720-64194-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
TPH (C13-C22)	340		5.0	3.7	mg/Kg	5		8015B	Silica Gel Cleanup
TPH (C23-C40)	350		250	50	mg/Kg	5		8015B	Silica Gel Cleanup

Client Sample ID: SS-7-3.5 — Lab Sample ID: 720-64194-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	910		240	95	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	550		5.0	3.7	mg/Kg	5		8015B	Silica Gel Cleanup
TPH (C23-C40)	390		250	50	mg/Kg	5		8015B	Silica Gel Cleanup

Client Sample ID: SS-9-2.5 — Lab Sample ID: 720-64194-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	15		9.7	1.2	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	1900		240	97	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3100		20	15	mg/Kg	20		8015B	Silica Gel Cleanup
TPH (C23-C40)	1300		1000	200	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-10-3.5 — Lab Sample ID: 720-64194-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	990		480	72	ug/Kg	100		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-10-3.5 (Continued) — Lab Sample ID: 720-64194-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1900		960	140	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	7500		960	96	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	660000		24000	9600	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	12000		200	150	mg/Kg	200		8015B	Silica Gel Cleanup

Client Sample ID: SS-12-3.0 — Lab Sample ID: 720-64194-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	3300		240	97	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3500		50	37	mg/Kg	50		8015B	Silica Gel Cleanup
TPH (C23-C40)	3200		2500	500	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-14-3.5 — Lab Sample ID: 720-64194-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	11		10	1.2	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	2900		250	100	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2000		20	15	mg/Kg	20		8015B	Silica Gel Cleanup
TPH (C23-C40)	1500		1000	200	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-16-4.0 — Lab Sample ID: 720-64194-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	9.3		4.7	0.71	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	68		9.4	1.4	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Toluene	7.2		4.7	0.67	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	110		9.4	1.2	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	270000		22000	8900	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	14000		200	150	mg/Kg	200		8015B	Silica Gel Cleanup

Client Sample ID: SS-18-3.5 — Lab Sample ID: 720-64194-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	58000		22000	8700	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2400		20	15	mg/Kg	20		8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: D-3 — Lab Sample ID: 720-64194-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	9600		1300	500	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2600		20	15	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-20-3.5 — Lab Sample ID: 720-64194-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	2200		1200	460	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	730		5.0	3.7	mg/Kg	5		8015B	Silica Gel Cleanup
TPH (C23-C40)	300		250	50	mg/Kg	5		8015B	Silica Gel Cleanup

Client Sample ID: D-4 — Lab Sample ID: 720-64194-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	5000		1200	500	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2800		20	15	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-22-3.5 — Lab Sample ID: 720-64194-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	5200		1200	470	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2800		20	15	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-25-3.0 — Lab Sample ID: 720-64194-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	54000		22000	8700	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3000		50	37	mg/Kg	50		8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-2-3.5
Date Collected: 04/14/15 12:35
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-2
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8	0.62	ug/Kg		04/16/15 19:49	04/17/15 01:43	1
Ethylbenzene	**9.9**		4.8	0.71	ug/Kg		04/16/15 19:49	04/17/15 01:43	1
Naphthalene	**14**		9.5	1.4	ug/Kg		04/16/15 19:49	04/17/15 01:43	1
Toluene	ND		4.8	0.67	ug/Kg		04/16/15 19:49	04/17/15 01:43	1
Xylenes, Total	**140**		9.5	1.2	ug/Kg		04/16/15 19:49	04/17/15 01:43	1
GRO (C4-C12)	**310000**		24000	9800	ug/Kg		04/17/15 10:00	04/17/15 12:37	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*128*		*45 - 131*	*04/16/15 19:49*	*04/17/15 01:43*	*1*
4-Bromofluorobenzene	*92*		*66 - 148*	*04/17/15 10:00*	*04/17/15 12:37*	*100*
1,2-Dichloroethane-d4 (Surr)	*87*		*60 - 140*	*04/16/15 19:49*	*04/17/15 01:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*73*		*62 - 137*	*04/17/15 10:00*	*04/17/15 12:37*	*100*
Toluene-d8 (Surr)	*92*		*58 - 140*	*04/16/15 19:49*	*04/17/15 01:43*	*1*
Toluene-d8 (Surr)	*94*		*65 - 141*	*04/17/15 10:00*	*04/17/15 12:37*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**7700**		50	37	mg/Kg		04/17/15 14:28	04/18/15 16:30	50
TPH (C23-C40)	ND		2500	500	mg/Kg		04/17/15 14:28	04/18/15 16:30	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/18/15 16:30*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/18/15 16:30*	*50*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-4-2.5
Date Collected: 04/14/15 12:50
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-4
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8	0.63	ug/Kg		04/16/15 19:49	04/17/15 02:13	1
Ethylbenzene	ND		4.8	0.73	ug/Kg		04/16/15 19:49	04/17/15 02:13	1
Naphthalene	ND		9.7	1.5	ug/Kg		04/16/15 19:49	04/17/15 02:13	1
Toluene	ND		4.8	0.69	ug/Kg		04/16/15 19:49	04/17/15 02:13	1
Xylenes, Total	ND		9.7	1.2	ug/Kg		04/16/15 19:49	04/17/15 02:13	1
GRO (C4-C12)	**3700**		240	96	ug/Kg		04/17/15 19:08	04/17/15 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*45 - 131*	*04/16/15 19:49*	*04/17/15 02:13*	*1*
4-Bromofluorobenzene	*96*		*45 - 131*	*04/17/15 19:08*	*04/17/15 21:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*60 - 140*	*04/16/15 19:49*	*04/17/15 02:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*74*		*60 - 140*	*04/17/15 19:08*	*04/17/15 21:38*	*1*
Toluene-d8 (Surr)	*96*		*58 - 140*	*04/16/15 19:49*	*04/17/15 02:13*	*1*
Toluene-d8 (Surr)	*91*		*58 - 140*	*04/17/15 19:08*	*04/17/15 21:38*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3800**		50	37	mg/Kg		04/17/15 14:28	04/20/15 11:35	50
TPH (C23-C40)	ND		2500	500	mg/Kg		04/17/15 14:28	04/20/15 11:35	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:35*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:35*	*50*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-5-3.0
Date Collected: 04/14/15 13:20
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-5
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.6	0.59	ug/Kg		04/16/15 19:49	04/17/15 02:44	1
Ethylbenzene	ND		4.6	0.68	ug/Kg		04/16/15 19:49	04/17/15 02:44	1
Naphthalene	ND		9.1	1.4	ug/Kg		04/16/15 19:49	04/17/15 02:44	1
Toluene	ND		4.6	0.65	ug/Kg		04/16/15 19:49	04/17/15 02:44	1
Xylenes, Total	ND		9.1	1.1	ug/Kg		04/16/15 19:49	04/17/15 02:44	1
GRO (C4-C12)	ND		250	99	ug/Kg		04/17/15 19:08	04/17/15 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*45 - 131*	*04/16/15 19:49*	*04/17/15 02:44*	*1*
4-Bromofluorobenzene	*93*		*45 - 131*	*04/17/15 19:08*	*04/17/15 22:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*60 - 140*	*04/16/15 19:49*	*04/17/15 02:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*60 - 140*	*04/17/15 19:08*	*04/17/15 22:09*	*1*
Toluene-d8 (Surr)	*96*		*58 - 140*	*04/16/15 19:49*	*04/17/15 02:44*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*04/17/15 19:08*	*04/17/15 22:09*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**340**		5.0	3.7	mg/Kg		04/17/15 14:28	04/20/15 11:59	5
TPH (C23-C40)	**350**		250	50	mg/Kg		04/17/15 14:28	04/20/15 11:59	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:59*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:59*	*5*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-7-3.5
Date Collected: 04/14/15 12:25
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-7
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.7	0.62	ug/Kg		04/16/15 19:49	04/17/15 03:14	1
Ethylbenzene	ND		4.7	0.71	ug/Kg		04/16/15 19:49	04/17/15 03:14	1
Naphthalene	ND		9.5	1.4	ug/Kg		04/16/15 19:49	04/17/15 03:14	1
Toluene	ND		4.7	0.67	ug/Kg		04/16/15 19:49	04/17/15 03:14	1
Xylenes, Total	ND		9.5	1.2	ug/Kg		04/16/15 19:49	04/17/15 03:14	1
GRO (C4-C12)	**910**		240	95	ug/Kg		04/16/15 19:49	04/17/15 03:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*	*04/16/15 19:49*	*04/17/15 03:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*60 - 140*	*04/16/15 19:49*	*04/17/15 03:14*	*1*
Toluene-d8 (Surr)	*97*		*58 - 140*	*04/16/15 19:49*	*04/17/15 03:14*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**550**		5.0	3.7	mg/Kg		04/17/15 14:28	04/20/15 12:23	5
TPH (C23-C40)	**390**		250	50	mg/Kg		04/17/15 14:28	04/20/15 12:23	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 12:23*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 12:23*	*5*

Client Sample ID: SS-9-2.5
Date Collected: 04/14/15 12:15
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-9
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.9	0.63	ug/Kg		04/16/15 19:49	04/17/15 03:45	1
Ethylbenzene	ND		4.9	0.73	ug/Kg		04/16/15 19:49	04/17/15 03:45	1
Naphthalene	ND		9.7	1.5	ug/Kg		04/16/15 19:49	04/17/15 03:45	1
Toluene	ND		4.9	0.69	ug/Kg		04/16/15 19:49	04/17/15 03:45	1
Xylenes, Total	**15**		9.7	1.2	ug/Kg		04/16/15 19:49	04/17/15 03:45	1
GRO (C4-C12)	**1900**		240	97	ug/Kg		04/16/15 19:49	04/17/15 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*45 - 131*	*04/16/15 19:49*	*04/17/15 03:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 140*	*04/16/15 19:49*	*04/17/15 03:45*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*	*04/16/15 19:49*	*04/17/15 03:45*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3100**		20	15	mg/Kg		04/17/15 14:28	04/20/15 12:47	20
TPH (C23-C40)	**1300**		1000	200	mg/Kg		04/17/15 14:28	04/20/15 12:47	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 12:47*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 12:47*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-10-3.5
Date Collected: 04/14/15 13:30
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-10
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		480	33	ug/Kg		04/17/15 10:00	04/17/15 13:08	100
Ethylbenzene	**990**		480	72	ug/Kg		04/17/15 10:00	04/17/15 13:08	100
Naphthalene	**1900**		960	140	ug/Kg		04/17/15 10:00	04/17/15 13:08	100
Toluene	ND		480	68	ug/Kg		04/17/15 10:00	04/17/15 13:08	100
Xylenes, Total	**7500**		960	96	ug/Kg		04/17/15 10:00	04/17/15 13:08	100
GRO (C4-C12)	**660000**		24000	9600	ug/Kg		04/17/15 10:00	04/17/15 13:08	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*66 - 148*	*04/17/15 10:00*	*04/17/15 13:08*	*100*
1,2-Dichloroethane-d4 (Surr)	*77*		*62 - 137*	*04/17/15 10:00*	*04/17/15 13:08*	*100*
Toluene-d8 (Surr)	*100*		*65 - 141*	*04/17/15 10:00*	*04/17/15 13:08*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**12000**		200	150	mg/Kg		04/17/15 14:28	04/20/15 11:35	200
TPH (C23-C40)	ND		10000	2000	mg/Kg		04/17/15 14:28	04/20/15 11:35	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:35*	*200*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:35*	*200*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-12-3.0
Date Collected: 04/14/15 13:50
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-13
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.6	0.59	ug/Kg		04/16/15 19:49	04/17/15 04:46	1
Ethylbenzene	ND		4.6	0.69	ug/Kg		04/16/15 19:49	04/17/15 04:46	1
Naphthalene	ND		9.1	1.4	ug/Kg		04/16/15 19:49	04/17/15 04:46	1
Toluene	ND		4.6	0.65	ug/Kg		04/16/15 19:49	04/17/15 04:46	1
Xylenes, Total	ND		9.7	1.2	ug/Kg		04/17/15 19:08	04/17/15 22:40	1
GRO (C4-C12)	**3300**		240	97	ug/Kg		04/17/15 19:08	04/17/15 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*45 - 131*	*04/16/15 19:49*	*04/17/15 04:46*	*1*
4-Bromofluorobenzene	*93*		*45 - 131*	*04/17/15 19:08*	*04/17/15 22:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*77*		*60 - 140*	*04/16/15 19:49*	*04/17/15 04:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*60 - 140*	*04/17/15 19:08*	*04/17/15 22:40*	*1*
Toluene-d8 (Surr)	*94*		*58 - 140*	*04/16/15 19:49*	*04/17/15 04:46*	*1*
Toluene-d8 (Surr)	*90*		*58 - 140*	*04/17/15 19:08*	*04/17/15 22:40*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3500**		50	37	mg/Kg		04/17/15 14:28	04/20/15 11:59	50
TPH (C23-C40)	**3200**		2500	500	mg/Kg		04/17/15 14:28	04/20/15 11:59	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:59*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:59*	*50*

Client Sample ID: SS-14-3.5
Date Collected: 04/14/15 14:10
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-15
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8	0.63	ug/Kg		04/16/15 19:49	04/17/15 05:17	1
Ethylbenzene	ND		4.8	0.73	ug/Kg		04/16/15 19:49	04/17/15 05:17	1
Naphthalene	ND		9.7	1.5	ug/Kg		04/16/15 19:49	04/17/15 05:17	1
Toluene	ND		4.8	0.69	ug/Kg		04/16/15 19:49	04/17/15 05:17	1
Xylenes, Total	**11**		10	1.2	ug/Kg		04/17/15 19:08	04/17/15 23:10	1
GRO (C4-C12)	**2900**		250	100	ug/Kg		04/17/15 19:08	04/17/15 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*45 - 131*	*04/16/15 19:49*	*04/17/15 05:17*	*1*
4-Bromofluorobenzene	*87*		*45 - 131*	*04/17/15 19:08*	*04/17/15 23:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 140*	*04/16/15 19:49*	*04/17/15 05:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 140*	*04/17/15 19:08*	*04/17/15 23:10*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*04/16/15 19:49*	*04/17/15 05:17*	*1*
Toluene-d8 (Surr)	*90*		*58 - 140*	*04/17/15 19:08*	*04/17/15 23:10*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2000**		20	15	mg/Kg		04/17/15 14:28	04/20/15 12:23	20
TPH (C23-C40)	**1500**		1000	200	mg/Kg		04/17/15 14:28	04/20/15 12:23	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 12:23*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 12:23*	*20*

Client Sample ID: SS-16-4.0
Date Collected: 04/14/15 14:25
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-17
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.7	0.61	ug/Kg		04/16/15 19:49	04/17/15 05:48	1
Ethylbenzene	**9.3**		4.7	0.71	ug/Kg		04/16/15 19:49	04/17/15 05:48	1
Naphthalene	**68**		9.4	1.4	ug/Kg		04/16/15 19:49	04/17/15 05:48	1
Toluene	**7.2**		4.7	0.67	ug/Kg		04/16/15 19:49	04/17/15 05:48	1
Xylenes, Total	**110**		9.4	1.2	ug/Kg		04/16/15 19:49	04/17/15 05:48	1
GRO (C4-C12)	**270000**		22000	8900	ug/Kg		04/17/15 10:00	04/17/15 13:39	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*45 - 131*	*04/16/15 19:49*	*04/17/15 05:48*	*1*
4-Bromofluorobenzene	*89*		*66 - 148*	*04/17/15 10:00*	*04/17/15 13:39*	*100*
1,2-Dichloroethane-d4 (Surr)	*83*		*60 - 140*	*04/16/15 19:49*	*04/17/15 05:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*74*		*62 - 137*	*04/17/15 10:00*	*04/17/15 13:39*	*100*
Toluene-d8 (Surr)	*96*		*58 - 140*	*04/16/15 19:49*	*04/17/15 05:48*	*1*
Toluene-d8 (Surr)	*94*		*65 - 141*	*04/17/15 10:00*	*04/17/15 13:39*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**14000**		200	150	mg/Kg		04/17/15 14:28	04/20/15 12:47	200
TPH (C23-C40)	ND		10000	2000	mg/Kg		04/17/15 14:28	04/20/15 12:47	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 12:47*	*200*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 12:47*	*200*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-18-3.5
Date Collected: 04/14/15 14:40
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-20
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		440	30	ug/Kg		04/17/15 10:00	04/17/15 14:10	100
Ethylbenzene	ND		440	65	ug/Kg		04/17/15 10:00	04/17/15 14:10	100
Naphthalene	ND		870	130	ug/Kg		04/17/15 10:00	04/17/15 14:10	100
Toluene	ND		440	62	ug/Kg		04/17/15 10:00	04/17/15 14:10	100
Xylenes, Total	ND		870	87	ug/Kg		04/17/15 10:00	04/17/15 14:10	100
GRO (C4-C12)	**58000**		22000	8700	ug/Kg		04/17/15 10:00	04/17/15 14:10	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*66 - 148*	*04/17/15 10:00*	*04/17/15 14:10*	*100*
1,2-Dichloroethane-d4 (Surr)	*76*		*62 - 137*	*04/17/15 10:00*	*04/17/15 14:10*	*100*
Toluene-d8 (Surr)	*98*		*65 - 141*	*04/17/15 10:00*	*04/17/15 14:10*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2400**		20	15	mg/Kg		04/17/15 14:28	04/20/15 11:02	20
TPH (C23-C40)	ND		1000	200	mg/Kg		04/17/15 14:28	04/20/15 11:02	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:02*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:02*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: D-3
Date Collected: 04/14/15 14:43
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-21
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		25	3.3	ug/Kg		04/20/15 20:36	04/21/15 01:35	1
Ethylbenzene	ND		25	3.8	ug/Kg		04/20/15 20:36	04/21/15 01:35	1
Naphthalene	ND		50	7.5	ug/Kg		04/20/15 20:36	04/21/15 01:35	1
Toluene	ND		25	3.6	ug/Kg		04/20/15 20:36	04/21/15 01:35	1
Xylenes, Total	ND		50	6.1	ug/Kg		04/20/15 20:36	04/21/15 01:35	1
GRO (C4-C12)	**9600**		1300	500	ug/Kg		04/20/15 20:36	04/21/15 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*45 - 131*	*04/20/15 20:36*	*04/21/15 01:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*60 - 140*	*04/20/15 20:36*	*04/21/15 01:35*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*04/20/15 20:36*	*04/21/15 01:35*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2600**		20	15	mg/Kg		04/17/15 14:28	04/20/15 11:31	20
TPH (C23-C40)	ND		1000	200	mg/Kg		04/17/15 14:28	04/20/15 11:31	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:31*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:31*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-20-3.5
Date Collected: 04/14/15 15:00
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-23
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		23	3.0	ug/Kg		04/20/15 20:36	04/21/15 02:05	1
Ethylbenzene	ND		23	3.5	ug/Kg		04/20/15 20:36	04/21/15 02:05	1
Naphthalene	ND		46	6.9	ug/Kg		04/20/15 20:36	04/21/15 02:05	1
Toluene	ND		23	3.3	ug/Kg		04/20/15 20:36	04/21/15 02:05	1
Xylenes, Total	ND		46	5.6	ug/Kg		04/20/15 20:36	04/21/15 02:05	1
GRO (C4-C12)	**2200**		1200	460	ug/Kg		04/20/15 20:36	04/21/15 02:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*04/20/15 20:36*	*04/21/15 02:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*60 - 140*	*04/20/15 20:36*	*04/21/15 02:05*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*	*04/20/15 20:36*	*04/21/15 02:05*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**730**		5.0	3.7	mg/Kg		04/17/15 14:28	04/20/15 12:01	5
TPH (C23-C40)	**300**		250	50	mg/Kg		04/17/15 14:28	04/20/15 12:01	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 12:01*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 12:01*	*5*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: D-4
Date Collected: 04/14/15 15:04
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-24
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		25	3.2	ug/Kg		04/20/15 20:36	04/21/15 02:36	1
Ethylbenzene	ND		25	3.7	ug/Kg		04/20/15 20:36	04/21/15 02:36	1
Naphthalene	ND		50	7.4	ug/Kg		04/20/15 20:36	04/21/15 02:36	1
Toluene	ND		25	3.5	ug/Kg		04/20/15 20:36	04/21/15 02:36	1
Xylenes, Total	ND		50	6.0	ug/Kg		04/20/15 20:36	04/21/15 02:36	1
GRO (C4-C12)	**5000**		1200	500	ug/Kg		04/20/15 20:36	04/21/15 02:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*	*04/20/15 20:36*	*04/21/15 02:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*78*		*60 - 140*	*04/20/15 20:36*	*04/21/15 02:36*	*1*
Toluene-d8 (Surr)	*98*		*58 - 140*	*04/20/15 20:36*	*04/21/15 02:36*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2800**		20	15	mg/Kg		04/17/15 14:28	04/20/15 11:11	20
TPH (C23-C40)	ND		990	200	mg/Kg		04/17/15 14:28	04/20/15 11:11	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/17/15 14:28*	*04/20/15 11:11*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/17/15 14:28*	*04/20/15 11:11*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-22-3.5
Date Collected: 04/14/15 15:20
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-26
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		24	3.1	ug/Kg		04/20/15 20:36	04/21/15 03:06	1
Ethylbenzene	ND		24	3.5	ug/Kg		04/20/15 20:36	04/21/15 03:06	1
Naphthalene	ND		47	7.1	ug/Kg		04/20/15 20:36	04/21/15 03:06	1
Toluene	ND		24	3.3	ug/Kg		04/20/15 20:36	04/21/15 03:06	1
Xylenes, Total	ND		47	5.8	ug/Kg		04/20/15 20:36	04/21/15 03:06	1
GRO (C4-C12)	**5200**		1200	470	ug/Kg		04/20/15 20:36	04/21/15 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*45 - 131*	*04/20/15 20:36*	*04/21/15 03:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*60 - 140*	*04/20/15 20:36*	*04/21/15 03:06*	*1*
Toluene-d8 (Surr)	*94*		*58 - 140*	*04/20/15 20:36*	*04/21/15 03:06*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2800**		20	15	mg/Kg		04/20/15 15:10	04/21/15 11:18	20
TPH (C23-C40)	ND		1000	200	mg/Kg		04/20/15 15:10	04/21/15 11:18	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/20/15 15:10*	*04/21/15 11:18*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/20/15 15:10*	*04/21/15 11:18*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: SS-25-3.0
Date Collected: 04/14/15 15:40
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-29
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		430	29	ug/Kg		04/17/15 10:00	04/17/15 16:44	100
Ethylbenzene	ND		430	65	ug/Kg		04/17/15 10:00	04/17/15 16:44	100
Naphthalene	ND		870	130	ug/Kg		04/17/15 10:00	04/17/15 16:44	100
Toluene	ND		430	62	ug/Kg		04/17/15 10:00	04/17/15 16:44	100
Xylenes, Total	ND		870	87	ug/Kg		04/17/15 10:00	04/17/15 16:44	100
GRO (C4-C12)	**54000**		22000	8700	ug/Kg		04/17/15 10:00	04/17/15 16:44	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*66 - 148*	*04/17/15 10:00*	*04/17/15 16:44*	*100*
1,2-Dichloroethane-d4 (Surr)	*75*		*62 - 137*	*04/17/15 10:00*	*04/17/15 16:44*	*100*
Toluene-d8 (Surr)	*96*		*65 - 141*	*04/17/15 10:00*	*04/17/15 16:44*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3000**		50	37	mg/Kg		04/20/15 13:23	04/21/15 03:51	50
TPH (C23-C40)	ND		2500	500	mg/Kg		04/20/15 13:23	04/21/15 03:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/20/15 13:23*	*04/21/15 03:51*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/20/15 13:23*	*04/21/15 03:51*	*50*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(66-148)	(62-137)	(65-141)
720-64194-2	SS-2-3.5	92	73	94
720-64194-10	SS-10-3.5	99	77	100
720-64194-17	SS-16-4.0	89	74	94
720-64194-20	SS-18-3.5	95	76	98
720-64194-29	SS-25-3.0	90	75	96
LCS 720-179906/5	Lab Control Sample	88	72	95
LCS 720-179906/7	Lab Control Sample	91	73	95
LCSD 720-179906/6	Lab Control Sample Dup	93	74	101
LCSD 720-179906/8	Lab Control Sample Dup	98	78	99
MB 720-179906/10	Method Blank	91	73	98

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(45-131)	(60-140)	(58-140)
720-64194-2	SS-2-3.5	128	87	92
720-64194-4	SS-4-2.5	101	80	96
720-64194-4	SS-4-2.5	96	74	91
720-64194-5	SS-5-3.0	94	80	96
720-64194-5	SS-5-3.0	93	76	93
720-64194-7	SS-7-3.5	96	81	97
720-64194-9	SS-9-2.5	97	82	95
720-64194-13	SS-12-3.0	93	77	94
720-64194-13	SS-12-3.0	93	76	90
720-64194-15	SS-14-3.5	89	82	93
720-64194-15	SS-14-3.5	87	82	90
720-64194-17	SS-16-4.0	110	83	96
720-64194-21	D-3	109	98	92
720-64194-23	SS-20-3.5	91	80	95
720-64194-24	D-4	96	78	98
720-64194-26	SS-22-3.5	95	76	94
LCS 720-179892/5	Lab Control Sample	94	81	98
LCS 720-179892/7	Lab Control Sample	93	84	97
LCS 720-179965/6	Lab Control Sample	90	75	94
LCS 720-179965/8	Lab Control Sample	92	80	94
LCS 720-180071/6	Lab Control Sample	95	87	97
LCS 720-180071/8	Lab Control Sample	94	88	96
LCSD 720-179892/6	Lab Control Sample Dup	95	81	100
LCSD 720-179892/8	Lab Control Sample Dup	95	86	97
LCSD 720-179965/7	Lab Control Sample Dup	93	77	96
LCSD 720-179965/9	Lab Control Sample Dup	94	80	93
LCSD 720-180071/7	Lab Control Sample Dup	94	86	97

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(45-131)	(60-140)	(58-140)
LCSD 720-180071/9	Lab Control Sample Dup	94	85	94
MB 720-179892/4	Method Blank	91	83	93
MB 720-179965/4	Method Blank	90	76	89
MB 720-180071/5	Method Blank	90	94	91

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)	
		NDA1	PTP1
Lab Sample ID	Client Sample ID	(0-1)	(38-148)
720-64194-2	SS-2-3.5	0	0 X D
720-64194-4	SS-4-2.5	0	0 X D
720-64194-5	SS-5-3.0	0	0 X D
720-64194-7	SS-7-3.5	0	0 X D
720-64194-9	SS-9-2.5	0	0 X D
720-64194-10	SS-10-3.5	0	0 X D
720-64194-13	SS-12-3.0	0	0 X D
720-64194-15	SS-14-3.5	0	0 X D
720-64194-17	SS-16-4.0	0	0 X D
720-64194-20	SS-18-3.5	0	0 X D
720-64194-21	D-3	0	0 X D
720-64194-23	SS-20-3.5	0	0 X D
720-64194-24	D-4	0	0 X D
720-64194-26	SS-22-3.5	0	0 X D
720-64194-29	SS-25-3.0	0	0 X D
LCS 720-179963/2-A	Lab Control Sample		77
LCS 720-180054/2-A	Lab Control Sample		100
MB 720-179963/1-A	Method Blank	0.008	84
MB 720-180054/1-A	Method Blank	0	97

Surrogate Legend

NDA = Capric Acid (Surr)

PTP = p-Terphenyl

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-179892/4
Matrix: Solid
Analysis Batch: 179892

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.65	ug/Kg			04/16/15 19:33	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			04/16/15 19:33	1
Naphthalene	ND		10	1.5	ug/Kg			04/16/15 19:33	1
Toluene	ND		5.0	0.71	ug/Kg			04/16/15 19:33	1
Xylenes, Total	ND		10	1.2	ug/Kg			04/16/15 19:33	1
GRO (C4-C12)	ND		250	100	ug/Kg			04/16/15 19:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*		*04/16/15 19:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*60 - 140*		*04/16/15 19:33*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*		*04/16/15 19:33*	*1*

Lab Sample ID: LCS 720-179892/5
Matrix: Solid
Analysis Batch: 179892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	48.6		ug/Kg		97	70 - 130
Ethylbenzene	50.0	43.8		ug/Kg		88	80 - 137
Naphthalene	50.0	52.9		ug/Kg		106	60 - 147
Toluene	50.0	45.9		ug/Kg		92	80 - 128
m-Xylene & p-Xylene	50.0	45.4		ug/Kg		91	70 - 146
o-Xylene	50.0	44.9		ug/Kg		90	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*81*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: LCS 720-179892/7
Matrix: Solid
Analysis Batch: 179892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1000	1020		ug/Kg		102	70 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*84*		*60 - 140*
Toluene-d8 (Surr)	*97*		*58 - 140*

Lab Sample ID: LCSD 720-179892/6
Matrix: Solid
Analysis Batch: 179892

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	49.5		ug/Kg		99	70 - 130	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-179892/6
Matrix: Solid
Analysis Batch: 179892

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene			50.0	45.2		ug/Kg		90	80 - 137	3	20
Naphthalene			50.0	53.2		ug/Kg		106	60 - 147	0	20
Toluene			50.0	47.0		ug/Kg		94	80 - 128	2	20
m-Xylene & p-Xylene			50.0	46.4		ug/Kg		93	70 - 146	2	20
o-Xylene			50.0	46.2		ug/Kg		92	70 - 140	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*81*		*60 - 140*
Toluene-d8 (Surr)	*100*		*58 - 140*

Lab Sample ID: LCSD 720-179892/8
Matrix: Solid
Analysis Batch: 179892

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			1000	1010		ug/Kg		101	70 - 122	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*86*		*60 - 140*
Toluene-d8 (Surr)	*97*		*58 - 140*

Lab Sample ID: MB 720-179906/10
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		500	34	ug/Kg			04/17/15 10:02	100
Ethylbenzene	ND		500	75	ug/Kg			04/17/15 10:02	100
Naphthalene	ND		1000	150	ug/Kg			04/17/15 10:02	100
Toluene	ND		500	71	ug/Kg			04/17/15 10:02	100
Xylenes, Total	ND		1000	100	ug/Kg			04/17/15 10:02	100
GRO (C4-C12)	ND		25000	10000	ug/Kg			04/17/15 10:02	100

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*66 - 148*		*04/17/15 10:02*	*100*
1,2-Dichloroethane-d4 (Surr)	*73*		*62 - 137*		*04/17/15 10:02*	*100*
Toluene-d8 (Surr)	*98*		*65 - 141*		*04/17/15 10:02*	*100*

Lab Sample ID: LCS 720-179906/5
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			5000	5230		ug/Kg		105	76 - 122
Ethylbenzene			5000	4670		ug/Kg		93	76 - 137

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-179906/5
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Naphthalene			5000	5040		ug/Kg		101	62 - 151		
Toluene			5000	5040		ug/Kg		101	77 - 120		
m-Xylene & p-Xylene			5000	4920		ug/Kg		98	71 - 142		
o-Xylene			5000	4790		ug/Kg		96	71 - 142		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*72*		*62 - 137*
Toluene-d8 (Surr)	*95*		*65 - 141*

Lab Sample ID: LCS 720-179906/7
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
GRO (C4-C12)			100000	115000		ug/Kg		115	62 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*73*		*62 - 137*
Toluene-d8 (Surr)	*95*		*65 - 141*

Lab Sample ID: LCSD 720-179906/6
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			5000	5510		ug/Kg		110	76 - 122	5	20
Ethylbenzene			5000	5050		ug/Kg		101	76 - 137	8	20
Naphthalene			5000	5540		ug/Kg		111	62 - 151	9	20
Toluene			5000	5430		ug/Kg		109	77 - 120	7	20
m-Xylene & p-Xylene			5000	5280		ug/Kg		106	71 - 142	7	20
o-Xylene			5000	5160		ug/Kg		103	71 - 142	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*74*		*62 - 137*
Toluene-d8 (Surr)	*101*		*65 - 141*

Lab Sample ID: LCSD 720-179906/8
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			100000	120000		ug/Kg		120	62 - 120	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-179906/8
Matrix: Solid
Analysis Batch: 179906

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		66 - 148
1,2-Dichloroethane-d4 (Surr)	78		62 - 137
Toluene-d8 (Surr)	99		65 - 141

Lab Sample ID: MB 720-179965/4
Matrix: Solid
Analysis Batch: 179965

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.65	ug/Kg			04/17/15 19:05	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			04/17/15 19:05	1
Naphthalene	ND		10	1.5	ug/Kg			04/17/15 19:05	1
Toluene	ND		5.0	0.71	ug/Kg			04/17/15 19:05	1
Xylenes, Total	ND		10	1.2	ug/Kg			04/17/15 19:05	1
GRO (C4-C12)	ND		250	100	ug/Kg			04/17/15 19:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		45 - 131		04/17/15 19:05	1
1,2-Dichloroethane-d4 (Surr)	76		60 - 140		04/17/15 19:05	1
Toluene-d8 (Surr)	89		58 - 140		04/17/15 19:05	1

Lab Sample ID: LCS 720-179965/6
Matrix: Solid
Analysis Batch: 179965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.1		ug/Kg		92	70 - 130
Ethylbenzene	50.0	43.9		ug/Kg		88	80 - 137
Naphthalene	50.0	48.9		ug/Kg		98	60 - 147
Toluene	50.0	45.9		ug/Kg		92	80 - 128
m-Xylene & p-Xylene	50.0	44.6		ug/Kg		89	70 - 146
o-Xylene	50.0	44.1		ug/Kg		88	70 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	90		45 - 131
1,2-Dichloroethane-d4 (Surr)	75		60 - 140
Toluene-d8 (Surr)	94		58 - 140

Lab Sample ID: LCS 720-179965/8
Matrix: Solid
Analysis Batch: 179965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1000	965		ug/Kg		97	70 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	92		45 - 131

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-179965/8
Matrix: Solid
Analysis Batch: 179965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	80		60 - 140
Toluene-d8 (Surr)	94		58 - 140

Lab Sample ID: LCSD 720-179965/7
Matrix: Solid
Analysis Batch: 179965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	46.4		ug/Kg		93	70 - 130	1	20
Ethylbenzene			50.0	44.7		ug/Kg		89	80 - 137	2	20
Naphthalene			50.0	50.6		ug/Kg		101	60 - 147	4	20
Toluene			50.0	46.4		ug/Kg		93	80 - 128	1	20
m-Xylene & p-Xylene			50.0	45.4		ug/Kg		91	70 - 146	2	20
o-Xylene			50.0	45.1		ug/Kg		90	70 - 140	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	93		45 - 131
1,2-Dichloroethane-d4 (Surr)	77		60 - 140
Toluene-d8 (Surr)	96		58 - 140

Lab Sample ID: LCSD 720-179965/9
Matrix: Solid
Analysis Batch: 179965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			1000	963		ug/Kg		96	70 - 122	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	94		45 - 131
1,2-Dichloroethane-d4 (Surr)	80		60 - 140
Toluene-d8 (Surr)	93		58 - 140

Lab Sample ID: MB 720-180071/5
Matrix: Solid
Analysis Batch: 180071

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.65	ug/Kg			04/20/15 19:29	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			04/20/15 19:29	1
Naphthalene	ND		10	1.5	ug/Kg			04/20/15 19:29	1
Toluene	ND		5.0	0.71	ug/Kg			04/20/15 19:29	1
Xylenes, Total	ND		10	1.2	ug/Kg			04/20/15 19:29	1
GRO (C4-C12)	ND		250	100	ug/Kg			04/20/15 19:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		45 - 131		04/20/15 19:29	1
1,2-Dichloroethane-d4 (Surr)	94		60 - 140		04/20/15 19:29	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-180071/5
Matrix: Solid
Analysis Batch: 180071

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		58 - 140		04/20/15 19:29	1

Lab Sample ID: LCS 720-180071/6
Matrix: Solid
Analysis Batch: 180071

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.2		ug/Kg		94	70 - 130
Ethylbenzene	50.0	46.0		ug/Kg		92	80 - 137
Naphthalene	50.0	50.8		ug/Kg		102	60 - 147
Toluene	50.0	46.0		ug/Kg		92	80 - 128
m-Xylene & p-Xylene	50.0	47.2		ug/Kg		94	70 - 146
o-Xylene	50.0	47.1		ug/Kg		94	70 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		45 - 131
1,2-Dichloroethane-d4 (Surr)	87		60 - 140
Toluene-d8 (Surr)	97		58 - 140

Lab Sample ID: LCS 720-180071/8
Matrix: Solid
Analysis Batch: 180071

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1000	996		ug/Kg		100	70 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	94		45 - 131
1,2-Dichloroethane-d4 (Surr)	88		60 - 140
Toluene-d8 (Surr)	96		58 - 140

Lab Sample ID: LCSD 720-180071/7
Matrix: Solid
Analysis Batch: 180071

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	46.7		ug/Kg		93	70 - 130	1	20
Ethylbenzene	50.0	44.9		ug/Kg		90	80 - 137	2	20
Naphthalene	50.0	51.0		ug/Kg		102	60 - 147	1	20
Toluene	50.0	44.8		ug/Kg		90	80 - 128	3	20
m-Xylene & p-Xylene	50.0	45.5		ug/Kg		91	70 - 146	4	20
o-Xylene	50.0	45.5		ug/Kg		91	70 - 140	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	94		45 - 131
1,2-Dichloroethane-d4 (Surr)	86		60 - 140
Toluene-d8 (Surr)	97		58 - 140

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-180071/9
Matrix: Solid
Analysis Batch: 180071

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			1000	961		ug/Kg		96	70 - 122	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*85*		*60 - 140*
Toluene-d8 (Surr)	*94*		*58 - 140*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-179963/1-A
Matrix: Solid
Analysis Batch: 179997

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 179963

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	ND		1.0	0.75	mg/Kg		04/17/15 14:28	04/18/15 14:53	1
TPH (C23-C40)	ND		50	10	mg/Kg		04/17/15 14:28	04/18/15 14:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.008*		*0 - 1*	*04/17/15 14:28*	*04/18/15 14:53*	*1*
p-Terphenyl	*84*		*38 - 148*	*04/17/15 14:28*	*04/18/15 14:53*	*1*

Lab Sample ID: LCS 720-179963/2-A
Matrix: Solid
Analysis Batch: 179997

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 179963

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH (C13-C22)			83.2	47.1		mg/Kg		57	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*77*		*38 - 148*

Lab Sample ID: MB 720-180054/1-A
Matrix: Solid
Analysis Batch: 180019

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 180054

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	ND		0.99	0.74	mg/Kg		04/20/15 13:23	04/21/15 05:19	1
TPH (C23-C40)	ND		49	9.9	mg/Kg		04/20/15 13:23	04/21/15 05:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/20/15 13:23*	*04/21/15 05:19*	*1*
p-Terphenyl	*97*		*38 - 148*	*04/20/15 13:23*	*04/21/15 05:19*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 720-180054/2-A
Matrix: Solid
Analysis Batch: 180019

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 180054

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH (C13-C22)			83.0	66.5		mg/Kg		80	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*100*		*38 - 148*

GC/MS VOA

Analysis Batch: 179892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-2	SS-2-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-4	SS-4-2.5	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-5	SS-5-3.0	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-7	SS-7-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-9	SS-9-2.5	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-13	SS-12-3.0	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-15	SS-14-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179897
720-64194-17	SS-16-4.0	Total/NA	Solid	8260B/CA_LUFT MS	179897
LCS 720-179892/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-179892/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-179892/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-179892/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-179892/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 179897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-2	SS-2-3.5	Total/NA	Solid	5030B	
720-64194-4	SS-4-2.5	Total/NA	Solid	5030B	
720-64194-5	SS-5-3.0	Total/NA	Solid	5030B	
720-64194-7	SS-7-3.5	Total/NA	Solid	5030B	
720-64194-9	SS-9-2.5	Total/NA	Solid	5030B	
720-64194-13	SS-12-3.0	Total/NA	Solid	5030B	
720-64194-15	SS-14-3.5	Total/NA	Solid	5030B	
720-64194-17	SS-16-4.0	Total/NA	Solid	5030B	

Analysis Batch: 179906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-2	SS-2-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179943
720-64194-10	SS-10-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179943
720-64194-17	SS-16-4.0	Total/NA	Solid	8260B/CA_LUFT MS	179943
720-64194-20	SS-18-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179943
720-64194-29	SS-25-3.0	Total/NA	Solid	8260B/CA_LUFT MS	179943
LCS 720-179906/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-179906/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-179906/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	

GC/MS VOA (Continued)

Analysis Batch: 179906 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-179906/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-179906/10	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 179943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-2	SS-2-3.5	Total/NA	Solid	5030B	
720-64194-10	SS-10-3.5	Total/NA	Solid	5030B	
720-64194-17	SS-16-4.0	Total/NA	Solid	5030B	
720-64194-20	SS-18-3.5	Total/NA	Solid	5030B	
720-64194-29	SS-25-3.0	Total/NA	Solid	5030B	

Analysis Batch: 179965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-4	SS-4-2.5	Total/NA	Solid	8260B/CA_LUFT MS	179983
720-64194-5	SS-5-3.0	Total/NA	Solid	8260B/CA_LUFT MS	179983
720-64194-13	SS-12-3.0	Total/NA	Solid	8260B/CA_LUFT MS	179983
720-64194-15	SS-14-3.5	Total/NA	Solid	8260B/CA_LUFT MS	179983
LCS 720-179965/6	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-179965/8	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-179965/7	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-179965/9	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-179965/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 179983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-4	SS-4-2.5	Total/NA	Solid	5030B	
720-64194-5	SS-5-3.0	Total/NA	Solid	5030B	
720-64194-13	SS-12-3.0	Total/NA	Solid	5030B	
720-64194-15	SS-14-3.5	Total/NA	Solid	5030B	

Analysis Batch: 180071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-21	D-3	Total/NA	Solid	8260B/CA_LUFT MS	180089
720-64194-23	SS-20-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180089
720-64194-24	D-4	Total/NA	Solid	8260B/CA_LUFT MS	180089
720-64194-26	SS-22-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180089
LCS 720-180071/6	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-180071/8	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	

GC/MS VOA (Continued)

Analysis Batch: 180071 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-180071/7	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180071/9	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-180071/5	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 180089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-21	D-3	Total/NA	Solid	5030B	
720-64194-23	SS-20-3.5	Total/NA	Solid	5030B	
720-64194-24	D-4	Total/NA	Solid	5030B	
720-64194-26	SS-22-3.5	Total/NA	Solid	5030B	

GC Semi VOA

Prep Batch: 179963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-2	SS-2-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-4	SS-4-2.5	Silica Gel Cleanup	Solid	3546	
720-64194-5	SS-5-3.0	Silica Gel Cleanup	Solid	3546	
720-64194-7	SS-7-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-9	SS-9-2.5	Silica Gel Cleanup	Solid	3546	
720-64194-10	SS-10-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-13	SS-12-3.0	Silica Gel Cleanup	Solid	3546	
720-64194-15	SS-14-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-17	SS-16-4.0	Silica Gel Cleanup	Solid	3546	
720-64194-20	SS-18-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-21	D-3	Silica Gel Cleanup	Solid	3546	
720-64194-23	SS-20-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-24	D-4	Silica Gel Cleanup	Solid	3546	
LCS 720-179963/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
MB 720-179963/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 179997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-179963/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	179963
MB 720-179963/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	179963

Analysis Batch: 179998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-2	SS-2-3.5	Silica Gel Cleanup	Solid	8015B	179963

Analysis Batch: 180015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-4	SS-4-2.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-5	SS-5-3.0	Silica Gel Cleanup	Solid	8015B	179963
720-64194-7	SS-7-3.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-9	SS-9-2.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-24	D-4	Silica Gel Cleanup	Solid	8015B	179963

GC Semi VOA (Continued)

Analysis Batch: 180017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-10	SS-10-3.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-13	SS-12-3.0	Silica Gel Cleanup	Solid	8015B	179963
720-64194-15	SS-14-3.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-17	SS-16-4.0	Silica Gel Cleanup	Solid	8015B	179963

Analysis Batch: 180019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-20	SS-18-3.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-21	D-3	Silica Gel Cleanup	Solid	8015B	179963
720-64194-23	SS-20-3.5	Silica Gel Cleanup	Solid	8015B	179963
720-64194-29	SS-25-3.0	Silica Gel Cleanup	Solid	8015B	180054
LCS 720-180054/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	180054
MB 720-180054/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	180054

Prep Batch: 180054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-26	SS-22-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-29	SS-25-3.0	Silica Gel Cleanup	Solid	3546	
LCS 720-180054/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
MB 720-180054/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 180097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-26	SS-22-3.5	Silica Gel Cleanup	Solid	8015B	180054

Client Sample ID: SS-2-3.5

Lab Sample ID: 720-64194-2

Date Collected: 04/14/15 12:35

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 01:43	PDR	TAL PLS
Total/NA	Prep	5030B			179943	04/17/15 10:00	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	179906	04/17/15 12:37	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	179998	04/18/15 16:30	DCH	TAL PLS

Client Sample ID: SS-4-2.5

Lab Sample ID: 720-64194-4

Date Collected: 04/14/15 12:50

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 02:13	PDR	TAL PLS
Total/NA	Prep	5030B			179983	04/17/15 19:08	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179965	04/17/15 21:38	PDR	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180015	04/20/15 11:35	JXL	TAL PLS

Client Sample ID: SS-5-3.0

Lab Sample ID: 720-64194-5

Date Collected: 04/14/15 13:20

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 02:44	PDR	TAL PLS
Total/NA	Prep	5030B			179983	04/17/15 19:08	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179965	04/17/15 22:09	PDR	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		5	180015	04/20/15 11:59	JXL	TAL PLS

Client Sample ID: SS-7-3.5

Lab Sample ID: 720-64194-7

Date Collected: 04/14/15 12:25

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 03:14	PDR	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		5	180015	04/20/15 12:23	JXL	TAL PLS

Client Sample ID: SS-9-2.5

Lab Sample ID: 720-64194-9

Date Collected: 04/14/15 12:15

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 03:45	PDR	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180015	04/20/15 12:47	JXL	TAL PLS

Client Sample ID: SS-10-3.5

Lab Sample ID: 720-64194-10

Date Collected: 04/14/15 13:30

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179943	04/17/15 10:00	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	179906	04/17/15 13:08	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		200	180017	04/20/15 11:35	JXL	TAL PLS

Client Sample ID: SS-12-3.0

Lab Sample ID: 720-64194-13

Date Collected: 04/14/15 13:50

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 04:46	PDR	TAL PLS
Total/NA	Prep	5030B			179983	04/17/15 19:08	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179965	04/17/15 22:40	PDR	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180017	04/20/15 11:59	JXL	TAL PLS

Client Sample ID: SS-14-3.5

Lab Sample ID: 720-64194-15

Date Collected: 04/14/15 14:10

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 05:17	PDR	TAL PLS
Total/NA	Prep	5030B			179983	04/17/15 19:08	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179965	04/17/15 23:10	PDR	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180017	04/20/15 12:23	JXL	TAL PLS

Client Sample ID: SS-16-4.0

Lab Sample ID: 720-64194-17

Date Collected: 04/14/15 14:25

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179897	04/16/15 19:49	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	179892	04/17/15 05:48	PDR	TAL PLS
Total/NA	Prep	5030B			179943	04/17/15 10:00	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	179906	04/17/15 13:39	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		200	180017	04/20/15 12:47	JXL	TAL PLS

Client Sample ID: SS-18-3.5

Lab Sample ID: 720-64194-20

Date Collected: 04/14/15 14:40

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179943	04/17/15 10:00	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	179906	04/17/15 14:10	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180019	04/20/15 11:02	JXL	TAL PLS

Client Sample ID: D-3

Lab Sample ID: 720-64194-21

Date Collected: 04/14/15 14:43

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180089	04/20/15 20:36	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180071	04/21/15 01:35	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180019	04/20/15 11:31	JXL	TAL PLS

Client Sample ID: SS-20-3.5

Lab Sample ID: 720-64194-23

Date Collected: 04/14/15 15:00

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180089	04/20/15 20:36	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180071	04/21/15 02:05	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		5	180019	04/20/15 12:01	JXL	TAL PLS

Client Sample ID: D-4

Lab Sample ID: 720-64194-24

Date Collected: 04/14/15 15:04

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180089	04/20/15 20:36	LPL	TAL PLS

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Client Sample ID: D-4

Lab Sample ID: 720-64194-24

Date Collected: 04/14/15 15:04
Matrix: Solid
Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	180071	04/21/15 02:36	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			179963	04/17/15 14:28	BSY	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180015	04/20/15 11:11	JXL	TAL PLS

Client Sample ID: SS-22-3.5

Lab Sample ID: 720-64194-26

Date Collected: 04/14/15 15:20
Matrix: Solid
Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180089	04/20/15 20:36	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180071	04/21/15 03:06	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180054	04/20/15 15:10	JRD	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180097	04/21/15 11:18	JXL	TAL PLS

Client Sample ID: SS-25-3.0

Lab Sample ID: 720-64194-29

Date Collected: 04/14/15 15:40
Matrix: Solid
Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			179943	04/17/15 10:00	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	179906	04/17/15 16:44	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180054	04/20/15 13:23	JRD	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180019	04/21/15 03:51	JXL	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-64194-2	SS-2-3.5	Solid	04/14/15 12:35	04/15/15 16:30
720-64194-4	SS-4-2.5	Solid	04/14/15 12:50	04/15/15 16:30
720-64194-5	SS-5-3.0	Solid	04/14/15 13:20	04/15/15 16:30
720-64194-7	SS-7-3.5	Solid	04/14/15 12:25	04/15/15 16:30
720-64194-9	SS-9-2.5	Solid	04/14/15 12:15	04/15/15 16:30
720-64194-10	SS-10-3.5	Solid	04/14/15 13:30	04/15/15 16:30
720-64194-13	SS-12-3.0	Solid	04/14/15 13:50	04/15/15 16:30
720-64194-15	SS-14-3.5	Solid	04/14/15 14:10	04/15/15 16:30
720-64194-17	SS-16-4.0	Solid	04/14/15 14:25	04/15/15 16:30
720-64194-20	SS-18-3.5	Solid	04/14/15 14:40	04/15/15 16:30
720-64194-21	D-3	Solid	04/14/15 14:43	04/15/15 16:30
720-64194-23	SS-20-3.5	Solid	04/14/15 15:00	04/15/15 16:30
720-64194-24	D-4	Solid	04/14/15 15:04	04/15/15 16:30
720-64194-26	SS-22-3.5	Solid	04/14/15 15:20	04/15/15 16:30
720-64194-29	SS-25-3.0	Solid	04/14/15 15:40	04/15/15 16:30

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

160542

ARCADIS
Infrastructure Water Environment Buildings

ID#: 720-64194

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 3

Lab Work Order #

4/22/2015

Send Results to:

Contact & Company Name: Scott HACKMAN
Telephone:
Address: ON FILE
Fax:
City State Zip
E-mail Address:

Project Name/Location (City, State): UPRR Oakland CA
Project #: RV009596.0000.00001
Sampler's Printed Name: GARY CLIFT
Sampler's Signature:

Preservative	E	—	—									
Filtered (✓)												
# of Containers	1	—	—									
Container Information	7	—	—									

Keys

Preservation Key:
A. H_2SO_4
B HCL
C HNO_3
D NaOH
E None
F Other: _____
G. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Sediment NL - NAPL/Oil
Sludge SW - Sample Wipe
Other: _____

720-64194 Chain of Custody

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TPH C4-C40 by EPA 8015B	BTEX, Naphthalene by EPA 8260B	Silica Gel Clean Up					
SS-1-3.5	4-14	1230		✓	SO	X	X	X					Hold
SS-2-3.5	4-14	1235		✓	SO	X	X	X					
SS-3-4.0	4-14	1245		✓	SO	X	X	X					Hold
SS-4-2.5	4-14	1250		✓	SO	X	X	X					
SS-5-3.0	4-14	1320		✓	SO	X	X	X					
SS-6-3.5	4-14	1305		✓	SO	X	X	X					Hold
SS-7-3.5	4-14	1225		✓	SO	X	X	X					[redacted] Run
SS-8-2.5	4-14	1220		✓	SO	X	X	X					Hold
SS-9-2.5	4-14	1215		✓	SO	X	X	X					[redacted] Run
SS-10-3.5	4-14	1330		✓	SO	X	X	X					
SS-11-3.5	4-14	1340		✓	SO	X	X	X					Hold
D-1	4-14	1332		✓	SO	X	X	X					Hold
SS-12-3.0	4-14	1350		✓	SO	X	X	X					
SS-13-3.5	4-14	1400		✓	SO	X	X	X					Hold

Special Instructions/Comments:

Temp BLANK

☐ Special QA/QC Instructions(✓):

3.1°C

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Test America	Cooler Custody Seal (✓)	Printed Name: GARY CLIFT	Printed Name: Keith Hammond	Printed Name: Keith Hammond	Printed Name: Bryan Thomas
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 5 DAY TAT	Sample Receipt:	Firm: Arcadis	Firm/Courier: TA	Firm/Courier: TA	Firm: TestAmerica
Shipping Tracking #	Condition/Cooler Temp: _____	Date/Time: 4-14-15 6:00	Date/Time: 4-15-15 10:38	Date/Time: 4-15-15 1150	Date/Time: 4/15/15 1150

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

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ARCADIS
Infrastructure Water Environment Buildings

ID#: 720-64194

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 3

Lab Work Order #

4/22/2015

Send Results to:

Contact & Company Name: Scott HACKMAN
Telephone:
Address: On File
Fax:
City State Zip
E-mail Address:

Project Name/Location (City, State): UPRR Oakland, CA
Project #: RV009596.0000.00001
Sampler's Printed Name: GARY CLIFT
Sampler's Signature:

Preservative	E	—	—				
Filtered (✓)							
# of Containers	1	—	—				
Container Information	7	—	—				

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C HNO_3
D NaOH
E. None
F. Other: _____
G Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TPH C4-C40 by EPA 8015 B	Naphthalene by EPA 8260 B BTEX	Silica gel Clean up					REMARKS
SS-14-3.5	4-14	1410		✓	SO	X	X	X					
SS-15-3.75	4-14	1415		✓	SO	X	X	X					Hold
SS-16-4.0	4-14	1425		✓	SO	X	X	X					
SS-17-3.5	4-14	1430		✓	SO	X	X	X					Hold
D-2	4-14	1432		✓	SO	X	X	X					Hold
SS-18-3.5	4-14	1440		✓	SO	X	X	X					
D-3	4-14	1443		✓	SO	X	X	X					
SS-19-3.5	4-14	1455		✓	SO	X	X	X					Hold
SS-20-3.5	4-14	1500		✓	SO	X	X	X					
D-4	4-14	1504		✓	SO	X	X	X					
SS-21-~~4.0~~	4-14	1510		✓	SO	X	X	X					Hold
SS-22-3.5	4-14	1520		✓	SO	X	X	X					
SS-23-3.0	4-14	1525		✓	SO	X	X	X					Hold
SS-24-3.5	4-14	1530		✓	SO	X	X	X					Hold

Special Instructions/Comments:

Temp Blank

3.1°c

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Test America	Cooler Custody Seal (✓)	Printed Name: GARY CLIFT	Printed Name: Keith Hammond	Printed Name: Keith Hammond	Printed Name: Bryan Thomas
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 5 DAY TAT	Sample Receipt:	Firm: ARCADIS	Firm/Courier: TA	Firm/Courier: TA	Firm: TestAmerica
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 4-14-15 6:00	Date/Time: 4-15-15 1030	Date/Time: 4-15-15 1150	Date/Time: 4/15/15 1150

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160542

ARCADIS
Infrastructure Water Environment Buildings

ID#: 720-64194

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 3 of 3

Lab Work Order #

Send Results to:

Contact & Company Name: Scott HACKMAN	Telephone:
Address:	Fax: (N/A) File
City / State / Zip:	E-mail Address:
Project Name/Location (City, State): UPRR Oakland, CA	Project #: RV009596.0000.0000)
Sampler's Printed Name: GARY CLIFT	Sampler's Signature: [signature]

	TPH C-4 - C40 by EPA 8015 B	BTEX Naphthalene by EPA 8260 B	Silica gel Cleanup						
Preservative	E	—	—						
Filtered (✓)									
# of Containers	1	—	—						
Container Information	7	—	—						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TPH C-4 - C40 by EPA 8015 B	BTEX Naphthalene by EPA 8260 B	Silica gel Cleanup							REMARKS
SS-25-3.0	4/4	1540		✓	SO	X	X	X							

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: ______
G. Other: ______
H. Other: ______

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: ______
10. Other: ______

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: ______

Special Instructions/Comments:
temp Blank

☐ Special QA/QC Instructions(✓):

3.1°c

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Test America	Cooler Custody Seal (✓)	Printed Name: GARY CLIFT	Printed Name: Keith Hemmesh	Printed Name: Keith Hemmesh	Printed Name: Bryan Thomas
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature: [signature]	Signature: [signature]	Signature: [signature]	Signature: [signature]
Specify Turnaround Requirements: 5 DAY TAT	Sample Receipt:	Firm: Arcadis	Firm/Courier: TA	Firm/Courier: TA	Firm: TestAmerica
Shipping Tracking #:	Condition/Cooler Temp: ______	Date/Time: 4-14-15 6:00	Date/Time: 4-15-15 1038	Date/Time: 4-15-15 1150	Date/Time: 4/15/15 1150

20730826 CofC AR Form 01.12.2007

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 720-64194-1

Login Number: 64194

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

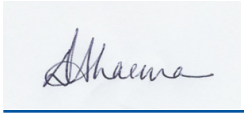
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-64194-2
Client Project/Site: UPRR-Oakland Track 58

For:
ARCADIS U.S. Inc
101 Creekside Ridge Court
2nd Floor
Roseville, California 95678

Attn: Mr. Scott Hackman



Authorized for release by:
4/29/2015 3:23:42 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-64194-2

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-64194-2

Comments
No additional comments.

Receipt
The samples were received on 4/15/2015 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
Method 8260B: Internal standard (ISTD) response for the following sample was outside control limits: SS-13-3.5 (720-64194-14). The sample wasre-analyzed with concurring results, and the original set of data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
Method 8015B: The following sample required a dilution due to the nature of the sample matrix: SS-15-3.75 (720-64194-16), SS-24-3.5 (720-64194-28). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-1-3.5 (720-64194-1), SS-3-4.0 (720-64194-3), SS-6-3.5 (720-64194-6) and SS-8-2.5 (720-64194-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-11-3.5 (720-64194-11), D-1 (720-64194-12), SS-13-3.5 (720-64194-14), SS-17-3.5 (720-64194-18), D-2 (720-64194-19), SS-19-3.5 (720-64194-22), SS-21-4.0 (720-64194-25) and SS-23-3.0 (720-64194-27). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-1-3.5 — Lab Sample ID: 720-64194-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	1600		370	150	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2300		20	15	mg/Kg	20		8015B	Silica Gel Cleanup
TPH (C23-C40)	1000		1000	200	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-3-4.0 — Lab Sample ID: 720-64194-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	7900		1300	500	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	1100		10	7.5	mg/Kg	10		8015B	Silica Gel Cleanup

Client Sample ID: SS-6-3.5 — Lab Sample ID: 720-64194-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	10		9.7	1.5	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	22		9.7	1.2	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	2000		240	97	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3100		20	15	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-8-2.5 — Lab Sample ID: 720-64194-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	110000		24000	9500	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3900		49	37	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-11-3.5 — Lab Sample ID: 720-64194-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	180000		24000	9700	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	8000		99	74	mg/Kg	100		8015B	Silica Gel Cleanup

Client Sample ID: D-1 — Lab Sample ID: 720-64194-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	2800		960	96	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	390000		24000	9600	ug/Kg	100		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	13000		100	75	mg/Kg	100		8015B	Silica Gel Cleanup

Client Sample ID: SS-13-3.5 — Lab Sample ID: 720-64194-14

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-13-3.5 (Continued) — Lab Sample ID: 720-64194-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	4500		300	120	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	4600		50	37	mg/Kg	50		8015B	Silica Gel Cleanup
TPH (C23-C40)	4100		2500	500	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-15-3.75 — Lab Sample ID: 720-64194-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	38		35	4.2	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
GRO (C4-C12)	5900		870	350	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	2400		20	15	mg/Kg	20		8015B	Silica Gel Cleanup
TPH (C23-C40)	2500		1000	200	mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SS-17-3.5 — Lab Sample ID: 720-64194-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	67		37	5.6	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	370		37	4.6	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	12000		100	75	mg/Kg	100		8015B	Silica Gel Cleanup
TPH (C23-C40)	7600		5000	1000	mg/Kg	100		8015B	Silica Gel Cleanup

Client Sample ID: D-2 — Lab Sample ID: 720-64194-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	440		47	5.7	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	8100		99	74	mg/Kg	100		8015B	Silica Gel Cleanup
TPH (C23-C40)	5900		5000	990	mg/Kg	100		8015B	Silica Gel Cleanup

Client Sample ID: SS-19-3.5 — Lab Sample ID: 720-64194-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
TPH (C13-C22)	97		5.0	3.7	mg/Kg	5		8015B	Silica Gel Cleanup
TPH (C23-C40)	350		250	50	mg/Kg	5		8015B	Silica Gel Cleanup

Client Sample ID: SS-21-4.0 — Lab Sample ID: 720-64194-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	170		38	4.6	ug/Kg	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-21-4.0 (Continued) — Lab Sample ID: 720-64194-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C4-C12)	27000		940	380	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	5400		50	37	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-23-3.0 — Lab Sample ID: 720-64194-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	790		40	4.9	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	5300		50	37	mg/Kg	50		8015B	Silica Gel Cleanup
TPH (C23-C40)	2700		2500	500	mg/Kg	50		8015B	Silica Gel Cleanup

Client Sample ID: SS-24-3.5 — Lab Sample ID: 720-64194-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	23		21	3.1	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	650		41	5.0	ug/Kg	1		8260B/CA_LUFT MS	Total/NA
TPH (C13-C22)	3700		20	15	mg/Kg	20		8015B	Silica Gel Cleanup
TPH (C23-C40)	1500		990	200	mg/Kg	20		8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-1-3.5
Date Collected: 04/14/15 12:30
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-1
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		7.5	0.97	ug/Kg		04/23/15 18:45	04/23/15 19:04	1
Ethylbenzene	ND		7.5	1.1	ug/Kg		04/23/15 18:45	04/23/15 19:04	1
Naphthalene	ND		15	2.2	ug/Kg		04/23/15 18:45	04/23/15 19:04	1
Toluene	ND		7.5	1.1	ug/Kg		04/23/15 18:45	04/23/15 19:04	1
Xylenes, Total	ND		15	1.8	ug/Kg		04/23/15 18:45	04/23/15 19:04	1
GRO (C4-C12)	**1600**		370	150	ug/Kg		04/23/15 18:45	04/23/15 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*	*04/23/15 18:45*	*04/23/15 19:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*60 - 140*	*04/23/15 18:45*	*04/23/15 19:04*	*1*
Toluene-d8 (Surr)	*89*		*58 - 140*	*04/23/15 18:45*	*04/23/15 19:04*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2300**		20	15	mg/Kg		04/23/15 19:14	04/25/15 22:57	20
TPH (C23-C40)	**1000**		1000	200	mg/Kg		04/23/15 19:14	04/25/15 22:57	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/23/15 19:14*	*04/25/15 22:57*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/23/15 19:14*	*04/25/15 22:57*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-3-4.0
Date Collected: 04/14/15 12:45
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-3
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		25	3.3	ug/Kg		04/23/15 18:52	04/23/15 19:21	1
Ethylbenzene	ND		25	3.8	ug/Kg		04/23/15 18:52	04/23/15 19:21	1
Naphthalene	ND		50	7.5	ug/Kg		04/23/15 18:52	04/23/15 19:21	1
Toluene	ND		25	3.6	ug/Kg		04/23/15 18:52	04/23/15 19:21	1
Xylenes, Total	ND		50	6.1	ug/Kg		04/23/15 18:52	04/23/15 19:21	1
GRO (C4-C12)	**7900**		1300	500	ug/Kg		04/23/15 18:52	04/23/15 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*87*		*45 - 131*	*04/23/15 18:52*	*04/23/15 19:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*60 - 140*	*04/23/15 18:52*	*04/23/15 19:21*	*1*
Toluene-d8 (Surr)	*91*		*58 - 140*	*04/23/15 18:52*	*04/23/15 19:21*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**1100**		10	7.5	mg/Kg		04/23/15 19:14	04/24/15 19:26	10
TPH (C23-C40)	ND		500	100	mg/Kg		04/23/15 19:14	04/24/15 19:26	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/23/15 19:14*	*04/24/15 19:26*	*10*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/23/15 19:14*	*04/24/15 19:26*	*10*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-6-3.5
Date Collected: 04/14/15 13:05
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-6
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.9	0.63	ug/Kg		04/23/15 18:52	04/23/15 20:46	1
Ethylbenzene	ND		4.9	0.73	ug/Kg		04/23/15 18:52	04/23/15 20:46	1
Naphthalene	**10**		9.7	1.5	ug/Kg		04/23/15 18:52	04/23/15 20:46	1
Toluene	ND		4.9	0.69	ug/Kg		04/23/15 18:52	04/23/15 20:46	1
Xylenes, Total	**22**		9.7	1.2	ug/Kg		04/23/15 18:52	04/23/15 20:46	1
GRO (C4-C12)	**2000**		240	97	ug/Kg		04/23/15 18:52	04/23/15 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*45 - 131*	*04/23/15 18:52*	*04/23/15 20:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*	*04/23/15 18:52*	*04/23/15 20:46*	*1*
Toluene-d8 (Surr)	*87*		*58 - 140*	*04/23/15 18:52*	*04/23/15 20:46*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3100**		20	15	mg/Kg		04/23/15 19:14	04/25/15 23:21	20
TPH (C23-C40)	ND		990	200	mg/Kg		04/23/15 19:14	04/25/15 23:21	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/23/15 19:14*	*04/25/15 23:21*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/23/15 19:14*	*04/25/15 23:21*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-8-2.5
Date Collected: 04/14/15 12:20
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-8
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		480	32	ug/Kg		04/24/15 10:00	04/24/15 16:16	100
Ethylbenzene	ND		480	71	ug/Kg		04/24/15 10:00	04/24/15 16:16	100
Naphthalene	ND		950	140	ug/Kg		04/24/15 10:00	04/24/15 16:16	100
Toluene	ND		480	68	ug/Kg		04/24/15 10:00	04/24/15 16:16	100
Xylenes, Total	ND		950	95	ug/Kg		04/24/15 10:00	04/24/15 16:16	100
GRO (C4-C12)	**110000**		24000	9500	ug/Kg		04/24/15 10:00	04/24/15 16:16	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*66 - 148*	*04/24/15 10:00*	*04/24/15 16:16*	*100*
1,2-Dichloroethane-d4 (Surr)	*79*		*62 - 137*	*04/24/15 10:00*	*04/24/15 16:16*	*100*
Toluene-d8 (Surr)	*95*		*65 - 141*	*04/24/15 10:00*	*04/24/15 16:16*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3900**		49	37	mg/Kg		04/23/15 19:14	04/25/15 23:45	50
TPH (C23-C40)	ND		2500	490	mg/Kg		04/23/15 19:14	04/25/15 23:45	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/23/15 19:14*	*04/25/15 23:45*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/23/15 19:14*	*04/25/15 23:45*	*50*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-11-3.5
Date Collected: 04/14/15 13:40
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-11
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		490	33	ug/Kg		04/24/15 10:00	04/24/15 16:46	100
Ethylbenzene	ND		490	73	ug/Kg		04/24/15 10:00	04/24/15 16:46	100
Naphthalene	ND		970	150	ug/Kg		04/24/15 10:00	04/24/15 16:46	100
Toluene	ND		490	69	ug/Kg		04/24/15 10:00	04/24/15 16:46	100
Xylenes, Total	ND		970	97	ug/Kg		04/24/15 10:00	04/24/15 16:46	100
GRO (C4-C12)	**180000**		24000	9700	ug/Kg		04/24/15 10:00	04/24/15 16:46	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*66 - 148*	*04/24/15 10:00*	*04/24/15 16:46*	*100*
1,2-Dichloroethane-d4 (Surr)	*75*		*62 - 137*	*04/24/15 10:00*	*04/24/15 16:46*	*100*
Toluene-d8 (Surr)	*96*		*65 - 141*	*04/24/15 10:00*	*04/24/15 16:46*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**8000**		99	74	mg/Kg		04/24/15 08:39	04/27/15 11:13	100
TPH (C23-C40)	ND		4900	990	mg/Kg		04/24/15 08:39	04/27/15 11:13	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 11:13*	*100*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 11:13*	*100*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: D-1
Date Collected: 04/14/15 13:32
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-12
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		480	33	ug/Kg		04/24/15 10:00	04/24/15 17:17	100
Ethylbenzene	ND		480	72	ug/Kg		04/24/15 10:00	04/24/15 17:17	100
Naphthalene	ND		960	140	ug/Kg		04/24/15 10:00	04/24/15 17:17	100
Toluene	ND		480	68	ug/Kg		04/24/15 10:00	04/24/15 17:17	100
Xylenes, Total	**2800**		960	96	ug/Kg		04/24/15 10:00	04/24/15 17:17	100
GRO (C4-C12)	**390000**		24000	9600	ug/Kg		04/24/15 10:00	04/24/15 17:17	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*66 - 148*	*04/24/15 10:00*	*04/24/15 17:17*	*100*
1,2-Dichloroethane-d4 (Surr)	*77*		*62 - 137*	*04/24/15 10:00*	*04/24/15 17:17*	*100*
Toluene-d8 (Surr)	*95*		*65 - 141*	*04/24/15 10:00*	*04/24/15 17:17*	*100*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**13000**		100	75	mg/Kg		04/24/15 08:39	04/27/15 11:38	100
TPH (C23-C40)	ND		5000	1000	mg/Kg		04/24/15 08:39	04/27/15 11:38	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 11:38*	*100*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 11:38*	*100*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-13-3.5
Date Collected: 04/14/15 14:00
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-14
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		6.0	0.78	ug/Kg		04/24/15 18:01	04/24/15 19:07	1
Ethylbenzene	ND		6.0	0.90	ug/Kg		04/24/15 18:01	04/24/15 19:07	1
Naphthalene	ND	*	12	1.8	ug/Kg		04/24/15 18:01	04/24/15 19:07	1
Toluene	ND		6.0	0.86	ug/Kg		04/24/15 18:01	04/24/15 19:07	1
Xylenes, Total	ND		12	1.5	ug/Kg		04/24/15 18:01	04/24/15 19:07	1
GRO (C4-C12)	**4500**		300	120	ug/Kg		04/24/15 18:01	04/24/15 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*73*		*45 - 131*	*04/24/15 18:01*	*04/24/15 19:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*60 - 140*	*04/24/15 18:01*	*04/24/15 19:07*	*1*
Toluene-d8 (Surr)	*79*		*58 - 140*	*04/24/15 18:01*	*04/24/15 19:07*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**4600**		50	37	mg/Kg		04/24/15 08:39	04/27/15 12:02	50
TPH (C23-C40)	**4100**		2500	500	mg/Kg		04/24/15 08:39	04/27/15 12:02	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 12:02*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 12:02*	*50*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-15-3.75
Date Collected: 04/14/15 14:15
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-16
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		17	2.3	ug/Kg		04/23/15 18:52	04/23/15 23:10	1
Ethylbenzene	ND		17	2.6	ug/Kg		04/23/15 18:52	04/23/15 23:10	1
Naphthalene	ND		35	5.2	ug/Kg		04/23/15 18:52	04/23/15 23:10	1
Toluene	ND		17	2.5	ug/Kg		04/23/15 18:52	04/23/15 23:10	1
Xylenes, Total	**38**		35	4.2	ug/Kg		04/23/15 18:52	04/23/15 23:10	1
GRO (C4-C12)	**5900**		870	350	ug/Kg		04/23/15 18:52	04/23/15 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*04/23/15 18:52*	*04/23/15 23:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 140*	*04/23/15 18:52*	*04/23/15 23:10*	*1*
Toluene-d8 (Surr)	*90*		*58 - 140*	*04/23/15 18:52*	*04/23/15 23:10*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**2400**		20	15	mg/Kg		04/24/15 08:39	04/25/15 19:09	20
TPH (C23-C40)	**2500**		1000	200	mg/Kg		04/24/15 08:39	04/25/15 19:09	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/25/15 19:09*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/25/15 19:09*	*20*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-17-3.5
Date Collected: 04/14/15 14:30
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-18
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		19	2.4	ug/Kg		04/23/15 18:52	04/23/15 23:38	1
Ethylbenzene	ND		19	2.8	ug/Kg		04/23/15 18:52	04/23/15 23:38	1
Naphthalene	**67**		37	5.6	ug/Kg		04/23/15 18:52	04/23/15 23:38	1
Toluene	ND		19	2.6	ug/Kg		04/23/15 18:52	04/23/15 23:38	1
Xylenes, Total	**370**		37	4.6	ug/Kg		04/23/15 18:52	04/23/15 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*45 - 131*	*04/23/15 18:52*	*04/23/15 23:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*04/23/15 18:52*	*04/23/15 23:38*	*1*
Toluene-d8 (Surr)	*83*		*58 - 140*	*04/23/15 18:52*	*04/23/15 23:38*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**12000**		100	75	mg/Kg		04/24/15 08:39	04/27/15 12:26	100
TPH (C23-C40)	**7600**		5000	1000	mg/Kg		04/24/15 08:39	04/27/15 12:26	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 12:26*	*100*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 12:26*	*100*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: D-2
Date Collected: 04/14/15 14:32
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-19
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		23	3.0	ug/Kg		04/23/15 18:52	04/24/15 00:07	1
Ethylbenzene	ND		23	3.5	ug/Kg		04/23/15 18:52	04/24/15 00:07	1
Naphthalene	ND		47	7.0	ug/Kg		04/23/15 18:52	04/24/15 00:07	1
Toluene	ND		23	3.3	ug/Kg		04/23/15 18:52	04/24/15 00:07	1
Xylenes, Total	**440**		47	5.7	ug/Kg		04/23/15 18:52	04/24/15 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*45 - 131*	*04/23/15 18:52*	*04/24/15 00:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*04/23/15 18:52*	*04/24/15 00:07*	*1*
Toluene-d8 (Surr)	*89*		*58 - 140*	*04/23/15 18:52*	*04/24/15 00:07*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**8100**		99	74	mg/Kg		04/24/15 08:39	04/27/15 13:31	100
TPH (C23-C40)	**5900**		5000	990	mg/Kg		04/24/15 08:39	04/27/15 13:31	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 13:31*	*100*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 13:31*	*100*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-19-3.5
Date Collected: 04/14/15 14:55
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-22
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8	0.62	ug/Kg		04/24/15 18:01	04/24/15 18:38	1
Ethylbenzene	ND		4.8	0.72	ug/Kg		04/24/15 18:01	04/24/15 18:38	1
Naphthalene	ND		9.6	1.4	ug/Kg		04/24/15 18:01	04/24/15 18:38	1
Toluene	ND		4.8	0.68	ug/Kg		04/24/15 18:01	04/24/15 18:38	1
Xylenes, Total	ND		9.6	1.2	ug/Kg		04/24/15 18:01	04/24/15 18:38	1
GRO (C4-C12)	ND		240	96	ug/Kg		04/24/15 18:01	04/24/15 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*45 - 131*	*04/24/15 18:01*	*04/24/15 18:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*04/24/15 18:01*	*04/24/15 18:38*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*04/24/15 18:01*	*04/24/15 18:38*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**97**		5.0	3.7	mg/Kg		04/24/15 08:39	04/27/15 13:55	5
TPH (C23-C40)	**350**		250	50	mg/Kg		04/24/15 08:39	04/27/15 13:55	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 13:55*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 13:55*	*5*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-21-4.0
Date Collected: 04/14/15 15:10
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-25
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		19	2.4	ug/Kg		04/23/15 18:52	04/24/15 01:04	1
Ethylbenzene	ND		19	2.8	ug/Kg		04/23/15 18:52	04/24/15 01:04	1
Naphthalene	ND		38	5.6	ug/Kg		04/23/15 18:52	04/24/15 01:04	1
Toluene	ND		19	2.7	ug/Kg		04/23/15 18:52	04/24/15 01:04	1
Xylenes, Total	**170**		38	4.6	ug/Kg		04/23/15 18:52	04/24/15 01:04	1
GRO (C4-C12)	**27000**		940	380	ug/Kg		04/23/15 18:52	04/24/15 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*45 - 131*	*04/23/15 18:52*	*04/24/15 01:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*	*04/23/15 18:52*	*04/24/15 01:04*	*1*
Toluene-d8 (Surr)	*90*		*58 - 140*	*04/23/15 18:52*	*04/24/15 01:04*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**5400**		50	37	mg/Kg		04/24/15 08:39	04/27/15 14:20	50
TPH (C23-C40)	ND		2500	500	mg/Kg		04/24/15 08:39	04/27/15 14:20	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 14:20*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 14:20*	*50*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-23-3.0
Date Collected: 04/14/15 15:25
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-27
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		20	2.6	ug/Kg		04/23/15 18:52	04/24/15 01:33	1
Ethylbenzene	ND		20	3.0	ug/Kg		04/23/15 18:52	04/24/15 01:33	1
Naphthalene	ND		40	6.0	ug/Kg		04/23/15 18:52	04/24/15 01:33	1
Toluene	ND		20	2.9	ug/Kg		04/23/15 18:52	04/24/15 01:33	1
Xylenes, Total	**790**		40	4.9	ug/Kg		04/23/15 18:52	04/24/15 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*45 - 131*	*04/23/15 18:52*	*04/24/15 01:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*60 - 140*	*04/23/15 18:52*	*04/24/15 01:33*	*1*
Toluene-d8 (Surr)	*87*		*58 - 140*	*04/23/15 18:52*	*04/24/15 01:33*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**5300**		50	37	mg/Kg		04/24/15 08:39	04/27/15 14:44	50
TPH (C23-C40)	**2700**		2500	500	mg/Kg		04/24/15 08:39	04/27/15 14:44	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/27/15 14:44*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/27/15 14:44*	*50*

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-24-3.5
Date Collected: 04/14/15 15:30
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-28
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		21	2.7	ug/Kg		04/23/15 18:52	04/24/15 02:02	1
Ethylbenzene	**23**		21	3.1	ug/Kg		04/23/15 18:52	04/24/15 02:02	1
Naphthalene	ND		41	6.2	ug/Kg		04/23/15 18:52	04/24/15 02:02	1
Toluene	ND		21	2.9	ug/Kg		04/23/15 18:52	04/24/15 02:02	1
Xylenes, Total	**650**		41	5.0	ug/Kg		04/23/15 18:52	04/24/15 02:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*45 - 131*	*04/23/15 18:52*	*04/24/15 02:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*60 - 140*	*04/23/15 18:52*	*04/24/15 02:02*	*1*
Toluene-d8 (Surr)	*91*		*58 - 140*	*04/23/15 18:52*	*04/24/15 02:02*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	**3700**		20	15	mg/Kg		04/24/15 08:39	04/25/15 17:12	20
TPH (C23-C40)	**1500**		990	200	mg/Kg		04/24/15 08:39	04/25/15 17:12	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/25/15 17:12*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*04/24/15 08:39*	*04/25/15 17:12*	*20*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(45-131)	(60-140)	(58-140)
720-64194-1	SS-1-3.5	96	85	89
720-64194-3	SS-3-4.0	87	85	91
720-64194-6	SS-6-3.5	89	88	87
720-64194-6 MS	SS-6-3.5	84	88	87
720-64194-6 MSD	SS-6-3.5	84	88	87
720-64194-14	SS-13-3.5	73	85	79
720-64194-16	SS-15-3.75	91	89	90
720-64194-18	SS-17-3.5	86	92	83
720-64194-19	D-2	100	92	89
720-64194-22	SS-19-3.5	90	92	93
720-64194-25	SS-21-4.0	94	88	90
720-64194-27	SS-23-3.0	105	86	87
720-64194-28	SS-24-3.5	102	85	91
LCS 720-180285/5	Lab Control Sample	96	90	99
LCS 720-180285/7	Lab Control Sample	96	90	96
LCS 720-180332/7	Lab Control Sample	94	88	94
LCS 720-180332/9	Lab Control Sample	102	94	93
LCS 720-180412/11	Lab Control Sample	99	91	95
LCS 720-180412/9	Lab Control Sample	93	87	93
LCSD 720-180285/6	Lab Control Sample Dup	91	85	95
LCSD 720-180285/8	Lab Control Sample Dup	94	86	96
LCSD 720-180332/10	Lab Control Sample Dup	95	91	94
LCSD 720-180332/8	Lab Control Sample Dup	87	88	92
LCSD 720-180412/10	Lab Control Sample Dup	93	90	98
LCSD 720-180412/12	Lab Control Sample Dup	95	92	94
MB 720-180285/4	Method Blank	88	93	89
MB 720-180332/6	Method Blank	96	92	94
MB 720-180412/8	Method Blank	97	96	95

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(66-148)	(62-137)	(65-141)
720-64194-8	SS-8-2.5	95	79	95
720-64194-11	SS-11-3.5	90	75	96
720-64194-12	D-1	98	77	95
LCS 720-180366/10	Lab Control Sample	87	74	95
LCS 720-180366/12	Lab Control Sample	94	76	96
LCSD 720-180366/11	Lab Control Sample Dup	88	73	96
LCSD 720-180366/13	Lab Control Sample Dup	90	75	95
MB 720-180366/9	Method Blank	85	76	92

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)	
		NDA1	PTP1
Lab Sample ID	Client Sample ID	(0-1)	(38-148)
720-64194-1	SS-1-3.5	0	0 X D
720-64194-3	SS-3-4.0	0	0 X D
720-64194-6	SS-6-3.5	0	0 X D
720-64194-8	SS-8-2.5	0	0 X D
720-64194-11	SS-11-3.5	0	0 X D
720-64194-12	D-1	0	0 X D
720-64194-14	SS-13-3.5	0	0 X D
720-64194-16	SS-15-3.75	0	0 X D
720-64194-18	SS-17-3.5	0	0 X D
720-64194-19	D-2	0	0 X D
720-64194-22	SS-19-3.5	0	0 X D
720-64194-25	SS-21-4.0	0	0 X D
720-64194-27	SS-23-3.0	0	0 X D
720-64194-28	SS-24-3.5	0	0 X D
LCS 720-180343/2-A	Lab Control Sample		98
LCS 720-180379/2-A	Lab Control Sample		90
MB 720-180343/1-A	Method Blank	0.005	89
MB 720-180379/1-A	Method Blank	0	126

Surrogate Legend

NDA = Capric Acid (Surr)
PTP = p-Terphenyl

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-180285/4
Matrix: Solid
Analysis Batch: 180285

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.65	ug/Kg			04/23/15 08:43	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			04/23/15 08:43	1
Naphthalene	ND		10	1.5	ug/Kg			04/23/15 08:43	1
Toluene	ND		5.0	0.71	ug/Kg			04/23/15 08:43	1
Xylenes, Total	ND		10	1.2	ug/Kg			04/23/15 08:43	1
GRO (C4-C12)	ND		250	100	ug/Kg			04/23/15 08:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*45 - 131*		*04/23/15 08:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*60 - 140*		*04/23/15 08:43*	*1*
Toluene-d8 (Surr)	*89*		*58 - 140*		*04/23/15 08:43*	*1*

Lab Sample ID: LCS 720-180285/5
Matrix: Solid
Analysis Batch: 180285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	48.9		ug/Kg		98	70 - 130
Ethylbenzene	50.0	47.7		ug/Kg		95	80 - 137
Naphthalene	50.0	54.1		ug/Kg		108	60 - 147
Toluene	50.0	46.4		ug/Kg		93	80 - 128
m-Xylene & p-Xylene	50.0	48.6		ug/Kg		97	70 - 146
o-Xylene	50.0	48.7		ug/Kg		97	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: LCS 720-180285/7
Matrix: Solid
Analysis Batch: 180285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1000	1020		ug/Kg		102	70 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCSD 720-180285/6
Matrix: Solid
Analysis Batch: 180285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	47.1		ug/Kg		94	70 - 130	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-180285/6
Matrix: Solid
Analysis Batch: 180285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene			50.0	46.0		ug/Kg		92	80 - 137	4	20
Naphthalene			50.0	51.4		ug/Kg		103	60 - 147	5	20
Toluene			50.0	45.2		ug/Kg		90	80 - 128	3	20
m-Xylene & p-Xylene			50.0	46.5		ug/Kg		93	70 - 146	4	20
o-Xylene			50.0	46.5		ug/Kg		93	70 - 140	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*85*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Lab Sample ID: LCSD 720-180285/8
Matrix: Solid
Analysis Batch: 180285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			1000	975		ug/Kg		97	70 - 122	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*86*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: MB 720-180332/6
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.65	ug/Kg			04/23/15 16:59	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			04/23/15 16:59	1
Naphthalene	ND		10	1.5	ug/Kg			04/23/15 16:59	1
Toluene	ND		5.0	0.71	ug/Kg			04/23/15 16:59	1
Xylenes, Total	ND		10	1.2	ug/Kg			04/23/15 16:59	1
GRO (C4-C12)	ND		250	100	ug/Kg			04/23/15 16:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*		*04/23/15 16:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*		*04/23/15 16:59*	*1*
Toluene-d8 (Surr)	*94*		*58 - 140*		*04/23/15 16:59*	*1*

Lab Sample ID: LCS 720-180332/7
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			50.0	45.1		ug/Kg		90	70 - 130
Ethylbenzene			50.0	44.9		ug/Kg		90	80 - 137

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-180332/7
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Naphthalene			50.0	49.5		ug/Kg		99	60 - 147		
Toluene			50.0	46.8		ug/Kg		94	80 - 128		
m-Xylene & p-Xylene			50.0	45.3		ug/Kg		91	70 - 146		
o-Xylene			50.0	45.8		ug/Kg		92	70 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*
Toluene-d8 (Surr)	*94*		*58 - 140*

Lab Sample ID: LCS 720-180332/9
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
GRO (C4-C12)			1000	991		ug/Kg		99	70 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*94*		*60 - 140*
Toluene-d8 (Surr)	*93*		*58 - 140*

Lab Sample ID: LCSD 720-180332/10
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			1000	967		ug/Kg		97	70 - 122	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 140*
Toluene-d8 (Surr)	*94*		*58 - 140*

Lab Sample ID: LCSD 720-180332/8
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	44.2		ug/Kg		88	70 - 130	2	20
Ethylbenzene			50.0	43.9		ug/Kg		88	80 - 137	2	20
Naphthalene			50.0	47.3		ug/Kg		95	60 - 147	5	20
Toluene			50.0	45.6		ug/Kg		91	80 - 128	3	20
m-Xylene & p-Xylene			50.0	44.4		ug/Kg		89	70 - 146	2	20
o-Xylene			50.0	45.1		ug/Kg		90	70 - 140	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-180332/8
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	*87*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*
Toluene-d8 (Surr)	*92*		*58 - 140*

Lab Sample ID: 720-64194-6 MS
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: SS-6-3.5
Prep Type: Total/NA
Prep Batch: 180358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		50.0	47.8		ug/Kg		96	70 - 130
Ethylbenzene	ND		50.0	44.6		ug/Kg		84	65 - 130
Naphthalene	10		50.0	36.4		ug/Kg		53	45 - 146
Toluene	ND		50.0	51.2		ug/Kg		97	70 - 130
m-Xylene & p-Xylene	ND		50.0	45.1		ug/Kg		83	70 - 130
o-Xylene	19		50.0	54.8		ug/Kg		72	68 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	*84*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*
Toluene-d8 (Surr)	*87*		*58 - 140*

Lab Sample ID: 720-64194-6 MSD
Matrix: Solid
Analysis Batch: 180332

Client Sample ID: SS-6-3.5
Prep Type: Total/NA
Prep Batch: 180358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		48.1	45.9		ug/Kg		95	70 - 130	4	20
Ethylbenzene	ND		48.1	42.4		ug/Kg		83	65 - 130	5	20
Naphthalene	10		48.1	32.7		ug/Kg		47	45 - 146	11	20
Toluene	ND		48.1	50.4		ug/Kg		99	70 - 130	2	20
m-Xylene & p-Xylene	ND		48.1	42.2		ug/Kg		81	70 - 130	7	20
o-Xylene	19		48.1	55.1		ug/Kg		76	68 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	*84*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*
Toluene-d8 (Surr)	*87*		*58 - 140*

Lab Sample ID: MB 720-180366/9
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		500	34	ug/Kg			04/24/15 11:12	100
Ethylbenzene	ND		500	75	ug/Kg			04/24/15 11:12	100
Naphthalene	ND		1000	150	ug/Kg			04/24/15 11:12	100
Toluene	ND		500	71	ug/Kg			04/24/15 11:12	100

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-180366/9
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		1000	100	ug/Kg			04/24/15 11:12	100
GRO (C4-C12)	ND		25000	10000	ug/Kg			04/24/15 11:12	100

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*66 - 148*		*04/24/15 11:12*	*100*
1,2-Dichloroethane-d4 (Surr)	*76*		*62 - 137*		*04/24/15 11:12*	*100*
Toluene-d8 (Surr)	*92*		*65 - 141*		*04/24/15 11:12*	*100*

Lab Sample ID: LCS 720-180366/10
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5000	5150		ug/Kg		103	76 - 122
Ethylbenzene	5000	4940		ug/Kg		99	76 - 137
Naphthalene	5000	5410		ug/Kg		108	62 - 151
Toluene	5000	5100		ug/Kg		102	77 - 120
m-Xylene & p-Xylene	5000	5040		ug/Kg		101	71 - 142
o-Xylene	5000	4940		ug/Kg		99	71 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*87*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*74*		*62 - 137*
Toluene-d8 (Surr)	*95*		*65 - 141*

Lab Sample ID: LCS 720-180366/12
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	100000	108000		ug/Kg		108	62 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*76*		*62 - 137*
Toluene-d8 (Surr)	*96*		*65 - 141*

Lab Sample ID: LCSD 720-180366/11
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	5000	5190		ug/Kg		104	76 - 122	1	20
Ethylbenzene	5000	4970		ug/Kg		99	76 - 137	1	20
Naphthalene	5000	5410		ug/Kg		108	62 - 151	0	20
Toluene	5000	5130		ug/Kg		103	77 - 120	1	20
m-Xylene & p-Xylene	5000	5070		ug/Kg		101	71 - 142	1	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-180366/11
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene			5000	5010		ug/Kg		100	71 - 142	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*73*		*62 - 137*
Toluene-d8 (Surr)	*96*		*65 - 141*

Lab Sample ID: LCSD 720-180366/13
Matrix: Solid
Analysis Batch: 180366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			100000	108000		ug/Kg		108	62 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*90*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*75*		*62 - 137*
Toluene-d8 (Surr)	*95*		*65 - 141*

Lab Sample ID: MB 720-180412/8
Matrix: Solid
Analysis Batch: 180412

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.65	ug/Kg			04/24/15 16:16	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			04/24/15 16:16	1
Naphthalene	ND		10	1.5	ug/Kg			04/24/15 16:16	1
Toluene	ND		5.0	0.71	ug/Kg			04/24/15 16:16	1
Xylenes, Total	ND		10	1.2	ug/Kg			04/24/15 16:16	1
GRO (C4-C12)	ND		250	100	ug/Kg			04/24/15 16:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*45 - 131*		*04/24/15 16:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*60 - 140*		*04/24/15 16:16*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*		*04/24/15 16:16*	*1*

Lab Sample ID: LCS 720-180412/11
Matrix: Solid
Analysis Batch: 180412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
GRO (C4-C12)			1000	1040		ug/Kg		104	70 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-180412/9
Matrix: Solid
Analysis Batch: 180412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	48.4		ug/Kg		97	70 - 130		
Ethylbenzene			50.0	47.7		ug/Kg		95	80 - 137		
Naphthalene			50.0	53.4		ug/Kg		107	60 - 147		
Toluene			50.0	49.6		ug/Kg		99	80 - 128		
m-Xylene & p-Xylene			50.0	48.9		ug/Kg		98	70 - 146		
o-Xylene			50.0	48.9		ug/Kg		98	70 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*87*		*60 - 140*
Toluene-d8 (Surr)	*93*		*58 - 140*

Lab Sample ID: LCSD 720-180412/10
Matrix: Solid
Analysis Batch: 180412

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	45.7		ug/Kg		91	70 - 130	6	20
Ethylbenzene			50.0	45.7		ug/Kg		91	80 - 137	4	20
Naphthalene			50.0	47.9		ug/Kg		96	60 - 147	11	20
Toluene			50.0	46.7		ug/Kg		93	80 - 128	6	20
m-Xylene & p-Xylene			50.0	46.4		ug/Kg		93	70 - 146	5	20
o-Xylene			50.0	46.6		ug/Kg		93	70 - 140	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: LCSD 720-180412/12
Matrix: Solid
Analysis Batch: 180412

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)			1000	1030		ug/Kg		103	70 - 122	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*
Toluene-d8 (Surr)	*94*		*58 - 140*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-180343/1-A
Matrix: Solid
Analysis Batch: 180290

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 180343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	ND		0.99	0.75	mg/Kg		04/23/15 16:04	04/23/15 22:09	1
TPH (C23-C40)	ND		50	9.9	mg/Kg		04/23/15 16:04	04/23/15 22:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.005*		*0 - 1*	*04/23/15 16:04*	*04/23/15 22:09*	*1*
p-Terphenyl	*89*		*38 - 148*	*04/23/15 16:04*	*04/23/15 22:09*	*1*

Lab Sample ID: LCS 720-180343/2-A
Matrix: Solid
Analysis Batch: 180290

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 180343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH (C13-C22)			82.3	64.5		mg/Kg		78	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*98*		*38 - 148*

Lab Sample ID: MB 720-180379/1-A
Matrix: Solid
Analysis Batch: 180452

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 180379

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH (C13-C22)	ND		0.99	0.75	mg/Kg		04/24/15 08:39	04/25/15 16:13	1
TPH (C23-C40)	ND		50	9.9	mg/Kg		04/24/15 08:39	04/25/15 16:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*04/24/15 08:39*	*04/25/15 16:13*	*1*
p-Terphenyl	*126*		*38 - 148*	*04/24/15 08:39*	*04/25/15 16:13*	*1*

Lab Sample ID: LCS 720-180379/2-A
Matrix: Solid
Analysis Batch: 180452

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 180379

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH (C13-C22)			82.8	68.4		mg/Kg		83	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*90*		*38 - 148*

GC/MS VOA

Analysis Batch: 180285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-1	SS-1-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180313
LCS 720-180285/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-180285/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180285/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180285/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-180285/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 180313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-1	SS-1-3.5	Total/NA	Solid	5030B	

Analysis Batch: 180332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-3	SS-3-4.0	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-6	SS-6-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-6 MS	SS-6-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-6 MSD	SS-6-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-16	SS-15-3.75	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-18	SS-17-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-19	D-2	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-25	SS-21-4.0	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-27	SS-23-3.0	Total/NA	Solid	8260B/CA_LUFT MS	180358
720-64194-28	SS-24-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180358
LCS 720-180332/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-180332/9	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180332/10	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180332/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-180332/6	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 180358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-3	SS-3-4.0	Total/NA	Solid	5030B	
720-64194-6	SS-6-3.5	Total/NA	Solid	5030B	
720-64194-6 MS	SS-6-3.5	Total/NA	Solid	5030B	
720-64194-6 MSD	SS-6-3.5	Total/NA	Solid	5030B	

GC/MS VOA (Continued)

Prep Batch: 180358 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-16	SS-15-3.75	Total/NA	Solid	5030B	
720-64194-18	SS-17-3.5	Total/NA	Solid	5030B	
720-64194-19	D-2	Total/NA	Solid	5030B	
720-64194-25	SS-21-4.0	Total/NA	Solid	5030B	
720-64194-27	SS-23-3.0	Total/NA	Solid	5030B	
720-64194-28	SS-24-3.5	Total/NA	Solid	5030B	

Analysis Batch: 180366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-8	SS-8-2.5	Total/NA	Solid	8260B/CA_LUFT MS	180401
720-64194-11	SS-11-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180401
720-64194-12	D-1	Total/NA	Solid	8260B/CA_LUFT MS	180401
LCS 720-180366/10	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-180366/12	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180366/11	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180366/13	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-180366/9	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 180401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-8	SS-8-2.5	Total/NA	Solid	5030B	
720-64194-11	SS-11-3.5	Total/NA	Solid	5030B	
720-64194-12	D-1	Total/NA	Solid	5030B	

Analysis Batch: 180412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-14	SS-13-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180440
720-64194-22	SS-19-3.5	Total/NA	Solid	8260B/CA_LUFT MS	180440
LCS 720-180412/11	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-180412/9	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180412/10	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-180412/12	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-180412/8	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 180440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-14	SS-13-3.5	Total/NA	Solid	5030B	
720-64194-22	SS-19-3.5	Total/NA	Solid	5030B	

GC Semi VOA

Analysis Batch: 180290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-180343/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	180343
MB 720-180343/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	180343

Prep Batch: 180343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-1	SS-1-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-3	SS-3-4.0	Silica Gel Cleanup	Solid	3546	
720-64194-6	SS-6-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-8	SS-8-2.5	Silica Gel Cleanup	Solid	3546	
LCS 720-180343/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
MB 720-180343/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 180372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-3	SS-3-4.0	Silica Gel Cleanup	Solid	8015B	180343

Prep Batch: 180379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-11	SS-11-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-12	D-1	Silica Gel Cleanup	Solid	3546	
720-64194-14	SS-13-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-16	SS-15-3.75	Silica Gel Cleanup	Solid	3546	
720-64194-18	SS-17-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-19	D-2	Silica Gel Cleanup	Solid	3546	
720-64194-22	SS-19-3.5	Silica Gel Cleanup	Solid	3546	
720-64194-25	SS-21-4.0	Silica Gel Cleanup	Solid	3546	
720-64194-27	SS-23-3.0	Silica Gel Cleanup	Solid	3546	
720-64194-28	SS-24-3.5	Silica Gel Cleanup	Solid	3546	
LCS 720-180379/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
MB 720-180379/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 180452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-16	SS-15-3.75	Silica Gel Cleanup	Solid	8015B	180379
LCS 720-180379/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	180379
MB 720-180379/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	180379

Analysis Batch: 180453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-28	SS-24-3.5	Silica Gel Cleanup	Solid	8015B	180379

Analysis Batch: 180455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-1	SS-1-3.5	Silica Gel Cleanup	Solid	8015B	180343
720-64194-6	SS-6-3.5	Silica Gel Cleanup	Solid	8015B	180343
720-64194-8	SS-8-2.5	Silica Gel Cleanup	Solid	8015B	180343

Analysis Batch: 180476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-11	SS-11-3.5	Silica Gel Cleanup	Solid	8015B	180379
720-64194-12	D-1	Silica Gel Cleanup	Solid	8015B	180379

GC Semi VOA (Continued)

Analysis Batch: 180476 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64194-14	SS-13-3.5	Silica Gel Cleanup	Solid	8015B	180379
720-64194-18	SS-17-3.5	Silica Gel Cleanup	Solid	8015B	180379
720-64194-19	D-2	Silica Gel Cleanup	Solid	8015B	180379
720-64194-22	SS-19-3.5	Silica Gel Cleanup	Solid	8015B	180379
720-64194-25	SS-21-4.0	Silica Gel Cleanup	Solid	8015B	180379
720-64194-27	SS-23-3.0	Silica Gel Cleanup	Solid	8015B	180379

Client Sample ID: SS-1-3.5

Lab Sample ID: 720-64194-1

Date Collected: 04/14/15 12:30

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180313	04/23/15 18:45	PRD	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180285	04/23/15 19:04	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180343	04/23/15 19:14	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180455	04/25/15 22:57	JXL	TAL PLS

Client Sample ID: SS-3-4.0

Lab Sample ID: 720-64194-3

Date Collected: 04/14/15 12:45

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/23/15 19:21	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180343	04/23/15 19:14	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		10	180372	04/24/15 19:26	JXL	TAL PLS

Client Sample ID: SS-6-3.5

Lab Sample ID: 720-64194-6

Date Collected: 04/14/15 13:05

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/23/15 20:46	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180343	04/23/15 19:14	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180455	04/25/15 23:21	JXL	TAL PLS

Client Sample ID: SS-8-2.5

Lab Sample ID: 720-64194-8

Date Collected: 04/14/15 12:20

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180401	04/24/15 10:00	PRD	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	180366	04/24/15 16:16	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180343	04/23/15 19:14	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180455	04/25/15 23:45	JXL	TAL PLS

Client Sample ID: SS-11-3.5

Lab Sample ID: 720-64194-11

Date Collected: 04/14/15 13:40

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180401	04/24/15 10:00	PRD	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	180366	04/24/15 16:46	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS

Client Sample ID: SS-11-3.5

Lab Sample ID: 720-64194-11

Date Collected: 04/14/15 13:40

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Analysis	8015B		100	180476	04/27/15 11:13	JXL	TAL PLS

Client Sample ID: D-1

Lab Sample ID: 720-64194-12

Date Collected: 04/14/15 13:32

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180401	04/24/15 10:00	PRD	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		100	180366	04/24/15 17:17	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		100	180476	04/27/15 11:38	JXL	TAL PLS

Client Sample ID: SS-13-3.5

Lab Sample ID: 720-64194-14

Date Collected: 04/14/15 14:00

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180440	04/24/15 18:01	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180412	04/24/15 19:07	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180476	04/27/15 12:02	JXL	TAL PLS

Client Sample ID: SS-15-3.75

Lab Sample ID: 720-64194-16

Date Collected: 04/14/15 14:15

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/23/15 23:10	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		20	180452	04/25/15 19:09	DCH	TAL PLS

Client Sample ID: SS-17-3.5

Lab Sample ID: 720-64194-18

Date Collected: 04/14/15 14:30

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/23/15 23:38	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		100	180476	04/27/15 12:26	JXL	TAL PLS

Client Sample ID: D-2

Lab Sample ID: 720-64194-19

Date Collected: 04/14/15 14:32

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/24/15 00:07	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		100	180476	04/27/15 13:31	JXL	TAL PLS

Client Sample ID: SS-19-3.5

Lab Sample ID: 720-64194-22

Date Collected: 04/14/15 14:55

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180440	04/24/15 18:01	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180412	04/24/15 18:38	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		5	180476	04/27/15 13:55	JXL	TAL PLS

Client Sample ID: SS-21-4.0

Lab Sample ID: 720-64194-25

Date Collected: 04/14/15 15:10

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/24/15 01:04	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180476	04/27/15 14:20	JXL	TAL PLS

Client Sample ID: SS-23-3.0

Lab Sample ID: 720-64194-27

Date Collected: 04/14/15 15:25

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/24/15 01:33	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		50	180476	04/27/15 14:44	JXL	TAL PLS

Client Sample ID: SS-24-3.5

Lab Sample ID: 720-64194-28

Date Collected: 04/14/15 15:30

Matrix: Solid

Date Received: 04/15/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			180358	04/23/15 18:52	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	180332	04/24/15 02:02	PRD	TAL PLS
Silica Gel Cleanup	Prep	3546			180379	04/24/15 08:39	DFR	TAL PLS

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Client Sample ID: SS-24-3.5
Date Collected: 04/14/15 15:30
Date Received: 04/15/15 16:30

Lab Sample ID: 720-64194-28
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Analysis	8015B		20	180453	04/25/15 17:12	JXL	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: UPRR-Oakland Track 58

TestAmerica Job ID: 720-64194-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-64194-1	SS-1-3.5	Solid	04/14/15 12:30	04/15/15 16:30
720-64194-3	SS-3-4.0	Solid	04/14/15 12:45	04/15/15 16:30
720-64194-6	SS-6-3.5	Solid	04/14/15 13:05	04/15/15 16:30
720-64194-8	SS-8-2.5	Solid	04/14/15 12:20	04/15/15 16:30
720-64194-11	SS-11-3.5	Solid	04/14/15 13:40	04/15/15 16:30
720-64194-12	D-1	Solid	04/14/15 13:32	04/15/15 16:30
720-64194-14	SS-13-3.5	Solid	04/14/15 14:00	04/15/15 16:30
720-64194-16	SS-15-3.75	Solid	04/14/15 14:15	04/15/15 16:30
720-64194-18	SS-17-3.5	Solid	04/14/15 14:30	04/15/15 16:30
720-64194-19	D-2	Solid	04/14/15 14:32	04/15/15 16:30
720-64194-22	SS-19-3.5	Solid	04/14/15 14:55	04/15/15 16:30
720-64194-25	SS-21-4.0	Solid	04/14/15 15:10	04/15/15 16:30
720-64194-27	SS-23-3.0	Solid	04/14/15 15:25	04/15/15 16:30
720-64194-28	SS-24-3.5	Solid	04/14/15 15:30	04/15/15 16:30

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ARCADIS
Infrastructure Water Environment Buildings

ID#: 720-64194

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 3

Lab Work Order #

Send Results to:
Contact & Company Name: Scott Hackman
Telephone:
Address: on file
Fax:
City: State: Zip:
E-mail Address:

Project Name/Location (City, State): UPRR Oakland CA
Project #: RV009596.0000.00001
Sampler's Printed Name: Gary Clift
Sampler's Signature: [signature]

Preservative	E	—	—				
Filtered (✓)							
# of Containers	1	—	—				
Container Information	7	—	—				

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	TPH C-4–C-40 by EPA 8015B	BTEX Naphthalene by EPA 8260B	Silica gel Clean up					
SS-1-3.5	4-14	1230		✓	SO	X	X	X					Hold
SS-2-3.5	4-14	1235		✓	SO	X	X	X					
SS-3-4.0	4-14	1245		✓	SO	X	X	X					Hold
SS-4-2.5	4-14	1250		✓	SO	X	X	X					
SS-5-3.0	4-14	1320		✓	SO	X	X	X					
SS-6-3.5	4-14	1305		✓	SO	X	X	X					Hold
SS-7-3.5	4-14	1225		✓	SO	X	X	X					Run
SS-8-2.5	4-14	1220		✓	SO	X	X	X					Hold
SS-9-2.5	4-14	1215		✓	SO	X	X	X					Run
SS-10-3.5	4-14	1330		✓	SO	X	X	X					
SS-11-3.5	4-14	1340		✓	SO	X	X	X					Hold
D-1	4-14	1332		✓	SO	X	X	X					Hold
SS-12-3.0	4-14	1350		✓	SO	X	X	X					
SS-13-3.5	4-14	1400		✓	SO	X	X	X					Hold

720-64194 Chain of Custody

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: ______
G. Other: ______

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: ______
10. Other: ______

Sediment / Sludge / Air
NL - NAPL/Oil
SW - Sample Wipe
Other: ______

Special Instructions/Comments: Temp Blank

☐ Special QA/QC Instructions(✓):

3.1°C

Laboratory Information and Receipt

Lab Name: Test America
☑ Cooler packed with ice (✓)
Specify Turnaround Requirements: 5 Day TAT
Shipping Tracking #:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact
Sample Receipt:
Condition/Cooler Temp: ______

	Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name	Gary Clift	Keith Hammel	Keith Hammel	Bryan Thomas
Signature	[signature]	[signature]	[signature]	[signature]
Firm	Arcadis	TA	TA	TestAmerica
Date/Time	4-14-15 6:00	4-15-15 10:38	4-15-15 1150	4/15/15 1150

20730826 CofC AR Form 01.12.2007

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

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ARCADIS
Infrastructure Water Environment Buildings

ID#: 720-64194

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 3

Lab Work Order #

4/29/2015

Send Results to:

Contact & Company Name: Scott HACKMAN — Telephone: On File
Address: — Fax:
City — State — Zip — E-mail Address:

Project Name/Location (City, State): UPRR Oakland, CA
Project #: RV009596.0000.00001
Sampler's Printed Name: GARY CLIFT
Sampler's Signature:

Preservative	E	—	—					
Filtered (✓)								
# of Containers	1	—	—					
Container Information	7	—	—					

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C HNO_3
D NaOH
E. None
F. Other: _____
G Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TPH C4-C40 by EPA 8015 B	Naphthalene by EPA 8260 B BTEX	Silica gel Clean up	REMARKS
SS-14-3.5	4-14	1410		✓	SO	X	X	X	
SS-15-3.75	4-14	1415		✓	SO	X	X	X	Hold
SS-16-4.0	4-14	1425		✓	SO	X	X	X	
SS-17-3.5	4-14	1430		✓	SO	X	X	X	Hold
D-2	4-14	1432		✓	SO	X	X	X	Hold
SS-18-3.5	4-14	1440		✓	SO	X	X	X	
D-3	4-14	1443		✓	SO	X	X	X	
SS-19-3.5	4-14	1455		✓	SO	X	X	X	Hold
SS-20-3.5	4-14	1500		✓	SO	X	X	X	
D-4	4-14	1524		✓	SO	X	X	X	
SS-21-~~4.0~~	4-14	1510		✓	SO	X	X	X	Hold
SS-22-3.5	4-14	1520		✓	SO	X	X	X	
SS-23-3.0	4-14	1525		✓	SO	X	X	X	Hold
SS-24-3.5	4-14	1530		✓	SO	X	X	X	Hold

Special Instructions/Comments:

Temp Blank

☐ Special QA/QC Instructions(✓):

3.1°C

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Test America	Cooler Custody Seal (✓)	Printed Name: GARY CLIFT	Printed Name: Keith Hammond	Printed Name: Keith Hammond	Printed Name: Bryan Thomas
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 5 DAY TAT	Sample Receipt:	Firm: ARCADIS	Firm/Courier: TA	Firm/Courier: TA	Firm: TestAmerica
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 4-14-15 6:00	Date/Time: 4-15-15 1030	Date/Time: 4-15-15 1150	Date/Time: 4/15/15 1150

20730826 CofC AR Form 01.12.2007

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

160542

ARCADIS
Infrastructure Water Environment Buildings

ID#: 120-64194

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 3 of 3

Lab Work Order #

4/29/2015

Send Results to:	Contact & Company Name	Telephone
	Scott HACKMAN	File
	Address	
	City State Zip	E-mail Address:

Project Name/Location (City, State):	Project #:
UPRR Oakland, CA	RV009596.0000.00001
Sampler's Printed Name:	Sampler's Signature:
GARY CLIFT	

Preservative	E	–	–				
Filtered (✓)							
# of Containers	1	–	–				
Container Information	7	–	–				

Keys

Preservation Key:
A. H_2SO_4
B HCL
C. HNO_3
D. NaOH
E None
F. Other: _____
G Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1-L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	PARAMETER ANALYSIS & METHOD: TPH C-4-C40 by EPA 8015 B	BTEX Naphthalene by EPA 8260 B	Silica Gel Cleanup	REMARKS
SS-25-3.0	4/4	1540		✓	SO	X	X	X	

Special Instructions/Comments:

Temp Blank

☐ Special QA/QC Instructions(✓):

3.1°C

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Test America	Cooler Custody Seal (✓)	Printed Name: GARY CLIFT	Printed Name: Keith Hemmerle	Printed Name: Keith Hemmerle	Printed Name: Bryan Thomas
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 5 DAY TAT	Sample Receipt:	Firm: ARCADIS	Firm/Courier: TA	Firm/Courier: TA	Firm: TestAmerica
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 4/4/15 6:00	Date/Time: 4-15-15 1038	Date/Time: 4-15-15 1150	Date/Time: 4/15/15 1150

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Sharma, Dimple 720-64194-2

From: Hackman, Scott <Scott.Hackman@arcadis-us.com>
Sent: Thursday, April 23, 2015 3:56 PM
To: Sharma, Dimple
Cc: Gerard, Becky
Subject: RE: TestAmerica EDD and report files from 720-64194-1 UPRR-Oakland Track 58

Hi Dimple,
Can you please analyze the 14 samples that were held for BTEX, Naphthalene, and TPH C4-C40 (C13-C40 with silica gel cleanup) the same as the initial samples.

Please analyze them on a 5-day TAT.

720-64194 Chain of Custody

-Scott-

From: Sharma, Dimple [mailto:dimple.sharma@testamericainc.com]
Sent: Wednesday, April 22, 2015 5:51 PM
To: Gerard, Becky; Hackman, Scott; UPRR SysDat
Subject: TestAmerica EDD and report files from 720-64194-1 UPRR-Oakland Track 58

Hello,

Attached please find the EDD and report files for job 720-64194-1; UPRR-Oakland Track 58

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

DIMPLE SHARMA
Senior Project Manager

TestAmerica Pleasanton
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484.1919
www.testamericainc.com

Reference: [183301]
Attachments: 2

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 720-64194-2

Login Number: 64194

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

From: Sharma, Dimple
To: Hackman, Scott
Cc: Gerard, Becky; Hull, David
Subject: RE: TestAmerica files from 720-64194-2 UPRR-Oakland Track 58
Date: Friday, May 29, 2015 9:19:07 AM

Hi Scott,
The analyst confirmed that GRO results are due to heavier hydrocarbons but not necessarily diesel. It could be other hydrocarbons from that range too.

Thanks.

Dimple Sharma
Senior Project Manager
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
1220 Quarry Lane
Pleasanton, CA 94566
Tel 925.484.1919 ext. 103 | Fax 925.600.3002
www.testamericainc.com

-----Original Message-----
From: Hackman, Scott [mailto:Scott.Hackman@arcadis-us.com]
Sent: Thursday, May 28, 2015 8:30 PM
To: Sharma, Dimple
Cc: Gerard, Becky; Hull, David
Subject: Re: TestAmerica files from 720-64194-2 UPRR-Oakland Track 58

Hi Dimple.
Did your analyst have any input on whether they feel the GRO is contributed from the diesel range organically?

-Scott-

> On May 28, 2015, at 11:46 AM, Sharma, Dimple <dimple.sharma@testamericainc.com> wrote:
>
>
>
> Hello,
>
> Attached please find the files for job 720-64194-2; UPRR-Oakland Track 58
>
> Please feel free to contact me if you have any questions.
>
> Thank you.
>
> Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback<https://www.surveymonkey.com/s/TAProjectFeedback>
>
>
> DIMPLE SHARMA
> Senior Project Manager
>
> TestAmerica Pleasanton
> THE LEADER IN ENVIRONMENTAL TESTING

>
> Tel: 925.484,1919
> www.testamericainc.com<http://www.testamericainc.com>
>
> Reference: [186228]
> Attachments: 1
>
>
> <Method 8260B Low Level_SampleData [Std_Tal_L4].pdf>

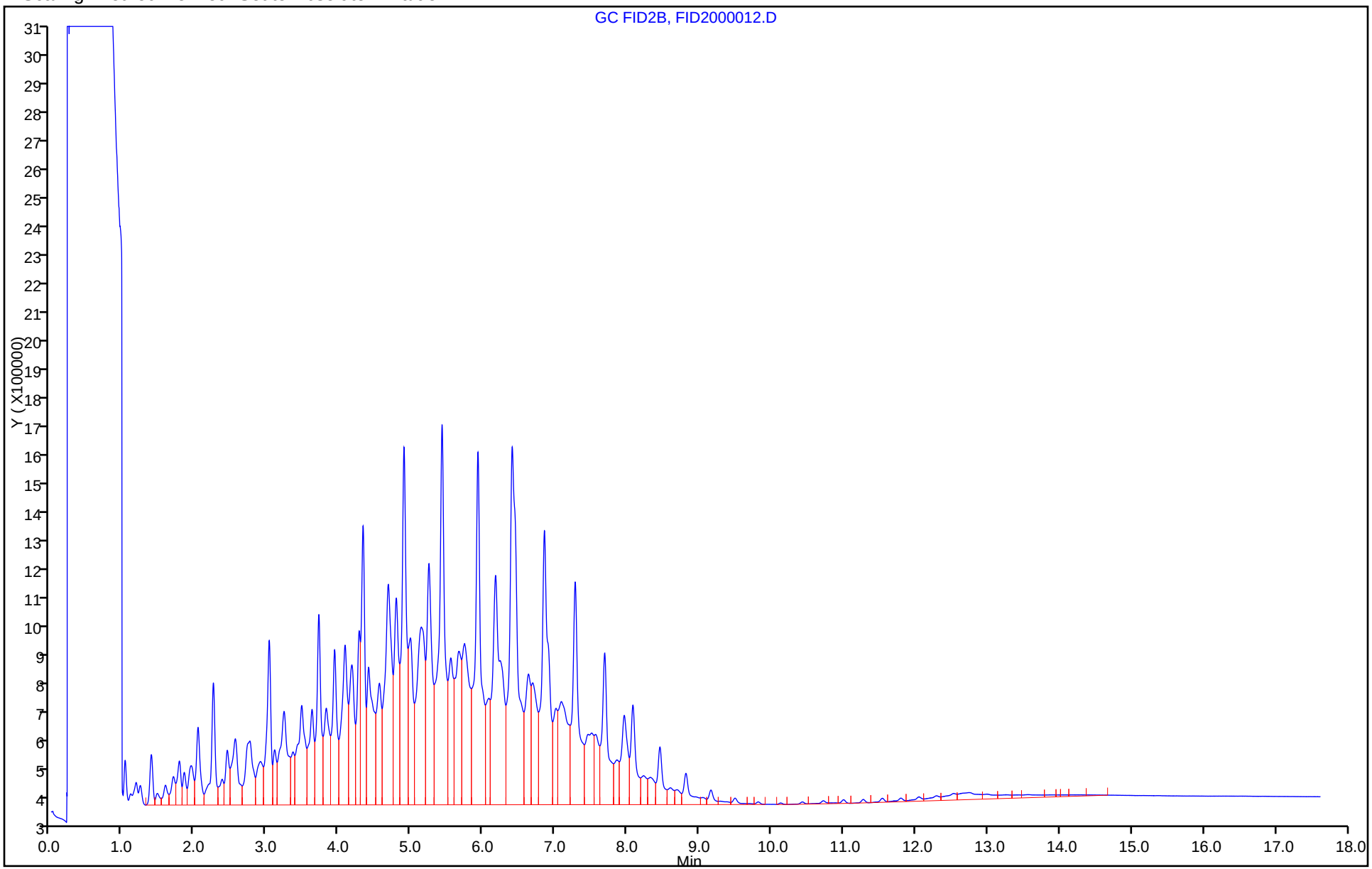
Report Date: 30-Jan-2015 14:31:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

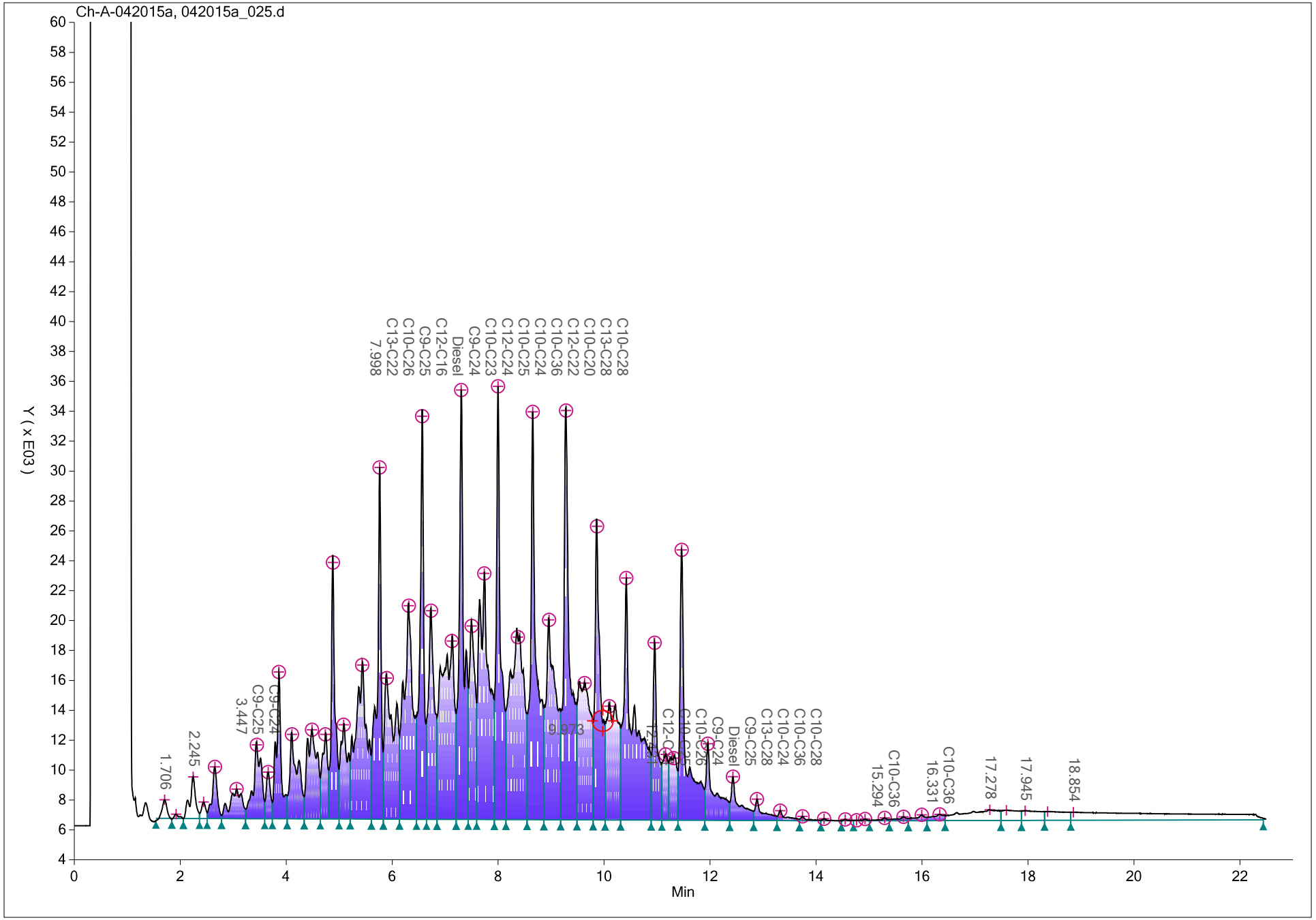
TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150130-32506.b\FID2000012.D

Injection Date:	30-Jan-2015 14:02:49	Instrument ID:	CHDRO6	Operator ID:	RLU
Lims ID:	STD1000 DIESEL			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	62
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value




Ch-A-042015a, 042015a_025.d
Y (x E03)
Min
1.706
2.245
3.447
C9-C25
C9-C24
7.998
C13-C22
C10-C26
C9-C25
C12-C16
Diesel
C9-C24
C10-C23
C12-C24
C10-C25
C10-C24
C10-C36
C12-C22
C10-C20
C13-C28
C10-C28
9.973
C12-C22
C10-C25
C10-C26
C9-C24
Diesel
C9-C25
C13-C28
C10-C24
C10-C36
C10-C28
15.294
C10-C36
16.331
C10-C36
17.278
17.945
18.854

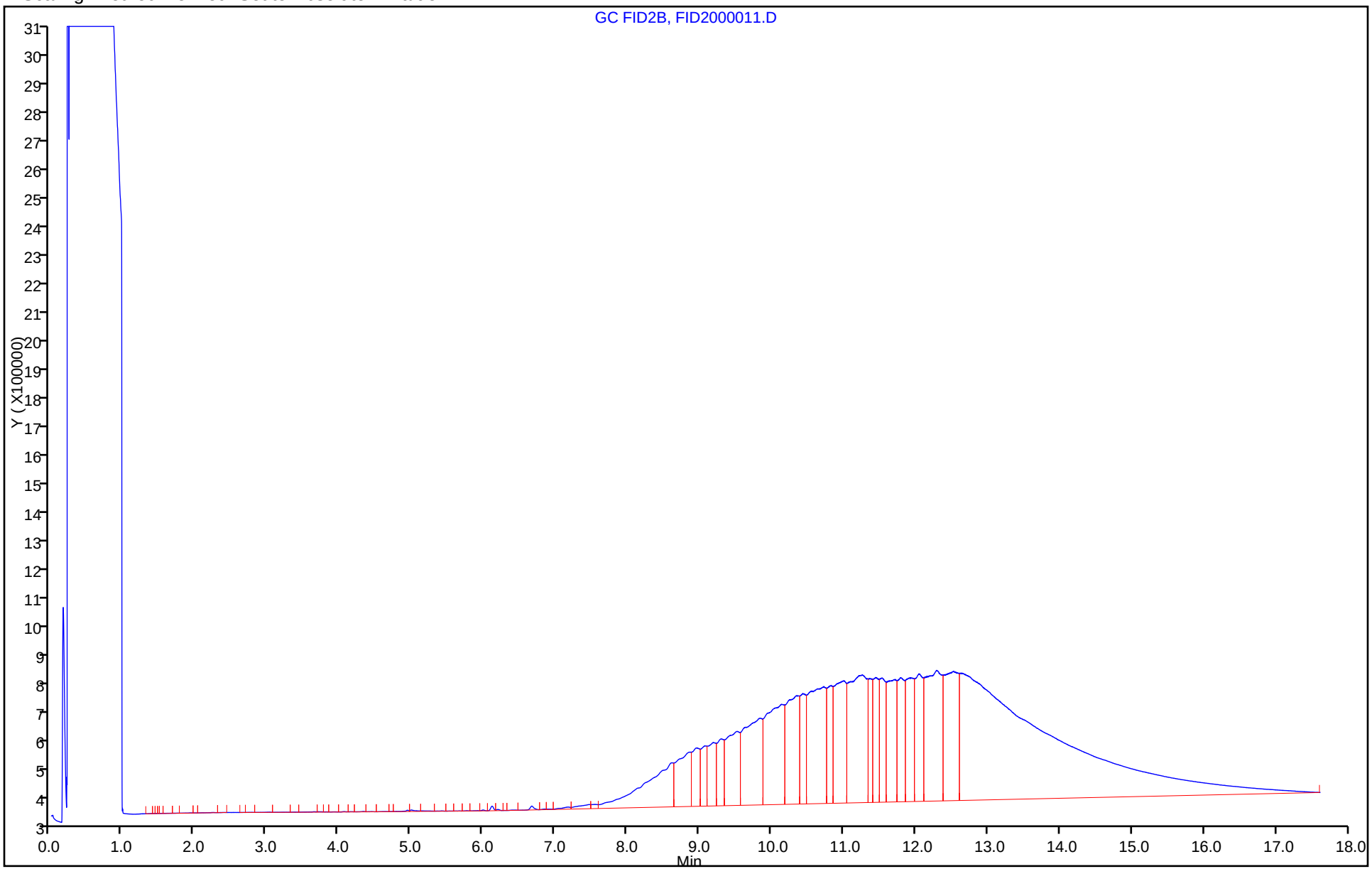
Report Date: 30-Jan-2015 14:31:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

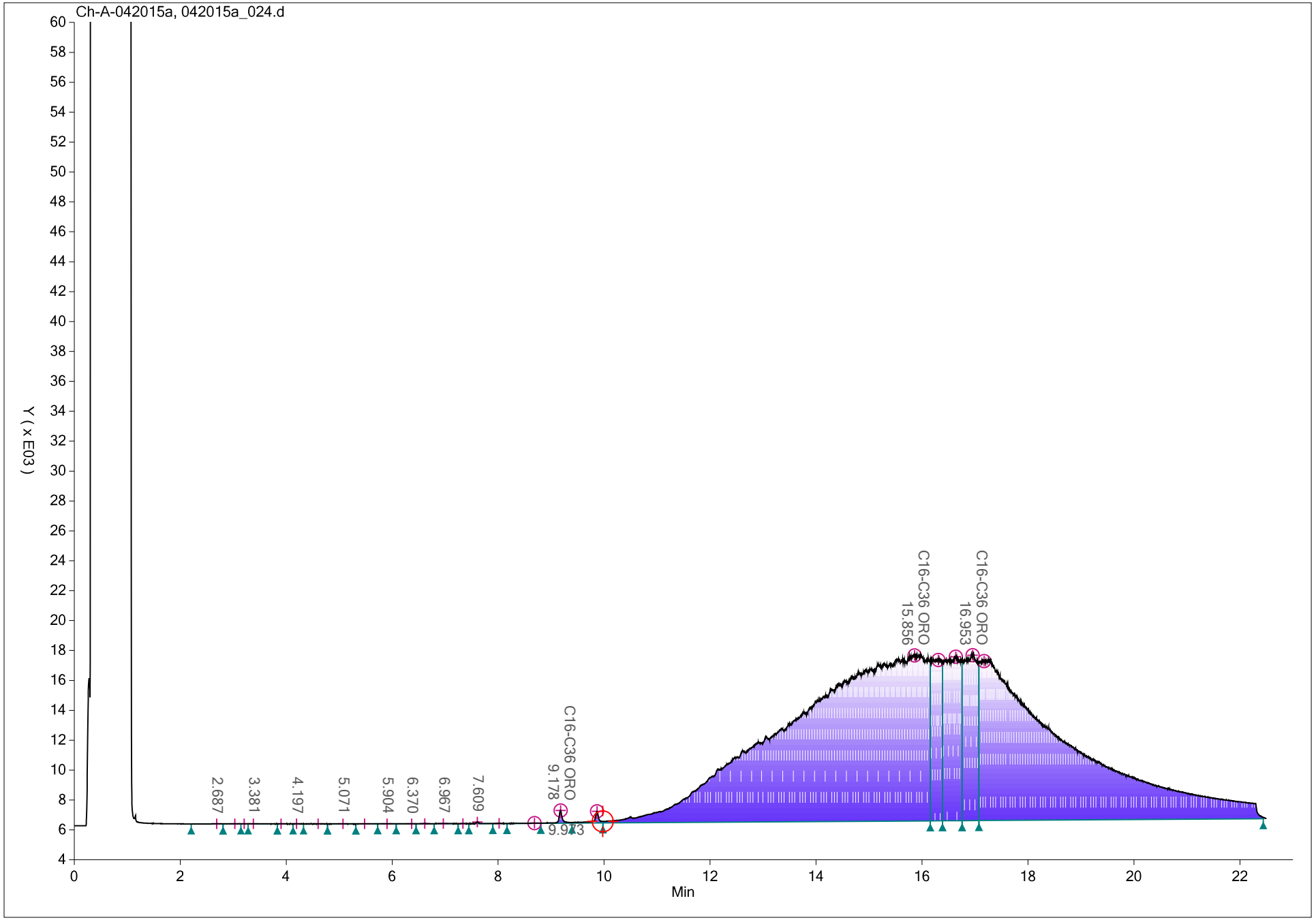
TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150130-32506.b\FID2000011.D

Injection Date:	30-Jan-2015 13:38:39	Instrument ID:	CHDRO6	Operator ID:	RLU
Lims ID:	STD1000 MOTOR			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	61
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value




Ch-A-042015a, 042015a_024.d
Y (x E03)
Min
2.687
3.381
4.197
5.071
5.904
6.370
6.967
7.609
C16-C36 ORO
9.178
9.973
C16-C36 ORO
15.856
C16-C36 ORO
16.953

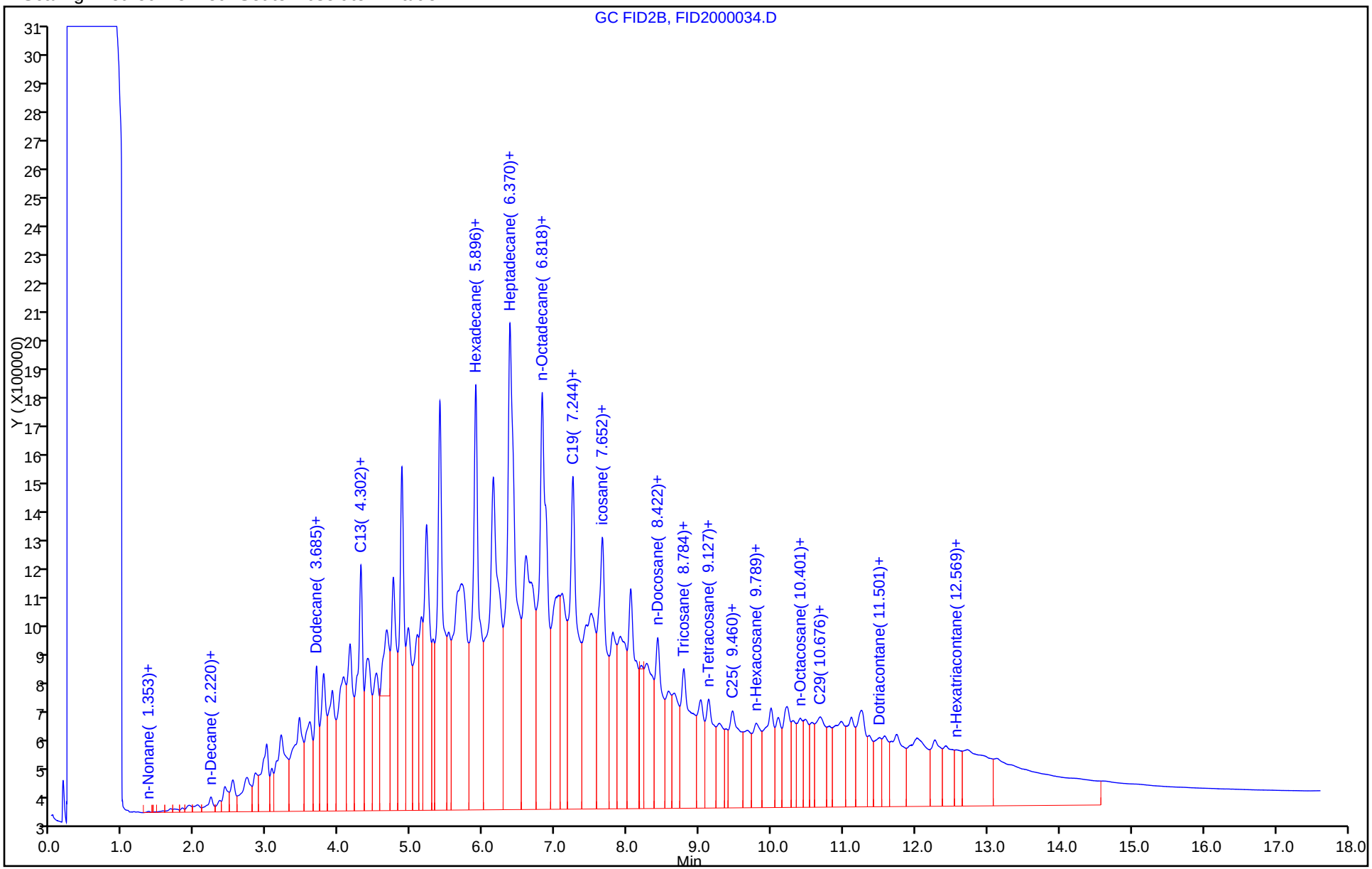
Report Date: 27-Apr-2015 12:29:57 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150425-33940.b\FID2000034.D

Injection Date:	25-Apr-2015 22:57:09	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-1-B	Lab Sample ID:	720-64194-1	Worklist Smp#:	34
Client ID:	SS-1-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	84
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



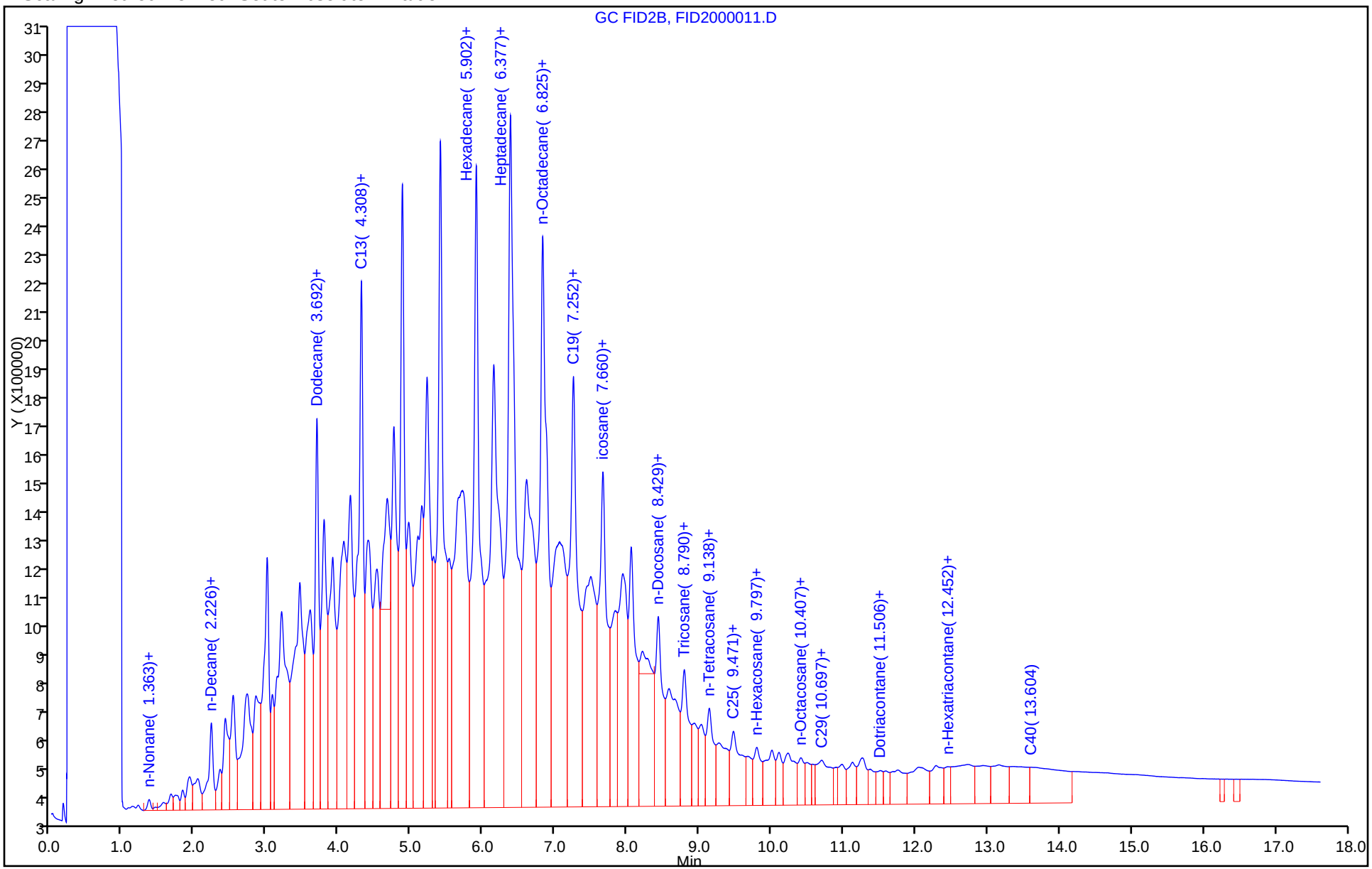
Report Date: 20-Apr-2015 09:51:04 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150418-33827.b\FID2000011.D

Injection Date:	18-Apr-2015 16:30:12	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-2-C	Lab Sample ID:	720-64194-2	Worklist Smp#:	11
Client ID:	SS-2-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	61
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



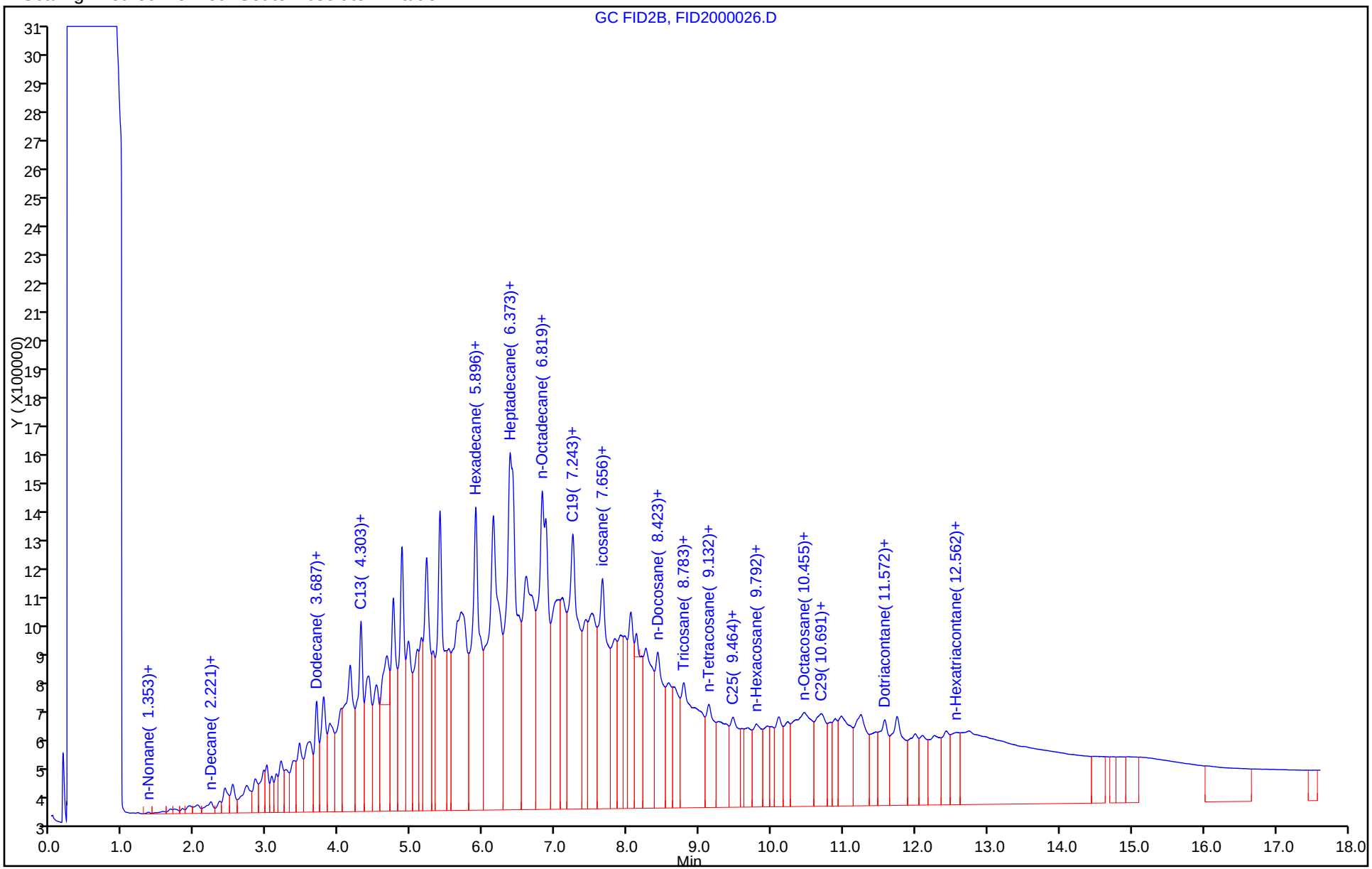
Report Date: 27-Apr-2015 08:57:06 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150424-33923.b\FID2000026.D

Injection Date:	24-Apr-2015 19:26:06	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-3-B	Lab Sample ID:	720-64194-3	Worklist Smp#:	26
Client ID:	SS-3-4.0				
Injection Vol:	1.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	76
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



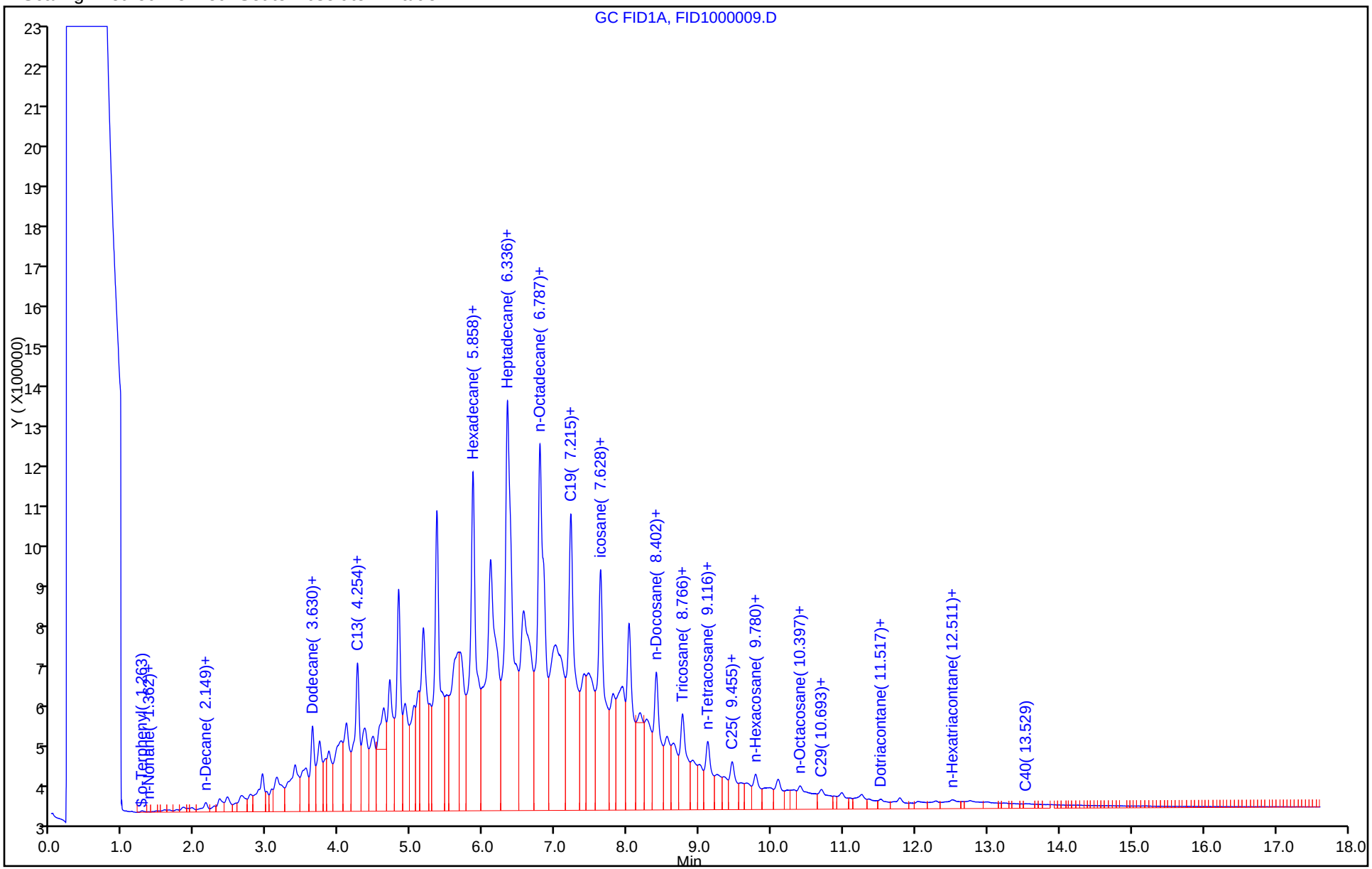
Report Date: 21-Apr-2015 11:12:52 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33835.b\FID1000009.D

Injection Date:	20-Apr-2015 11:35:11	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-4-B	Lab Sample ID:	720-64194-4	Worklist Smp#:	9
Client ID:	SS-4-2.5				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	9
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



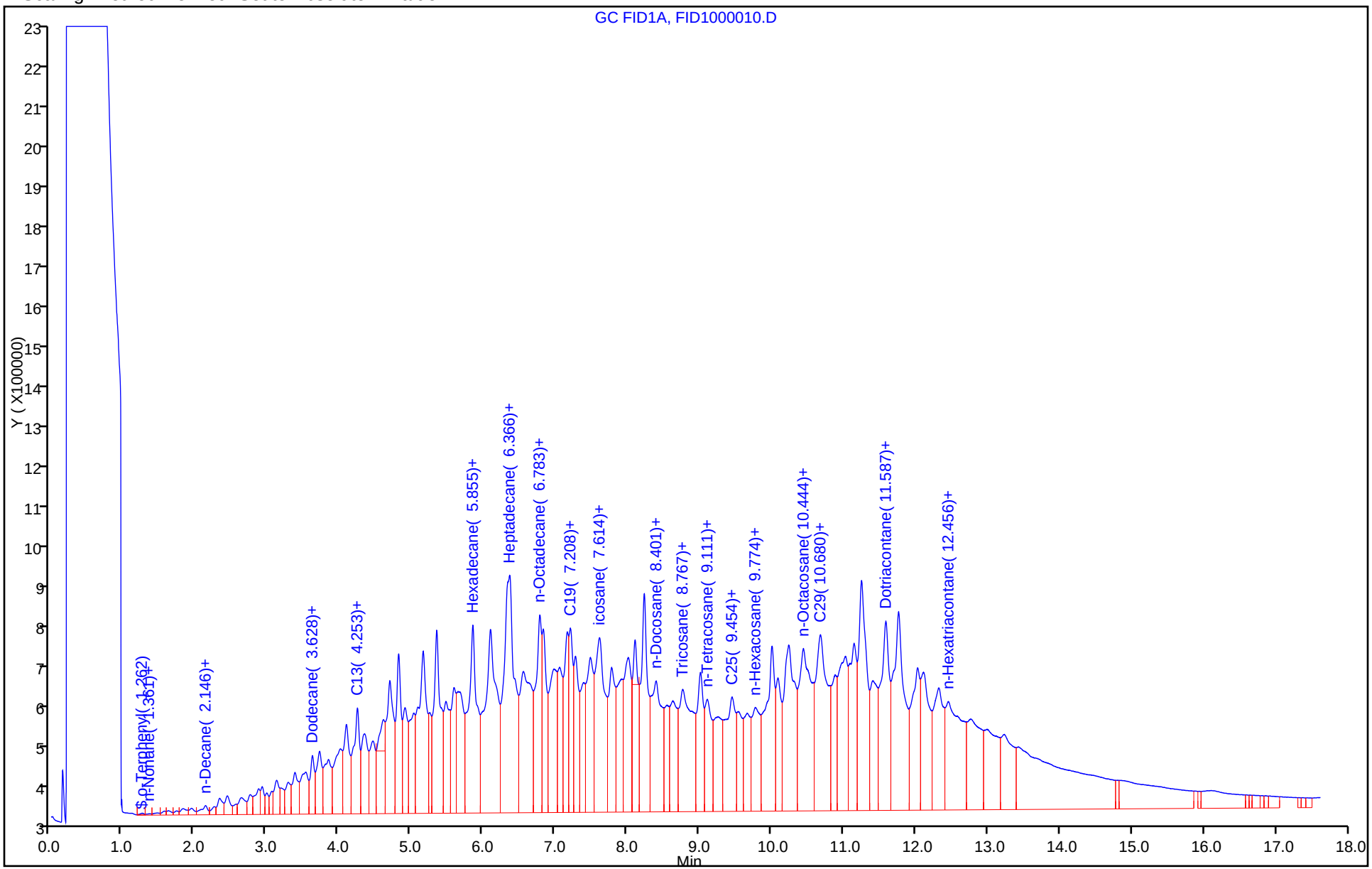
Report Date: 21-Apr-2015 11:15:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33835.b\FID1000010.D

Injection Date:	20-Apr-2015 11:59:28	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-5-B	Lab Sample ID:	720-64194-5	Worklist Smp#:	10
Client ID:	SS-5-3.0				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	10
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



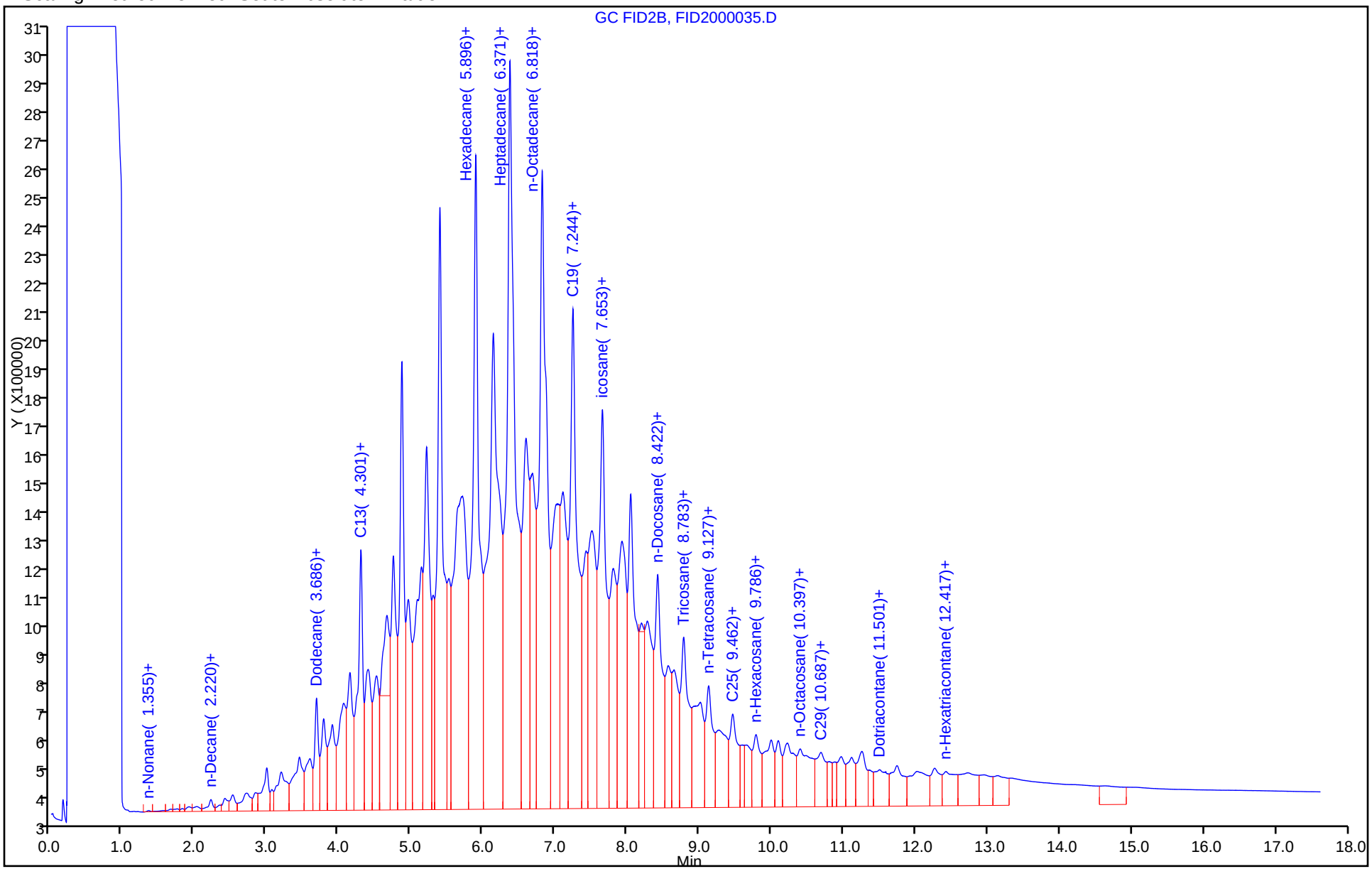
Report Date: 27-Apr-2015 12:32:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150425-33940.b\FID2000035.D

Injection Date:	25-Apr-2015 23:21:10	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-6-D	Lab Sample ID:	720-64194-6	Worklist Smp#:	35
Client ID:	SS-6-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	85
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



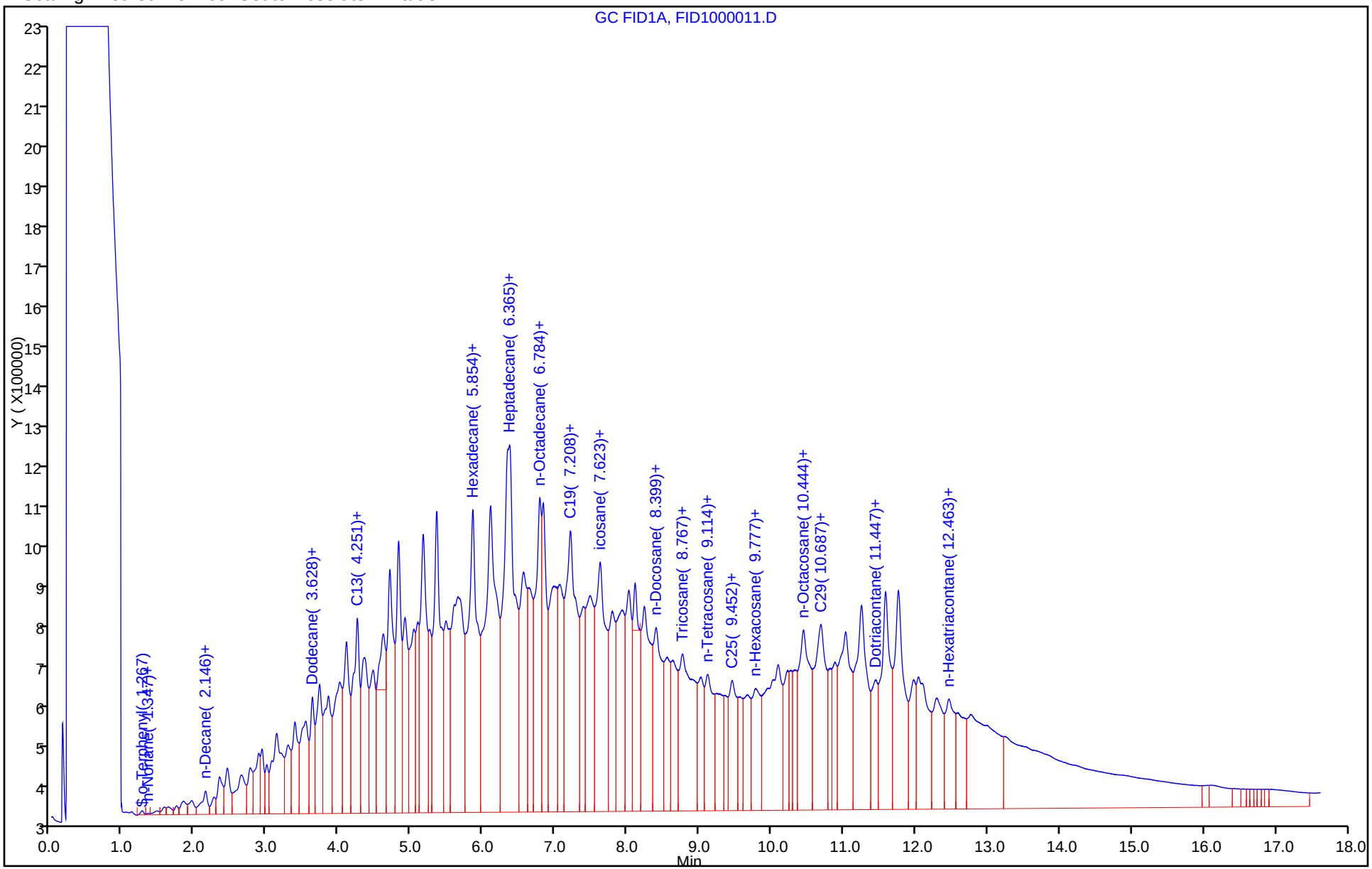
Report Date: 21-Apr-2015 11:14:56 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33835.b\FID1000011.D

Injection Date:	20-Apr-2015 12:23:38	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-7-B	Lab Sample ID:	720-64194-7	Worklist Smp#:	11
Client ID:	SS-7-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	11
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



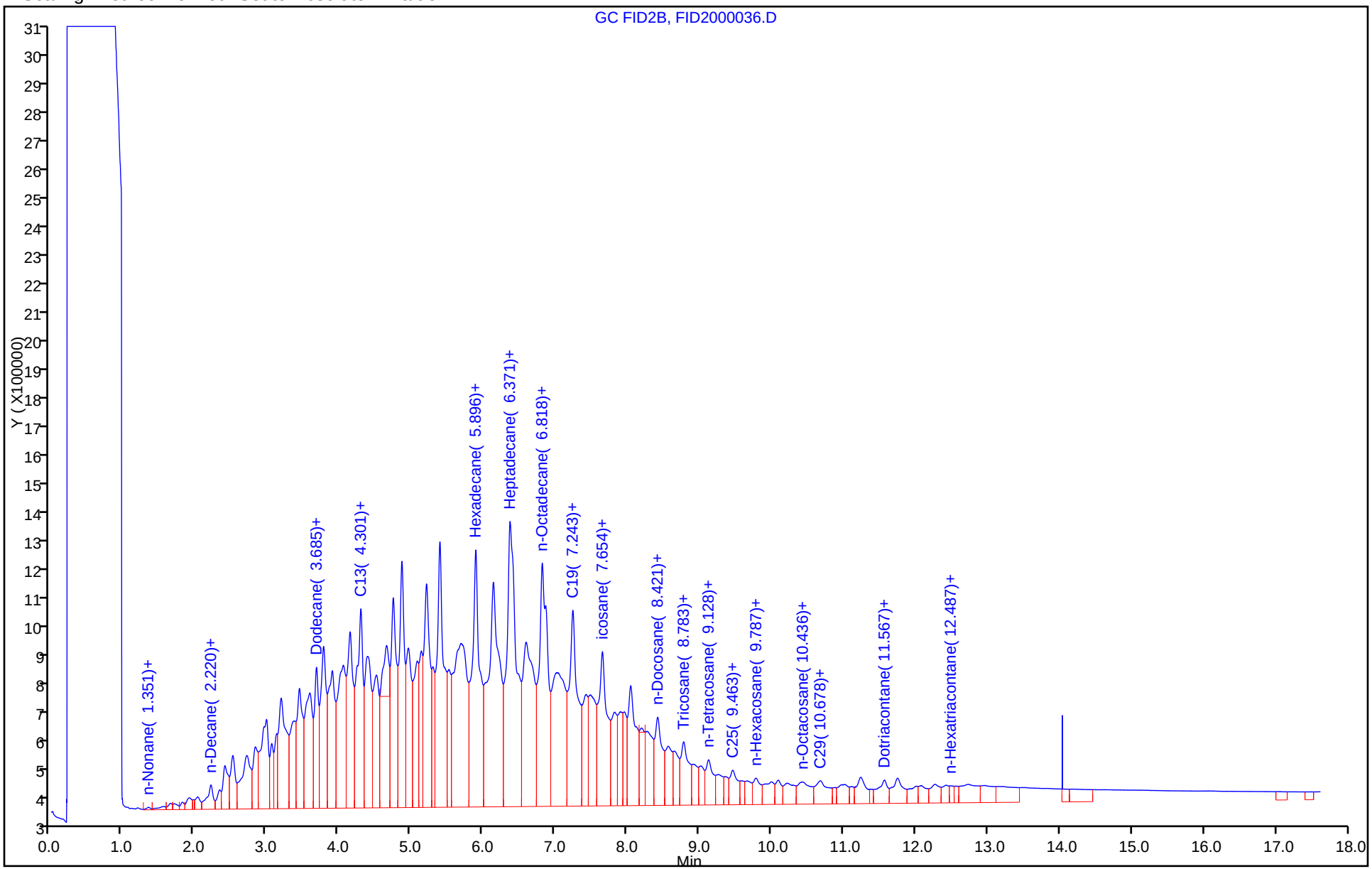
Report Date: 27-Apr-2015 12:34:37 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150425-33940.b\FID2000036.D

Injection Date:	25-Apr-2015 23:45:13	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-8-B	Lab Sample ID:	720-64194-8	Worklist Smp#:	36
Client ID:	SS-8-2.5				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	86
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



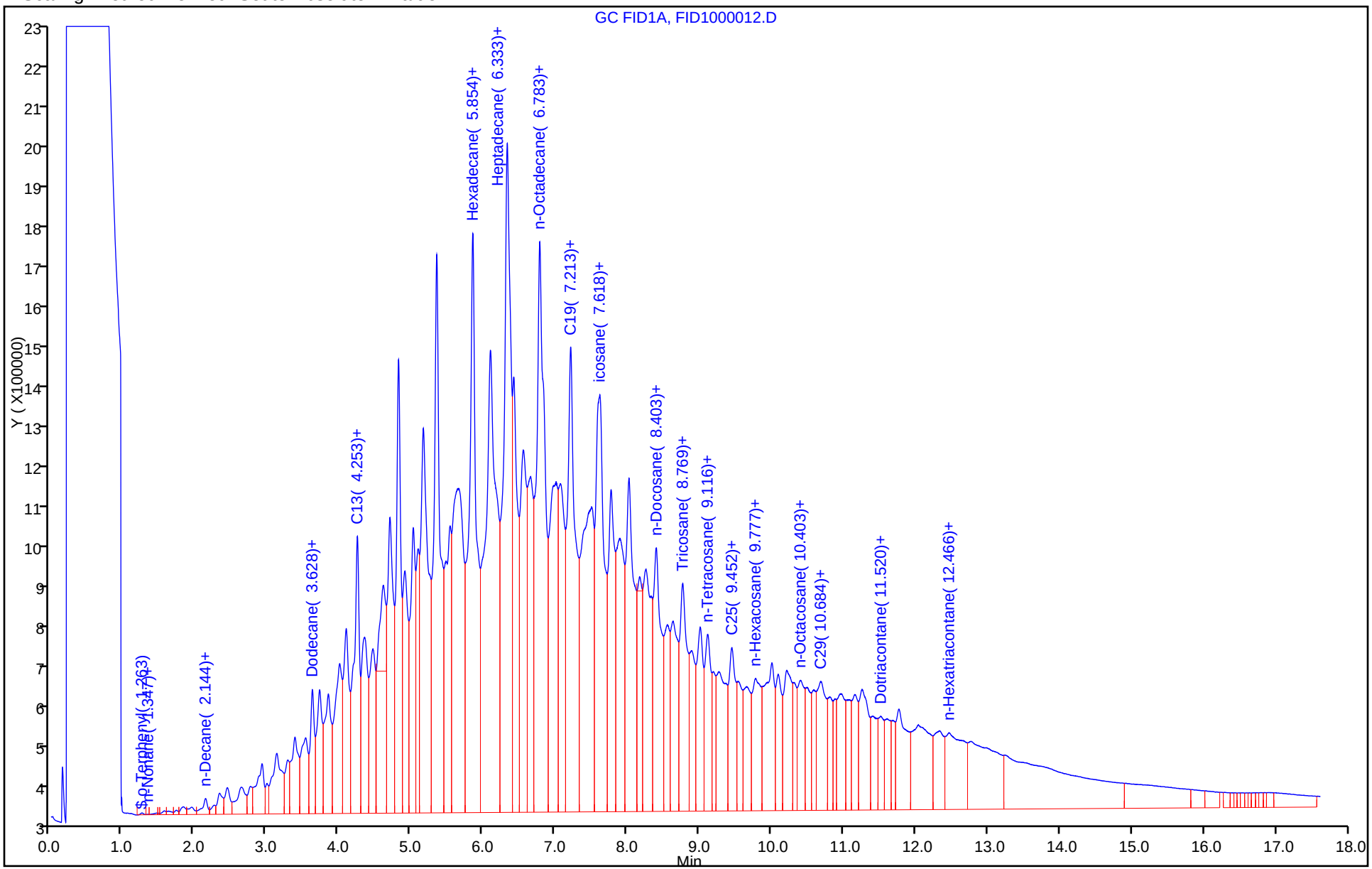
Report Date: 21-Apr-2015 11:17:25 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33835.b\FID1000012.D

Injection Date:	20-Apr-2015 12:47:54	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-9-B	Lab Sample ID:	720-64194-9	Worklist Smp#:	12
Client ID:	SS-9-2.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	12
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



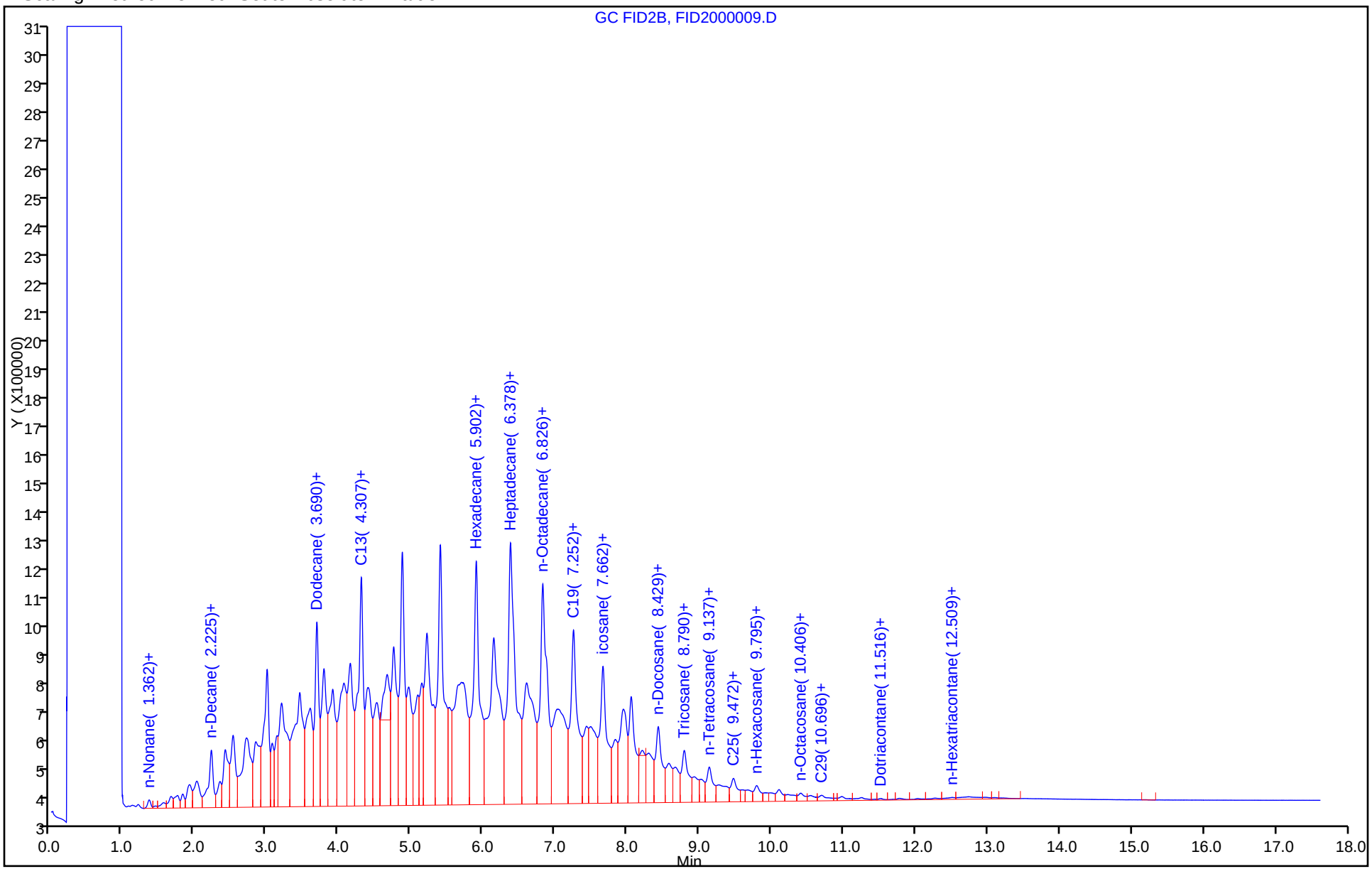
Report Date: 21-Apr-2015 12:52:06 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33836.b\FID2000009.D

Injection Date:	20-Apr-2015 11:35:11	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-10-C	Lab Sample ID:	720-64194-10	Worklist Smp#:	9
Client ID:	SS-10-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	200.0000	ALS Bottle#:	59
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



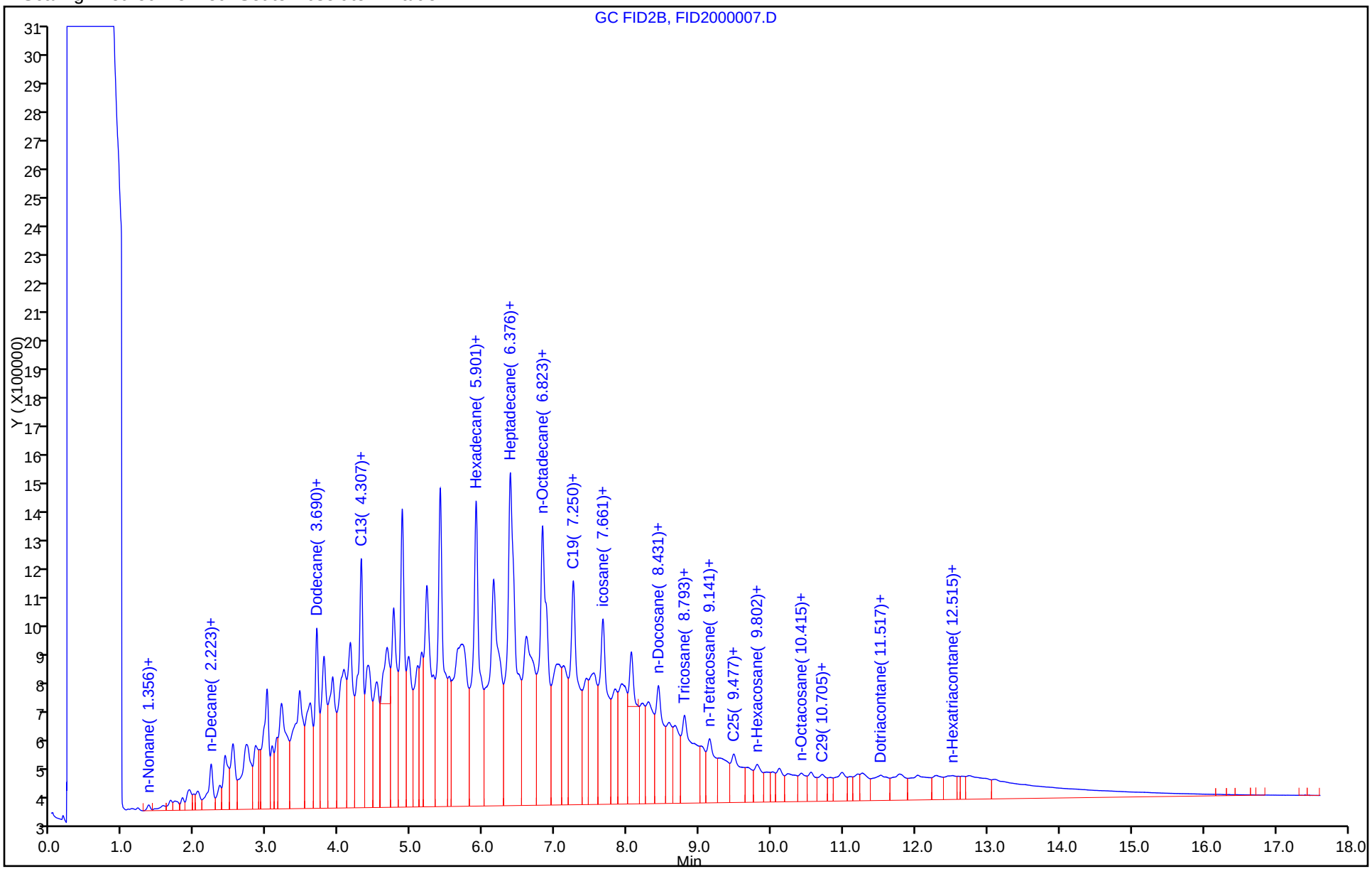
Report Date: 27-Apr-2015 12:01:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000007.D

Injection Date:	27-Apr-2015 11:13:59	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-11-B	Lab Sample ID:	720-64194-11	Worklist Smp#:	7
Client ID:	SS-11-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	57
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value

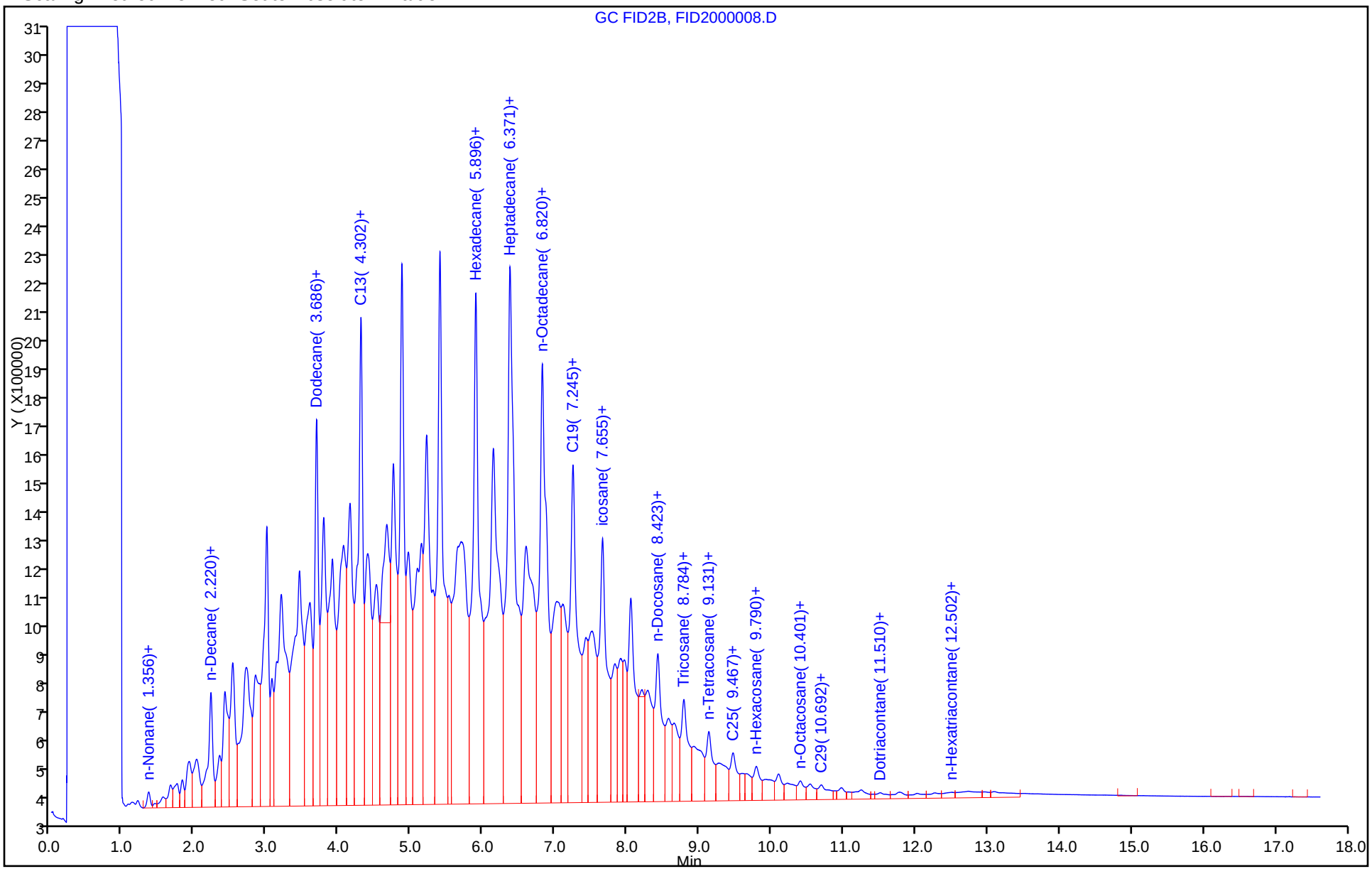


Report Date: 27-Apr-2015 12:02:07 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File:	\\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000008.D				
Injection Date:	27-Apr-2015 11:38:05	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-12-B	Lab Sample ID:	720-64194-12	Worklist Smp#:	8
Client ID:	D-1				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	58
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



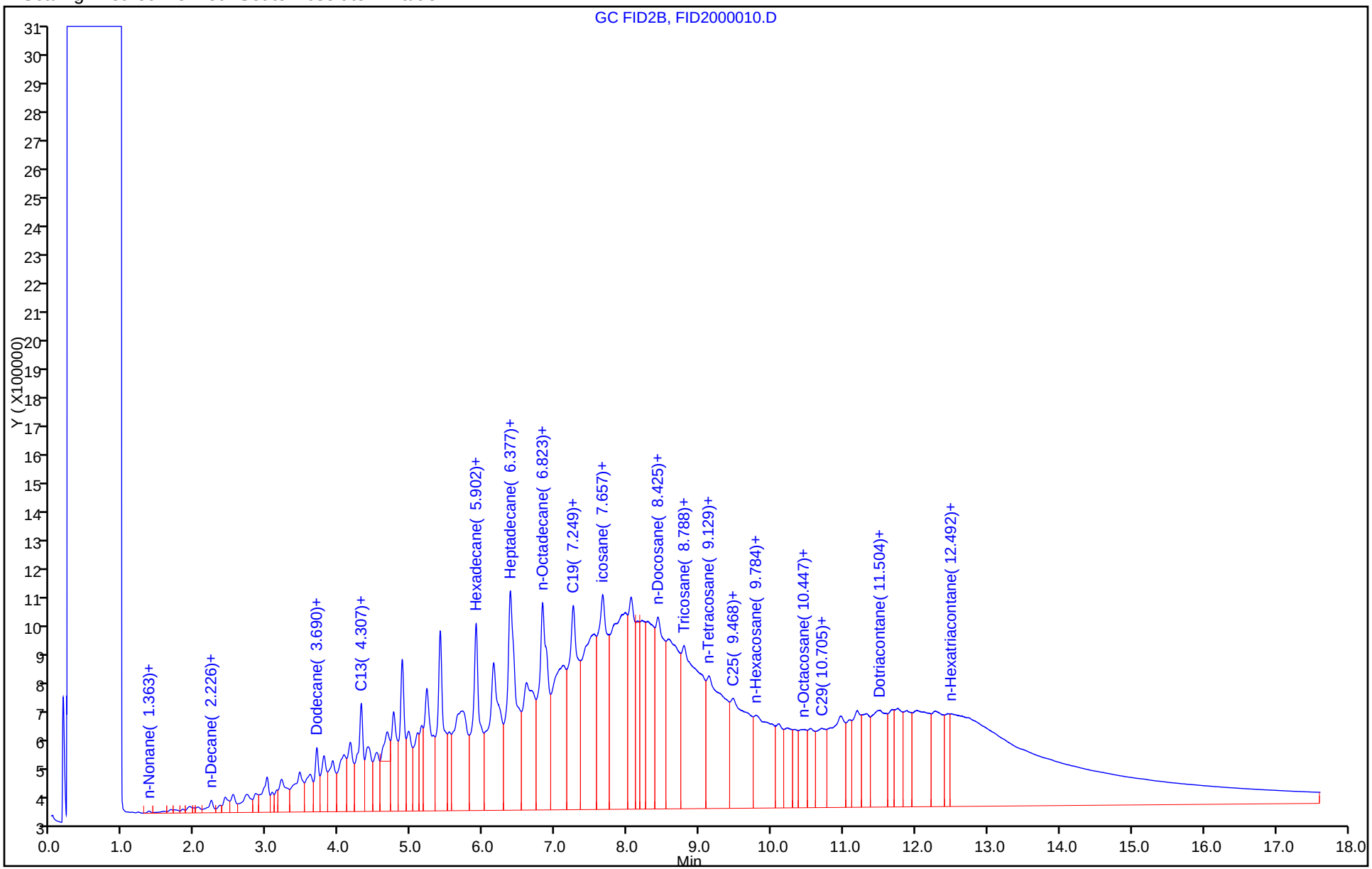
Report Date: 21-Apr-2015 12:53:36 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33836.b\FID2000010.D

Injection Date:	20-Apr-2015 11:59:28	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-13-B	Lab Sample ID:	720-64194-13	Worklist Smp#:	10
Client ID:	SS-12-3.0				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	60
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



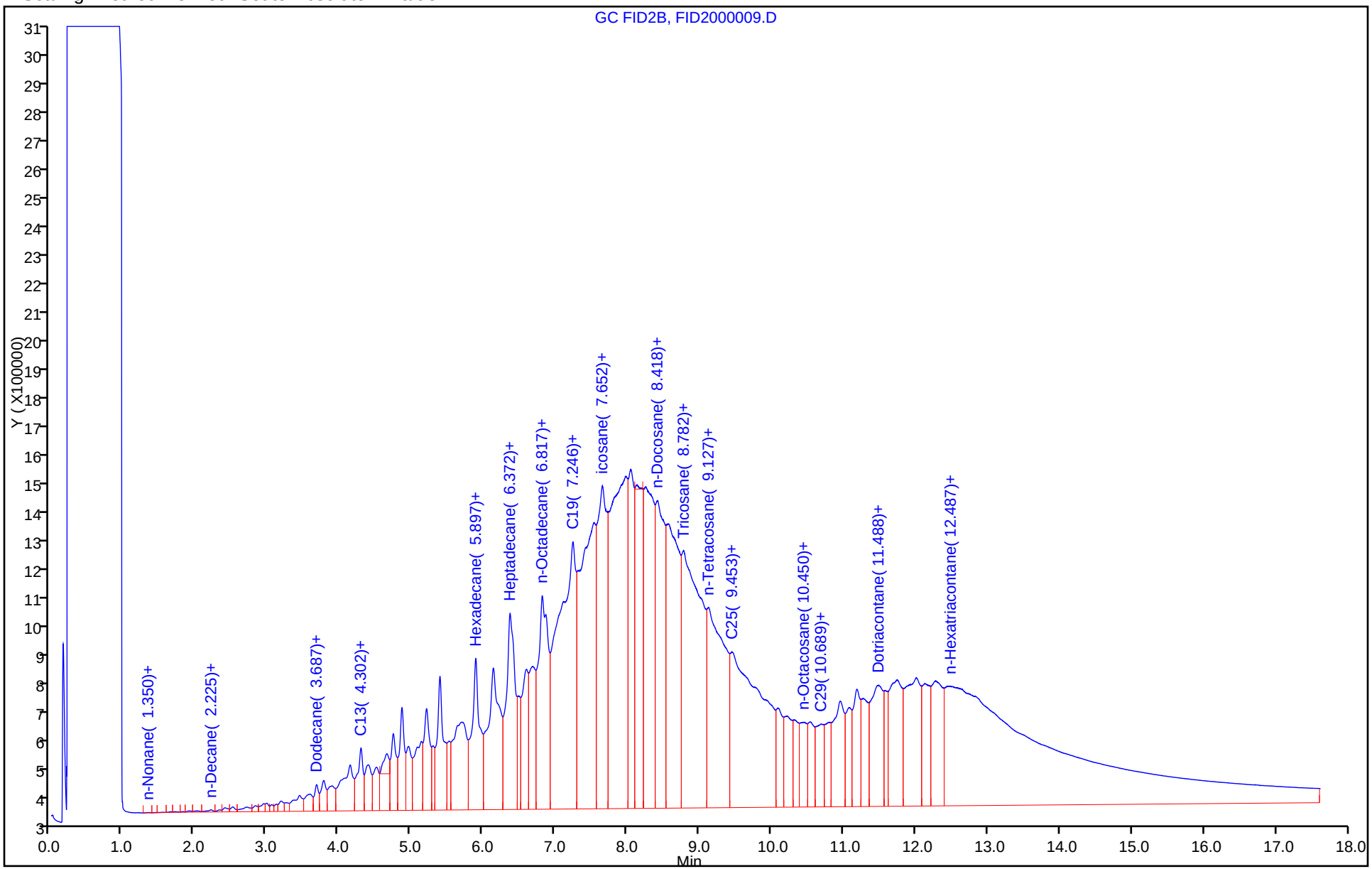
Report Date: 27-Apr-2015 12:57:52 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000009.D

Injection Date:	27-Apr-2015 12:02:15	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-14-B	Lab Sample ID:	720-64194-14	Worklist Smp#:	9
Client ID:	SS-13-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	59
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



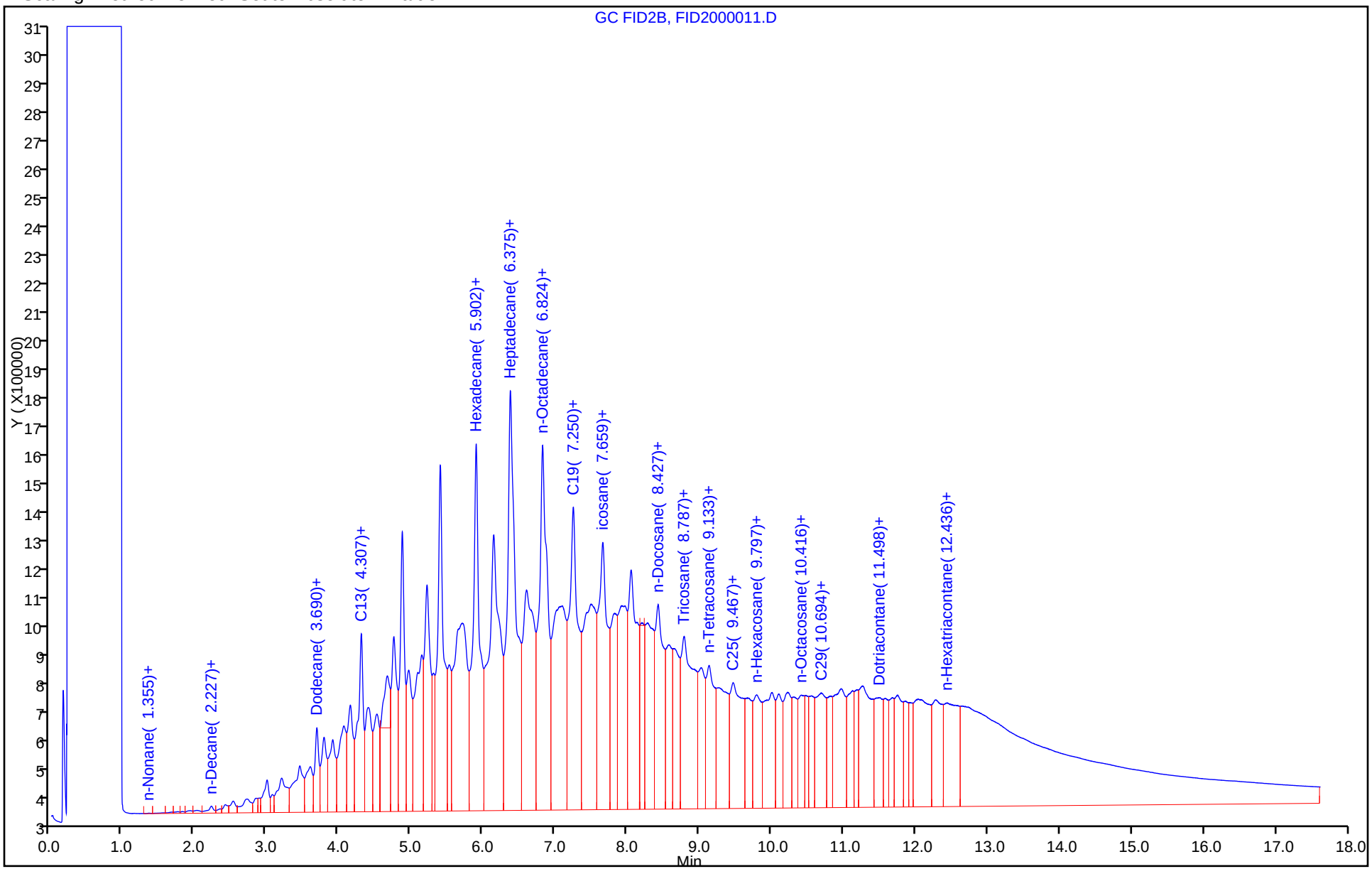
Report Date: 21-Apr-2015 12:55:55 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33836.b\FID2000011.D

Injection Date:	20-Apr-2015 12:23:38	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-15-B	Lab Sample ID:	720-64194-15	Worklist Smp#:	11
Client ID:	SS-14-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	61
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



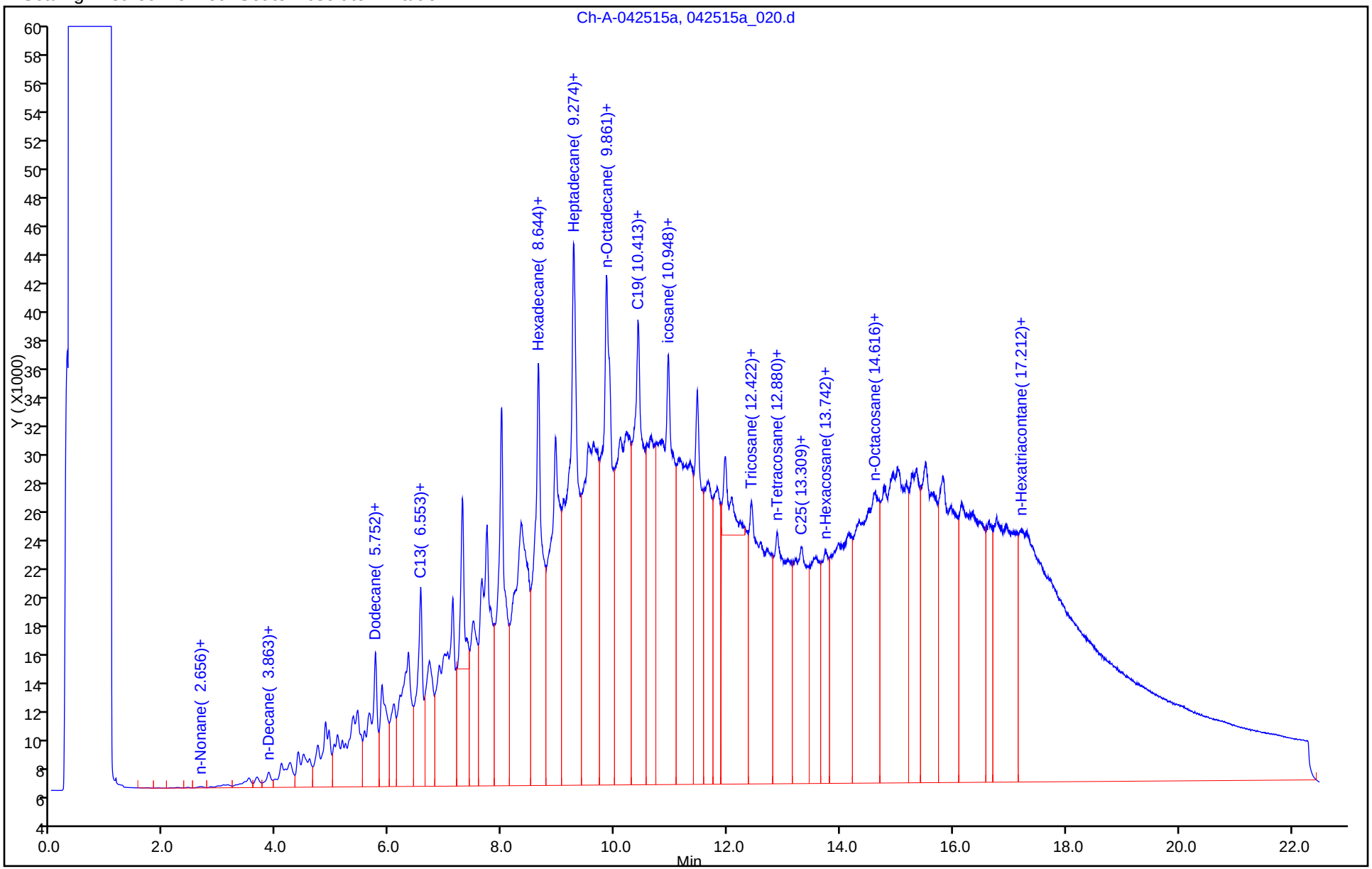
Report Date: 27-Apr-2015 11:22:47 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO5\20150425-33937.b\042515a_020.d

Injection Date:	25-Apr-2015 19:09:43	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64194-A-16-B	Lab Sample ID:	720-64194-16	Worklist Smp#:	20
Client ID:	SS-15-3.75				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	DRO5A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



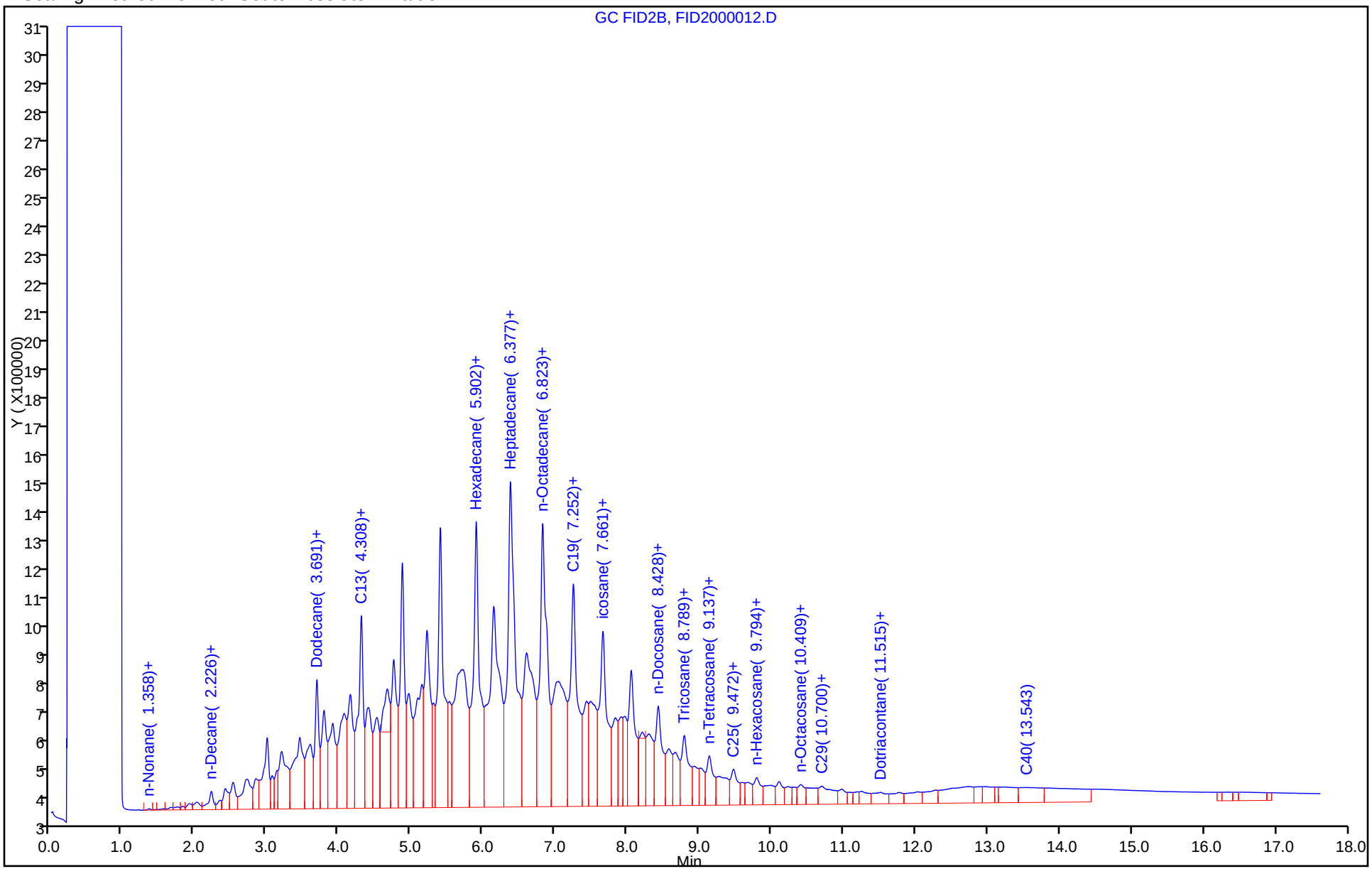
Report Date: 21-Apr-2015 12:57:05 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33836.b\FID2000012.D

Injection Date:	20-Apr-2015 12:47:54	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-17-C	Lab Sample ID:	720-64194-17	Worklist Smp#:	12
Client ID:	SS-16-4.0				
Injection Vol:	1.0 ul	Dil. Factor:	200.0000	ALS Bottle#:	62
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



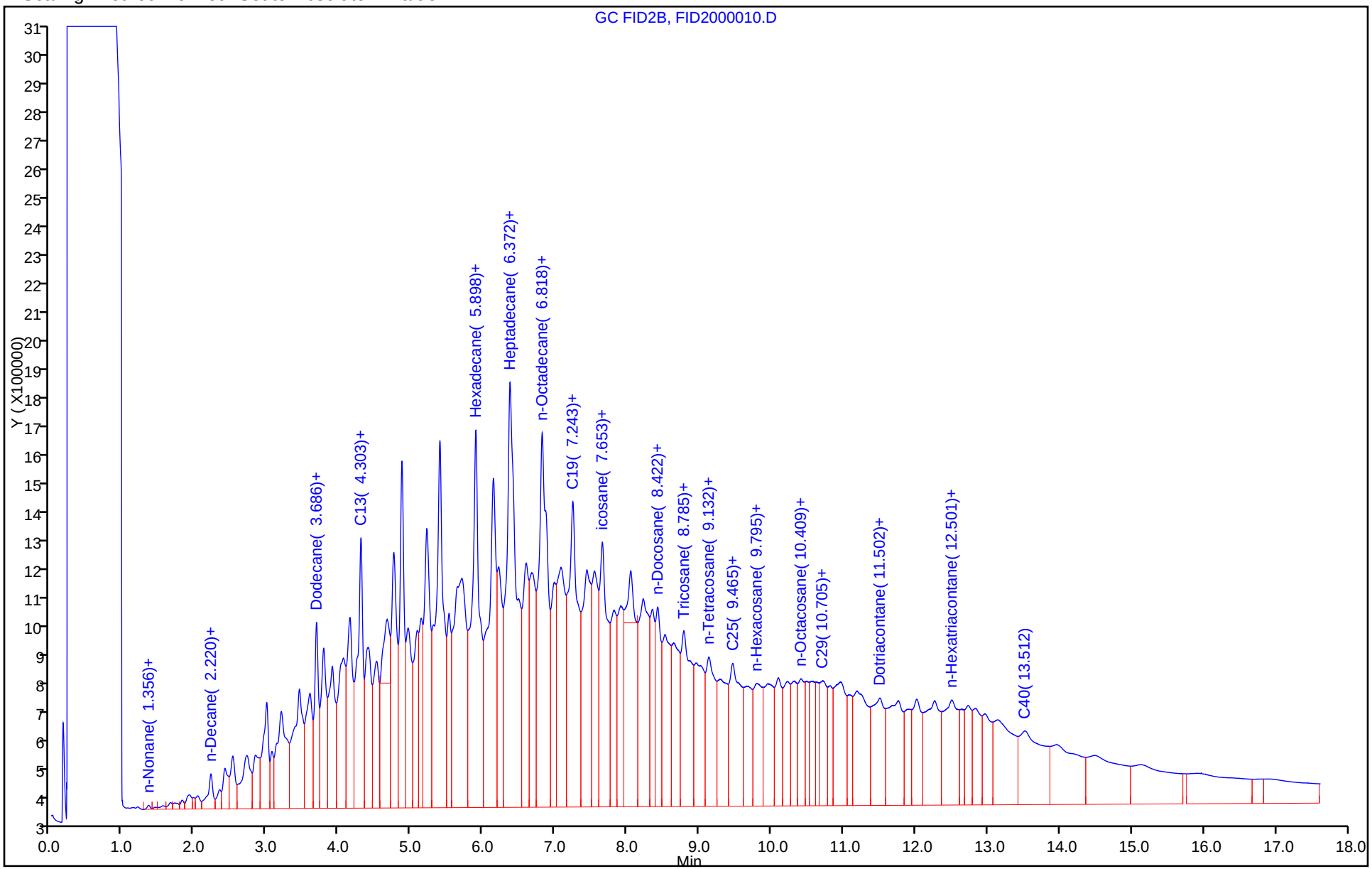
Report Date: 27-Apr-2015 12:59:02 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000010.D

Injection Date:	27-Apr-2015 12:26:39	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-18-B	Lab Sample ID:	720-64194-18	Worklist Smp#:	10
Client ID:	SS-17-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	60
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value

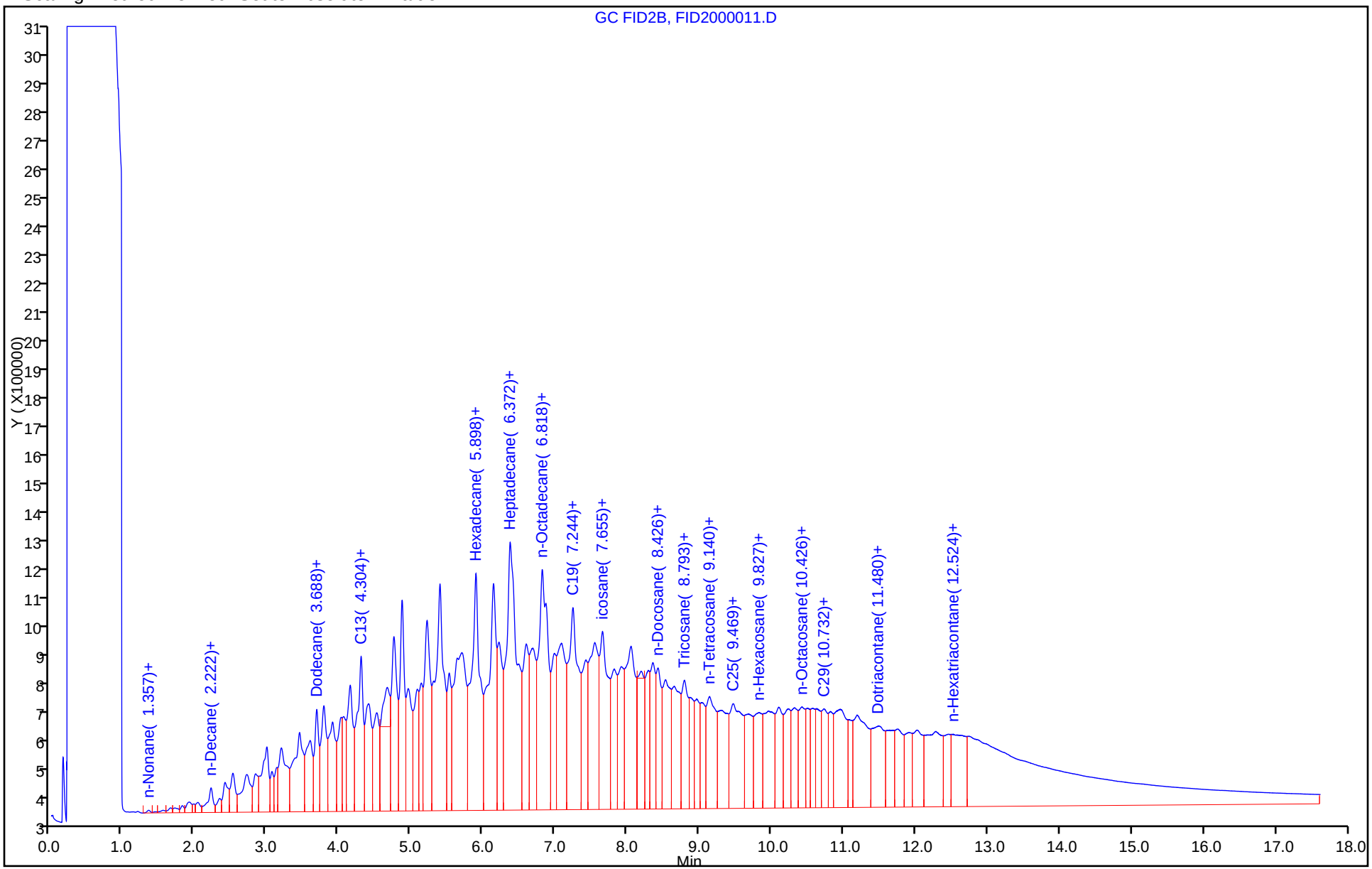


Report Date: 27-Apr-2015 14:04:24 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File:	\\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000011.D				
Injection Date:	27-Apr-2015 13:31:44	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-19-B	Lab Sample ID:	720-64194-19	Worklist Smp#:	11
Client ID:	D-2				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	61
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



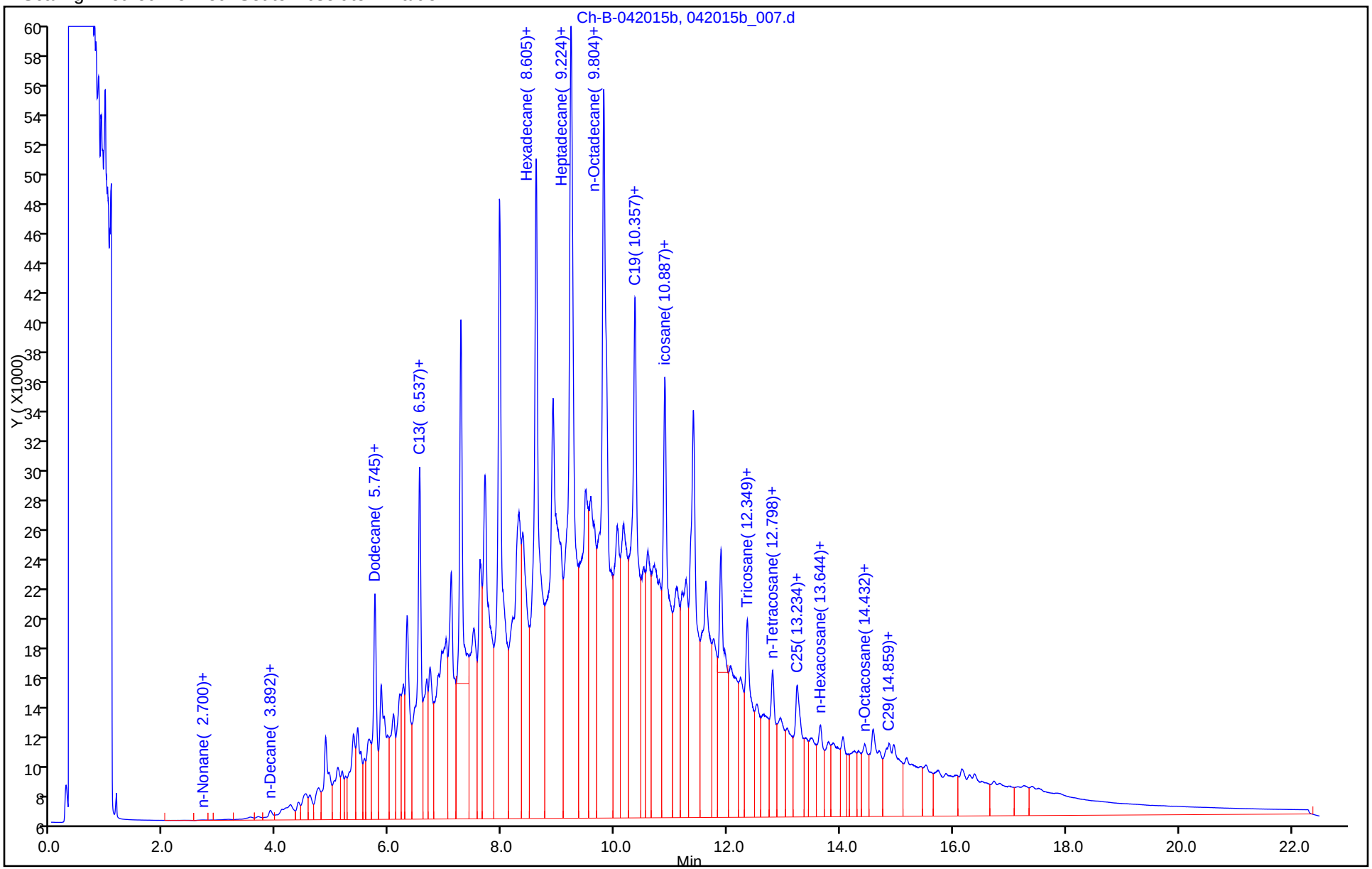
Report Date: 21-Apr-2015 14:32:45 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO5\20150420-33839.b\042015b_007.d

Injection Date:	20-Apr-2015 11:02:15	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64194-A-20-B	Lab Sample ID:	720-64194-20	Worklist Smp#:	7
Client ID:	SS-18-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	DRO5B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



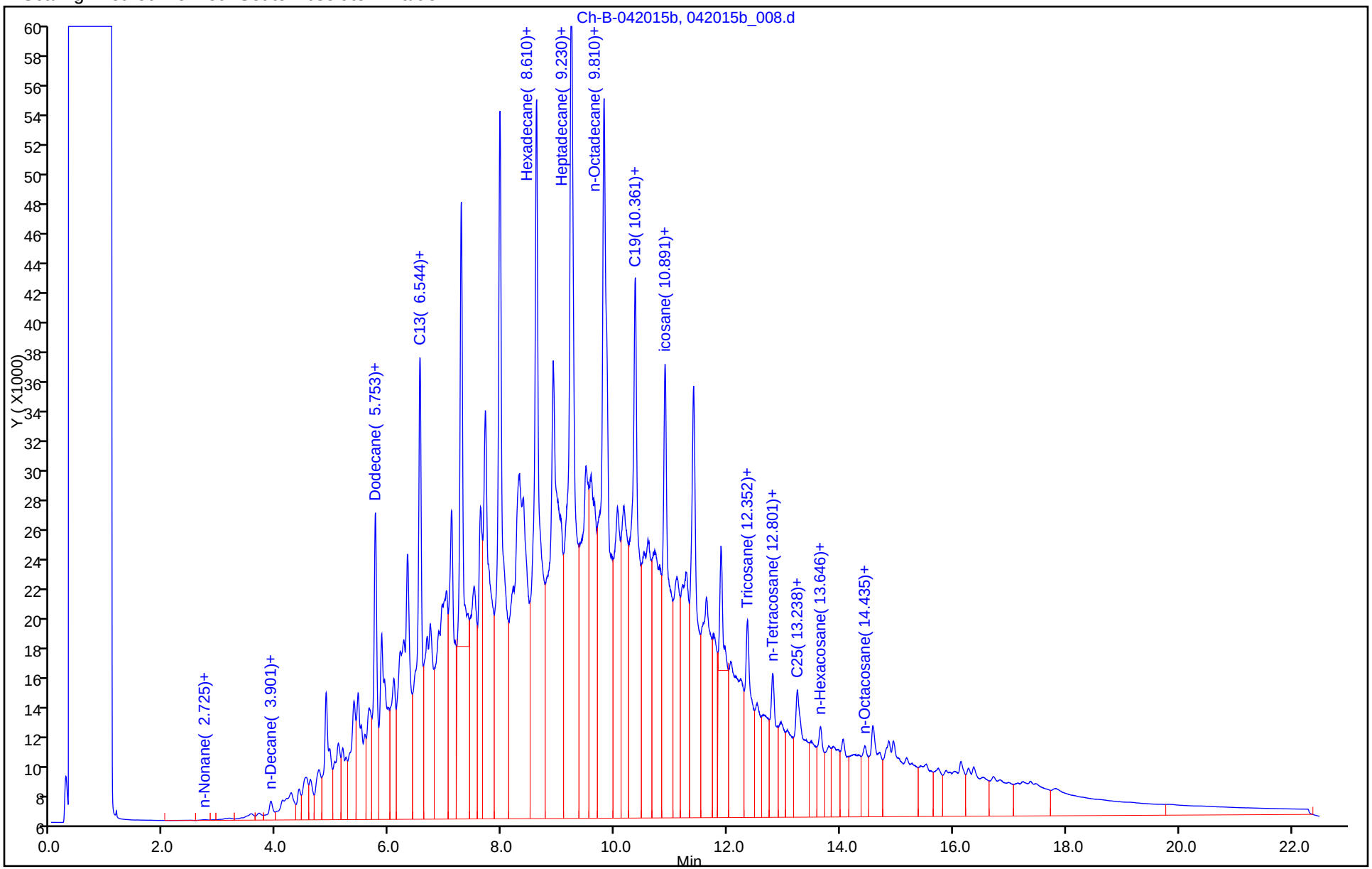
Report Date: 21-Apr-2015 14:33:59 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO5\20150420-33839.b\042015b_008.d

Injection Date:	20-Apr-2015 11:31:51	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64194-A-21-B	Lab Sample ID:	720-64194-21	Worklist Smp#:	8
Client ID:	D-3				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	DRO5B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



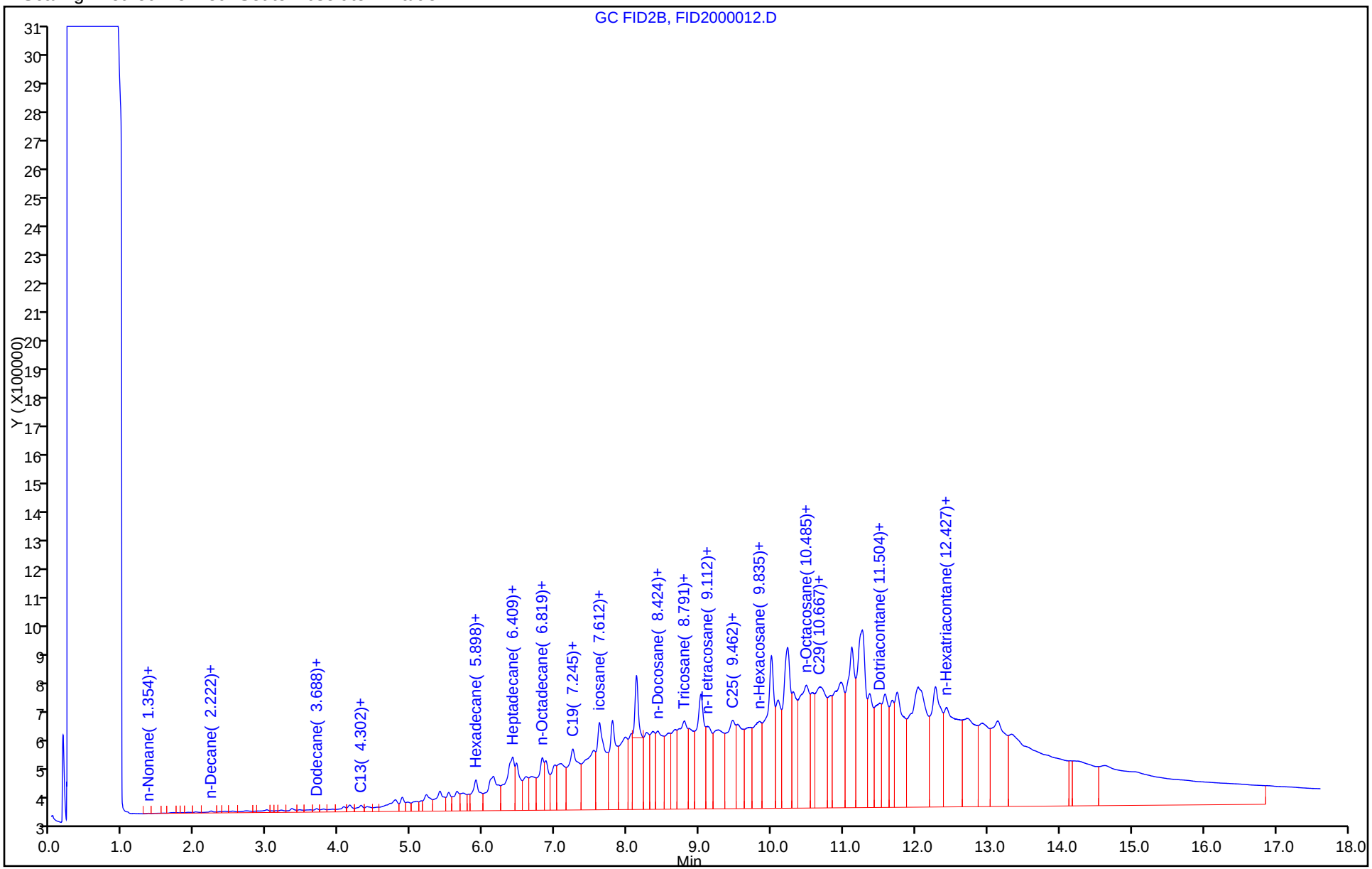
Report Date: 27-Apr-2015 18:03:11 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000012.D

Injection Date:	27-Apr-2015 13:55:52	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-22-B	Lab Sample ID:	720-64194-22	Worklist Smp#:	12
Client ID:	SS-19-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	62
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value

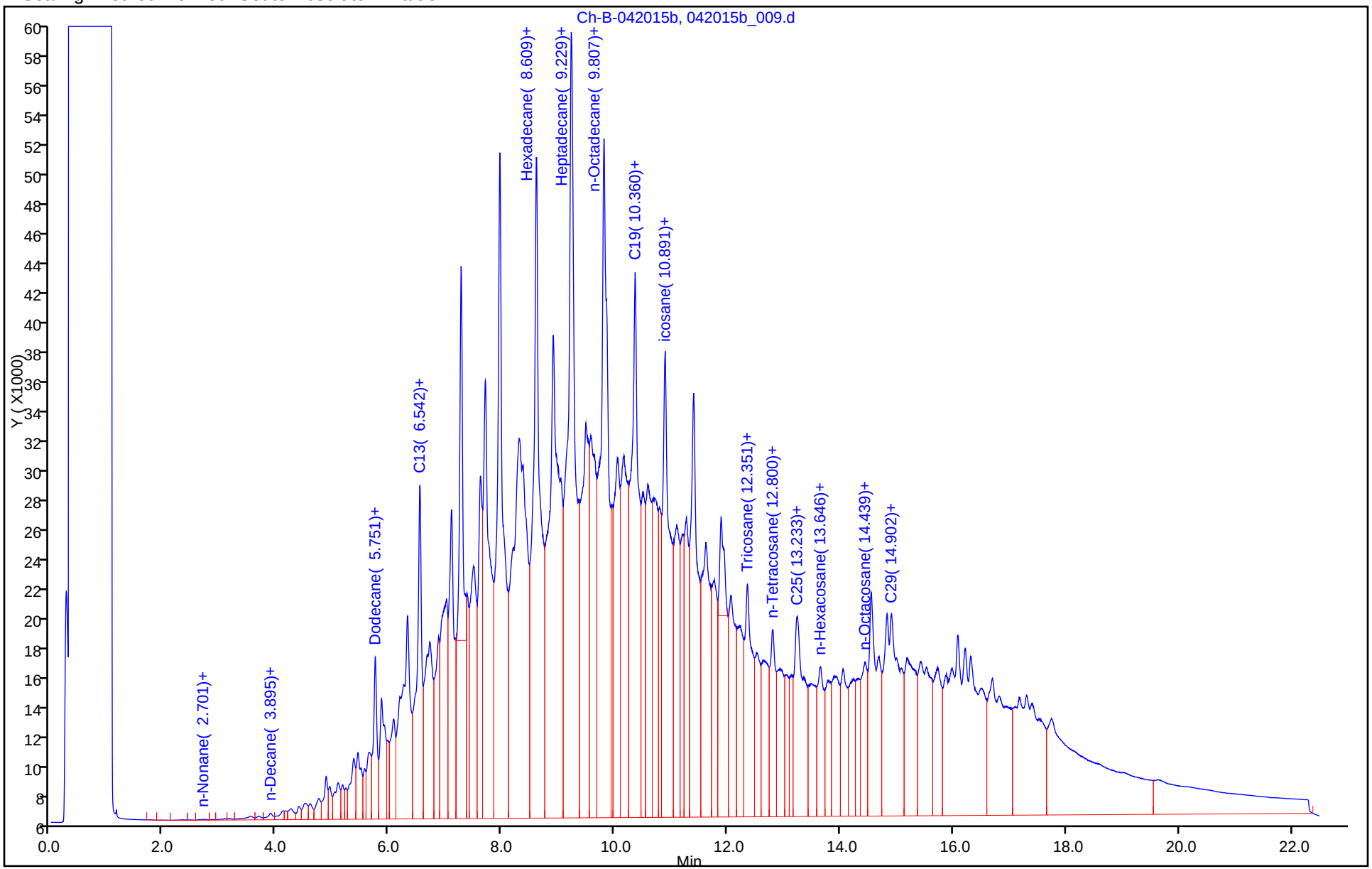


Report Date: 21-Apr-2015 14:35:10 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File:	\\Taisfchrom\ChromData\CHDRO5\20150420-33839.b\042015b_009.d				
Injection Date:	20-Apr-2015 12:01:15	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64194-A-23-B	Lab Sample ID:	720-64194-23	Worklist Smp#:	9
Client ID:	SS-20-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	DRO5B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



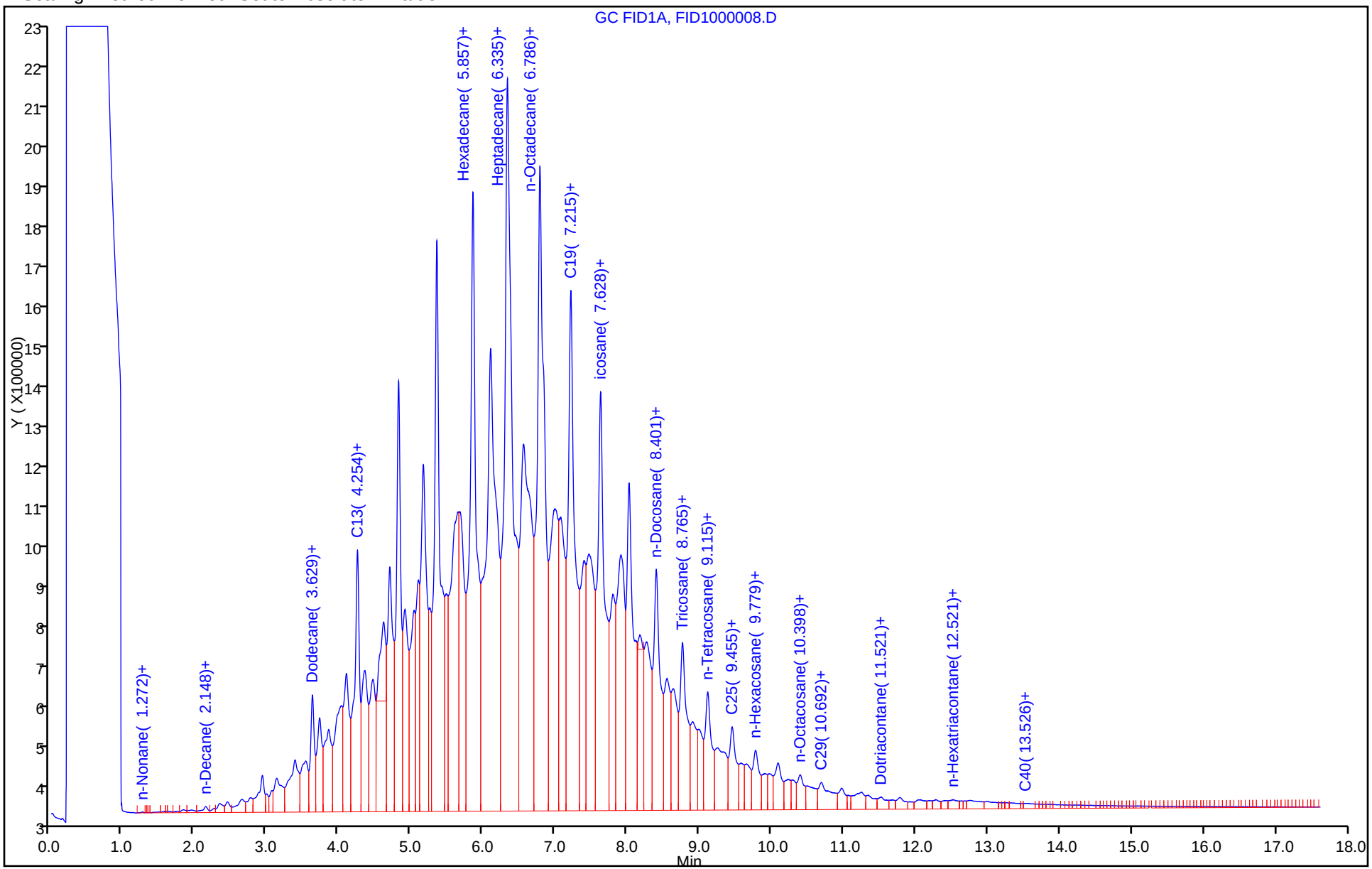
Report Date: 21-Apr-2015 11:11:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150420-33835.b\FID1000008.D

Injection Date:	20-Apr-2015 11:11:05	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-24-B	Lab Sample ID:	720-64194-24	Worklist Smp#:	8
Client ID:	D-4				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	8
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



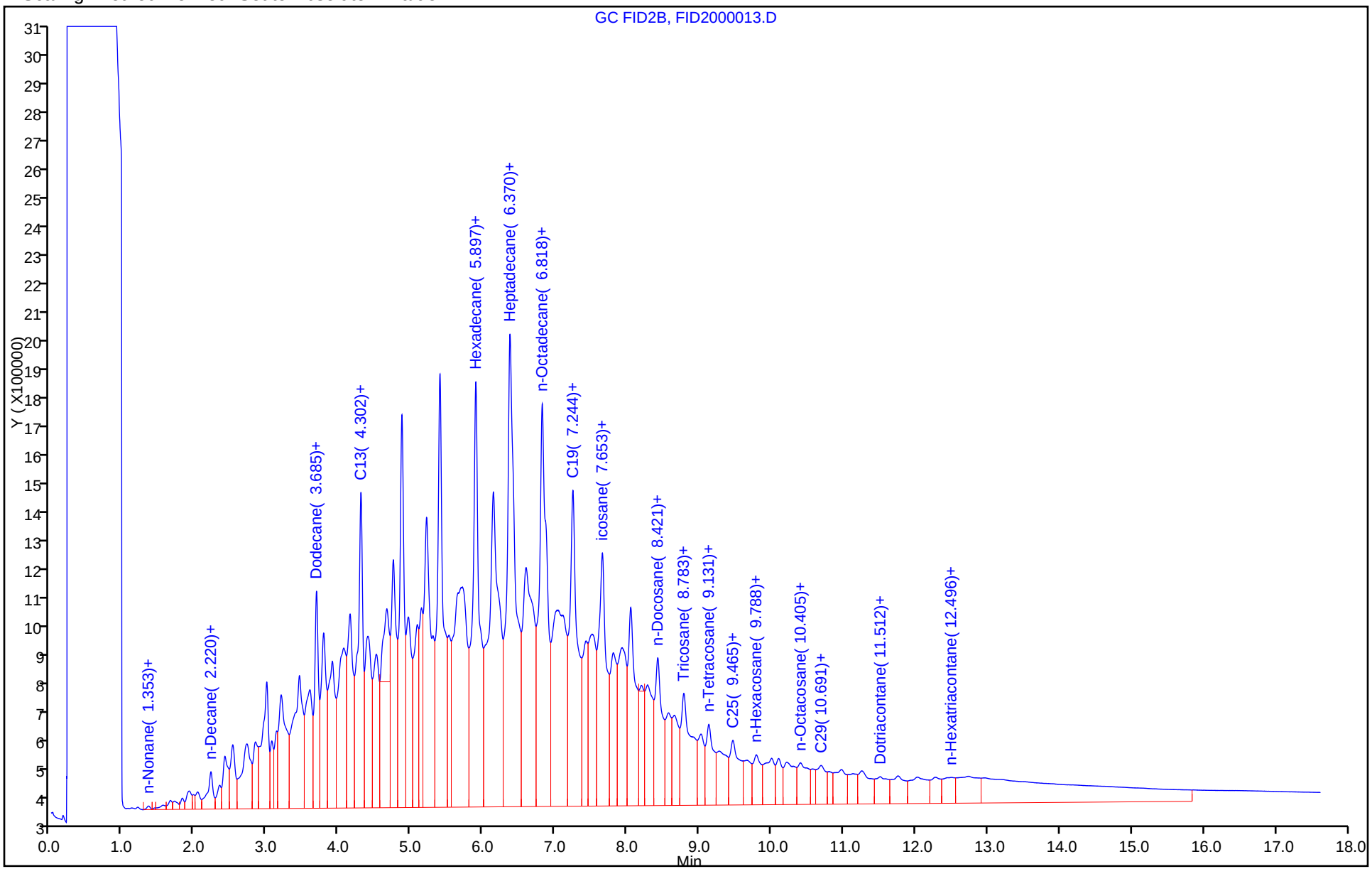
Report Date: 27-Apr-2015 18:04:59 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000013.D

Injection Date:	27-Apr-2015 14:20:25	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-25-B	Lab Sample ID:	720-64194-25	Worklist Smp#:	13
Client ID:	SS-21-4.0				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	63
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



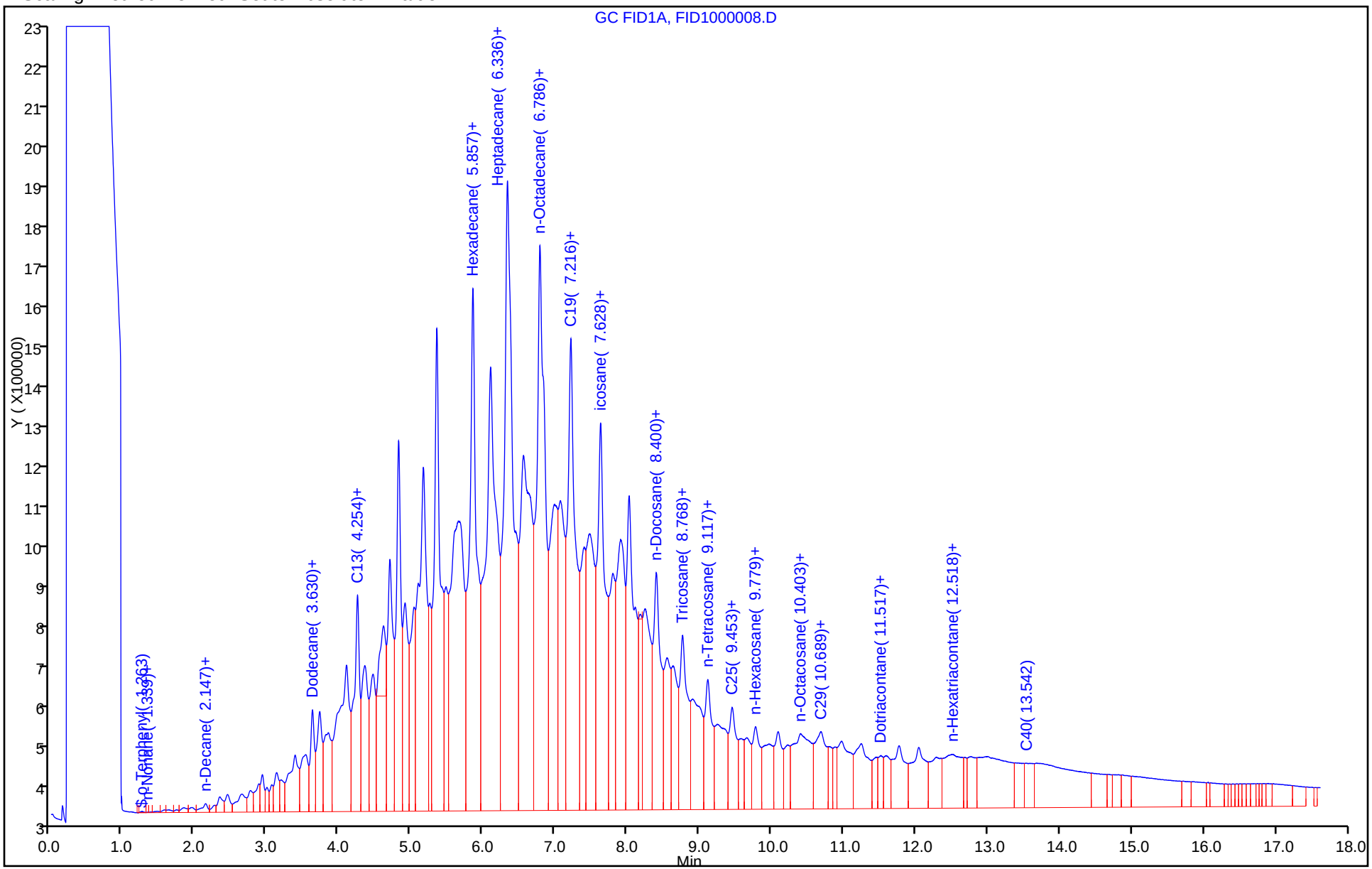
Report Date: 21-Apr-2015 12:04:59 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150421-33852.b\FID1000008.D

Injection Date:	21-Apr-2015 11:18:22	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-26-B	Lab Sample ID:	720-64194-26	Worklist Smp#:	8
Client ID:	SS-22-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	8
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



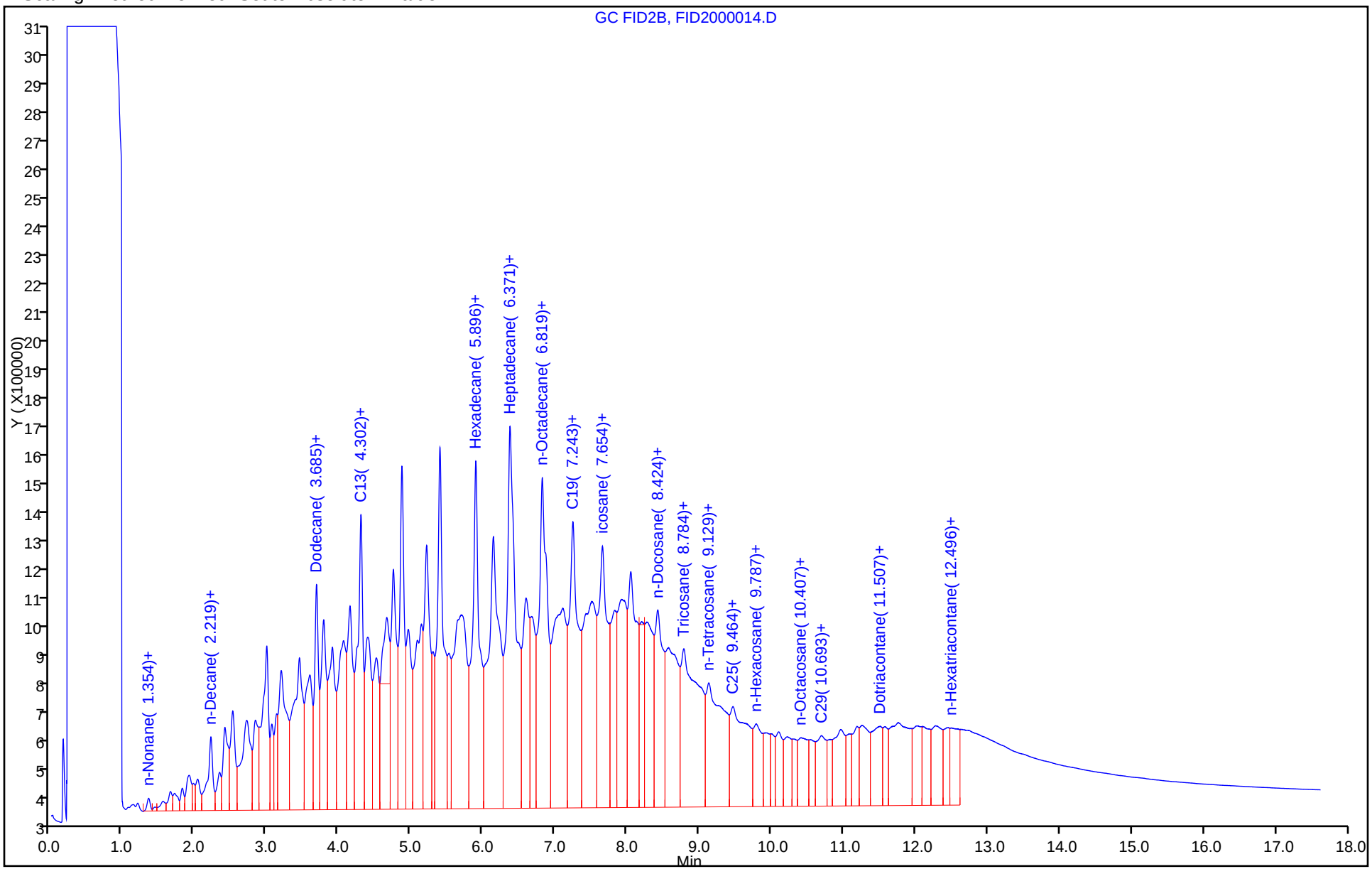
Report Date: 27-Apr-2015 18:07:00 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150427-33952.b\FID2000014.D

Injection Date:	27-Apr-2015 14:44:51	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64194-A-27-B	Lab Sample ID:	720-64194-27	Worklist Smp#:	14
Client ID:	SS-23-3.0				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	64
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



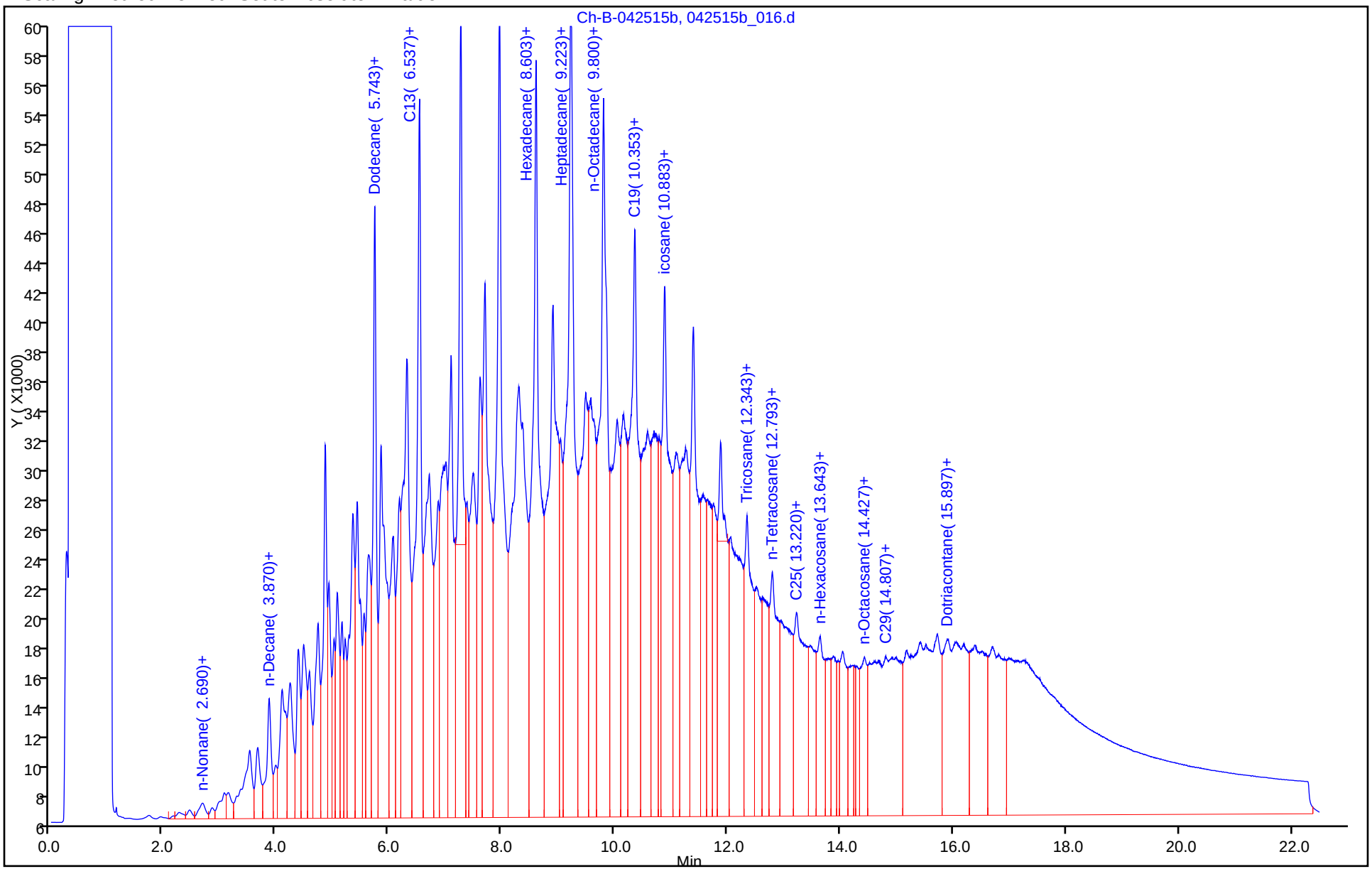
Report Date: 27-Apr-2015 11:40:23 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO5\20150425-33938.b\042515b_016.d

Injection Date:	25-Apr-2015 17:12:04	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64194-A-28-B	Lab Sample ID:	720-64194-28	Worklist Smp#:	16
Client ID:	SS-24-3.5				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	0
Method:	DRO5B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



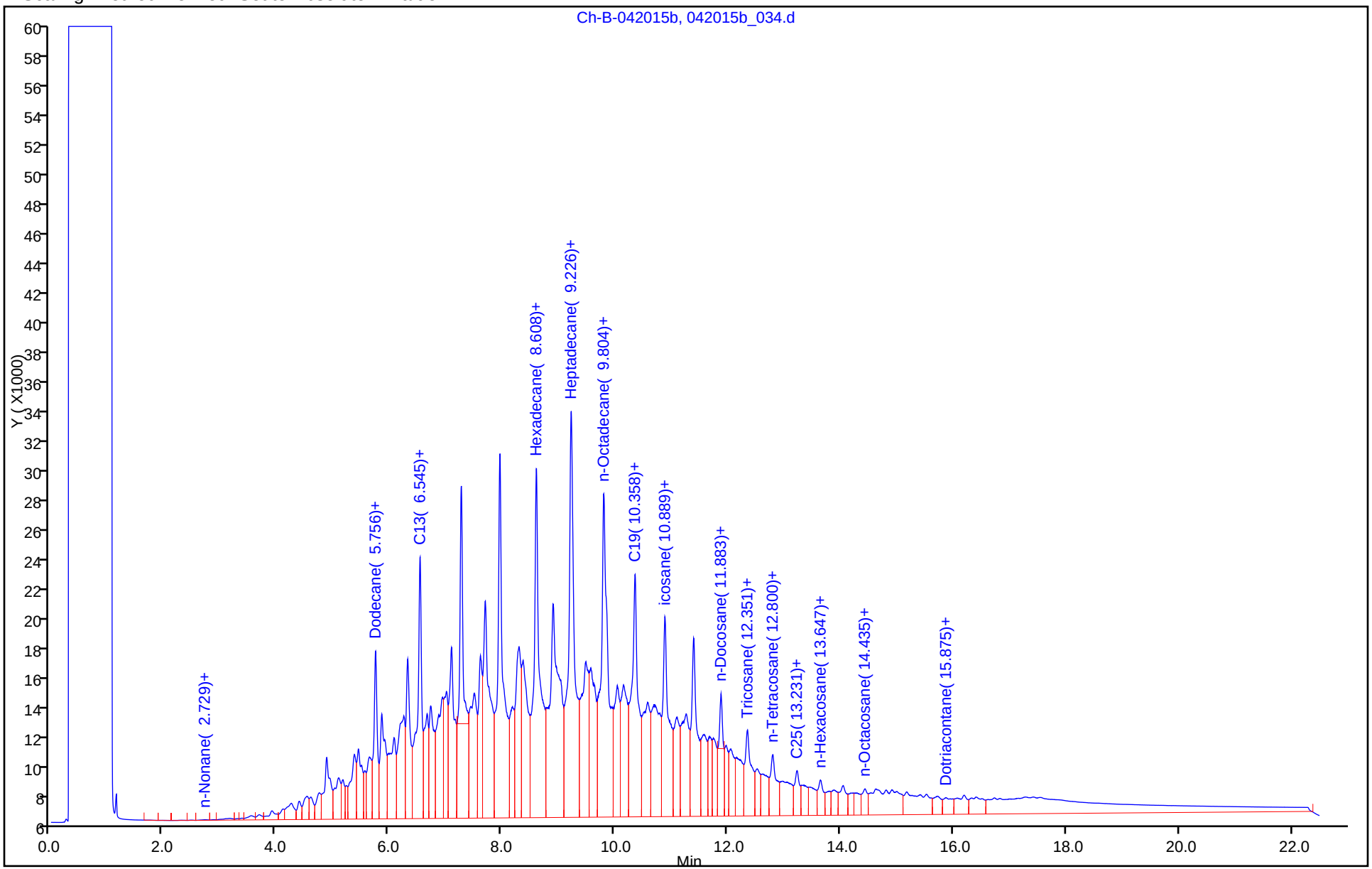
Report Date: 21-Apr-2015 15:05:56 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO5\20150420-33839.b\042015b_034.d

Injection Date:	21-Apr-2015 03:51:28	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64194-A-29-B	Lab Sample ID:	720-64194-29	Worklist Smp#:	34
Client ID:	SS-25-3.0				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	0
Method:	DRO5B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



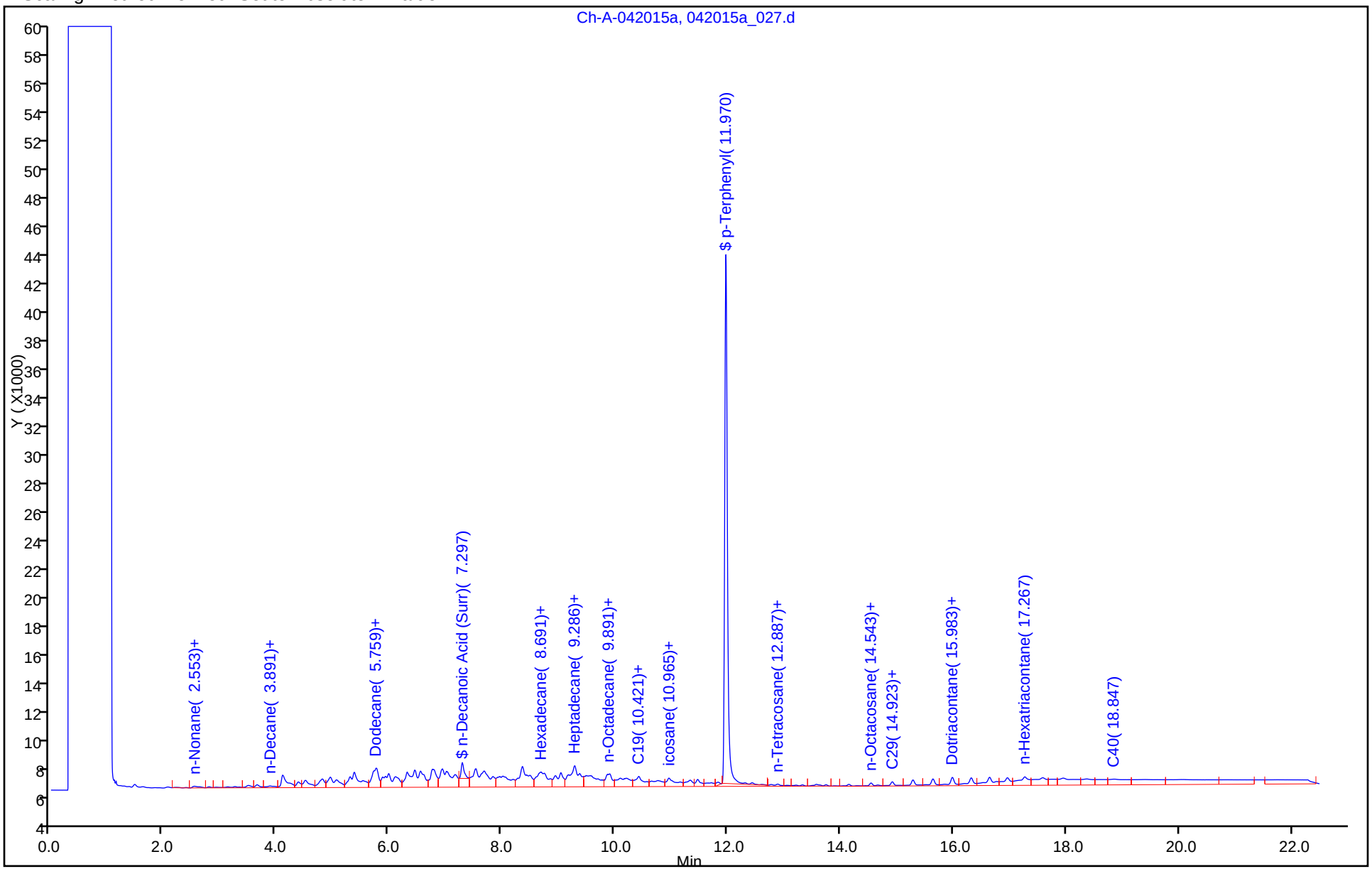
Report Date: 21-Apr-2015 14:06:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

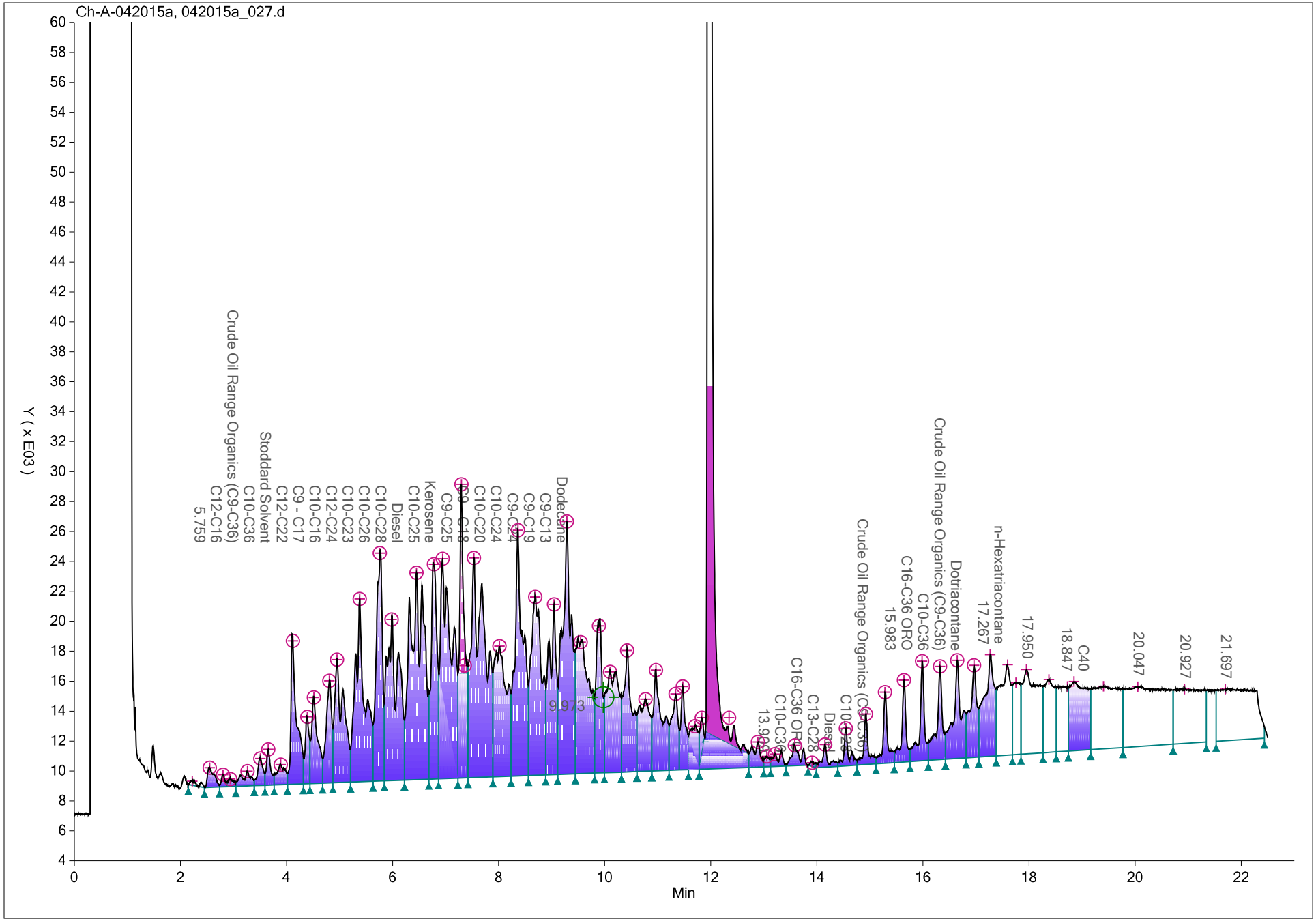
TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO5\20150420-33837.b\042015a_027.d

Injection Date:	21-Apr-2015 00:25:55	Instrument ID:	CHDRO5	Operator ID:	manager
Lims ID:	720-64192-D-1-A	Lab Sample ID:	720-64192-1	Worklist Smp#:	27
Client ID:	BOTTOM SAMPLE				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	DRO5A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value

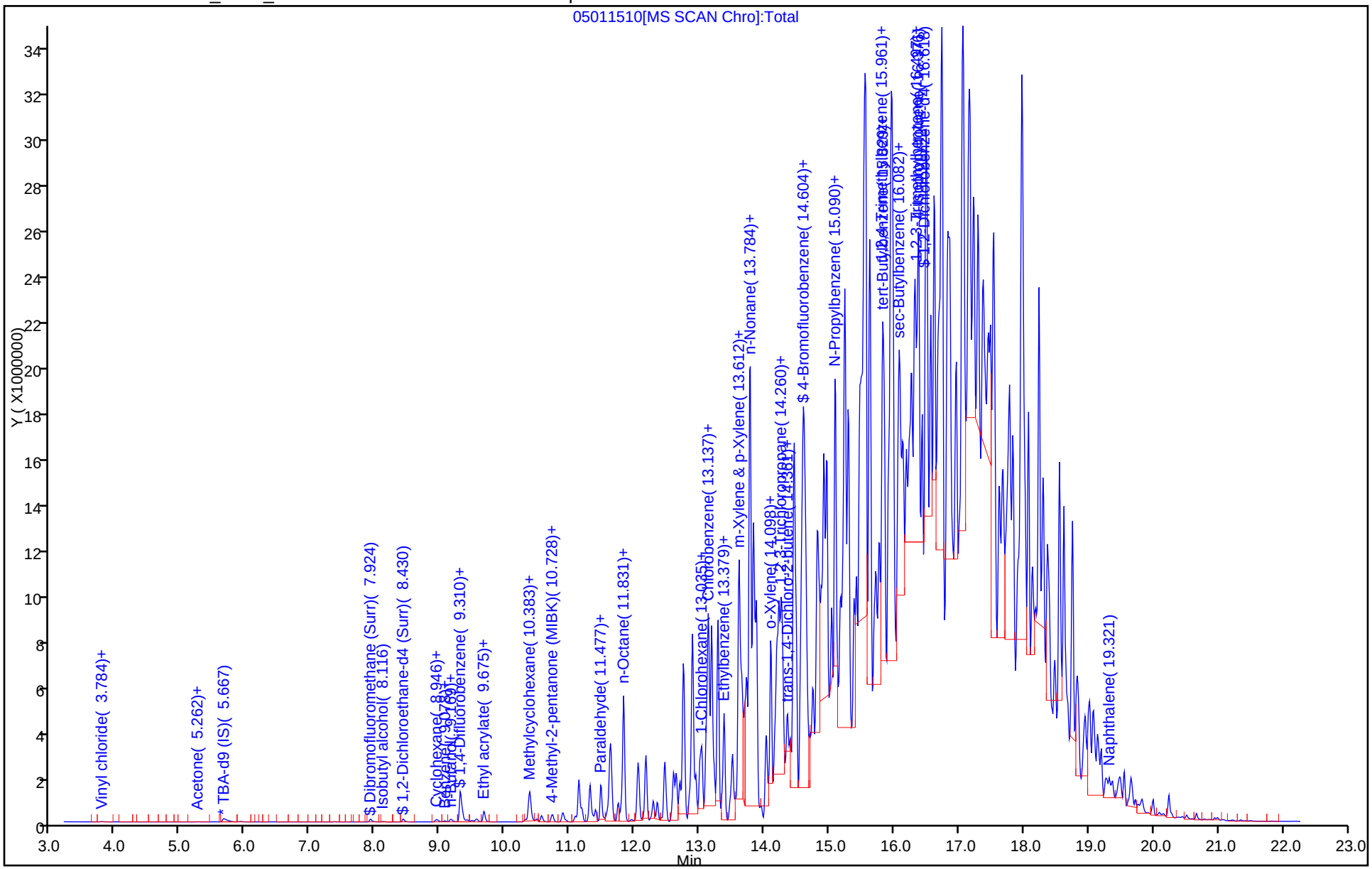



Ch-A-042015a, 042015a_027.d
Y (x E03)
Min
Crude Oil Range Organics (C9-C36)
C12-C16
5.759
Stoddard Solvent
C10-C36
C12-C22
C9 - C17
C10-C16
C12-C24
C10-C23
C10-C26
C10-C28
Diesel
C10-C25
Kerosene
C9-C25
C9-C18
C10-C20
C10-C24
C9-C24
C9-C19
C9-C13
Dodecane
9.973
C16-C36 ORO
13.98
C10-C36
C13-C28
Diesel
C10-C28
Crude Oil Range Organics (C9-C36)
C16-C36 ORO
15.983
C10-C36
Crude Oil Range Organics (C9-C36)
Dotriacontane
n-Hexatriacontane
17.267
17.950
C40
18.847
20.047
20.927
21.697

Report Date: 01-May-2015 14:29:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

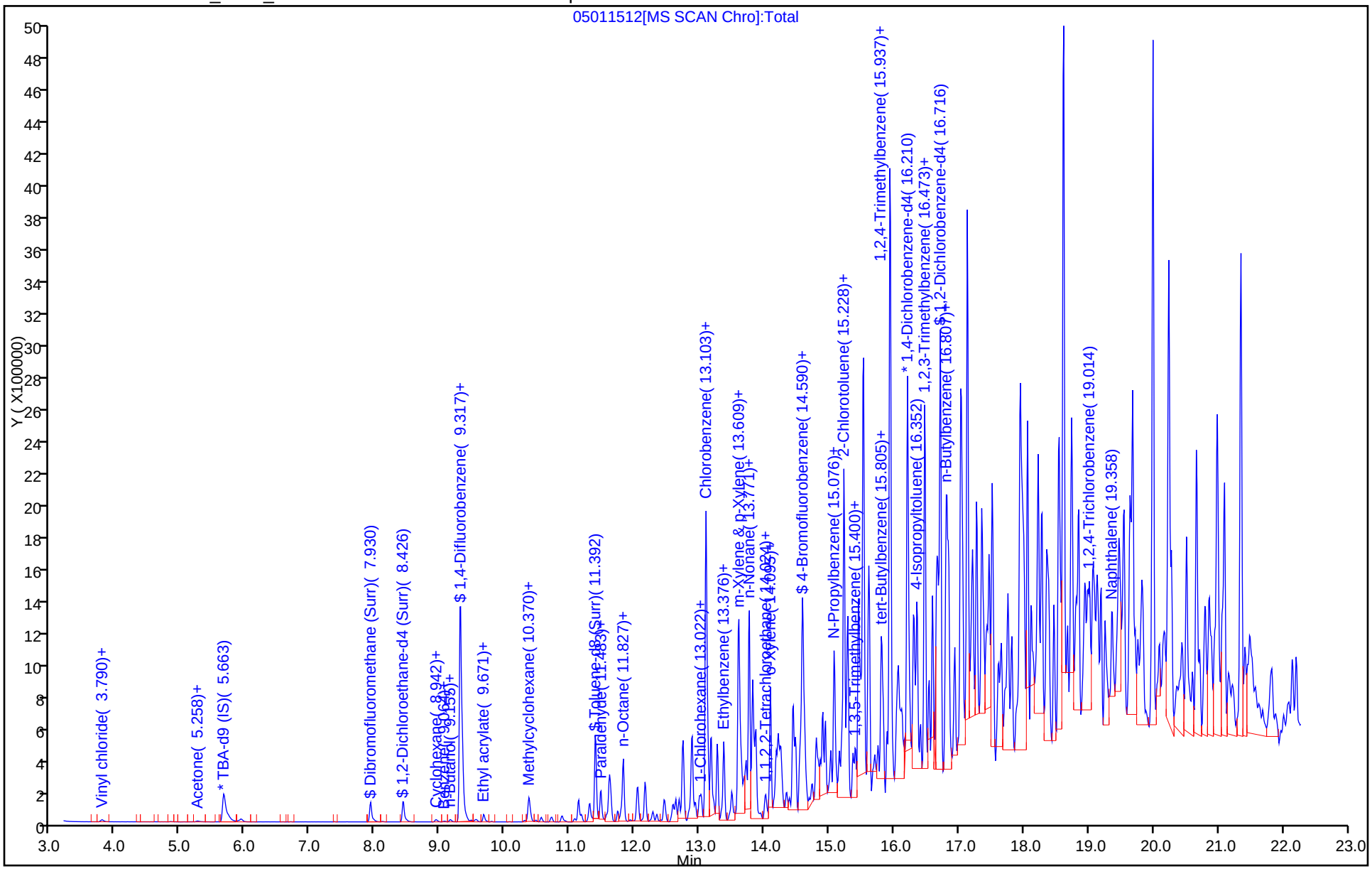
Data File:	\\taisfchrom\chromdata\HP7\20150501-34025.b\05011510.D				
Injection Date:	01-May-2015 12:26:30	Instrument ID:	HP7	Operator ID:	SF
Lims ID:	720-64476-A-1	Lab Sample ID:	720-64476-1	Worklist Smp#:	9
Client ID:	A 3635-OIL Phase-1				
Purge Vol:	10.000 mL	Dil. Factor:	1000.0000	ALS Bottle#:	8
Method:	8260_GRO_HP7	Limit Group:	8260B		



Report Date: 01-May-2015 14:06:38 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pleasanton

Data File:	\\taisfchrom\chromdata\HP7\20150501-34025.b\05011512.D				
Injection Date:	01-May-2015 13:37:30	Instrument ID:	HP7	Operator ID:	SF
Lims ID:	720-64476-A-1	Lab Sample ID:	720-64476-1	Worklist Smp#:	11
Client ID:	A 3635-OIL Phase-1				
Purge Vol:	10.000 mL	Dil. Factor:	5000.0000	ALS Bottle#:	10
Method:	8260_GRO_HP7	Limit Group:	8260B		



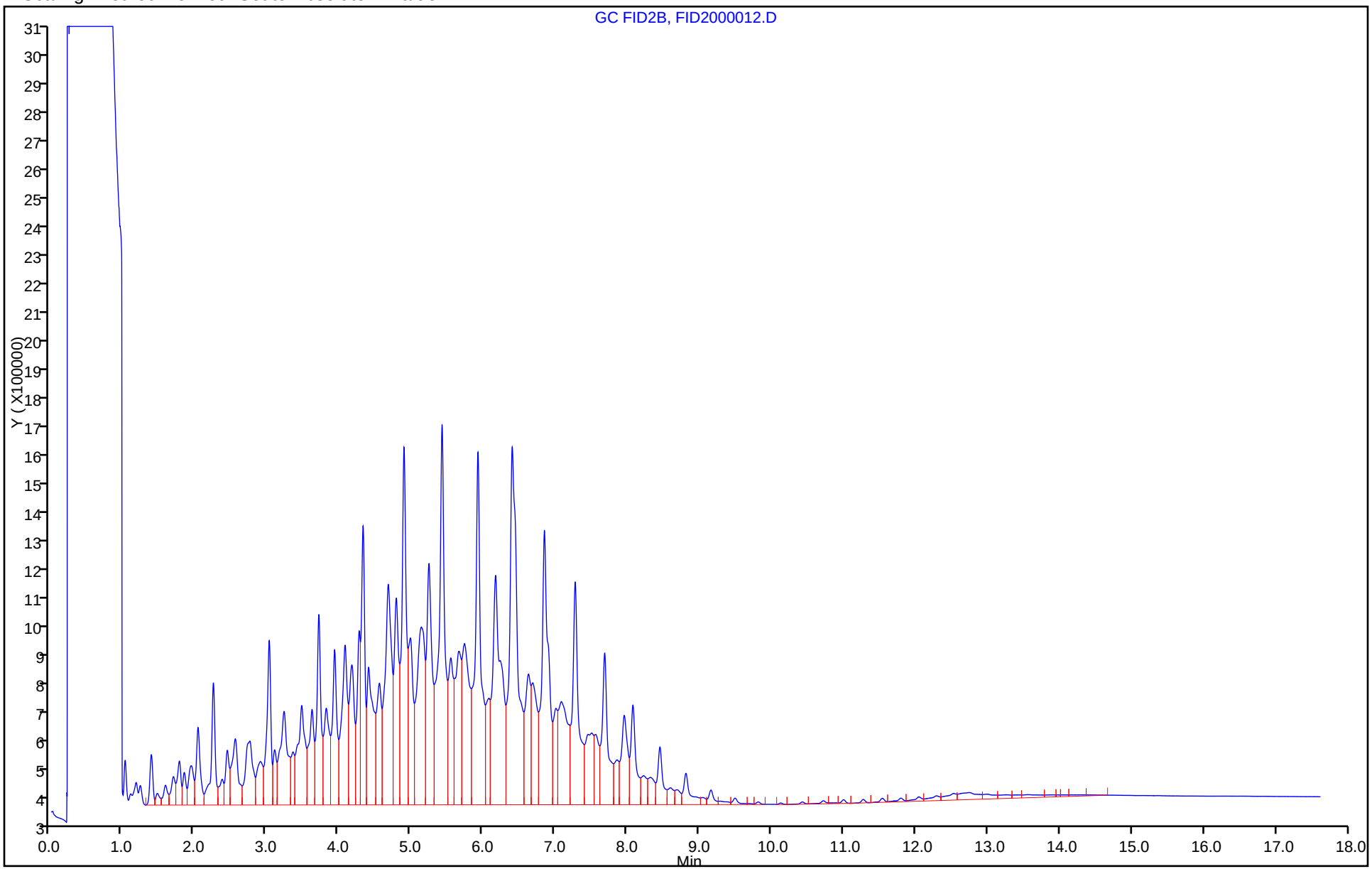
Report Date: 30-Jan-2015 14:31:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

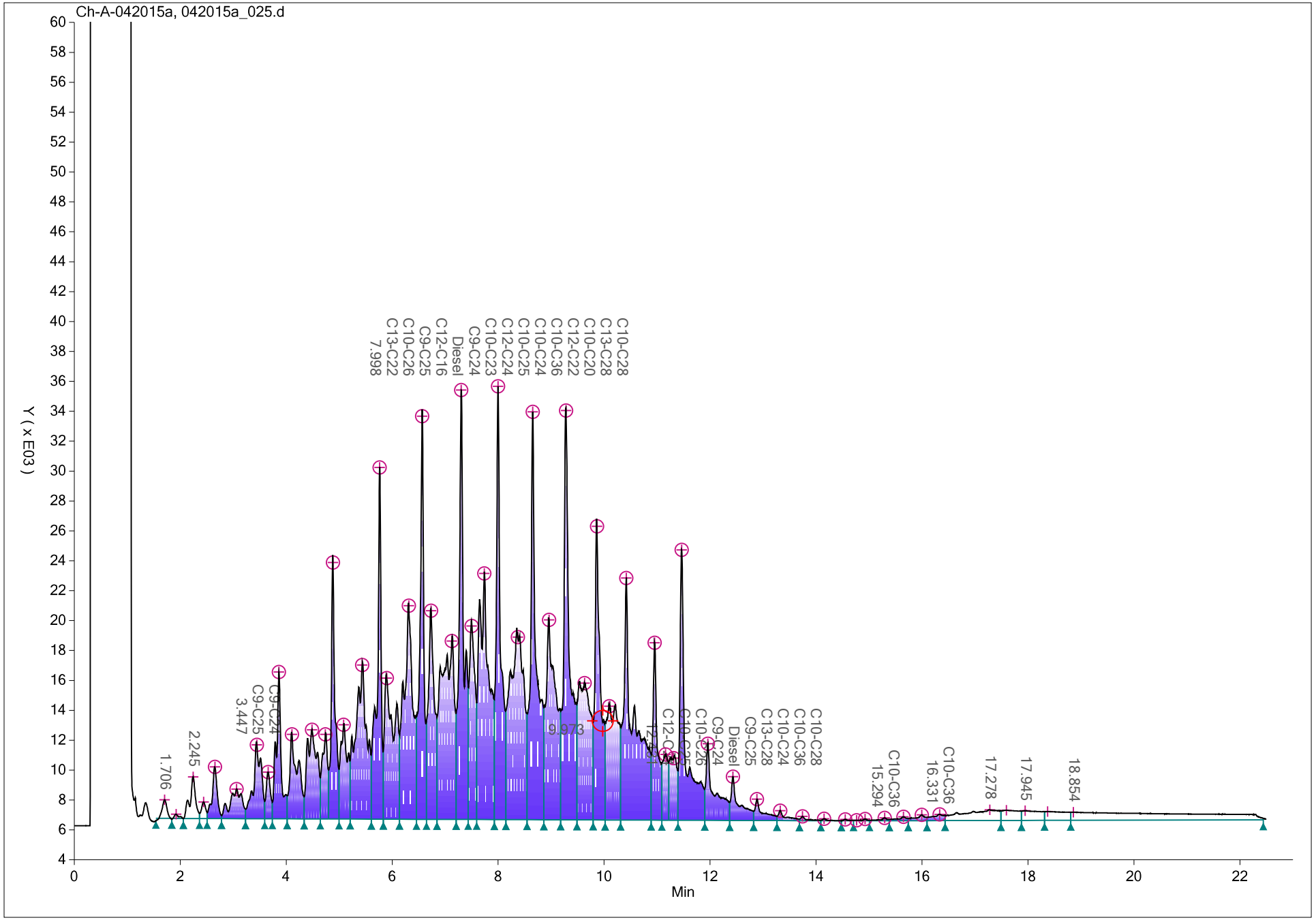
TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150130-32506.b\FID2000012.D

Injection Date:	30-Jan-2015 14:02:49	Instrument ID:	CHDRO6	Operator ID:	RLU
Lims ID:	STD1000 DIESEL			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	62
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value




Ch-A-042015a, 042015a_025.d
Y (x E03)
Min
1.706
2.245
3.447
C9-C25
C9-C24
7.998
C13-C22
C10-C26
C9-C25
C12-C16
Diesel
C9-C24
C10-C23
C12-C24
C10-C25
C10-C24
C10-C36
C12-C22
C10-C20
C13-C28
C10-C28
9.973
C12-C22
C10-C25
C10-C26
C9-C24
Diesel
C9-C25
C13-C28
C10-C24
C10-C36
C10-C28
15.294
C10-C36
16.331
C10-C36
17.278
17.945
18.854

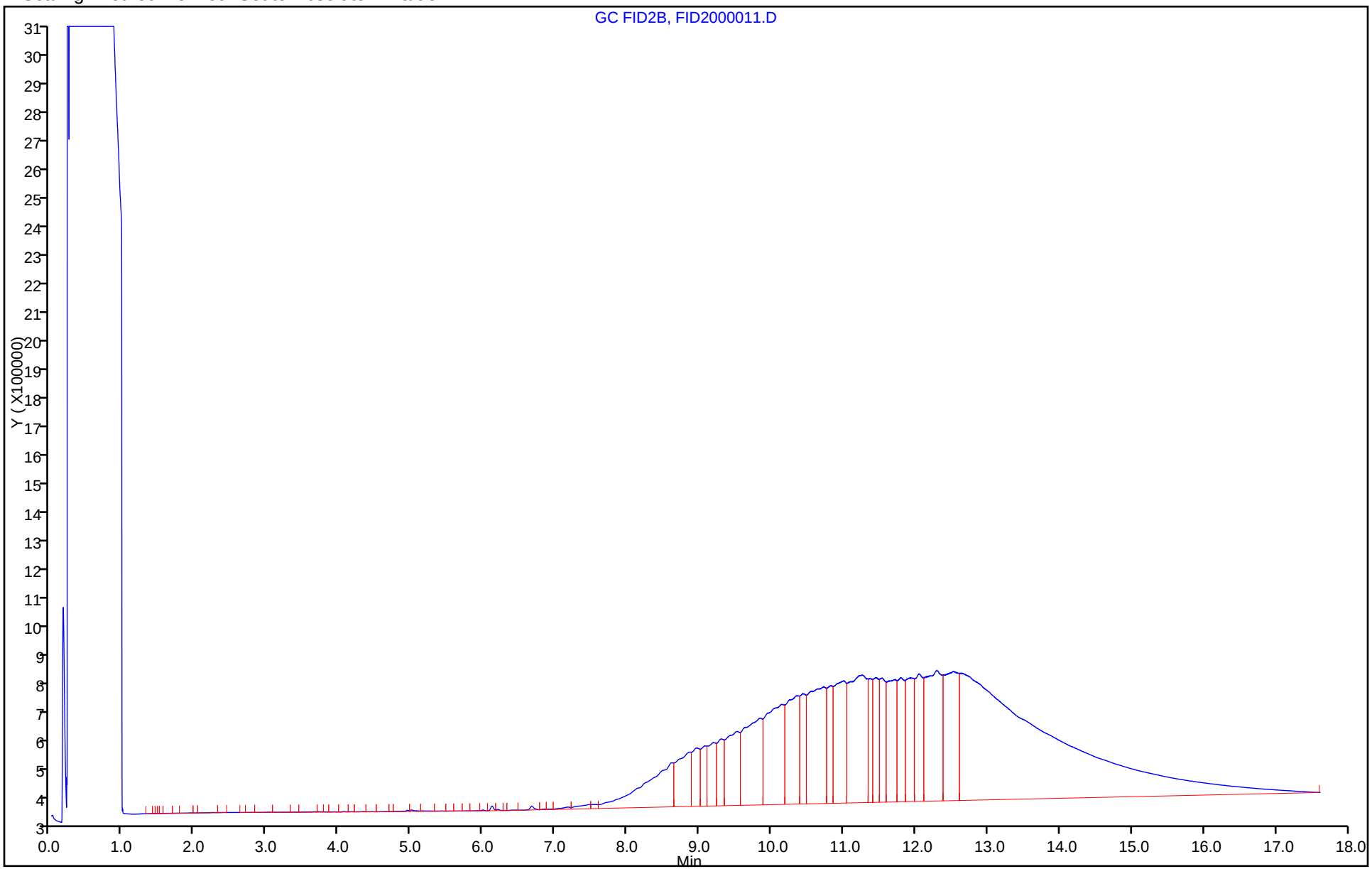
Report Date: 30-Jan-2015 14:31:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

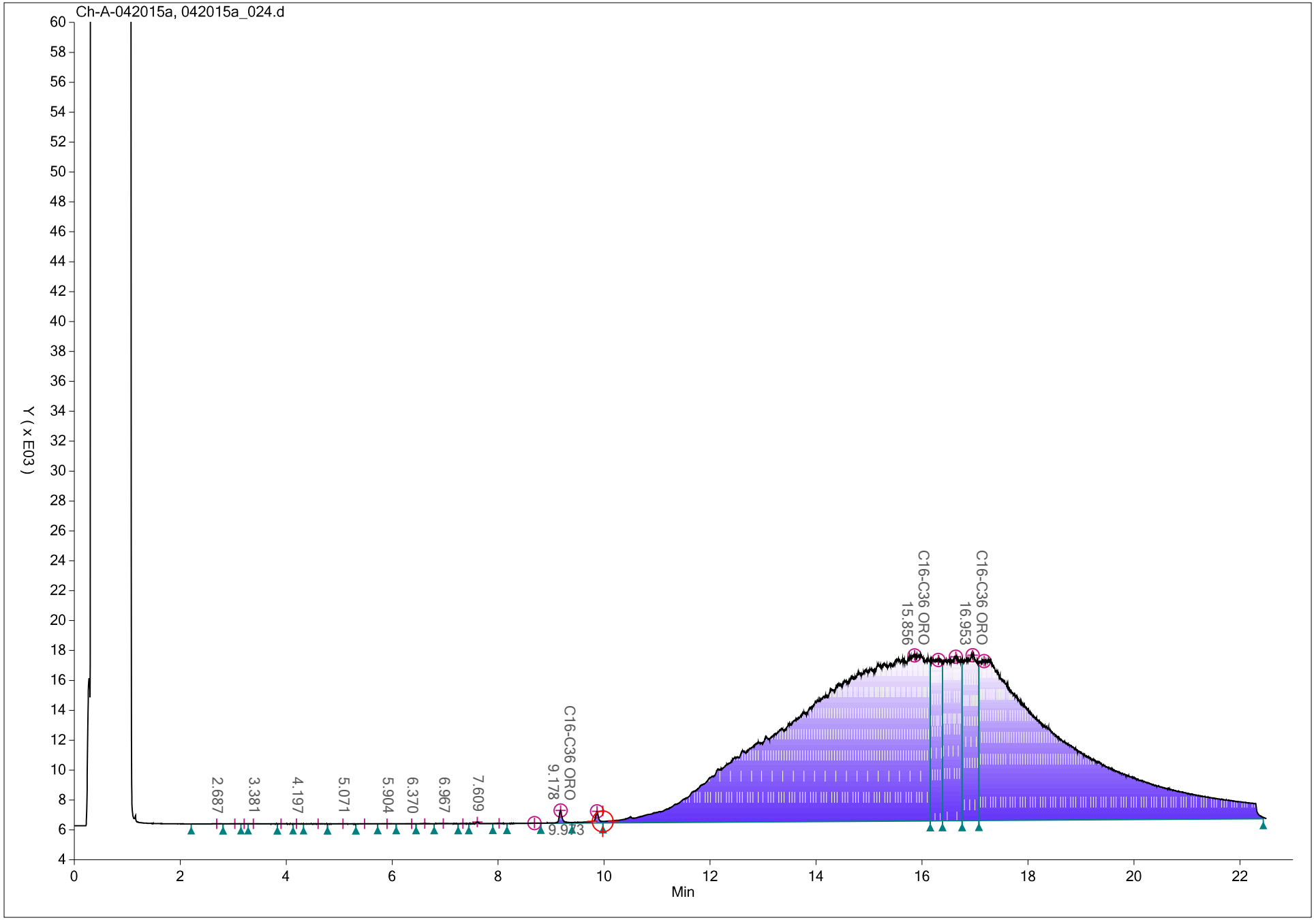
TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150130-32506.b\FID2000011.D

Injection Date:	30-Jan-2015 13:38:39	Instrument ID:	CHDRO6	Operator ID:	RLU
Lims ID:	STD1000 MOTOR			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	61
Method:	DRO6_B	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value




Ch-A-042015a, 042015a_024.d
Y (x E03)
Min
2.687
3.381
4.197
5.071
5.904
6.370
6.967
7.609
C16-C36 ORO
9.178
9.973
C16-C36 ORO
15.856
C16-C36 ORO
16.953

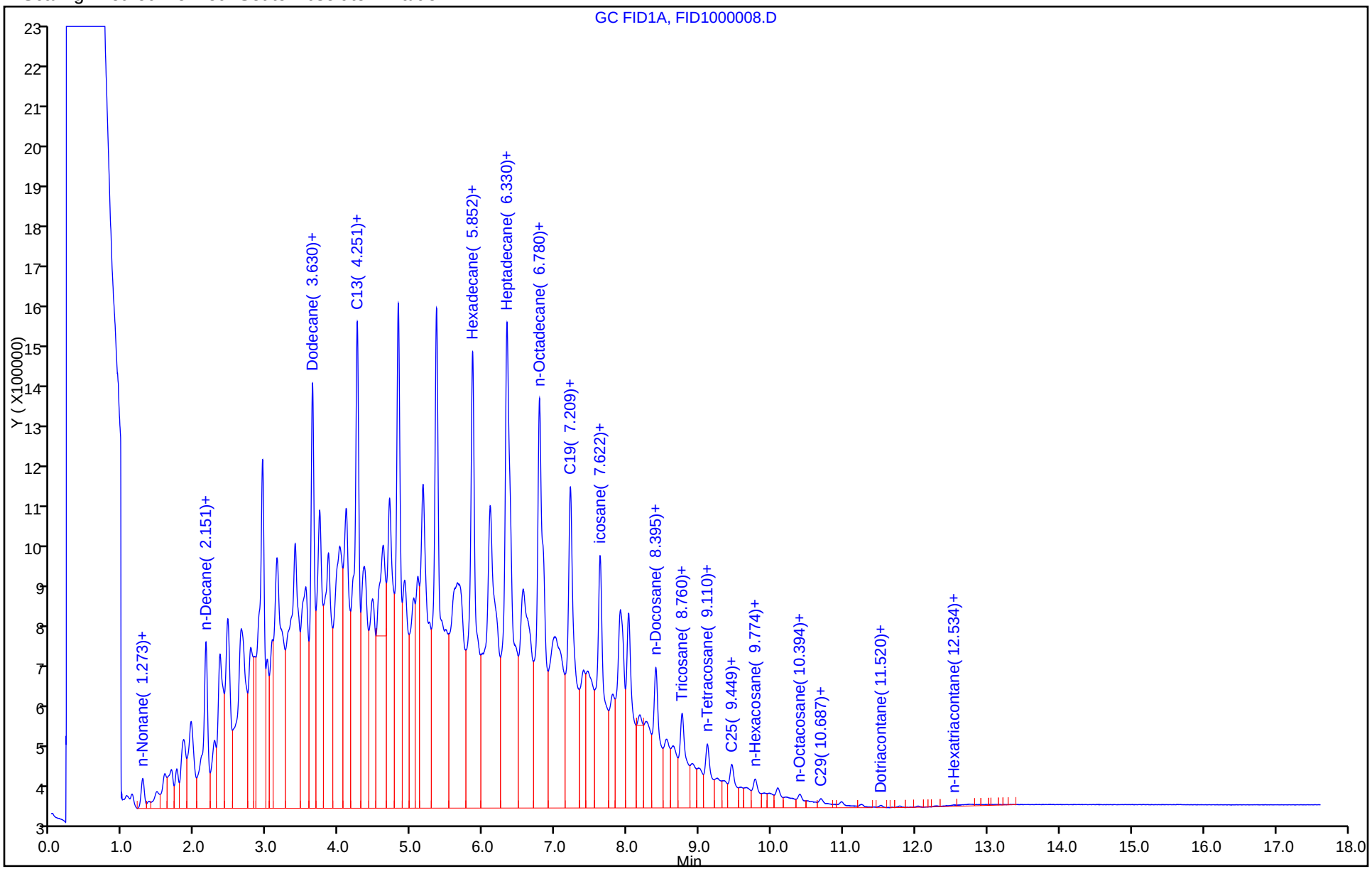
Report Date: 13-Apr-2015 11:37:49 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pleasanton

Data File: \\Taisfchrom\ChromData\CHDRO6\20150413-33711.b\FID1000008.D

Injection Date:	13-Apr-2015 11:05:05	Instrument ID:	CHDRO6	Operator ID:	
Lims ID:	720-64015-K-1-A	Lab Sample ID:	720-64015-1	Worklist Smp#:	8
Client ID:	TANK A3635				
Injection Vol:	1.0 ul	Dil. Factor:	200.0000	ALS Bottle#:	8
Method:	DRO6_A	Limit Group:	DRO		

Y Scaling: Method Defined: Set to Absolute Y Value



ARCADIS

Attachment 3

Backfill Results

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-19346-1

Job Description: Evergreen Elementary RAW

For:
Granite Rock Company
PO BOX 50001
Watsonville, CA 95077

Attention: Mr. Jon Erskine

Approved for release.
Dimple Sharma
Project Manager I
5/8/2009 12:39 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
05/08/2009

TRANSMISSION ELECTRON MICROSCOPY
ANALYTICAL REPORT

Contact:	Dimple Sharma	**REPORT NO.**	**076685**
Address:	1220 Quarry Lane TestAmerica-San Francisco Pleasanton, CA 94566	Date:	May-07-09
		Date Received:	May-01-09
Job Site / No.	Not listed on CoC 720-19346	Total Samples Analyzed:	4

Client Sample # EFP-1 NOA-5

Laboratory Sample # 1283-00001-001

SAMPLE DESCRIPTION

(720-19346 #16)

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg):	59.4	Filter Type & Pore Size	MCE 0.22um
Volume of Suspension Water (ml):	500	Effective Filter Area (sq.mm)	201
Volume of Suspension Filtered (ml):	0.5		

ASBESTOS DETECTED IN SCAN AREA

CHRYSOTILE		AMPHIBOLE	
FIBERS	BUNDLES	FIBERS	BUNDLES
NSD	NSD	NSD	NSD

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM / ANALYTICAL PARAMETERS

Grid Op. # Scanned For Bundles	20	Grid Op. Area (sq.mm)	0.0099	Bundle Scan Area (sq.mm)	0.198
Grid Op. # Scanned For Fibers	1	Grid Op. Area (sq.mm)	0.0099	Fiber Scan Area (sq.mm)	0.0099

Magnification: 18,000X

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

TRANSMISSION ELECTRON MICROSCOPY
ANALYTICAL REPORT

Contact:	Dimple Sharma	**REPORT NO.**	**076685**
Address:	1220 Quarry Lane TestAmerica-San Francisco Pleasanton, CA 94566	Date:	May-07-09
		Date Received:	May-01-09
Job Site / No.	Not listed on CoC 720-19346	Total Samples Analyzed:	4

Client Sample # **EFP-1 NOA-6**

Laboratory Sample # 1283-00001-002

SAMPLE DESCRIPTION

(720-19346 #17)

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg):	66.4	Filter Type & Pore Size	MCE 0.22um
Volume of Suspension Water (ml):	500	Effective Filter Area (sq.mm)	201
Volume of Suspension Filtered (ml):	0.5		

ASBESTOS DETECTED IN SCAN AREA

CHRYSOTILE		AMPHIBOLE	
FIBERS	BUNDLES	FIBERS	BUNDLES
NSD	NSD	NSD	NSD

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM / ANALYTICAL PARAMETERS

Grid Op. # Scanned For Bundles	20	Grid Op. Area (sq.mm)	0.0099	Bundle Scan Area (sq.mm)	0.198
Grid Op. # Scanned For Fibers	1	Grid Op. Area (sq.mm)	0.0099	Fiber Scan Area (sq.mm)	0.0099

Magnification: 18,000X

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

TRANSMISSION ELECTRON MICROSCOPY
ANALYTICAL REPORT

Contact:	Dimple Sharma	**REPORT NO.**	**076685**
Address:	1220 Quarry Lane TestAmerica-San Francisco Pleasanton, CA 94566	Date:	May-07-09
		Date Received:	May-01-09
Job Site / No.	Not listed on CoC 720-19346	Total Samples Analyzed:	4

Client Sample # EFP-1 NOA-7

Laboratory Sample # 1283-00001-003

SAMPLE DESCRIPTION

(720-19346 #18)

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg):	63	Filter Type & Pore Size	MCE 0.22um
Volume of Suspension Water (ml):	500	Effective Filter Area (sq.mm)	201
Volume of Suspension Filtered (ml):	0.5		

ASBESTOS DETECTED IN SCAN AREA

CHRYSOTILE		AMPHIBOLE	
FIBERS	BUNDLES	FIBERS	BUNDLES
NSD	NSD	NSD	NSD

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected	**Filter Loading:** Moderate **SAED Photo ID Nos.**

TEM / ANALYTICAL PARAMETERS

Grid Op. # Scanned For Bundles	20	Grid Op. Area (sq.mm)	0.0099	Bundle Scan Area (sq.mm)	0.198
Grid Op. # Scanned For Fibers	1	Grid Op. Area (sq.mm)	0.0099	Fiber Scan Area (sq.mm)	0.0099

Magnification: 18,000X

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

TRANSMISSION ELECTRON MICROSCOPY
ANALYTICAL REPORT

Contact:	Dimple Sharma	**REPORT NO.**	**076685**
Address:	1220 Quarry Lane TestAmerica-San Francisco Pleasanton, CA 94566	Date:	May-07-09
		Date Received:	May-01-09
Job Site / No.	Not listed on CoC 720-19346	Total Samples Analyzed:	4

Client Sample # **EFP-1 NOA-8**

Laboratory Sample # 1283-00001-004

SAMPLE DESCRIPTION

(720-19346 #119)

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg):	61.3	Filter Type & Pore Size	MCE 0.22um
Volume of Suspension Water (ml):	500	Effective Filter Area (sq.mm)	201
Volume of Suspension Filtered (ml):	0.5		

ASBESTOS DETECTED IN SCAN AREA

CHRYSOTILE		AMPHIBOLE	
FIBERS	BUNDLES	FIBERS	BUNDLES
NSD	NSD	NSD	NSD

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected	**Filter Loading:** Moderate **SAED Photo ID Nos.**

TEM / ANALYTICAL PARAMETERS

Grid Op. # Scanned For Bundles	20	Grid Op. Area (sq.mm)	0.0099	Bundle Scan Area (sq.mm)	0.198
Grid Op. # Scanned For Fibers	1	Grid Op. Area (sq.mm)	0.0099	Fiber Scan Area (sq.mm)	0.0099

Magnification: 18,000X

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

(1283)

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane ● Pleasanton CA 94566-4756
Phone: (925) 484-1919 ● Fax: (925) 600-3002

Reference #: 720-19346

Date 5-01-09 Page 1 of 1

Subto: Asbestos Tem

Report To

Attn: D Sharma
Company:
Address:
Phone: Email:
Bill To: Sampled By:
Attn: Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Low Level Metals by EPA 200.8/6020 (ICP-MS): ___	☐☐ W.E.T (STLC) TCLP	☐☐ Hexavalent Chromium pH (24h hold time for H_2O)	☐☐ Spec Cond. ☐ Alkalinity TSS ☐ TDS ☐	Anions : ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	NOA-TEM Quantitative			Number of Containers
EFP-1 NOA-5	4-21-09	1248	S	ice					(720-19346 #16)														X			1
EFP-1 NOA-6	4-21-09	1251	S	ice					(720-19346 #17)														X			1
EFP-1 NOA-7	4-21-09	1254	S	ice					(720-19346 #18)														X			1
EFP-1 NOA-8	4-21-09	1255	S	ice					(720-19346 #19)														X			1

Project Info.

Project Name:
Project#:
PO#:
Credit Card#:

Sample Receipt

of Containers: 4
Head Space:
Temp:
Conforms to record:

TAT: 5 Day | 72h | 48h | 24h | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF

Special Instructions / Comments: ☐ Global ID ___

720-19346

See Terms and Conditions on reverse

*TestAmerica SF reports 8015M from C_9-C_{24} (industry norm). Default for 8015B is C_{10}-C_{28}

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: Joan Mulley Time: 1330	Signature: Time: 1445	Signature: Time:
Printed Name: Joan Mulley Date: 5-01-09	Printed Name: David Motta Date: 5/1/09	Printed Name: Date:
Company: TestAmerica	Company: TASF	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: Time: 1330	Signature: Time:	Signature: Time:
Printed Name: David Motta Date: 05-01-09	Printed Name: Michael T. Lee Date: 05-01-09 02:43 RCVD	Printed Name: Date:
Company: TestAmerica	Company: ATEM	Company:

Rev02/09

ASBESTOS TEM LABORATORIES, INC.

SAMPLE RECEIPT and LOGIN CHECKLIST

(1283)

Client: TEST AMERICA / SAN FRANCISCO Login Number: 76685

Project: 720-19346

Sample Receipt

By: [initial] Date: 5/1/09

Did samples arrive with a shipping bill (airbill etc.)?	Yes	(No)
If yes, enter name of courier and airbill #: COURIER		
Were custody seals present and intact?	Yes	(No)
If yes, enter name and date on custody seal:		
Did COC forms accompany samples?	(Yes)	No
Were the COC forms filled out correctly?	(Yes)	No
Did you sign and date the COC forms in the correct place?	(Yes)	No
Was the project identifiable from the COC forms? If yes, enter project mane on top of this form.	(Yes)	No
Were bulk and air samples received separately?	(Yes)	No
Was the client contacted about discrepancies? If yes, give details below:	(Yes)	No

Who was contacted? SHARMA DIMPLE By: [initial] Date: 5/1/09 @ 3:00 pm

Notes: CONFIRMED, THAT CLIENT WOULD LIKE TO SET UP AN ACCOUNT FOR TESTAMERICA-SAN FRANCISCO, AND DID SO USING INFO SHE PROVIDED.

Sample Login

By: [initial] Date: 5/1/09

Describe packing material (i.e. vermiculite, polysterene): TEM-BULK SAMPLES IN PLASTIC BAGS

Were samples sealed in separate bags?	(Yes)	No
Did samples arrive intact and unbroken?	(Yes)	No
Were sample custody labels present and intact?	Yes	(No)
Were sample labels complete (date,time, initials)?	Yes	(No)
Did sample labels agree with COC?	(Yes)	No
Was the client contacted about discrepancies? If yes, give details below:	Yes	(No)

Who was contacted? _____ By: _____ Date: _____

Notes: _____

Include with e-mail of client notification of sample receipt.

STRATEGIC ENGINEERING & SCIENCE

CHAIN OF CUSTODY RECORD

720-19346

110 11th Street, 2nd Floor
Oakland, California 94607
Phone 510.451.1761
Fax : 510.451.1150

115842

Project Name: Evergreen Elementary RAW

Job No.: Aromas Quarry - Engineered Fill Stockpile

Report To: John Calhoun - Calhoun Bros.

Sampler (print): Christopher Vertin/Jon Erskine

Sampler (signature): [signature]

Electronic Deliverable Format Required: ☐ YES ☐ NO

EDF LOGCODE: ☐ LAMV ☐ LAO ☐ LAF

Global ID # :

Turnaround Requirements

☒ 5 Working Days
☐ 48 Hours
☐ 24 Hours
☐ 2-3 Hours RUSH
☐ ____________

QC Requirement:
☒ Level A (standard)

ANALYSES REQUESTED

Sample I.D. (Field Point Name)	Date	Time	Lab I.D.	Sample Matrix	No. of Cont.	TPH as gas/BTEX/MTBE Method: ☐8015/8021 ☐8260	TPH as diesel (8015M) ☐add silica gel column ☐add Oil Range	TRPH (418.1) with silica gel column	Halogenated VOCs (former 8010 list) Method: ☐8021 ☐8260 ☐add BTEX	Organochlorine Pesticides (8081)	Metals: CAM 17	pH		NOA - TEM Quantitative				Remarks
EFP-1 COMP3(A-D)	4/21/09	13:36		Soil	4													Hold *
EFP-1 COMP4(A-D)	↓	13:30		↓	↓													Hold *
EFP-1 COMP5(A-D)	↓	13:22		↓	↓													Hold *
EFP-1 NOA-5	4/21/09	12:48		Soil	1													Hold (**)
EFP-1 NOA-6	↓	12:51		↓	↓													Hold (**)
EFP-1 NOA-7	↓	12:54		↓	↓													Hold (**)
EFP-1 NOA-8	↓	12:58		↓	↓													Hold (**)
EFP-1 NOA-9	↓	13:01		↓	↓													Hold (**)
EFP-1 NOA-10	↓	13:09		↓	↓													Hold (**)

(**) Ship to Asbestos TEM in Berkley for Analysis
* 4-Pt Composite

Relinquished By: [signature]	Date: 4/21/09	Time: 15:40	Received By:	Date:	Time:	PM Initial:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Lab of Record:			Temp: 5.2°C
			Received by Lab: [signature]	Date: 4-21-09	Time: 1540	1966

ANALYTICAL REPORT

Job Number: 720-19346-2

Job Description: Evergreen Elementary RAW

For:
Granite Rock Company
PO BOX 50001
Watsonville, CA 95077

Attention: Mr. Jon Erskine

Approved for release.
Dimple Sharma
Project Manager I
6/3/2009 2:50 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
06/03/2009

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

Metals
Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 51225 were outside control limits. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Granite Rock Company

Job Number: 720-19346-2

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
720-19346-5	**EFP-1 COMP3A,B,C,D**					
Barium		41		1.0	mg/Kg	6010B
Chromium		3.7		1.0	mg/Kg	6010B
Cobalt		6.8		1.0	mg/Kg	6010B
Copper		71		1.0	mg/Kg	6010B
Nickel		2.7		1.0	mg/Kg	6010B
Vanadium		48		1.0	mg/Kg	6010B
Zinc		22		1.0	mg/Kg	6010B
Mercury		0.037	H	0.020	mg/Kg	7471A
Soluble						
pH-S		9.87	H	0.100	SU	9045C
720-19346-10	**EFP-1 COMP4A,B,C,D**					
Barium		31		0.95	mg/Kg	6010B
Chromium		7.3		0.95	mg/Kg	6010B
Cobalt		8.0		0.95	mg/Kg	6010B
Copper		67		0.95	mg/Kg	6010B
Nickel		6.3		0.95	mg/Kg	6010B
Vanadium		51		0.95	mg/Kg	6010B
Zinc		25		0.95	mg/Kg	6010B
Mercury		0.064	H	0.020	mg/Kg	7471A
Soluble						
pH-S		10.1	H	0.100	SU	9045C

METHOD SUMMARY

Client: Granite Rock Company

Job Number: 720-19346-2

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
Mercury (CVAA)	TAL SF	SW846 7471A	
Preparation, Mercury	TAL SF		SW846 7471A
pH	TAL SF	SW846 9045C	
Deionized Water Leaching Procedure	TAL SF		ASTM DI Leach

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Granite Rock Company

Job Number: 720-19346-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-19346-5	EFP-1 COMP3A,B,C,D	Solid	04/21/2009 1336	04/21/2009 1540
720-19346-10	EFP-1 COMP4A,B,C,D	Solid	04/21/2009 1330	04/21/2009 1540

Client: Granite Rock Company

Job Number: 720-19346-2

Client Sample ID: **EFP-1 COMP3A,B,C,D**

Lab Sample ID: 720-19346-5
Client Matrix: Solid

Date Sampled: 04/21/2009 1336
Date Received: 04/21/2009 1540

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 1.0
Date Analyzed: 06/01/2009 1705
Date Prepared: 05/29/2009 1440

Analysis Batch: 720-51354
Prep Batch: 720-51225

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		2.0
Arsenic		ND		1.0
Barium		41		1.0
Beryllium		ND		0.50
Cadmium		ND		0.50
Chromium		3.7		1.0
Cobalt		6.8		1.0
Copper		71		1.0
Lead		ND		1.0
Molybdenum		ND		1.0
Nickel		2.7		1.0
Selenium		ND		2.0
Silver		ND		1.0
Thallium		ND		1.0
Vanadium		48		1.0
Zinc		22		1.0

7471A Mercury (CVAA)

Method: 7471A
Preparation: 7471A
Dilution: 1.0
Date Analyzed: 05/31/2009 1527
Date Prepared: 05/28/2009 1837

Analysis Batch: 720-51275
Prep Batch: 720-51170

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.59 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		0.037	H	0.020

Client: Granite Rock Company

Job Number: 720-19346-2

Client Sample ID: **EFP-1 COMP4A,B,C,D**

Lab Sample ID: 720-19346-10
Client Matrix: Solid

Date Sampled: 04/21/2009 1330
Date Received: 04/21/2009 1540

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 1.0
Date Analyzed: 06/01/2009 1701
Date Prepared: 05/29/2009 1440

Analysis Batch: 720-51354
Prep Batch: 720-51225

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1.05 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		1.9
Arsenic		ND		0.95
Barium		31		0.95
Beryllium		ND		0.48
Cadmium		ND		0.48
Chromium		7.3		0.95
Cobalt		8.0		0.95
Copper		67		0.95
Lead		ND		0.95
Molybdenum		ND		0.95
Nickel		6.3		0.95
Selenium		ND		1.9
Silver		ND		0.95
Thallium		ND		0.95
Vanadium		51		0.95
Zinc		25		0.95

7471A Mercury (CVAA)

Method: 7471A
Preparation: 7471A
Dilution: 1.0
Date Analyzed: 05/31/2009 1529
Date Prepared: 05/28/2009 1837

Analysis Batch: 720-51275
Prep Batch: 720-51170

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		0.064	H	0.020

General Chemistry

Client Sample ID: **EFP-1 COMP3A,B,C,D**

Lab Sample ID: 720-19346-5 Date Sampled: 04/21/2009 1336
Client Matrix: Solid Date Received: 04/21/2009 1540

Analyte	Result	Qual	Units	RL	Dil	Method
pH-S	9.87	H	SU	0.100	1.0	9045C
Anly Batch: 720-51330	Date Analyzed	05/29/2009 1800			DryWt Corrected: N	

Client Sample ID: **EFP-1 COMP4A,B,C,D**

Lab Sample ID: 720-19346-10 Date Sampled: 04/21/2009 1330
Client Matrix: Solid Date Received: 04/21/2009 1540

Analyte	Result	Qual	Units	RL	Dil	Method
pH-S	10.1	H	SU	0.100	1.0	9045C
Anly Batch: 720-51330	Date Analyzed	05/29/2009 1800			DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: Granite Rock Company Job Number: 720-19346-2

Lab Section	Qualifier	Description
Metals		
	F	MS or MSD exceeds the control limits
	F	RPD of the MS and MSD exceeds the control limits
	H	Sample was prepped or analyzed beyond the specified holding time
General Chemistry		
	H	Sample was prepped or analyzed beyond the specified holding time

Client: Granite Rock Company

Job Number: 720-19346-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-51170					
LCS 720-51170/2-A	Lab Control Sample	T	Solid	7471A	
LCSD 720-51170/3-A	Lab Control Sample Duplicate	T	Solid	7471A	
MB 720-51170/1-A	Method Blank	T	Solid	7471A	
720-19346-5	EFP-1 COMP3A,B,C,D	T	Solid	7471A	
720-19346-10	EFP-1 COMP4A,B,C,D	T	Solid	7471A	
Prep Batch: 720-51225					
LCS 720-51225/2-A	Lab Control Sample	T	Solid	3050B	
LCSD 720-51225/3-A	Lab Control Sample Duplicate	T	Solid	3050B	
LCSSRM 720-51225/12-A	LCS-Standard Reference Material	T	Solid	3050B	
MB 720-51225/1-A	Method Blank	T	Solid	3050B	
720-19346-5	EFP-1 COMP3A,B,C,D	T	Solid	3050B	
720-19346-10	EFP-1 COMP4A,B,C,D	T	Solid	3050B	
720-19346-10MS	Matrix Spike	T	Solid	3050B	
720-19346-10MSD	Matrix Spike Duplicate	T	Solid	3050B	
Analysis Batch:720-51275					
LCS 720-51170/2-A	Lab Control Sample	T	Solid	7471A	720-51170
LCSD 720-51170/3-A	Lab Control Sample Duplicate	T	Solid	7471A	720-51170
MB 720-51170/1-A	Method Blank	T	Solid	7471A	720-51170
720-19346-5	EFP-1 COMP3A,B,C,D	T	Solid	7471A	720-51170
720-19346-10	EFP-1 COMP4A,B,C,D	T	Solid	7471A	720-51170
Analysis Batch:720-51354					
LCS 720-51225/2-A	Lab Control Sample	T	Solid	6010B	720-51225
LCSD 720-51225/3-A	Lab Control Sample Duplicate	T	Solid	6010B	720-51225
LCSSRM 720-51225/12-A	LCS-Standard Reference Material	T	Solid	6010B	720-51225
MB 720-51225/1-A	Method Blank	T	Solid	6010B	720-51225
720-19346-5	EFP-1 COMP3A,B,C,D	T	Solid	6010B	720-51225
720-19346-10	EFP-1 COMP4A,B,C,D	T	Solid	6010B	720-51225
720-19346-10MS	Matrix Spike	T	Solid	6010B	720-51225
720-19346-10MSD	Matrix Spike Duplicate	T	Solid	6010B	720-51225

Report Basis
T = Total

Client: Granite Rock Company

Job Number: 720-19346-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 720-51233					
LCS 720-51233/1-A	Lab Control Sample	S	Solid	DI Leach	
720-19346-5	EFP-1 COMP3A,B,C,D	S	Solid	DI Leach	
720-19346-5DU	Duplicate	S	Solid	DI Leach	
720-19346-10	EFP-1 COMP4A,B,C,D	S	Solid	DI Leach	
Analysis Batch:720-51330					
LCS 720-51233/1-A	Lab Control Sample	S	Solid	9045C	
720-19346-5	EFP-1 COMP3A,B,C,D	S	Solid	9045C	
720-19346-5DU	Duplicate	S	Solid	9045C	
720-19346-10	EFP-1 COMP4A,B,C,D	S	Solid	9045C	

Report Basis

S = Soluble

Client: Granite Rock Company

Job Number: 720-19346-2

Method Blank - Batch: 720-51225

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 720-51225/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/01/2009 1642
Date Prepared: 05/29/2009 1440

Analysis Batch: 720-51354
Prep Batch: 720-51225
Units: mg/Kg

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1.04 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Antimony	ND		1.9
Arsenic	ND		0.96
Barium	ND		0.96
Beryllium	ND		0.48
Cadmium	ND		0.48
Chromium	ND		0.96
Cobalt	ND		0.96
Copper	ND		0.96
Lead	ND		0.96
Molybdenum	ND		0.96
Nickel	ND		0.96
Selenium	ND		1.9
Silver	ND		0.96
Thallium	ND		0.96
Vanadium	ND		0.96
Zinc	ND		0.96

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-19346-2

LCS-Standard Reference Material - Batch: 720-51225

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCSSRM 720-51225/12-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/01/2009 1811
Date Prepared: 05/29/2009 1440

Analysis Batch: 720-51354
Prep Batch: 720-51225
Units: mg/Kg

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1.04 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	27.4	12.4	45	11 - 101	
Arsenic	22.7	21.1	93	69 - 119	
Barium	145	127	87	61 - 117	
Beryllium	1.09	0.913	84	56 - 102	
Cadmium	42.2	40.2	95	67 - 118	
Chromium	246	230	94	67 - 121	
Cobalt	65.1	62.7	96	64 - 133	
Copper	58.5	57.0	97	68 - 126	
Lead	44.1	39.0	88	62 - 113	
Molybdenum	61.0	54.7	90	62 - 128	
Nickel	96.8	89.5	92	65 - 117	
Selenium	165	157	95	63 - 126	
Silver	79.5	77.6	98	51 - 130	
Thallium	55.9	54.3	97	64 - 124	
Vanadium	56.7	53.1	94	67 - 123	
Zinc	44.0	38.2	87	62 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-19346-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-51225

Method: 6010B
Preparation: 3050B

LCS Lab Sample ID:	LCS 720-51225/2-A	Analysis Batch:	720-51354	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-51225	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.01 g
Date Analyzed:	06/01/2009 1646			Final Weight/Volume:	50 mL
Date Prepared:	05/29/2009 1440				

LCSD Lab Sample ID:	LCSD 720-51225/3-A	Analysis Batch:	720-51354	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-51225	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.05 g
Date Analyzed:	06/01/2009 1650			Final Weight/Volume:	50 mL
Date Prepared:	05/29/2009 1440				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Antimony	101	100	80 - 120	5	20		
Arsenic	102	100	80 - 120	6	20		
Barium	104	102	80 - 120	6	20		
Beryllium	103	101	80 - 120	6	20		
Cadmium	101	99	80 - 120	6	20		
Chromium	110	102	80 - 120	12	20		
Cobalt	102	100	80 - 120	6	20		
Copper	106	102	80 - 120	7	20		
Lead	103	101	80 - 120	6	20		
Molybdenum	104	102	80 - 120	6	20		
Nickel	105	100	80 - 120	9	20		
Selenium	101	99	80 - 120	5	20		
Silver	102	100	80 - 120	6	20		
Thallium	102	100	80 - 120	6	20		
Vanadium	104	101	80 - 120	6	20		
Zinc	103	101	80 - 120	6	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-19346-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-51225

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	720-19346-10	Analysis Batch:	720-51354	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-51225	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Date Analyzed:	06/01/2009 1654			Final Weight/Volume:	50 mL
Date Prepared:	05/29/2009 1440				

MSD Lab Sample ID:	720-19346-10	Analysis Batch:	720-51354	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-51225	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	0.99 g
Date Analyzed:	06/01/2009 1657			Final Weight/Volume:	50 mL
Date Prepared:	05/29/2009 1440				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	14	17	75 - 125	24	20	F	F
Arsenic	94	92	75 - 125	0	20		
Barium	96	84	75 - 125	7	20		
Beryllium	97	96	75 - 125	1	20		
Cadmium	90	89	75 - 125	0	20		
Chromium	88	86	75 - 125	0	20		
Cobalt	88	87	75 - 125	1	20		
Copper	72	65	75 - 125	3	20	F	F
Lead	94	91	75 - 125	2	20		
Molybdenum	91	88	75 - 125	2	20		
Nickel	81	81	75 - 125	1	20		
Selenium	92	90	75 - 125	0	20		
Silver	98	95	75 - 125	1	20		
Thallium	89	87	75 - 125	1	20		
Vanadium	85	82	75 - 125	1	20		
Zinc	92	88	75 - 125	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-19346-2

Method Blank - Batch: 720-51170

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 720-51170/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/31/2009 1512
Date Prepared: 05/28/2009 1837

Analysis Batch: 720-51275
Prep Batch: 720-51170
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.61 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Mercury	ND		0.020

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-51170

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 720-51170/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/31/2009 1513
Date Prepared: 05/28/2009 1837

Analysis Batch: 720-51275
Prep Batch: 720-51170
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.58 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-51170/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/31/2009 1515
Date Prepared: 05/28/2009 1837

Analysis Batch: 720-51275
Prep Batch: 720-51170
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.59 g
Final Weight/Volume: 50 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Mercury	103	103	80 - 120	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-19346-2

Duplicate - Batch: 720-51330

Method: 9045C
Preparation: N/A

Lab Sample ID: 720-19346-5
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/29/2009 1800
Date Prepared: N/A
Date Leached: 05/29/2009 1535

Analysis Batch: 720-51330
Prep Batch: N/A
Units: SU

Leachate Batch: 720-51233

Instrument ID: Corning pH
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH-S	9.87	9.960	1	5	

Calculations are performed before rounding to avoid round-off errors in calculated results.

720-19346-2

Sharma, Dimple

From: Mark Campbell [marqcambell@sbcglobal.net]
Sent: Wednesday, May 27, 2009 5:19 PM
To: Sharma, Dimple
Cc: 'Dave Sinclair'; 'Gavin Barquero'; tmccloskey@sesinconline.net
Subject: Aromas Quarry CAM 17 and PH Testing

Dimple,

Per our phone conversation today would you please test two of the composite samples for CAM 17 and PH that were taken from the Aromas Quarry on April 21, 2009. These were part of the samples that were already tested for NOA per your report #720=19346-1. If you have any questions, please do not hesitate to call me.

Sincerely

Mark Campbell
JLC Inc
805-909-8056

Login Sample Receipt Check List

Client: Granite Rock Company

Job Number: 720-19346-2

Login Number: 19346

List Source: TestAmerica San Francisco

Creator: Mullen, Joan

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ANALYTICAL REPORT

Job Number: 720-20324-1

Job Description: Evergreen Elementary RAW

For:
Granite Rock Company
PO BOX 50001
Watsonville, CA 95077

Attention: Mr. Jon Erskine

Approved for release.
Dimple Sharma
Project Manager I
6/30/2009 2:42 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
06/30/2009

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Granite Rock Company

Job Number: 720-20324-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
720-20324-5	**EFP-1 COMP 6 (A-D)**					
Barium		29		1.0	mg/Kg	6010B
Chromium		3.2		2.6	mg/Kg	6010B
Cobalt		7.3		0.52	mg/Kg	6010B
Copper		57		2.6	mg/Kg	6010B
Vanadium		46		1.0	mg/Kg	6010B
Zinc		22		2.6	mg/Kg	6010B
Mercury		0.038		0.020	mg/Kg	7471A
Soluble						
pH-Soluble		8.23	H	0.100	SU	9045C
720-20324-10	**EFP-1 COMP 7 (A-D)**					
Barium		38		1.0	mg/Kg	6010B
Chromium		3.8		2.6	mg/Kg	6010B
Cobalt		7.6		0.51	mg/Kg	6010B
Copper		59		2.6	mg/Kg	6010B
Vanadium		52		1.0	mg/Kg	6010B
Zinc		25		2.6	mg/Kg	6010B
Mercury		0.038		0.019	mg/Kg	7471A
Soluble						
pH-Soluble		8.32	H	0.100	SU	9045C

METHOD SUMMARY

Client: Granite Rock Company Job Number: 720-20324-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
Mercury (CVAA)	TAL SF	SW846 7471A	
Preparation, Mercury	TAL SF		SW846 7471A
pH	TAL SF	SW846 9045C	
Deionized Water Leaching Procedure	TAL SF		ASTM DI Leach
General Sub Contract Method		Subcontract	

Lab References:

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TAL SF = TestAmerica San Francisco

Method References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Granite Rock Company

Job Number: 720-20324-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-20324-5	EFP-1 COMP 6 (A-D)	Solid	06/02/2009 1206	06/02/2009 1540
720-20324-10	EFP-1 COMP 7 (A-D)	Solid	06/02/2009 1208	06/02/2009 1540
720-20324-12	EFP-1 NOA-12	Solid	06/02/2009 1209	06/02/2009 1540
720-20324-14	EFP-1 NOA-14	Solid	06/02/2009 1215	06/02/2009 1540

Client: Granite Rock Company

Job Number: 720-20324-1

Client Sample ID: **EFP-1 COMP 6 (A-D)**

Lab Sample ID: 720-20324-5
Client Matrix: Solid

Date Sampled: 06/02/2009 1206
Date Received: 06/02/2009 1540

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 5.0
Date Analyzed: 06/25/2009 2326
Date Prepared: 06/23/2009 1444

Analysis Batch: 720-52939
Prep Batch: 720-52710

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 0.97 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		2.1
Arsenic		ND		1.0
Barium		29		1.0
Beryllium		ND		0.52
Cadmium		ND		0.52
Chromium		3.2		2.6
Cobalt		7.3		0.52
Copper		57		2.6
Lead		ND		1.0
Molybdenum		ND		2.6
Nickel		ND		2.6
Selenium		ND		2.1
Silver		ND		1.0
Thallium		ND		1.0
Vanadium		46		1.0
Zinc		22		2.6

7471A Mercury (CVAA)

Method: 7471A
Preparation: 7471A
Dilution: 1.0
Date Analyzed: 06/24/2009 1638
Date Prepared: 06/23/2009 1805

Analysis Batch: 720-52824
Prep Batch: 720-52757

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.59 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		0.038		0.020

Client: Granite Rock Company

Job Number: 720-20324-1

Client Sample ID: **EFP-1 COMP 7 (A-D)**

Lab Sample ID: 720-20324-10
Client Matrix: Solid

Date Sampled: 06/02/2009 1208
Date Received: 06/02/2009 1540

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 5.0
Date Analyzed: 06/25/2009 2331
Date Prepared: 06/23/2009 1444

Analysis Batch: 720-52939
Prep Batch: 720-52710

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 0.98 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		2.0
Arsenic		ND		1.0
Barium		38		1.0
Beryllium		ND		0.51
Cadmium		ND		0.51
Chromium		3.8		2.6
Cobalt		7.6		0.51
Copper		59		2.6
Lead		ND		1.0
Molybdenum		ND		2.6
Nickel		ND		2.6
Selenium		ND		2.0
Silver		ND		1.0
Thallium		ND		1.0
Vanadium		52		1.0
Zinc		25		2.6

7471A Mercury (CVAA)

Method: 7471A
Preparation: 7471A
Dilution: 1.0
Date Analyzed: 06/24/2009 1644
Date Prepared: 06/23/2009 1805

Analysis Batch: 720-52824
Prep Batch: 720-52757

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.63 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		0.038		0.019

General Chemistry

Client Sample ID: **EFP-1 COMP 6 (A-D)**

Lab Sample ID: 720-20324-5 Date Sampled: 06/02/2009 1206
Client Matrix: Solid Date Received: 06/02/2009 1540

Analyte	Result	Qual	Units	RL	Dil	Method
pH-Soluble	8.23	H	SU	0.100	1.0	9045C
Anly Batch: 720-52713	Date Analyzed	06/23/2009 1424			DryWt Corrected: N	

Client Sample ID: **EFP-1 COMP 7 (A-D)**

Lab Sample ID: 720-20324-10 Date Sampled: 06/02/2009 1208
Client Matrix: Solid Date Received: 06/02/2009 1540

Analyte	Result	Qual	Units	RL	Dil	Method
pH-Soluble	8.32	H	SU	0.100	1.0	9045C
Anly Batch: 720-52713	Date Analyzed	06/23/2009 1427			DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: Granite Rock Company Job Number: 720-20324-1

Lab Section	Qualifier	Description
Metals		
	F	MS or MSD exceeds the control limits
	F	RPD of the MS and MSD exceeds the control limits
General Chemistry		
	H	Sample was prepped or analyzed beyond the specified holding time

Client: Granite Rock Company

Job Number: 720-20324-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-52710					
LCS 720-52710/2-A	Lab Control Sample	T	Solid	3050B	
LCSD 720-52710/3-A	Lab Control Sample Duplicate	T	Solid	3050B	
MB 720-52710/1-A	Method Blank	T	Solid	3050B	
720-20324-5	EFP-1 COMP 6 (A-D)	T	Solid	3050B	
720-20324-5MS	Matrix Spike	T	Solid	3050B	
720-20324-5MSD	Matrix Spike Duplicate	T	Solid	3050B	
720-20324-10	EFP-1 COMP 7 (A-D)	T	Solid	3050B	
Prep Batch: 720-52757					
LCS 720-52757/2-A	Lab Control Sample	T	Solid	7471A	
LCSD 720-52757/3-A	Lab Control Sample Duplicate	T	Solid	7471A	
MB 720-52757/1-A	Method Blank	T	Solid	7471A	
720-20324-5	EFP-1 COMP 6 (A-D)	T	Solid	7471A	
720-20324-10	EFP-1 COMP 7 (A-D)	T	Solid	7471A	
Analysis Batch:720-52824					
LCS 720-52757/2-A	Lab Control Sample	T	Solid	7471A	720-52757
LCSD 720-52757/3-A	Lab Control Sample Duplicate	T	Solid	7471A	720-52757
MB 720-52757/1-A	Method Blank	T	Solid	7471A	720-52757
720-20324-5	EFP-1 COMP 6 (A-D)	T	Solid	7471A	720-52757
720-20324-10	EFP-1 COMP 7 (A-D)	T	Solid	7471A	720-52757
Analysis Batch:720-52939					
LCS 720-52710/2-A	Lab Control Sample	T	Solid	6010B	720-52710
LCSD 720-52710/3-A	Lab Control Sample Duplicate	T	Solid	6010B	720-52710
MB 720-52710/1-A	Method Blank	T	Solid	6010B	720-52710
720-20324-5	EFP-1 COMP 6 (A-D)	T	Solid	6010B	720-52710
720-20324-5MS	Matrix Spike	T	Solid	6010B	720-52710
720-20324-5MSD	Matrix Spike Duplicate	T	Solid	6010B	720-52710
720-20324-10	EFP-1 COMP 7 (A-D)	T	Solid	6010B	720-52710

Report Basis
T = Total

Client: Granite Rock Company

Job Number: 720-20324-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 720-52685					
LCS 720-52685/1-A	Lab Control Sample	S	Solid	DI Leach	
720-20324-5	EFP-1 COMP 6 (A-D)	S	Solid	DI Leach	
720-20324-10	EFP-1 COMP 7 (A-D)	S	Solid	DI Leach	
Analysis Batch:720-52713					
LCS 720-52685/1-A	Lab Control Sample	S	Solid	9045C	
720-20324-5	EFP-1 COMP 6 (A-D)	S	Solid	9045C	
720-20324-10	EFP-1 COMP 7 (A-D)	S	Solid	9045C	

Report Basis

S = Soluble

Client: Granite Rock Company

Job Number: 720-20324-1

Method Blank - Batch: 720-52710

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 720-52710/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/25/2009 2301
Date Prepared: 06/23/2009 1444

Analysis Batch: 720-52939
Prep Batch: 720-52710
Units: mg/Kg

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.03 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Antimony	ND		0.39
Arsenic	ND		0.19
Barium	ND		0.19
Beryllium	ND		0.097
Cadmium	ND		0.097
Chromium	ND		0.49
Cobalt	ND		0.097
Copper	ND		0.49
Lead	ND		0.19
Molybdenum	ND		0.49
Nickel	ND		0.49
Selenium	ND		0.39
Silver	ND		0.19
Thallium	ND		0.19
Vanadium	ND		0.19
Zinc	ND		0.49

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20324-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-52710

Method: 6010B
Preparation: 3050B

LCS Lab Sample ID:	LCS 720-52710/2-A	Analysis Batch:	720-52939	Instrument ID:	Thermo 6500 ICP
Client Matrix:	Solid	Prep Batch:	720-52710	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	0.98 g
Date Analyzed:	06/25/2009 2306			Final Weight/Volume:	50 mL
Date Prepared:	06/23/2009 1444				

LCSD Lab Sample ID:	LCSD 720-52710/3-A	Analysis Batch:	720-52939	Instrument ID:	Thermo 6500 ICP
Client Matrix:	Solid	Prep Batch:	720-52710	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.03 g
Date Analyzed:	06/25/2009 2311			Final Weight/Volume:	50 mL
Date Prepared:	06/23/2009 1444				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Antimony	94	96	80 - 120	3	20		
Arsenic	94	96	80 - 120	4	20		
Barium	101	102	80 - 120	4	20		
Beryllium	93	94	80 - 120	4	20		
Cadmium	98	98	80 - 120	4	20		
Chromium	102	103	80 - 120	4	20		
Cobalt	99	101	80 - 120	4	20		
Copper	97	97	80 - 120	4	20		
Lead	96	97	80 - 120	4	20		
Molybdenum	100	101	80 - 120	4	20		
Nickel	98	99	80 - 120	4	20		
Selenium	90	90	80 - 120	4	20		
Silver	97	98	80 - 120	4	20		
Thallium	95	96	80 - 120	4	20		
Vanadium	102	104	80 - 120	3	20		
Zinc	94	95	80 - 120	4	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20324-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-52710

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	720-20324-5	Analysis Batch:	720-52939	Instrument ID:	Thermo 6500 ICP
Client Matrix:	Solid	Prep Batch:	720-52710	Lab File ID:	N/A
Dilution:	5.0			Initial Weight/Volume:	0.99 g
Date Analyzed:	06/25/2009 2316			Final Weight/Volume:	50 mL
Date Prepared:	06/23/2009 1444				

MSD Lab Sample ID:	720-20324-5	Analysis Batch:	720-52939	Instrument ID:	Thermo 6500 ICP
Client Matrix:	Solid	Prep Batch:	720-52710	Lab File ID:	N/A
Dilution:	5.0			Initial Weight/Volume:	0.97 g
Date Analyzed:	06/25/2009 2321			Final Weight/Volume:	50 mL
Date Prepared:	06/23/2009 1444				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	42	42	75 - 125	2	20	F	F
Arsenic	94	94	75 - 125	1	20		
Barium	99	181	75 - 125	43	20		F
Beryllium	93	92	75 - 125	1	20		
Cadmium	96	95	75 - 125	1	20		
Chromium	101	102	75 - 125	2	20		
Cobalt	98	101	75 - 125	4	20		
Copper	206	177	75 - 125	9	20	F	F
Lead	95	94	75 - 125	1	20		
Molybdenum	93	92	75 - 125	1	20		
Nickel	96	95	75 - 125	1	20		
Selenium	90	90	75 - 125	3	20		
Silver	100	99	75 - 125	1	20		
Thallium	93	93	75 - 125	1	20		
Vanadium	117	131	75 - 125	8	20		F
Zinc	104	111	75 - 125	6	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20324-1

Method Blank - Batch: 720-52757

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 720-52757/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 1622
Date Prepared: 06/23/2009 1805

Analysis Batch: 720-52824
Prep Batch: 720-52757
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.62 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Mercury	ND		0.019

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-52757

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 720-52757/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 1624
Date Prepared: 06/23/2009 1805

Analysis Batch: 720-52824
Prep Batch: 720-52757
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.59 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-52757/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 1626
Date Prepared: 06/23/2009 1805

Analysis Batch: 720-52824
Prep Batch: 720-52757
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.63 g
Final Weight/Volume: 50 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Mercury	100	98	80 - 120	8	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20324-1

Lab Control Sample - Batch: 720-52713

Method: 9045C
Preparation: N/A

Lab Sample ID:	LCS 720-52685/1-A	Analysis Batch:	720-52713	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	SU	Initial Weight/Volume:	50 mL
Date Analyzed:	06/23/2009 1350			Final Weight/Volume:	50 mL
Date Prepared:	N/A				
Date Leached:	06/23/2009 1135	Leachate Batch:	720-52685		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
pH-Soluble	7.00	7.050	101	99 - 101	

Calculations are performed before rounding to avoid round-off errors in calculated results.

TRANSMISSION ELECTRON MICROSCOPY ANALYTICAL REPORT

Contact:	Dimple Sharma	**REPORT NO.**	**077659**
Address:	TestAmerica Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Date:	Jun-29-09
		Date Received:	Jun-23-09
Job Site / No.	Evergreen Elementary RAW 72004835	Total Samples Analyzed:	2

SAMPLE DESCRIPTION

Client Sample # **EFP-1 NOA-12**

Laboratory Sample # 1266-00009-001

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg):	67.2	Filter Type & Pore Size	MCE 0.22um
Volume of Suspension Water (ml):	500	Effective Filter Area (sq.mm)	201
Volume of Suspension Filtered (ml):	0.5		

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %) DETECTED IN SCAN AREA

Fiber Length	CHRYSOTILE Struct.#	CHRYSOTILE	AMPHIBOLE Struct.#	AMPHIBOLE
<10um	NSD	<0.0001	NSD	<0.0001
>10um	NSD	<0.0001	NSD	<0.0001
Total Structures	NSD		NSD	

Analytical Sensitivity (Wt. %)

<0.0001

Assumes Smallest Structure Countable is a Chrysotile Fiber 0.5um Long * 0.05 um Wide.

TOTAL (Wt.%)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM SCANNING PARAMETERS

Low Mag (10,000X)	# Grid Openings Scanned	20	Area (sq.mm)	0.0099	Scan Area (sq.mm) 0.198
High Mag (18,000X)	# Grid Openings Scanned	1	Area (sq.mm)	0.0099	Scan Area (sq.mm) 0.0099

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

ASBESTOS TEM LABORATORIES, INC. 630 BANCROFT WAY, BERKELEY, CA 94710 (510) 704-8930
www.asbestostemlabs.com *With Offices in Reno, NV (775) 359-3377*

TRANSMISSION ELECTRON MICROSCOPY
ANALYTICAL REPORT

Contact:	Dimple Sharma	**REPORT NO.**	**077659**
Address:	TestAmerica Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Date:	Jun-29-09
		Date Received:	Jun-23-09
Job Site / No.	Evergreen Elementary RAW 72004835	Total Samples Analyzed:	2

SAMPLE DESCRIPTION

Client Sample # **EFP-1 NOA-14**

Laboratory Sample # 1266-00009-002

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg):	53.1	Filter Type & Pore Size	MCE 0.22um
Volume of Suspension Water (ml):	500	Effective Filter Area (sq.mm)	201
Volume of Suspension Filtered (ml):	0.5		

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %) DETECTED IN SCAN AREA

Fiber Length	CHRYSOTILE Struct.#	CHRYSOTILE	AMPHIBOLE Struct.#	AMPHIBOLE
<10um	NSD	<0.0001	NSD	<0.0001
>10um	NSD	<0.0001	NSD	<0.0001
Total Structures	NSD		NSD	

Analytical Sensitivity (Wt. %)

<0.0001

Assumes Smallest Structure Countable is a Chrysotile Fiber 0.5um Long * 0.05 um Wide.

TOTAL (Wt.%)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM SCANNING PARAMETERS

Low Mag (10,000X)	# Grid Openings Scanned	20	Area (sq.mm)	0.0099	Scan Area (sq.mm) 0.198
High Mag (18,000X)	# Grid Openings Scanned	1	Area (sq.mm)	0.0099	Scan Area (sq.mm) 0.0099

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

ASBESTOS TEM LABORATORIES, INC. 630 BANCROFT WAY, BERKELEY, CA 94710 (510) 704-8930
www.asbestostemlabs.com *With Offices in Reno, NV (775) 359-3377*

TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sharma, Dimple	Carrier Tracking No(s):	COC No: 720-5676.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: dimple.sharma@testamericainc.com		Page: Page 1 of 1
Company: ASBESTOS TEM LABORATORIES, INC.				Job #: 720-20324-1
Address: 630 BANCROFT WAY, ,	Due Date Requested: 6/29/2009			
City: Berkeley	TAT Requested (days):			
State, Zip: CA, 94710				
Phone:	PO #:			
Email:	WO #:			
Project Name: Evergreen Elementary RAW	Project #: 72004835			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	SUBCONTRACT/ TEM Quantitative	Special Instructions/Note:
EFP-1 NOA-12 (720-20324-12)	6/2/09	12:09		Solid	X	
EFP-1 NOA-14 (720-20324-14)	6/2/09	12:15		Solid	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 6-22-09 1315	Company SF	Received by:	Date/Time: 6-22-09 1315	Company TASF
Relinquished by:	Date/Time: 6/23/09	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6-23-09 12:11	Company RCVD

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

ASBESTOS TEM LABORATORIES, INC.

SAMPLE RECEIPT and LOGIN CHECKLIST

77659 ~~77656~~

Client: Test America SF

Login Number:

Project: Evergreen RAW

Sample Receipt

By: TB (initial) Date: 6-23

Did samples arrive with a shipping bill (airbill etc.)?	(Yes)	No
If yes, enter name of courier and airbill #:	courier	
Were custody seals present and intact?	Yes	(No)
If yes, enter name and date on custody seal:		
Did COC forms accompany samples?	(Yes)	No
Were the COC forms filled out correctly?	(Yes)	No
Did you sign and date the COC forms in the correct place?	(Yes)	No
Was the project identifiable from the COC forms? If yes, enter project name on top of this form.	(Yes)	No
Were bulk and air samples received separately?	(Yes)	No
Was the client contacted about discrepancies? If yes, give details below:	Yes	(No)

Who was contacted? _____ By: _____ Date: _____

Notes: _____

Sample Login

By: TB (initial) Date: 6-23

Describe packing material (i.e. vermiculite, polysterene)	plastic ziplock	
Were samples sealed in separate bags?	(Yes)	No
Did samples arrive intact and unbroken?	Yes	(No)
Were sample custody labels present and intact?	(Yes)	No
Were sample labels complete (date,time, initials)?	Yes	(No)
Did sample labels agree with COC?	(Yes)	No
Was the client contacted about discrepancies? If yes, give details below:	(Yes)	No

Who was contacted? Someone @ Test America By: Paul Date: 6-23

Notes: sample EFP-1 NOA-14 had a broken bag and was full of water. Paul called to let them know but we are still going to analyze the samples.

Include with e-mail of client notification of sample receipt.

720-20797
720-20324

Sharma, Dimple

From: Mark Campbell [marqcambell@sbcglobal.net]
Sent: Monday, June 22, 2009 1:04 PM
To: Sharma, Dimple
Cc: 'Gavin Barquero'; 'Steve Petcavich'; tmccloskey@sesinconline.net; 'Dave Sinclair'
Subject: Aromas Testing Evergreen School

Dimple,

Per our telephone conversation, please proceed with the testing as follows:

NOA TEM Quantitative. Use the four samples delivered to you on Friday June 19 plus NOA-12 and NOA-14 from the June 2 samples. That would be a total of 6 samples for NOA-TEM Quant. I believe these samples go to the Berkeley Lab.

CAM 17. Use the sample for Friday June 19 plus the two composite samples from June 2. That would be a total of three samples for testing.

pH testing. The samples also need to be tested for pH.

I understand the turn around time is five days. Please proceed with the tests immediately. Thanks for your help. If you have any questions, please contact me at 805-909-8056.

Sincerely,

Mark Campbell

STRATEGIC ENGINEERING & SCIENCE

720 - 20324 CHAIN OF CUSTODY RECORD

116787

110 11th Street, 2nd Floor
Oakland, California 94607
Phone 510.451.1761
Fax : 510.451.1150

Sampled for John Calhoun of Calhoun Bros.

Project Name: Evergreen Elementary RAW

Job No.: Aramas Quarry - Engineered Fill Stockpile

Report To: John Cali, -/- Barrett / -. Erski

Sampler (print): Christopher Vertin (observed sampling) / Jon Erskine

Sampler (signature): [signature]

Electronic Deliverable Format Required: ☐ YES ☐ NO

EDF LOGCODE: ☐ LAMV ☐ LAO ☐ LAF

Global ID # :

Turnaround Requirements

- ☒ 5 Working Days
- ☐ 48 Hours
- ☐ 24 Hours
- ☐ 2-3 Hours RUSH
- ☐ ______

QC Requirement:
☒ Level A (standard)

ANALYSES REQUESTED

Sample I.D. (Field Point Name)	Date	Time	Lab I.D.	Sample Matrix	No. of Cont.	TPH as gas/BTEX/MTBE Method: ☐8015/8021 ☐8260	TPH as diesel (8015M) ☐add silica gel column ☐add Oil Range	Purgeable Petroleum Hydrocarbons	Extractable Petroleum, Hydrocarbons / with silica gel column	Organochlorine Pesticides (8081)	Metals: ☐As, Pb, Hg ☒17 CAM	Halogenated VOCs (Abbreviated list by 8260)	Halogenated VOCs (8260 full list)	PAHs ☐ 8310 ☐ 8270 SIM	pH	NOA-TEM Quantitative		Remarks
EFP-1 Comp 6 (A-D)	6.2.09	12:06		Soil	4													* Hold
EFP-1 Comp 7 (A-D)	⊥	12:08		⊥	1													* Hold
EFP-1 NOA-11	6.2.09	12:05		Soil	1													** Hold
EFP-1 NOA-12		12:09																** Hold
EFP-1 NOA-13		12:12																** Hold
EFP-1 NOA-14	⊥	12:15		⊥	⊥													** Hold

Remarks: ** Ship to Asbestos TEM Laboratory in Berkeley, CA for analysis
*- 4pt Composite

Relinquished By: [signature]	Date: 6/2/09	Time: 15:40	Received By: [signature] (TASF)	Date: 6/2/09	Time: 1540	PM Initial:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Lab of Record:			Temp: 5.1°C
			Received by Lab:	Date:	Time:	

Login Sample Receipt Check List

Client: Granite Rock Company

Job Number: 720-20324-1

Login Number: 20324

List Source: TestAmerica San Francisco

Creator: Hoang, Julie

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ANALYTICAL REPORT

Job Number: 720-20797-1

Job Description: Evergreen Elementary RAW

For:
Granite Rock Company
PO BOX 50001
Watsonville, CA 95077

Attention: Mr. Jon Erskine

Approved for release.
Dimple Sharma
Project Manager I
6/30/2009 2:52 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
06/30/2009

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Granite Rock Company

Job Number: 720-20797-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-20797-5	**EFP-1 COMP 8 A-D**				
Barium		47	0.99	mg/Kg	6010B
Chromium		3.9	2.5	mg/Kg	6010B
Cobalt		9.5	0.50	mg/Kg	6010B
Copper		42	2.5	mg/Kg	6010B
Vanadium		70	0.99	mg/Kg	6010B
Zinc		31	2.5	mg/Kg	6010B
Mercury		0.040	0.020	mg/Kg	7471A
Soluble					
pH-Soluble		8.46	0.100	SU	9045C

METHOD SUMMARY

Client: Granite Rock Company Job Number: 720-20797-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
Mercury (CVAA)	TAL SF	SW846 7471A	
Preparation, Mercury	TAL SF		SW846 7471A
pH	TAL SF	SW846 9045C	
Deionized Water Leaching Procedure	TAL SF		ASTM DI Leach
General Sub Contract Method		Subcontract	

Lab References:

=

TAL SF = TestAmerica San Francisco

Method References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Granite Rock Company

Job Number: 720-20797-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-20797-5	EFP-1 COMP 8 A-D	Solid	06/19/2009 1141	06/19/2009 1500
720-20797-6	EFP-1 NOA-15	Solid	06/19/2009 1140	06/19/2009 1500
720-20797-7	EFP-1 NOA-16	Solid	06/19/2009 1143	06/19/2009 1500
720-20797-8	EFP-1 NOA-17	Solid	06/19/2009 1145	06/19/2009 1500
720-20797-9	EFP-1 NOA-18	Solid	06/19/2009 1152	06/19/2009 1500

Client: Granite Rock Company

Job Number: 720-20797-1

Client Sample ID: **EFP-1 COMP 8 A-D**

Lab Sample ID: 720-20797-5
Client Matrix: Solid

Date Sampled: 06/19/2009 1141
Date Received: 06/19/2009 1500

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 5.0
Date Analyzed: 06/24/2009 2236
Date Prepared: 06/24/2009 0834

Analysis Batch: 720-52861
Prep Batch: 720-52769

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.01 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		2.0
Arsenic		ND		0.99
Barium		47		0.99
Beryllium		ND		0.50
Cadmium		ND		0.50
Chromium		3.9		2.5
Cobalt		9.5		0.50
Copper		42		2.5
Lead		ND		0.99
Molybdenum		ND		2.5
Nickel		ND		2.5
Selenium		ND		2.0
Silver		ND		0.99
Thallium		ND		0.99
Vanadium		70		0.99
Zinc		31		2.5

7471A Mercury (CVAA)

Method: 7471A
Preparation: 7471A
Dilution: 1.0
Date Analyzed: 06/24/2009 1758
Date Prepared: 06/24/2009 1113

Analysis Batch: 720-52829
Prep Batch: 720-52784

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.59 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		0.040		0.020

Client: Granite Rock Company

Job Number: 720-20797-1

General Chemistry

Client Sample ID: **EFP-1 COMP 8 A-D**

Lab Sample ID: 720-20797-5
Client Matrix: Solid

Date Sampled: 06/19/2009 1141
Date Received: 06/19/2009 1500

Analyte	Result	Qual	Units	RL	Dil	Method
pH-Soluble	8.46		SU	0.100	1.0	9045C
	Anly Batch: 720-52713		Date Analyzed 06/23/2009 1431			DryWt Corrected: N

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: Granite Rock Company

Job Number: 720-20797-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-52769					
LCS 720-52769/2-A	Lab Control Sample	T	Solid	3050B	
LCSD 720-52769/3-A	Lab Control Sample Duplicate	T	Solid	3050B	
MB 720-52769/1-A	Method Blank	T	Solid	3050B	
720-20797-5	EFP-1 COMP 8 A-D	T	Solid	3050B	
Prep Batch: 720-52784					
LCS 720-52784/2-A	Lab Control Sample	T	Solid	7471A	
LCSD 720-52784/3-A	Lab Control Sample Duplicate	T	Solid	7471A	
MB 720-52784/1-A	Method Blank	T	Solid	7471A	
720-20797-5	EFP-1 COMP 8 A-D	T	Solid	7471A	
Analysis Batch:720-52829					
LCS 720-52784/2-A	Lab Control Sample	T	Solid	7471A	720-52784
LCSD 720-52784/3-A	Lab Control Sample Duplicate	T	Solid	7471A	720-52784
MB 720-52784/1-A	Method Blank	T	Solid	7471A	720-52784
720-20797-5	EFP-1 COMP 8 A-D	T	Solid	7471A	720-52784
Analysis Batch:720-52861					
LCS 720-52769/2-A	Lab Control Sample	T	Solid	6010B	720-52769
LCSD 720-52769/3-A	Lab Control Sample Duplicate	T	Solid	6010B	720-52769
MB 720-52769/1-A	Method Blank	T	Solid	6010B	720-52769
720-20797-5	EFP-1 COMP 8 A-D	T	Solid	6010B	720-52769

Report Basis
T = Total

General Chemistry					
Prep Batch: 720-52685					
LCS 720-52685/1-A	Lab Control Sample	S	Solid	DI Leach	
720-20797-5	EFP-1 COMP 8 A-D	S	Solid	DI Leach	
720-20797-5DU	Duplicate	S	Solid	DI Leach	
Analysis Batch:720-52713					
LCS 720-52685/1-A	Lab Control Sample	S	Solid	9045C	
720-20797-5	EFP-1 COMP 8 A-D	S	Solid	9045C	
720-20797-5DU	Duplicate	S	Solid	9045C	

Report Basis
S = Soluble

Client: Granite Rock Company

Job Number: 720-20797-1

Method Blank - Batch: 720-52769

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 720-52769/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 2105
Date Prepared: 06/24/2009 0834

Analysis Batch: 720-52861
Prep Batch: 720-52769
Units: mg/Kg

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.04 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Antimony	ND		0.38
Arsenic	ND		0.19
Barium	ND		0.19
Beryllium	ND		0.096
Cadmium	ND		0.096
Chromium	ND		0.48
Cobalt	ND		0.096
Copper	ND		0.48
Lead	ND		0.19
Molybdenum	ND		0.48
Nickel	ND		0.48
Selenium	ND		0.38
Silver	ND		0.19
Thallium	ND		0.19
Vanadium	ND		0.19
Zinc	ND		0.48

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20797-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-52769

Method: 6010B
Preparation: 3050B

LCS Lab Sample ID:	LCS 720-52769/2-A	Analysis Batch:	720-52861	Instrument ID:	Thermo 6500 ICP
Client Matrix:	Solid	Prep Batch:	720-52769	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.04 g
Date Analyzed:	06/24/2009 2110			Final Weight/Volume:	50 mL
Date Prepared:	06/24/2009 0834				

LCSD Lab Sample ID:	LCSD 720-52769/3-A	Analysis Batch:	720-52861	Instrument ID:	Thermo 6500 ICP
Client Matrix:	Solid	Prep Batch:	720-52769	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	0.97 g
Date Analyzed:	06/24/2009 2115			Final Weight/Volume:	50 mL
Date Prepared:	06/24/2009 0834				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Antimony	91	92	80 - 120	8	20		
Arsenic	93	92	80 - 120	6	20		
Barium	97	97	80 - 120	7	20		
Beryllium	94	95	80 - 120	8	20		
Cadmium	95	96	80 - 120	8	20		
Chromium	97	98	80 - 120	9	20		
Cobalt	96	96	80 - 120	7	20		
Copper	96	96	80 - 120	7	20		
Lead	95	96	80 - 120	8	20		
Molybdenum	98	99	80 - 120	8	20		
Nickel	96	97	80 - 120	8	20		
Selenium	92	92	80 - 120	6	20		
Silver	91	92	80 - 120	8	20		
Thallium	95	95	80 - 120	7	20		
Vanadium	94	95	80 - 120	8	20		
Zinc	94	95	80 - 120	8	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20797-1

Method Blank - Batch: 720-52784

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 720-52784/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 1726
Date Prepared: 06/24/2009 1113

Analysis Batch: 720-52829
Prep Batch: 720-52784
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Mercury	ND		0.020

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-52784

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 720-52784/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 1728
Date Prepared: 06/24/2009 1113

Analysis Batch: 720-52829
Prep Batch: 720-52784
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-52784/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/24/2009 1730
Date Prepared: 06/24/2009 1113

Analysis Batch: 720-52829
Prep Batch: 720-52784
Units: mg/Kg

Instrument ID: LL HG Analyzer
Lab File ID: N/A
Initial Weight/Volume: 0.62 g
Final Weight/Volume: 50 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Mercury	102	103	80 - 120	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Granite Rock Company

Job Number: 720-20797-1

Lab Control Sample - Batch: 720-52713

Method: 9045C
Preparation: N/A

Lab Sample ID:	LCS 720-52685/1-A	Analysis Batch:	720-52713	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	SU	Initial Weight/Volume:	50 mL
Date Analyzed:	06/23/2009 1350			Final Weight/Volume:	50 mL
Date Prepared:	N/A				
Date Leached:	06/23/2009 1135	Leachate Batch:	720-52685		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
pH-Soluble	7.00	7.050	101	99 - 101	

Duplicate - Batch: 720-52713

Method: 9045C
Preparation: N/A

Lab Sample ID:	720-20797-5	Analysis Batch:	720-52713	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	SU	Initial Weight/Volume:	20 mL
Date Analyzed:	06/23/2009 1435			Final Weight/Volume:	20 mL
Date Prepared:	N/A				
Date Leached:	06/23/2009 1138	Leachate Batch:	720-52685		

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH-Soluble	8.46	8.440	0	5	

Calculations are performed before rounding to avoid round-off errors in calculated results.

TRANSMISSION ELECTRON MICROSCOPY ANALYTICAL REPORT

Contact: Dimple Sharma

Address:

Job Site / No.: Evergreen Elementary RAW 72004835

REPORT NO. 077656

Date: Jun-29-09

Date Received: Jun-23-09

Total Samples Analyzed: 4

SAMPLE DESCRIPTION

Client Sample # EFP-1 NOA-15

Laboratory Sample # 1266-00008-001

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg): 58.2

Volume of Suspension Water (ml): 500

Volume of Suspension Filtered (ml): 0.5

Filter Type & Pore Size: MCE 0.22um

Effective Filter Area (sq.mm): 201

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %) DETECTED IN SCAN AREA

Fiber Length	CHRYSOTILE Struct.#	CHRYSOTILE	AMPHIBOLE Struct.#	AMPHIBOLE
<10um	NSD	<0.0001	NSD	<0.0001
>10um	NSD	<0.0001	NSD	<0.0001
Total Structures	NSD		NSD	

Analytical Sensitivity (Wt. %)

<0.0001

Assumes Smallest Structure Countable is a Chrysotile Fiber 0.5um Long * 0.05 um Wide.

TOTAL (Wt.%)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM SCANNING PARAMETERS

Low Mag (10,000X)	# Grid Openings Scanned: 20	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.198
High Mag (18,000X)	# Grid Openings Scanned: 1	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.0099

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

ASBESTOS TEM LABORATORIES, INC.
www.asbestostemlabs.com
630 BANCROFT WAY, BERKELEY, CA 94710 (510) 704-8930
With Offices in Reno, NV (775) 359-3377

TRANSMISSION ELECTRON MICROSCOPY ANALYTICAL REPORT

Contact: Dimple Sharma

Address:

Job Site / No.: Evergreen Elementary RAW 72004835

REPORT NO. 077656

Date: Jun-29-09

Date Received: Jun-23-09

Total Samples Analyzed: 4

SAMPLE DESCRIPTION

Client Sample # EFP-1 NOA-16

Laboratory Sample # 1266-00008-002

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg): 60.3

Volume of Suspension Water (ml): 500

Volume of Suspension Filtered (ml): 0.5

Filter Type & Pore Size: MCE 0.22um

Effective Filter Area (sq.mm): 201

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %) DETECTED IN SCAN AREA

Fiber Length	CHRYSOTILE Struct.#	CHRYSOTILE	AMPHIBOLE Struct.#	AMPHIBOLE
<10um	NSD	<0.0001	NSD	<0.0001
>10um	NSD	<0.0001	NSD	<0.0001
Total Structures	NSD		NSD	

Analytical Sensitivity (Wt. %)

<0.0001

Assumes Smallest Structure Countable is a Chrysotile Fiber 0.5um Long * 0.05 um Wide.

TOTAL (Wt.%)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM SCANNING PARAMETERS

Low Mag (10,000X)	# Grid Openings Scanned: 20	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.198
High Mag (18,000X)	# Grid Openings Scanned: 1	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.0099

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

ASBESTOS TEM LABORATORIES, INC.
www.asbestostemlabs.com
630 BANCROFT WAY, BERKELEY, CA 94710 (510) 704-8930
With Offices in Reno, NV (775) 359-3377

TRANSMISSION ELECTRON MICROSCOPY ANALYTICAL REPORT

Contact: Dimple Sharma

Address:

Job Site / No. Evergreen Elementary RAW 72004835

REPORT NO. **077656**

Date: Jun-29-09

Date Received: Jun-23-09

Total Samples Analyzed: 4

SAMPLE DESCRIPTION

Client Sample # **EFP-1 NOA-17**

Laboratory Sample # 1266-00008-003

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg): 63.6

Volume of Suspension Water (ml): 500

Volume of Suspension Filtered (ml): 0.5

Filter Type & Pore Size: MCE 0.22um

Effective Filter Area (sq.mm): 201

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %) DETECTED IN SCAN AREA

Fiber Length	CHRYSOTILE Struct.#	CHRYSOTILE	AMPHIBOLE Struct.#	AMPHIBOLE
<10um	NSD	<0.0001	NSD	<0.0001
>10um	NSD	<0.0001	NSD	<0.0001
Total Structures	NSD		NSD	

Analytical Sensitivity (Wt. %)

<0.0001

Assumes Smallest Structure Countable is a Chrysotile Fiber 0.5um Long * 0.05 um Wide.

TOTAL (Wt.%)

CHRYSOTILE	AMPHIBOLE	TOTAL
<0.0001	<0.0001	<0.0001

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM SCANNING PARAMETERS

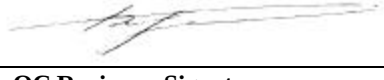
Low Mag (10,000X)	# Grid Openings Scanned: 20	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.198
High Mag (18,000X)	# Grid Openings Scanned: 1	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.0099

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature



Lab QC Reviewer Signature

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With Offices in Reno, NV (775) 359-3377

TRANSMISSION ELECTRON MICROSCOPY ANALYTICAL REPORT

Contact: Dimple Sharma

Address:

Job Site / No.: Evergreen Elementary RAW 72004835

REPORT NO. 077656

Date: Jun-29-09

Date Received: Jun-23-09

Total Samples Analyzed: 4

SAMPLE DESCRIPTION

Client Sample # EFP-1 NOA-18

Laboratory Sample # 1266-00008-004

SAMPLE PREPARATION PARAMETERS

Weight of Material Suspended (mg): 59.4

Volume of Suspension Water (ml): 500

Volume of Suspension Filtered (ml): 0.5

Filter Type & Pore Size: MCE 0.22um

Effective Filter Area (sq.mm): 201

CALCULATED ASBESTOS CONCENTRATION (WEIGHT %) DETECTED IN SCAN AREA

Fiber Length	CHRYSOTILE Struct.#	CHRYSOTILE	AMPHIBOLE Struct.#	AMPHIBOLE
<10um	NSD	<0.0001	NSD	<0.0001
>10um	NSD	<0.0001	NSD	<0.0001
Total Structures	NSD		NSD	

TOTAL (Wt.%)		
<0.0001	<0.0001	<0.0001

Analytical Sensitivity (Wt. %)

<0.0001

Assumes Smallest Structure Countable is a Chrysotile Fiber 0.5um Long * 0.05 um Wide.

COMMENTS

No Asbestos Detected

Filter Loading: Moderate

SAED Photo ID Nos.

TEM SCANNING PARAMETERS

Low Mag (10,000X)	# Grid Openings Scanned: 20	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.198
High Mag (18,000X)	# Grid Openings Scanned: 1	Area (sq.mm): 0.0099	Scan Area (sq.mm): 0.0099

NOTATION KEY

Chrys. - Chrysotile Asbestos
Amph. - Amphibole Asbestos
NSD - No Structures Detected
Non-Asb. - Non-Asbestos

1 um = 1 micron = 0.001 mm
1 mm = 1 millimeter
1 sq.mm = 1 square millimeter
1 cc = 1 cubic centimeter

Analyst Signature

Lab QC Reviewer Signature

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With Offices in Reno, NV (775) 359-3377

TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sharma, Dimple	Carrier Tracking No(s):	COC No: 720-5677.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: dimple.sharma@testamericainc.com		Page: Page 1 of 1
Company: ASBESTOS TEM LABORATORIES, INC.				Job #: 720-20797-1
Address: 630 BANCROFT WAY,	Due Date Requested: 6/29/2009			
City: Berkeley	TAT Requested (days):			
State, Zip: CA, 94710				
Phone:	PO #:			
Email:	WO #:			
Project Name: Evergreen Elementary RAW	Project #: 72004835			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	SUBCONTRACT/ TEM Quantitative	Special Instructions/Note:
EFP-1 NOA-15 (720-20797-6)	6/19/09	11:40		Solid	X	
EFP-1 NOA-16 (720-20797-7)	6/19/09	11:43		Solid	X	
EFP-1 NOA-17 (720-20797-8)	6/19/09	11:45		Solid	X	
EFP-1 NOA-18 (720-20797-9)	6/19/09	11:52		Solid	X	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	6-22-09 1315	ST	[signature]	6-22-09 1315	TAS
2	[signature]	6/23/09		[signature]		
3					06-23-09 12:11	RCVD

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ASBESTOS TEM LABORATORIES, INC.

SAMPLE RECEIPT and LOGIN CHECKLIST

Client: Test America SF Login Number: 77656

Project: Evergreen RAW

Sample Receipt

By: TB (initial) Date: 6-23

Did samples arrive with a shipping bill (airbill etc.)?	(Yes)	No
If yes, enter name of courier and airbill #:	courier	
Were custody seals present and intact?	Yes	(No)
If yes, enter name and date on custody seal:		
Did COC forms accompany samples?	(Yes)	No
Were the COC forms filled out correctly?	(Yes)	No
Did you sign and date the COC forms in the correct place?	(Yes)	No
Was the project identifiable from the COC forms? If yes, enter project mane on top of this form.	(Yes)	No
Were bulk and air samples received separately?	(Yes)	No
Was the client contacted about discrepancies? If yes, give details below:	Yes	(No)

Who was contacted? _____ By: _____ Date: _____

Notes: _____

Sample Login

By: TB (initial) Date: 6-23

Describe packing material (i.e. vermiculite, polysterene)	plastic zip-lock	
Were samples sealed in separate bags?	(Yes)	No
Did samples arrive intact and unbroken?	(Yes)	No
Were sample custody labels present and intact?	(Yes)	No
Were sample labels complete (date,time, initials)?	Yes	(No)
Did sample labels agree with COC?	(Yes)	No
Was the client contacted about discrepancies? If yes, give details below:	Yes	(No)

Who was contacted? _____ By: _____ Date: _____

Notes: _____

Include with e-mail of client notification of sample receipt.

720-20797

Sharma, Dimple

From: Mark Campbell [marqcambell@sbcglobal.net]
Sent: Monday, June 22, 2009 1:04 PM
To: Sharma, Dimple
Cc: 'Gavin Barquero'; 'Steve Petcavich'; tmccloskey@sesinconline.net; 'Dave Sinclair'
Subject: Aromas Testing Evergreen School

Dimple,

Per our telephone conversation, please proceed with the testing as follows:

NOA TEM Quantitative. Use the four samples delivered to you on Friday June 19 plus NOA-12 and NOA-14 from the June 2 samples. That would be a total of 6 samples for NOA-TEM Quant. I believe these samples go to the Berkeley Lab.

CAM 17. Use the sample for Friday June 19 plus the two composite samples from June 2. That would be a total of three samples for testing.

pH testing. The samples also need to be tested for pH.

I understand the turn around time is five days. Please proceed with the tests immediately. Thanks for your help. If you have any questions, please contact me at 805-909-8056.

Sincerely,

Mark Campbell

720-20797

CHAIN OF CUSTODY RECORD

STRATEGIC ENGINEERING & SCIENCE

Sampled for John Calhoun of Calhoun Bros

110 11th Street, 2nd Floor
Oakland, California 94607
Phone 510.451.1761
Fax: 510.451.1150

117263

Project Name: Evergreen Elelmentary RAW

Job No.: Aromas Quarry - Engineered Fill Stockpile

Report To: John Calhoun c/o Don Barrett / Jon Erskine Graniterock

Sampler (print): (observed sampling) Chris Vertin / Jon Erskine

Sampler (signature): [signature]

Electronic Deliverable Format Required: ☐ YES ☐ NO

EDF LOGCODE: ☐ LAMV ☐ LAO ☐ LAF

Global ID # :

Turnaround Requirements

- ☒ **5 Working Days**
- ☐ **48 Hours**
- ☐ **24 Hours**
- ☐ **2-3 Hours RUSH**
- ☐ _____

QC Requirement:
☒ **Level A (standard)**

ANALYSES REQUESTED

Sample I.D. (Field Point Name)	Date	Time	Lab I.D.	Sample Matrix	No. of Cont.	TPH as gas/BTEX/MTBE Method: ☐8015/8021 ☐8260	TPH as diesel (8015M) ☐add silica gel column ☐add Oil Range	Purgeable Petroleum Hydrocarbons	Extractable Petroleum. Hydrocarbons / with silica gel column	Organochlorine Pesticides (8081)	Metals: ☐As, Pb, Hg ☒17 CAM	Halogenated VOCs (Abbreviated list by 8260)	Halogenated VOCs (8260 full list)	PAHs ☐ 8310 ☐ 8270 SIM	pH	NOA TEM Quantitative	Remarks
EFP-1 COMP 8(A-D)	6.19.09	11:41		Soil	4												* 4-pt Composite * Hold
EFP-1 NOA-15	6.19.09	11:40		Soil	1												** Slip to Asbestos TEM Laboratories in Berkeley CA for analysis ** Hold
EFP-1 NOA-16	"	11:43		"	"												** Hold
EFP-1 NOA-17	"	11:45		"	"												** Hold
EFP-1 NOA-18	"	11:52		"	"												** Hold

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PL BG

Relinquished By: [signature]	Date: 6/19/09	Time: 15:00	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Lab of Record:		
			Received by Lab: [signature]	Date: 6-19-09	Time: 1500

PM Initial:

Temp: 24.6°C

3.2°C

Login Sample Receipt Check List

Client: Granite Rock Company

Job Number: 720-20797-1

Login Number: 20797

List Source: TestAmerica San Francisco

Creator: Mullen, Joan

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-62471-1
Client Project/Site: EFP

For:
Granite Rock Company
PO BOX 50001
Watsonville, California 95077

Attn: Mr. Jon Erskine

Authorized for release by:
1/28/2015 11:59:05 AM

Micah Smith, Project Manager II
(925)484-1919
micah.smith@testamericainc.com

Table of Contents

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-62471-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-62471-1

Comments
No additional comments.

Receipt
The samples were received on 1/20/2015 6:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2º C.

Metals
Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries precision and RPD for batch 440-231857 were outside control limits for Copper. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) and post dilution spike (PDS) were within acceptance limits. (720-62471-1 MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-1 — Lab Sample ID: 720-62471-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	40		0.50		mg/Kg	20		6020	Total/NA
Chromium	5.7		1.0		mg/Kg	20		6020	Total/NA
Cobalt	7.6		0.50		mg/Kg	20		6020	Total/NA
Copper	35		1.0		mg/Kg	20		6020	Total/NA
Nickel	3.4		1.0		mg/Kg	20		6020	Total/NA
Lead	0.55		0.50		mg/Kg	20		6020	Total/NA
Vanadium	85		1.0		mg/Kg	20		6020	Total/NA
Zinc	28		10		mg/Kg	20		6020	Total/NA
Mercury	0.085		0.0088		mg/Kg	1		7471A	Total/NA

Client Sample ID: EFP15-2 — Lab Sample ID: 720-62471-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	45		0.50		mg/Kg	20		6020	Total/NA
Chromium	6.9		1.0		mg/Kg	20		6020	Total/NA
Cobalt	7.8		0.50		mg/Kg	20		6020	Total/NA
Copper	39		5.0		mg/Kg	100		6020	Total/NA
Nickel	6.2		1.0		mg/Kg	20		6020	Total/NA
Lead	0.50		0.50		mg/Kg	20		6020	Total/NA
Vanadium	100		5.0		mg/Kg	100		6020	Total/NA
Zinc	28		10		mg/Kg	20		6020	Total/NA
Mercury	0.11		0.0088		mg/Kg	1		7471A	Total/NA

Client Sample ID: EFP15-3 — Lab Sample ID: 720-62471-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	39		0.50		mg/Kg	20		6020	Total/NA
Chromium	5.8		1.0		mg/Kg	20		6020	Total/NA
Cobalt	8.6		0.50		mg/Kg	20		6020	Total/NA
Copper	51		1.0		mg/Kg	20		6020	Total/NA
Nickel	2.9		1.0		mg/Kg	20		6020	Total/NA
Lead	0.62		0.50		mg/Kg	20		6020	Total/NA
Vanadium	120		1.0		mg/Kg	20		6020	Total/NA
Zinc	30		10		mg/Kg	20		6020	Total/NA
Mercury	0.053		0.0087		mg/Kg	1		7471A	Total/NA

Client Sample ID: EFP15-4 — Lab Sample ID: 720-62471-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	34		0.50		mg/Kg	20		6020	Total/NA
Chromium	6.5		1.0		mg/Kg	20		6020	Total/NA
Cobalt	8.3		0.50		mg/Kg	20		6020	Total/NA
Copper	37		1.0		mg/Kg	20		6020	Total/NA
Molybdenum	1.2		1.0		mg/Kg	20		6020	Total/NA
Nickel	3.2		1.0		mg/Kg	20		6020	Total/NA
Lead	0.64		0.50		mg/Kg	20		6020	Total/NA
Vanadium	87		1.0		mg/Kg	20		6020	Total/NA
Zinc	34		10		mg/Kg	20		6020	Total/NA
Mercury	0.043		0.0085		mg/Kg	1		7471A	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-1
Date Collected: 01/20/15 12:00
Date Received: 01/20/15 18:40

Lab Sample ID: 720-62471-1
Matrix: Solid

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Arsenic	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Barium	**40**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Beryllium	ND		0.30		mg/Kg		01/24/15 22:57	01/27/15 15:57	20
Cadmium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Chromium	**5.7**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Cobalt	**7.6**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Copper	**35**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Molybdenum	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Nickel	**3.4**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Lead	**0.55**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Antimony	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Thallium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Vanadium	**85**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Zinc	**28**		10		mg/Kg		01/24/15 22:57	01/27/15 14:11	20
Selenium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:11	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.085**		0.0088		mg/Kg		01/21/15 12:06	01/21/15 18:16	1

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-2
Date Collected: 01/20/15 12:05
Date Received: 01/20/15 18:40

Lab Sample ID: 720-62471-2
Matrix: Solid

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Arsenic	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Barium	**45**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Beryllium	ND		0.30		mg/Kg		01/24/15 22:57	01/27/15 16:08	20
Cadmium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Chromium	**6.9**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Cobalt	**7.8**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Copper	**39**		5.0		mg/Kg		01/24/15 22:57	01/27/15 15:29	100
Molybdenum	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Nickel	**6.2**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Lead	**0.50**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Antimony	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Thallium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Vanadium	**100**		5.0		mg/Kg		01/24/15 22:57	01/27/15 15:29	100
Zinc	**28**		10		mg/Kg		01/24/15 22:57	01/27/15 14:19	20
Selenium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:19	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.11**		0.0088		mg/Kg		01/21/15 12:06	01/21/15 18:24	1

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-3
Date Collected: 01/20/15 12:10
Date Received: 01/20/15 18:40

Lab Sample ID: 720-62471-3
Matrix: Solid

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Arsenic	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Barium	**39**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Beryllium	ND		0.30		mg/Kg		01/24/15 22:57	01/27/15 16:13	20
Cadmium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Chromium	**5.8**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Cobalt	**8.6**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Copper	**51**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Molybdenum	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Nickel	**2.9**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Lead	**0.62**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Antimony	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Thallium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Vanadium	**120**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Zinc	**30**		10		mg/Kg		01/24/15 22:57	01/27/15 14:24	20
Selenium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:24	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.053**		0.0087		mg/Kg		01/21/15 12:06	01/21/15 18:26	1

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-4
Date Collected: 01/20/15 12:15
Date Received: 01/20/15 18:40

Lab Sample ID: 720-62471-4
Matrix: Solid

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Arsenic	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Barium	**34**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Beryllium	ND		0.30		mg/Kg		01/24/15 22:57	01/27/15 16:16	20
Cadmium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Chromium	**6.5**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Cobalt	**8.3**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Copper	**37**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Molybdenum	**1.2**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Nickel	**3.2**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Lead	**0.64**		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Antimony	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Thallium	ND		0.50		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Vanadium	**87**		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Zinc	**34**		10		mg/Kg		01/24/15 22:57	01/27/15 14:26	20
Selenium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:26	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.043**		0.0085		mg/Kg		01/21/15 12:06	01/21/15 18:28	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 440-231857/1-A ^20
Matrix: Solid
Analysis Batch: 232330

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 231857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Arsenic	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Barium	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Cadmium	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Chromium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Cobalt	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Copper	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Molybdenum	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Nickel	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Lead	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Antimony	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Thallium	ND		0.51		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Vanadium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Zinc	ND		10		mg/Kg		01/24/15 22:57	01/27/15 14:06	20
Selenium	ND		1.0		mg/Kg		01/24/15 22:57	01/27/15 14:06	20

Lab Sample ID: MB 440-231857/1-A ^20
Matrix: Solid
Analysis Batch: 232361

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 231857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.30		mg/Kg		01/24/15 22:57	01/27/15 15:51	20

Lab Sample ID: LCS 440-231857/2-A ^20
Matrix: Solid
Analysis Batch: 232330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	24.9	22.4		mg/Kg		90	80 - 120
Arsenic	49.8	44.0		mg/Kg		89	80 - 120
Barium	49.8	43.3		mg/Kg		87	80 - 120
Cadmium	49.8	43.9		mg/Kg		88	80 - 120
Chromium	49.8	43.8		mg/Kg		88	80 - 120
Cobalt	49.8	41.6		mg/Kg		84	80 - 120
Copper	49.8	40.9		mg/Kg		82	80 - 120
Molybdenum	49.8	43.4		mg/Kg		87	80 - 120
Nickel	49.8	40.8		mg/Kg		82	80 - 120
Lead	49.8	44.5		mg/Kg		89	80 - 120
Antimony	49.8	45.7		mg/Kg		92	80 - 120
Thallium	49.8	44.0		mg/Kg		88	80 - 120
Vanadium	49.8	44.5		mg/Kg		90	80 - 120
Zinc	49.8	42.9		mg/Kg		86	80 - 120
Selenium	49.8	43.8		mg/Kg		88	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 440-231857/2-A ^20
Matrix: Solid
Analysis Batch: 232361

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	49.8	51.8	E	mg/Kg		104	80 - 120

Lab Sample ID: 720-62471-1 MS
Matrix: Solid
Analysis Batch: 232330

Client Sample ID: EFP15-1
Prep Type: Total/NA
Prep Batch: 231857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		25.1	20.7		mg/Kg		82	80 - 120
Arsenic	ND		50.3	41.7		mg/Kg		82	80 - 120
Barium	40		50.3	88.8		mg/Kg		97	80 - 120
Cadmium	ND		50.3	41.1		mg/Kg		82	80 - 120
Chromium	5.7		50.3	42.6	F1	mg/Kg		73	80 - 120
Cobalt	7.6		50.3	41.7	F1	mg/Kg		68	80 - 120
Copper	35		50.3	120	F1	mg/Kg		168	80 - 120
Molybdenum	ND		50.3	42.1		mg/Kg		82	80 - 120
Nickel	3.4		50.3	36.2	F1	mg/Kg		65	80 - 120
Lead	0.55		50.3	44.5		mg/Kg		88	80 - 120
Antimony	ND		50.3	26.7	F1	mg/Kg		53	80 - 120
Thallium	ND		50.3	42.3		mg/Kg		84	80 - 120
Vanadium	85		50.3	134		mg/Kg		98	80 - 120
Zinc	28		50.3	69.8		mg/Kg		84	80 - 120
Selenium	ND		50.3	39.9	F1	mg/Kg		79	80 - 120

Lab Sample ID: 720-62471-1 MS
Matrix: Solid
Analysis Batch: 232361

Client Sample ID: EFP15-1
Prep Type: Total/NA
Prep Batch: 231857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		50.3	42.5		mg/Kg		85	80 - 120

Lab Sample ID: 720-62471-1 MSD
Matrix: Solid
Analysis Batch: 232330

Client Sample ID: EFP15-1
Prep Type: Total/NA
Prep Batch: 231857

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		25.1	20.1		mg/Kg		80	80 - 120	3	20
Arsenic	ND		50.3	40.4		mg/Kg		80	80 - 120	3	20
Barium	40		50.3	85.1		mg/Kg		89	80 - 120	4	20
Cadmium	ND		50.3	39.9	F1	mg/Kg		79	80 - 120	3	20
Chromium	5.7		50.3	41.0	F1	mg/Kg		70	80 - 120	4	20
Cobalt	7.6		50.3	43.8	F1	mg/Kg		72	80 - 120	5	20
Copper	35		50.3	71.9	F1 F2	mg/Kg		72	80 - 120	50	20
Molybdenum	ND		50.3	41.8		mg/Kg		81	80 - 120	1	20
Nickel	3.4		50.3	37.9	F1	mg/Kg		69	80 - 120	5	20
Lead	0.55		50.3	42.4		mg/Kg		83	80 - 120	5	20
Antimony	ND		50.3	28.2	F1	mg/Kg		56	80 - 120	5	20
Thallium	ND		50.3	40.4		mg/Kg		80	80 - 120	5	20
Vanadium	85		50.3	118	F1	mg/Kg		66	80 - 120	13	20
Zinc	28		50.3	65.0	F1	mg/Kg		75	80 - 120	7	20

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 720-62471-1 MSD — **Client Sample ID: EFP15-1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 232330 — **Prep Batch: 231857**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	ND		50.3	39.3	F1	mg/Kg		78	80 - 120	1	20

Lab Sample ID: 720-62471-1 MSD — **Client Sample ID: EFP15-1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 232361 — **Prep Batch: 231857**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	ND		50.3	38.9	F1	mg/Kg		77	80 - 120	9	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-174503/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 174528 — **Prep Batch: 174503**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.010		mg/Kg		01/21/15 12:06	01/21/15 17:55	1

Lab Sample ID: LCS 720-174503/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 174528 — **Prep Batch: 174503**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.875		mg/Kg		105	80 - 120

Lab Sample ID: LCSD 720-174503/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 174528 — **Prep Batch: 174503**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.833	0.875		mg/Kg		105	80 - 120	0	20

Metals

Prep Batch: 174503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-62471-1	EFP15-1	Total/NA	Solid	7471A	
720-62471-2	EFP15-2	Total/NA	Solid	7471A	
720-62471-3	EFP15-3	Total/NA	Solid	7471A	
720-62471-4	EFP15-4	Total/NA	Solid	7471A	
LCS 720-174503/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-174503/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-174503/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 174528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-62471-1	EFP15-1	Total/NA	Solid	7471A	174503
720-62471-2	EFP15-2	Total/NA	Solid	7471A	174503
720-62471-3	EFP15-3	Total/NA	Solid	7471A	174503
720-62471-4	EFP15-4	Total/NA	Solid	7471A	174503
LCS 720-174503/2-A	Lab Control Sample	Total/NA	Solid	7471A	174503
LCSD 720-174503/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	174503
MB 720-174503/1-A	Method Blank	Total/NA	Solid	7471A	174503

Prep Batch: 231857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-62471-1	EFP15-1	Total/NA	Solid	3050B	
720-62471-1 MS	EFP15-1	Total/NA	Solid	3050B	
720-62471-1 MSD	EFP15-1	Total/NA	Solid	3050B	
720-62471-2	EFP15-2	Total/NA	Solid	3050B	
720-62471-3	EFP15-3	Total/NA	Solid	3050B	
720-62471-4	EFP15-4	Total/NA	Solid	3050B	
LCS 440-231857/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	
MB 440-231857/1-A ^20	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 232330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-62471-1	EFP15-1	Total/NA	Solid	6020	231857
720-62471-1 MS	EFP15-1	Total/NA	Solid	6020	231857
720-62471-1 MSD	EFP15-1	Total/NA	Solid	6020	231857
720-62471-2	EFP15-2	Total/NA	Solid	6020	231857
720-62471-2	EFP15-2	Total/NA	Solid	6020	231857
720-62471-3	EFP15-3	Total/NA	Solid	6020	231857
720-62471-4	EFP15-4	Total/NA	Solid	6020	231857
LCS 440-231857/2-A ^20	Lab Control Sample	Total/NA	Solid	6020	231857
MB 440-231857/1-A ^20	Method Blank	Total/NA	Solid	6020	231857

Analysis Batch: 232361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-62471-1	EFP15-1	Total/NA	Solid	6020	231857
720-62471-1 MS	EFP15-1	Total/NA	Solid	6020	231857
720-62471-1 MSD	EFP15-1	Total/NA	Solid	6020	231857
720-62471-2	EFP15-2	Total/NA	Solid	6020	231857
720-62471-3	EFP15-3	Total/NA	Solid	6020	231857
720-62471-4	EFP15-4	Total/NA	Solid	6020	231857
LCS 440-231857/2-A ^20	Lab Control Sample	Total/NA	Solid	6020	231857
MB 440-231857/1-A ^20	Method Blank	Total/NA	Solid	6020	231857

Lab Chronicle

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-1

Lab Sample ID: 720-62471-1

Date Collected: 01/20/15 12:00

Matrix: Solid

Date Received: 01/20/15 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232361	01/27/15 15:57	YS	TAL IRV
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232330	01/27/15 14:11	YS	TAL IRV
Total/NA	Prep	7471A			174503	01/21/15 12:06	ASB	TAL PLS
Total/NA	Analysis	7471A		1	174528	01/21/15 18:16	SLK	TAL PLS

Client Sample ID: EFP15-2

Lab Sample ID: 720-62471-2

Date Collected: 01/20/15 12:05

Matrix: Solid

Date Received: 01/20/15 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232361	01/27/15 16:08	YS	TAL IRV
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232330	01/27/15 14:19	YS	TAL IRV
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		100	232330	01/27/15 15:29	YS	TAL IRV
Total/NA	Prep	7471A			174503	01/21/15 12:06	ASB	TAL PLS
Total/NA	Analysis	7471A		1	174528	01/21/15 18:24	SLK	TAL PLS

Client Sample ID: EFP15-3

Lab Sample ID: 720-62471-3

Date Collected: 01/20/15 12:10

Matrix: Solid

Date Received: 01/20/15 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232361	01/27/15 16:13	YS	TAL IRV
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232330	01/27/15 14:24	YS	TAL IRV
Total/NA	Prep	7471A			174503	01/21/15 12:06	ASB	TAL PLS
Total/NA	Analysis	7471A		1	174528	01/21/15 18:26	SLK	TAL PLS

Client Sample ID: EFP15-4

Lab Sample ID: 720-62471-4

Date Collected: 01/20/15 12:15

Matrix: Solid

Date Received: 01/20/15 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232361	01/27/15 16:16	YS	TAL IRV
Total/NA	Prep	3050B			231857	01/24/15 22:57	CH	TAL IRV
Total/NA	Analysis	6020		20	232330	01/27/15 14:26	YS	TAL IRV
Total/NA	Prep	7471A			174503	01/21/15 12:06	ASB	TAL PLS

Lab Chronicle

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Client Sample ID: EFP15-4
Date Collected: 01/20/15 12:15
Date Received: 01/20/15 18:40

Lab Sample ID: 720-62471-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7471A		1	174528	01/21/15 18:28	SLK	TAL PLS

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-15 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15 *
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-15 *
USDA	Federal		P330-09-00080	06-06-15
USEPA UCMR	Federal	1	CA01531	01-31-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL IRV
7471A	Mercury (CVAA)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Granite Rock Company
Project/Site: EFP

TestAmerica Job ID: 720-62471-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-62471-1	EFP15-1	Solid	01/20/15 12:00	01/20/15 18:40
720-62471-2	EFP15-2	Solid	01/20/15 12:05	01/20/15 18:40
720-62471-3	EFP15-3	Solid	01/20/15 12:10	01/20/15 18:40
720-62471-4	EFP15-4	Solid	01/20/15 12:15	01/20/15 18:40

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-62471

TESTAMERICA Pleasanton Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 158802

Date 1/20/15 Page 1 of 1

1/28/2015

Report To

Attn: JON ERSKINE
Company: GRANITEROCK
Address: 350 Technology Dr, WATSONVILLE
Email: JERSKINE@GRANITEROCK.COM
Bill To: GRANITEROCK
Sampled By: JAE
Attn: JON ERSKINE
Phone: 831.206-5310

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B; ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	Semi/Volatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☐ 8270C SIM	Oil and Grease (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS): ___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity			Number of Containers
EFP15-1	1/20/15	12:20	S	—									X													1
EFP15-2	1/20/15	12:05	S	—									X													1
EFP15-3	1/20/15	12:10	S	—									X													1
EFP15-4	1/20/15	12:15	S										X													1

720-62471 Chain of Custody

Project Info

Project Name/ #: EFP
PO#:
Credit Card Y/N: If yes, please call with payment information ASAP

Sample Receipt

of Containers: 4
Head Space:
Temp: 4.2°C

TAT: 10 Day | (5 Day) | 4 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☒ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID ___

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 12:30	Signature: [signature] Time: 1725	Signature: Time:
Printed Name: JON ERSKINE Date: 1/20/15	Printed Name: Ed Martin Date: 1-20-15	Printed Name: Date:
Company: GRANITEROCK	Company: TA	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 1315	Signature: [signature] Time: 1725	Signature: Time:
Printed Name: Ed Martin Date: 1-20-15	Printed Name: [illegible] Date: 1/20/15	Printed Name: Date:
Company: TA	Company: TA	Company:

Rev. 10/2012

720-62471-rev

Cuellar, Cherie

From: Jon Erskine [jerskine@Graniterock.com]
Sent: Wednesday, January 21, 2015 4:01 PM
To: Cuellar, Cherie
Subject: RE: TestAmerica Sample Login Confirmation files from 720-62471 EFP

Cherie,
Per our conversation, please cancel 6010 and substitute CAM 17 by 6020. Thanks.

Jon Erskine

From: Cuellar, Cherie [mailto:cherie.cuellar@testamericainc.com]
Sent: Wednesday, January 21, 2015 11:56 AM
To: Jon Erskine; Matt Wadiak; Reed Carter
Subject: TestAmerica Sample Login Confirmation files from 720-62471 EFP

Hello,

Attached please find the Sample Confirmation files for job 720-62471; EFP

Please feel free to contact me or your PM Micah Smith if you have any questions.

Thank you.

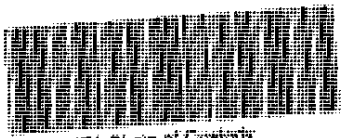
Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

CHERIE CUELLAR
Project Management Assistant I

TestAmerica Pleasanton
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484.1919
www.testamericainc.com

Reference: [176372]
Attachments: 2



720-62471 Chain of Custody

Login Sample Receipt Checklist

Client: Granite Rock Company

Job Number: 720-62471-1

Login Number: 62471

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Granite Rock Company

Job Number: 720-62471-1

Login Number: 62471
List Number: 2
Creator: Ornelas, Olga

List Source: TestAmerica Irvine
List Creation: 01/23/15 01:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

From:	Nowell, Keith, Env. Health
To:	"lamancus@up.com"
Cc:	"sapearso@up.com"; Hackman, Scott; Roe, Dilan, Env. Health
Subject:	Site Clean Up case RO3169 - Diesel locomotive released, 1408 Middle Harbor Road, Oakland
Date:	Tuesday, April 21, 2015 3:34:46 PM

Dear Ms. Mancuso,

Alameda County Environmental Health (ACEH) staff has reviewed the laboratory analysis report entitled *GraniteRock Virgin Class II AB Data_comp* provided to ACEH as an attachment to an email dated 4/21/2015. The analytical data represents the CAM 17 metals and asbestos results for the proposed import of virgin aggregate material for backfill for the subject site.

Based on the data review, this material appears acceptable for use at the subject site.

If not done already, please claim your site in the State Water Resources Control Board's (SWRCB) GeoTracker website and upload outstanding and future technical reports to both the ACEH ftp site (Attention: Keith Nowell), and to GeoTracker by the dates specified below.

Technical Report Request

Please perform the following action items in accordance with the following schedule:

April 28, 2015– Claim site in GeoTracker

April 28, 2015– Electronic Submittal of Information

These reports are requested pursuant to California Code of Regulations, Title 23, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1, beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the UST or LUST program, must be transmitted electronically to the SWRCB GeoTracker system via the internet. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs, including SLIC programs. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites was required in GeoTracker.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org.

Regards,
Keith Nowell

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ARCADIS

Attachment 4

Excavated Soil Information

Attachment 4

ARCADIS
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Excavated Soil Quantity Information
March 26, 2015 Locomotive Fuel Release
Oakland, California

Gondola Number	ECDC Profile Number	Manifest Number	ECDC Weigh Date	Soil Weight
HPJX 900541	4041156843	003515475	5/8/15	90.63
AEX 17109	4041156843	003515474	5/8/15	97.6
HPJX 900044	4041156843	003515473	5/8/15	87.75
AEX 17096	4041156843	003515472	5/8/15	87.88
AEX 17097	4041156843	003515471	5/8/15	80
AEX 17101	4041156843	003515470	5/8/15	95.63
HPJX 901041	4041156843	003515469	5/8/15	91.55
HPJX 900052	4041156843	003515468	5/8/15	91.9
HPJX 900753	4041156843	003515467	5/8/15	89.55
HPJX 900737	4041156843	003515466	5/8/15	70.85
AEX 17076	4041156843	003515465	5/8/15	82.9
HPJX 900249	4041156843	003515464	5/8/15	76
HPJX 900231	4041156843	003515463	5/8/15	72.63
HPJX 900214	4041156843	003515462	5/8/15	81.13
HPJX 900982	4041156843	003515461	5/8/15	74.43
HPJX 900761	4041156843	003515460	5/8/15	97.68
HPJX 900974	4041156843	003515459	5/8/15	99.7
AEX 17078	4041156843	003515476	5/8/15	105.28
			Total:	1573.09

Attachment 4
Estimate of Recovered Mass
March 26, 2015 Locomotive Fuel Release

Total constituent mass in soil	Mass of Affected Soil Removed (tons)	Mass of Affected Soil Removed (kg)	TPH-E (DRO) Soil Concentration (mg/kg)*	TPH-E (DRO) Mass Recovered (kg)	TPH-E (DRO) Mass Recovered (lbs)	**Total TPH-E (DRO) Vol. Recovered (gal)**
Constituent						
TPH-E (DRO) *using geometric mean of concentrations**	1,573.1	1,427,083.2	10,469.2	14,940.5	32,938.0	**4,643.4**
TPH-E (DRO) *using average concentrations**	1,573.1	1,427,083.2	14,867.0	21,216.4	46,774.2	**6,593.9**

Notes and Definitions

TPH-E (DRO) = Total Petroleum Hydrocarbons - Extractable as Diesel Range Organics
mg = milligrams
kg = kilograms
lbs = pounds
gal = gallons

INPUT DATA JUSTIFICATION AND/OR REFERENCES:

1 ton	907.18474	kilograms
1 kg	2.20462	lb
1 cubic foot	28.3168	liter
density of TPH-E (DRO)	0.850	g/cm3
density of TPH-E (DRO)	7.09	lbs/gallon

** Soil concentrations established using TPH-E (DRO) concentration values reported from waste characterization samples WC-1 through WC-6.*